

ORISSA ELECTRICITY REGULATORY COMMISSION

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

*** **

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

CASE NO. 42 OF 2005

DATE OF HEARING : **04.02.2006**

DATE OF ORDER : **23.03.2006**

IN THE MATTER OF : An application for approval of Annual Revenue Requirement and determination of Bulk Supply price under Section 61, 62, 64, 86(1)(b) and other applied provisions of the Electricity Act, 2003 read with relevant provisions of OERC (Terms and Conditions for Determination of Tariff) Regulations, 2004, and OERC (Conduct of Business) Regulations, 2004, and other Tariff related matters, for the year 2006-07.

ORDER

M/s. Grid Corporation of Orissa Limited, Janpath, Bhubaneswar (in short, GRIDCO) a deemed licensee under 5th proviso of Section 14 of the Electricity Act, 2003(the Act) read with Government of Orissa's Transfer Notification No. 6892 dtd. 09.06.2005, submitted an application in respect of its Annual Revenue Requirement (ARR), and determination of price for bulk supply of electricity to distribution companies operating in the State of Orissa. The said application was duly scrutinised, registered as Case No.42/2005 and admitted for hearing under Section 86(1)(b) of the Act, 2003. In the consultative process, the Commission heard the applicant, objectors, representative of the State Government and discussed the matter in the specially convened meeting of the State Advisory Committee and orders as follows:

1 PROCEDURAL HISTORY

- 1.1 As per OERC (Conduct of Business) Regulations, 2004 and OERC (Terms and Conditions for Determination of Tariff) Regulations, 2004, licensees/deemed licensees are required to file the ARR within 30th November in the prescribed formats. GRIDCO as a deemed licensee submitted its ARR application for 2006-07 before the Commission on 30.11.2005.
- 1.2 After admitting the matter, the Commission directed GRIDCO to publish its ARR application in the approved format in the leading and widely circulated daily

newspapers and the matter was also pasted in the Commission's website in order to invite objections from the intending objectors. The said public notice was published in the leading daily newspapers. The Commission directed the applicant to file its rejoinder to the objections filed by the various objectors before the Commission and to serve copy to them.

- 1.3 In response to the aforesaid public notice of the applicant, the Commission received 16 nos. of objections from the following objectors.

(1) Mr. Jayadev Mishra, N-4/98, Nayapalli, Bhubaneswar (2) Utkal Chamber of Commerce & Industry, N/6, IRC Village, Nayapalli, Bhubaneswar (3) Sambalpur District Consumer Federation, Balaji Mandir Bhawan, Khetrajpur, Sambalpur (4) Confederation of India Industry (CII), 8, Forest Park, Bhubaneswar (5) Orissa Consumers' Association & FOCO, Biswanath Lane, Cuttack (6) National Institute of Indian Labour, Beherasahi, Nayapalli, Bhubaneswar (7) IDCOL Ferro Chrome & Alloys Ltd. Jajpur Road, Jajpur (8) Rourkela Chamber of Commerce and Industry, Chamber Bhawan, Chamber Point, Rourkela (9) M/s Tata Steel Co. Ltd., 273, Bhouma Nagar, Unit-IV, Bhubaneswar (10) M/s NESCO, Januganj, Balasore (11) Mr. R.P.Mohapatra, 775, Jayadev Vihar, Bhubaneswar (12) M/s Ferro Alloys Corporation Ltd., GD-2/10, Chandrasekharapur, Bhubaneswar (13) M/s Jindal Stainless Ltd., 50-HIG, Jayadev Vihar, Bhubaneswar (14) Rural Development Dept., Govt. of Orissa, Orissa Secretariate, Bhubaneswar (15) State Public Interest Protection Council, Talengabazar, Cuttack (16) Organisation for Removing Regional Imbalances and Social Injustice in Society (ORRISIS), Kadambari Complex, Nayapara, Sambalpur-1.

- 1.4 The date for hearing was fixed and it was duly notified in the leading newspapers mentioning the list of the objectors. The Commission conducted a public hearing in its premises and heard the applicant, objectors/their authorised representative and the representative of the State Government on 04.02.2006. Along with the ARR application of GRIDCO, the Commission had decided to dispose of the petition filed by GRIDCO for review of the order of the Commission dtd. 22.03.2005 passed in case no. 147/2004.

- 1.5 During the hearing Mr. K.N.Jena, the authorised representative of Orissa Consumer's Association and FOCO, raised some preliminary issues about the maintainability of GRIDCO's application. He raised the issue that the Commission had no authority to determine the bulk supply tariff of GRIDCO, which is a trading licensee. Functioning of GRIDCO as a trading company is unnecessary and is against the spirit of competition mandated by law. On this preliminary issue, the Commission heard the applicant and the objector at length. The Commission is of the considered view that it is competent to determine all types of tariff including the bulk supply price as mandated under Section 86(1)(a)/(b) of the Act. In the present context, where a single buyer model exists, GRIDCO as a deemed licensee, has been assigned with all the long term existing PPAs and also the responsibility to carry out the activities of bulk purchase and sale of electricity under Government of Orissa Transfer Scheme, 2005. The Commission as a statutory body has legal obligations under section 86(1)(b) of the Act, to regulate

the price at which distribution licensees of the State shall purchase power from GRIDCO. This price has direct impact on the consumers of the State and the Commission is also competent to determine the same under the existing PPAs as well as the Bulk Supply Agreements. In the above circumstances, and in the public interest, the Commission decided to proceed with the matter under Section 86(1)(b) of the Act.

2 GRIDCO'S ARR FOR FY 2006-07

2.1 GRIDCO holds the Bulk Supply License for the State of Orissa and is a constituent of the Eastern Regional Power Committee. The licensee supplies power to DISTCOs to cater to the requirements of consumers of the State. It also provides emergency power to Captive Power Plants (CPPs) and sells the surplus power as and when available within the state to intending agencies for use elsewhere. GRIDCO purchases power from the OHPC, OPGC, TTPS and central sector generators located in the Eastern Region and Chukka in Bhutan and surplus power from some CPPs within the State.

2.2 GRIDCO has filed an application for Annual Revenue Requirement and revision of Bulk Supply Price for 2006-07 to enable the licensee to carry out its functions of bulk supply to DISTCOs and trading of electricity. The licensee subsequently submitted an amended version of its ARR and BST application to the Commission. GRIDCO requested the Commission to consider the issues raised in the Review Petition filed before the Commission for review of the BST order dated 22.03.2005, the financial implication of which is of the order of Rs. 586.89 crore, along with the present ARR application for FY 2006-07.

2.3 Projection of Demand and Energy

2.3.1 The actual demand for 2004-05, average of the actual demand for first six months of 2005-06 and projection for 2006-07 as submitted by GRIDCO in the BST and ARR application, are given in Table-1.

Table – 1
Average Maximum Demand Projection for 2006-07

Name of the Company	2004-05 (Actual)	Avg. of the actual for first six months of 2005-06	(Figures in MVA)	
			DISTCOs' Projection for 2006-07	GRIDCO's Projection for 2006-07
CESCO	621.67	710.69	814.50	717.80
NESCO	413.60	476.98	650.00	550.00
WESCO	582.70	636.42	995.52	658.69
SOUTHCO	255.30	283.36	310.91	287.27
Total DISTCOs	1873.27	2107.45	2770.93	2213.76

2.3.2 The actual energy requirement for 2004-05, actual for first six months of 2005-06 and both DISTCOs' and GRIDCO's energy projections for 2006-07 as submitted by GRIDCO in its ARR filing, are indicated in Table-2.

Table - 2
Energy Projection for 2006-07

(Figures in MU)

Name of the Company	2004-05 (Actual)	Actual for 1st six months of 2005-06	DISTCOs' Projection for 2006-07	GRIDCO's Projection for 2006-07
CESCO	4,079.46	2103.76	4409.92	4409.92
NESCO	2,824.00	1570.17	4200.00	4200.00
WESCO	3,912.90	2045.95	4,531.03	4,531.03
SOUTHCO	1,653.00	838.21	1836.30	1836.30
Total DISTCOs	12,469.36	6558.09	14,977.25	14,977.25
CPP	10	159.53		120.00
Total Sale	12,479.36	6717.2	14,977.25	15,097.25

2.3.3 **Power Availability and Export of Power:** GRIDCO projected the total power availability of 16326.24 MU and considered transmission loss of 4.49% for 2006-07. After meeting the demand of DISTCOs and CPPs and making necessary allowance for transmission loss, the surplus available for export is projected as under:

Table – 3
Power Availability and Export of Power (MU), 2006-07

Item	Initial Projection for 2006-07 (MU)	Revised Projection for 2006-07 (MU)
Total power available	16326.24	16326.24
Proposed power sale to DISTCOs and CPP	15097.25	15097.25
Transmission loss initially was @ 5.05% and was later revised to 4.49 %, over DISTCOs & CPP drawal only	802.96	709.73
Total procurement required for DISTCOs and CPP	15900.21	15806.98
Surplus available after meeting State Demand	426.03	519.26
The loss in transmission on account of wheeling to out side the state through EREB (MU) considering the loss level @ 2.94%	53.90	15.26
Balance power available for Export	372.13	504.00

2.4 Revenue Requirement for 2006-07

2.4.1 As stated above, GRIDCO has considered total energy procurement of 16,326.24 MU for 2006-07. This includes transmission loss of 4.49% over DISTCOs' and CPPs' drawl of 15097.25 MU for 2006-07 and export to the tune of 504.00 MU during the year.

2.4.2 The projection of Revenue Requirement for 2006-07 and Excess or Deficit as furnished by GRIDCO is reproduced hereunder in Table-4.

Table - 4
Revenue Requirement for 2006-07

		(Rs. Crore)			
	Item	2004-05 Actual	2005-06 Provisional	GRIDCO's Initial Proposal for 2006-07	GRIDCO's Revised Proposal for 2006-07
a)	Power Purchase Cost	1729.31	1830.90	2106.86	2106.86
b)	Previous Loss	-	-	1701.69	1653.74
c)	Interest, Finance & Establishment Charges	758.92	336.28	979.10	903.39
d)	Contribution to contingency reserve	8.82	-	Nil	Nil
e)	Reasonable Return	-	-	22.53	23.62
f)	Revenue Requirement (a+b+c+d+e)	2497.05	2167.18	4810.18	4687.61
g)	(-) Misc. Receipts	1310.58	693.74	138.21	173.16
h)	Net Revenue Requirement (f-g)	1186.46	1473.44	4671.97	4514.45
i)	Net Revenue Receipt from sale of power to DISTCOs and CPP	1625.56	1321.88	1458.48	1460.79
j)	Excess or Deficit	439.10	-151.56	-3213.49	-3053.66

2.4.3 Energy drawl from various sources and the cost thereof are projected by GRIDCO as follows:

Table – 5
Power Procurement by GRIDCO, 2006-07

Source	MU	Per Unit (P/U)	Total cost (Rs.Cr.)
OHPC	3452.40	40.96	141.41
Indravati	1942.38	65.50	127.23
Machkund	265.00	19.47	5.16
Total Hydro	5659.78	48.38	273.80
OPGC	2973.41	152.37	453.07
TTPS	3132.80	150.88	472.68
CPP	160.00	110.00	17.60
Renewable Energy Source	0.00	231.53	0.00
State Total	11,925.99	102.06	1217.14
Chukha	236.56	174.44	41.27
TSTPS	2000.67	181.05	362.22
FSTPS	1370.71	220.90	302.79
KHSTPS	792.31	231.53	183.44
Total EREB	4400.25	202.20	889.72
Total	16326.24	129.05	2106.86

2.4.4 Pass Through of Previous Loss

GRIDCO initially proposed a sum of Rs.1701.69 crore to be passed on to ARR on account of past losses during 2006-07. This included accumulated losses of the licensee to the tune of Rs. 1028.15 crore upto 2004-05 and aggregate losses under various heads during 2005-06 of the order of Rs. 634.84 crore as raised in the review petition of GRIDCO. These figures were revised by the licensee as detailed under:

Table – 6
Pass through of Previous Loss, 2006-07

(Rs. Crores)

Sl. No.	Item	Initial Proposal	Revised Proposal
1	Loss due to adjustment in trading	161.50	113.55
2	Additional burden due to FPA of OPGC	13.84	13.84
3	Payment of Delayed Payment Surcharge (DPS) to OPGC	72.90	72.90
4	Additional burden due to FPA of CGSs	71.22	71.22
5	Year End Adjustment (YEA) of NTPC Stations	11.52	11.52
6	Pass through of PGCIL payments	29.38	29.38
7	Compensation against inter-state wheeling charges	12.28	12.28
8	Pass through of open access charges	8.88	8.88
9	Pass through of ERLDC scheduling charges	1.36	1.36
10	Compensation to PTC & NVVNL	2.83	2.83
11	Terminal benefit (85.00 - 40.62)	44.38	44.38
12	Repayment of Interest (Rs 338.96 Cr + Rs 156.73 - Rs 291 Cr)	204.75	204.75
	TOTAL OF Sl.1 to12 raised in review petition.	634.84	586.89
13	The accumulated loss of GRIDCO up to 2004-05 is Rs. 1028.15 Cr	1028.15	1028.15
14	Pass Through of Income tax claim of TTPS for 2004-05 and 2005-06.	29.78	29.78
15	Pass Through of payment to PGCIL towards contracted power for 2003-04, 2004-05 and 2005-06.	8.92	8.92
	Total	1701.69	1653.74

2.4.5 Interest and Financing Charges

The interest & financing charges, repayment towards principal including establishment cost etc. as proposed by GRIDCO is presented hereunder.

Table – 7
Interest, Financing & Establishment Charges

	(Rs. Crore)	
	GRIDCO's Initial Proposal for 2006-07	GRIDCO's Revised Proposal for 2006-07
1. Interest Cost	439.60	383.38
2. Repayment towards Principal	519.44	512.75
3. Other Costs:		
a. Employee Cost	3.11	3.11
b. Repair & Maintenance Cost	0.00	0.00
c. A&G Cost	2.83	2.83
d. Depreciation	0.00	0.00
e. Bad Debts	0.00	0.00
f. ERLDC, NLDC fees and SLDC scheduling Charges	14.12	1.32
Sub-Total - Other Costs:	20.06	7.26
Total (1+2+3)	979.10	903.39

2.5 Proposed Revenue Earning at Existing Rate

2.5.1 GRIDCO proposes to earn revenue of Rs.1460.79 crore from sale to DISTCOs and CPPs at the existing rates during 2006-07. The licensee proposes to earn revenue of Rs.173.16 crore from export and CPP sale (Miscellaneous Receipt). Total revenue earning during 2006-07 is proposed at Rs.1633.95 crore (=Rs.1460.79 crore + Rs.173.16 crore).

2.5.2 A summary of the proposal of GRIDCO's expected revenue earning during 2006-07 as submitted in TRT-23 is furnished in Table-8.

Table – 8
Expected Revenue from Charges, 2006-07

(Rs. Crore)

NET TOTAL REVENUE (DISTCOs)	(EXPECTED REVENUE WITH ANTICIPATED SALE AT EXISTING RATES)					
	CESCO	NESCO	WESCO	SOUTHCO	TOTAL (Initial Proposal)	TOTAL (Revised Proposal)
Gross receipt from Demand Charges (a)	172.27	132.00	158.09	68.95	531.30	531.30
Gross receipt from Energy Charges (b)	374.84	361.20	447.76	137.72	1321.52	1321.52
Total Revenue from DISTCOs ©	547.11	493.20	605.84	206.67	1852.82	1852.82
Less receipt towards Transmission (d)	116.11	110.58	119.30	48.35	394.35	* 392.03
Total Revenue from DISTCOs (e)=(a+b+c-d)	431.00	382.62	486.54	158.32	1458.48	1460.79
Miscellaneous Receipts						
Sale to CPPs					39.60	39.60
Export					98.61	133.56
Unscheduled Interchange					Nil	Nil
Total of Misc. Receipts (f)					138.21	173.16
Net Total Revenue (g)=(e+f)					1596.69	1633.95

*** Break-up not supplied**

2.6 Recovery of Cost in the ARR During 2006-07

2.6.1 With the present tariff structure, GRIDCO cannot meet its total current costs estimated at Rs.4514.45 crore (table – 4) as it results in a deficit of Rs.3053.66 crore on account of changes in its various cost components, proposal for pass through of past losses to the tune of Rs.1653.74 crore, shortfall in trading and revenue, rise in financing and interest costs, terminal benefits, income tax payment to TTPS etc. In order to meet this deficit, GRIDCO submits this application before the Hon'ble Commission requesting for revision of bulk supply price for 2006-07.

2.6.2 The licensee proposes to recover the full costs of supply of Rs.4514.45 crore comprising Rs.3226.03 crore (71.46%) towards fixed costs and Rs.1288.42 crore (28.54%) towards variable costs during 2006-07.

2.6.3 GRIDCO proposes a two-part price structure comprising of Demand Charge and Energy Charge. The Demand Charge, intended to cover fixed costs, is levied in consonance with the philosophy of realisation of cost in proportion to the capacity requirement of the utilities. Energy Charge is

recovered in proportion to the actual quantum of energy consumed by the utilities.

2.7 Options for Pricing Bulk Supply

2.7.1 GRIDCO has considered alternate options for structuring Demand and Energy Charges which are presented in the table below:

**Table - 9
Pricing Options for 2006-07**

Pricing Options	GRIDCO's Initial Proposal For 2006-07		GRIDCO's Revised Proposal for 2006-07	
	Demand Charges Rs/kVA/ Month	Energy Charges (P/U)	Demand Charges Rs/kVA/ Month	Energy Charges (P/U)
Option – I: Structuring Demand Charges to cover full cost of establishment and all the fixed cost of power purchase. Energy Charges will cover only the variable costs of generation.	1508.05	89.04		
Option – II: Demand Charges of Rs 300 per kVA per month. Energy Charges will cover balance fixed costs and all variable costs of generation.	300.00	258.73	300.00	248.21
Avg. Energy charge		311.94		301.42
%Rise over current average energy charge@100P/U		211.94%		201.00%

2.7.2 In order to avoid a steep rise in Demand Charges, GRIDCO, in this application proposes Demand Charge @ Rs. 300 per KVA/Month although recovery of full fixed cost through Demand Charges is desirable.

2.8 Estimation of Demand & Energy Charges:

GRIDCO has assessed the revenue receipt from demand charges based on a total SMD of 2213.76 MVA per month for 2006-07 as given in table - 10. After deduction of the revenue earnings from demand charges, the balance revenue requirement is proposed to be realised through energy charges.

Table - 10
Computation of Demand & Energy Charges for 2006-07

Item	GRIDCO'S INITIAL PROPOSAL	GRIDCO'S REVISED PROPOSAL
Revenue Requirement of GRIDCO to be recovered through BST (Rs. Cr).	4671.97	4514.45
Demand charges per month (Rs./KVA)	300.00	300.00
Chargeable Demand in MVA per month for 2006-07	2213.76	2213.76
Annual Revenue from Demand Charges (Rs. Crore)	796.95	796.95
Balance revenue to be recovered through Energy Charges (Rs. Crore) (a)	3875.02	3717.50
Proposed sale to DISTCOs and CPP in MU (b)	14977.25	14977.25
Energy Charges (a/b) in P/U	258.73	248.21

2.8.1 GRIDCO has been billing to the distribution companies the demand charge on the basis of simultaneous maximum demand (SMD) for each month. It has submitted that till the contract demand is finalised with the Distribution Companies, the demand to be billed in a month will be the highest of the SMD of the month. If the total actual demand in a quarter is less than the total approved demand, the difference of the demand charges shall be billed additionally as a quarter-ending adjustment.

2.9 Over Draw Charges

2.9.1 GRIDCO's Procurement Plan is based on least cost power purchase designed to utilise the lowest cost power first for meeting DISTCOs' Demand before procuring from a higher cost source, subject to generation availability and transmission constraints. Thus, any drawl by DISTCOs that exceeds the procurement plan made for them will reduce export of power to that extent for which GRIDCO will suffer loss in terms of revenue under Miscellaneous Receipts head. GRIDCO, therefore, requests the Commission to amend/modify the relevant provision approved in the past tariff order as follows:

“Any excess drawl of energy by a Distribution and retail supply Licensee over and above the approved drawl would be payable at the actual rate approved for export of energy plus transmission charges and transmission loss subject to necessary changes due to implementation of intra-state ABT.”

2.10 Delayed Payment Surcharge

GRIDCO has proposed levy of delayed payment surcharge on bulk supply bills @ 1.25% per month for payments received after the period of 30 days from the date of submission of the bills, for 2006-07.

2.11 **Rebate**

Corresponding to the delayed payment surcharge, GRIDCO has also proposed a rebate for 2006-07. A rebate of 2% on the monthly bill, if payment is made in full within 48 hours of submission of bill, 1.5% rebate, if a minimum of 85% out of billed amount is paid within 48 hours and 1% rebate on the balance amount, if paid in full within 15 days of submission of bill. For full payment made within 15 days from submission of the bill, a rebate of 1% may be allowed.

2.12 **Carry Forward of Revenue Gap**

GRIDCO prays the Commission that the proposed Bulk Supply Tariff be made applicable from 1st April 2006. However, in case of a gap between the approved revenue requirements for 2006-07 and the revenue realised, the Commission may kindly approve to carry forward the gap for adjustment during the future years.

2.13 **Summary of Tariff Filing for 2006-07**

2.13.1 GRIDCO prays that the Commission may kindly approve the following for 2006-07:

- i) Demand charges @ Rs.300 per KVA/month. Energy charges @ 248.21 paise/unit on energy supplied.
- ii) Charges for over drawl in demand and energy.
- iii) Delayed Payment Surcharge as proposed.
- iv) Rebate as proposed.
- v) Transmission loss @ 4.49%.

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 ARR filing for the financial year 2006-07. Based on their nature and type, these objections have been categorised subject-wise as discussed below.

3.2 **Legal :**

- 3.2.1 The application filed by the licensee is not bonafide and as such, the same is liable to be rejected.
- 3.2.2 The Commission has no authority u/s 62 of the Electricity Act, 2003 to determine tariff and allow indulgence in superfluous companies.
- 3.2.3 Notice so published inviting objections does not confirm to the requirements of law.

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

- 3.3.1 One objector has agreed to the DISTCOs' projection of SMD and energy requirement as opposed to those projected by GRIDCO. Another has forecasted the demand for the four DISTCOs at 2403 MVA as against 2214 MVA arrived at by GRIDCO. Other objectors have suggested that GRIDCO's figure of 2214 MVA might be accepted, as DISTCOs' figure might not be correct.
- 3.3.2 Some objectors have maintained that the demand of energy inside the state has been overstated.
- 3.3.3 Another objector has stated that GRIDCO should motivate DISTCOs to reduce their peak demand through suitable energy conservation measures and demand side management.

3.4 **Energy Requirement & Availability:**

- 3.4.1 Assuming that the consumption figures approved by OERC upto 2005-06 shall be achieved, and there will be load growth of about 8% in the distribution systems and reduction of 3% in the distribution loss, one objector suggested that total energy drawl by the DISTCOs should be kept at 13,950 MU instead of 14,977 MU as suggested by GRIDCO.
- 3.4.2 Another objector has estimated the energy requirement for 2006-07 at 17,851 MU as against 16,381 MU projected by GRIDCO.
- 3.4.3 Some objectors have stated that GRIDCO has projected higher sale to DISTCOs, which has reduced the quantum of export of power during 2006-07.
- 3.4.4 Other objectors have said that higher projection of energy requirement by DISTCOs has necessitated drawl of high cost power from CGSs.
- 3.4.5 Some objectors observed that the energy availability projected by GRIDCO for 2006-07 at 16,236.24 MU was lower than the approved figure of 16,538.45 MU for 2005-06.

3.5 **Transmission Loss**

- 3.5.1 Most objectors were critical of GRIDCO's projection of transmission loss at 5.05%, which was subsequently revised by the licensee to 4.49%.
- 3.5.2 Some objectors suggested to consider transmission loss at a lower level basing on the following points:
- CPP power available at load centres helps reduce transmission loss.
 - Export of power from Orissa to others is mostly drawn out from OPGC at inter-state border.
 - PGCIL transmission system provides inter-state transmission links to many important load centres such as Jeypore, Rourkela, Meramundali, etc.

- Losses should be low as per the guidelines given by the Soven Kanungo Committee/State Govt.
- 3.5.3 One objector suggested that the transmission loss should reduce each year to reach the national grid level of 2.5%. Therefore, GRIDCO should be allowed a transmission loss of 4% approved earlier instead of 5.05% proposed now.
 - 3.5.4 OERC might limit the transmission loss to 3.58% in 2006-07 in accordance with OERC tariff order for 2003-04, said another objector.
 - 3.5.5 Transmission loss projected by GRIDCO showed complete inefficiency of OPTCL/GRIDCO/DISTCOs. It was, therefore, necessary to locate at which point huge losses were occurring and what remedies have been taken to improve upon it.
 - 3.5.6 Some objectors were of the view that the transmission loss should be fixed at 3.5% for DISTCOs. Any additional transmission loss beyond 3.5% should be charged to trading and ABT gains.
 - 3.5.7 One objector said that EHT losses should be reduced further from the level of 2005-06 because new EHT lines and sub-stations have been commissioned without any appreciable load growth.
 - 3.5.8 Another objector stated that if transmission loss was adopted at 5.05%, the surplus available for trading would become 402.6 MU instead of 372.13 MU projected by GRIDCO.
 - 3.5.9 Some stated that GRIDCO's projection of transmission loss on account of wheeling to outside States through EREB at 53.90 MU was much in the higher side as compared to the entire system transmission loss of 5.05% projected by GRIDCO. The licensee cannot adopt a separate method for calculating transmission loss on account of wheeling to outside the State, they maintained.
 - 3.5.10 Some others pointed out that GRIDCO was projecting transmission loss of 5.05% even after huge investment in the transmission sector. This loss should not be more than 3.7%.

3.6 Power Procurement : Least Cost Drawl

3.6.1 Hydro:

3.6.1.1 One objector stated that Hydro generation figure of 5394.74 MU from all hydro sources seemed to be in the lower side. Even this was lower than the worst water year i.e. 2003-04, which had a generation of 5475 MU. At least 6000 MU should be made available from hydro sources, the objector opined.

3.6.1.2 Another objector stated that GRIDCO should schedule for higher energy availability from OHPC through suitable incentives in

PPAs. OHPC and GRIDCO should enter into firm PPAs for each of the old stations as approved for Rengali. Machine availability should be ensured to avail more of secondary energy during July-October. A total hydro drawl of 5939.24 MU @40.91 P/U might be adopted till the approval of PPAs for all old OHPC stations.

3.6.1.3 Some objectors stated that GRIDCO had projected 5659.78 MU for 2006-07 from hydro sources against approved energy of 5939.24 MU available from all hydro stations during 2005-06.

3.6.1.4 Some others have considered the design energy levels for determining the availability of old OHPC stations and reservoir levels for Upper Indravati. They estimated availability of power from the State hydro stations at 6,052 MU for 2006-07.

3.6.1.5 One objector stated that lower generation figures have been projected for almost all hydro stations despite the fact that reservoir levels as on 1st December 2005 were higher than those on 1st December 2004.

3.6.1.6 Other objectors pointed out that the tariff for HPS had been increased to 65 paise/unit, when the availability of Chipilima Power Station was very low and that of the Burla PH was far from satisfactory.

3.6.1.7 One objector observed that the average cost of hydro power has been increased from 40.91 P/U to 48.38 P/U over the previous year.

3.6.2 **State Thermal:**

3.6.2.1 One objector assumed TTPS and OPGC to operate at 85% and 87% PLF in 2006-07 respectively.

3.6.2.2 In respect of TTPS, the objector suggested that the auxiliary consumption should be taken at 10% instead of 11% since PLF of TTPS was at higher level of 87.55%. Availability of power might, therefore, be taken at 3160 MU from TTPS.

3.6.2.3 Another objector estimated the fixed cost of TTPS at Rs.175.39 crore for 2006-07.

3.6.2.4 One objector stated that a PLF of 90% and energy availability of 3300 MU should be ensured from OPGC through a joint scheduling by GRIDCO and OPGC.

3.6.2.5 Some objectors stated that GRIDCO has proposed a reduced generation plan for OPGC. Even after accepting generation plan of OPGC, if auxiliary consumption is accepted at 9.5%, then 3005 MU shall be available for export.

3.6.2.6 Some others have estimated the fixed cost of OPGC at Rs.219.16 crore for 2006-07.

3.6.3 CPPs:

3.6.3.1 One objector requested OERC to consider a drawl of 721 MU for 2006-07.

3.6.3.2 Another objector stated that availability from CPPs might be taken as 684 MU through suitable incentives.

3.6.3.3 Some objectors observed that GRIDCO's projection for power availability from CPPs at 160 MU during 2006-07 was lower as compared to 658 MU approved for 2005-06.

3.6.4 Central Sector:

3.6.4.1 The objectors in general observed that the cost of power from thermal stations of the State had been increased considerably.

3.6.4.2 They worked out the GRIDCO share of fixed costs of Talcher Super, Farakka Super and Kahalgaon Super Thermal Power Stations at Rs.157 crore, Rs.77.81 crore and Rs.55.01 crore respectively.

3.6.4.3 One objector relied upon the average of the variable cost in the first six months of the year while computing variable charges for TSTPS, FSTPS and KHSTPS. For tariff purpose the objector has considered the average FPA of the past six months and assumed a 10% escalation in FPA for 2006-07.

3.7 Power Procurement Cost

3.7.1 Objectors in general observed that the power procurement costs have been projected to be very high and optimum utilisation of various sources of power particularly of hydro availability has not been explored.

3.7.2 The objectors suggested that the power procurement plan of GRIDCO should be revised by increasing availability of cheaper power, reducing demand of DISTCOs to realistic levels and increasing thereby the quantum of export during 2006-07.

3.7.3 Some objectors pointed out that despite huge expenditure in Hirakud Power House, there has been a reduction in total installed capacity, which has adversely affected the total cost of generation.

3.7.4 Others stated that GRIDCO has accepted the rates quoted by various generators without analysing the details of their proposal and negotiating with them for reduced and realistic rates. They suggested a realistic power mix and reasonable pricing of the same and projected the power purchase cost at Rs.1803.29 crore.

- 3.7.5 One of the objectors stated that GRIDCO's projection of power purchase cost at Rs.2106.86 crore, which constituted 43% of total cost, needed to be checked.
- 3.7.6 Another objector computed the total power purchase cost at Rs.2017 crore as against GRIDCO's projection of Rs.2107 crore.
- 3.7.7 One objector stated that the power purchase cost of secondary energy from UIHEP had reduced to Rs.34.14 crore as against Rs.46.28 crore provided under the ARR of 2004-05. This reduction was due to reduction in secondary energy rate from 62.86 p/u to 46.38 p/u. This has caused a difference of Rs.12.14 crore whose impact should be factored in the ARR of 2005-06 and the benefit may be passed on as reduction in BST for 2006-07.
- 3.7.8 The objector pointed out that the capital cost of UIHEP has been shown at Rs.1195.42 crore which should be much less. No step has been taken to determine the capital cost for the purpose of tariff determination despite the order of OERC.
- 3.7.9 Another objector has stated that the share of Orissa from the Central Generating Stations have undergone change from those approved in OERC order of 2005-06. Orissa's share from KhSTPS was more and from FSTPS, it was less, which has resulted in higher cost.
- 3.7.10 Some objectors pointed out that PGCIL's claim towards transmission charges to GRIDCO included many items not related to the State. Even some of the inter-regional transmission systems were not required by GRIDCO for trading its power. It may not, therefore, be fair for GRIDCO to pay PGCIL such amount of transmission charges.
- 3.8 Establishment & Financing Cost**
- 3.8.1 Employee Cost, A&G, R&M Expenses**
- 3.8.1.1 One objector stated that the licensee had failed to arrest the system loss, bad debts, expenses on telephone, material cost, A&G expenses, rents, rates, taxes, legal expenses, audited fees and other related expenses.
- 3.8.1.2 Another objector has recasted the establishment cost projected by GRIDCO at Rs.979.10 crore to Rs.20.06 crore.
- 3.8.2 Interest on Long Term Liabilities**
- 3.8.2.1 Some suggested that the total interest paid by GRIDCO had exceeded the amount approved by the Commission, which needed scrutiny.
- 3.8.2.2 Another objector has estimated interest on loan at Rs.165.9 crore as against Rs.435.52 crore proposed by GRIDCO.

3.8.2.3 Interest on the securitization amount did not add to any capital assets nor could be considered as a part of general operational cost. This, therefore, should not be allowed to be passed on to ARR.

3.9 Previous Loss

- 3.9.1 Some objectors stated that past losses and year-end adjustments should be made up from Power Development Fund. GRIDCO should not have projected accumulated losses till 2004-05 at Rs.1028.15 crore. Past losses initially projected by GRIDCO at Rs.1701.69 crore should not be allowed.
- 3.9.2 Others stated that GRIDCO's claim of Rs.1028.15 crore towards recovery of accumulated past losses upto 2004-05 should not be entertained.
- 3.9.3 One objector maintained that past losses should be passed on to ARR only if these have been incurred due to reasons beyond the control of the licensee.
- 3.9.4 Another objector stated that the proposal of pass through of previous loss originally projected by GRIDCO at Rs.1701.69 crore might have an impact of about 125 paise/unit on the BST of GRIDCO which itself was equivalent to the present cost of BST.
- 3.9.5 Some objectors observed that the figure of previous loss projected by GRIDCO seemed to be unrealistic and exaggerated. Therefore, the Commission should deal with the issue of pass through of past losses in the same manner as was done in the last tariff order.
- 3.9.6 Others stated that GRIDCO's accumulated losses were due to the inefficiency of the licensee in collecting dues from the DISTCOs.

3.10 Export of Power & UI

- 3.10.1 One of the objectors stated that the licensee should have furnished an account of revenue earned through trading and UI. GRIDCO has shown nil earning through UI whereas a substantial amount seems to have been gained through this mechanism.
- 3.10.2 The rate fixed for trading at 235 p/u is based on pooled cost of power. The objectors suggested that this rate be based on surplus power available from CGSs.
- 3.10.3 Another objector stated that UI charges earned by GRIDCO have not been shown in the ARR filing. GRIDCO's collection of surcharge from the DISTCOs towards DPS should be projected in revenue receipt.
- 3.10.4 Some objectors observed that GRIDCO had not projected the gain from trading during 2003-04, 2004-05 & 2005-06. Export of power outside the state should only be considered from high cost power and the same should be treated separately.

3.11 **Impact of Review Petition:**

- 3.11.1 **Open Access Charges:** One objector pointed out that these charges should be included in the cost of power sold to the trading company and should not form part of ARR. When GRIDCO was supplying power to the trading companies at the PGCIL's substation inside the State, there was no necessity on the part of GRIDCO to pay the open access charges particularly when no outside transmission lines were being utilized by GRIDCO for trading purposes.
- 3.11.2 **ERLDC Scheduling Charges:** The objector observed that ERLDC charged Rs. 3000 per day for trading transaction which formed part of trading cost and, therefore, the same has to be borne by the traders alone and not by the State consumers.
- 3.11.3 **Compensation to PTC:** It was observed by the objector that the agreement with PTC might need a scrutiny by OERC, if any extra payment due to the outside trading company was to be passed on to the State consumers. GRIDCO must have examined the total quantum of power to be made available for trading before signing the agreement.
- 3.11.4 **Payment towards PGCIL:** The objector maintained that GRIDCO had claimed Rs. 29.38 crore towards additional claims by PGCIL, which was sub-judice at Orissa High Court. This amount might be considered for pass through after the final judgement was made available.
- 3.11.5 **Inter-State Transmission Charges:** The objector stated that the claim of GRIDCO might be rejected.

3.12 **Revenue Requirement**

- 3.12.1 Some objectors projected the revenue requirement at Rs.1823.35 crore as compared to GRIDCO's projection of Rs.3828.61 crore.
- 3.12.2 Others computed revenue requirement of GRIDCO showing a surplus of Rs.62 crore as against a deficit of the order of Rs.3213 crore projected by GRIDCO for 2006-07.
- 3.12.3 One objector has projected that GRIDCO was expected to generate excess revenue of Rs.168.84 crore for 2006-07 on the basis of existing tariff.
- 3.12.4 Another objector has calculated the miscellaneous receipt at Rs.760 crore as against GRIDCO's projection of Rs.138.21 crore.
- 3.12.5 Some alleged that collection of arrear energy charges prior to 01.09.1999 had not been exhibited in revenue receipt.
- 3.12.6 Others observed that GRIDCO had not projected the gain from refund of charges collected by CGSs.

3.12.7 One objector suggested that upvaluation of assets should be taken into consideration while supplying power to new consumers. The same should not apply to the existing consumers.

3.12.8 Another objector compared the audited accounts of 2003-04 and 2004-05 with the corresponding approved figures as far as GRIDCO's income and expenditure were concerned. The objector's calculation has shown Rs.825 crore as surplus for 2003-04 and Rs.631 crore as surplus for 2004-05. The objector requested the Commission to take into account this surplus while determining the price for 2006-07.

3.13 **Levy of Over Drawl Charge**

3.13.1 Regarding GRIDCO's proposal relating to overdrawl charges, one objector felt that the same was not justified as any approved plan was likely to defer and penalty should be proportionate to the additional effort made by GRIDCO to make up the supply.

3.13.2 Another objector stated that to meet overdrawl of DISTCOs, GRIDCO would need to procure power from CGSs by paying extra charges in the form of variable cost and incentives. The same cost might be claimed towards overdrawl charges from DISTCOs.

3.14 **Rebate**

3.14.1 One objector prayed OERC to approve a rebate of 2% to the licensees for prompt payment of BST bills within three working days excluding Sundays and Holidays as per Negotiable Instruments Act, from the date of presentation of BST bill.

3.15 **Bulk Supply Price**

3.15.1 One objector observed that the sharp increase in Bulk Supply Price projected by GRIDCO was due to the following reasons:

- Lower projection of generation from state hydro stations.
- Higher average cost of power from state HEPs.
- Lower projection of power availability from the CPPs.
- Increase in the demand for power inside the State.
- Negligible provision towards export of power outside the State.

3.15.2 Some of the objectors stated that the computed rate of demand charge at Rs.1508.05/kva/month to recover the full fixed cost through demand charges was unrealistic.

3.15.3 One objector suggested that demand charges should be fixed at Rs.190/kva, down from the existing level of 200/kva.

3.15.4 Another objector stated that the energy charges in the BST should be reduced by 11.5 paise/unit for the year 2006-07 from the approved energy charge for 2005-06.

3.16 Other Issues:

3.16.1 One objector stated that the accuracy of meters installed to record input from the generators and output in the form of sale to DISTCOs and export to others and frequency of test checks might be indicated by GRIDCO. Further, accuracy of these meters would determine correct system losses, according to the objector.

3.16.2 Another objector stated that GRIDCO might create two funds viz. (a) Power Reform Fund as recommended by Deepak Parekh Committee to take over past losses with support funding from different agencies like State Govt., Central Govt., all generators, DFID, World Bank etc. (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. may be put. The later Fund might be utilised to meet expenses on account of losses due to contingencies of low hydro, break-down of any generating unit and transmission lines etc.

3.16.3 GRIDCO has claimed Rs. 93.76 crore towards payment of DPS to OPGC. Some objectors stated that the payment to OPGC had been delayed because of the non-receipt of payment from DISTCOs. DISTCOs were supposed to pay DPS to GRIDCO for late payment of their arrear dues. Therefore, the late payment charges payable to OPGC could be offset against the DPS received from the DISTCOs.

3.16.4 Others maintained that GRIDCO had not taken any interest to collect outstanding dues from the DISTCOs, which ultimately had caused loss to GRIDCO.

3.16.5 One objector stated that GRIDCO had made a profit of Rs.1000 crore during last three years which should be passed on to the consumers instead of increasing energy charges in the name of revenue requirement.

3.17 Views of Government of Orissa

3.17.1 The Govt. of Orissa representative from the Department of Energy stated that GRIDCO had been hit hard during the last 5 years due to constant BST. In fact, the BST has gone down inspite of rising trend of power purchase cost. However, GRIDCO's loss showed a declining trend due to export of power to outside States. He stated that the additional earnings from UI charges and trading should be adjusted suitably against the past losses of GRIDCO. While allowing return on OHPC old stations, the book value of the assets should be adopted as the criterion. He also advocated that interest on loans incurred by UIHEP should be restricted and the uncontrollable cost constituting the regulatory assets should only be allowed as envisaged in the National Tariff Policy. In respect of

upvaluation of assets he pointed out that no distinction between a private and Govt. body had been stipulated in the Reform Act, 1995.

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 and BST for 2006-07, 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 Legal

4.1.1 Regarding the legalities of GRIDCO's ARR application, the licensee submitted that as per 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, it had submitted its ARR for the ensuing year i.e.2006-07 before OERC. Hence, the contention of the objector that the application filed by the Licensee was not bonafide, was not correct and such a statement had been made to mislead the Commission.

4.1.2 Reacting to the objectors' statement that the present ARR & BST application was based on incorrect and manipulated facts/material/accounts, GRIDCO replied that its ARR Application had been prepared and submitted to OERC basing on the segregated audited accounts for the year 2004-05, facts, and materials. Moreover, GRIDCO had furnished all information and other details as per the prescribed formats provided for the FY 2006-07 with all justifications.

4.1.3 GRIDCO maintained that the public notice published on 11.12.2005 by the licensee was absolutely in line with the provisions contained in Electricity Act, 2003 and conformed to the requirements under the aforesaid Act. Hence, sufficient information had been given for inviting objections and this could not be treated as a frustrated exercise and contrary to the law and/or principle of natural justice.

4.2 Energy Availability & Procurement:

4.2.1 On power availability, GRIDCO stated that the projection of quantum of power procurement for 2006-07 was based on the generation plan submitted by OHPC, OPGC, TTPS and considering 80% PLF of Central Generating Stations. The licensee did not accept the power availability figure of 16,961 MU given by the objectors.

4.2.2 Replying to the objectors' query on lower availability of hydro power, GRIDCO replied that total energy available would be 5156 MU in 2005-06 from OHPC Stations. Another 300 MU was expected from Machhkund during the year due to which the total hydro availability in 2005-06 would

be 5456 MU. The objectors' suggestion to consider 6000 MU from OHPC for 2006-07 was not acceptable to GRIDCO.

- 4.2.3 GRIDCO further said that it had no views to offer on the point relating to OHPC Tariff, auxiliary consumption, fixation of design energy etc.
- 4.2.4 Regarding net drawl from OPGC, GRIDCO stated that the generation plan furnished by OPGC for 2006-07 indicated export of 2973.529 MU after deducting auxiliary consumption of 10% from generation of 3311.280 MU. GRIDCO considered the net energy sent out as 2973.41 MU for FY 2006-07 as per projection of OPGC.
- 4.2.5 Replying to the objectors' query on norms used for fixation of Tariff of OPGC, GRIDCO said that the CERC regulations dtd. 26.03.01 and 26.03.04 were subjudice. Once the same had been decided, the auxiliary consumption along with other norms would be agitated.
- 4.2.6 On power purchase projections for TTPS, GRIDCO said that the same was based on generation plan submitted by TTPS. GRIDCO had no objection if Commission considered auxiliary consumption at 10% as suggested by the objectors. GRIDCO, however, pointed out that CERC in its Regulation dtd.26.03.04 had considered auxiliary consumption at 11%.
- 4.2.7 GRIDCO's power purchase projections from CPPs were based on present trend and the licensee was trying to draw all surplus power available from them. The Objector's proposal regarding the energy drawl of 605MU from CPPs was considered as beyond expectation.
- 4.2.8 GRIDCO would have no objection if the Commission took a suitable decision on drawl from OHPC considering the latest reservoir level.

4.3 **Transmission Loss**

- 4.3.1 On high level of transmission loss, GRIDCO replied that it had no control over the transmission loss, which was technical in nature and depended upon several factors beyond the licensee's control. Transmission Loss took place due to several reasons as listed below:
 - ◆ GRIDCO maintained that there had been increase in Transmission Loss during the year 2005-06 on account of extension of 132 KV networks and addition of substations and augmentation of sub-stations' capacity.
 - ◆ Some of the lines such as 132 KV Theruvalli-Kesinga – Bolangir and 132 KV Chiplima-Baragarh-Bolangir etc. had been overloaded.
 - ◆ The Lines close to seacoast were also responsible for higher level of loss because of high capacitance effect e.g. Chatrapur-Rambha 132 KV traction feeder. There has been around 1/3rd extra loss due to saline effect.
 - ◆ The transmission loss varied basing on the import & export in the same line.

- ◆ Further at the time of low hydro generation, there was flow of power from TTPS to Jeypore, which was also a cause for increase in transmission loss from March-05 to September-05.
- ◆ GRIDCO had undertaken construction of new lines and sub-stations based on future load growth for improvement of quality of power supply. In some of the new lines, the loading was very less which was a factor for adding loss.

4.3.2 GRIDCO also pointed out that further reduction of the loss beyond 4% was not possible as recommended by Kanungo Committee Report and suggested by the objectors.

4.3.3 Reacting to the suggestion of objectors to prepare computerised load flow studies at different loads to know the line losses, GRIDCO replied that the same was an issue for separate consideration and was not relevant to the present ARR & BST Application.

4.3.4 Regarding transmission loss on account of wheeling to outside the State through EREB, GRIDCO said that this has been estimated at 53.9 MU by extrapolating the unit loss for the first 6 months of 2005-06 i.e. 26.95 MU. This had been done as per the procedure adopted by the Commission vide para 6.3.4 of the BST order dated 26.02.2005 in case No. 146 of 2004. Accordingly, GRIDCO had projected export of balance power after deducting this much quantity of power.

4.4 **Demand Estimation & Energy Requirement:**

4.4.1 Reacting to the objectors' viewpoint that the Demand for power was artificially projected by GRIDCO, the licensee replied that electronic meters of 0.2 accuracy had been installed at all the Grid S/S at interconnection points as well as supply points connected to distribution companies. All power purchases and sales were duly accounted for and as such, the question of artificially projecting the demand did not arise. In fact, the projection of GRIDCO during previous years had been proved to be correct.

4.4.2 Regarding energy requirement, GRIDCO replied that its projection of power procurement was not based on the sale figures of DISTCOs but based on the DISTCOs' proposal of power procurement from GRIDCO.

4.4.3 If the energy requirement was kept at lower side as suggested by the objectors, then there might be either load shedding or otherwise, there would be overdrawl for which overdrawl charges would have to be paid by the Distcos.

4.4.4 The DSM activity as was talked by the objectors, was a part of DISTCOs' activity to reduce power demand. Reduction in energy demand through energy conservation measures and demand side management were not relevant to the present ARR & BST Application, maintained GRIDCO.

4.5 Power Procurement Cost

- 4.5.1 On power procurement cost, GRIDCO stated that the same for 2006-07 was based on the rates as proposed by OHPC, OPGC and the tariff order of CERC for TTPS and Central Generating Stations. The licensee maintained that the projection of power procurement cost for 2006-07 should not be compared with those approved by OERC for 2005-06.
- 4.5.2 Regarding PPAs and adoption of two-part tariff for OHPC stations GRIDCO stated that in accordance with OERC order dated 22.03.2005, two-part tariff was followed for UIHEP w.e.f. 01.04.05. The Commission has already approved long term PPA based on CERC norms executed between OHPC and GRIDCO for Rengali Power House. PPAs for other old generating stations would be in line with Rengali PPA. However, in accordance with CERC norms, the old generating stations shall be governed by single-part tariff since the per unit cost is lower than the lowest variable cost of central generating thermal stations. On capital cost of UIHEP, GRIDCO said that it had requested OHPC to furnish the progress on review of capital cost of UIHEP.
- 4.5.3 GRIDCO stated that the unit cost projected in BST application was based on the tariff proposal submitted by generators of state and CERC orders for Central Generating Stations.
- 4.5.4 GRIDCO has not received any credit bill from NTPC towards the downward revision of tariff by CERC for the period 2001-02 to 2003-04.

4.6 Interest on Long Term Liabilities

- 4.6.1 Regarding securitisation, GRIDCO said that for liquidation of past dues of generators, securitisation was badly necessary as adopted by Govt. of India for the overall benefit of end users. On securitisation, DPS of 24% was reduced to a bond interest of 8.5%. Therefore, interest on securitisation should be allowed in the ARR.
- 4.6.2 On interest on GRIDCO bonds, the licensee replied that these expenses were estimated based on evidential documents. Interest on GRIDCO bonds and loans were revenue expenditure and were genuine which should be allowed in ARR.
- 4.6.3 GRIDCO's projection of interest cost for 2006-07 was based on facts and evidential documents. Hence, the licensee did not agree to the objectors' projection of interest cost for 2006-07.

4.7 Previous Loss

- 4.7.1 In reply to the objections raised against the proposal for pass through of past losses, GRIDCO stated that the proposal for pass through of Rs.1028.15 crore of accumulated loss up to 2004-05 was based on audited accounts. The losses were mostly due to:

- ◆ Approval of lower than actual expenses in respect of Employees Cost, Interest Cost, Depreciation etc.,
- ◆ Actual drawal from OHPC and CPPs is less than the Commission's approval for different years which has forced GRIDCO to draw equivalent additional power from CGSs at extra cost.
- ◆ Excess power purchase cost incurred during 2002-03 due to hydrology failure.

4.7.2 Reacting to the observations of the objectors that the losses of Gridco was due to inefficiency of Gridco, excess expenditure over approved ones, the licensee stated that the same was not correct. Over the years from 1997-98 to 2004-05, the Hon'ble Commission had allowed total costs of Rs. 13,659.58 crore and revenue of Rs. 12,255.65 crore leaving a gap of Rs. 1,403.93 crore as un-recoverable costs. As against this, Gridco had achieved revenue of Rs. 15,029.30 crore and incurred costs of Rs. 15762.44 crore over the same period leaving a gap of Rs.733.14 crore. This implies that overall financial performance of Gridco has been comparatively better during the above period.

4.7.3 GRIDCO also mentioned that its expenditure under the heads of power purchase, employees' costs, interest costs accounted for about 92% of the total costs. Over the period from 1997-98 to 2004-05 the cost incurred against these 3 items was higher by Rs. 2,572.13 crore compared to the approved figures.

4.7.4 GRIDCO further submitted that if Rs. 427 crore was considered in ARR as interest receivable from DISTCOs between 1997-98 and 2004-05 on back to back loan which has not been received except Rs. 80 crore realized by way of adjustment, the total gap would further increase.

4.7.5 The non-payment of dues by DISTCOs had burdened GRIDCO with long-term loans by way of securitisation of dues payable to various generators. As per audited accounts of GRIDCO for FY 2004-05, the amount receivable from DISTCOs against BST was Rs. 1,292 crore and loan outstanding including interest was Rs. 1,499 crore. Because of the non-payment by WESCO, NESCO and SOUTHCO, NTPC has not paid Rs. 247 crore (not Rs.270 Crore as mentioned by objectors) to GRIDCO and this has been adjusted by NTPC. The three Distribution Companies have been requested to arrange term loans to make one time settlement. The amount of Rs. 247 crore has been considered in the accounts of GRIDCO for FY 2004-05 and the accumulated loss of GRIDCO has been reduced.

4.8 **Export**

Regarding the quantum of export, GRIDCO said that the surplus left after meeting State demand was considered for export. GRIDCO's projection of 504 MU towards export for 2006-07 is realistic. The licensee did not agree with the estimation given by the objectors.

4.9 **Review Petition**

4.9.1 Regarding the financial impact of Rs.634.84 crore due to the Review Petition and an additional amount Rs.38.70 Cr. towards payment of Income Tax to TTPS for 2004-05 & 2005-06 and payment to PGCIL towards Contracted power, GRIDCO maintained that under provision of the Electricity Act, 2003, any reasonable expenditure incurred by the licensee would be allowed for pass through and recovered in ARR.

4.9.2 **Payment of Delayed Payment Surcharge to OPGC**

On payment of DPS to OPGC, GRIDCO stated that as per the arbitration proceeding, GRIDCO had to pay an amount of Rs.93.776 crore towards DPS relating to various payment obligations, of which GRIDCO paid Rs.15.00 crore by 31.12.03. The balance was to be paid in 24 monthly equal instalments.

4.9.3 **Pass through of Open Access Charges**

As per power trading Agreement with Traders, the open Access charges upto ER Boundary had been borne by GRIDCO.

4.9.4 **Pass through of ERLDC Scheduling charges**

As per Power Trading Agreement, with traders the ERLDC scheduling charges had been borne by GRIDCO.

4.9.5 **Compensation to Power Trading Company**

As per Power trading Agreement with traders, compensation has been paid by GRIDCO for short supply to traders for the amount claimed for April and May 2005. Short supply in trading occurred due to low availability of power from hydro stations and thermal sources and also increase in state demand.

4.9.6 **Inter- State Transmission Charges**

GRIDCO would perhaps earn revenue of about Rs.5 crore whereas OERC had approved revenue of Rs.17.5 crore under this head. Therefore, the deficit under this head was to be included in ARR for 2006-07

4.10 **Miscellaneous Receipts**

4.10.1 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 behaviour of the grid constituents, line availability, demand (peak & off-peak) of the state, better hydro generation resulting in management of grid operation and scheduling of drawl in a most efficient manner etc. Since the behaviour of these factors was unpredictable, estimation of receipt or payment of UI charges beforehand would be difficult and impossible. Therefore, GRIDCO projected zero income from Unscheduled

Interchange (UI) of power. If there was any gain due to UI charges, it would be taken into account for adjustment against the past losses.

- 4.10.2 GRIDCO opined that the gains from selling of power to out side states during 2003-04, 2004-05 have already been accounted for the same year which was available in the audited accounts for 2003-04 and 2004-05.
 - 4.10.3 GRIDCO did not agree to the objector's estimation of Rs760 crore toward miscellaneous receipts since the projection of 1975 MU of export by the objector was not acceptable.
- 4.11 **Revenue Requirement:**
- 4.11.1 On revenue requirement, GRIDCO stated that the Annual Revenue Requirement for 2006-07 comprising Power Procurement cost, Employees cost, A&G cost, Interest, Depreciation, Reasonable Return etc along with pass through of anticipated losses for 2005-06 as against OERC order and accumulated past losses from 1996 to 2004-05 had been submitted to the Commission with full justification, facts along with evidential documents. GRIDCO would have no objection for detailed scrutiny of the same and to the decision of the Commission towards fixation of Bulk Supply Price for FY 2006-07.
 - 4.11.2 GRIDCO replied that the calculations of ARR made by the objectors were based on their own assumptions, which were not acceptable to the licensee.
 - 4.11.3 GRIDCO also stated that due to uncertainty on collection of Govt. dues, the same was not projected. However, if any dues were collected during the year, the same would be set off against regulatory assets.
 - 4.11.4 GRIDCO did not agree to the objectors' proposal on the point of truing up of earlier accounts since the same was already reflected in audit reports.
 - 4.11.5 Reacting to the objectors query whether the profit made for 2003-04 & 2004-05 had been accounted for the respective years' revenue requirement, GRIDCO replied that the same was accounted for which the accumulated loss had been reduced to Rs.1028.15 crore by 2004-05.
- 4.12 **Bulk Supply Price**
- 4.12.1 GRIDCO did not agree to the objector's calculation of revenue requirement.
 - 4.12.2 The Licensee did not agree with the objectors' proposal for reduction of demand & energy charges.
- 4.13 **Miscellaneous**
- 4.13.1 Regarding metering, GRIDCO replied that it had fixed 0.2 accuracy meters at power receiving and sale points, which were periodically checked for accuracy. The licensee submitted that the suggestion of the

objectors to order for sample checks by its appointed inspectors from time to time was a different chapter and was not relevant to the present ARR & BST Application.

- 4.13.2 On improvement of efficiency, GRIDCO replied that it had made reasonable effort to improve its efficiency, standard of service/performance. In fact, after commissioning of a number of new EHT lines and Grid Sub-stations during last few years, the voltage profile in most part of the State had improved remarkably. The interruption in supply had also been drastically reduced. GRIDCO was maintaining its bulk power supply to DISTCOs round the clock.
 - 4.13.3 GRIDCO strongly opposed to the contention of the objectors that it had not applied its mind while proposing the BST for 2006-07. In fact, GRIDCO had estimated its ARR based on the Energy & Demand estimation of DISTCOs, adopting least cost combination of power procurement as per the generation plan submitted by generators, the power purchase rate submitted by state generators/approved rate by CERC for Central Generating Stations. Evidential documents pertaining to this estimation were submitted along with the application to the Commission for scrutiny by the Commission.
- 4.14 **GRIDCO's Response to Queries Raised by the Commission Staff in the Public Hearing**
- 4.14.1 Replying to the query of the Commission regarding lower drawl from hydro stations GRIDCO stated that its projections of drawl from hydro stations were based on the generation plan submitted by OHPC during October 2005. GRIDCO was convinced that OHPC couldn't generate up to design energy level considering the Commission's approval and actual drawl by GRIDCO for the past years. GRIDCO had no objection if the Commission took suitable decision on drawl from OHPC considering the latest reservoir levels.
 - 4.14.2 Regarding drawl from CPP, GRIDCO replied that it expected to draw 360 MU in 2006-07 based on the latest MOU signed by GRIDCO and NALCO and drawl from other CPPs, provided NALCO adhered to its minimum commitments.
 - 4.14.3 Replying to the Commission's query whether NTPC had filed tariff application before CERC, GRIDCO stated that though NTPC had filed tariff application, the tariff was yet to be determined. GRIDCO has projected the fixed cost of CGSs based on the claim made by NTPC in September, 2005 bill which were lower than the rates fixed by CERC for 2003-04. NTPC had gone to Appellate Tribunal against CERC order dtd.28.02.2005 and the latter had modified the order and approved the fixed cost as follows:

Table - 11

Fixed Cost Claim by NTPC in January, 2006

Stations	Fixed Cost Claim by NTPC in Jan, 2006 Bill due to Modification of CERC Order (Rs. Crore)
FSTPS	578.75
KHTPS	365.52
TSTPS	497.88

- 4.14.4 GRIDCO has requested the Commission to approve the above fixed cost for 2006-07.
- 4.14.5 Regarding justification sought by OERC towards payment of income tax for TTPS for 2004-05 and 2005-06, GRIDCO replied that the same had already been explained in Vol. I of the ARR application. GRIDCO further stated that the bills submitted by PGCIL towards claim of Rs.8.92 crore for contracted power had already been furnished to the Commission.
- 4.14.6 Reacting to the Commission's query regarding fluctuation in projections for interest and principal repayments in the ARR for 2006-07, GRIDCO stated that initially the calculation of interest and repayment of principals was based on the segregated account as notified by the Orissa Electricity Reform (Transfer of Transmission and other related activities) Scheme, 2005 dated 09.06.2005. In the mean time, the annual accounts of GRIDCO were finalised and adopted by the Board of Directors in their 96th meeting held on 28th October 2005 and the Statutory Auditors gave their report on 29th October 2005. GRIDCO stated that the differences exhibited in the projections of Interest and Principal repayments in the original and revised filing were mainly due to change in mix of Loan Portfolios.
- 4.14.7 Regarding the query whether GRIDCO was exploring any scheme of Central and State Governments for funding the bulk supply business, the licensee stated that such a scheme was not available. Earlier one-time settlement scheme was availed by undivided GRIDCO.

5 OBSERVATIONS OF STATE ADVISORY COMMITTEE (SAC)

- 5.1 The SAC constituted under Section 87 of the Electricity Act, 2003 met on 8th February 2006 to deliberate on the tariff related issues pending before the Commission. The discussion related to the review petition of GRIDCO pending

before the Commission for the year 2005-06, the Annual Revenue Requirement Applications for the year 2006-07 of all licensees.

- 5.1.1 Members in general expressed concern about the poor performance of the licensees rendering requisite services to the consumers, high distribution loss, non-investment by private entrepreneurs, GRIDCO's proposal for stiff hike in bulk supply price, proposed rise in R&M expenses by OPTCL despite its failure to spend the approved amount in the previous tariff orders.
- 5.1.2 In addition, the members strongly recommended that the licensees should not be allowed any hike in price without giving proper services to the consumers. The members expressed their displeasure over the proposed hike in price by the licensees, which had not been linked with performance efficiency.
- 5.1.3 Some members did not appreciate GRIDCO's proposal for lower drawl from the cheaper source of hydro power. The members pointed out that frequent power interruption had assumed alarming proportion and no remedial action had been initiated in this regard. On the other hand, a sum of Rs.10.00 lakh per MW was being proposed to be collected from the prospective consumers in the name of system augmentation. They stated that overdrawl during off-peak hours helping the system should not be penalised. They also proposed to incentivise sale of energy during night shift and staggering of weekly off in industries.
- 5.1.4 The members expressed their deep concern over the increasing transmission loss and alleged that structure of Demand Side Management (DSM) has not been contemplated.
- 5.1.5 The SAC requested the Commission to introduce financial, social and energy audit of the licensees.
- 5.1.6 Some alleged that GRIDCO was not making any infrastructural development and expressed their doubt regarding the price of coal and oil furnished by the licensee and requested the Commission to verify the same properly.
- 5.1.7 Some stated that ARR filing should be based on audited accounts. They enquired the reasons for non-implementation of recommendations of Deepak Parekh Committee.
- 5.1.8 They stated that the transfer of OSEB assets to another Government organisation should not be at the up-valued cost. CERC Regulation did not envisage depreciation on the up-valued cost. In respect of up-valuation of assets, they pointed out that no distinction between a private or government body has been stipulated in the Reform Act, 1995.

- 5.1.9 The members stated that no response had been received from the Govt. with reference to upvaluation of assets. As such, there was little option left for the Commission except to increase the price.
- 5.1.10 The members said that as the DISTCOs defaulted in payment of their dues to GRIDCO, GRIDCO in turn had to securitise the power purchase cost and the consumers should not be saddled with carrying charges of such securitised amount.

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

On detailed scrutiny and examination of the Annual Revenue Requirement and Bulk Supply Price Applications for 2006-07, the written and oral submissions of the objectors and the views of the members of the State Advisory Committee, the Commission has passed the order as enunciated in the subsequent paragraphs.

6.1 Quantum of Power Purchase

6.1.1 GRIDCO as a deemed Licensee procures power from the generating stations inside and outside the State to meet the requirements of the consumers of the State. Currently GRIDCO, after meeting the total demand for power in the State, sells the surplus power as and when available within the state to the intending agencies for use elsewhere.

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 2006-07 for drawl of power from GRIDCO and the latter has prepared the estimate for the same. GRIDCO has projected its power drawl after taking into account requirements of (i) distribution companies (ii) CPPs and (iii) sale of surplus power, if available.

6.1.4 The quantum of energy drawl by DISTCOs from GRIDCO has been projected differently both by GRIDCO and DISTCOs in their respective filings.

6.1.5 The quantum of power to be purchased for the year 06-07 in respect of the four distribution companies has been assessed and approved by the

Commission while determining the Revenue Requirement and tariff for the DISTCOs in Case Nos. WESCO (44/2005), NESCO (45/2005), SOUTHCO (46/2005), CESCO (47/2005).

6.1.6 Accordingly, the quantum of power purchase approved by the Commission along with the proposals given by the DISTCOs and GRIDCO is given below:

Table - 12
Drawl of Power by DISTCOs, 2006-07

	Business Plan for 2006-07	Proposed by DISTCOs for 2006-07	Proposed by GRIDCO for 06-07	Commission's Approval for 06-07
CESCO	3,990.00	4,164.00	4,409.92	4,164.00
NESCO	3,317.14	4,200.00	4,200.00	4,169.00
WESCO	4,200.00	4,600.00	4,531.03	4,600.00
SOUTHCO	1,856.00	1,750.00	1,836.30	1,750.00
TOTAL	13,363.14	14,714.00	14,977.25	14,683.00

6.1.7 Drawl from GRIDCO also includes the units lost on account of EHT transmission, as the DISTCOs receive metered power supply at HT & EHT. The Commission approves the emergency drawl by CPPs at 120 MU for 2006-07, as projected by GRIDCO. The detailed requirement of power purchase for the state use is projected in the table below:

Table - 13
Purchase of Power by GRIDCO for State Use, 2006-07
(Figures in MU)

Name of the DISTCOs	Commission's Approval 2005-06	GRIDCO's Proposal in ARR 2006-07	Commission's Approval 2006-07
CESCO	3930.00	4409.92	4164.00
NESCO	3308.14	4200.00	4169.00
WESCO	4150.00	4531.03	4600.00
SOUTHCO	1800.00	1836.30	1750.00
TOTAL DISTCOs	13,188.14	14977.25	14683.00
CPP	10.00	120.00	120.00
Export	2808.28	504.00	-
TOTAL SALE	16,006.42	15,601.25	14,803.00
Transmission loss for DISTCOs @ (4 % on DISTCOs drawl)	549.50	709.73	611.79
Transmission loss for export	84.10	15.26	-
Total Purchase	16,640.02	16,326.24	15,414.79

6.2 Determination of Simultaneous Maximum Demand (SMD) in MVA

Bulk Supply price contains a component of demand charge, which is calculated on the basis of average system demand of the distribution companies. The Commission in the last BST order dtd. 22.03.2005 had approved the SMD at 2066.18 MVA for the GRIDCO system for 2004-05 and 2005-06 taking into account the actual SMD figures available upto December, 2004. The Commission holds the view that this figure has undergone changes in the recent past. It has been observed that there has been an upward trend in the average demand of the DISTCOs during the last three months i.e. November'05 to January'06 and the Commission feels that the same trend would continue during the ensuing year. Therefore, the Commission has taken the average of last three months of SMD for the four DISTCOs while arriving at the average SMD at 2226.76 MVA for 2006-07. The proposed SMD by GRIDCO and DISTCOs along with the approved figures for 2006-07 are presented in the table below:

Table - 14
Demand in MVA, 2006-07

DISTCO	Proposal by DISTCO in RST	Proposal by GRIDCO in ARR	Actual Average of Maximum Demand from April 2005 to Jan. 2006	Actual Avg of Maximum Demand from Last 3 months i.e. from Nov. 2005 to Jan. 2006	Commission's Approval for 2006-07
CESCO	711.35	717.80	712.63	719.20	719.20
NESCO	650.00	550.00	505.96	554.85	554.85
WESCO	740.00	658.69	646.34	663.76	663.76
SOUTHCO	295.00	287.27	285.79	288.95	288.95
TOTAL	2396.35	2213.76	2150.72	2226.76	2226.76

6.3 Computation of Transmission Loss

6.3.1 After examining the transmission loss figures of different months for 2005-06 as submitted by the licensee, the Commission approves it at 4% of energy transmitted for 2006-07. The details of calculations of transmission loss are furnished in the tariff order for OPTCL for the year 2006-07.

6.3.2 GRIDCO shall purchase power from the generator and at inter-state point from outside sources while OPTCL will bill the customers at the delivery point. There would be a gap between the units treated as lost on account of delivery to the customers on the normative basis approved by the Commission and the actual figure. It will be desirable that existing practice of billing on the basis of actual loss shall be followed and final adjustment shall be carried out at the end of FY 2006-07 between

GRIDCO and OPTCL. GRIDCO shall give credit to OPTCL for the units deemed to have been lost on account of export of power, if any.

6.4 Purchase of Power from Different Generating Stations

6.5 State Hydro

6.5.1 GRIDCO's proposal and Commission's approval for 2006-07 for various stations of OHPC are given in the table below the details of which have been dealt in Case No.48/2005 for determination tariff and revenue requirement of OHPC.

Table - 15
Drawl From State Hydro Stations (2006-07)

Source of Generation	GRIDCO Proposal (2006-07)	Commission's Approval (2006-07)
OHPC (Old stations)	3452.36	3676.86
Upper Indravati	1942.38	1942.38
Machkund	265.00	265.00
Total Hydro	5659.74	5884.24

6.5.2 **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 2006-07 implying thereby that all Units shall be fully operational. The generation plan furnished by TTPS for 2006-07 indicating generation of 3520 MU at 87.35% PLF has been furnished by GRIDCO. After deducting auxiliary consumption of 11% the net energy availability of 3132.80 MU is proposed by GRIDCO for FY 2006-07. The Commission approves net drawl of 3132.67 MU from TTPS for the year 2006-07.

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

6.5.4 OPGC in its generation plan for 2006-07 had projected a target generation of 3311.28 MU. But GRIDCO has projected net energy availability of 2973.41 MU for FY 2006-07 after deducting auxiliary consumption of 10% from generation plan proposed for 3285.54 MU at 89.54% PLF.

6.5.5 The PPA envisages auxiliary consumption at 9.5%. Hence, assuming auxiliary consumption @ 9.5% as per the provisions of the PPA, the

Commission approves for a net drawl of 2981.39 MU at 89.54% PLF as against 2973.41 MU proposed by GRIDCO.

6.6 Captive Power Plants (CPPs)

6.6.1 GRIDCO had submitted in its application that power purchased from the captive power plants was not firm in nature and was supplied to the system, as and when available. The actual availability from the CPPs varied widely from the quantum approved by the Commission in the past years. The total drawl from CPPs as proposed by GRIDCO is 160 MU for 2006-07. OPTCL has submitted the Load Generation Balance Report (LGBR) for the year 2006-07 and projected GRIDCO's drawl from CPPs at 331 MU. GRIDCO has already drawn 298.50 MU for the period April'05 to Dec.'05 and prorating the same for whole year, the drawl from CPPs comes to 398 MU.

6.6.2 Considering the past trend and also the relatively low cost of power, GRIDCO should maximise the drawl from the CPPs. The Commission scrutinised the proposal of GRIDCO and the LGBR and approves drawl of power at 398 MU from CPPs for 2006-07 based on the present trend of drawl as indicated below:

Table - 16
GRIDCO DRAWL FROM CPPs FOR FY 2006-07

(Figs. In MU)

	LGBR of OPTCL	GRIDCO's Proposal, 2006-07	Actual Drawl upto Dec.,05	Actual Drawl Prorating for Whole Year
NALCO	78.00	50.00	133.65	178.20
ICCL	58.00	40.00	27.31	36.41
RSP	78.00	5.00	49.14	65.52
HPCL	-	5.00	15.70	20.93
NINL	113.00	50.00	47.88	63.84
NBFA	4.00	10.00	24.82	33.09
TOTAL	331.00	160.00	298.50	398.00

6.7 Power Purchase from Central Generating Stations

6.7.1 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 had considered the Central sector system loss at 2.94% in the ARR for 2006-07 based on the

Commission's approval for 2005-06. It is observed from the data circulated by ERLDC that the weekly system loss for ER system varied from 2.7% to 4.8% for the current year up to December 2005. On examination of the proposal submitted by GRIDCO, the Commission observed that the average transmission loss in this regard worked out to 2.91% in 2004-05 and 3.64% upto December 2005 of 2005-06. The Commission had approved the central transmission loss of 2.94% for the year 2005-06. Higher loss in ER system has impact only on actual energy drawl of GRIDCO but not on total cost since cost is calculated on gross drawl. As ABT system is in operation and loss has been calculated by ERLDC on weekly basis, the Commission accepts the Central Sector loss of 3.64% for 2006-07 since GRIDCO has no control over it.

6.7.2 Central Generating Stations (CGSs)

Orissa has been allocated shares in all the NTPC stations located in the Eastern Region as well as from the Chukha Hydro Electric Project in Bhutan. The entitlement from these stations is based on share allocation made by the CEA from time to time. The energy accounting from these stations is done on a monthly basis as per the ABT based Regional Energy Account (REA) prepared by the Eastern Regional Power Committee. Since ABT has come into operation from 01.04.2003 in the Eastern Region, GRIDCO has proposed to draw the entire share from ER stations of NTPC considering generation at 80% PLF.

- 6.7.3 The availability from the CGSs at 80% PLF would entitle them for recovery of full capacity charge as per CERC notification. That is why the energy drawl from the above central sector stations has been estimated taking 80% PLF for the ensuing year. The Commission considers the Central Sector transmission loss @ 3.64% for the above drawl as stated earlier.
- 6.7.4 CEA vide its letter dt.11.11.2005 has revised the share allocation of power from CGSs in the Eastern Region and Chukka Hydro Electric Power effective from 14th November, 2005. With the above stipulation, the details of GRIDCO's drawl from CGSs, as approved by the Commission, are given in the table below.

Table - 17
Drawl From Central Generating Stations (2006-07)

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons. (%)	Estimated PLF (%)	Net Availability	GRIDCO Share (%)	GRIDCO Share (MU)	Share Excluding Central Sector Transmission Loss of 3.64% (MU)
TSTPS	1000	7.50	80.00	6482.40	31.80	2061.40	1986.36
FSTPS	1600	7.56	80.00	10365.11	13.63	1412.76	1361.33
KhSTPS	840	9.00	80.00	5356.92	15.24	816.39	786.67
TOTAL				22204.43		4290.56	4134.37

6.8 **Chukha:** Orissa has been assigned share of 15.19% in 270 MW Chukha Hydro Power Station, Bhutan. The Orissa quota on an average works out to 41 MW. Drawl from Chukha has been projected by GRIDCO at 236.56 MU for 2006-07.

6.8.1 Based on the LGBR submitted by OPTCL, GRIDCO's drawl from Chukka for the year 2006-07 will be 253 MU. The net drawl by GRIDCO for 2006-07 comes to 243.79 MU after deducting the Central Sector transmission loss @ 3.64%. On scrutiny, it is observed that GRIDCO has already drawn 206.14 MU for the period from April'05 to December'05 and for the balance period of the current year GRIDCO's drawl will be reduced due to lower generation in Chukka. The Commission accepts the projected drawl and approves 243.79 MU in respect of drawl from Chukka hydro station for 2006-07.

6.9 A summary of GRIDCO's proposal for purchase of power from different generating stations and the Commission's approved quantum of purchase for 2006-07 is given in the table below:

Table - 18
Quantum of Power Purchase from Various Sources for 2006-07
(Figures in MU)

Sources of Purchase	GRIDCO's Proposal	Commission's Approval for State Drawl
OHPC (OLD)	3452.40	3676.86
Machhkund	265.00	265.00
Indravati	1942.38	1942.38
TOTAL HYDRO	5659.78	5884.24
TTPS	3132.80	3132.67
OPGC	2973.41	2981.39
CPP	160.00	398.00
TOTAL ORISSA	11925.99	12396.30
Chukha	236.56	243.79
TSTPS	2000.67	1986.36
FSTPS	1370.71	788.34
KSTPS	792.31	0.00
TOTAL EREB	4400.25	3018.49
TOTAL GRIDCO PURCHASE	16326.24	15414.79

6.10 Power Procurement Cost

- 6.10.1 The cost of power is the highest component in the revenue requirement of GRIDCO. The Commission, for determination of the cost of power purchase, has exercised due diligence in arriving at the cost in respect of each of the power stations based on the relevant rules, regulations and documents available.
- 6.10.2 Section 86 of the Electricity Act, 2003, among other things, provides for determination of the generation tariff by the Commission. 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.
- 6.10.3 OHPC had submitted the application for approval of its Annual Revenue Requirement and Tariff of individual power station of OHPC separately for the financial year 2005-06 & 2006-07 in terms of Section-62, 64 and 86 of the Electricity Act, 2003 registered as Case No.48/2005. The tariff

approved in the said order will be utilised as the input for the determination of cost of power purchase from all stations of OHPC. However, the cost of power purchase from Machkund Hydro Electric Project is being dealt in the later part of this order.

6.10.4 Accordingly, the rate as approved in respect of each of the power stations of OHPC is given in the table below:

Table – 19
Schedule of Tariff for OHPC Stations

Name of the Power Station	Quantum of Power Purchase in 2006-07 (MU)	Annual Capacity Charge (Rs. Crore)	Energy Charge in paise per unit
Hirakud	1162.26	-	57.10
Balimela	1171.17	-	21.82
Rengali	519.75	-	35.56
Upper Kolab	823.68	-	16.35
Upper Indravati	1942.38	37.14	46.38
Total	5619.24		

6.11 Machhkund

6.11.1 OHPC had furnished a rate @19.47 paise/unit for Machhkund Power Station for the year 2006-07 inclusive of the arrear O&M charges based on energy drawl of 265 MU. On scrutiny of the calculation, the following observations are made:

- i) Orissa share of actual O&M expenditure during 2004-05 was Rs.3.95 crore as indicated in the tariff calculation.
- ii) OHPC has claimed O&M escalation @ 4% as per CERC norms.

6.11.2 The Commission has taken into consideration the net share payable by Orissa towards O&M expenses for the year 2004-05 (actual) to the tune of Rs.3.95 crore. Allowing an escalation of 4% per annum for the year 2005-06 and subsequently for 2006-07, O&M expenses come to Rs.4.27 crore and the rate per unit comes to 19.47 paise for the year 2006-07. Accordingly, the procurement cost works out to Rs.5.16 crore for an approved energy drawl of 265 MU.

6.12 Talcher Thermal Power Station (TTPS)

6.12.1 The determination of tariff for TTPS depends on CERC terms and conditions of tariff, 2004. However, 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.

6.12.2 **Fixed Cost:** GRIDCO has claimed fixed cost of Rs.220.99 crore for 2006-07. CERC has already approved TTPS tariff (Petition No.62/2000 dated 5th November, 2003) in which the total fixed cost has been determined as Rs.159.28 crore for the year 2003-04.

6.12.3 The R&M expenditure upto October 2003 allowed by the CERC is Rs.437 crore. As the matter of TTPS tariff comes under the purview of the CERC, the Commission shall be guided by the fixed cost as approved by CERC. Thus, the Commission accepts the fixed cost as Rs.159.28 crore for 2006-07 until further orders relating to R&M expenses by CERC.

6.12.4 The Commission had allowed Rs.126.35 crore towards R&M expenditure in the tariff order dated 19.04.2002 for the financial years 2000-01 and 2001-02. As per the existing MOU, GRIDCO is liable to pay additional fixed cost due to R&M @ Rs.1.7 lakh/month/crore of investment. The actual expenditure on account of R&M would be considered after receipt of due approval from CERC. Taking Rs.126.35 crore as R&M capitalisation, the Commission approves provisionally Rs.25.78 crore of additional capital cost subject to final order of CERC. As such, the total fixed cost for TTPS for the year 2006-07 comes to Rs.185.06 crore.

6.13 **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.

6.14 **FPA:** GRIDCO proposes FPA at 21.04 paise/unit considering 10% escalation over the average rate of 20.23 paise/unit arrived at for first 6 months of FY 2005-06. Subsequently, GRIDCO has submitted the revised bills of FPA from April 2005 to December 2005 raised by NTPC wherein the FPA rate has been substantially increased from an average of 21.04 paise/unit to 27.79 paise/unit. This change has occurred due to rise in the coal and oil prices in the market.

6.15 After detailed scrutiny of the bills submitted by GRIDCO, the Commission is convinced of the fact that there has been substantial increase in coal and oil prices leading to the rise in the FPA rate. The details of oil and coal prices from April 2005 to December 2005 is presented in the table below.

Table - 20
FPA Rates for TTPS

Months	Price of Coal (Rs./MT)	Price of Oil (Rs./KL)	FPA Rate (p/kwh)
April	685.09	25417.86	26.75
May	674.51	26490.11	26.31
June	674.43	27870.67	26.60
July	668.30	28634.42	26.42
August	668.90	29033.76	26.67
September	669.06	31349.88	27.79
October	669.66	31224.61	27.92
November	666.72	30451.49	27.39
December	607.36	30840.13	21.64
Average FPA			26.39

6.15.1 Based on the above facts and figures, the Commission approves FPA rate of 26.39 paise/unit considering the average of April–December, 2005 FPA rates.

6.16 Year-end Charges

GRIDCO has submitted that the year-end charges of TTPS include cess on water, water charges, electricity duty and income tax. GRIDCO has claimed Rs. 14.72 crore towards income tax for 2004-05 as TTPS had already submitted the income tax bill of this amount. Similarly, for the first 6 months of 2005-06, GRIDCO has claimed Rs. 7.53 crore towards income tax. The licensee also has claimed Rs. 15.06 crore towards income tax for 2006-07. The Commission on examination of the claims approves (i). Rs.15.06 crore towards income tax payment for 2006-07, (ii) Electricity duty of Rs.7.74 crore calculated @ 20 paise/unit on auxiliary consumption on the generation at 87.35% PLF, (iii) Incentive of Rs. 11.08 crore for excess generation over the normative PLF of 75% and (iv) Water cess & water charges of Rs.0.37 crore. Thus, the year-end charges approved for 2006-07 come to Rs.34.25 crore.

6.17 Orissa Power Generation Corporation (OPGC)

6.17.1 OPGC did not file its ARR with OERC for the year 2006-07 under the same plea as it had maintained for the preceding two years. The matter is sub-judice as the OPGC has gone on appeal against the orders of the Hon'ble High Court of Orissa passed in OJC No.13338 of 2001. However, till the issue is settled, the per unit rate for OPGC is provisionally estimated based on GRIDCO's filing of the cost

components of OPGC stations for 2005-06 subject to revision at a later date, if deemed necessary.

- 6.17.2 **Fixed Cost:** The fixed cost of OPGC for 2006-07 as proposed by GRIDCO was Rs. 223.04 crore. The Commission approves the estimate of fixed cost at Rs. 223.04 crore for the year 2006-07 as proposed by GRIDCO.
- 6.17.3 **Variable Charges:** GRIDCO has proposed variable charges in respect of Ib Thermal Power Stations at 58.52 paise/unit for 2006-07. The Commission after detailed scrutiny accepts 58.52 paise/unit as variable charges.
- 6.17.4 **FPA:** GRIDCO has proposed the FPA rate for 2006-07 at 5.56 paise/unit after considering 10% escalation over the FPA rate of 5.05 paise/unit for the first 6 months of 2005-06. The Commission on scrutiny of the FPA bills submitted by OPGC, approves the estimate of FPA at 5.56 paise/unit for 2006-07.
- 6.17.5 **Year-end Charges:** GRIDCO had proposed year-end charges of Rs. 39.45 crore on account of land tax, water cess, electricity duty, income tax and incentive. Similarly, for the first 6 months of 2005-06, GRIDCO has claimed Rs.10.49 crore towards income tax. The Commission on examination of the claims approves (i). Rs.10.49 crore towards income tax payment for 2006-07, (ii) Electricity duty of Rs.6.26 crore @ 20 paise/unit on auxiliary consumption on the generation at 89.54% PLF, (iii) Incentive of Rs.23.43 crore allowed for generation over and above normative generation of 68.5% PLF for the year 2006-07. Thus, the estimated year-end charges approved for 2006-07 is Rs.40.18 crore.

6.18 Power Procurement Cost

6.19 Captive Power Plants (CPPs)

6.19.1 GRIDCO in its application for 2006-07 had stated that an agreement has been executed between GRIDCO & NALCO on 30.08.2004 for procurement of surplus power of NALCO by GRIDCO. Based on that agreement, the surplus power of NALCO was made available to GRIDCO at the following basic price:

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

6.19.2 Based on the rates stated above, GRIDCO proposes cost for energy received from CPPs at 110.00 paise/unit, as the estimated annual drawl is

around 160 MU. GRIDCO has submitted in para 9 in its rejoinder dt.16.01.2006 that the quantum of power received from NALCO is higher than other CPPs. The Commission provisionally has accepted this rate for determining the cost of power purchase from all the CPPs for the year 2006-07 subject to actuals at the year-end.

6.20 Central Power Stations

6.20.1 **Chukha:** GRIDCO has stated that the procurement cost of power from Chukha for 2006-07 has been calculated based on the revised rate fixed by MOP/GOI, which is Rs.1.50/Unit for the full year effective from 01.01.2005. PTC in its letter dt.10.03.2005 informed that the issue regarding revision in Chukha power tariff had been resolved between MOP/GOI and MEA/GOI in line with the discussion the Secretary (POWER), MOP / GOI had with the beneficiary states of Chukha power on 10.01.2005 at New Delhi. Accordingly, Royal Government of Bhutan will be paid Rs. 2.00/ KWH round the year w.e.f. 01.01.2005 for Chukha power and the states will pay Rs. 1.50/KWH round the year w.e.f. 01.01.2005. The differential amount of Re. 0.50/KWH will be subsidized by Ministry of External Affairs (MEA)/GOI.

6.20.2 Further, handling charges @ 5 paise/unit has to be added to the above rates based on PGCIL letter dated 19th November 1999 addressed to the beneficiaries. GRIDCO has also to bear the expenditure on account of the transmission charges and central transmission losses in the PGCIL network. On detailed analysis of the aforesaid cost parameters, GRIDCO has proposed a rate of 174.44 paise/unit for 2006-07.

6.20.3 Based on GOI decision, the average rate per unit of Chukka power has been worked out and approved by the Commission at 174.79 paise/unit inclusive of central transmission loss and transmission charges for 2006-07.

6.21 Central Thermal Power Station

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

“The terms and conditions 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.”

- 6.21.2 Further CERC vide its notification dated 07.10.2005 stated that the billing of charges in terms of the Commission’s notification dated 30.4.2004 read with notification dated 11.6.2004, extended by notification dated 1.10.2004 and further extended by the notification dated 14.3.2005 up to 30.9.2005, shall be continued on provisional basis for a period up to 31.3.2006 or till disposal of the applications made by the utilities for approval of tariff, whichever is earlier. The tariff charged, based on provisional billing shall be subject to adjustment after final determination of tariff by the Commission.
- 6.21.3 The Commission’s estimate is based on the above order of CERC and takes into account the fixed cost as on 31st March 2004 applicable to FSTPS, KHSTPS & TSTPS. For variable charges, NTPC has furnished assessment based upon new norms fixed by CERC and the same also takes into account the coal price and oil price for April 2004 as the base price for variable charges. Any variation in the variable cost due to change in the cost and GCV of coal and oil would be billed separately through FPA. The above estimation is provisional subject to final adjustment after due notification by CERC.
- 6.21.4 **Fixed Cost:** GRIDCO in its proposal stated that the fixed cost had been calculated based on CERC’s notification dated 30.04.2004 and the share allocation made by CEA on 11.11.2005. Further, GRIDCO has considered a revision in the fixed cost made by NTPC due to reduction of O&M Cost & FERV as per CERC order dt.04.01.2005. NTPC has billed to GRIDCO based on the revised fixed cost w.e.f. September 2005. Further, GRIDCO had submitted in its response to queries raised by the Commission’s staff in the public hearing that NTPC had gone to Appellate Tribunal against

CERC order dated 28.02.2005 and the same has been modified by the Tribunal in January, 2006. As per this modification, NTPC has claimed the provisional bill for fixed cost which is furnished below in tabular form as under:

6.21.5 The Commission is of the considered view that the tariff for CGSs has not yet been finalised by CERC for the period from 1st April 2004 till date. Therefore, as of now all the bills submitted by NTPC to GRIDCO are to be considered as provisional and subject to final adjustment after notification of final orders by CERC. Hence, the Commission approves the amount of fixed cost as claimed by NTPC in its September'05 bill.

Table - 21

Fixed Cost of CGSs

Central Thermal Stations	Fixed Cost Approved by CERC for FY 03-04 (Rs. crore)	GRIDCO's Proposal Based on Fixed Cost as Claimed by NTPC in Sept, 05 Bill (Rs. Crore)	Estimated Generation in MU at 80% Plant Load Factor less auxiliary	Provisional Fixed Cost Considered for 2006-07 (Rs. crore)	Provisional Fixed Cost Considered for 2006-07 Including CGSs' Tr. Loss @3.64% (P/U)
Talcher STPS	501.27	493.72	6482.40	493.72	79.04
Farakka STPS	581.26	571.08	10365.11	571.08	57.18
Kahalgaon STPS	368.37	360.99	5356.92	360.99	69.93

6.22 Variable Charges

GRIDCO stated that NTPC has furnished the calculation for variable charges based on the CERC's revised norms as applicable from 1st April, 2004. Based on the above revised calculations, NTPC has raised the monthly bill to GRIDCO w.e.f 1st April 2004 on provisional basis and GRIDCO in its BST application considers the same towards energy charges payable to NTPC. The Commission has accepted the variable charges proposed by GRIDCO. The proposed and approved variable charges are indicated in the table below.

Table - 22
Variable Charges of Central Thermal Power Stations (P/U)

Stations	Variable Cost billed by NTPC w.e.f. 01.04.2005	GRIDCO's Proposal for 2006-07 (Including Central Tr. Loss of 2.94%)	Provisional Variable Cost Approved by the Commission for 2006-07 (Including Central Tr. Loss of 3.64%)
FSTPS	107.32	110.57	111.38
KHSTPS	107.48	110.74	111.55
TSTPS	41.06	42.30	42.61

6.23 Fuel Price Adjustment (FPA)

6.23.1 GRIDCO in para 6.9.3 of ARR application had stated that the average FPA of FSTPS, KSTPS and TSTPS were on the rise due to increase in coal & oil prices. Therefore, FPA has been calculated by GRIDCO on the basis of bills for Sept, 2005 produced by NTPC with an escalation of 10% including Central Sector Transmission Loss @ 2.94%.

6.23.2 The Commission scrutinised the actual bills of NTPC and observed that the coal and oil prices had increased substantially. The details of coal & oil prices and FPA rates as produced by NTPC are given below.

Table - 23
Coal & Oil Prices and FPA Rates of CGSs

MONTH	FSTPS			KSTPS			TSTPS		
	Cost of Oil (Rs./KL)	Cost of Coal (Rs./MT)	FPA P/U	Cost of Oil (Rs./KL)	Cost of Coal (Rs./MT)	FPA P/U	Cost of Oil (Rs./KL)	Cost of Coal (Rs./MT)	FPA P/U
Apr-04	13,065.10	915.30	-11.74	13,014.90	1,008.50	-2.07	14,741.20	489.20	0.98
Apr-05	14,543.69	1,128.17	2.03	15,141.03	1,076.75	2.21	15,251.94	561.37	6.41
May-05	18,062.79	1,199.14	9.67	15,141.00	1,149.15	10.10	13,653.03	559.06	6.14
Jun-05	18,062.79	1,088.75	5.26	18,483.65	1,117.08	16.21	13,398.31	776.55	19.39
Jul-05	18,062.79	1,394.15	28.53	18,483.00	1,297.03	33.60	21,966.87	807.97	23.47
Aug-05	18,062.79	1,449.50	27.90	18,805.10	1,306.04	28.53	16,203.92	972.55	34.57
Sep-05	22,615.93	1,457.61	26.76	18,805.09	1,325.75	31.32	19,536.49	1,009.80	36.88
Oct-05	20,706.51	1,465.18	26.32	18,805.09	1,213.75	16.03	15,869.20	879.03	28.38
Nov-05	20,706.51	1,420.02	21.84	18,805.09	1,241.73	20.34	19,292.89	988.68	35.39
Dec-05	21,886.09	1,396.43	16.36	18,805.09	1,210.64	13.20	19,319.71	891.70	26.42

6.23.3 The FPA signifies the difference between the prevailing cost of fuel and the cost on a particular date. A comparative picture has been drawn between the prevailing price of fuel and the prices existing as on April, 2004.

6.23.4 It is also an established fact that due to non-availability of coal, NTPC has imported coal. Further, oil prices have skyrocketed in the international markets. Taking the above factors into consideration, the commission has calculated the FPA rates based on the average price and GCV of coal and oil for preceding six months i.e. period from July'05 to December'05. GRIDCO should take adequate care to establish the correctness of these figures presented to the Commission as it involves huge outgo of cash by the utilities, which has been accepted on the basis of its submission. The details of the variable charges for the year 2005-06 are given in the table below:

Table - 24
Variable Charges of CGSs (P/U)

Stations	GRIDCO's Proposal for 2006-07 (Excluding Central Tr. Loss)			Provisional Variable Cost Calculated by the Commission for 2006-07 (Excluding Central Tr. Loss)			Total V.C. including CTL of 3.64%
	V.C	F.P.A.	TOTAL	V.C	F.P.A.	TOTAL	
FSTPS	107.32	29.44	136.76	107.32	24.50	131.82	136.80
KhSTPS	107.48	34.45	141.93	107.48	23.63	131.11	136.06
TSTPS	41.06	40.57	81.63	41.06	30.85	71.91	74.63

6.23.5 The differential FPA as projected in the above table is due to GRIDCO's computation of fuel cost on the basis of bills upto September'05, whereas the Commission has worked out the same upto December'05.

6.24 **Year-end Charges:** GRIDCO has projected the year-end charges for 2006-07 based on the basis of actual year-end charges for 2004-05. The details are given in the table below.

Table - 25
GRIDCO's Projection of Year-end Charges of CGSs

	FSTPS	TSTPS	KhTSPS
Energy drawal during 2004-05 (MU)	1,320.20	2,108.08	567.45
i) Income tax (Rs. crore)	10.123	Nil	Nil
ii) Electricity duty (Rs. crore)	Nil	4.741	Nil
iii) Incentive: (Rs. crore)	Nil	2.610	0.291
Total (Rs. crore)	10.123	7.351	0.291
Year-end Charge for 2004-05 (P/U)	7.67	3.49	0.51
Projection of year-end charges for 2006-07 (P/U)	7.67	3.49	0.51

6.24.1 The Commission has scrutinised the proposal and adopted the following principles for the purpose of calculation of the year-end charges for the year 2006-07.

- i) Income tax constitutes a major segment of the year-end charges. The commission provisionally considers the proposal of GRIDCO and accepts the same rate of income tax for 2006-07.
- ii) Electricity duty for TSTPS has been calculated @ 20 paise/unit based on the auxiliary consumption for 2005-06.
- iii) The Commission has considered generation at normative PLF of 80% for 2006-07 for which no incentive has been taken into account at present for CGSs while GRIDCO had considered incentive of Rs.2.61 crore for TSTPS and Rs.0.291 crore for KhSTPS.

6.24.2 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 (2006-07) (Paise/unit)

Central Thermal Stations	GRIDCO's Proposal Including Central Sector Loss @ 2.94%	Commission's Approval Including Central Sector Loss @ 3.64%
Talcher STPS	3.60	1.68
Farakka STPS	7.90	7.96
Kahalgaon STPS	0.53	Nil

6.25 Transmission Charge for PGCIL Lines

6.25.1 The tariff for central transmission lines is fixed by the principles and norms laid down by the CERC from time to time. Based on CERC notification and CEA's share allocation, PGCIL claims transmission

charge for use of central transmission systems by the eastern regional customers. The weighted average of percentage share allocation of the fixed cost towards PGCIL transmission charge has also been reflected in Regional Energy Accounts based on ABT norms. As per CEA's share allocation on 11.11.2005, GRIDCO has to pay weighted average of 18.41% share allocation of the fixed cost towards regional transmission system & 21.27% for inter-regional transmission system as PGCIL transmission charge.

- 6.25.2 In the ARR application, GRIDCO has considered the annual fixed charges of Rs.333.01 crore for PGCIL transmission system, consisting of both regional and inter-regional transmission systems based on claims made by PGCIL for September 2005 for all the users of the PGCIL system. However, it is ascertained from the monthly bill for December, 2005 produced by PGCIL that it has claimed Rs 331.628 crore as annual fixed cost towards transmission charges for both regional and inter-regional transmission systems duly accepted by GRIDCO. Therefore, the Commission considers a sum of Rs.331.628 crore as fixed cost towards PGCIL transmission charges for 2006-07 comprising Rs.204.32 crore towards regional transmission system and Rs.127.308 crore towards inter-regional transmission system.
- 6.25.3 Further, GRIDCO has considered a sum of Rs.19.69 crore as year-end adjustment charges for the EREB constituents, which comprises income tax of Rs.4.55 crore, incentive of Rs.12.98 crore, FERV of Rs.2.12 crore and AMC for special meter of Rs.0.05 crore.
- 6.25.4 The observations of the Commission on charges towards year-end adjustment claimed by GRIDCO are given below:
- 6.25.5 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. GRIDCO further submitted that PGCIL had billed Rs.13.84 crore towards incentive to be paid by ER constituents to PGCIL for the year 2003-04. The Commission accepts the same amount of Rs 13.84 crore for 2006-07.
- 6.25.6 The amount of income tax for the current year has been calculated by prorating the actual advance income tax paid by PGCIL (Rs.3.41 crore upto 3rd quarter) in 2004-05 i.e. Rs.4.55 crore.
- 6.25.7 The Commission approves an amount of Rs.5.00 lakh for maintenance of the special type of energy meters for 2006-07.
- 6.25.8 PGCIL has levied Rs.0.172 crore for FY 2002-03 & Rs.(-)0.191 crore for FY 2003-04 towards foreign exchange rate variation (FERV). Since the amount towards FERV for FY 2002-03 has been setoff in FY 2003-04, the

Commission does not accept any amount towards FERV for 2006-07 as against Rs.2.12 crore claimed by GRIDCO.

6.25.9 The details of GRIDCO's proposal & Commission's approval towards year-end adjustment charges for 2006-07 are given in the table below:

Table - 27
Year-end Adjustment Charges (2006-07) (Rs. Crore)

Description	GRIDCO's Proposal	Commission's Approval
Incentive	12.98	13.84
FERV	2.12	Nil
Income Tax	4.55	4.55
AMC for Special meters	0.05	0.05
Total	19.70	18.44

6.26 The total cost towards PGCIL transmission charges is indicated in the table below:

Table - 28
PGCIL Transmission Charges

	GRIDCO's Proposal	Commission's Approval
Regional Transmission System (Rs. crore)	205.70	204.320
Inter-Regional Transmission system (Rs. crore)	127.31	127.308
TOTAL FIXED COST	333.01	331.628
Year end Charges (Rs. crore)	19.70	18.44
Total Transmission Cost (Rs. crore)	352.71	350.068
GRIDCO's Share form Regional Tr.System (Rs. crore) (18.41 %)		37.611
GRIDCO's Share form Inter-Regional Tr.System (Rs. crore) (21.27 %)		27.074
GRIDCO's Share for Year end charge (Rs. crore) (18.41 %)		3.39
Total annual Transmission Charge Payable by GRIDCO for Central Transmission System (Rs. crore)		68.075
Less: Transmission Charges Received from Short term customers (actual receipt from April'05 to November'05 (Rs. crore)		7.0867
Net amount payable by GRIDCO towards Tr. Charge (Rs. crore)		60.988
Energy Drawl by GRIDCO (MU)	24429.00 (Total generation)	4543.56
PGCIL Tr. Charge (P/U)	14.44	13.42
PGCIL Tr. Charge Including Central Loss of 3.64% (P/U)	14.88 (considering CTS Loss as 2.94%)	13.93
The claims payable by each of the constituents of the EREB is based on the regional energy accounting.		

6.26.1 GRIDCO's proposal for the cost of power purchase from various generating stations and the Commission's approval based on least cost power purchase are given in the table below:

Table - 29
Power Purchase Cost for 2006-07

Source	GRIDCO's Proposal			Commission's Approval		
	Energy Drawl (MU)	Total Cost (P/U)	Total Cost (Rs. Crore)	Energy Drawl (MU)	Total Cost (P/U)	Total Cost (Rs. Crore)
OHPC	3452.40	40.96	141.41	3,676.86	33.69	123.87
MACHAKUND	265.00	19.47	5.16	265.00	19.47	5.16
INDRAVATI	1942.38	65.50	127.23	1,942.38	65.50	127.23
TOTAL HYDRO	5659.78	48.38	273.80	5,884.24	43.55	256.26
IB TPS	2973.41	152.37	453.07	2,981.39	152.37	454.27
TTPS	3132.80	150.88	472.68	3,132.67	144.76	453.50
CPPs	160.00	110.00	17.60	398.00	110.00	43.78
TOTAL STATE	11925.99	102.06	1217.14	12,396.30	97.43	1,207.81
FSTPS	1370.71	220.90	302.79	788.34	215.86	170.18
KhSTPS	792.31	231.53	183.44	-	219.93	-
TSTPS	2000.67	181.05	362.23	1,986.36	169.27	336.24
CHUKKA	236.56	174.44	41.27	243.79	174.79	42.61
TOTAL C.S.	4400.25	202.20	889.72	3,018.49	181.89	549.03
TOTAL	16326.24	129.05	2106.87	15,414.79	113.97	1,756.84
Note :	Central transmission loss of 2.94% for central stations included.			Central transmission loss of 3.64% for central stations included.		

6.27 Rebate for Prompt Payment from the Generators

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

6.27.2 For the purpose of calculation of revenue requirement, the cost of power should be calculated at its gross value, as the rebate available from the generator is likely to offset the rebate that will be allowed to the DISTCOs for payment through L.C. However, this will be subject to the actual figure as per the transaction at the end of the year, the effect of which is treated as nil for the year 2006-07.

6.28 **GRIDCO'S FINANCE**

6.29 The total volume of expenditure projected by GRIDCO for 2006-07 under various components, excluding cost of power procurement, has been grouped under the following heads:

- i) Employees Cost
- ii) A&G Expenses
- iii) ERLDC Charges
- iv) Interest on Loans
- v) Repayment of Loans

6.29.1 **Employees Cost:**

6.29.1.1 GRIDCO had projected Rs.3.11 crore of expenditure for 2006-07 under "Employees Cost". In its filing, GRIDCO had stated that as per provision under Section 5(1) of the Orissa Electricity Reforms (Transfer of Transmission and Related Activities) Scheme 2005, all personnel of GRIDCO stood transferred to OPTCL.

6.29.1.2 The Commission observes that 'Employees Cost' projected by GRIDCO is unduly high particularly when there is practically no staff with the licensee.

6.29.1.3 While replying to the query raised by the Commission during the public hearing, GRIDCO had stated that it had assumed 1.5% of the 'Employees Cost' of the composite business for its own business.

6.29.1.4 The Commission has determined and approved the total 'Employees Cost' of the composite business of GRIDCO in the Tariff Order for OPTCL for the year 2006-07. Accordingly, taking 1.5% of the approved Employees Cost of Rs.116.91 crore for the composite business, the cost allocable to GRIDCO should be Rs.1.75 crore as against Rs.3.11 crore proposed by the licensee.

6.29.1.5 Taking the above facts into consideration, the Commission approves Rs.1.75 crore on provisional basis for the year 2006-07 under the head 'Employees Cost'.

6.29.2 Administrative and General Expenses

6.29.2.1 GRIDCO had projected Rs.2.83 crore towards administrative and general expenses. The combined A&G expenses of GRIDCO and OPTCL was projected at Rs.18.68 crore which had been segregated between GRIDCO and OPTCL in the ratio of 15% and 85% respectively.

6.29.2.2 Following the earlier tariff orders, the Commission allows escalation of 5.2% over the approved figure of A&G expenses for 2005-06 to factor in changes in WPI & CPI and approves an amount of Rs.16.54 crore for 2006-07 for the composite business.

6.29.2.3 Out of the above amount of Rs.16.54 crore, the Commission apportions 10% to GRIDCO and approve an amount of Rs.1.65 crore on provisional basis under the head 'A&G Expenses'.

6.29.3 Other Expenses (ERLDC Charges)

GRIDCO had projected Rs.1.32 crore towards ERLDC fees. The Commission approves the same and allows Rs.1.32 crore to be passed on to ARR.

6.30 Interest on Loan

6.30.1 GRIDCO had projected an amount of Rs.383.38 crore towards 'Interest on Loan' for the FY 2006-07.

6.30.2 Pursuant to provisions in the Electricity Act 2003, the Government of Orissa had issued the Orissa Electricity Reform (Transfer of transmission and other related activities) Scheme, 2005 on 09.06.2005 by virtue of which GRIDCO was further unbundled for the purpose of transfer and vesting of transmission and related activities of GRIDCO to a new company, namely OPTCL. As per this scheme, the assets and liabilities of the transmission utility should be transferred from GRIDCO to OPTCL at the book value as on the date of transfer and the same should be adjusted to reflect the actual values on finalisation of audit of Annual Accounts of GRIDCO. The Annual Accounts of GRIDCO were finalised and adopted by the Board in its 96th meeting held on 28 October 2005 and the statutory auditors gave their report on 29 October 2005. Basing upon the audited accounts of GRIDCO and views of the consultants appointed by the licensee, GRIDCO has formulated separate accounts in respect of GRIDCO and OPTCL, which was subsequently approved by its Board in its 98th meeting held on 6.01.2006.

6.30.3 It was revealed from the segregated balance sheet that out of the total loan balance of Rs.5145.50 crore, an amount of Rs.3517.33 crore had been assigned to GRIDCO and the balance of Rs.1628.17 crore to OPTCL.

6.30.4 The details of GRIDCO loan as filed with the Commission are given in the table below:

Table - 30
Details of GRIDCO Loan

		Rate of Interest (%)	Closing Balance as on 31.03.05 (Rs Crore)	Closing Balance as on 31.03.06 (Rs Crore)	Closing Balance as on 31.03.07 (Rs Crore)	Interest Due for the Year (Rs Crore)
A	Govt. Loans					
	State Govt. Loan (OHPC Adj.)	10.50%	42.54	42.54	42.54	4.47
	State Govt. Loan (Working Capital)	13.00%	120.00	120.00	120.00	15.60
	IBRD Loan (Retained in GRIDCO)	13.00%	113.20	113.20	113.20	-
	NTPC-III (GoO Bonds)	8.50%	1102.88	1102.88	992.59	91.40
	Sub Total		1378.62	1378.62	1268.33	111.47
B	Institutional Loans					-
	REC Loan	12.15%	210.29	154.77	93.07	16.93
	REC WC Loan	7.50%	300.00	275.00	125.00	17.81
	PFC WCL		-	-	-	-
	PFC STL	7.50%	150.00	-	-	-
	Sub Total		660.29	429.77	218.07	34.74
C	Secured Loan					-
	Union Bank of India	8.25%	79.09	62.42	45.75	4.81
	Allahabad Bank	8.25%	146.41	138.08	116.65	10.95
	Dena Bank	8.25%	180.00	171.65	148.73	13.69
	Andhra Bank	7.75%	50.00	150.00	42.86	3.74
	Syndicate Bank	7.75%	10.00	50.00	50.00	3.88
	Karnatak Bank	7.75%	25.00	22.73	18.18	1.67
	Short term borrowing for Cash Deficit	8.50%	-	720.00	2160.00	122.40
	Sub Total		490.50	1214.88	2582.17	161.13

D	GRIDCO Bonds					
	Power Bond-I	15.00%	-	-		
	Power Bond-I(residual)	7.00%	-	-		
	Power Bond-II	15.25%	-	-		
	Power Bond-II(residual)	9.00%	46.65	-		
	OHPC-(Rs.50 Cr.)	15.00%	50.00	50.00	35.00	6.94
	Nalco-(Rs.50 Cr.)	15.00%	-	-	-	
	Nalco-(Rs.150 Cr.)	10.95%	-	-	-	
	NTPC (Rs.342.85 Cr.)	10.00%	342.825	250.59	180.17	23.30
	Pension Trust Bond	9.00%	271.91	239.28	206.65	20.80
	Sub Total		711.41	539.87	421.82	51.04
F	Other Loans & Finance Charges					25
G	Loans Transferred to OPTCL		-	-		
H	Grand Total		3240.82	3563.14	4490.39	383.38
I	Less : Interest on Loan receivable from Distcos					
J	Less : Interest Capitalisation					
K	Interest Chargeable					383.38

6.30.5 Out of the total loan amount of Rs.3517.33 crore assigned to GRIDCO, the amount of Principal as on 31.03.2005 is Rs.3240.82 crore as per the segregated account of GRIDCO. The balance amount of Rs.276.51 crore (3517.33 – 3240.82) is towards outstanding interest. A loan-wise analysis and the impact of interest on bulk supply price are presented in the subsequent paragraphs.

6.30.6 GRIDCO Bond

6.30.6.1 GRIDCO had issued bonds during 1998-99 and 2001-02 towards financing dues payable to generators. As reported by GRIDCO in its subsequent clarification, the following bonds were issued at different times with varying rates of interest. The position of bonds as on 31.03.2005, both before and after swapping, is given in the tables below:

Table - 31
Bonds Before Swapping

Bonds Issued	Original Rate of Interest (%)	Amount of Bonds Issued(Rs Crore)
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

Total - 32
Bonds After Swapping

Bonds Issued	Status of Bonds	Residual Amount of Bonds (Rs Crore)
Power Bond-I	Fully swapped	-
Power Bond-II	Partially swapped	46.65
OPGC-I	Fully swapped	-
NALCO-I	Fully swapped	-
OHPC-I	Not swapped	50
NTPC-III	Not swapped	1102.87
NTPC-IV	Not swapped	342.85
NALCO-II	Fully swapped	-
Sub-Total (A)		1542.37

Total - 33
New Loan Availed for Swapping

Source	Rate of Interest (%)	Amount of New Loan (Rs. Crore)
Union Bank of India-II	8.25	79.09
Allhabad Bank-I	8.25	21.41
Allhabad Bank-II	8.25	75.00
Allhabad Bank-III	8.25	50.00
Dena Bank-I	8.25	100.00
Dena Bank-II	8.25	80.00
Andhra Bank	7.75	50.00
Syndicate Bank	8.25	10.00
Karnatak Bank	7.75	25.00
Sub-total (B)		490.50

Total Loan (Table-33 + Table 34) = 1542.37 + 490.50 = Rs 2032.87 crore

6.30.6.2 It is discernible from the above tables that GRIDCO has swapped high cost and old loans by availing loans bearing low rates of interest.

6.30.6.3 In its last tariff order, the Commission had allowed recovery of interest on these bonds in the ARR. The Commission accepts the entire amount securitised by GRIDCO and allows the interest to be passed on to ARR for 2006.07, after considering the repayment liability for FY 2005-06 and 2006-07 projected by GRIDCO.

6.30.7 State Government Loan

GRIDCO in its ARR filing had considered an amount of Rs.162.54 crore towards the loan from State Govt. as on 31.3.2005. The interest impact of the above loan as claimed in the ARR was Rs.20.07 crore. Since the debt service of the State Government Loan has been kept in abeyance as per Government of Orissa notification dtd.29.01.2003, the Commission does not consider the interest impact of the loan to be passed on to ARR.

6.30.8 REC Loan

The loans from REC are project-related ones, which GRIDCO availed at different rates of interest at different times. These were availed for undertaking transmission as well as distribution capital projects. The average rate of interest of the above loans is estimated at 12.15%. The total loan balance based on the audited accounts for 2004-05 amounted to Rs.256.24 crore as on 31.3.2005. Out of this loan amount, Rs.45.95 core has been assigned to OPTCL leaving a balance of Rs.210.29 crore with GRIDCO. GRIDCO will continue to service these loans to REC, as REC did not agree to transfer the loans to DISTCOs. On the other hand, DISTCOs were bound by subsidiary loan agreement to service these loans of REC through a back-to-back arrangement. The Commission in its last tariff order had approved the interest amount to be passed on to ARR @8.5% (tax-free) as per Government of Orissa notification dtd. 29.01.2003. The same principle is adopted by the Commission now for calculation of interest on REC Loan, after considering the repayment liability for the years 2005-06 and 2006-07 as projected by GRIDCO.

6.30.9 REC (Working Capital Loan)

GRIDCO in its Account for the year ending 31.3.2005 had shown a loan balance of Rs.300 crore borrowed at 7.50% under this head. This loan was availed to swap a portion of the total PFC Working Capital Loan of Rs.400 crore availed during 2003-04. The Commission in its last tariff order (para 6.21.5.2) had addressed the treatment of PFC loan of Rs.400 crore. Originally, GRIDCO proposed to swap the PFC loan of Rs.400 crore along with its interest by availing fresh loans from HUDCO and

short term loans from PFC amounting to Rs.300 crore and Rs.150 crore respectively @7.5%. During the year 2004-05, GRIDCO instead of availing the loan from HUDCO borrowed the same amount from REC at the same rate of interest i.e. 7.5%. The Commission in its last tariff order had allowed the interest impact of the swapped loan to pass on to ARR. The Commission in respect of REC Working Capital Loan of Rs.300 crore adopts the same principle now.

6.30.10 PFC (Short-Term Loan)

This loan of Rs.150 crore was availed to swap a part of PFC Working Capital Loan. GRIDCO had not projected any interest payment during 2006-07 on account of this loan as the same was repaid fully during 2005-06. The Commission accepts the same.

6.30.11 Pension Trust Bond (PTB)

6.30.11.1 GRIDCO had shown in its Audited Accounts an amount of Rs.409.91 crore towards PTB. Out of this amount, Rs.271.91 crore has been assigned to GRIDCO and the balance of Rs.138 crore to OPTCL. The Commission in its last tariff order had allowed an interest amount on Rs.150 crore of bond to be passed on to ARR. In the notes to the Audited Accounts of 2004-05, GRIDCO had stated that due to paucity of funds the amount payable to trust fund had been settled by issue of GRIDCO Bonds of Rs.271.91 crore and the outstanding interest upto 31.03.2005 amounting to Rs.79.97 crore had been provided for during the year 2004-05. Some amounts were also to be received from Regional Provident Fund Commissioner (RPFC), which had not yet been finalized. The consequential deficit on the corpus fund had not been ascertained.

6.30.11.2 The Commission realises that GRIDCO for the past period has not been able to deposit the amount to the trust fund regularly because of paucity of funds. At the time of segregation, GRIDCO discharged the liability by issuing bonds of Rs.271.91 crore in favour of the Trust. Therefore, the Commission decides to allow the interest impact to be passed on to ARR for the year 2006-07.

6.30.12 Short-term Borrowings to meet Cash Deficit

6.30.12.1 GRIDCO in its ARR filing had stated that it would have to borrow Rs.430 crore during 2005-06 and Rs.1470 crore during 2006-07 due to deficit in cash flow. In its rejoinder, GRIDCO revised this figure to Rs.720 crore and Rs.1440 crore for 2005-06 and 2006-07 respectively. GRIDCO has claimed an interest amount of Rs.122.40 crore for the year 2006-07 on these loans.

6.30.12.2 The Commission does not allow the same to be passed on to ARR on the ground that GRIDCO, as revealed from Audited Accounts of 2004-05, is to receive Rs.1292 crore, Rs.675 crore, Rs.322 crore from DISTCOs towards BST outstanding, principal amount of loan and interest thereof respectively. Further, power dues receivable from other states amount to Rs.476 crore. The Commission strongly feels that GRIDCO should take follow-up action to reduce its long-term liabilities for improving cash flow.

6.30.12.3 Based on the above considerations, the interest liability of GRIDCO for the FY 2006-07 has been calculated and an amount of Rs.204.34 crore is allowed by the Commission to be passed on to ARR for 2006-07.

Table - 34

Interest Liability of GRIDCO, 2006-07

A	Govt. Loans	Rate of Interest (%)	Amount Proposed for 2006-07(Rs Crore)	Amount Approved by the Commission (Rs Crore)
	State Govt. Loan (OHPC Adj.)	10.50	4.47	0.00
	State Govt. Loan (Working Capital)	13.00	15.60	0.00
	IBRD Loan (Retained in GRIDCO)	13.00	-	0.00
	NTPC-III (GoO Bonds)	8.50	91.40	89.05
	Sub Total		111.47	89.05
B	Institutional Loans			
	REC Loan	12.15	16.93	15.06
	REC WCLoan	7.50	17.81	15.00
	PFC WCL		-	-
	PFC STL	0.00	-	-
	Sub Total		34.74	30.06
C	Secured Loan			
	Union Bank of India	8.25	4.81	4.46
	Allahabad Bank	8.25	10.95	10.51
	Dena Bank	8.25	13.69	13.21
	Andhra Bank	7.75	3.74	3.60
	Syndicate Bank	7.75	3.88	3.87
	Karnatak Bank	7.75	1.67	1.59
	Short term borrowing for Cash Deficit	8.50	122.40	0.00
	Sub Total		161.13	37.24

D	GRIDCO Bonds			
	Power Bond-I	15.00	-	-
	Power Bond-I(residual)	7.00	-	-
	Power Bond-II	15.25	-	-
	Power Bond-II(residual)	9.00	-	-
	OHPC-(Rs.50 Cr.)	15.00	6.94	6.38
	Nalco-(Rs.50 Cr.)	15.00	-	-
	Nalco-(Rs.150 Cr.)	10.95	-	-
	NTPC (Rs.342.85 Cr.)	10.00	23.30	21.54
	Pension Trust Bond	9.00	20.80	20.07
E	Sub Total		51.04	47.99
F	Other Loans & Finance Charges		25.00	0.00
G	Loans Transferred to OPTCL			
H	Grand Total		383.38	204.34
I	Less: Int. on Loan receivable from Distcos		-	-
J	Less: Interest Capitalisation		-	-
K	Interest Chargeable During 2006-07		383.38	204.34

6.30.13 Repayment of Principal

6.30.13.1 GRIDCO in its revised ARR filing had projected an amount of Rs.512.75 crore towards repayment of principal during 2006-07. These repayments of principal were mainly related to bonds issued by GRIDCO to finance overdue payables of generators. Out of the above amount of Rs.512.75 crore, Rs.32.63 crore relates to repayment of principal of pension trust bond of Rs.271.91 crore issued by GRIDCO to the trust fund during 2004-05. GRIDCO in its Annual Accounts had stated that due to paucity of funds, the amounts payable to Trust Funds had been settled by issue of GRIDCO Bond for Rs.271.91 crore and the outstanding interest upto 31.03.2005 amounting to Rs.79.97 crore had been provided for during the year 2004-05. Further, some amount was to be received from RPFC towards employer's contribution in respect of employees who have subsequently become the member of the Funds. The consequential deficit in the corpus of the Trust Fund had not been ascertained. Pending such ascertainment, Rs.37.19 crore has been paid to the employees on behalf of the Trust Fund and charged to the Profit and Loss Account.

6.30.13.2 In view of above, the Commission is not convinced to allow the repayment of the principal amounting to Rs.32.63 crore during 2006-07, unless the corpus of the trust fund upto 2004-05 (year of segregation of GRIDCO and OPTCL) is finally ascertained. Further, the Commission needs to verify the official receipts from the Trust duly acknowledging the

contribution from GRIDCO towards Trust Fund from time to time. Till such time the Commission does not find any justification to allow repayment of principal of the pension trust bond.

6.30.13.3 As such, the Commission approves an amount of Rs.480.12 crore towards repayment of principal (= Rs.512.75 – Rs.32.63) to be passed on to ARR for 2006-07.

6.30.14 Treatment of Past Losses

6.30.14.1 GRIDCO had submitted in its revised filing to consider an amount of Rs.1653.74 crore towards past losses. The break-up of the past losses is given in the table below:

Table - 35
Past Losses of GRIDCO

Sl. No.	Item	Revised Proposal (Rs. Crore)
1	Loss due to adjustment in trading	113.55
2	Additional burden due to FPA of OPGC	13.84
3	Payment of Delayed Payment Surcharge (DPS) to OPGC	72.90
4	Additional burden due to FPA of CGSs	71.22
5	Year End Adjustment (YEA) of NTPC Stations	11.52
6	Pass through of PGCIL payments	29.38
7	Compensation against interstate wheeling charges	12.28
8	Pass through of open access charges	8.88
9	Pass through of ERLDC scheduling charges	1.36
10	Compensation to PTC & NVVNL	2.83
11	Terminal benefit (85.00-40.62)	44.38
12	Repayment of Interest (Rs 338.96 Cr + Rs 156.73 - Rs 291 Cr)	204.75
	TOTAL OF SL.1 to12 raised in review petition	586.89
13	The accumulated loss of GRIDCO up to 2004-05 is Rs.1028.15 Cr	1028.15
14	Pass Through of Income tax claim of TTPS for 2004-05 and 2005-06.	29.78
15	Pass Through of payment to PGCIL towards contracted power for 2003-04 for 2004-05 and 2005-06.	8.92
	Total	1653.74

6.30.14.2 The amount of Rs.586.89 crore requested as pass through for the expenses of 2005-06 has not been substantiated with

appropriate claims by the licensee The contention of GRIDCO that the BST to DISTCOs was arrived at assuming the trading revenue calculated at the rate of Rs.2.35 paise per unit. The exact revenue earned from such an activity can only be known after finalisation of the annual account. Besides, loss due to adjustment in trading cannot be a pass through as trading is a non-core activity of GRIDCO.

- 6.30.14.3 The issue of finalisation of PPA of OPGC is sub-judice. As such, there is no justification of allowing the DPS until settlement of the PPA with OPGC.
- 6.30.14.4 The tariff of NTPC is provisional and any claim for NTPC dues has to be settled after finalisation of NTPC tariff. The claim of payment to PGCIL of Rs.29.38 crore is sub-judice as reported by the petitioner. As such, such a claim cannot be entertained.
- 6.30.14.5 All other trading related expenses claimed by GRIDCO have no basis for being passed on to the consumer tariff as all trading related activities for inter-state transactions are treated as non-core activities.
- 6.30.14.6 In the absence of actuarial valuation, the Commission has assessed and allowed the cash requirement for meeting the terminal liabilities.
- 6.30.14.7 GRIDCO has requested for a pass through of an additional amount of Rs.204.75 crore over and above the amount permitted in the tariff order of 2005-06 towards repayment of loan and interest. The Commission can allow any expenditure applying the prudence check to be fair to the licensee and to the consumers. GRIDCO had neither taken the consent nor appraised the Commission of the loan and the repayment, which they are proposing now. The genuineness of the loan has not been established to the satisfaction of the Commission. Besides, the Commission while allowing the interest for the FY 2006-07 has taken into consideration all loan liabilities as considered necessary and prudent. Hence, claim of Rs.204.75 crore of GRIDCO is disallowed.
- 6.30.14.8 Income Tax claim of TTPS of 2004-05 and 2005-06 once established through audited account can be allowed as a pass through. But the TTPS tariff is still treated as provisional. Once the tariff is finalised, all such claims of TTPS can be comprehensively worked out.
- 6.30.14.9 Pass through of payment to PGCIL towards contracted power for 2003-04, 2004-05 and 2005-06 has again to be claimed

only after finalisation of audited accounts for FY 2005-06 subject to the condition that this is not a trading related activity and further that this amount is not included in the calculation of accumulated loss of GRIDCO.

6.30.14.10 The balance sheet of GRIDCO as on 31.3.05 indicates accumulated loss of Rs.1028.15 crore which includes accumulated depreciation of Rs.733.35 crore. After deduction of accumulated depreciation of Rs.733.35 crore, the cash loss of GRIDCO amounts to Rs.294.80 crore. This depreciation seems to have been calculated applying post-94 rate on the value of assets, which needs to be recast in compliance to the order of Hon'ble High Court of Orissa at pre-92 rate. Both the figures of accumulated depreciation and commercial loss as on 31.3.05 will undergo change after recasting depreciation.

6.30.14.11 The Commission is aware of collection of additional revenue on account of un-scheduled interchange (UI) consequent upon implementation of ABT. GRIDCO might earn some revenue due to this non-core activity. Such earnings should be utilised to reduce the liabilities of GRIDCO that include conversion of short-term liability to long-term liability on account of purchase of power and its securitisation.

6.30.14.12 The Commission expects that GRIDCO manages its finance with deftness and competence by meeting its obligation towards cost of power purchase, repayment of loan and other statutory liabilities. The Commission desires that GRIDCO meets all such obligations for which it has been allowed a repayment of principal amount of Rs.480.12 crore during 2006-07 so that the cash flow will be smooth. A part of this repayment will be replenished through the back-to-back arrangement with DISTCOs towards recovery of loan, interest and outstanding BST. In addition to this, GRIDCO should also recover the outstanding amount lying with the outside state agencies.

6.30.14.13 The net effect of this would be reduction of the accumulated losses of GRIDCO. Hence, the Commission does not consider it necessary to allow the pass through of accumulated loss 1028.15 crore

6.30.15 Up-valuation of Assets

6.30.15.1 The Deptt. of Energy Notification No.1068/E dated 29.01.03 envisages that "The effect of up-valuation of assets of OHPC and GRIDCO indicated in notification No.52010 dated 01.04.96 and No.5207 dt.01.04.1996 would be kept in abeyance from the financial year 2001-02 prospectively till

2005-06 or the sector turns around, whichever is earlier to avoid re-determination of tariff for past years and also re-determination of asset of various DISTCOs. For this purpose, depreciation would be calculated at pre-92 norms notified by the GOI.” As such, the depreciation shall be calculated for the assets at pre-1992 norms.

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

6.30.15.3 The objectors submitted that as there has been no sectoral turn around and the CERC regulations do not permit such recovery, effect of up-valuation should not be considered while determining tariff for FY 2006-07.

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

6.30.16 **Return on Equity**

GRIDCO had projected an amount of Rs.23.62 crore towards Return on Equity for the FY 2006-07. The Commission does not consider the impact of RoE to be passed on to ARR in line with Government of Orissa notification dtd.29.01.03.

6.30.17 **Miscellaneous Receipts**

6.30.17.1 The licensee had proposed Rs.173.16 crore as miscellaneous receipts for the year 2006-07. These receipts have been estimated by the Commission at Rs.36.96 crore for sale of

power to CPPs to the tune of 120 MU for 2006-07 @308.00 p/u (three times the rate at which power is sold to GRIDCO i.e. $110 \times 3 = 330$ p/u minus transmission charge of 22 p/u paid to OPTCL).

6.30.17.2 **Revenue from Export of Power**

While finalising the expected aggregate revenue for 2006-07, the revenue earning by GRIDCO from export of power has not been taken into account on the ground that the trading of surplus power involved some risks and uncertainties which should not be transmitted to consumers in terms of tariff burden. Therefore, the Commission has not considered the power to be purchased and revenue to be earned from trading of surplus power to outside states. The Commission feels that GRIDCO is free to purchase additional power from any source and trade in the open market. The extra revenue earned due to trading of power by GRIDCO shall bridge the gap to some extent in its revenue requirement for 2006-07 and also reduce the burden of the consumers of the State by way of liquidating past liabilities.

6.30.17.3 **Revenue from UI:** UI charges are dependent on several unknown risk factors like the behaviour of grid constituents, demand (peak and off peak) of the state, hydrology condition, line availability, etc. for which GRIDCO has not considered the revenue from UI charges for 2006-07. GRIDCO has projected 'nil' figure towards UI charges. The Commission directs that any revenue earning by GRIDCO on account of UI charges during 2006-07 should be accounted for and adjusted against the revenue gap in 2006-07 and also past liabilities of GRIDCO.

6.30.18 **Receivables from DISTCOs**

6.30.18.1 The receivables of GRIDCO from DISTCOs have been grouped under the following heads:

- Principal amount of loan as per the subsidiary loan agreement upto 31.03.2005.
- Accumulated interest thereof as on 31.03.2005.
- Outstanding BST as on 31.03.2005.

6.30.18.2 As regards the loan balance and the accumulated interest thereof payable by DISTCOs, the company-wise reconciled amounts of principal and interest with GRIDCO are given in the table below along with the company-wise outstanding BST dues. The table also highlights the company-wise total dues (Loan + Interest + BST Dues) recoverable from DISTCOs.

Table - 36
Total Receivables from DISTCOs

Loan Balance	(Rs. Crore)				
	WESCO	NESCO	SOUTHCO	CESCO	TOTAL
Principal	138.46	94.64	134.36	307.61	675.07
Interest	60.31	41.05	58.43	162.86	322.65
Total	198.77	135.69	192.79	470.47	997.72
Outstanding BST Dues	169.59	277.89	126.31	718.30	1292.09
Total Receivables from DISTCOs	368.36	413.58	319.10	1188.77	2289.81

6.30.18.3 The servicing of liabilities of GRIDCO shall have to be carried out in accordance with our direction in Case No. 115 of 2004.

6.30.19 Receivables from Other States

As per the Audited Accounts of GRIDCO for FY 2004-05, GRIDCO was entitled to receive an amount of Rs.475.77 crore from other States such as West Bengal, Bihar, Madhya Pradesh, Andhra Pradesh, DVC, Assam, Manipur, PTC, NVNL, etc. GRIDCO shall take expeditious steps for recovery of such amount from other states to reduce the liabilities, which will help in reduction of the interest payable from year to year and keep the Commission apprised of the recovery from the defaulting States from time to time.

6.30.20 Revenue Requirement for FY 2006-07

6.30.20.1 In the light of the above, the Commission approves the revenue requirement of GRIDCO for FY 2006-07 as given in the table below:

Table - 37
Revenue Requirement of GRIDCO for FY 2006-07

A	Expenditure	2006-07	
		Proposed	Approved
	Cost of Power Purchase	2106.86	1756.84
	Employee costs	3.11	1.75
	Repair & Maintenance	0.00	0.00
	Administrative and General Expenses	2.83	1.65
	Provision for Bad & Doubtful Debts	-	-
	Other expenses (ERLDC Charges)	1.32	1.32
	Depreciation	-	-
	Interest Chargeable to Revenue	383.38	204.34
	Sub-Total	2497.50	1965.90
	Less: Expenses capitalised	-	-
	Total expenses	2497.50	1965.90

B	Special appropriation		
	Carry forward of Previous Losses	1653.73	-
	Repayment of Principal	512.75	480.12
	Contingency reserve	-	-
	Total	2166.48	480.12
C	Return on Equity	23.62	-
	TOTAL (A+B+C)	4687.60	2446.02
D	Less Miscellaneous Receipt	173.16	36.96
E	Less receivable from DISTCOs	-	110.10
F	Less receivable from outside States	-	20.00
G	Total Revenue Requirement	4514.44	2278.96
H	Expected Revenue (Full year) from DISTCOs	1460.79	1774.44
I	GAP (+/-)	-3053.65	-504.52

6.30.20.2 After taking into consideration the repayment of principal of Rs.480.12 crore by GRIDCO, the Commission leaves a gap of Rs.504.52 crore and expects GRIDCO to bridge the same by export earnings and UI charges. Shortfall, if any, after such adjustment shall be recognized as regulatory asset and the carrying cost thereof shall be passed on to ARR for the next year i.e. 2007-08 onwards.

6.30.20.3 The Commission also expects that the gap of Rs.504.52 crore left uncovered should be bridged to the extent possible by realisation of outstanding dues realisable from various DISTCOs and utilities outside the state. In this connection, any surplus available with WESCO after meeting the expenses of power purchase and other statutory dues in accordance with the Commission's order/agreement, shall be paid by WESCO to GRIDCO to liquidate WESCO's own payables to GRIDCO.

6.30.20.4 It is very much imperative that the back to back arrangement between DISTCO and GRIDCO should be scrupulously followed so that GRIDCO is in a position to make a principal repayment of Rs.480.12 crore. In view of this the following directions are issued:

6.30.20.5 As on 31.03.2005, the regulatory assets of NESCO and SOUTHCO were Rs.241crore and Rs.219.43 crore respectively. The Commission is now allowing Rs.41.36 crore to NESCO and Rs.31.91 crore to SOUTHCO out of the accumulated regulatory assets for recovery during the FY 2006-07 through tariff. The sums now allowed equal to 10% of the total receivables of GRIDCO from these companies as on 31.03.05. It is directed that GRIDCO may recover these amounts through the existing

escrow arrangement in monthly instalment and adjust it towards the outstanding dues of these companies.

6.30.20.6 Similarly, Rs.36.83 crore may be realised from the escrow account of WESCO by GRIDCO for adjustment against the receivables from WESCO. As far as CESCO is concerned the extent of recovery to be made shall be decided during the finalisation of sale deed of the utility.

6.30.20.7 The Commission would like to clarify that the recoveries now directed are over and above the amount which these companies are required to pay as per various subsisting agreements with them.

6.30.20.8 As indicated in the Business Plan, any collection out of arrears from the consumers shall have to be deposited with GRIDCO for liquidation of past outstanding dues as GRIDCO is carrying a burden of power purchase liability of about Rs.2063 crore to various generators and the interest component of this passed on to the consumers through tariff every year. Liquidation of GRIDCO's dues will reduce the interest burden and in turn, will be helpful both for GRIDCO, DISTCOs as well as the consumers.

6.31 Bulk Supply Price for 2006-07

6.32 Price Hike

6.32.1 It is the duty of the Commission to scrutinize the claims of licensee with a fine toothcomb 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 price adjustment. This is precisely the position of Law and has to be appreciated by the consumers of all categories. Keeping the above objective in view, the Commission has gone ahead in deciding the various parameters regarding determination of revenue requirement of the licensee in an endeavour to strike a balance between the interests of consumers on one hand and financial viability of licensee on the other.

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

6.32.3 Based on the aforesaid considerations, the Commission deems it desirable to continue with differential bulk supply price for the four distribution companies and uniform retail tariff through out the State.

6.33 Determination of Demand and Energy Charges

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

6.33.2 After taking into consideration the revenue requirement for 2006-07, the Commission does not consider it necessary to revise the existing rate of demand charge upward to Rs.300/KVA/month as proposed by GRIDCO. Therefore, the existing demand charge at Rs.200/KVA/month is retained by the Commission for 2006-07. The expected revenue from the demand charge based on the maximum demand for the various distribution companies approved by the Commission for 2006-07 is given in the table below:

Table - 38

Demand Charges for 2006-07

	FY 2006-07 (MVA)	Demand Charge (Rs./KVA/month)	Expected Annual Revenue from Demand Charges (Rs. Crore)
CESCO	719.20	200	172.61
NESCO	554.85	200	133.16
WESCO	663.76	200	159.30
SOUTHCO	288.95	200	69.35
TOTAL	2226.76		534.42

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

Table - 39

Rates of Energy Charges for 2006-07

		Existing	Revised
CESCO	Demand Charge (Rs./KVA/month)	200	200
	Energy Charge(P/U)	85.00	79.00
WESCO	Demand Charge(Rs./KVA/month)	200	200
	Energy Charge (P/U)	98.82	98.02
NESCO	Demand Charge(Rs./KVA/month)	200	200
	Energy Charge(P/U)	86.00	81.00
SOUTHCO	Demand Charge(Rs./KVA/month)	200	200
	Energy Charge(P/U)	75.00	70.00

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

Table - 40
Energy Charges for 2006-07

Name of the Company	Estimated 2006-07 (MU)	Energy Charge (P/U)	Revenue from Energy Charges (Rs. Crore)
CESCO	4164.00	79.00	328.96
NESCO	4169.00	81.00	337.69
WESCO	4600.00	98.02	450.87
SOUTHCO	1750.00	70.00	122.50
Total	14683.00		1240.02

6.33.5 As against GRIDCO's total revenue requirement of Rs.2278.96 crore, it will recover Rs.534.42 crore through demand charge and Rs.1240.02 crore from energy charge meeting its revenue requirement of Rs.1774.44 crore for the year 2006-07 from DISTCOs and leave a gap of Rs.(-)504.52 crore. The treatment of this gap has already been discussed above.

6.34 Charges for Overdrawl of Energy

6.34.1 GRIDCO in its application proposes that any excess drawl of energy by a Distribution and Retail Supply licensee over and above the approved drawl would be payable at the actual rate approved for export of energy plus transmission charges and transmission loss subject to necessary changes due to implementation of state ABT.

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

6.35 Rebate

For payment of bills through a letter of credit on presentation/upfront by cash within 48 hours, a rebate of 2% shall be allowed. If the payments are made by a mode other than through a letter of credit but within a period of one month of

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

6.36 Late Payment Surcharge

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

6.37 Duty and Taxes

The Commission approves that statutory levy/duty/tax/cess/toll imposed under any law from time to time shall be charged over and above the price fixed by the Commission.

6.38 The Commission directs GRIDCO to furnish separately a statement of accounts conforming to the Commission's Order on Bulk Supply Price. This is in addition to the statutory Audit Report submitted by GRIDCO to the Commission from time to time.

6.39 Fuel Price Adjustment: The revenue requirement of GRIDCO is under stress due to non-availability of adequate quantity of indigenous coal of appropriate grade requiring import of coal at a very high cost. The cost of oil has gone up substantially in the international market. Thus, the spurt in prices of coal and oil has resulted in additional burden of around Rs.188.19 crore during the FY 2006-07 estimated on the basis of price of coal and oil existing as in the second half of 2005-06. The break-up of additional cost on fuel is given below:

Central Generating Stations	:	Rs.105 crore
TTPS	:	Rs.67.82 crore
OPGC	:	Rs.15.04 crore
Total	:	Rs.188.19 crore

The fuel price adjustment in respect of Central Generating Stations has varied widely in different months and from station to station, which may undergo further changes depending upon rise or fall in the price of coal and oil.

6.40 Around 38% of the state's internal requirement is met out of low cost hydro generation, which has made the power sector revenue very vulnerable to the vagary of nature. Hydro power no doubt provides stability to system operation but at the same time failure of monsoon can play havoc on the states' utility. The Commission has considered revenue requirement of the current year based on the assumption of a normal rainfall.

6.41 The current surplus situation in the state will be diminishing unless effective steps are taken at the level of the government for creation of new capacity about which the Commission has already advised the govt and hopes that follow-up action shall be taken at the appropriate level so that the current surplus situation continues in spite of the rising industrial demand for power in the state. The

Commission may be kept apprised of the developments in this regard by the concerned quarters.

- 6.42 Orissa has always encouraged installation of captive generations in the past for which there exists major CPPs like NALCO with capacity of 960 MW, RSP 270 MW, INDAL 170 MW, OSWAL Paradeep, 110 MW and ICCL Chowdwar with capacity of 180 MW. There are also a large number of medium sized plants installed throughout the state. In line with the concept as espoused in the National Tariff Policy, the Commission would prefer harnessing of captive generation. For this purpose, the Commission has ordered that firm power to CPPs should be priced following a cost plus approach as perceived in CERC guidelines. Inadvertent injection will be priced at variable cost plus a mark-up linked to frequency related ABT.
- 6.43 The Commission has already fixed a minimum percentage of purchase of energy from non-conventional sources including from co-generation for the FY 2006-07. It is allowed upto 400 MU. The pricing of power from these generating stations will follow the cost plus approach based on the project cost to be approved by the state technical committee. It is hoped that some of the generators should come forward and avail of this opportunity for establishment of power stations.
- 6.44 The Commission further directs the licensee to implement the bulk supply price as determined by the Commission in this order to become effective after expiry of seven days of the publication under section 57 of the OERC (Conduct of Business) Regulation, 2004.
- 6.45 The bulk supply price in respect of GRIDCO will become effective from 1st April 2006.
- 6.46 **With regard to GRIDCO's application for determination of Bulk Supply Price for the FY 2006-07 (Case No.42/2005); the Hon'ble High Court of Orissa, on 31.01.2006, has passed interim order in Misc. Case No. 114/2006 (arising out of WP(C) No.165/2006), as follows:-**

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

- 6.47 **As ordered by the Hon'ble Court, this order is subject to the result of the said Writ Application.**

The application of GRIDCO is disposed off accordingly.

Sd/-
(S.K. JENA)
MEMBER

Sd/-
(B.C. JENA)
MEMBER

Sd/-
(D.C. SAHOO)
CHAIRPERSON