

ORISSA ELECTRICITY REGULATORY COMMISSION

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

*** **

Present : Shri B. K. Das, Chairperson
Shri S.K. Jena, Member

CASE NO. 55 OF 2006

DATE OF HEARING : **15.02.2007**

DATE OF ORDER : **22.03.2007**

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 2007-08.

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.55/2006 and was admitted for hearing for determination of Bulk Supply Price under Section 86(1)(b) of the Electricity Act, 2003. In the consultative process, the Commission heard the applicant, objectors and representative of the State Government 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 2007-08 before the Commission on 30.11.2006.
- 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 posted 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 13 nos. of objections/suggestions from the following persons/associations/institutions/licensees: -

(1) State Public Interest Protection Council, Tala Talengabazar, Cuttack, (2) Orissa Consumers' Association & FOCO, Biswanath Lane, Cuttack, (3) M/s Ferro Alloys Corporation Ltd., GD-2/10, Chandrasekharpur, Bhubaneswar, (4) Sambalpur District Consumer Federation, Balaji Mandir Bhawan, Khetrampur, Sambalpur, (5) Confederation of India Industry (CII), 8, Forest Park, Bhubaneswar, (6) Mr. R.P.Mohapatra, 775, Jayadev Vihar, Bhubaneswar (7) WESCO, Burla, Sambalpur, (8) SOUTHCO, Courtpetta, Berhampur, (9) NESCO, Januganj, Balasore (10) M/s Confederation of Captive Power Plant (CCGPO), Bomikhal, Rasulgarh, Bhubaneswar, (11) Parikhita Swain, 258(P), Cuttack Road, Bhubaneswar, (12) Utkal Chamber of Commerce & Industry, N/6, IRC Village, Nayapalli, Bhubaneswar (13) Mr. Jayadev Mishra, N-4/98, Nayapalli, Bhubaneswar

- 1.4 The date for hearing was fixed and it was duly notified in the leading newspapers mentioning the list of the objectors. Commission also issued notice to the Government of Orissa through the Department of Energy informing about the date of hearing and requesting to send the Government's authorised representative to take part in the proceeding.

- 1.5 In exercise of the power u/s.94(3) of the Electricity Act, 2003, in order to protect the interest of the consumers, the Commission for the first time appointed Nabakrushna Choudhury Centre for Development Studies, Chandrasekharpur, Bhubaneswar the premier Govt. of Orissa's Institute as Consumer Counsel for objective analysis of the licensee's Annual Revenue Requirement and tariff proposal. The consumer counsel submitted its report to the Commission and its representative put forth its analysis & views on the matter in the presence of all the parties present during the proceeding.

- 1.6 In its consultative process, the Commission conducted a public hearing at its premises on 15.02.2007 and heard the applicant, objectors, consumer counsel and the representative of the Government.

2 GRIDCO'S ANNUAL REVENUE REQUIREMENT (ARR) FOR FY 2007-08

- 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 Generating Plants (CGPs) and sells the power surplus to the requirement of DISTCOs as and when available within the state to intending agencies for use elsewhere. GRIDCO purchases power from OHPC, OPGC, TTPS and Central Sector Generators located in the Eastern

Region and Chukka and Tala HEP in Bhutan and surplus power from some CGPs within the State.

- 2.2 GRIDCO has filed an application for Annual Revenue Requirement and revision of Bulk Supply Price (BSP) for 2007-08 to enable it to carry out its functions of bulk supply to DISTCOs and emergency supply to CGPs.

2.3 Projection of Demand and Energy for DISTCOs

- 2.3.1 The actual Simultaneous Maximum Demand (SMD) for 2005-06, the actual SMD for first seven months of 2006-07 and projection for 2007-08 as submitted by GRIDCO in the BSP and ARR application, are given in Table-1.

Table – 1
Simultaneous Maximum Demand Projection for 2007-08
(Figures in MVA)

Name of the Company	2005-06 (Actual)	Avg. of the actual for first seven months of 2006-07	DISTCOs' Projection for 2007-08	GRIDCO's Projection for 2007-08
CESU	719.97	776.54	962.00	791.12
NESCO	515.63	539.65	768.00	588.14
WESCO	649.29	683.29	1142.54	716.86
SOUTHCO	287.73	291.47	321.34	303.88
Total DISTCOs	2172.62	2290.95	3193.88	2400.00

- 2.3.2 The actual energy requirement for 2005-06, actual for first seven months of 2006-07 and both DISTCOs' and GRIDCO's energy projections for 2007-08 as submitted by GRIDCO in its ARR filing, are indicated in Table-2.

Table - 2
Energy Projection for 2007-08
(Figures in MU)

Name of the Company	2005-06 (Actual)	Actual for 1st seven months of 2006-07	DISTCOs' Projection for 2007-08	GRIDCO's Projection for 2007-08
CESU	4185.51	2732.78	5225.00	5060.00
NESCO	3397.12	2219.45	5119.00	4110.00
WESCO	4188.86	2660.41	5300.06	4925.00
SOUTHCO	1702.22	1062.01	1905.25	1905.00
Total DISTCOs	13473.71	8674.65	17549.31	16000.00
CGPs	10	1.15		10.00
Total Sale	13483.71	8675.80	17549.31	16010.00

2.3.3 Power Procurement Projected by GRIDCO

GRIDCO projected the total power availability of 16801.22 MU and considered transmission loss of 5% for 2007-08. In order to meet the demand of DISTCOs and CGPs and make necessary allowance for transmission loss, GRIDCO has proposed as under:-

Table – 3
DEMAND AND ENERGY PROJECTION FOR FY 2007-08

Item	Projection for FY 2007-08
SMD for DISTCOs (MVA)	2400.00
Sale of Energy to DISTCOs (MU)	16000
Emergency Power to CGPs (MU)	10
Total Sale of Energy (MU)	16010.00
Transmission loss @ 5% (MU) in OPTCL system	842.63
Total Energy Requirement (MU)	16852.63
Total Energy Availability (MU)	16801.22
Energy Surplus/Deficit (+/-) (MU)	(-) 51.41

2.4 Revenue Requirement Projected for 2007-08

- 2.4.1 GRIDCO has projected to procure hydel power of 5855.80 MU from OHPC including power from Machkund, thermal power of 2996.71 MU from OPGC, 3144.37 MU from TTPS, 540 MU from State CGPs and 4264.34 MU Orissa share of power from Eastern Regional NTPC stations as well as from Tala and Chukha of Bhutan during 2007-08 totalling to 16,801.22 MU.
- 2.4.2 As stated above, GRIDCO has considered total energy procurement of 16,852.63 MU for 2007-08 including transmission loss of 5% over DISTCOs' and CGPs' proposed drawl of 16010 MU for 2007-08.
- 2.4.3 GRIDCO has signed PPA with NTPC for 200 MW of power towards 10% home State quota from TSTPS Stage II (4X500 MW), which will be about 1250 MU/annum. GRIDCO has further submitted that NTPC has forwarded the same to MOP, Govt of India for final approval and the communication from MOP is still awaited.
- 2.4.4 The financial forecast of power purchase/sale as furnished by GRIDCO is reproduced hereunder in Table-4.

Table - 4
Financial Forecast for Power Purchase/Sale for 2007-08
(Rs. Crore)

	Item	OERC approval for 2006-07	GRIDCO's Proposal for 2007-08
a)	Power Purchase Cost	1756.84	2164.46
b)	Previous Loss including repayment of principal	-	677.01
c)	Interest, Finance & Establishment Charges	480.12	187.16
d)	Contribution to contingency reserve	-	Nil
e)	Reasonable Return	-	60.62
f)	Revenue Requirement (a+b+c+d+e)	2446.02	3089.25
g)	(-) Misc. Receipts	157.06	3.30
h)	Net Revenue Requirement (f-g)	2278.96	3085.95
i)	Net Receipt from sale of power to DISTCOs and CGP	1774.44	1924.75
j)	Excess or Deficit	(-) 504.52	(-) 1161.20

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

Table – 5
Projected Power Procurement by GRIDCO for 2007-08

Source	MU	Per Unit (P/U)	Total cost (Rs.Cr.)
OHPC (Old)			
(a) Hirakud	998.19	60.15	60.04
(b) Balimela	1170.18	58.39	68.33
(c) Rengali	688.05	41.60	28.62
(d) Upper Kolab	792.00	25.97	20.57
OHPC (New)			
(a) Indravati	1942.38	67.24	130.61
OHPC (Joint Project)			
(a) Machkund	265.00	18.21	4.83
Total Hydro	5855.80	53.45	312.99
OPGC	2996.71	155.21	465.11
TTPS	3144.37	168.61	530.18
CGP			
NALCO	320.00	110.00	35.00
ICCL	20.00	93.76	1.88
HINDALCO(HIRAKUD)	33.00	77.00	254
RSP (SAIL)	30.00	65.40	1.96
NINL	60.00	202.00	12.12

NBFA	10.00	202.00	2.02
Arati Steel	65.00	202.00	13.13
MESCO	2.00	202.00	0.40
Total CGP	540.00	128.24	69.25
Renewable Energy Source	-	-	-
State Total (A)	12536.88	115.40	1377.53
Chukha	234.85	176.01	41.33
TSTPS	1986.25	146.25	290.49
FSTPS	1360.83	200.30	272.57
KHSTPS	520.19	227.33	118.26
Tala HEP	162.22	206.10	33.43
From other sources	51.41	600.00	30.85
Total ERPower (B)	4264.34	177.31	756.09
Total (A) + (B)	16801.22	129.12	2164.46

2.4.6 Pass Through of Previous Loss

GRIDCO has proposed a sum of Rs.677.01 crore to be recovered through tariff on account of past losses and uncovered expenses during 2007-08 as detailed in table below.

Table – 6
Pass through of Previous Loss & Uncovered Expenses, 2007-08
(Rs. Crore)

Sl. No.	Item	Initial Proposal
1	Past losses towards repayment of principal	497.49
2	Arrears of Fixed charges of TTPs after adjustment of Tariff revision of TSTPS & FSTPS	103.93
3	Claim by NTPC towards Income Tax	26.28
4	Paid to OPGC during 2006-07	39.36
5	Differential Fixed Charges of TTPS for 2006-07	9.95
	Total	677.01

2.4.7 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 Proposal for 2007-08
1. Interest Cost	180.72
2. Other Costs:	
a. Employee Cost	3.09
b. A&G Cost	2.03
c. ERLDC, NLDC fees and SLDC scheduling Charges	1.32
Sub-Total – Other Costs:	6.44
Total (1+2)	187.16

2.4.8 Return on Equity:

GRIDCO proposes RoE of Rs.60.62 Cr @ 14% on equity capital of Rs. 432.98 Cr.

2.5 Proposed Revenue Earning at Existing Rate

2.5.1 GRIDCO proposes to earn revenue of Rs.1924.75 crore from sale to DISTCOs at the existing rates during 2007-08.

2.5.2 A summary of the proposal of GRIDCO's expected revenue earning during 2007-08 is furnished in Table-8.

Table – 8
Expected Revenue from DISTCOs during 2007-08
(Rs. Crore)

	(EXPECTED REVENUE WITH ANTICIPATED SALE AT EXISTING RATES)				
NET TOTAL REVENUE (DISTCOs)	CESU	NESCO	WESCO	SOUTHCO	TOTAL
Gross receipt from Demand Charges	189.87	141.15	172.05	72.93	576.00
Gross receipt from Energy Charges	399.74	332.91	482.75	133.35	1348.75
Total Revenue from DISTCOs	589.61	474.06	654.80	206.28	1924.75

2.6 Recovery of Cost in the ARR during 2007-08

2.6.1 With the present tariff structure, GRIDCO cannot meet its total current cost estimated at Rs.3085.95 crore (Table – 4) as it results in a deficit of Rs.1161.20 crore on account of changes in its various cost components, proposal for pass through of past losses to the tune of Rs.677.01 crore, rise in financing and interest costs, terminal benefits, income tax payment to TTPS etc. In order to meet this deficit, GRIDCO submitted the application

before the Commission requesting for revision of bulk supply price for 2007-08.

2.6.2 The licensee proposes to recover the full costs of supply of Rs.3085.95 crore comprising Rs.1709.79 crore (55.41%) towards fixed costs and Rs.1376.16 crore (44.59%) towards variable costs during 2007-08.

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 2007-08

Pricing Options	GRIDCO's Proposal For 2007-08	
Structuring Options	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.	712.41	86.01
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	138.87
Avg. Energy charge		192.87
%Rise over current average energy charge @ 120.88 P/U		59.56%

2.7.2 In order to avoid a steep rise in Demand Charges, GRIDCO, in its application has proposed 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 2400.00 MVA per month for 2007-08 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 2007-08

Item	GRIDCO'S PROPOSAL
Revenue Requirement of GRIDCO to be recovered through BSP (Rs. Cr).	3085.95
Demand charges per month (Rs./KVA)	300.00
Chargeable Demand in MVA for 2007-08	2400.00
Annual Revenue from Demand Charges (Rs. Crore)	864.00
Balance revenue to be recovered through Energy Charges (Rs. Crore) (a)	2221.95
Proposed sale to DISTCOs (in MU) (b)	16000.00
Energy Charges (a/b) in P/U	138.87

2.9 Over Drawl Charges

2.9.1 GRIDCO's Procurement Plan proposed in ARR Application is based on the forecast of DISTCOs and limited to the energy availability subject to transmission constraints. GRIDCO has proposed that any drawl by DISTCOs exceeding the procurement plan adjusted by GRIDCO would force/compel GRIDCO to procure costly power from the market which may be around @ Rs.6.00/unit and in the process GRIDCO would suffer loss of revenue. GRIDCO, therefore, requests in its ARR Application to approve the following provisions by the Commission in ARR for FY 2007-08.

- a. Month-wise drawl need to be fixed for each DISTCO.
- b. Any cumulative excess drawl over cumulative approved quantum shall be billed at a cost of imported power with other charges on monthly basis.

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 bills, for 2007-08.

2.11 Rebate

Corresponding to the delayed payment surcharge, GRIDCO has also proposed a rebate for 2007-08. A rebate of 2% on the monthly bill, if payment is made in full within 48 hours of submission of bill. A rebate of 1% on monthly bill if paid in full within 30 days of submission of bill.

2.12 Carry Forward of Revenue Gap

GRIDCO prays the Commission that the proposed Bulk Supply Price be made applicable from 1st April 2007. However, in case of a gap between the approved revenue requirements for 2007-08 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 2007-08

2.13.1 GRIDCO prays that the Commission may kindly approve the following for 2007-08:

- i) Demand charges @ Rs.300 per KVA/month. Energy charges @ 138.87 paise/unit on energy supplied.
- ii) Charges for over drawl in energy at a cost of imported power on monthly settlement basis.
- iii) Delayed Payment Surcharge as proposed.
- iv) Rebate as proposed.

3 VIEWS OF THE OBJECTORS ON BULK SUPPLY PRICE PROPOSAL FOR 2007-08

The Licensee was allowed in the beginning of the hearing to give a power point presentation regarding its ARR and tariff application for the FY 2007-08. Director (Tariff) then raised certain queries on the licensee's filing. The representative of Nabakrushna Choudhury Centre for Development Studies, Bhubaneswar was appointed as consumer counsel and its representative put up certain queries and objections regarding ARR and price filing of GRIDCO. The objectors then made many comments/observations regarding the submission of the licensee.

The Commission has considered all the issues raised by the participants in their written as well as oral submissions during the public hearing. Some of the objections were found to be of general nature whereas others were specific to the proposed Revenue Requirement and Tariff filing for the financial year 2007-08. Based on their nature and type, these objections have been categorized broadly as indicated below:

3.1 Nabakrushna Choudhury Centre for Development Studies (NCCDS)

In accordance with Section 94(3) of Electricity Act, 2003 which stipulates that the appropriate Commission may authorize any person as it deems fit to represent the interest of consumers in the proceedings before it, the Commission for the first

time engaged Nabakrushna Choudhury Centre for Development Studies as consumer counsel in order to receive quality inputs/feed back on the tariff matters in the interest of different sections of consumers. The representative of NCCDS had analysed the application of the licensee in the light of Kanungo Committee Report and some of the important observations are as follows:

3.1.1 Revenue Gap

GRIDCO has shown a revenue gap of Rs 1161.20 Crore for the FY 2007-08, which includes the gap during FY 2007-08 along with the past losses and unforeseen expenses of Rs 677.01 Crore. In order to meet this deficit, GRIDCO has given the proposal for revision of Bulk Supply Price for the FY 2007-08. It has proposed Demand Charge @ Rs 300 per KVA/Month to recover fixed cost of Rs. 864 Crore. The balance revenue requirement of Rs 2221.95 is proposed to be covered by increasing energy charges @ 138.87 P/U. GRIDCO has also proposed other measures like over drawl charges, surcharge for late payments and rebate for early payments.

This higher revenue gap as shown by GRIDCO can be reduced by slashing the revenue requirement, which is projected to be very high. The gap arises due to the proposal for increase in power tariffs by the generating companies as claimed by GRIDCO as well as increase in other costs and accumulated losses and unforeseen expenses by the licensee. The Commission should not allow GRIDCO to increase BSP, which, if allowed, would be ultimately passed on to consumers.

3.1.2 Pass Through of Past Losses

The proposal for passing through of past losses and unforeseen expenses to the extent of Rs 677.01 Crore, if approved, would pose burden on the general consumers of the state. Therefore, pass through of past losses to consumers by GRIDCO should not be considered.

3.1.3 Employee and A&G Expenses

Cost of employees and A&G expenses during 2006-07 was Rs 2.40 Crore. GRIDCO projects the same at Rs 5.03 Crore for the FY 2007-08, which is more than 50 percent increase from the current year. This seems to be very high. The increase in this cost should not be allowed by more than 10%.

3.1.4 Power Procurement Costs

Since the power tariff proposal submitted by OHPC is subject to the final approval of the OERC, there is no need of calculating the power purchase cost at the proposed higher tariff, which has not been accepted till now. If the existing tariff were considered then the cost of power purchase of 5855.80 MU from the total hydro stations would be reduced by Rs 61 Crore. The GRIDCO is purchasing about one-third of total power requirement from these hydro based stations, which costs less compared to the other sources. Therefore, there is a need for proper assessment of the availability of power from hydro stations. GRIDCO has not explained the method of projection. Therefore, the Commission should assess the

availability of power from this source. If the availability of power from this source would be more than projected by GRIDCO, then the total cost of power purchase would be lower than what is projected.

3.1.5 Transmission Loss

GRIDCO has proposed a transmission loss of 5% as against 4% approved by OERC for 2006-07. It has failed to arrest the high transmission loss in conformity with the power sector reform. Therefore, GRIDCO needs to reduce the transmission loss gradually and significantly. The transmission loss, therefore, may be fixed at 3% for the FY 2007-08. This would increase the revenue from power sale to the DISTCOs and CGPs during 2007-08.

3.1.6 Projection of Demand

GRIDCO has projected lower demand from the DISTCOs for the FY 2007-08 and thereby underestimated revenue receipts from sale of power to the DISTCOs in order to project higher revenue gap. The licensee felt that the projections submitted by the Distribution Companies were on the higher side and estimated the projection for FY 2007-08 considering the prorated projection for FY 2006-07 with an average increase of 7.65% on demand by the DISTCOs. If the projected demand of the DISTCOs would be considered then the revenue receipts of GRIDCO would show an increase by more than Rs 168 Crore and hence reduction in the revenue gap by the same amount.

Table-11
Gap in Energy demand by DISTCOs and projection by GRIDCO
During FY 2007-08

DISTCOs	Projection submitted by DISTCOs to GRIDCO (MU)	Projection submitted by DISTCOs to OERC (MU)	Projection by GRIDCO (MU)	Gap in demand submitted to OERC and projection by GRIDCO	Additional revenue by sale of energy (Rs Crore)
WESCO	5300.06	6000.00	4925.00	1075.00	105.37
CESU	5225.00	5233.11	5060.00	173.11	13.68
NESCO	5119.00	4760.00	4110.00	650.00	52.65
SOUTHCO	1905.25	1855.00	1905.00	-50.00	-35.00
Total	17549.31	17848.11	16000.00	1848.11	168.70

All these show that the projection of GRIDCO for a higher revenue gap during the FY 2007-08 is against the interest of the general consumers. The burden would be passed on to them by the amount of hike in tariff for both the GRIDCO and the DISTCOs.

3.1.7 **GRIDCO has Profit from sale of power**

GRIDCO was selling power to other states when it was having surplus. It should give the picture of what it was doing with this profit. This is important as GRIDCO is now trying to pass through past losses to the consumers.

3.1.8 Summarizing the presentation, the representative of the NCCDS stated that the Commission should not allow GRIDCO to increase BSP, which if allowed would be ultimately passed on to consumers. The higher revenue gap as shown by GRIDCO can be reduced by reducing the revenue requirement, which is very high. GRIDCO has failed to arrest the high transmission loss in conformity with the power sector reform and needs to reduce the transmission loss gradually and significantly.

3.1.9 The Commission has considered all the views of various objectors on the Bulk Supply Price Proposal of GRIDCO. Some of these views were found to be of general nature and others were specific to the proposed tariff filing for the FY 2007-08. Based on their nature and type, these views have been classified subject-wise as discussed below:

3.2 **Legal:**

3.2.1 One objector stated that the application filed by GRIDCO for determination of tariff was not tenable as this Commission had no authority under law and more particularly u/s 62 of E. Act 2003, to determine tariff on the application of a non-licensee i.e. GRIDCO.

3.2.2 Another objector argued that Bulk supply was not defined in the Electricity Act, 2003 although under Section 86 (1) (a), the word “bulk” did appear. However, the objector clarified to the query of the Commission that the word ‘bulk’ therein implies that DISTCOs should supply in bulk or retail in a geographical area under RST. The Commission may decide whether the ARR of GRIDCO for determination of bulk supply price be at all termed as such. In case of an electricity trader, the act envisages fixation of trading margin and not approval of ARR. Commission may decide the status of GRIDCO and then say whether GRIDCO is authorized to file an ARR instead of charging only 4% / 4 P/U towards margin.

3.2.3 Some objectors stated that the status of GRIDCO might be determined based on CERC order dated 1.5.2006 which clarified that GRIDCO was an intra-state trader. The status of GRIDCO may also be determined based on ATE order dated 16.11.2006 and GRIDCO may only be allowed intra-state trading margin of 4% on base price of generator. GRIDCO should be first cleared legally before it operates as a bulk purchaser and seller of power in the State.

3.2.4 GRIDCO has stated that it is a deemed licensee without stating the purpose for which it has been licensed, said one objector. Since, license

could be given to (a) Transmit electricity, (b) Distribute electricity and (c) Trading of electricity under Electricity Act, 2003, GRIDCO could be treated as a deemed licensee for Intra-State trading in power, maintained one objector.

- 3.2.5 The objectors stated that there was no concept of Bulk Supply Licensee in the Electricity Act, 2003. The words 'wholesale' and 'bulk' appearing in Section 86 (1)(a) of the Electricity Act, 2003 refers only to wheeling, as supply of electricity has been stated as a separate function.
- 3.2.6 An amendment to the Electricity Act, 2003 may be necessary to enable GRIDCO, the 'Deemed Intra-State Trader' to purchase power in bulk from the generating stations, CGPs and CGSs to meet the requirement of power of the DISTCOs and to enable it to export power outside the state, suggested one objector.
- 3.2.7 Some maintained that functioning of GRIDCO as trading company/ licensee was unnecessary to act as middleman between the generating licensees and distribution licensees that too in the absence of competition. Some objectors said that there should be one aggregator and GRIDCO being the successor of OSEB, Government of Orissa must issue a letter of authorisation in favour of GRIDCO to handle all the Power Purchase Agreements.
- 3.2.8 One objector observed that the notice so published inviting opinions/ suggestions did not conform to the requirements. The law contemplates that the Commission has to determine licensee's revenue for the purpose of fixing tariff. The procedure/method adopted by the Commission should be made simple and inexpensive to enable the public to participate. The Commission may examine whether the licensee has complied with the directions, conditions of licensee etc. issued by the Commission?
- 3.2.9 The objector opined that since the GRIDCO had failed to control its expenses, it had violated conditions of license for which its application was liable to be rejected.
- 3.2.10 GRIDCO's accounts have not been audited for the financial year 2005-06, 2004-05 and 2003-04, the objectors maintained.

3.3 Simultaneous Maximum Demand, Contract Demand and Billing Demand

- 3.3.1 One objector suggested that OERC may accept GRIDCO's figure as DISTCOs' figures could not be correct as far as Simultaneous Maximum Demand was concerned. Another objector stated that the SMD projection made by GRIDCO had no merit and logic for consideration as the DISTCOs have submitted their proposal of SMD with the logic, which might be considered. The average SMD as proposed by NESCO, WESCO & SOUTHCO are 673 MVA, 950 MVA and 300 MVA respectively and the same may be taken for computation of Revenue of GRIDCO.

- 3.3.2 Some suggested that a format be designed by the Commission which should depict in a macro level the total quantum of power billed for respective voltage level along with matching contract demand.

3.4 Energy Requirement & Availability:

- 3.4.1 Some objectors stated that the quantum of energy submitted by GRIDCO for sale to DISTCOs might not be considered as the DISTCOs had submitted their requirement in their respective ARR. The drawl of energy submitted by the DISTCOs may be considered.

3.4.2 OHPC:

3.4.2.1 One objector stated that GRIDCO had not independently assessed the availability of hydro power during the year 2007-08, but had merely accepted the data submitted by OHPC based on “design energy”.

3.4.2.2 Another objector observed that the availability of power from hydel stations should be considered on the basis of the reservoir levels of the stations in the current year and their generation performance levels in the first seven months of FY 07. The generation as estimated for FY 07 may be considered as a basis for estimating the availability of power for FY 08.

3.4.2.3 Some objectors said that design energy of the hydel plants, their performances in the earlier years and the reservoir levels on the 1st day of October 2006 should be considered for computing power availability. They submit that the availability of power from State hydro stations would be 7128 MU in FY 08 as against GRIDCO’s proposal of 5856 MU.

3.4.2.4 One objector observed that GRIDCO should schedule for higher capacity availability from OHPC through suitable incentives.

3.4.3 TSTPS:

TSTPS stage 1 (1000 MW) is operating at higher PLF. Hence, Orissa’s share from TSTPS stage 1 shall be more than what GRIDCO had projected, said one objector.

3.4.4 CGPs:

3.4.4.1 Some objectors do not agree with the projections made by GRIDCO in terms of energy drawl from the CGPs. CGPs may be encouraged to supply surplus power at a cheaper rate to the GRID, maintained others.

3.4.4.2 One objector opined that firm supplies might be bought from captive plants by distribution licensee using the guidelines issued by the Central Government under Section 63 of the Act. Another objector stated that Grid-connected captive plants could also

supply power to non-captive users connected to the grid through available transmission facilities based on negotiated tariffs. Such sale of electricity would be subject to relevant regulations for open access.

3.4.4.3 In FY 08, availability from CGPs might be taken at 630 MU as against the GRIDCO proposal of 540 MU, said one objector.

3.4.4.4 Some objectors suggested that the rates to be made applicable to the new CGPs should at least be equivalent to the rates applicable to costliest power available from ER NTPC stations. Others, however, maintained that the rates for CGPs' power might be priced at the lowest cost ER NTPC power.

3.4.5 **Total Power Availability:**

3.4.5.1 Some objectors did not agree with the projected availability of power of 16801 MU as proposed by GRIDCO and estimated that the total availability of power would be 18815 MU during FY 07-08. One objector has given its views on availability of power during 2007-08 as follows:

- Availability from OHPC old stations should be considered as per OERC approval for 2006-07.
- As far as Indravati is concerned, Commission should go by Design Energy.
- Similarly, Commission should go by its own approval for 2006-07 for Machkund Power.
- Regarding availability from TTPS, OPGC and CGPs, Commission may retain GRIDCO's estimate.
- OERC should scrutinize the power availability from Chukka, TSTPS, FSTPS, and KHSTPS etc.

3.5 **Transmission Loss**

3.5.1 Most objectors were critical of GRIDCO's projection of transmission loss at 5%. One objector stated that the Licensee had miserably failed to arrest the high transmission losses. The average transmission loss in the OPTCL system has been taken as 5% which contradicts the recommendations of the High Power Committee. Due to delay in completion of lines and substations, system availability has gone down below 98% and system loss has gone up now upto 5% as per ARR Application, said some objectors.

3.5.2 One objector submitted that it was reasonable to assume EHT loss of 3.7% for 2007-08, which was also the recommendation of Kanungo Committee Report. Another objector observed that the Commission should direct

OPTCL to limit the transmission losses to a figure less than the approved loss of 4% in 2006-07 instead of approving 5% during 2007-08. The method of transmission loss computation adopted by GRIDCO is not acceptable to these objectors.

- 3.5.3 Some observed that GRIDCO should examine with OPTCL and determine the sections of transmission lines where higher transmission loss was occurring.

3.6 Power Procurement Cost

- 3.6.1 Objector 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. The Commission may examine whether cheaper power has been purchased by GRIDCO and whether the licensee has followed its PPA faithfully, suggested one objector.

- 3.6.2 Some objectors opined that not more than 6% variations in power purchase cost from the approved figures for FY 2006-07 should be allowed by OERC. Pooled cost of power purchased for supply to consumers inside the State should not include the cost of power purchased for trading out side the State, observed some objectors.

3.6.3 OPGC:

3.6.3.1 One objector pointed out that GRIDCO had not taken steps for early disposal of the OPGC case in the Supreme Court. Another objector pointed out that the truing up exercise was essential to find out the actual fixed cost paid by GRIDCO to OPGC in comparison to the fixed cost allowed in GRIDCO's ARR every year. The issue of finalization of PPA of OPGC is sub-judice. As such, there was no justification of allowing DPS until settlement of the PPA, said one objector.

3.6.3.2 Some objectors stated that the Fixed Cost of OPGC might be estimated for 2007-08 separately without considering the figure of 2006-07 as there would be substantial reduction of fixed cost on account of depreciation and interest on loan even if some increase was there in O&M expenses.

3.6.4 TTPS:

3.6.4.1 The fixed cost of TTPS from 2000-01 to 2007-08 may be derived based on the CERC approval, said one objector.

3.6.4.2 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 finalized, all such claims of TTPS can be comprehensively worked out, maintained another objector.

3.6.5 CGPs:

In respect of CGPs, the prices should be differentiated for peak and off-peak supply and the tariff should include variable cost of generation at actual levels and reasonable compensation for capacity charges, opined one objector. Alternatively, a frequency based real time mechanism could be used and the captive generators could be allowed to inject into the grid under the ABT mechanism.

3.6.6 CGSs:

3.6.6.1 One objector said that Tariff of NTPC was provisional and any claim for NTPC dues had to be settled after finalization of NTPC tariff. Another objector requested OERC to consider the tariff for KhSTPS based on the order dated 26.3.2004 of CERC.

3.6.6.2 Some objectors did not accept the increase in FPA by 10% over and above the average FPA of first 7 months during 2006-07 as proposed by GRIDCO. The additional impact of FPA worked out to Rs 43.59 crore which might be taken up for truing up. Some stated that for the purposes of tariff computation, the average FPA of the past seven months should be taken into account and suggested that 4% escalation for FPA in FY 08 might be approved over and above actual of last Seven months.

3.6.6.3 The Store Price Ledger along with the break-up of cost components should be treated as a mandatory evidential document before approving the impact of higher FPA, maintained another objector.

3.7 PGCIL Charges:

3.7.1 One objector stated that the claim of payment to PGCIL of Rs. 29.38 crore was sub-judice as reported by the petitioner. As such, such a claim could not be entertained.

3.7.2 Pass through of payment of PGCIL towards contracted power for 2003-04, 2004-05 and 2005-06 has again to be claimed only after finalization 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, maintained another objector.

3.8 Establishment & Financing Cost

3.8.1 Employee Cost and A&G Expenses

3.8.1.1 One objector questioned whether administrative, establishment/employees cost, general cost and legal expenses etc. were reasonable? As far as employees cost is concerned, allowing a 6% rise over the last year's approved figure may be reasonable, said another objector.

3.8.1.2 Some objectors said that Rs. 1.73 crore appeared to be reasonable towards A&G expenses for the year 2007-08.

3.8.2 Interest on Long Term Liabilities

3.8.2.1 The interest towards securitization as well as capital of securitization should not be passed onto the revenue requirement for tariff purposes, stated one objector. Another objector said that loans incurred for the payment of energy charges to the various generating companies should also not be taken into consideration.

3.8.2.2 Some stated that bonds issued for securitization of the arrear demand of the generating companies were loans which had not created any capital assets nor were intended for capital use. Interests under this head need not be included in the interest calculation nor repayment of such loans should be passed on to tariff as the consumers have already paid this amount once to the DISTCOs while clearing their monthly energy bills.

3.8.2.3 The rate of interest for some of the loans were very high, viz. 13% (for State loan and IBRD loan), 12.15% for REC loan, 15% for Power Bond-I and Power Bond-II, OHPC loan, Nalco loan etc. When loan is available now from the scheduled banks at a much lower rate say, 8% to 9% only, it is not known why GRIDCO is not taking steps to repay the loans by availing cheaper loans, observed some objectors.

3.8.2.4 The interest allowed in GRIDCO ARR for NTPC Bond may be trued up and the incentive received in cash or adjusted with GRIDCO dues under One Time Settlement(OTS) Scheme from 1.10.01 to 30.9.2006 may be passed on to the consumers of Orissa, maintained other objectors.

3.8.2.5 GRIDCO has submitted to repay the loan of Rs 497.50 crore during the FY 2007-08. It is worth while to mention here that the loan source taken in the ARR of GRIDCO is basically to meet the short fall of funds due to non-payment of BSP & other dues by DISTCOs and non-recovery of outstanding from Inter-State wheeling, Trading etc. The repayment is to be met from the collection from the outstanding dues of DISTCOs and outside States. DISTCOs could not pay the full BSP in the initial years because of gap in the ARR approved, understatement of T&D losses, natural calamities, default in payment of Govt. dues etc. The amount equivalent to the amount required to be paid by the DISTCOs to GRIDCO may be amortized as regulatory assets in the DISTCOs' ARR; which in turn will be paid to GRIDCO by DISTCOs for payment towards their outstanding dues. GRIDCO shall repay the said amount to the Generator/Bank/ FIs, said some objectors.

- 3.8.2.6 Some objectors calculated the interest on opening base loan submitted by GRIDCO. They observed that the loan base must be reduced to the extent of collection from DISTCOs and other states while computing interest for 2007-08. The arrear payment to be received from DISTCOs and outside the state should be considered for repayment of GRIDCO loan. The short fall of funds for repayment, might be re-phased by GRIDCO for a longer tenure, the interest on the same might be allowed in the ARR of GRIDCO.
- 3.8.2.7 Due to the inefficiency of GRIDCO, it failed to collect the BSP bill from distribution licensees for which NTPC Bond has been issued, said one objector.
- 3.8.2.8 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 re-payment of loan and interest. The genuineness of the loan has not been established to the satisfaction of the Commission. Hence, the claim of Rs. 204.75 crore of GRIDCO may be disallowed, said one objector.

3.9 Past Losses:

- 3.9.1 Past losses should not be passed on to tariff, said one objector. Another objector stated that past losses now suggested to be passed on to the Consumers, were due to un-prudent expenditure by GRIDCO which was far excess as compared to the amount approved by the Regulatory Commission.
- 3.9.2 While no assets other than buildings, furniture and fittings have been transferred to GRIDCO, huge liabilities have only been transferred to it. This is not permissible according to the provisions of Section 131 (2) of the Act as GRIDCO is only a trader and not a STU, nor generating company, nor transmission licensee, nor distribution licensee. Therefore, for the purpose of determination of BSP, no past liabilities of the erstwhile GRIDCO should be taken into account.
- 3.9.3 The erstwhile undivided GRIDCO was solely responsible for the liabilities as it did not collect its receivables from the DISTCOs nor it approached the Commission to take action against them for non-payment. No action is even taken now to collect its 50% share of the pre-1.4.99 arrears collected by the DISTCOs out of the written off revenue of Rs. 400 crore.
- 3.9.4 In terms of Section 131(1) of the Electricity Act, 2003, the liabilities of the erstwhile GRIDCO shall remain with the State Government and can't be re-vested in the present GRIDCO, the Intra-State trader.
- 3.9.5 GRIDCO has also requested for pass through of all the past losses to the extent of repayment of loans and liabilities. In this connection, it may kindly be reviewed if the Commission had already taken into

consideration repayment of such loan liabilities in the past year's tariff calculation, requested another objector.

- 3.9.6 One objector stated that the amount of Rs. 586.89 crore requested as pass through for the expenses of 2005-06 had not been substantiated with appropriate claims by the licensee. Another objector observed that the Commission should reject treatment of past loss and direct GRIDCO to adjust the same against its earnings from UI under ABT and power trading.
- 3.9.7 All losses of erstwhile OSEB and subsequently of GRIDCO from retail sale were kept in GRIDCO's book and distribution privatized with zero loss, said another objector. In the litigation against GRIDCO on power trading, GRIDCO should submit this picture before the Apex court and pray for a central subsidy to wash off all past losses. Incidentally a major part of these losses went as gains to central generating companies. Otherwise, past losses may be kept as a corpus to be funded through a Special Purpose Vehicle (SPV), said one objector.

3.10 Truing Up:

- 3.10.1 One objector maintained that GRIDCO might be directed to submit the truing up exercise from 1.4.99 upto 31.3.06 for consideration of OERC prior to fixation of ARR of GRIDCO for 2007-08. Unless the truing up exercise is done the Commission may not consider the pass through of past additional cost elements in isolation leaving revenue elements untouched. Some objectors stated that from the truing up Statement, it might be observed that there was a surplus of Rs 1386.52 crore during 1999-00 and upto 31.3.2005.
- 3.10.2 The Commission should true up the actual / estimations of ARR of GRIDCO for FY 2006-07 and the benefits due to higher availability of the power from Hydro stations and the cheaper Thermal stations ought to be passed on to the consumers of Orissa through reduction in Bulk Supply price, said one objector.

3.11 Export of Power & UI

- 3.11.1 Objectors in general observed that the earnings from the UI might be considered in the ARR of GRIDCO. Loss due to adjustment in trading cannot be a pass through as trading is a core activity of GRIDCO.
- 3.11.2 GRIDCO in its ARR has not mentioned the earnings on account of trading of power as well as from UI tariff, said one objector. Another objector stated that GRIDCO had not projected how much has been gained by selling power outside during FY 2003-04, 2004-05, 2005-06 and 2006-07.
- 3.11.3 The sale proceeds of the power traded by GRIDCO by selling the surplus power from the State's share of the energy generated in the Central Sector Power plants should be considered as a Miscellaneous Receipts by GRIDCO, maintained one objector.

- 3.11.4 There would be surplus of energy during 2007-08 to the extent of 213 MU which may be sold through UI at the peak hours by use of hydro stations to get more advantage for the State, opined another objector. Some said that a mechanism had to be found to enable export of power outside the State at a rate quoted by the Inter-State Traders.
- 3.11.5 Earnings from export of power or from UI charges should be passed on to the consumers by way of deduction from the cost of power.

3.12 Revenue Requirement

- 3.12.1 OERC may consider the Principles decided by the ATE in the order dated 13.12.2006 in the appeals no. 74, 75 and 76 of 2006 while deciding the revenue requirement of GRIDCO, opined one objector.
- 3.12.2 Some objectors projected the revenue requirement incorporating GRIDCO's collection of surcharge from the DISTCOs for delayed payment. This has to be projected in revenue receipt, they said. Similarly, collection of arrear energy charges prior to 01.09.1999 has not been exhibited in revenue receipt. Also GRIDCO has not projected how much has been gained from refund of charges collected by Central Power Stations.
- 3.12.3 Revenue receipt will increase due to sale of additional power as assumed by GRIDCO. Similarly, revenue expenses on transmission will decrease as consumers should not pay the interest on bonds on account of arrear energy charges. Further expenditure will decrease if pass through claims of GRIDCO are critically scrutinized by OERC, observed some objectors.
- 3.12.4 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, said some objectors.
- 3.12.5 One objector stated that the sale of CGPs for back up power and emergency power might be taken up in Sale instead of in Misc. Receipt.

3.13 Return on Equity:

- 3.13.1 The Commission need not consider the return on equity of Rs. 60.62 crore as proposed by the licensee, said one objector.
- 3.13.2 Others said that GRIDCO as an intra-State trader could not ask for return on equity since the same was not in line with Government of Orissa notification dated 29th January, 2003.

3.14 Other Income

3.14.1 During the first eight months of the current year (2006-07) Orissa has got more than Rs. 55 crore on account of UI which has not been shown by GRIDCO, said one objector.

3.14.2 Some objectors said that the licensee was supposed to receive 475.77 crore for financial year 2004-05 from West Bengal, Bihar, Madhya Pradesh and Andhra Pradesh, DVC, Assam, Manipur, PTC and NVNL etc. It had not furnished in this ARR the amount recovered against the outstanding as mentioned above.

3.15 Levy of Over Drawl Charge

The incremental cost for additional generation may be approved for billing in case there is an over drawl by any DISTCO over and above the quantum fixed by OERC, observed one objector.

3.16 Rebate

Some objectors stated that the Commission might approve the rebate of 2% to the DISTCOs for prompt payment of BSP bills within three working days excluding Sunday and holidays as per Negotiable Instruments Act from the date of presentation of the BSP bill.

3.17 RLDC/NLDC Fees:

The fees and scheduling charges leviable by the respective RLDC and NLDC are required for trading transactions outside the State and should not be burdened on the State consumers, observed one objector.

3.18 Other Issues:

3.18.1 Some objectors expressed that at present Orissa was not short of demand but short of energy capacity. The scenario of power shortage is knocking at the door of the Orissa State and in absence of matching generation planning, the future power scenario is appeared to be bleak. They have suggested that GRIDCO should be authorized to plan for generation of power for future years. GRIDCO should approach the Government to move an amendment in the Electricity Act, 2003, so that it could be vested with bulk supply activities as all the PPAs in respect of the State of Orissa were vested with GRIDCO.

3.18.2 One objector questioned as to how much arrear/dues were left to be recovered from the Govt., public body, industrial and commercial organization for which interest was being paid on loans availed by licensees and also DPS? For the last several years GRIDCO has not been able to collect its energy dues from DISTCOs for which it could not pay the full dues of NTPC and other generators. It has been issuing bonds to generators and paying interests, said another objector.

3.18.3 One objector suggested that when an infrastructure was developed by GRIDCO / OPTCL for supply of power to a particular licensee, the cost / depreciation should be charged to that particular distribution licensee who was deriving benefits out of that investment.

3.18.4 Distribution companies should be persuaded to resort to demand-side management activities, observed one objector. Some objectors stated that GRIDCO had not improved its efficiency and standards of performance. OPTCL/GRIDCO has taken no step for establishment of sufficient/adequate transmission network in spite of due mention in earlier petitions.

3.19 Views of Government of Orissa:

The Government of Orissa representative from the Department of Energy stated that the State Government had no comment on the ARR and Price Application of GRIDCO for 2007-08.

4 GRIDCO's RESPONSE TO THE OBJECTORS

In response to the views of the objectors on GRIDCO's application for approval of the Annual Revenue Requirement and Bulk Supply Price for 2007-08, GRIDCO had filed rejoinders on the same. GRIDCO's rejoinder on views expressed by the objectors has been broadly classified into the following main issues.

4.1 Legal

4.1.1 Regarding the legalities of GRIDCO's ARR application, GRIDCO submitted that it was a deemed licensee under provision 1 & 5 of section 14 of Electricity Act. Further OERC is empowered to determine the Bulk Supply Price under section 86 (1)(A) of Electricity Act, 2003. Orissa follows a single buyer model which is otherwise essential in a state where distribution is privatized. It is clarified that GRIDCO is a wholly owned undertaking of the State Government and a Company incorporated under Companies Act, 1956 for discharging its obligations of the Transferee under clause 11 of the Transfer Scheme in accordance with the Govt. of Orissa, Department of Energy Notification No.6899 dt.09.06.2005 from the date of transfer i.e. w.e.f. 01.04.2005.

4.1.2 The public notice published on 11.12.2006 by GRIDCO is absolutely in line with the provisions contained in Electricity Act, 2003 and conforms to the requirement of the regulations framed under the Act. The notice indicated that interested persons might inspect/peruse the said tariff proposal for 2007-08 and take note thereof by 11.01.07, which were available in the O/O Sr. General Manager (P.P), GRIDCO, and all S.Es. of EHT(M) Circles located at Cuttack, Burla, Berhampur, Jeypore, Chain pal and Jajpur Road. The full set of the tariff proposal could be purchased from the above offices on payment of Rs.100/- for each application. Besides above, a Salient Feature on the aforesaid proposals for each application was also available on payment of Rs.30/-. Hence sufficient information was 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.

- 4.1.3 Further, CERC in its order dated 01.05.2006 has held that GRIDCO is an Intra-State Trader. Appellate Tribunal for Electricity in its order dated 16.11.2006 in case No. 81/2006 has not disturbed the status of GRIDCO as held by CERC. GRIDCO has challenged the same before Hon'ble Supreme Court in Civil Appeal No. 5722/2006. The impugned order of ATE has been stayed.
- 4.1.4 With reference to 5th provision of section-14 of Electricity Act, 2003, GRIDCO is a deemed licensee. Hence, as per Section 61 to 64 & 86 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, GRIDCO had submitted its ARR for the ensuing year i.e.2007-08 before OERC with request to revise the present Bulk Supply Price which was registered as Case No.55/2006. OERC determines the BSP to the extent of the supply of power to the consumers of the state through the DISTCOs. Hence, the contention of the objector that the application filed by the Licensee was not bonafide, is not correct and such a statement has been given to mislead the Commission.
- 4.1.5 Regarding various provisions in the National Tariff Policy and their applicability to tariff determination, GRIDCO maintained that this Policy was a guiding factor and not a binding factor. The Tariff Regulations framed by CERC/OERC is followed strictly while submitting ARR.
- 4.1.6 GRIDCO clarified that its ARR application was based on audited accounts of 2004-05 and provisional accounts of 2005-06, with supporting documents and duly filled in formats as prescribed by Commission. The accounts for FY 03-04 & 04-05 have since been audited by CAG and submitted before OERC. This Statutory Audit for 05-06 has been completed. The report is awaited. Therefore, simply stating that GRIDCO's Application is based on incorrect and manipulated statements of facts/material/A/C is not warranted.

4.2 Simultaneous Maximum Demand and Energy Drawl

- 4.2.1 GRIDCO's projection for Energy drawl/ procurement and SMD for 2007-08 is based on realistic assessment. The DISTCOs were asked by the Commission to submit the contract demand in respect of each EHV S/Ss under their jurisdiction. The DISTCOs have not complied with the above directions of OERC. The Commission may insist upon the DISTCOs to provide GRIDCO with the contract demand from each of the EHV S/Ss in their respective area of operation
- 4.2.2 Information relating to sub-station wise contract demand is absolutely necessary for effective planning, augmentation, monitoring and maintenance. Again, any penalty collected by DISTCOs towards over

drawl by any of its consumers over and above the contracted demand, the same should be passed on to GRIDCO.

4.3 **Energy Availability & Procurement:**

4.3.1 GRIDCO projected its quantum of power procurement for 2007-08 as per the generation plan submitted by OHPC, OPGC, TTPS and considering 80% PLF of Central Generating Stations. GRIDCO's power purchase projections from CGPs were based on present trend.

4.3.2 **Hydel Power:**

4.3.2.1 The availability of hydro power is always estimated on the basis of Design Energy assessed scientifically by Central Electricity Authority or by any expert body. The actual availability of hydro power depends on rainfall during the year, discharge schedule approved by State Water Board etc. At the time of finalization of ARR during the month of February-March for the ensuing FY, it is difficult to assess the actual rainfall so also the reservoir level. Therefore, it is always projected on the basis of design energy. In some years, the availability exceeds design energy whereas in other years it falls short of the same.

4.3.2.2 OHPC while finalizing its generation plan for the ensuing FY 07-08 has taken into consideration the Design Energy, Reservoir Levels, Installed capacity of the Power Stations, R&M plan for the next year, Dispatch Schedule etc

4.3.2.3 GRIDCO does not have any scope to examine the projection made by OHPC. Further, at the time of determination of tariff of OHPC, the quantum of availability gets finalized in a transparent manner through a public hearing. The quantum and price as approved for OHPC by the Commission is finally considered in the power purchase quantity and cost of GRIDCO.

4.3.2.4 GRIDCO has furnished a table wherein against the total design energy of 5619.24MU of hydro stations, the details of drawl of power for last five financial years have been shown:

Table-12
Year-wise Energy Receipts from OHPC Stations.

(Energy in MU)

Particulars	Design Energy	Energy Received					
		01-02	02-03	03-04	04-05	05-06	Avg.
Old HPS	3676.86	3386.99	2235.38	3689.17	3896.65	3159.35	3273.51
UIHEP	1942.38	2920.47	790.03	2109.86	2826.50	1751.23	2079.62
Total	5619.24	6307.46	3025.42	5799.03	6723.14	4910.58	5353.13

- 4.3.3 Hence, it is observed that actual generation is below the Design Energy.
- 4.3.4 **State Thermal Power:** In respect of the State Thermal Power, GRIDCO has considered the generation plan submitted by TTPS and OPGC. The generation plan is prepared by the generators considering a host of factors and GRIDCO has no scope to examine the same.
- 4.3.5 **Central Generating Stations:** In the ABT regime, a PLF of 80% is considered as the standard norm as approved by CERC for tariff setting for the block period from FY 04-05 to 08-09. Therefore, availability at normative PLF level is considered while forecasting the quantum of drawl from Central Generating Stations.
- 4.3.6 Replying to the objectors' view that drawl from TSTPS should be scrutinized, GRIDCO maintained that it had 31.8% share on stage-I of TSTPS having capacity of 1000MW. The stage-II having capacity of 2000 MW is totally dedicated to Southern states. GRIDCO stated that after prolonged persuasion, Ministry of Power, Govt. of India has agreed in principle to allocate 10% home state quota i.e. 200 MW in favour of GRIDCO.
- 4.3.7 **CGPs:** The drawl from CGPs is totally un-certain and depends upon price offered by different Inter-State Traders, open access availability, own requirement etc. The forecast made by GRIDCO in respect of drawl from CGPs is based on actual availability in the 1st half of 2006-07. With the uncertainties involved with drawl of power with CGPs, GRIDCO's proposal to draw 540 MU should be considered optimistic and acceptable.
- 4.4 **Transmission Loss**
- 4.4.1 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. OPTCL has furnished the detailed reasons for high transmission loss in the system.
- 4.4.2 The average loss of OPTCL system for April 06 to Sept.06 works out to 4.78%. During FY 2007-08, Orissa Power System is expected to land in a deficit situation in energy contrary to previous 3-4 years when the state was energy surplus and the surplus energy was traded through ER boundary to other 4 regions from CGSs thereby effectively reducing the global loss. When the quantity of energy will be fully utilized for the state's requirement, the loss would be more than the loss encountered during the past 3-4 years. During FY 2007-08, the entire State share of power in the CGSs will be utilized to meet the State requirement and the State may require to source additional power from outside the state, if feasible. Hence, the projected loss during FY 2007-08 shall be of order of 5%.

- 4.4.3 Here it may not be out of place to mention that the transmission loss of OPTCL is one of the lowest in the country compared to other states.

4.5 **Power Procurement Cost**

- 4.5.1 On power procurement cost, GRIDCO stated that the cost of power projected in the ARR for 2007-08 was based on the rates proposed by OHPC, OPGC and tariff approved by CERC for Central Generating Stations including TTPS and rates agreed in the bilateral contracts with CGPs. During the year 06-07, OHPC tariff has undergone upward revision due to various factors including R&M expenditure incurred by the generator. Besides the tariff of thermal power was subject to fluctuations in fuel prices. GRIDCO has coughed up around Rs. 200 Cr. towards fuel price variation over and above the rate approved by OERC for the FY 05-06. Keeping in view rise in fuel prices witnessed during 05-06, OERC increased the approved cost of power for the FY 06-07 at a realistic rate. GRIDCO maintained that the actual cost of purchase of power was required to be allowed in the ARR of GRIDCO.
- 4.5.2 The tariff of TTPS for 2004-09 has not been finalized by CERC. CERC vide its order dated 28.07.2006 and subsequent order dated 25.09.2006 had revised upward the fixed cost of TTPS to Rs.198.35 Cr. for 2003-04 by allowing capitalization of R&M expenditure of Rs.402.92 Cr. Considering this order, NTPC claimed differential arrear fixed cost from 2000-01 to 2005-06 for Rs.166.27 Cr. Besides, Rs.13.56 Cr. has been paid to NTPC towards 1st instalment of reimbursement of interest and A&G expenses during R&M period.
- 4.5.3 The Commission in its different orders had not allowed the claim made by GRIDCO by stating that the actual expenditure on account of R&M would be considered after due approval from CERC.
- 4.5.4 GRIDCO has arrived at the capacity charges for the FY 07-08 keeping the base as Rs. 198.35 Cr. for the FY 03-04 and taking into consideration subsequent huge expenditures made by NTPC towards R&M.
- 4.5.5 As far as OPGC is concerned, GRIDCO stated that OPGC has filed a SLP before Supreme Court of India challenging the jurisdiction of OERC. GRIDCO has been insisting to prefer the claim on the basis of the revised financial and technical norms, whereas OPGC prefers monthly energy bills on the basis of the financial and technical norms envisaged in the GoI notification, 1992. Since the matter is sub-judice, GRIDCO is paying monthly energy bill under protest
- 4.5.6 Further, it is to mention here that during the initial two years, the depreciation was not recovered by OPGC in full as the units had come into commercial operation in phased manner. Therefore, the depreciation would not reach 90% of the fixed assets during the year 07-08.
- 4.5.7 Regarding the tariff for the KhSTPS, GRIDCO maintained that the same was not finalized at the time of submission of ARR application. In the

mean time, the tariff has been approved by CERC and NTPC has prepared bill for the month of December'06 on the basis of the revised tariff.

4.6 Employees Cost

On employees cost GRIDCO maintains that the projection is very much realistic. In view of merger of DA and normal annual increment, the claim of GRIDCO is justified.

4.7 A&G Cost

Based on past experience, GRIDCO has projected its requirement.

4.8 Interest on Long Term Liabilities

4.8.1 The interest expenses are estimated based on evidential documents. Interest on GRIDCO bonds and loans are revenue expenditures and are genuine which should be allowed in tariff. In fact, the Commission after consideration of all facts had allowed the same in earlier tariff orders.

4.8.2 GRIDCO has entered into BSP agreement and ESCROW agreement backed by LC to ensure collection of dues from DISTCOs. Despite that the dues from DISTCOs remain outstanding due to insufficient and inadequate revenue realization.

4.8.3 The failure on the part of DISTCOs to pay the full BSP dues of GRIDCO has resulted in corresponding failure of GRIDCO to clear the power purchase dues with the generators which ultimately resulted in huge payables. In order to tide over the situation, bonds have been issued by GRIDCO as well as distribution companies to generators under different schemes which inter-alia includes one time settlement scheme of GoI. In the event of GRIDCO failing to service these bonds, serious consequence like regulation of power, recovery from central plan assistance to the state etc. were very much likely. Against this backdrop, it is extremely essential to pass on the interest as well as principal instalments in the tariff, so that, adequate funds would be available with GRIDCO to service these loan bonds.

4.8.4 GRIDCO maintained that incentive received under one time settlement scheme from NTPC had no relationship whatsoever with interest. The incentive so received was utilized on year to year basis against items of expenditure, not provided for in the ARR like DPS payment to OPGC, arrear PGCIL bill due to upward revision of tariff, retrospective revision of capacity charges of TTPS from the FY 01-02 to FY 06-07 due to additional capitalization on account of R&M work etc. GRIDCO has projected interest cost strictly as per the loan/bond agreement executed with Financial Institutions/Banks/Generators which is open to audit by the Commission.

4.8.5 Non-payment of principal also have similar serious consequences like regulation of power, recovery from central plan assistance, invocation of ESCROW mechanism, invocation of Govt. Guarantee, loss of credibility in the market, difficulties in raising further loan etc. Therefore,

considering practicality of situation, GRIDCO has proposed pass through of repayment of principal under Special Appropriation. However, the amount proposed towards repayment of principal may be reduced to the extent of commitments to be made by DISTCOs for repayment of loan.

4.8.6 GRIDCO is taking care of the interest burden by way of swapping the high cost loans with lower cost loans in order to reduce the burden on Tariff. The swapping exercise has contributed about Rs. 80 crore towards savings per annum.

4.8.7 The servicing cost of loan liability is considered on the basis of amount becoming due during 07-08 as per the terms and conditions of the loan/bond.

4.9 ERLDC/NLDC Fees:

The scheduling charges claimed in ARR is mandatory for a constituent having share in Central Generating Stations.

4.10 Return on Equity:

Regarding RoE GRIDCO maintained that the same was projected based on CERC Regulations, 2004. Further, no business can run and survive without provision of Return on Equity.

4.11 Previous Loss

4.11.1 In reply to the objections raised against the proposal for pass through of past losses, GRIDCO stated that accumulated past losses from 1996 to 2005-06 (on the basis of the Audited Accounts upto 2005-06) have been submitted to the Commission with full justification, facts along with evidential documents.

4.11.2 GRIDCO maintains that the loss is mostly due to under approval of Employees Cost, interest cost, depreciation, excess power procurement projection from OHPC and CGPs in Commission's orders for different years. For example, GRIDCO had spent RS. 550 Cr. towards the change in sales mix due to hydrology failure during 02-03 to meet state demand. Similarly, GRIDCO suffered additional losses to the tune of Rs. 200 Cr. following increase in FPA during FY 05-06. Under the provisions of the Act, any reasonable expenditure incurred by the Licensee would be allowed as a pass through and recovered through tariff.

4.11.3 GRIDCO stated that it was a 100% Govt. Company whose accounts were subject to Statutory Audit and audit of C&AG.

4.12 Computation of PGCIL Transmission Charges

Action is being taken to provide the recent CERC orders pertaining to tariff for different transmission lines as evidential documents. The tariff for the TALA Transmission System has been approved by the CERC in the meantime. The additional impact of this would be Rs. 2.50 Cr. per month.

4.13 **Export**

Regarding the quantum of export, GRIDCO said that there would not be any surplus power available for trading out side during 2007-08. In fact GRIDCO proposes to purchase extra power from out side to meet the state demand.

4.14 **Miscellaneous Receipts**

4.14.1 Many objectors were of the view that GRIDCO should reflect the actual gain/loss from UI charges while proposing Revenue Requirement. GRIDCO maintained that the receipt / payment of UI charges were dependent on several factors like the behaviour of the grid constituents, line availability, demand (Peak & off-peak) of the state, management of grid operation by system operators etc. Since these factors were unpredictable, estimation of receipt or payment of UI charges beforehand would be difficult and impossible. Therefore, GRIDCO has not considered any income from Unscheduled Interchange (UI) of power.

4.14.2 The supply of power to CGPs comes under ancillary activities as per license condition. The income from sale of power to CGPs (NALCO & ICCL) is very nominal compared to total turnover of GRIDCO, and as such categorized under miscellaneous receipt under materiality concept. However, in case of DISTCOs, the sale of power to CGPs consists of a significant portion of their total sale and hence the same is categorised under revenue from sale of power.

4.15 **Revenue Requirement**

4.15.1 On revenue requirement, GRIDCO stated that it would not agree that revenue receipt would increase due to the various factors stated by the stake-holders.

4.15.2 The present ARR & BSP application has been prepared and submitted to OERC basing on the audited accounts for the year 2005-06. Moreover, GRIDCO has furnished all information and other details as per the prescribed formats provided for the FY 2007-08 with all justifications.

4.15.3 GRIDCO has submitted its ARR clearly stating the expenditure under various heads. Out of which, the cost of power purchase and servicing of loan liability accounts for approximately 97%. The items such as employee cost, A&G cost and ROI contributes less than approximately 3% of total ARR. The power purchase cost is arrived at on the basis of the tariff approved by appropriate Commission. Similarly, the servicing cost of loan liability is considered on the basis of amount becoming due during 07-08 as per the terms and condition of the loan/bond. GRIDCO does not have any control over the said two items which account for more than 97%. Any shortfall in provisioning of the above two items will have serious consequence such as regulation of power, recovery from central plan assistance to the state, attachment of the bank account as per ESCROW agreement, invocation of Govt. Guarantee etc.

4.16 Non-accounting of Some Revenue Receipts by GRIDCO

- 4.16.1 Regarding the objectors' contention to incorporate income from deemed trading in the revenue receipt, GRIDCO said that there would be shortfall of power during 07-08 and as such there was no justification in expecting revenue earnings on account of deemed trading (UI)
- 4.16.2 There is huge BSP outstanding from four DISTCOs and additional receipt over and above current BSP dues is adjusted towards arrear BSP dues unless the total outstanding BSP is liquidated in full the additional receipt could not be taken into account towards DPS.
- 4.16.3 In the ARR application of each financial year i.e. 03-04, 04-05, 05-06 & 06-07, GRIDCO had projected the expected revenue for the sale of surplus power. Again, the gain from export to out side during 2003-04, 04-05 and 05-06 have already been taken in to account for the same years which is available in audited accounts for 03-04, 04-05 and 05-06. After taking this factor into account, the remaining deficit amount has been claimed before the OERC for pass through.
- 4.16.4 GRIDCO stated that till this date the amount against collection of arrear energy charges prior to 1.9.99 had not been remitted by DISTCOs to GRIDCO.
- 4.16.5 The refundable amount due to downward tariff revision is duly considered in the audited accounts and ARR of the respective years and some of the adjustments towards the downward revision are also taken up in ARR of 07-08
- 4.16.6 In fact the contention of the objector that the earnings of export has not been considered in the order is not correct. The BSP order dated 23.03.06 at Para-6.30.20.2, clearly mentions that Commission leaves a gap of 504.52 Crs. and expects GRIDCO to bridge the same out of the profit earned on export of power.
- 4.16.7 Regarding receivable of Rs. 475.77 crore towards the outstanding dues from various states. It is to mention that the said amount had already been included in the expected revenue of the relevant years on accrual basis and as such it could not be treated as the expected revenue during current year. Further, it is to mention that the said outstanding dues are pertaining to earlier periods and there is no possibility of recovery of the same in near future.

4.17 Over Drawl Charges

As per the merit order procurement policy the cheaper power will be considered first for the consumption inside the state. In a shortage scenario, any excess drawl over and above the approved drawl by any DISCOM will force GRIDCO to source from spot market at very high cost. This will burden the general consumers of the state, if allowed. In case of shortage, DISCOM may purchase from open market.

4.18 **Rebate**

GRIDCO is availing 2% rebate from the generators against payment on presentation of bill. DISTCOs may be allowed to avail the rebate in similar line.

4.19 **Miscellaneous**

4.19.1 In a single buyer model, GRIDCO functions as aggregator. Some other states like MP, Gujarat, Haryana etc. are following the same model. The existence of GRIDCO is otherwise essential where distribution is privatized. Under 5th provision of Sec 14 of Electricity Act, 2003. GRIDCO is a deemed licensee.

4.19.2 GRIDCO stated that power purchase and servicing of loan costs accounted for more than 97% of the proposed ARR on which GRIDCO had no control. Therefore, an increase in BSP could not be attributed to inefficiency of the licensee

4.19.3 The Demand Side Management activity is the responsibility of DISCOMs. This is beyond the scope of GRIDCO.

4.20 **GRIDCO's Response to Queries Raised by the Commission Staff in the Public Hearing**

The Commission's staff during the hearing on 15.02.2007 had asked GRIDCO to clarify some points and also to submit some information. GRIDCO has submitted the following relevant information and analysis.

4.20.1 **Revision of KhSTPS Tariff :**

CERC vide its order dtd. 23rd November'2006 has approved the tariff in respect of Kahalgaon Super Thermal Power Station, Stage-I (840 MW) for the period from 01.04.04 to 31.03.09. As per the above tariff, the annual fixed cost for FY 07-08 has been fixed at Rs. 311.79 Crore. GRIDCO in its ARR application had put the fixed cost at 70.81 p/u for KhSTPS power considering annual fixed cost of KhSTPS of Rs. 365.52 Crore approved prior to this order. Considering the above reduction in annual fixed cost, GRIDCO's claim towards fixed cost of KhSTPS power may be revised downward to 60.40 p/u from 70.81 p/u.

4.20.2 **Enhancement in Transmission Charges of CTU system and load despatch charges:**

The regional transmission charges and inter-regional transmission charges as considered by GRIDCO in its filing are Rs. 40.2 Crore and Rs. 23.6 Crore respectively considering the Sept'06 bill. In the mean time, CERC has allowed tariff for following lines, which includes regional as well as inter-regional assets such as

- LILO of Siliguri-Gangtok Sec.132kv Rangit-Siliguri line at Melli
- LILO of 1 ckt. Slg-Rangit line at Gangtok.

- 40% Fixed series compensation on existing 400Kv s/c Rangali-Indravati Transmission line.
- 400 kv Siliguri-Purnea, Purnea-Muzafferpur & 220 KV(PGCIL)-Muzafferpur (BSEB)
- 400 kv Siliguri S/s (Ext),400 KV Purnea S/s (Ext),40% Fixed Series Compensation and 5%to 15% TCSC on each ckt of Purnea MZ 400 Kv D/C Trans line at Purnea
- 400/220 kv 315 MVA ICT at Purnea
- 400/220 KV MzprpurS/s(New) (Excluding 2nos 400 KV bays at MZ pur with line reactors for MZPR-Gorkhpr Transmission line and ICT-II, 220 kv Mzpr s/s Extension
- 400 kv Muzpr-Gorkhpr TL (Inter-regional)
- TCSC & 2 No. of 400 KV bays at Gorakhpur Sub-Station associated with 400 Kv Mzpr-Gorkpr tr.line(Inter-reg)
- 2nos of 400 Kv bays at Mzpr with line reactor associated with 400 Kv Muzafferpur-Gorakhpur Transmission line (Inter-regional).

Also CERC vide its Order dtd 27.11.06 has allowed provisional transmission charges for Central Sector as well as State Sector ULDC scheme.

Considering that all these assets are added and taking weighted average share for regional transmission system as 16.9038% and inter-regional as 21.603%, GRIDCO'S revised proposal for share of PGCIL transmission charges comes to Rs 98.184 Crore.

Again considering the Open access charges collected from short term customers till Dec'06 as Rs 6.74 Crore and Year-end Charges as Rs 3.72 Crore, net transmission charges aggregate to Rs 95.165 Crore. Hence, transmission charge of PGCIL may be fixed by the Commission accordingly.

Based on the above, the estimation of transmission price works out to 22.32 p/u in place of 15.15 p/u as envisaged in the ARR for transmission of CGS power.

4.20.3 Purchase of 200 MW Power from TSTPS, Stage-II:

GRIDCO has signed PPA with NTPC towards 200 MW power from TSTPS Stage-II, Kaniha. NTPC has forwarded the same to MoP, GoI for final approval. The communication from MoP is awaited.

4.21 GRIDCO's additional submission on Power Purchase Cost:

4.21.1 As the communication from the MOP is awaited regarding purchase of 10% share from 2000 MW, TSTPS Stage-II, GRIDCO has prepared two sets of power purchase cost statements as follows:

- (i) Power purchase cost considering purchase of power from TSTPS Stage-II, revised KHSTPS tariff and revised PGCIL charges.
- (ii) Power purchase cost without considering purchase of power from TSTPS Stage-II and considering revised KHSTPS tariff and revised PGCIL charges.

4.21.2 The power purchase cost of TSTPS Stage-II is prepared based on the following facts/assumptions:

- (i) The fixed cost per unit and variable cost per unit is determined based on CERC Tariff Order dtd. 13.06.2005 for the period 01.03.04 to 31.03.04.
- (ii) The rate of FPA and year-end charges are considered at par with the rate proposed for TSTPS Stage-1.
- (iii) GRIDCO may be required to bear additional expenditure of Rs. 11 crore towards the evacuation cost of power from TSTPS Stage-II.

4.21.3 The estimated total power purchase costs, both with and without purchase of power from TSTPS Stage-II, are summarized in the tables as under:

Table – 13
Power Procurement Cost (Including TSTPS – II) for 2007-08

Source	MU	Per Unit (P/U)	Total cost (Rs.Cr.)
OHPC (Old)			
(a) Hirakud	998.19	60.15	60.04
(b) Balimela	1170.18	58.39	68.33
(c) Rengali	688.05	41.60	28.62
(d) Upper Kolab	792.00	25.97	20.57
Sub-Total	3648.42	48.67	177.56
(a) Indravati	1942.38	67.24	130.61
(a) Machkund	265.00	18.25	4.83
Total Hydro	5855.80	53.45	312.99
OPGC	2996.71	155.21	465.11
TTPS	3144.37	168.61	530.18
CGP			
NALCO	320.00	110.00	35.20
ICCL	20.00	93.76	1.88
INDAL	33.00	77.00	2.54
RSP (SAIL)	30.00	65.40	1.96

NINL	60.00	202.00	12.12
NBFA	10.00	202.00	2.02
Arati Steel	65.00	202.00	13.13
MESCO	2.00	202.00	0.40
Total CGP	540.00	128.24	69.25
Renewable Energy Source	-	-	-
State Total (A)	12536.88	109.88	1377.53
Chukha	234.85	183.18	43.02
TSTPS – I	1986.25	153.42	304.72
FSTPS	1360.83	207.46	282.32
KHSTPS	520.20	224.09	116.57
Tala HEP	162.22	213.27	34.60
TSTPS – II	1249.31	121.04	151.21
Total ER Power (B)	4264.34	169.11	932.44
From other sources	0.00	-	-
Total (A) + (B)	18050.52	127.97	2309.97

Table – 14
Power Procurement Cost (Excluding TSTPS – II) for 2007-08

Source	MU	Per Unit (P/U)	Total cost (Rs.Cr.)
OHPC (Old)			
(a) Hirakud	998.19	60.15	60.04
(b) Balimela	1170.18	58.39	68.33
(c) Rengali	688.05	41.60	28.62
(d) Upper Kolab	792.00	25.97	20.57
Sub-Total	3648.42	48.67	177.56
(a) Indravati	1942.38	67.24	130.61
(a) Machkund	265.00	18.25	4.83
Total Hydro	5855.80	53.45	312.99
OPGC	2996.71	155.21	465.11
TTPS	3144.37	168.61	530.18
CGP			
NALCO	320.00	110.00	35.20
ICCL	20.00	93.76	1.88
INDAL	33.00	77.00	2.54
RSP (SAIL)	30.00	65.40	1.96
NINL	60.00	202.00	12.12
NBFA	10.00	202.00	2.02
Arati Steel	65.00	202.00	13.13
MESCO	2.00	202.00	0.40
Total CGP	540.00	128.24	69.25
Renewable Energy Source	-	-	-

State Total (A)	12536.88	109.88	1377.53
Chukha	234.85	183.18	43.02
TSTPS – I	1986.25	153.42	304.72
FSTPS	1360.83	207.46	282.32
KHSTPS	520.20	224.09	116.57
Tala HEP	162.22	213.27	34.60
TSTPS – II		0.00	0.00
Total ER Power (B)	4264.34	183.20	781.23
From other sources	51.41	600.00	30.85
Total (A) + (B)	16852.63	129.93	2189.61

5 COMMISSION’S OBSERVATION AND ANALYSIS OF LICENSEE’S PROPOSAL

5.1 Legal Status of GRIDCO and Nature of its Application

- 5.1.1 Before enactment of the Electricity Act, 2003 (hereinafter referred to as the Act) GRIDCO was “Transmission and Bulk Supply Licensee” under the Orissa Electricity Reforms Act, 1995 (hereinafter referred to as the Reforms Act). As such GRIDCO had entered into long-term Power Purchase Agreements (PPAs) with generating companies namely OPGC, OHPC, NTPC etc. and also Bulk Supply Agreements with the four DISTCOs namely, NESCO, WESCO, CESU and SOUTHCO. Under the said agreements GRIDCO was obliged to sell power on priority basis to the aforesaid DISTCOs of Orissa up to their full requirement and the DISTCOs were obliged to buy power only from GRIDCO. This arrangement was what is known as “single buyer model” of power procurement for DISTCOs of Orissa. The arrangement was convenient because GRIDCO was also the transmission licensee. The mutual obligations under the long term bulk supply agreements have devolved on GRIDCO & DISTCOs as of now and the single buyer model still prevails as a historical legacy.
- 5.1.2 Under the Fifth Proviso to Sec.14 of the Act GRIDCO has become a deemed licensee; but its position has had to be consistent with the provisions of the Act. GRIDCO has had to belong to one of the categories of licensee as set forth in clauses (a) (b) or (c) of Sec.14 of the Act. It could not continue to maintain its position as “Transmission and Bulk Supply Licensee” under the Reforms Act. Its present activity, after its transmission business was taken over by OPTCL is now confined to bulk purchase of electricity for sale to DISTCOs of Orissa. This satisfies the definition of trading in Sec. 2(71) of Act. Therefore GRIDCO’s position under the Fifth Proviso to Sec. 14 of the Act is that of a deemed trading licensee, carrying on trading of electricity in bulk.
- 5.1.3 Bulk Supply activity by a trader is not repugnant to any provision of the Act. Such activity is tenable in law. It is a historical legacy coming down from the period under the Reforms Act and it continues so long as the long term bulk supply agreements with DISTCOs subsist. Some objectors have

canvassed the view that the single buyer model is against the spirit of the Act and adversely affects the consumers. In this tariff proceeding the Commission has to set tariff in the situation as it stands now and therefore it refrains from addressing this larger issue.

- 5.1.4 Under Sec.86(1)(b) of the Act the Commission is entitled to regulate the price at which DISTCOs may buy power from generating companies or licensees (such as GRIDCO, which is a deemed trading licensee) or from other sources through agreements. The power to regulate price includes the power to fix regulated price from time to time. This provision enables the Commission to fix a regulated price for procurement of power by DISTCOs under the existing Bulk Supply Agreements with GRIDCO. Conceptually this is different from setting of general tariff for sale of electricity by GRIDCO to any purchaser.
- 5.1.5 The Commission can not and does not fix tariff for sale of electricity by a trader, vide Sec.62 of the Act, and it does not intend to do so for GRIDCO as a trader; even though under Section 86(1) read with Sec.62 of the Act the Commission may determine tariff for whole sale or bulk supply of electricity by generators or distributors (*i.e. licensees other than traders*). This follows from a harmonious reading of Sec.62 and Sec.86 (1) (a) and Sec. 86(1)(j) of the Act. But it just happens that in the present situation of single buyer model the regulated purchase price for DISTCOs fixed under Sec. 86(1)(b) coincides with the selling price of GRIDCO as a trader for sale of power *only to the present DISTCOs of Orissa*. If GRIDCO sells surplus power, after meeting its contractual obligation under existing bulk supply agreements, directly to any consumer u/s 42 read with Sec.49 or another trader, or even to another distributor licensed under the 6th proviso to Sec.14 of the Act, the procurement price, which coincides with GRIDCO's selling price, fixed in this order is not applicable. Thus, this order does not fix tariff for GRIDCO as a trader.
- 5.1.6 The regulatory power under Section 86(1)(b) can be exercised by the Commission suo motu. GRIDCO has filed its application referring to Sec.62, Sec.64 and also referring to Sec.86 (1) (b) of the Act. GRIDCO has however prayed for fixation of its selling price qua the present distribution companies by virtue of the subsisting Bulk Supply Agreement and filed its ARR along with the application. The DISTCOs in their tariff application vide Case Nos.57, 58, 59 & 60 of 2006 have not prayed for fixation of their power procurement price but such fixation being fundamental determinant of tariff is implicit in their prayer for determination of tariff. In the circumstances GRIDCO's application is not being treated as a tariff application but as material for the Commission to precede *suo motu* for fixation of a regulatory price for power procurement by the present DISTCOs under the existing Bulk Supply Agreements. In this context GRIDCO has been heard at length on its ARR because under the prevailing single buyer model, the procurement price of the present DISTCOs coincides with the selling price of GRIDCO. Therefore

GRIDCO ought to have a say in the matter and ought to be heard even though the Commission is essentially fixing the procurement price for the present DISTCOs. No meaningful hearing can be given to GRIDCO in this context unless its ARR is considered and approved. It is in this context that ARR of GRIDCO was considered and analysed and not in the context of fixing a general tariff for GRIDCO.

- 5.1.7 On detailed scrutiny and examination of the Annual Revenue Requirement and Bulk Supply Price Applications for 2007-08, the written and oral submissions of the objectors, the Commission has passed the order as enunciated in the subsequent paragraphs.

5.2 Calculation of BSP for FY 2007-08

- 5.2.1 The Commission, for the determination and approval of the ARR for GRIDCO for FY 2007-08 continues to follow the same principles as in the previous year. For the purpose of tariff setting for FY 2007-08, the Commission has followed the principles laid down in its terms and conditions of tariff, and continues to be guided by the provisions of the National Tariff Policy as well other statutory notifications and directives, while giving due considerations to the complexities of the Orissa Power Sector.
- 5.2.2 Tariff determination, being a forecasting exercise, involves using various assumptions and principles to arrive at the individual ARR components for a future year – and hence, is liable to be at variance to actual turn of events. In order to insulate the licensee from all prudent and genuine expenses and eventualities, the Commission has also accepted the concept of true-up. As a part of this ARR exercise, the Commission has undertaken a comprehensive exercise to estimate the true-up requirement for GRIDCO for the past years, based on audited annual accounts of the licensee.
- 5.2.3 The Commission, as in the previous years, has continued to determine the ARR for the year FY 2007-08 using the following principles.
- 5.2.4 The submissions of the Distcos have been considered for the estimation of the energy to be procured by GRIDCO for supply to the Distcos. The SMD has been computed based on the actual demand for the period from April, 2006 to January, 2007 and keeping in mind the significant additions to HT and EHT load projected by the Distcos for FY 2007-08.
- 5.2.5 The cost of power purchase for GRIDCO, which constitutes more than 97% of the total cost structure of GRIDCO has been considered on a merit-order basis, with hydro generation being computed based on the design energy of the stations, and the state thermal generation being considered as per norms of the PPA or CERC guidelines. Drawal from the CGPs have been maximised as well. Availability from the Eastern Region CGS has been considered as per the allocation of shares in these stations and the applicable CERC guidelines.

- 5.2.6 Following the approval of the Business Plans of the Distcos and the restructuring of the past liabilities payable by the Distcos to GRIDCO, the Commission, for the year FY 2007-08, has considered the terms approved in its earlier order on the business plan dated 28 February 2005. All the liabilities of the Distcos payable to GRIDCO are in a back-to-back arrangement with various lenders and financial institutions with GRIDCO, and GRIDCO continues to service these liabilities, even in the light of the Distcos not being able to meet their repayment obligations to GRIDCO in full and on time. The servicing cost (corresponding interest charges on these liabilities) forms a part of the BSP and is being paid by GRIDCO. Hence, the Commission feels that charging the same from the DISTCOs over and above the component being recovered through the BSP would lead to double recovery from consumers, and hence has not been factored separately outside the BSP.
- 5.2.7 Following the hiving off of the transmission business along with related assets, liabilities and personnel to OPTCL, GRIDCO has virtually no fixed assets on its books. However, in contrast, it continues to carry the burden of past liabilities raised over a period of time to service operational losses and non-payment of arrears by the Distcos on time in the past. The Commission has, over the last few years, recognised these liabilities and the fact that these need to be serviced from within the sector. GRIDCO also does not have the benefit of depreciation provisions to meet these debt obligations. Keeping in line with its earlier order, to avoid any undue additional burden being passed on the retail consumers, the Commission has provided for the servicing of these liabilities from the non-core activities of GRIDCO, namely from export earnings, which now stand greatly limited, and any earnings from un-scheduled interchanges.
- 5.2.8 The Commission has scrutinised in detail the energy requirement proposed by the Distcos for FY 2007-08. The Distcos have proposed a significant increase in their power requirement over the previous year, and based on the energy availability, the Commission is of the view that after availability of power from TSTPS Stage-II, some surplus energy may be available after meeting the State demand for 2007-08.
- 5.2.9 GRIDCO has made considerable profits in the past three years of operations from trading and un-scheduled interchanges. On the other hand, GRIDCO has also been burdened with past liabilities, which have now been recognised in this tariff order as part of the truing-up exercise. These profits have been accounted for in the truing-up exercise for GRIDCO.
- 5.2.10 These principles forming the basis of this ARR determination exercise are dealt in greater detail in the main text of this order under the relevant components of the ARR.

5.3 **Quantum of Power Purchase**

- 5.3.1 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 within the state as and when available to the intending agencies for use elsewhere.

- 5.3.2 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.”

- 5.3.3 The Distribution Companies have furnished projections for 2007-08 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 distribution companies and CGPs.
- 5.3.4 The quantum of energy drawl by DISTCOs from GRIDCO has been projected differently both by GRIDCO and DISTCOs in their respective filings.
- 5.3.5 The quantum of power to be purchased for the year 2007-08 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 (58/2006), NESCO (59/2006), SOUTHCO (60/2006), CESU (57/2006).
- 5.3.6 Accordingly, the quantum of power purchase approved by the Commission along with supply of 10 MU to CGPs proposed by GRIDCO is worked out.

Table - 15
Drawl of Power by DISTCOs for 2007-08

	Business Plan for 2007-08	Proposed by DISTCOs for 2007-08	Proposed by GRIDCO for 07-08
CESU	4050.00	5233.11	5060.00
NESCO	3320.14	4760.00	4110.00
WESCO	4263.00	6000.00	4925.00
SOUTHCO	1920.00	1855.00	1905.00
TOTAL	13553.14	17848.11	16000.00

- 5.3.7 Drawl by GRIDCO includes the units lost on account of transmission at EHT within the State for delivery to the DISTCOs. The detailed requirement of power purchase for use within the State is projected in the table below:

Table - 16
Purchase of Power by GRIDCO for State Use for 2007-08
(Figures in MU)

Name of the DISTCOs	Commission's Approval 2006-07	GRIDCO's Proposal in ARR 2007-08	Commission's Approval 2007-08
CESU	4164.00	5060.00	4842.00
NESCO	4169.00	4110.00	4497.00
WESCO	4600.00	4925.00	5496.00
SOUTHCO	1750.00	1905.00	1818.00
TOTAL DISTCOs	14683.00	16000.00	16653.00
CGP	120	10.00	10.00
TOTAL SALE	14803.00	16010.00	16663.00
Transmission loss at EHT in MU	611.79 @ (4% transmission loss)	842.11 @ (5% transmission loss)	876.47 @ (5% transmission loss)
Total Purchase	15414.79	16852.11	17539.47

5.4 Determination of Simultaneous Maximum Demand (SMD) in MVA

- 5.4.1 Bulk Supply price contains a component of demand charge, which is calculated on the basis of average system demand of the distribution companies. The simultaneous maximum demand projected by GRIDCO varies from those of the DISTCOs. The DISTCOs projected a higher maximum demand keeping in view the up-coming load growth on account of rapid industrialization. The monthly drawl of DISTCOs for the period from April 06 to Jan 07 is furnished in a table as under:

Table - 17
Demand in MVA for 2006-07

	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Dec-06	Jan-07	AVERAGE (4/06 to 1/07)
CESU	764.77	775.67	765.55	768.52	781.78	802.56	784.08	759.70	759.489	764.755	772.688
NESCO	581.00	560.80	525.07	536.07	512.45	522.55	523.91	571.22	591.038	616.556	554.068
WESCO	666.53	648.12	663.64	696.19	713.73	712.27	697.24	685.45	737.47	733.971	695.459
SOUTHCO	292.57	287.82	290.05	294.30	288.30	295.77	308.26	307.38	291.209	313.251	296.891
ALL ORISSA	2,304.87	2,272.41	2,244.30	2,295.09	2,296.27	2,333.15	2,313.49	2,323.75	2,379.21	2,428.53	2,319.11

- 5.4.2 It is observed from the above table that the SMD has registered a rising trend during the months under review and has reached a peak of 2428.53

MVA during January, 07. The SMD recorded in January, 2007 is even higher than the hottest month of the year i.e. May, 2006 by about 150 MVA. This drawl is expected to continue during the next two months of the current financial year as January is within the last quarter of the current FY, when the industrial and production activities are supposed to be have picked up along with the irrigation and agricultural loads due to Rabi season.

- 5.4.3 The Commission analysed the drawl pattern by the HT and EHT consumers as well as the requirement of area loads. After recasting the estimated requirement of power during the current FY 06-07 it was observed that due to rapid industrialization, there may be an additional requirement of about 1624 MU by the HT and EHT group only. As far as the requirement of low voltage consumers are concerned it is expected that the additional load growth in this category will be met out of the saving due to reduction of distribution loss. Thus, for meeting this additional demand of 1624 MU, the additional MVA requirement has been worked out with a system power factor of 0.90. The total estimated demand in MVA DISTCO-wise is given in the table below.

Table - 18
Demand in MVA for 2007-08

DISTCOs	OERC APPROVAL for 2006-07	Proposal by DISTCO for 2007-08	Proposal by GRIDCO for 2007-08	Actual for Jan, 2007	Additional Load growth for HT & EHT consumer as estimated for 2007-08 (MU)	Additional load growth converted to MVA at a power factor 0.9	OERC Approval for 2007-08 (Actual for 1/07 + Additional load growth)
CESU	719.20	719.55	791.12	764.76	238.00	30.19	794.94
NESCO	554.85	672.63	588.14	616.56	561.00	71.16	687.71
WESCO	663.76	950.00	716.86	733.97	820.00	104.01	837.98
SOUTHCO	288.95	300.00	303.88	313.25	5.10	0.65	313.90
ALL ORISSA	2,226.76	2,642.18	2,400.00	2,428.53	1,624.10	206.00	2,634.53

5.5 Computation of Transmission Loss

- 5.5.1 The Commission has approved a figure of 5% towards transmission loss in the OPTCL system. The details of calculations of transmission loss are furnished in the tariff order for OPTCL for the year 2007-08.
- 5.5.2 GRIDCO shall purchase power from the generators and at inter-state points from outside sources while OPTCL will bill the customers at the delivery points. 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 2007-08 between GRIDCO and OPTCL. GRIDCO shall give credit to OPTCL for the units deemed to have been lost on account of export of power, if any.

5.6 **Purchase of Power from Different Generating Stations**

5.7 **State Hydro**

5.7.1 GRIDCO's proposal and Commission's approval for 2007-08 for various stations of OHPC are given in the table below the details of which have been dealt in Case No.54/2006 for determination of tariff and revenue requirement of OHPC.

Table - 19
Drawl From State Hydro Stations (2007-08)

Source of Generation	GRIDCO's Proposal (2007-08)	Commission's Approval (2007-08)
OHPC (Old stations)	3648.42	3676.86
Upper Indravati	1942.38	1942.38
Machkund	265.00	265.00
Total Hydro	5855.80	5884.24

5.8 **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. The generation plan furnished by TTPS for 2007-08 indicates a generation of 3533 MU at 87.68% PLF. After deducting auxiliary consumption of 11%, the net energy availability works out to 3144.51 MU. GRIDCO in its ARR application for FY 2007-08 has proposed the same level of drawl from TTPS. The Commission approves the net drawl of 3144.51 MU from TTPS for the year 2007-08.

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

5.9.1 OPGC did not file its ARR with OERC for the year 2007-08 apparently under the plea that it was selling power not to any distribution company but to GRIDCO, which is now a trader. The sale of power by OPGC to GRIDCO is governed by a bilateral agreement (PPA) dated. 13.08.1996. This PPA was held to be invalid by the Hon'ble High Court of Orissa in their Judgement dated 22.02.2005 in OJC No.13338/2001 for want of consent of the Commission u/s 21(4) of the Orissa Electricity Reforms Act, 1995; and in the said Judgement the Hon'ble High Court directed that a fresh PPA filed by GRIDCO, vide Case No.13/02, should be disposed of by the Commission. OPGC went up in appeal against the aforesaid Order of the Hon'ble High Court and by Order dated. 29.04.2005 in SLP(C) Nos.6812-6813 of 2005, the Hon'ble Supreme Court stayed further

proceedings before the Commission in respect of the said subsequent PPA. The question of Commission's power to set tariff for generating companies in respect of sale to distribution companies u/s.62 (1)(a) of the Act, has not been an issue in the aforesaid case before the High Court and the Supreme Court. In the Supreme Court, OPGC has taken the stand that the PPA dated 13.08.1996 subsists and the High Court has wrongly decided that the said PPA was void. In view of OPGC's own stand before the Supreme Court, the Commission has proceeded on the footing that till the issue of validity of PPA is settled, the sale of power by OPGC to GRIDCO would be governed by the provisions of the said PPA dated. 13.08.1996 and the matter rests on the bilateral contract between OPGC and GRIDCO including provisions relating to parameters of tariff calculation.

- 5.9.2 The Commission has to determine the power procurement price of DISTCOs, which in the situation of a single buyer model prevailing in Orissa turns out to be the selling price of the single buyer i.e, GRIDCO under the subsisting BSA's with the DISTCOs. Moreover, because of the prevailing single buyer model created by the joint operation of the PPA of OPGC and GRIDCO and of the BSA's of GRIDCO with the DISTCOs of Orissa, GRIDCO is functioning as a mere conduit, and the only conduit, for supply of power from OPGC to DISTCOs of Orissa. The aforesaid PPA coupled with Bulk Supply Agreements of GRIDCO with DISTCOs has brought about a situation that in effect and substance amounts to supply of power by OPGC to DISTCOs. Since u/s. 62(1)(a) of the Act, the Commission has a duty to determine tariff for supply of electricity by a generating company to a distribution licensee, the Commission can *apply* the tariff so determined to the sole trader whose trading is confined to buying all the power generated by OPGC and selling it only to DISTCOs of Orissa so long as their requirements remain unfulfilled, and DISTCOs have no option to buy power from any other source. The Commission therefore overrules OPGC's plea in its letter No. 1721 dated.08.07.2004, that the Commission cannot require it to furnish ARR u/s. 62(2) of the Act. OPGC ought to have filed its ARR as a matter of its statutory duty. Since it did not do so, the Commission has had to provisionally apply the parameters of tariff set forth in the aforesaid PPA dated.13.08.1996 and proceed on the information made available to it by the other contracting party namely GRIDCO for calculating its fixed cost, variable charges, FPA and Year-end Charges for fixing its tariff u/s. 62(1)(a) of the Act qua DISTCO's. The Commission further directs that the bulk purchase price, based on tariff now determined shall be applicable to sale of OPGC's power to GRIDCO under the single buyer model.
- 5.9.3 OPGC in its generation plan for 2007-08 had projected a target generation of 3311.28 MU at 90% PLF. GRIDCO has projected net energy availability of 2996.71 MU for FY 2007-08 after deducting auxiliary consumption of 9.5%. The Commission approves a net drawl of 2996.71 MU at 90% PLF for FY 2007-08.

5.10 Captive Generating Plants (CGPs)

5.10.1 GRIDCO had submitted in its application that power purchased from the Captive Generating Plants was not firm in nature and was supplied to the system, as and when available. The actual availability from the CGPs varied widely from the quantum approved by the Commission in the past years. The total drawl from CGPs as proposed by GRIDCO in its filing is 540 MU for 2007-08 and the details are given below.

Table - 20
Power Procurement From CGPs

		2007-08		2006-07	(MU)
	Projected drawal as per Load Generation Balance Report of SLDC	GRIDCO's Proposal	Rate of Purchase (P/U)	Actual Drawl upto Dec.06 (MU)	Estimated drawl Prorating for the whole Year
NALCO	385.00	320.00	110 P/U for first 30 MU/Month 220 P/U for next MUs	248.12	330.83
ICCL	21.00	20.00	93.76	14.07	18.76
RSP	44.00	30.00	65.40	25.11	33.49
HPCL	37.00	33.00	77.00	22.78	30.37
NINL	173.00	60.00	202.00	48.76	
NBFA	-	10.00	202.00	20.65	
BHUSAN	-	-	202.00	1.85	
ARATI STEEL	50.00	65.00	202.00	60.75	
MESCO	47.00	2.00	202.00	0.74	
TOTAL	757.00	540.00		442.85	413.45

5.10.2 GRIDCO has furnished the Load Generation Balance Report (LGBR) for the year 2007-08 prepared by SLDC and projected GRIDCO's drawl from CGPs at 757 MU.

5.10.3 The Commission is duty bound u/s.86(1)(b) of the Act, to regulate electricity purchase and procurement process of distribution licensees(DISTCOs) of Orissa including the price at which electricity shall be procured from generating companies or licensees or from other sources. The question that arises is whether this regulatory power of the Commission is available when GRIDCO, a trader purchases power from CGPs in a situation of single buyer model. There is no doubt that if the distribution companies purchase power directly from CGPs the regulatory power is available; and the Commission is of the view that the regulatory power is also available when GRIDCO purchases power from CGPs for fulfilling the requirements of DISTCOs of Orissa under a single buyer

model in order to fulfill its obligations under the bulk supply agreements with DISTCOs.

- 5.10.4 It is observed that GRIDCO has purchased at different rates from different CGPs. GRIDCO has contracted power at the rate of 202 P/U for some CGPs which is apparently higher compared to some other sources of purchase. The Commission therefore allows drawl of power from NALCO upto 30 MU /Month, ICCL, HPCL and RSP for the State consumers for 2007-08. GRIDCO has already drawn 310.08 MU from the aforesaid CGPs for the period April'06 to Dec'06 and prorating the same for the whole year, the drawl of aforesaid CGPs comes to 413.45 MU. Based on the present trend of drawl as indicated above, the Commission approves drawl of power from CGPs to the extent of 413.45 MU for 2007-08 excluding costly power from CGPs.
- 5.10.5 However, the present approval shall not be a limiting factor for GRIDCO for drawl of power from CGPs to meet the demand of the State if the need arises. GRIDCO shall take necessary approval of the Commission in respect of quantity and price for any excess drawl of power from these sources for purchase by DISTCOs if it becomes necessary, after following the merit order drawl.
- 5.10.6 However, the Commission would like to stress that GRIDCO is free to purchase power from CGPs at mutually contracted price for sale within Orissa to persons other than the DISTCOs for use elsewhere, unless the same is required by the DISTCOs for internal use of the consumers. This is in keeping with National Policy of Harnessing Captive Generation.

5.11 Power Purchase from Central Generating Stations

5.11.1 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 3.64% in the ARR for 2007-08. It is observed from the data circulated by ERLDC that the weekly system loss for the ER system varied from 2.6% to 3.9% during the financial year up to December 2006, averaging to 3.28%. Higher loss in the ER system has an impact only on actual energy drawl of GRIDCO but not on total cost of power 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 3.28% for 2007-08 based on the average loss from April to December, 2006.

5.11.2 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 and Tala 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. ABT has come into operation from 01.04.2003 in the Eastern Region. GRIDCO has proposed to draw the entire share from ER NTPC stations considering normative generation at 80% PLF and central sector transmission loss of 3.64%. Govt. of India, MoP vide its letter dt.7.07.2006 has revised the share allocation of power from CGSs in the Eastern Region and Chukka and Tala Hydro Electric Project and GRIDCO has considered the same allocation as proposed by MoP.

5.11.3 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 central sector stations has been estimated taking 80% PLF for the ensuing year. The Commission considers the Central Sector transmission loss @ 3.28% for the above drawl as stated in the previous Para.

5.11.4 Tariff of the CGSs is determined by the CERC by virtue of the authority vested in them under the provisions of the Electricity Act, 2003. The Commission takes note of the decision and determines the justification and correctness of the claim made by GRIDCO based on the various orders of the GOI/MOP/ CEA and CERC and clarifications thereof provided by GRIDCO. With the above stipulation, the details of GRIDCO's drawl from Central Thermal Stations, as approved by the Commission, are given in the table below.

Table - 21
Drawl From Central Thermal Generating Stations (2007-08)

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons. (%)	Estimated PLF (%)	Net Availability	GRIDCO Share (%)	GRIDCO's share after deduction of Central Sector Transmission Loss of 3.28%	Approved drawl in MU for State use
TSTPS	1000	7.50	80.00	6482.40	31.80	1993.76	1993.76
FSTPS	1600	7.56	80.00	10365.11	13.63	1366.40	1366.40
KhSTPS	840	9.00	80.00	5356.92	10.077	522.12	87.92
TOTAL	3440			22204.43		3882.28	3448.08

5.11.5 GRIDCO in its filing dt 07.03.07 stated further that it has signed a PPA with NTPC for 200MW power from TSTPS Stage-II, Kaniha. NTPC has forwarded the same to MOP for final approval. The communication from MOP is awaited and GRIDCO expects a drawl of 1249.31 MU for the year 2007-08.

5.11.6 After approval by MOP, GRIDCO will be entitled to draw 1253.94 MU/annum considering 3.28% Central Transmission loss from TSTPS

Stage-II beginning 2007-08. Anticipating the approval of the MOP for the said power at cheaper rate, the Commission approves provisionally a drawl of 1253.94 MU from TSTPS Stage –II to meet the State requirement. If the power will not be available from the TSTPS Stage-II and GRIDCO purchases high cost power to meet the State's demand, the extra cost incurred will be taken care of as an year-end-adjustment payable by each of the drawees in proportion to their drawl.

- 5.12 **Chukha:** Orissa has been assigned share of 15.19% in 270 MW from 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 234.85 MU for 2007-08 considering central sector loss of 3.64%.

The Commission accepts the proposal of GRIDCO and approves 235.73 MU in respect of drawl from Chukha hydro station for 2007-08 based on central sector transmission loss of 3.28%.

- 5.13 **TALA:** Ministry of Power, Govt. of India vide letter dated 07.11.2006 has allocated 85% of Tala HEP to ER constituents out of which GRIDCO's share accounts for 4.25%.

5.13.1 GRIDCO has projected drawl of 162.22 MU from Tala HEP during 2007-08 considering central sector transmission loss of 3.64%.

5.13.2 The Commission accepts the proposal of GRIDCO and based on central sector transmission loss of 3.28%, the drawl from Tala HEP during 2007-08 has been estimated at 162.83 MU.

- 5.14 A summary of GRIDCO's proposal for purchase of power from different generating stations and the Commission's approved quantum of purchase for 2007-08 based on least cost power is given in the table below:

Table - 22
Quantum of Power Purchase from Various Sources for 2007-08 (Figures in MU)

Sources of Purchase (Station- wise)	Commission's Approval for 2006-07	GRIDCO's Proposal For 2007-08	Commission's Approval for procurement for 2007-08
OHPC (OLD)	3676.86	3648.42	3676.86
Machhkund	265.00	265.00	265.00
Indravati	1942.38	1942.38	1942.38
HYDRO (Orissa)	5884.24	5855.80	5884.24
TTPS	3132.67	3144.37	3144.51
OPGC	2981.39	2996.71	2996.71
CGP	398.00	540.00	413.45
Thermal (Orissa)		6681.08	6554.67
TOTAL ORISSA	12396.30	12536.88	12438.90
Chukha	243.79	234.85	235.73
TALA		162.22	162.83
TSTPS	1986.36	1986.25	1993.76

FSTPS	788.34	1360.83	1366.40
KSTPS	0.00	520.19	87.92
TSTPS–Stage –II (prov.)			1253.94
Other sources		51.41	
TOTAL ER POWER	3018.49	4315.75	5100.57
TOTAL GRIDCO PURCHASE	15414.79	16852.63	17539.47

5.15 Power Procurement Cost

5.15.1 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.

5.15.2 Section 86 of the Electricity Act, 2003, amongst 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.

5.15.3 OHPC had submitted the application for approval of its Annual Revenue Requirement and Tariff of individual power stations of OHPC separately for the financial year 2007-08 in terms of Section-62, 64 and 86 of the Electricity Act, 2003 registered as Case No.54/2006. 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.

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

Table – 23
Schedule of Tariff for OHPC Stations for 2007-08

Name of the Power Station	Rate Approved For 2006-07	Quantum of Power Purchase in 2007-08 (MU)	Primary Energy Charge (P/U)	Capacity charge (Rs. Cr.)	Secondary Energy Charge (P/U)
Hirakud	57.10	1162.26	41.10	15.91	41.10
Balimela	21.82	1171.17	41.10	14.55	41.10
Rengali	35.56	519.75	35.17	-	35.14
Upper Kolab	16.35	823.68	21.24	-	20.94
Upper Indravati	46.38	1942.38	41.10	50.62	41.10
Total		5619.24			

5.16 **Machhkund**

5.16.1 **Machhkund Hydro Electric Project**

OHPC has requested for approval of a rate of 18.21 paise/unit for purchase of power Machhkund Power Station for the year 2007-08 based on energy drawl of 265 MU.

5.16.2 The Commission has taken into consideration the net share payable by Orissa towards O&M expenses for the year 2005-06 (actual) which is to the tune of Rs.3.64 crore. Allowing an escalation of 4% per annum for the year 2006-07 and subsequently for 2007-08, O&M expenses come to Rs. 3.94 crore and the rate per unit comes to 18.21 paise for the year 2007-08. Accordingly, the procurement cost works out to Rs.4.83 crore for an approved energy drawl of 265 MU.

5.17 **Talcher Thermal Power Station (TTPS)**

5.17.1 Talcher Thermal Power Station is owned and operated by NTPC and determination of tariff for this generating station comes under the purview of Central Electricity Regulatory Commission (CERC).

5.17.2 **Fixed Cost:** The CERC has approved the TTPS tariff for the FY 2000-01 to 2003-04 vide order dtd. 28.07.06 and 25.09.06. The revised annual fixed cost is taken at Rs. 195.01 crore for the above period. However, the decision regarding annual fixed cost for 2004-05 to 2008-09 is pending with CERC. But GRIDCO has claimed Rs. 250.33 crore, which includes Rs 195.01 crore towards provisional fixed cost plus Rs. 55.32 crore towards projected additional fixed cost towards R&M activities. The Commission allows annual fixed cost of Rs. 195.01 crore as approved by CERC upto 2003-04. Additional amount of Rs. 55.32 crore as claimed by GRIDCO will be taken into consideration after due approval of CERC.

5.18 **Variable Charges**

CERC had approved 48.37 P/U 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 for the ensuing year.

5.19 **FPA:** GRIDCO proposes FPA of 22.59 P/U for FY 2007-08 considering 10% escalation over the average of the actual FPA for the first seven months of 2006-07 which is 20.53 P/U. After detailed scrutiny of the bills submitted by GRIDCO, the Commission approves FPA rate of 22.58 P/U considering the average of first seven months of 2006-07 and allowing 10% escalation as proposed by GRIDCO keeping in view the possibility of price rise of coal and oil.

5.20 **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. 21.34 crore towards income tax as projected by NTPC for 2006-07. TTPS has already submitted the income tax bill of this amount. The licensee also has claimed Rs.

13.57 crore towards reimbursement of second instalment of interest and AG expenses as per the order of the CERC dtd. 28.07.2006. The Commission on examination of the claims approves (i) interest and A&G expenses of Rs. 13.57 crore (ii) Rs.21.34 crore towards income tax payment for 2006-07, (iii) Electricity duty of Rs.7.77 crore calculated @ 20 paise/unit on auxiliary consumption on the generation at 87.68% PLF, (iv) Incentive of Rs. 11.37 crore for excess generation over the normative PLF of 75% @ 25 P/U. Thus, the year-end charges approved for 2006-07 come to Rs.54.05 crore. The corresponding year-end charges for 2006-07 was Rs. 34.25 crore. It may be observed that this increase is partly due to rise in payment of Income Tax from Rs. 15.56 crore to Rs. 21.34 crore and partly due to the reimbursement of interest and AG expenses as per CERC order. The year end charges approved by the Commission for the FY 2007-08 is shown in the table below:

Table – 24
Year End Charges of TTPS

Rs. in crore			
ITEM	OERC approval for FY 06-07	Projection for 07-08	OERC approval for FY 07-08
Income tax	15.06	21.34	21.34
Electricity duty@20P/U	7.74	07.74	7.77
Water Cess	0.07		
Water Charge	0.30		
Incentive:	11.08	12.98	11.37
Reimbursement of int.& AG exp. 2 nd Inst.		13.57	13.57
Total	34.25	56.76	54.05

5.21 Orissa Power Generation Corporation (OPGC)

5.21.1 OPGC did not file its ARR with OERC for the year 2007-08 under the same plea as it had maintained for the preceding 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 the parameters of subsisting PPA between GRIDCO and OPGC stations for 2007-08 is accepted for the purpose of tariff calculation of 2007-08 subject to change in accordance with court orders or otherwise.

5.21.2 **Fixed Cost:** The fixed cost of OPGC for 2007-08 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 2007-08 as proposed by GRIDCO subject to para 5.21.1 above.

- 5.21.3 **Variable Charges:** GRIDCO has proposed variable charges in respect of 1b Thermal Power Stations at 58.52 P/U for 2007-08. The Commission after detailed scrutiny accepts 58.52 P/U as variable charges.
- 5.21.4 **FPA:** GRIDCO has proposed the FPA rate for 2007-08 at 5.56 P/U. The Commission on scrutiny of the FPA bills submitted by OPGC, approves the estimate of FPA at 5.56 P/U for 2007-08.
- 5.21.5 **Year-end Charges:** GRIDCO had proposed year-end charges of Rs. 50.02 crore on account of land tax, water cess, electricity duty, income tax, incentive and DPS payable to the tune of Rs. 9.84 crore. The Commission on examination of the claims approves (i). Rs.10.49 crore towards income tax payment for 2007-08, (ii) Electricity duty of Rs.6.29 crore @ 20 P/U on auxiliary consumption on the generation at 90% PLF, (iii) Incentive of Rs.23.94 crore allowed for generation over and above normative generation of 68.5% PLF for the year 2007-08 and DPS payable to the tune of Rs. 9.84 crore. Thus, the estimated year-end charges approved for 2007-08 is Rs.50.56 crore which is shown in table below.

Table – 25
Year End Charges of OPGC

(Rs. in crore)

ITEM	OERC approval for 06-07	Proposed year end charges for 07-08	OERC approval for 2007-08
Water Cess & Water Ch.	0.00	0.00	
Electricity duty@20P/U	6.26	6.26	6.29
Income Tax:	10.49	10.49	10.49
Incentive:	23.43	23.43	23.94
DPS Payable (upto 6/08)		9.84	9.84
Total	40.18	50.02	50.56

5.22 Captive Generating Plants (CGPs)

5.22.1 GRIDCO has stated that it has been procuring from CGPs at negotiated rates at present in absence of policy of procurement of surplus power from CGPs by State Govt. So, GRIDCO is purchasing power from different CGPs at different rates.

5.22.2 The Commission scrutinised the application of GRIDCO and accepts the negotiated rates for NALCO, ICCL, RSP and HPCL as proposed by

GRIDCO. Accordingly the cost of power purchased from aforesaid CGPs during FY 2007-08 approved by the Commission is given in table below:

Table - 26
Quantum of Power Purchase from CGPs during 2007-08

	GRIDCO's PROPOSAL			COMMISSION's APPROVAL		
	MU	Rate (P/U)	Cost (Rs.in Cr)	MU	Rate (P/U)	Cost (Rs.in Cr)
NALCO	320.00	110.00	35.20	330.83	110.00	36.39
ICCL	20.00	93.76	1.88	18.76	93.76	1.76
RSP	30.00	65.40	1.96	33.49	65.40	2.19
HPCL	33.00	77.00	2.54	30.37	77.00	2.34
NINL	60.00	202.00	12.12			
NBFA	10.00	202.00	2.02			
BHUSAN		202.00	-			
ARATI STEEL	65.00	202.00	13.13			
MESCO(BSSL)	2.00	202.00	0.40			
TOTAL	540.00	128.24	69.25	413.45	103.23	42.68

5.23 Central Generating Stations

5.23.1 **Chukha:** GRIDCO has stated that the procurement cost of power from Chukha for 2007-08 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 as per PTC letter dt 1.03.2005.

5.23.2 Further, handling charges @ 5 paise/unit has to be added to the above rates to be paid to PTC as Nodal Agency handling charges. GRIDCO has also to bear the expenditure on account of the transmission charges and central transmission losses in the PGCIL network. GRIDCO has, therefore, proposed a rate of 183.18 paise/unit for 2007-08 based on Central Transmission Loss of 3.64%.

5.23.3 Based on the submission of GRIDCO, the average rate per unit of Chukka power has been worked out and approved by the Commission at 181.16 paise/unit inclusive of central transmission loss and applicable transmission charges for 2007-08.

5.23.4 **TALA:** GRIDCO has stated that the procurement cost of both primary and secondary energy from TALA for 2007-08 has been fixed at Rs.1.80/Unit calculated based on the agreement signed between MOP/GOI, and Royal Govt of Bhutan on dt28.07.2006.

5.23.5 Further, a transaction charge @ 4 paise/unit has to be added to the above rates to be paid to PTC as Nodal Agency handling charges. GRIDCO has also to bear the expenditure on account of the transmission charges and central transmission losses in the PGCIL network. GRIDCO has therefore proposed a rate of 213.27 paise/unit for 2007-08 based on Central Transmission Loss of 3.64%.

5.23.6 Submission of GRIDCO was examined. The average rate per unit of TALA power has been worked out at 211.15 paise/unit inclusive of central transmission loss of 3.28% and applicable transmission charge for 2007-08.

5.24 Central Sector Thermal Power Stations

5.24.1 **Fixed Cost:** Tariff of Central Thermal Generating Stations is governed by CERC tariff notification valid from 1.4.04 to 31.03.2009 i.e for a period of 5 years. Based on the CERC notifications and the share allocation from CGSs by MOP vide letter dated 07.07.2006, GRIDCO has claimed fixed cost for different Central Sector Thermal Power Stations. The approval of the Commission is shown in table below:

Table - 27

Fixed Cost of Central Thermal Stations for 2007-08

Name of Power Station	OERC approval for 06-07 for GRIDCO including CGSs' Tr. Loss @ 3.64 %	Fixed cost approved by CERC for 2007-08	GRIDCO share in %	GRIDCO's proposal for Fixed Cost	GRIDCO's proposal (including Central Tr. Loss of 3.28%)	Commission's approval (including Central Tr. Loss of 3.28%)
	P/U	Rs. Cr.		Rs. Cr.	P/U	P/U
TSTPS	79.04	399.90	31.80	127.17	64.02	63.78
FSTPS	57.18	513.05	13.63	69.93	51.37	51.18
KHSTPS	69.98	311.79	10.077	31.42	60.40	60.18

5.25 Variable Charges

GRIDCO stated that variable charges based on the CERC's notification for 2007-08 has been accepted. The Commission has accepted the variable charges proposed by GRIDCO as those are in accordance with the notification. However, the cost in P/U changes as the Commission accepts a CTL of 3.28% and not 3.64% as proposed by GRIDCO. The proposed and approved variable charges are indicated in the table below.

Table - 28
Variable Charges of Central Thermal Power Stations (P/U)

Stations	OERC Approval for 06-07 (Including Central Tr. Loss @3.64%)	Variable Cost as per CERC order (excluding central transmission loss)	GRIDCO's Proposal for 2007-08 (Including Central Tr. Loss of 3.64%)	Variable Cost Approved by the Commission for 2007-08 (Including Central Tr. Loss of 3.28%)
TSTPS	42.61	41.103	42.61	42.50
FSTPS	111.38	98.567	102.29	101.91
KHSTPS	111.58	108.502	112.60	112.18

5.26 Fuel Price Adjustment (FPA)

5.26.1 GRIDCO in para 5.6.3.3 of ARR application had stated that the average FPAs of FSTPS, KhSTPS and TSTPS were on the rise due to increase in coal and oil prices. Therefore, FPA has been calculated by GRIDCO on the basis of bills for first seven months of 2006-07 produced by NTPC with an escalation of 10% including Central Sector Transmission Loss @ 3.64%.

5.26.2 Actual bills of NTPC are scrutinised and the Commission observes that the coal and oil prices had increased substantially. The details of coal and oil prices and FPA rates as produced by NTPC are given below.

Table - 29
Coal & Oil Prices and FPA Rates of CGSs

	FSTPS			KSTPS			TSTPS		
MONTH	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-06	23,097.56	1,419.94	36.35	21,963.27	1,337.16	24.20	21,377.60	735.10	18.53
May-06	25,421.69	1,234.04	17.04	21,963.27	1,455.50	34.78	21,201.20	926.73	32.03
Jun-06	25,421.66	1,209.10	17.42	21,963.27	1,302.45	21.89	21,480.78	642.03	14.30
Jul-06	25,421.66	1,042.40	8.38	21,963.27	1,205.95	16.89	21,239.70	633.17	14.30
Aug-06	25,800.35	1,064.14	9.52	21,963.27	1,193.60	14.06	21,390.85	654.18	17.47
Sep-06	25,801.27	1,346.25	40.18	23,886.87	1,306.67	24.89	19,830.29	752.98	22.79
Oct-06	21,889.24	1,288.00	32.91	23,886.87	1,364.15	39.08	19,215.70	769.59	20.23
Nov-06	21,313.99	1,201.83	16.82	18,580.30	1,264.37	15.15	20,543.49	683.67	16.31
Dec-06	21,313.99	1,193.57	13.44	18,580.30	1,361.01	21.58	18,854.94	790.62	25.11
Jan-07	21,313.99	1,260.72	18.99	18,580.30	1,242.41	6.39	18,387.62	733.61	23.50
Avg from 4/06 to 1/07	23679.54	1226.00	20.99	21333.10	1303.33	21.68	20352.22	732.17	20.52

5.26.3 Considering the above, the Commission estimated the FPA rates based on the average price and GCV of coal and oil for the period from April'06 to January'07 with 5.5% escalation over average FPA to meet the changes in WPI as against an escalation of 10% proposed by GRIDCO.

Table - 30
Fuel Price Adjustment Charges of CGSs for 2007-08

Stations	Figs in Paise/Unit				
	OERC Approval for 06-07 (Including Central Tr. Loss @ 3.64%)	GRIDCO's proposal (including central Tr. Loss of 3.64%)	Avg FPA for the period from 4/06 to 1/07	Approval of the Commission with an escalation of 5.5%	Approval of the Commission including central Tr. Loss of 3.28%
TSTPS	32.01	22.79	20.52	21.65	22.39
FSTPS	25.43	23.53	20.99	22.15	22.90
KHSTPS	24.52	29.83	21.68	22.88	23.65

5.27 **Year-end Charges:** GRIDCO has proposed the year-end charges for 2007-08 including Central Sector loss based on the Commission's approval of the year-end charges for 2006-07.

5.27.1 The Commission has scrutinised the proposal and adopted the following principles for the purpose of calculation of the year-end charges for the year 2007-08.

- i) Income tax constitutes a major segment of the year-end charges. On scrutiny, it is observed that NTPC has raised revised tax liability for 2006-07 to ER constituents including GRIDCO. The Commission provisionally accepts the same amount claimed by NTPC for 2007-08.
- ii) Electricity duty for TSTPS has been calculated @ 20 paise/unit based on the auxiliary consumption for 2007-08.
- iii) The Commission has considered generation at normative PLF of 80% for 2007-08 for which no payment towards incentive has been taken into account at present for CGSs.
- iv) NTPC has raised water cess bills for CGSs for the period from April to August, 2006. The Commission approves the water cess payments for FY 2007-08 by prorating for the whole financial year based on NTPC bills.

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

Table - 31
Approved Year-end Charges (2007-08) (Paise/unit)

Central Thermal Stations	OERC approval for 06-07 (including Central Tr. Loss @ 3.64 %)	GRIDCO's Proposal Including Central Sector Loss @ 3.64%	Commission's Approval Including Central Sector Loss @ 3.28%
Talcher STPS	1.68	1.68	1.72
Farakka STPS	7.96	7.96	5.47
Kahalgaon STPS	NIL	0.00	0.08

5.28 **Cost of Power Purchase from TSTPS Stage-II**

5.28.1 GRIDCO in its filing dtd. 07.03.2007 stated that the power purchase cost of TSTPS State-II has been prepared based on following facts and assumptions:

- (i) The fixed cost per unit and variable cost per unit is determined based on CERC Tariff order dtd. 13.06.2005 for the period 01.03.04 to 31.03.04.
- (ii) The rate of FPA and Year End Charges are considered at par with the rate of proposal for TSTPS State-I.
- (iii) It is anticipated that GRIDCO may be required to bear additional expenditure of Rs. 11.00 crore towards the evacuation cost of power from TSTPS Stage-II.

5.28.2 The TSTPS Stage-II power has been fully allocated to Southern region from its inception. The data for the previous year is not available to the Commission. So the Commission provisionally accepts the proposal of GRIDCO as stated above. Accordingly the cost of power purchase from TSTPS Stage-II is given in the table below:

Table - 32

Cost of Power Purchase from TSTPS Stage-II

Particulars	Unit	GRIDCO proposal for 2007-08	Commission Approval for 2007-08
Installed Capacity	MW	2000	2000
Auxiliary Consumption	%	7.50	7.50
Net Availability (ESO at PLF 80%)	MU	12965	12964.80
GRIDCO share	%	10.00	10.00
Central Transmission Loss (CTL) considered	%	3.64	3.28
Net GRIDCO share after loss	MU	1249.31	1253.94
Fixed cost	Rs. Crore	502.15	502.15
GRIDCO Share of FC	Rs. Crore	50.215	50.215
Fixed Cost incl CTL	Paise/Unit	40.19	40.05
Variable cost as per CERC Order(Incl CTL)	Paise/Unit	47.57	47.40
FPA (Incl CTL)	Paise/Unit	22.79	22.39
Year End charges	Paise/Unit	1.68	1.72
PGCIL charges for TSTPS Stage-II @ Rs11cr/Annum)	Paise/Unit	8.80	8.77
TOTAL COST FOR TSTPS Stage-II	Paise/Unit	121.04	120.32

5.29 Transmission Charge for PGCIL System

5.29.1 The tariff for central transmission system 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 system 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 17.11.2006, GRIDCO has to pay a weighted average of 16.90% share of the fixed cost towards regional transmission system & 21.60% for inter-regional transmission system as PGCIL transmission charge.

- 5.29.2 In the ARR application, GRIDCO has considered the annual fixed charges of Rs.355.62 crore for PGCIL transmission system, consisting of both regional and inter-regional transmission systems based on claims made by PGCIL for September 2006 for all the users of the PGCIL system. GRIDCO share for the same comes to Rs. 40.2 Crore and Rs23.6 Crore for regional Transmission Charges and intra-regional Transmission Charges respectively.
- 5.29.3 Further GRIDCO in its filing dt 02.03.2007 submitted that the regional Transmission Charges as considered by GRIDCO in its filing has undergone a change due to additions of new regional and inter-regional lines for which tariff has been approved by CERC. The new regional and inter-regional lines, include the following:
- LILO of Siliguri-Gangtok Sec. 132 KV Rangit-Siliguri line at Melli.
 - LILO of 1ckt. Siliguri-Rangit line at Gangtok.
 - 40% Fixed series compensation on existing 400 KV S/C Rangali-Indravati Transmission line.
 - 400 KV Siliguri-Purnea, Purnea-Muzafferpur & 220 KV (PGCIL)-Muzafferpur (BSEB).
 - 400 KV Siliguri S/s (Ext) 400 KV Purnea S/C (Ext) 40% Fixed Series Compensation and 5% to 15% TCSC on each ckt of Purnea Muzafferpur 400 KV D/C Trans line at Purnea.
 - 400/220 KV 315 MVA ICT at Purnea.
 - 400/220 KV Mzprpur S/s (New) (Excluding 2 nos 400 KV bays at MZ pur with line reactors for MZPR – Gorkhpr Transmission line and ICT-II, 220 KV Mzpr S/s Extension
 - 400 KV Muzpr-Gorkhpur TL (Inter-regional).
 - TCSC & 2 No. of 400 KV bays at Gorakhpur Sub-Station associated with 400 KV Mzpr – Gorkpr tr. Line (Inter-reg).
 - 2 nos of 400 KV bays at Mzpr with line reactor associated with 400 KV Muzafferpur-Gorakhpur Transmission line (Inter-regional).
- 5.29.4 Considering all these assets additions and taking weighted average share for regional transmission system as 16.9038% and inter-regional system as 21.603%, GRIDCO's revised proposal for share of PGCIL transmission charges comes to Rs. 84.65 crore
- 5.29.5 In addition to these, CERC vide its Order dtd 27.11.06 has allowed provisional charges for Unified Load despatch & Communication Scheme (ULDC) for both Central and State Sectors. Accordingly, GRIDCO has to pay to PGCIL an amount of Rs. 8.3756 crore and Rs. 4.5134 crore towards ULDC charges for State sector and Central sector respectively.
- 5.29.6 Considering the Open Access Charges collected from short term customers till Dec' 06 as Rs. 6.74 Crore and year-end charges of Rs. 3.72 Crore, net transmission charge aggregate to Rs 95.164 crore. Considering

the above, the Transmission charges for PGCIL transmission system works out to 22.32 P/U in place of 15.15 P/U as indicated in the ARR filing on 30th Nov, 2006.

- 5.29.7 It is ascertained from the monthly bill for January, 2007 produced by PGCIL that it has claimed Rs.460.27 crore as annual fixed cost towards transmission charges for both regional and inter-regional transmission systems for the whole region after adjusting amount payable by short-term customers which was duly accepted by GRIDCO. The huge increase is due to inclusion of evacuation system for Tala HEP which is about Rs.90 crore/annum and other ER Regional Transmission lines. Therefore, the Commission considers a sum of Rs.460.27 crore as fixed cost towards PGCIL transmission charges for 2007-08 comprising Rs.330.31 crore towards regional transmission system and Rs.129.96 crore towards inter-regional transmission system duly deducting the apportionment to other regions.
- 5.29.8 Further, GRIDCO has considered a sum of Rs.3.72 crore as year-end adjustment charges, which comprises of income tax of Rs.1.77 crore, incentive of Rs.1.94 crore and AMC for special meter of Rs.0.01 crore. The observations of the Commission on charges towards year-end adjustment claimed by GRIDCO are given below:
- 5.29.9 PGCIL is eligible for incentive for availability of transmission system above 98% as per CERC notification. GRIDCO had considered Rs.1.94 crore towards incentive to be paid to PGCIL for the year 2004-05. Since the Commission approved the tariff on normative basis, incentive for FY 2007-08 is not considered.
- 5.29.10 The amount of income tax for the ensuing year has been calculated by prorating the actual advance income tax paid by PGCIL up to the 2nd quarter (Rs.0.826 crore upto 2nd quarter) in 2005-06 i.e. Rs.1.66 crore. The Commission approves this amount of Rs.1.66 crore.
- 5.29.11 The Commission approves an amount of Rs.1.00 lakh for maintenance of the special type of energy meters for 2007-08.
- 5.29.12 The details of GRIDCO's proposal and Commission's approval towards year-end adjustment charges for 2007-08 are given in the table below:

Table - 33

Year-end Adjustment Charges (2007-08)			(Rs. Crore)
Description	OERC approval for 06-07	GRIDCO's Proposal	Commission's Approval
Incentive	2.54	1.94	Nil
Income Tax	0.84	1.77	1.66
AMC for Special meters	0.01	0.01	0.01
Total	3.39	3.72	1.67

5.29.13 GRIDCO has implemented unified load despatch and communication scheme as a part of ULDC programme for the Eastern Region. On scrutiny of PGCIL bill for the month of January, 2007 by the Commission, it is observed that PGCIL has claimed an amount of Rs.0.698 crore towards state sector ULD and communication charges and an amount of Rs.0.376 crore towards central sector ULD and communication charges totalling to Rs.1.074 crore. The Commission provisionally accepts the aforesaid claim of PGCIL and allows pass through tariff for FY 2007-08 for Rs.12.889 crore. An expenditure of 12.889 crore/ annum is a substantial amount from which commensurate advantage should accrue to the users of the system. It goes without saying that the ULDC is a requirement mandated by the Act but at the same time it imposes burden that the system should be utilised to the fullest extent by utilization for efficient Commercial transaction, so that it turns out to be a source of earning and saving of expenditure for the power users in Orissa. OPTCL may come up with a position paper on this within two months before the Commission, which would specially explain how commercial advantage could be derived out of this.

5.29.14 It is further observed from PGCIL bills that an amount of Rs.6.737 crore has been credited to GRIDCO account towards short-term open access charges for the period from April, 2006 to December, 2006. The Commission after prorating the same for the whole year has deducted an amount of Rs.8.983 crore from PGCIL transmission charges.

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

Table - 34
PGCIL Transmission Charges for 2007-08

	Commission's Approval for 2006-07	GRIDCO's revised Proposal on dtd. 02.03.07	Commission's Approval for 2007-08
Regional Transmission System (Rs. crore)	204.32		330.31
Inter-Regional Transmission system chargeable to Eastern Region (Rs. crore)	127.308		129.96
TOTAL FIXED COST	331.628		460.27
GRIDCO's Share form Regional Tr.System (Rs. crore) (16.90 %)	37.61		55.83
GRIDCO's Share form Inter-Regional Tr.System (Rs. crore) (21.60 %)	27.07		28.076
Sub-Total		85.29	83.90
GRIDCO's Share for Year end charge (Rs. crore)	3.39	3.72	1.67
ULD and communication charges	-	12.89	12.889
Total annual Transmission Charge Payable by GRIDCO for Central Transmission System (Rs. crore)	68.075	101.90	98.47

Less: Transmission Charges Received from Short term customers	7.0867	6.74	8.983
Net amount payable by GRIDCO towards Tr. Charge (Rs. crore)	60.988	95.164	89.48
Energy Drawl by GRIDCO (MU)	4543.56	4264.34 (Total generation)	4426.08
PGCIL Tr. Charge (P/U)	13.42	22.32	20.22
PGCIL Tr. Charge Including Central Loss of 3.28% (P/U)	13.93		20.90

5.30.1 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 - 35
Power Purchase Cost for 2007-08

	GRIDCO's Proposal (As per filing dtd. 07.03.2007)			Commission's Approval		
Source	Energy Drawl (MU)	Cost (P/U)	Cost (Rs. Crore)	Energy Drawl (MU)	Cost (P/U)	Cost (Rs. Crore)
OHPC	3648.42	48.67	177.56	3676.86	44.10	162.14
MACHAKUND	265.00	18.25	4.83	265.00	18.21	4.83
INDRAVATI	1942.38	67.24	130.61	1942.38	67.16	130.46
TOTAL HYDRO	5855.80	53.45	312.99	5884.24	50.55	297.43
IB TPS	2996.71	155.21	465.11	2996.71	155.38	465.64
TTPS	3144.37	168.61	530.18	3144.51	150.16	472.18
CGPs	540.00	128.24	69.25	413.45	103.23	42.68
TOTAL STATE	12536.88	109.88	1377.53	12438.90	102.74	1277.93
FSTPS	1360.83	207.46	282.32	1366.40	202.36	276.51
KhSTPS	520.20	224.09	116.57	87.92	216.99	19.08
TSTPS Stage-I	1986.25	153.42	304.72	1993.76	151.29	301.63
TSTPS Stage-II*	1249.31	121.04	151.21	1253.94	120.32	150.87
CHUKKA	234.85	183.18	43.02	235.73	181.16	42.70
TALA	162.22	213.27	34.60	162.83	211.15	34.38
TOTAL C.S.	5513.64	169.11	932.44	5100.57	161.78	825.18
TOTAL	18050.52	127.97	2309.97	17539.47	119.91	2103.11
Note :	Central transmission loss of 3.64% for central stations included.			Central transmission loss of 3.28% for central stations included.		

- (*) Due to addition of TSTPS Stage-II (10% home state quota), power availability has gone upto 18050.52 MU from 16039 MU projected earlier by GRIDCO for FY 2007-08.

5.31 Rebate for Prompt Payment from the Generators

5.31.1 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.

5.31.2 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.

5.32 GRIDCO'S FINANCE

5.33 The total volume of expenditure projected by GRIDCO for 2007-08 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 Loan

5.33.1 Employees Cost:

GRIDCO had projected Rs.2.03 crore of expenditure for 2007-08 under "Employees Cost" in its filing. The Commission has allowed Rs 1.75 crore towards employees expenses for 2006-07. The actual employees cost based on provisional accounts for 2005-06 amounts to Rs 1.65 Crore. Taking into account DA merger and normal annual rise Rs 2.03 Crore proposed by the licensee, is found reasonable and allowed by the commission for the FY 2007-08.

5.33.2 Administrative and General Expenses

GRIDCO had projected Rs.3.09 crore towards administrative and general expenses for the FY 2007-08 as against the approved amount of Rs.1.65 crore for the FY 2006-07. GRIDCO in its filing stated that because of huge legal expenses, it proposes Rs.3.09 crore. The Commission following earlier tariff order allows escalation of 5.5% over the approved figure of

2006-07 to factor in changes in WPI & CPI and approves an amount of Rs. 1.74 crore for the financial year 2007-08.

5.33.3 Other Expenses (ERLDC charges)

GRIDCO had projected Rs.1.32 crore towards ERLDC fees for FY 2007-08. The Commission approves the same and allows Rs.1.32 crore to be passed on to ARR.

5.34 Interest on Loan

5.34.1 GRIDCO had projected an amount of Rs.180.72 crore towards 'Interest on Loan' for the FY 2007-08.

5.34.2 The detail item wise repayment of principal and interest payable for FY 2007-08 are shown in the table below:

Table – 36

			Principal					Interest due for the year
		Rate of Interest	O/B as on 01.04.05	O/B as on 01.04.06	O/B as on 01.04.07	Repayment	CB as on 31-3-08	
A	Govt. Loans							
	State Govt. Loan (OPGC Adj.)	10.50%	42.54	42.54	42.54	-	42.54	4.47
	State Govt. Loan (Working Capital)	13.00%	120	120.00	120.00	-	120.00	15.60
	IBRD Loan (Retained in Gridco)	13.00%	113.21	-	-	-	-	-
	NTPC-III (GoO Bonds)	8.50%	1102.88	1102.88	992.59	110.29	882.31	82.03
	Sub Total		1378.63	1265.42	1,155.13	110.29	1,044.85	102.09
B	Institutional Loans							
	REC Loan	12.15%	210.30	154.77	93.07	68.56	24.51	6.39
	REC WCLoan	7.50%	300	275.00	125.00	125.00	-	4.60
	PFC STL	7.50%	150	-	-	-	-	-
	Sub Total		660.30	429.77	218.07	193.56	24.51	10.99
C	Secured Loan							
	Union Bank of India-I	8.25%	79.09	62.41	45.74	16.67	29.07	3.14
	Union Bank of India-III	8.25%	-	-	91.67	14.29	77.38	7.65
	Allahabad Bank	8.25%	146.41	136.88	115.44	21.43	94.01	8.74
	Dena Bank	8.25%	180.00	171.65	148.73	31.56	117.17	11.00
	Andhra Bank	7.75%	50.00	50.00	42.86	7.14	35.71	3.46
	Syndicate Bank	7.75%	10.00	50.00	50.00	10.00	40.00	3.71
	Syndicate Bank-STL	7.25%	-	100.00	-	-	-	-
	Karnataka Bank	7.75%	25.00	22.73	18.18	4.55	13.64	1.32
	Sub Total		490.49	593.66	512.62	105.63	406.98	39.03

D	GRIDCO Bonds							
	OHPC-(Rs.50 Cr.)	8.50%	50.00	50.00	35.00	15.00	20.00	2.77
	NTPC (Rs.342.85 Cr.)	10.00%	342.85	243.07	97.64	40.39	57.26	8.76
	Pension Trust Bond	9.00%	271.91	271.91	228.40	32.63	195.78	17.08
	Power Bond II (residual)	9.00%	46.65	-	-	-	-	-
	Sub Total		711.41	564.98	361.04	88.01	273.03	28.61
	Grand Total		3240.83	2853.83	2,246.87	497.49	1,749.37	180.72

5.34.3 From the above table, it is found that the original loan balance of GRIDCO as on 31.03.2005 amounts to Rs.3240.83 crore. The origin of the loan from the segregated balance sheet of GRIDCO has been extensively dealt in para 6.30 of the tariff order 2006-07. A loan wise analysis and impact of interest on the bulk supply price are presented in the subsequent paragraphs.

5.34.4 GRIDCO Bond

5.34.4.1 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 - 37
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 - 38
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 - 39
New Loan Availed by 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

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

5.34.4.3 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 2007-08, after considering the repayment liability for FY 2005-06, 2006-07 and 2007-08 projected by GRIDCO.

5.34.5 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 for the year 2007-08 is 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.

5.34.6 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 crore has been assigned to OPTCL leaving a balance of Rs.210.29 crore with GRIDCO as on 31.03.2005. For FY 2005-06, 2006-07 and 2007-08, GRIDCO has proposed an amount of Rs.55.53 crore, Rs.61.70 crore and Rs.68.56 crore towards repayment of principal reducing the loan balance to Rs.0.07 crore as at the end of 31.03.2008. 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 to 2007-08 as projected by GRIDCO @8.5% of interest per annum.

5.34.7 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 purpose of availing such loan has been extensively dealt in para 6.30.9 of the last tariff order of the Commission. The Commission in its last tariff order has allowed interest impact on the above loan. During FY 2006-07, 2007-08 and 2008-09, GRIDCO has proposed an amount of Rs.25.00 crore, Rs.150.00 crore and Rs.125.00 crore towards repayment of principal reducing the loan balance to nil as at the end of 31.03.2008. The Commission in its last tariff order had approved the interest amount to be passed on to ARR @7.5%. 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 to 2007-08 as projected by GRIDCO.

5.34.8 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 2007-08 on account of this loan as the same was repaid fully during 2005-06. The Commission accepts the same.

5.34.9 Pension Trust Bond (PTB)

5.34.9.1 GRIDCO in its Audited Accounts for 2004-05 had shown 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 interest on the loan amount of Rs.271.91 crore @9% per annum. Reason for allowing the interest as a part of the revenue requirement has been explained in details vide para 6.30.11 of the tariff order for 2006-07. The Commission in line with the last year's tariff order allow the interest to pass on to the tariff for FY 2007-08.

5.34.9.2 Based on the above considerations, the interest liability of GRIDCO for the FY 2007-08 has been calculated and an amount of Rs.158.12 crore is allowed by the Commission to be passed on to ARR for 2007-08.

Table - 40

Interest Liability of GRIDCO, 2007-08

A	Govt. Loans	Rate of Interest (%)	Approval for 2006-07 (Rs Crore)	Proposed for 2007-08 (Rs Crore)	Approved for 2007-08 (Rs Crore)
	State Govt. Loan (OHPC Adj.)	10.50	0.00	0.00	0.00
	State Govt. Loan (Working Capital)	13.00	0.00	0.00	0.00
	IBRD Loan (Retained in GRIDCO)	13.00	0.00	0.00	0.00
	NTPC-III (GoO Bonds)	8.50	89.05	82.03	79.68
	Sub Total		89.05	82.03	79.68
B	Institutional Loans				
	REC Loan	12.15	15.06	6.39	7.14
	REC WC Loan	7.50	15.00	4.60	4.69
	PFC WCL		-		
	PFC STL	0.00	-		
	Sub Total		30.06	10.99	11.83
C	Secured Loan				
	Union Bank of India	8.25	4.46	3.14	3.09
	Union Bank of India II			7.65	6.97
	Allahabad Bank	8.25	10.51	8.74	8.64
	Dena Bank	8.25	13.21	11.00	10.97

	Andhra Bank	7.75	3.60	3.46	3.04
	Syndicate Bank	7.75	3.87	3.71	3.49
	Karnatak Bank	7.75	1.59	1.32	1.23
	Short term borrowing for Cash Deficit	8.50	0.00	-	-
	Sub Total		37.24	39.03	37.43
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	6.38	2.77	2.34
	Nalco-(Rs.50 Cr.)	15.00	-	-	-
	Nalco-(Rs.150 Cr.)	10.95	-	-	-
	NTPC (Rs.342.85 Cr.)	10.00	21.54	8.76	7.74
	Pension Trust Bond	9.00	20.07	17.08	19.09
E	Sub Total		47.99	28.61	29.17
F	Grand Total		204.34	180.72	158.12
G	Less: Interest Capitalisation		-	-	-
H	Interest Chargeable During 2007-08		204.34	180.72	158.12

5.34.10 Pass through of Past losses and uncovered expenses

5.34.10.1 GRIDCO has applied pass through of past losses and uncovered expenses for an amount of Rs.677.01 crore under the following heads:-

Table - 41

Sl No.	Item	Amount (Rs. In Cr.)
1.	Proposal for pass through of past losses towards repayment of principal	497.49
2.	Rs.103.93 Cr. towards arrear fixed cost charges of TTPS after adjustment of Tariff revision of TSTPS & FSTPS.	103.93
3.	Rs.26.28 Cr. claimed by NTPC towards arrear Income Tax	26.28
4.	Rs.39.36 Cr paid/payable to OPGC during FY 2006-07	39.36
5.	Differential F.C. of TTPS for 2006-07 (Rs.195.01 Cr. revised FC-Rs.185.06 Cr. as approved by OERC)	9.95
	Total	677.01

5.34.10.2 The amount of Rs.497.49 crore requested as a pass through under repayment of principal is analysed in details. It is found from the detailed statement furnished by GRIDCO that an amount of Rs. 464.86 crore of repayment mainly relates to bonds issued by GRIDCO to finance the over dues payment by the generators. The balance amount of Rs.32.36 crore is the repayment towards pension trust bond.

5.34.10.3 Some objectors contended that GRIDCO's present position as a Bulk Supply Trader does not admit of any loan liability being saddled on it and servicing of such loans should not be allowed in its ARR for fixing trading margin, if any, and consumers should not be burdened with it. DISTCOs also contended that GRIDCO's principal repayment obligations, at any rate, should not be included in its ARR, inasmuch as according to alleged accounting principle, they are met out of depreciation allowance in respect of assets created by the loans. According to us it is not a repayment of principle payment but it is a payment liability due to conversion of current liabilities on account of power purchase to long term liability allowable as a special appropriation for running of the utility. The Commission does not agree. The Commission is primarily concerned with fixing the procurement price of DISTCOs and is incidentally considering in ARR of GRIDCO in this connection because of the special circumstances of existing PPAs and BSAs giving rise to a single buyer model, and because the procurement price coincides with the selling price of GRIDCO in respect of the present DISTCOs [The term "BSP" wherever used in this order is to be understood in this sense]. The loan liabilities of GRIDCO consisting of Govt. loans, institutional loans, secured loans and GRIDCO bonds have been assigned to GRIDCO under a transfer scheme entitled the Orissa Electricity Reform (Transfer of Transmission and Related Activities) Scheme 2005 published u/s 131(4) of the Electricity Act, 2003. These liabilities are attributable to bulk supply activities of GRIDCO created by conversion of current liabilities to long-term liability functioning as erstwhile Bulk Supply and Transmission Licensee. These liabilities exist as facts and as legal obligations of GRIDCO, which can not be wiped out. GRIDCO as a trader has virtually no assets. The liabilities have been incurred by GRIDCO not for creating assets but for meeting the demands of its suppliers when DISTCOs have defaulted in their payments to GRIDCO. Therefore the question of repaying the loan liabilities out of depreciation allowance does not arise. The liabilities can be discharged only if they are suitably included in the ARR and the Commission appropriately takes them into consideration while fixing the procurement price of DISTCOs. The Commission has to pass them through in the ARR because they are legally recoverable dues and the

Commission cannot go against the law. But pass through in the ARR does not necessarily translate into an element in the price to be charged. The Commission may direct that the recovery shall be made not by loading it on to Distcoms' procurement price but, as has been done in the last year's tariff, through export earnings, UI charges and other sources of income of GRIDCO. Parts of it may also be recognized as regulatory assets and the carrying cost thereof may be passed on to the ARR for subsequent year. The Commission may also issue directions to the DISTCOs to scrupulously follow the schedule of repayment. In fact, the Commission deducts the receivables from DISTCOs for approving revenue requirements of GRIDCO and fixing the procurement price of DISTCOs and thus the Commission expects that the benefit thus derived by DISTCOs would go towards clearance of their outstanding dues to GRIDCO. In this connection the Order dated 20th July, 2006 in Case No.115 of 2004 relating to business plan of GRIDCO may be referred to, wherein the Commission had approved the following repayment schedule of GRIDCO to discharge the power purchase liabilities, the details of which are given in the table below:-

Table - 42

Financial Year	Repayment approved (Rs. in Crore) for liquidation of power purchase dues
FY 2005-06	406.25
FY 2006-07	480.12
FY 2007-08	480.62
FY 2008-09	306.55
FY 2009-10	226.73
FY 2010-11	166.39
FY 2011-12	146.82
FY 2012-13	140.85
FY 2013-14	118.29
FY 2014-15	110.29
FY 2015-16	110.26
Total Repayment Amount	2,693.17

- 5.34.10.4 This loan repayment does not include the repayment liabilities towards pension trust bond.
- 5.34.10.5 Since there is no provision for depreciation available for meeting the principal repayment obligations for GRIDCO, GRIDCO should ideally meet these principal repayment obligations from receipt of the back-to-back arrears from the four DISTCOs on account of past BSP as well as outstanding back-to-back loans and corresponding overdue interest to meet a part cost of principal repayment of power bonds.
- 5.34.10.6 The following table summarise the outstanding amount of loan balances and accumulated interest thereof payable by the DISTCOs to GRIDCO as on March 31, 2005 (which have been reconciled with the DISTCOs), along with the DISTCO-wise outstanding BSP dues.

Table - 43

Total Receivables from the DISTCOs excluding DPS if any as on March 31, 2005

Rs. in Crore

Loan Balance	WESCO	NESCO	SOUTHCO	CESU	TOTAL
Principal	138.46	94.94	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 BSP 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
Receivables from Others					475.77

- 5.34.10.7 The Reliance managed DISTCOs have been paying their monthly BSP dues in full from March, 2003. They have been hardly able to make any payment towards the arrear outstanding BSP dues and the loan principal and accumulated interest. Had this arrear been remitted by the DISTCOs to GRIDCO in time, question of allowing repayment of principal to GRIDCO in revenue requirement would not have arisen. However, given the possible threat to interruptions

in power supply from the generators as well possible curtailment of CPA, through tripartite agreement, GRIDCO has continued to meet these principal obligations out of its other income and internal accruals. Given this background it is essential that GRIDCO continues to meet its principal obligation in time for efficient running of the power system and ensuring uninterrupted power supply. In view of this Commission agrees in principles to allow an amount of Rs. 464.84 crore towards special appropriation in ARR.

5.34.10.8 The Commission would also like to clarify that, though in its last tariff order for GRIDCO for FY 2006-07, the Commission had shown a recovery of Rs.480.12 crores towards repayment of principal, this was not given effect to in the BSP since the Commission had left a higher gap of Rs.504.52 crores, leaving in effect, a net gap of Rs.24.40 crores, even without considering recovery of principal amount of Rs.480.12 crores.

5.34.10.9 GRIDCO, in its ARR proposal, has asked for Rs.32.63 crores towards payment to the Trust Funds, by settling a portion of the bonds issued in lieu of the shortfall in the Trust Fund. GRIDCO has also submitted the position of the investments and the corpus available with the Trust to meet obligations of terminal liabilities. Subsequent to the unbundling of the transmission activity and vesting of the transmission assets, liabilities and related personnel in OPTCL, OPTCL continues to jointly manage the Trust for all erstwhile employees of GRIDCO. The requirement for terminal liabilities towards meeting the corpus of this combined Trust has already been dealt with in the transmission ARR of OPTCL. The Commission will make necessary allowances to meet the shortfall in the Trust on this account in the subsequent tariff orders. For the present, the Commission does not allow any recovery on account of the bond issued by GRIDCO to the Pension Trust Fund.

5.34.11 Pass through of Rs.103.93 crore, towards arrear of fixed cost charges of TTPS after adjustment of Tariff revision of TSTPS and FSTPS

5.34.11.1 CERC vide its order dated 28.7.2006 and subsequent order dt.25.09.2006 has approved the revised Fixed Charges due to additional capitalization for the period 2000-01 to 2003-04 for the Talcher Thermal Power Station (460 MW) and allowed reimbursement of actual expenditure incurred towards Administrative and General Expenses and interest on loan during the period 2000-01 to 31.03.2004 for R&M units.

- 5.34.11.2 Following the CERC order GRIDCO has submitted the detailed calculation of additional capitalization on fixed costs of TTPS. The revised fixed and other charges as approved by CERC order and normative availability at which it is recoverable is also furnished in its petition. The revised annual fixed cost is approved by CERC at Rs.195.01 crore for the above period. The Commission has allowed the same as approved by CERC upto 2003-04 in this tariff order.
- 5.34.11.3 The CERC had already approved the TTPS tariff (petition no.62/2000 dt.5th November, 2003) in which the total fixed cost was determined as Rs.159.28 crore for the year 2003-04. The Commission has been allowing the same since FY 2004-05. GRIDCO had claimed additional cost towards R&M expenditure in its earlier ARR filings. But the Commission had allowed Rs.126.35 crore towards R&M expenditure in the tariff order dtd. 19.04.2002 for the year 2000-01 and 2001-02. As per the MoU that was in force for the above mentioned period, GRIDCO was liable to pay additional fixed cost due to R&M @ Rs. 1.7 lakh/month/crore of investment. Taking an amount of Rs.126.35 crore as R&M capitalization, the Commission had approved Rs.25.78 crore of additional capital cost. Thus the total fixed cost allowed to GRIDCO was Rs.159.28 crore + Rs. 25.78 crore which comes to Rs.185.06 crore. The Commission in its tariff orders dt.23.6.2003 had pointed out that the actual expenditure on account of R&M would be considered after due approval from CERC.
- 5.34.11.4 GRIDCO has submitted the detailed calculation of additional capitalization on fixed cost of TTPS from 2000-01 till 2005-06 (at ED-5 page 257) in which an amount of Rs.179.83 crore has been shown towards different components of costs. After adjustment towards revision of tariff of FSTPS and TSTPS, GRIDCO has proposed for pass through of net arrear claim of Rs. 103.93 crore in the ARR for 2007-08.
- 5.34.11.5 The Commission had scrutinized the bills submitted by GRIDCO and considers it prudent to pass on the differential amount to the tune of Rs.103.93 crore billed on account of additional capitalization due to R&M of units of TTPS as claimed by GRIDCO. The Commission approves the same on the above consideration.
- 5.34.12 **Pass through of Rs.26.28 crore claimed by NTPC towards arrear of income tax**
- GRIDCO has submitted that NTPC has raised the arrear income tax bills for the period 1998-99, 2000-01 and 2001-02 against TTPS, FSTPS, TSTPS and KhSTPS for an amount of Rs.26.28 crore paid during 2006-

07. The Commission has examined the bills and approves Rs.26.28 crore to be passed on in the ARR for 2007-08.

5.34.13 Pass through of Rs. 39.36 crore payable to OPGC during 2006-07

GRIDCO has submitted that it is paying DPS to the tune of Rs.3.28 crore per month to OPGC as per arbitration settlement. The Commission has scrutinized the bills raised by OPGC and approves Rs.39.36 crore (Rs.3.28 X 12) towards payment of DPS to OPGC.

5.34.14 Pass through of Rs. 9.95 crore towards the differential Fixed Charges of TTPS for 06-07 FY.

GRIDCO has stated that OERC had allowed a total of Rs.185.06 crore as fixed cost of TTPS for 2006-07. But, due to revision of fixed cost to 195.01 crore GRIDCO has to pay the differential amount of Rs.9.95 crore per annum towards fixed cost. Thus, GRIDCO has claimed this amount to be passed on to ARR of 2007-08. The Commission has examined the bills raised by TTPS and submitted by GRIDCO and considers it prudent to be passed on ARR of GRIDCO for 2007-08.

5.35 Truing-up Exercise

5.35.1 For a long time, the Commission has been directing the licensees to expedite and to bring up to date their audited annual accounts. Till a long time, the licensees were significantly behind schedule in their mandatory obligation to prepare audited accounts, with audited accounts not being available even after three years of the year-end. Because of the non-availability of the audited information, the Commission was not in a position to undertake a comprehensive truing-up exercise in the past. However, the Commission did recognise critical elements, like for example the cost of power purchase (which constitutes approx. 70% of the total cost of a Distco), and has made efforts to recognise actual costs for this element as early as in 2001-02.

5.35.2 The Commission, time and again, has urged the Licensees to submit their audited accounts, based on which the Commission can carry out a truing-up exercise to regularise prudent expenses in line with Commission's directive based on actual audited figures. Till early March 2006, WESCO, NESCO and SOUTHCO have managed to submit before the Commission their audited accounts till FY 2004-'05 and their annual accounts prepared for the purpose of tax audit for FY 2005-'06. CESCO has submitted special audited accounts till FY 2003-'04 and provisional accounts for FY 2004-'05 and FY 2005-'06.

5.35.3 Recognition of actual costs has also been advised by the National Tariff Policy (NTP) under its directives on the Multi Year Tariff framework provisions. The NTP provides for a complete acceptance of actual costs as

well as providing for the entire gap between the actual and regulated costs in full through tariff increases or other means.

5.35.4 The Appellate Tribunal for Electricity, in Para 30 of its Appeal No. 77, 78 and 79 of 2006 dated December 13, 2006, had directed the Regulatory Commission to carry out truing-up exercise for the past three years (namely for FY 2005-06, FY 2004-05 and FY 2003-04). The Commission in its Business Plan Order had directed for carrying out the exercise at the end of the control period. Yet the Commission has taken into cognizance the directives of the Appellate Tribunal while carrying out this truing-up exercise.

5.35.5 It is under this framework that the OERC has proceeded to undertake this truing-up exercise as part of the ARR and Tariff Determination exercise for FY 2007-08.

5.35.6 **Truing-Up for GRIDCO**

5.35.6.1 Following the unbundling of the OSEB on 31 March 1996, the functions of the erstwhile SEB, i.e., generation, transmission, distribution & retail supply was vested in two successor entities – Orissa Hydro Power Corporation (OHPC), which inherited the hydro-generation assets owned earlier by OSEB as well as the Govt. of Orissa; and the Grid Corporation of Orissa Limited (GRIDCO), which inherited the businesses of transmission, distribution and retail supply.

5.35.6.2 In November 1998, as a result of subsequent further unbundling, the distribution and retail supply business of GRIDCO was hived off to four distribution companies formed for this purpose, under gazette notification.

5.35.6.3 As per the provisions of the second transfer scheme dated November 26, 1998, all operational losses as well as the past liabilities of GRIDCO would be retained with GRIDCO and not passed on to the newly formed Distcos, in order to enable the Distcos to commence operations on a clean slate and not be overburdened by past considerations.

5.35.6.4 As a result of this, GRIDCO was burdened with all the operational losses and associated liabilities arising out of the inefficiencies of the distribution business up to 31 March 1999. This mainly included past liabilities on account of the gap between the permitted power purchase dues, at regulated loss levels and actuals for the purpose of tariff setting, as well as other liabilities (both current and long term) to meet the operational gap during this period.

5.35.6.5 The Commission, as part of this ARR and tariff determination exercise, is undertaking a comprehensive exercise of truing-up

based on audited information available with the Commission for the period from FY 1997-'98 till FY 2005-'06 for GRIDCO, along with the four distribution licensees.

5.35.7 Truing-up of Power Purchase Costs

5.35.7.1 Post unbundling, GRIDCO has been responsible for the procurement of power for meeting the requirements of distribution supply till date. As a part of the truing-up exercise, the Commission has accepted the audited power purchase costs of GRIDCO after due scrutiny.

5.35.7.2 Till 25 Nov 1998, GRIDCO continued with the Distribution business. From 1997 onwards, the Commission had used a T&D loss benchmark of 35% for the computation of ARR and tariff setting based on reports available at that point of time. Authentic data or audited accounts of the licensees to set the base level of Distribution losses was not available. Besides GRIDCO was not able to maintain the level of T&D Loss approved by the Commission.

5.35.7.3 However, with the completion on annual audit and the availability of audited annual accounts, the Commission, as a part of this truing up, has taken into consideration the audited level of distribution losses for truing-up the shortfall in power purchase costs keeping in view the Kanungo Committee Report which accepts a distribution loss level of 42.21 % for the year 2001-02. Obviously the loss level of 1996-97 was required to be visited. This principle has been applied from FY 1996-97.

5.35.8 Truing-up of Operations & Maintenance Expenses

O&M expenses for GRIDCO include employee expenses, administrative & general expenses and expenses incurred on repairs & maintenance. For the truing-up exercise, O&M expenses have been considered at actual levels.

5.35.9 Depreciation

5.35.9.1 Actual depreciation as per audited accounts have been considered for the period from FY-'97 to FY-'00 for the purpose of the truing-up exercise.

5.35.9.2 Following the Govt. of Orissa's acceptance of the directives of the Commission in accepting the set of remedial measures suggested by OERC in its tariff order for FY-01 and FY-'02, the Commission has been following the basis of historical cost of assets at pre-1992 rates of depreciation.

5.35.9.3 For the purpose of the truing-up exercise also, the Commission has followed the same above principle for accepting the depreciation cost for the period FY 2000-01 to FY 2005-06.

5.35.10 Interest & Financing Charges

5.35.10.1 Following the vesting of the transmission business along with related liabilities and personnel with the Orissa Power Transmission Corporation Limited (OPTCL) GRIDCO, in its books today, has total long term liabilities which have been primarily raised to fund past liabilities (apart from a small amount of liabilities to REC and PFC which have been passed on through a back-to-back arrangement to the Distcos as part of the second transfer scheme dated 26.11.1998. However, all the fixed assets have been vested out of GRIDCO in OPTCL.

5.35.10.2 As a result, GRIDCO today has virtually no fixed assets on its books. However, it is required to service significant amount of liabilities from the past, which have been over a period of time accepted by the Commission. With no assets on its books and no depreciation cover, GRIDCO can not service these obligations apart from collecting the servicing of these liabilities through the bulk supply tariff (where as repayment obligations of long term bonds taken by conversion of current purchase liabilities would need to be met from other sources or through income from GRIDCO's non-core activities).

5.35.10.3 As per the provisional accounts submitted to the Commission for FY 2005-06, GRIDCO's total long term loan liabilities as on 31 March 2006 are a total of Rs. 3,091 crore, the break-up of which is as follows:

Table - 44

Source of Funds	Loan Balance as on March 31, 2006 (Rs. in crore)
Loans from the State Government	297.78
Bonds issued to NTPC under the OTS Scheme	1,102.87
Loans from REC (passed on to the DISTCOs under the back-to-back arrangement)	429.77
Bonds issued to the Pension Trust	373.63
Other Bonds & market Borrowings	293.07
Borrowings from Commercial Banks	593.67
Total Long Term Liabilities	3,090.79

5.35.10.4 All these liabilities have been recognised by the Commission over a period of time and the cost of these financing has already been allowed by the Commission in their last tariff orders.

5.35.10.5 For the purpose of the truing up, the Commission has accepted the cost of interest & financing charges as per actual cost incurred as per the audited annual accounts of GRIDCO from FY 1996-97 to FY 2005-06.

5.35.11 Summary of the Truing-up Exercise

5.35.11.1 The following table summaries the ARR allowed by the Commission as part of individual past ARR & Tariff orders vis-à-vis the revised ARR as per the truing-up exercise carried out by the Commission, based on audited annual accounts, which are provisional subject to finalization after hearing all stakeholders namely GRIDCO and four DISTCOs:

Table - 45
Summary of earlier approved ARR of GRIDCO vis-à-vis ARR
based on Audited Accounts

(Rs. In crore)

Financial Year	ARR based on Audited Accounts	ARR considered for truing-up	Total Revenue considered for Truing-up	Truing-up Requirement
(1)	(2)	(3)	(4)	(5) = (4) - (3)
FY 1996-'97	1,448.36	1,435.84	1,153.36	(282.48)
FY 1997-'98	1,718.99	1,700.99	1,399.87	(301.12)
FY 1998-'99	1,947.47	1,930.91	1,368.85	(562.06)
FY 1999-'00	1,508.79	1,500.75	1,478.23	(22.52)
FY 2000-'01	1,751.97	1,744.44	1,666.73	(77.71)
FY 2001-'02	1,699.95	1,688.50	1,774.45	85.95
FY 2002-'03	2,138.73	2,128.48	1,540.64	(587.84)
FY 2003-'04	1,908.89	1,896.60	2,320.01	423.41
FY 2004-'05	2,495.84	2,449.18	2,844.41	395.22
FY 2005-'06*	2,586.55	2,585.22	2,612.49	27.27
Total Truing-up Requirement				(901.87)

5.35.11.2 Apart from the requirement of truing-up calculated by the Commission as detailed in the table above, the Commission has also accepted GRIDCO's securitisation of its past liabilities (including for power purchase liabilities) to the tune of Rs. 2,063 crores in parts from the year FY 2001-02 onwards, and has been allowing the servicing of this securitisation as part of the GRIDCO's ARR. The Commission, having recognised the need for truing-up for GRIDCO, would like to leave this for finalisation after a joint stakeholder consultation with GRIDCO, OPTCL and the DISTCOs during the course of the next financial year FY 2007-08, and would finalise the

quantum for truing-up as part of the next ARR/ tariff determination exercise.

5.35.12 Return on Equity

5.35.12.1 GRIDCO had projected an amount of Rs.60.62 crore towards Return on Equity @ 14% on equity capital of Rs.432.98 crore for the FY 2007-08.

5.35.12.2 At the time of vesting of the transmission & distribution business with GRIDCO by the State Govt. on 01.04.1996, the Equity Share Capital was Rs.327.00 Crore. During the subsequent years upto FY 2004-05, there were additional infusion of equity capital of Rs.165.98 Crore by the State Govt. raising the total equity of GRIDCO to Rs.492.98 Crore. At the time of de-merger of GRIDCO effective from 01.04.2005, the equity share capital of OPTCL was stated at Rs.60 Crore, leaving the balance equity share capital with GRIDCO. The equity share capital issued to Govt. of Orissa was both in consideration of cash & other than cash. Therefore, the licensee claimed ROE @14% on the equity share capital of Rs.432.98 Crore. The commission in earlier orders referred to the GoO notification of 29.1.2003, where in it has been stated that GRIDCO & OHPC shall not be entitled to any return in equity till the sector becomes viable or FY 2005-06 whichever is earlier. Further, in a partial modification earlier notification the Govt. of Orissa in its letter no. 5302 dtd. 6.5.2003 stated the following "GRIDCO and OHPC shall not be entitled to any Return on Equity (ROE) except in respect of the new projects commissioned after 01.04.2006 till the sector become viable or and of 2005-06 whichever is earlier. The Commission would like to clarify that letters have been written to Govt. of Orissa to clarify the status of the letter dtd. 29.1.2003, as it has great impact on Tariff. But the Govt. of Orissa has not responded yet. As regards infusion of capital for the new project, the Commission verified audited accounts of GRIDCO upto 2004-05. It is found that the addition of share capital shown in the balance sheet after 96-97 is only the grants received from DFID towards R&M expenditure and rehabilitation assistance. As per Project Memorandum signed between Govt. of India and Govt of Orissa and DFID, the above amount has sown under share deposit account pending allotment of shares for non-receipt of approval from GoO.

5.35.12.3 Keeping in view of the above fact, the Commission does not consider it proper to allow return on equity to GRIDCO for the Year 2007-08.

5.35.13 **Miscellaneous Receipts**

5.35.13.1 The GRIDCO had proposed 10 MU as emergency sale to CGP for the FY 2007-08 and the corresponding revenue receipt proposed under this head comes to Rs.3.30 crore. The Commission approves the same.

5.35.13.2 **Revenue from Export of Power**

5.35.13.3 GRIDCO in its filing has stated that no surplus energy is expected to be available in the FY 2007-08. It has got no scope to make good the past losses out of sale up surplus power and UI. Further GRIDCO in its filing dt 07.03.2007 stated that GRIDCO's availability will be 18050.52 MU after inclusion of 200MW power available to GRIDCO from TSTPS Stage –II subject to approval by MOP. So GRIDCO may be surplus in power after meeting the state demand for 2007-08.

5.35.13.4 While finalising the expected aggregate revenue for 2007-08, 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 2007-08 and also reduce the burden of the consumers of the State by way of liquidating past liabilities.

5.35.13.5 **Revenue from UI:** UI charges are dependent on several unknown risk factors like the behaviour of grid, 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 2007-08. GRIDCO has projected 'nil' figure towards UI charges. The Commission directs that any revenue earning by GRIDCO on account of UI charges during 2007-08 should be accounted for and adjusted against the revenue gap in 2007-08 and also past liabilities of GRIDCO.

5.35.14 **Receivables from DISTCOs**

5.35.14.1 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 BSP as on 31.03.2005.

5.35.14.2 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 BSP dues. The table also highlights the company-wise total dues (Loan + Interest + BSP Dues) recoverable from DISTCOs.

Table - 46
Total Receivables from DISTCOs excluding DPS

	(Rs. Crore)				
Loan Balance	WESCO	NESCO	SOUTHCO	CESU	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 BSP 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

5.35.14.3 The servicing of liabilities of GRIDCO shall have to be carried out in accordance with our direction mentioned in Order dtd. 20.07.2006 in Case No. 115 of 2004.

5.35.15 Receivables from Other States

5.35.15.1 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. Now GRIDCO stated that receivables from others (other than from DISTCOs towards bulk sale of power) aggregates to Rs.387.15 crore as on 31st March 2006 which comprises Rs.145.67 crore from other State/SEBs, Rs.241.48 crore from Govt. of Orissa and others. The break up of receivables from other States/SEBs is as under:

	<u>Rs. in crore</u>
West Bengal	- 0.01
Bihar	- 9.97
MP	- 71.78
AP	- 32.28
DVC	- 0.31
EREB	- 5.73
PTC	- <u>25.58</u>
Total	145.66

- 5.35.15.2 The amount receivables from EREB is towards UI charges and from PTC is towards sale of surplus power which remained outstanding as on 31.03.2006 for the March 2006 transaction and the amount has been collected thereafter.
- 5.35.15.3 Pursuant to CERC order GRIDCO is entitled to receive Rs.1.98 crore from BSEB during 2007-08. The receivables from MP is the wheeling charge claimed by GRIDCO which has been disputed by MP SEB and the matter is subjudice. GRIDCO does not expect to receive any amount from MP during 2007-08. The AP Transco has disputed the GRIDCO's receivables amounting to Rs.32.28 crore as it has similar claim from OHPC. The matter is subjudice before CERC. GRIDCO therefore does not expect to receive any amount from AP during 2007-08.
- 5.35.15.4 The receivables from State Govt. is towards sale of electricity which GRIDCO has retained in its accounts from FY 1999-00 pursuant to the Transfer Scheme of 1998 notified by the Govt. of Orissa. The total amount retained in its accounts as receivable from Govt. Deptts. and PSUs which aggregates to Rs.224.85 crore. This amount is yet to be paid by the State Govt. to GRIDCO. GRIDCO has requested the Govt. to adjust this amount against the payables of GRIDCO to the State Govt.
- 5.35.15.5 The receivables from other States and SEBs etc. which stood at Rs.475.07 crore as on 31.03.2005 has been reduced to Rs.387.15 crore as on 31.03.2006 as the receivables from some States/SEBs and the receivables from ICCL and NALCO mostly representing wheeling charges have been transferred to OPTCL pursuant to the Transfer Notification issued by the State Govt. in 2005 transferring the transmission business to OPTCL effective from 01.04.2005.
- 5.35.15.6 Receipt of those amounts would have reduced the Bulk Supply Price. In view of the GRIDCO's submission, the Commission in line with the order of 2006-07 provisionally considers an amount of Rs.30 crore to be collected towards arrears of revenue during the year FY 2007-08. However, GRIDCO should settle the matters with respective organisation and submit a final position of receivables.

5.35.16 Revenue Requirement for FY 2007-08

- 5.35.16.1 In the light of the above, the Commission approves the revenue requirement of GRIDCO for FY 2007-08 as given in the table below:

Table - 47
Revenue Requirement of GRIDCO for FY 2007-08

		Rs. in Crs		
		2006-07	2007-08	
A	Expenditure	Approved	Proposed	Approved
	Cost of Power Purchase	1756.84	2164.46	2103.11
	Employee costs	1.75	2.03	2.03
	Repair & Maintenance	0.00	0.00	0.00
	Administrative and General Expenses	1.65	3.09	1.74
	Provision for Bad & Doubtful Debts	-	-	-
	Other expenses (ERLDC Charges)	1.32	1.32	1.32
	Depreciation	-	-	-
	Interest Chargeable to Revenue	204.34	180.72	158.12
	Sub-Total	1965.9	2351.62	2266.32
	Less: Expenses capitalized	-	-	-
	Total expenses	1965.90	2351.62	2266.32
B	Special appropriation			
	Carry forward of Previous Losses	-	677.01	644.38
	Repayment of principal	480.12		
	Contingency reserve	-	-	-
	Total	480.12	677.01	644.38
C	Return on Equity		60.62	-
	TOTAL (A+B+C)	2446.02	3089.25	2910.70
D	Less Miscellaneous Receipt	36.96	3.30	3.30
E	Less receivable from DISTCOs	110.10	-	153.33
F	Less receivable from outside States	20.00	-	30.00
G	Total Revenue Requirement	2278.96	3085.95	2724.07
H	Expected Revenue (Full year) from DISTCOs	1774.44	1924.75	2259.21
I	GAP (+/-)	(-) 504.52	(-)1161.20	(-)464.86

5.35.16.2 After taking into consideration the past liabilities of Rs.644.38 crore by GRIDCO, the Commission leaves a gap of Rs.464.86 crore and expects GRIDCO to bridge the same by export earnings, UI charges and recovery of receivables of DISTCOs. 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. 2008-09 onwards.

5.35.16.3 It is very much imperative that the back to back arrangement between DISTCOs and GRIDCO should be scrupulously followed so that GRIDCO is in a position to at least recovery of Rs.153.33 crore. In view of this the following directions are issued:

5.35.16.4 As on 31.03.2006, the regulatory gap of NESCO, SOUTHCO and CESU arrived on the basis of truing of exercise of the distribution licensees provisionally works out to Rs. 253.94

crore, Rs. 260.44 crore and Rs. 435.34 crore respectively. The Commission is now allowing Rs.41.36 crore to NESCO, Rs.31.91 crore to SOUTHCO and Rs. 43.23 crore to CESU out of the accumulated regulatory assets for recovery during the FY 2007-08 through tariff. 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.

5.35.16.5 Similarly, Rs.36.83 crore may be realised from the escrow account of WESCO by GRIDCO for adjustment against the receivables from WESCO.

5.35.16.6 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.

5.35.16.7 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.

5.35.17 **Design for Bulk Supply Pricing Philosophy**

5.35.17.1 A significant issue in the power sector in Orissa today is the changing nature of the consumer mix in the four distribution zones and its impact on power tariff. When power reform was effected in 1996, the consumer profile was very different. The HT consumers were at the top of the power pyramid in terms of consumption but their numbers were very few. The consumer profile was bottom heavy with a large percentage of LT consumers. At that time, it was envisaged that the load growth would continue in that sector. However, the rapid pace of industrialization has overturned the equation.

5.35.17.2 While the four Distribution Companies in Orissa were carved out of different areas of the State with varying consumer mix, electricity consumers through out the State are being charged at uniform rate for supply of power. The changing consumer scenario has however created regional imbalances as far as the revenues and financial health of the DISTCOs are concerned. The load growth in Orissa has been phenomenal in the last decade. Due to liberalization

and open door policy coupled with rich mineral wealth, industrial houses have invested heavily in the State. Industrialization has come to Orissa.

- 5.35.17.3 However, this high load growth is mostly restricted to Western and North-Eastern/Central Orissa, largely due to exploitation of iron ore for production of steel. On the other hand the Southern part of the State is not witnessing growth of HT and EHT load due to absence of requisite resources. Most of the Aluminum/Charge Chrome industries located in South Orissa are old and have their own captive power plants. Therefore while HT/EHT sale in WESCO & NESCO is 76.1% & 72.7% respectively, that of CESU & SOUTHCO is 39.7% & 32.7% respectively.
- 5.35.17.4 South Orissa is also disadvantaged from the point of view of the nature of electricity consumption. As a tribal dominated region with low-income population, it has poor economic capacity for utilization of electricity. Therefore, SOUTHCO is entirely dependent on low voltage consumers, mostly domestic, for its revenues.
- 5.35.17.5 Today the industrial scenario is very different from the 90's with substantial growth of large and heavy industry in Western, North-Eastern and Central Orissa. This has naturally fuelled demand for power. Compared to 06-07, the additional sale at HT and EHT will be more than 1700 MU in the State in 2007-08.
- 5.35.17.6 For the last few years, consumers of Orissa have benefited from being a power surplus State. Low cost hydro power has been utilised within the state and higher cost thermal power has been exported by GRIDCO and the gains thus accrued have been passed on to consumers. In the coming years because of higher growth of HT and EHT most of the power produced will be consumed within the State. There will be no or little power available for export outside the State.
- 5.35.17.7 In other words, more and higher cost power will be utilized within the State for use by the consumers. Purchase of power from high cost sources is raising the per unit of cost of supply. As an example, in 06-07 the weighted average cost of power purchase was 120.85 paise per unit which has gone up to 135.66 paise per unit in 07-08.
- 5.35.17.8 The effect of purchase of this high cost of power will be absorbed by the licensees like WESCO, NESCO and also to some extent by CESU. But, SOUTHCO will be hard pressed due to rise in purchase price as there will not be

commensurate rise in revenue through EHT and HT. In other words higher utilization of power within other DISTCOs in Orissa will put a burden on the SOUTHCO, and ultimately on the consumers of SOUTHCO. This is a major concern that the Commission needs to address.

5.35.17.9 Moreover, distribution companies with higher sale at EHT/HT have been found to be totally inefficient in reducing LT losses. They try to manage with revenue earned from EHT/HT consumers from the margin available to them between BSP & consumer tariff. The difference between purchase price and the revenue is the margin of the companies. Essentially this margin should be used for cross subsidy among companies.

5.35.17.10 As stated earlier, OERC has been following a uniform retail tariff policy. The consumers of Orissa should not be deprived of this benefit. However, to maintain that level of uniformity, it is necessary to allocate low cost source of generation to those of the licensees who are burdened with very high content of LT load. This will ensure that their financial viability is not jeopardized.

5.35.17.11 Until we move away from the uniform RST structure, the differential pricing mechanism should give a signal that improved performance at LT through higher LT sale would enable a utility to get power at a lower rate. Conversion of lost units to billing units at LT means reduction of commercial loss which needs to be encouraged. While designing such a tariff structure low cost sources of generation are deemed to be assigned to low voltage consumers.

5.35.17.12 In view of this, for the year 2007-08, following merit order dispatch, lowest cost of power is to be earmarked for the low voltage consumers. Balance cost of power is to be utilized by the EHT and HT group of consumers, which is reflected in the bulk supply price proportionate to the level of EHT and HT consumption. This would be an indicator to the utilities with predominately EHT/HT consumer that negligence in reduction of LT loss comes at a price.

5.35.17.13 In keeping with this objective, the bulk supply price is so designed that at least the utilities like SOUTHCO could remain viable. Otherwise it will require a substantial rise in tariff for consumer of SOUTHCO and heavy loss to the utility and give a signal to the utilities like WESCO that reduction of loss at LT can reduce the bulk supply price.

5.35.18 Determination of Demand and Energy Charges

- 5.35.18.1 Demand charge is levied in consonance with the philosophy of realization of a part cost of the fixed charges in proportionate to the capacity utilization by the licensee. The energy consumption is recovered in proportion to the actual quantum of energy consumed by the utilities.
- 5.35.18.2 The total revenue recovery by the GRIDCO is drawn through demand charges and energy charges. Revenue from demand charges is computed @ Rs.200 per KVA per month multiplied by the SMD recorded in KVA by the utilities. This fixed charge can be converted to paise/unit depending upon the load factor.
- 5.35.18.3 Questions have been raised by the licensees that there are chances of over recovery or under recovery through demand charges if there is a difference between the approved SMD and actual SMD in a particular year. Over recovery through demand charges by GRIDCO could mean additional recovery of revenue if the distribution companies draw power at the permitted level.
- 5.35.18.4 A case was made out that fixation of higher SMD by the Commission could reduce the energy charge per unit, the total revenue requirement remaining fixed. But if there is under drawl by the DISTCOs due to reduced energy charges, GRIDCO will not be able to receive the full revenue requirement due to it. On the other hand, if the permitted SMD is not attained GRIDCO also stands to lose the revenue. To obviate this difficulty the Commission decides that the entire revenue recovery of GRIDCO could be effected through energy charges only by combining the demand charges and energy charges. The SMD fixation of a composite energy charges will however not take away the concept of SMD. However, this has also to take care of the permitted maximum demand for any utility so that the utility does not resort to unbridled maximum demand drawl of power and jeopardize the system's stability.
- 5.35.18.5 Therefore, the Commission directs that there shall not be any levy of separate maximum demand charges upto the permitted SMD for the distribution companies for the FY 07-08. Permitted SMD would mean monthly SMD recorded upto maximum of 10% over the approved SMD in the current tariff order to take care of monthly variations. Any excess drawl over the permitted SMD will have to be paid @Rs.200 per KVA per month. This is again subject to the condition that the annual average SMD shall be limited to the SMD permitted in the order. This is necessary to maintain the planning of load and system's stability. Any drawl over and above the annual average SMD will be payable @Rs.200 per KVA per month, notwithstanding the fact that a

utility might have paid the SMD charges for exceeding the permitted SMD in any month.

5.36 Determination of Bulk Supply Price

5.36.1 GRIDCO had proposed Demand Charge @ Rs. 300/KVA/month and energy charge @ 138.87 P/U to be levied on the DISTCOs towards their purchase of power. The Commission fixes the Bulk Supply Price as a single-part-tariff towards payment of energy drawn by DISTCOs in line with the concept defined in the earlier paragraphs. The details of Bulk Supply Price as well as the quantum of energy approved by the Commission for each DISTCO are presented in a table below:

Table - 48

Bulk Supply Price and Quantum of Energy for 2007-08

Name of the DISTCO	Quantum of Energy (MU)	Bulk Supply Price (P/U)	Revenue from Bulk Supply Price (Rs. Crore)	Average Rate approved for 2006-07
CESU	4842.00	121.70	589.27	120.45
NESCO	4497.00	125.80	565.72	112.94
WESCO	5496.00	175.67	965.50	132.65
SOUTHCO	1818.00	76.30	138.71	109.63
Total	16653.00	135.66	2259.21	120.85

5.36.2 As against GRIDCO's total revenue requirement of Rs 2724.07 crore, it will recover Rs. 2259.21 crore through energy charge for the year 2007-08 from DISTCOs and will leave a gap of Rs.(-)464.86 crore. The treatment of this gap has already been discussed above.

5.37 Charges for Overdrawl of Energy

5.37.1 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 a cost of imported power on monthly basis.

5.37.2 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.

5.38 Rebate

For payment of bills through a letter of credit on presentation/upfront by cash within two working days, 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.

5.39 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.

5.40 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.

5.41 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.

5.42 Around 35.3% 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 vagaries of nature. Hydro power no doubt provides stability to system operation but at the same time failure of monsoon can play havoc on the state's utilities. The Commission has considered revenue requirement of the current year based on the assumption of a normal rainfall.

5.43 The current power scenario of the State is in a State of transition due to demand on account of rapid industrialization and massive rural electrification envisaged under Rajeev Gandhi Gramya Vidyut Yojana (RGGVY). The surplus scenario is first 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.

5.44 Orissa has always encouraged installation of Captive Generation due to which NALCO, RSP, ICCL, HINDALCO, IFFCO etc have established Captive Power Plants of the order of 960 MW at Angul, 248 MW at Rourkela, 267.50 MW at Hirakud and 110 MW at Paradeep respectively. The installed capacity of CGPs connected to State Grid has gone upto 2031.688 MW. A number of electro-metallurgical industries have signed MoUs with the State Government and are coming up with CGPs of their own. The Commission would prefer harnessing of surplus power from the existing and upcoming CGPs of the State. For this purpose, the Commission has ordered that the current practice of negotiated price

between GRIDCO and CGPs may continue until a firm policy is decided in the matter by the Commission.

- 5.45 The Commission has already fixed a minimum percentage of purchase of energy from non-conventional sources including from co-generation for the FY 2007-08. It has 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.
- 5.46 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.
- 5.47 The Bulk Supply Price in respect of GRIDCO will become effective from 1st April 2007 and shall continue until further order.
- 5.48 The application of GRIDCO in Case No.55/2006 is disposed off accordingly.

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

**Sd/-
(B.K. DAS)
CHAIRPERSON**

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