

ODISHA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN,
UNIT – VIII, BHUBANESWAR – 751 012

*** *** ***

Present: Shri S. P. Nanda, Chairperson
Shri S. P. Swain, Member
Shri A. K. Das, Member

CASE NO.54 OF 2015

Date of Hearing : 05.02.2016
Date of Order : 21.03.2016

IN THE MATTER OF: Application for approval of Aggregate Revenue Requirement (ARR) and determination of Bulk Supply Price (BSP) of GRIDCO Ltd. for the year 2016-17 under Section 86(1) (a) & (b) and other applicable provisions of the Electricity Act, 2003 read with relevant provisions of OERC (Conduct of Business) Regulations, 2004 and other related Rules and Regulations.

O R D E R

Section 86(1) (b) of the Electricity Act, 2003 requires the Commission to determine the procurement price structure for Distribution Utilities operating in the State of Odisha. Under the existing Bulk Supply Agreements with GRIDCO Ltd. (in short GRIDCO), the Distribution Utilities of Odisha are under obligation to purchase power solely from GRIDCO. In determining the procurement price, the Commission has to hear not only the buyers (Distribution Utilities) but also the seller (GRIDCO Ltd.). No meaningful hearing of GRIDCO is possible unless GRIDCO files its Aggregate Revenue Requirement and expected revenue. The Commission, in its earlier BSP orders, has given enough reasoning with justification for filing of ARR & BSP application by GRIDCO Ltd. The Commission requires to take up the filing of GRIDCO Ltd. into consideration even though GRIDCO Ltd. as a deemed trading licensee under the 5th Proviso to Section 14 of the Electricity Act, 2003 (hereinafter referred to as “the Act”) is outside the purview of Section 62 of the said Act. The prices at which GRIDCO Ltd. supplies power to the Distribution Utilities coincides with the procurement price fixed for the Distribution Utilities under Section 86(1)(b) of the Act. For

supply of surplus power to any other person anywhere after satisfying the requirements of the Distribution Utilities of Odisha, the bulk supply prices fixed for the Utilities would not be applicable. So far as Distribution Utilities of Odisha are concerned the prices at which GRIDCO Ltd. would supply power has to be determined by reference to the Aggregate Revenue Requirement (ARR) of GRIDCO Ltd. Hence GRIDCO Ltd. has filed its Aggregate Revenue Requirement & BSP application for ensuing Financial Year i.e. for FY 2016-17.

PROCEDURAL HISTORY (Para 2 to 7)

2. Complying with the direction of the Commission, GRIDCO Ltd. had published its Aggregate Revenue Requirement (ARR) and determination of Bulk Supply Price (BSP) application in leading newspapers in the approved format in order to invite objections/suggestions from the shareholders and objectors. The said public notice was also uploaded in Commission's website as well as in the website of GRIDCO Ltd. The Commission directed GRIDCO Ltd. to file its rejoinder to the objections filed by the various objectors before the Commission and to serve copy to them.
3. In response to the aforesaid public notice in respect to the Aggregate Revenue Requirement (ARR) and BSP application of the GRIDCO Ltd. for FY 2016-17, the Commission received 11 nos. of objections/ suggestions from the following persons/ associations/ institutions/ licensees: -
 - (1) Sri M.V. Rao, Resident Manager, M/s Ferro Alloys Corporation Limited, (FACOR), GD-2/10, Chandrasekharpur, Bhubaneswar-751023, (2) Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour, Plot No.302(B), Beherasahi, Nayapalli, Bhubaneswar-751012, (3) Shri Prashanta Kumar Das, President, State Public Interest Protection Council, 204, Sunamoni Appartments, Telenga Bazar, Cuttack-753009, (4) Shri Devashis Mahanti, President, North Odisha Chamber of Commerce and Industry (NOCCI), Ganeswarapur Industrial Estate, Januganj, Balasore-756019, (5) M/s.Grasim Industries Ltd. formerly known as Aditya Birla Chemicals (India) Ltd., At/P.O. Jayashree-761025, Dist-Ganjam, (6) M/s. Utkal Chamber of Commerce & Industry Ltd. (UCCI), N-6, IRC Village, Nayapalli, Bhubaneswar-751015, (7) Sri Alekh Chandra Mallick, S/o. Sri Harekrushna Mallick, VR-13, Unit-6, Bhubaneswar, Khurda, (8) M/s. Swain & Sons Power Tech Pvt. Ltd., Swati Villa, Surya Vihar, Link Road, Cuttack-753012, (9) M/s. Vedanta Limited, 1st Floor, Fortune Tower, Chandrasekharpur, Bhubaneswar-751023, (10) Sri Ananda Kumar Mohapatra, Power Analyst, S/o-Jachindranath Mohapatra, Plot No. L-II/68, SRIT Colony, Budharaja, P.S.-Ainthapali, Dist-Sambalpur-768004, (11) Sri G.N. Agrawal, Convenor-cum-Gen. Secretary, Sambalpur District Consumers Federation, Balaji Mandir

Bhawan, Khetrapur, Sambalpur-768003 The applicant submitted its reply to the issues raised by the various objectors during hearing of the above case.

4. In exercise of the power conferred under S.94(3) of the Electricity Act, 2003, in order to protect the interest of the consumers of Odisha, the Commission appointed to World Institute of Sustainable Energy (WISE), Pune, as Consumer Counsel for objective analysis of the licensee's Aggregate Revenue Requirement (ARR) and Bulk Supply Price proposal for FY 2016-17. The Consumer Counsel presented its views on the matter in the hearing.
5. The date for hearing was fixed as 05.02.2016 at 11.00 AM and it was duly notified in the leading newspapers and also to the objectors. The Commission also issued notice to the Department of Energy, Government of Odisha informing them about the date, time and place of hearing with the request to participate in the proceedings.
6. In its consultative process, the Commission conducted a public hearing at its premises on 05.02.2016 and heard the Applicant, Objectors, Consumer Counsel and the Representative of Dept. of Energy, Govt. of Odisha at length. The following persons were participated in the hearing process.
 - (1) Sri M.V. Rao, Resident Manager, M/s Ferro Alloys Corporation Limited, (FACOR), GD-2/10, Chandrasekharpur, Bhubaneswar-751023, (2) Shri Bibhu Charan Swain, the authorized representative of M/s. North Odisha Chamber of Commerce and Industry (NOCCI), Ganeswarapur Industrial Estate, Januganj, Balasore-756019 and M/s Swain & Sons Power Tech Pvt. Ltd., Swati Villa, Surya Vihar, Link Road, Cuttack-753012, (3) Shri R.P. Mohapatra, the authorized representative of M/s.Grasim Industries Ltd. formerly known as M/s. Aditya Birla Chemicals (India) Ltd. AT/P.O. Jayashree-761025, Dist-Ganjam, (4) Shri Brahmananda Mishra, Advocate on behalf of M/s. Utkal Chamber of Commerce & Industry Ltd. (UCCI), N-6, IRC Village, Nayapalli, Bhubaneswar-751015 and also on behalf of M/s. Vedanta Limited, 1st Floor, Fortune Tower, Chandrasekharpur, Bhubaneswar-751023, (5) Sri Alekh Chandra Mallick, S/o. Sri Harekrushna Mallick, VR-13, Unit-6, Bhubaneswar, Khurda, (6) Sri Ananda Kumar Mohapatra, Power Analyst, S/o-Jachindranath Mohapatra, Plot No. L-II/68, SRIT Colony, Budharaja, Ps-Ainthapali, Dist-Sambalpur-768004. Nobody was present on behalf of Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour, Plot No.302(B), Beherasahi, Nayapalli, Bhubaneswar-751012, Shri Prasanta Kumar Das, President, State Public Interest Protection Council, Sunamoni Appartments, Telenga Bazar, Cuttack-753009 and Sri G.N. Agrawal, Convenor-cum-Gen. Secretary, Sambalpur District Consumers Federation, Balaji Mandir Bhawan,

Khetrapur, Sambalpur-768003, but their written objections/suggestions which were filed in the above case were taken in to consideration by the Commission.

7. The Commission convened the State Advisory Committee (SAC) meeting on 18.02.2016 at 3.30 PM in the Conference Hall of the OERC on Bulk Supply Price proposal of the licensee for the FY 2016-17. The Members of the SAC, Special Invitees, the Representative of Department of Energy, Govt. of Odisha actively participated in the discussion and offered their valuable suggestions and views on the matter for consideration of the Commission.

PROPOSAL OF GRIDCO ON ARR & BULK SUPPLY PRICE (BSP) FOR THE FY 2016-17 (Para 8 to 23)

8. According to the applicant GRIDCO Limited (hereinafter called as GRIDCO) is a Deemed Trading Licensee under the 5th Proviso to Section 14 of the Electricity Act, 2003 and carries out the business of Bulk Supply of electricity to the four Electricity Supply Utility Companies (hereinafter called as DISCOMs) by utilizing the transmission network of OPTCL, the State Transmission Utility (STU) and others. Besides, being the successor organization to the erstwhile Odisha State Electricity Board (OSEB), GRIDCO continues the functions of bulk purchase and sale of power in the interest of the State under the Single Buyer Model, as a matter of historical legacy. Accordingly, GRIDCO continues to procure power from various generators located inside Odisha and the State share from central generator for supply the same to DISCOMs under the existing Bulk Supply Agreement at a regulated price determined by the Commission. This Price incidentally happens to be the Bulk Supply Price at which GRIDCO supplies power to the DISCOMs. Moreover, GRIDCO also supplies emergency power to the Captive Generating Plants (CGPs) and trades the surplus power available, if any, from time to time. Thus, as a statutory requirement, GRIDCO is required to submit its Aggregate Revenue Requirement (ARR) before OERC for determination of the procurement price of the DISCOMs. In this above backdrop, GRIDCO has filed an application for approval of its proposed Aggregate Revenue Requirement and revision of Bulk Supply Price for the FY 2016-17 to enable it to carry out its functions of bulk supply to DISCOMs and emergency supply to CGPs.

Projection of Demand and Energy

9. The Simultaneous Maximum Demand (SMD) of DISCOMs for the FY 2016-17 has been projected at 4080.54 MVA per month and energy requirement has been projected as 25468 MU for consumption of DISCOMs for FY 2016-17. GRIDCO has also projected emergency power drawl by CGPs (NALCO & IMFA) as 10 MU for the same period.

Power Procurement Plan of GRIDCO

10. The proposed energy available to GRIDCO is 29147.42 MU. The estimated surplus energy of about 2690.52 MU is proposed to be utilised for power trading.

**Table – 1
Demand and Energy Projection for FY 2016-17**

ITEMS	Projection for FY 2016-17
SMD for DISCOMs (MVA per month)	4080.54
Energy Demand of DISCOMs (MU)	25468.00
Emergency Power to CGPs (MU)	10.00
Transmission Loss @ 3.70% in OPTCL system (MU)	978.91
Total Energy Required to be Purchased (MU)	26456.91
Total Energy Availability (MU)	29147.42
Surplus energy (MU)	2690.52

Power Purchase Cost Projected for 2016-17

11. The detailed cost of power purchase as furnished by GRIDCO for FY 2016-17 is reproduced in the Table below.

**Table – 2
Summary of Proposed Power Procurement Cost during FY 2016-17**

Stations	Availability (Saleable Design Energy) (MU)	Rate (P/U)	Total Cost (Rs.Cr.)
HHEP	639.28	183.64	117.40
CHEP	464.62	132.34	61.49
Rengali	514.55	230.12	118.41
Upper Kolab	815.44	138.89	113.26
Balimela	1159.46	156.33	181.26
OHPC(Old)	3593.35	164.70	591.81
Indravati	1922.96	108.12	207.91
Sub-Total OHPC	5516.30	144.97	799.72
Machhkund	262.50	47.93	12.58
Total State Hydro Availability	5778.80	140.57	812.30
OPGC	2928.42	216.90	635.18
TTPS	3150.40	305.51	962.49
Small Hydro Renewable Energy	320.00	368.00	117.76
Biomass Energy (Shalivahan Energy Ltd.)	100.00	578.00	57.80
BioMass Energy (Octatnt Industries Ltd.)	60.00	566.00	33.96
Solar Energy	230.00	710.00	163.30
CGPs	0.00	0.00	0.00
Co-generation Plants	0.00	0.00	0.00
IPPs	8316.00	214.81	1786.33

Stations	Availability (Saleable Design Energy) (MU)	Rate (P/U)	Total Cost (Rs.Cr.)
Total State Availability	20883.62	218.79	4569.12
TSTPS Stg.-I	2121.11	293.35	622.23
TSTPS Stg.-II	1323.54	289.44	383.08
FSTPS-II&III	1466.42	426.48	625.40
FSTPS-III	564.29	497.38	280.67
KhSTPS Stg.-I	835.15	441.50	368.72
KhSTPS Stg.-II	224.48	439.35	98.63
Barh STPS -II (Unit-IV & V)	1302.24	571.88	744.72
Total Central Thermal	7837.22	398.54	3123.45
Chukha	256.00	216.68	55.47
TALA	141.00	235.17	33.16
Teesta	510.00	267.83	136.60
Total Central Hydro Availability	907.00	248.32	225.22
Total EREB	8744.22	382.96	3348.67
SoC & MoC Charges			2.93
Total	29627.84	267.34	7920.72
Power Banking			
Inflow	153.36		
Outflow	-633.78		
Power Purchase Cost	29147.42	271.75	7920.72

Pass through of arrear dues paid / to be paid during FY 2016-17

12. GRIDCO proposes to consider pass through of expenses, already incurred or to be incurred, in the ARR for the FY 2016-17. This expenses amount to Rs.414.04 crore consisting of total arrear of NTPC-TTPS till FY 2016-17 as per its filing before the Hon'ble CERC (Rs.28.55 crore), arrear paid to NTPC ó Barh II for the period November 2014 to September 2015 (Rs.167.14 crore), arrear of Teesta-V for FY 2014-15 (Rs.8.88 crore), arrear energy charges towards M/s Vendanta Ltd from FY 2010-11 to FY 2013-14 (Rs.164 crore), arrear towards reactive energy charge paid to ER Pool account from April 2015 to November 08, 2015 (Rs.0.87 crore), and reimbursement claimed by OHPC in tariff (Rs.44.60 crore).

Special Appropriation of repayment of principal for FY 2016-17

13. GRIDCO has proposed a sum of Rs.812.59 crore on account of repayment of principal of bank loans to be recovered through tariff of the FY 2016-17. GRIDCO proposes deferment of repayment of Govt. dues of Rs.1554.40 crore.

Interest, Financing & Other expenses

14. GRIDCO has proposed to recover Rs.605.06 crore during the FY 2016-17 towards interest on loans and financial charges, employee cost, A&G cost, R&M cost and depreciation as detailed in Table below.

Table – 3
Interest, Financing & Other expenses for FY 2016-17 (Rs. Crore)

Particulars	Amount
1. Interest & Financial Charges	582.04
2. Other Costs:	
a. Employee Cost	10.72
b. A&G Cost	11.33
c. Repair & Maintenance Cost	0.25
Sub-Total - Other Costs	22.30
3. Depreciation	0.72
Total (1+2+3)	605.06

Return on Equity

15. GRIDCO has proposed RoE of Rs.92.27 crore @ 16.00 % on its equity capital of Rs. 576.71 crore.

Other Income / Miscellaneous Receipts

16. GRIDCO expects to earn an amount of Rs. 6.85 crore (at existing approved tariff) from proposed sale of 10 MU emergency power to NALCO and IMFA.

Receivable from DISCOMs and others

17. DISCOMs have defaulted in payment of Rs.2085.33 crore towards securitized dues, Rs.625.17 crore towards Year-end-Adjustment (YEA) Bills and Rs. 1246.86 crore towards BSP bills from FY 2011-12 to FY 2015-16 (upto September 2015). Further, Rs.195.36 crore towards NTPC Bonds is due from DISCOMs as on 31.03.2015.

Aggregate Revenue Requirement

18. The proposal for Aggregate Revenue Requirement (ARR) of GRIDCO for FY 2016-17 is summarised in the Table below.

Table - 4
Aggregate Revenue Requirement of GRIDCO for FY 2016-17
(Rs. Crore)

	Item	OERC approval for 2015-16	GRIDCO's Proposal for 2016-17
a)	Power Purchase Cost	5927.67	7920.72
b)	Pass through expenses and Special Appropriation	838.15	1226.63
c)	Interest, Financing and other expenses	290.97	605.06
d)	Return on Equity		92.27
e)	Revenue Requirement (a+b+c+d)	7056.79	9844.68
f)	(-) Misc. Receipts	6.85	6.85

	Item	OERC approval for 2015-16	GRIDCO's Proposal for 2016-17
g)	(-) Revenue from trading of surplus power		739.89
h)	Net Revenue Requirement (e-f-g)	7049.94	9097.94

Proposed Revenue Earning at Existing BSP Rates

19. GRIDCO proposes to earn revenue of Rs 7239.50 crore during FY 2016-17 from the anticipated sale of 25468 MU to DISCOMs at the existing BSP rates for 2015-16, the details of which is given in Table below.

Table – 5
**Expected Revenue for FY 2016-17 with anticipated sale to DISCOMs
at Existing BSP**

	Energy (MU)	Existing BSP (P/U)	Amount (Rs. Cr.)
CESU	8905	285	2537.93
NESCO	5583	302	1686.07
WESCO	7450	310	2309.50
SOUTHCO	3530	200	706.00
TOTAL	25468		7239.50

Excess / Deficit in the ARR for FY 2016-17

20. GRIDCO has proposed that it would suffer revenue deficit of Rs.1858.44 crore considering the proposed ARR and the revenue to be earned from sale of the proposed energy of 25468 MU to DISCOMs during FY 2016-17 at the existing BSP for FY 2015-16, the details of which are shown in the Table below.

Table - 6
Excess / Deficit on Revenue Requirement for FY 2016-17
(Rs. Crore)

	Item	GRIDCO's Proposal for 2016-17
a)	Total Revenue Requirement	9844.68
b)	Less: Misc. Receipts	6.85
c)	Less: Revenue from trading of surplus power	739.89
d)	Net Revenue Requirement	9097.94
e)	Revenue Receipt from DISCOMs (at existing BSP)	7239.50
f)	Excess(+) or Deficit(-)	-1858.44

Summary of Tariff Filing for FY 2016-17

21. GRIDCO has requested the Commission to approve the following for FY 2016-17 and make the same effective from 1st April, 2016.

- i) The proposed uniform Bulk Supply Price (BSP) @ 357.23 P/U to recover net revenue requirement of Rs.9097.94 crore from DISCOMs.
- ii) Demand charges @ Rs.250 /KVA/month, when actual SMD exceeds the permitted monthly SMD.
- iii) Charges for over drawl of energy at a cost of highest OERC approved power purchase rate fixed for a station for FY 2016-17 to be recovered on monthly basis subject to final adjustment at the end of the year considering the highest Power Purchases rate/ cost including the rate/s of energy drawn through U.I. / Deviation Settlement of the month plus transmission charges and transmission loss.
- iv) Any excess payment made by GRIDCO towards FPA for a particular / relevant month will be levied on DISCOMs in the succeeding month in proportion to their actual drawl during the preceding month along with the BSP bills if the Fuel Surcharge Price of the particular month paid by GRIDCO exceeds by more than 5% of the approved Average BSP subject to maximum of 25% of the approved Average BSP.
- v) On payment of the current monthly bills, the Distribution and Retail licensees (DISCOM Utilities) shall be entitled to:
 - A rebate of 2%, in case the DISCOM Utilities make full payment of the current month's BSP dues within two working days (excluding holidays under NI Act) of serving of the BSP invoice by GRIDCO.
 - A rebate of 1%, in case DISCOM Utilities make payment of the current month's BSP dues in full within a period of 30 days of serving of the BSP invoice by GRIDCO.
 - A rebate of 2% on the amount of current month's BSP dues partly paid by the DISCOM Utilities within two working days (excluding holidays under NI Act) and 1% on the balance current BSP dues, if paid within a period of 30 days of serving of the BSP invoice by GRIDCO.
 - No rebate, if the DISCOM Utilities have not paid any amount of the current month's BSP dues within a period of 30 days of serving of the BSP invoice by GRIDCO.
- vi) Delayed Payment Surcharge @1.50% per month for the period of delay beyond 30 days from date of submission of bills.
- vii) The Electricity Duty levied by the Government of Odisha and any other Statutory levy/ Duty/ Tax/ Cess / Toll etc. imposed under any law from time to time shall be charged over and above the Bulk Supply Price.

- viii) To suitable frame and approve the Intra State UI / Deviation Settlement Mechanism & Rates in a manner by which GRIDCO will be in a position to recover its dues payable to the generators from the BSP Bills charged to the DISCOMs.
22. During the hearing, the Licensee was allowed to give a presentation on its ARR and BSP application for the FY 2016-17. World Institute of Sustainable Energy (WISE), Pune, appointed as consumer counsel, put up certain queries and objections regarding ARR and BSP filing of GRIDCO. The objectors also made suggestions and observations on the submission of the licensee.
23. 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 2016-17. Based on their nature and type, these objections have been categorized as follows.

VIEWS OF THE CONSUMER COUNSEL AND OBJECTORS ON THE BULK SUPPLY PRICE PROPOSAL FOR FY 2016-17 (Para 24 to 69)

Consumer Counsel

24. Design of BSP for DISCOMs has direct impact on consumer tariff; therefore, the Commission may consider the following points: review of energy availability from all sources, energy procurement from renewable energy projects to meet the RPO, charges in case of TPPS, cost components of OPGC, all charges in case of Central thermal stations, transmission loss and transmission charges in case of Central sector projects, power procurement rates for IPPs, pass through and special appropriation of expenses, employee cost, R&M cost, A&G cost, RoE and proposed trading income of GRIDCO. Apart from these components repayment of existing loans need to be verified to find actuals and interest on proposed new loans may not be allowed, they suggested. The high cost energy available from Central Thermal Stations need not be considered in public interest, it further goes on.

Views of Objectors

Legal Issues:

25. GRIDCO, as a trader, is entitled to get trading margin of 4 P/U over power procurement cost. The Commission should determine only a trading margin for GRIDCO and therefore, determination of ARR and BSP for GRIDCO is not in accordance with the provisions of the Statute.

Availability from State Stations

26. Power availability from OHPC needs to be considered on actual performance of previous years with additional capacities built up and not on design energy. GRIDCO being a trading agency is to prevail upon OHPC for more production and to have proper up-gradation of their storage capacity. In addition, expeditious commissioning of Unit III & IV of OPGC power station will be an advantage to the people of Odisha, so as to supply reasonable and reliable electricity to the consumers of Odisha. Hence, GRIDCO should strive to maximize generation from OPGC, NTPCóTTPC, Kaniha and State IPPs, to avoid procurement of energy from power stations fed from imported coal. GRIDCO needs to disclose the State's share/entitlements from all IPPs with whom PPA has been made and strive to achieve the same at low cost.
27. The reason for consideration of such low NAPAF for FY 2016-17 and execution of ñPower cutö in Odisha need to be clarified by GRIDCO.
28. GRIDCO has not factored distribution loss while projecting the power demand of the distribution companies. Therefore, the Commission may scrutinize the projections given by GRIDCO regarding power availability from generating stations in the state and procurement proposed by GRIDCO from high cost central sector power stations.
29. GRIDCO may be advised to procure maximum power available from the Captive Power Plants in the State and then avail the allocation of the Central Power Stations in the merit order to meet the power requirement of the State Consumers.
30. GRIDCO has not planned any procurement from CGPs, who help them during shortfall of energy in the state. GRIDCO should procure a specified minimum quantum from CGPs considering that CGP power is cheaper in comparison to the tariff of some of the central generating stations. The Commission need to allocate power procurement from the CGPs by GRIDCO.
31. GRIDCO should buy power from IEX at low rates to avoid financial burden on the general consumer.
32. GRIDCO has not taken up with PGCIL seriously for non-scheduling of power through inter-regional lines like W3, S1 and S2 areas causing heavy loss to GRIDCO.
33. There is hardly any initiative by GRIDCO in last one and half years in increasing solar generation, while neighboring states lead. Wind power is not technically feasible in Odisha, but some experiment in some area may be taken up by the State. The Commission may also entrust responsibility on GRIDCO for development of Energy from waste management.

34. GRIDCO has not considered the shortfall in RPO for the previous years in the present ARR. GRIDCO is to submit year wise RPO obligation and compliance status and has to clarify whether it has submitted any quarterly report and annual report regarding its RPO compliance to OREDA, the state designated agency. The Commission may direct GRIDCO on this.
35. It is necessary to find out exact energy requirement of the state both qualitatively and quantitatively for the year under consideration both in short term and long term.

Power Procurement Cost

36. OHPC in their ARR application have stated that they are not able to generate more power as per GRIDCO planning and projected higher rates. GRIDCO has to explain the actual rate for OHPC power. Alternative sources of power may be examined in order to reduce the burden on consumers.
37. The rate of high cost power purchased by GRIDCO during the peak period in last six years should not be included in the tariff. Rather it should be advised to make efficient purchases helping to reduce BSP.
38. The Commission may scrutinize the power cost projected by the state generating stations both hydro and thermal and allow the procurement from central power stations on merit order to meet the power requirement of the state. The Commission may direct GRIDCO to purchase power from IPPs and Captive Generating Plants in the state and from power exchanges under open access instead of procuring costlier power from central sector.
39. The Commission may direct the GRIDCO to chalk out five year plan, looking at power availability from IPPs and future load demand and explore the possibility to surrender the allocation of costly central sector power, in order to avoid payment of fixed charges in the event of non drawl. GRIDCO has appointed consultants to carry out a feasibility study for projected power demand; the report of the same may be furnished.
40. The lower PLF of OPGC as proposed by GRIDCO causes hike of electricity tariff. The inefficiencies of the power stations need attention and necessary actions. OPGC tariff ought to be examined with break up.
41. The Commission should scrutinize the power procurement proposed by GRIDCO to avoid procurement of costlier energy from central sector stations as average cost of supply to the consumers will increase by 50-60 paisa for all categories of consumers taking into consideration the BSP proposed by GRIDCO, increase in transmission charges of OPTCL and the distribution losses of the DISCOMs.

- 42. GRIDCO is purchasing NTPC power at substantially higher cost. The price of coal in the international market has fallen by over 30% which substantially reduces cost of generation of power by 60%-70%. When there is blending of higher quality international coal, there should be a substantial drop in the variable cost of power production.
- 43. As per CERC norms, fuel cost is a pass through. Therefore, GRIDCO is to be directed to conduct an enquiry on the coal position and price.
- 44. GRIDCO procured costly power of 5989.20 MU from CGP during the period 2008-13 beyond the approval of OERC by incurring additional expenditure.
- 45. M/s. Vedanta Ltd. has submitted that in view of de-allocation of Rampia and Dipside of Rampia coal block allotted to it, the claim of GRIDCO for supply of 7% of power at variable cost for the past and future period is not correct. Hence as per the clause 2.2 (i) of the consolidated PPA dated 19.12.2012, GRIDCO has the right on 5% power sent out at variable cost, i.e. 832 MU at energy charge rate. However, GRIDCO can avail 5% power from Vedanta at variable cost provided station generation exceeds 80% PLF on which clarification has been sought from Govt. of Odisha.

GRIDCO has proposed the fixed cost and energy charge rate based on the Tariff Petitions filed by NTPC before CERC. But for Vedanta-TPP, GRIDCO has completely disregarded the MYT Petition filed by it for approval of the Annual Fixed Charges and Energy Charges rate for FY 2014-15 to FY 2018-19. M/s. Vedanta Ltd. prayed for equitable treatment for its power project with that of NTPC generating stations.

The provisional tariff for FY 2015-16 was fixed without referring to the Tariff Petition filed by M/s. Vedanta Ltd. which resulted lesser recovery of cost of generation. The delay in disposal of the petition causing extreme financial hardship to Vedanta. Further, the provisional tariff considered by GRIDCO for FY 2016-17 is much lower than the tariff prayed for approval.

GRIDCO has projected only 233.46 P/U power to be purchased from Vedanta which is erroneous and discriminatory and at this tariff Vedanta will be subject to extreme financial hardship and will not be able to supply energy to GRIDCO. Further GRIDCO has not considered the past arrears on account of tariff revision of Vedanta. Reimbursement of water cess and water transfer charges incurred by Vedanta for bringing water to the site on a monthly basis should be allowed. Necessary budgetary provisions should be kept in the ARR of GRIDCO towards payment of outstanding dues including DPS of Vedanta for the previous years.

46. GRIDCO has signed PPAs for generating capacity of 39010 MW by 2016-17 against an estimated requirement of 6362 MW in the state without any corresponding arrangement for evacuation of power. PPAs with IPPs were signed on cost plus route in violation of the Electricity Act 2003 requiring bidding route. Suboptimal operationalisation of PPAs resulted in payment of higher price to the IPPs to the extent of Rs 554.80 crore.
47. Irregularities in procurement of power from CGPs at higher rate and unjustified determination of CGP status led to incurring extra expenditure. Failure to procure cheap hydro power as per merit order policy as well as for procurement of renewable power below the target resulted in incurring extra expenditure of Rs 372.70 crore, the objectors mentioned.

Interest on Long Term Liabilities

48. Some objectors submit that interest charges on Govt. loan should not be considered in the BSP.
49. Due to non-realization of dues from DISCOMs to meet power procurement cost, the company regularly borrowed from financial institutions.

Employee cost

50. GRIDCO has to justify whether accounts are being audited as per statutory provision of the Companies Act. The Commission should direct the management of GRIDCO to recruit adequate number of manpower as the existing staff will not be able to handle the work load coming up in future. Otherwise GRIDCO may be allowed to outsource its activities. Employee cost may be approved at Rs 6 crore after prudence check.

A&G Expenses

51. GRIDCO has always crossed the approved A&G expenses without obtaining necessary consent from the Commission. GRIDCO should justify whether truing up exercise is being carried out each year and accounts are being audited as per statutory provision. The average increase in A&G expenses is around 6%; hence, the Commission may approve Rs 4.9 crore as A&G expenses only.

Depreciation and R&M Expenses

52. The Commission may allow Rs 0.3 crore towards depreciation and Rs 0.3 crore towards R&M expenses.

Past Losses and Pass through Expenses

53. Some of the objectors opposed the proposal of GRIDCO to consider past losses, securitization of arrear while approving the ARR of GRIDCO.

Return on Equity

54. RoE as proposed by GRIDCO may not be allowed as per the order of the APTEL.

Trading income

55. GRIDCO should produce year wise status report of power trading to outside of the state since 2008-09 till date.

56. Procuring high cost power from central sector and trading 2690 MU at 275 P/kWh is not justified. If at all GRIDCO is allowed to trade the surplus high cost power a ceiling of minimum sale price of 500 P/kWh should be approved.

GRIDCO has failed to trade surplus power of Odisha as directed by OERC to bridge the revenue gaps. Shortfall was partly attributable to delay in decision making and absence of required policy framework leading to inefficiency.

Inter-state trading license is a pre-requisite for trading of power outside the State but negative net worth of GRIDCO rendered its ineligibility for obtaining such license, which needs attention.

57. Sufficient power is available in Odisha to meet state demand but the commercial management of GRIDCO is incompetent and inefficient to trade such power and gain advantage, they stated.

Revenue Gap and BST

58. Any increase in BSP will have direct bearing on RST and in the past the burden of increase in BST was loaded on HT and EHT consumers availing load factor incentive tariffs and also on LT industrial consumers.

59. It is necessary to rationalize the BSP to prevent tariff hike. The BSP projection of GRIDCO needs to be properly scrutinized.

60. Since GRIDCO is only a trader, it need not maintain a huge establishment as is the case currently and hence, establishment costs may not be approved and allowed to be passed through in the ARR.

61. Energy charges in BST for the DISCOMs should remain at par with reduction in power purchase cost, especially because of CAPEX. The reservoir levels of OHPC stations have improved, Chiplima is functioning well, local CGPs are committed to supply, hence no need to take much burden by purchasing high cost NTPC power, the objector stated.

62. As observed by CAG, the non-professional commercial management of GRIDCO is the main reason to raise the BSP in every year. CAG has made observation on GRIDCO several times in the area of power purchase, losses, poor governance

and connivance of GRIDCO in rising losses of DISCOMs. There are deficiencies in internal control system of GRIDCO. The company is yet to have its own organizational structure.

Other Issues

63. GRIDCO has to submit the details outstanding with Govt. consumers and private industries till 31st December, 2015 along with action taken report.
64. GRIDCO is not able to realize the BSP from DISCOMS and total amount now pending since 2008-09 till date on DISCOMS should be submitted and the Commission should pass order on the issue directing the DISCOMs to clear the liabilities.
65. Arrear dues of the DISCOMs to GRIDCO are increasing from year to year. There is no penalty on the DISCOMs on such non-performance. On the other hand the debt is being serviced by the consumers, on account of failure of the DISCOMs to reduce the AT&C losses. There is no provision in the Statute for GRIDCO to service the creditors of the DISCOMs.
66. GRIDCO has not taken any action to regulate power supply to the defaulting DISCOMs and burden the consumers of the state by condoning the non-performance of the DISCOMs.
67. GRIDCO should submit the copy of energy bills served by CGP, renewable energy based power plants. GRIDCO may be directed to release all payments due to various captive generators supplied to it from time to time.
68. Despite escrow agreement, GRIDCO did not collect its dues regularly resulted in outstanding. GRIDCO has allowed rebate to DISCOMs without recovering/ collecting the delayed payment surcharge from them.
69. Provisions of PPA stipulate that the obligation and responsibility for evacuation of power from delivery points of the IPP projects lies with GRIDCO.

GRIDCO's RESPONSE TO THE OBJECTORS (Para 70 to 121)

70. In response to the views of the objectors on its application, GRIDCO had filed rejoinders as follows.

Legal Issues

71. The Trading Margin of 4 Paise per Unit relevant to Inter State Power Traders, is not applicable to GRIDCO as the power trading by GRIDCO is Intra-State in nature. In fact, such position has been upheld by the Hon'ble Supreme Court of India in Appeal No. 5722 of 2006 (Gajendra Haldea vrs. GRIDCO & Others). Moreover, GRIDCO's legal existence and the nature of its business have also been upheld by the OERC in various previous ARR & BSP Orders since long.

Therefore, the issue of trading margin of 4 paise/unit raise by the objector may not be considered.

Energy Availability and Procurement

72. GRIDCO is obliged to procure the contracted power from the generators as per the Power Purchase Agreements, Memorandum of Understanding (MOUs) and as per the allotment made from the Central Generating Stations from time to time based on Least Cost Combination of power purchase for supply to the DISCOMs. Considering the above, GRIDCO has projected its quantum of power procurement from different sources for 2016-17 to meet the anticipated demand of the Long Term Customers like the DISCOMs, M/s. IMFA and M/s. NALCO etc. under following conditions.
- I. Anticipated generation from OHPC, OPGC & TPPS have been taken as per the generation plan submitted by these generators and also in line the OERC (Generation Tariff) Regulations, 2014.
 - II. Projection from Machhkund is assumed as per the allotment.
 - III. Consumption from Samal and Meenakhi small HPSs has been assumed based upon the generation in past years.
 - IV. Availability from Central Generating Stations at 83% NAPAF has been considered based as per the present CERC Tariff Regulations, 2014.
 - V. Import from Chukha HPS & Tala HPS has been taken by considering the trend of supply during the past years.
 - VI. Procurement from Teesta HPS has been considered based on the annual saleable energy.
 - VII. Energy availability from the IPPs has been taken as per the PPA.
73. The availability of Hydro Power during FY 2015-16, based on the power procurement data available for the first eight months from April 15 to November 15, has been calculated as 5042 MU only. Due to the El-Nino effect, the availability of hydro power will remain a matter of concern so also the consequent Power Purchase Cost to the disadvantage of GRIDCO.
74. GRIDCO has been in the practice of procuring power through IEX on $\ddot{\text{o}}$ as and when required $\ddot{\text{o}}$ basis if this works out to be commercially more lucrative than the costly power allocation from Central Sector Power Stations.
75. GRIDCO is scheduling its full entitlement from TSTPS-I & TSTPS-II, Kaniha Stations and sometimes overdrawing its entitlement. A Comparative Statement of the Scheduled Drawal during FY 2014-15 and that during FY 2015-16 (April 15

to December 15) is given below, which demonstrates GRIDCO's commitment to optimal drawal of energy from above Stations at lesser cost.

Table-7
Comparative Scheduled Generation and Scheduled Drawal of GRIDCO
(in MU)

Power Stations	FY 2014-15			FY 2015-16 (Apr'15 to Dec.'15)		
	Scheduled Generation of the Station	Entitlement of GRIDCO in Scheduled Generation of the Station	Actual Energy Scheduled by GRIDCO	Scheduled Generation of the Station	Entitlement of GRIDCO in Scheduled Generation of the Station	Actual Energy Scheduled by GRIDCO
TSTPS-I	6898.45	2226.89	2293.11	5334.68	1705.46	1767.14
TSTPS-II	14910.13	1491.01	1534.70	10939.44	1093.94	1126.76

- 76. Due to efforts of GRIDCO, the ER-S1 through 220 KV Balimela-Upper Sileru Line has been restored. Similarly, 400 KV IB-Meramundli DC line has been charged which shall evacuate additional 150 MW of power from M/s. Vedanta Limited which is situated in W3. There is no direct Inter-Regional Link between ER and S2 at present. In anticipation of charging of long awaited 400kV Double Circuit Ib-Meramundali Line, GRIDCO has proposed to avail its full quota of power supply from the IPP of Vedanta Ltd (25% +7%). In fact the said transmission line has been completely restored and charged on 06-01-2015 and the IPP has been supplying the State entitlement of power to the tune of 500MW through it. GRIDCO has also simultaneously faced difficulties due to short supply of power by the IPP of Vedanta Ltd under the pretext of transmission constraints.
- 77. GRIDCO has been following the merit order power procurement as a matter of policy and will resort to sourcing power from CGPs if the cost of economics works out in GRIDCO's favour and also depending on the exigencies to do so.
- 78. Drawal of firm power from the Generators with whom PPAs have been signed, has to be sourced first failing which the liability of payment of Fixed Cost remains with GRIDCO irrespective of any energy drawal. The summation of the estimated procurement of energy during FY 2016-17 from such firm Stations exceeds the projected demand and therefore, there is no room left for any procurement of energy from non-firm CGP sources during the ensuing year. However, GRIDCO may source surplus power from CGPs under "force majeure" or "exigency conditions", which, in all fairness, may be considered as being quite logical.

79. GRIDCO is also procuring the available hydro power from Small Hydro projects, like Meenakshi and Samal which helps it to fulfill the Renewable Purchase Obligation (RPO).

Sales Projection

80. GRIDCO generally considers the demand projection of the DISCOMs as submitted by them and adds the transmission loss to arrive at the energy requirement of the State. The projected Transmission Loss @3.70% of the Intra-State Transmission System of OPTCL for FY 2016-17 has been considered by GRIDCO in its current ARR & BSP Application for FY 2016-17.

The Projections by DISCOM Utilities to purchase energy from GRIDCO are based on their own sales projection to consumers plus the distribution loss of their system. GRIDCO does not consider distribution loss for projecting the DISCOMsø energy demand. However, the projection of power procurement by GRIDCO from different Stations for FY 2016-17 to meet the demand of DISCOMs is not final as the same is subject to the approval by the Commission.

GRIDCO has based its estimated power procurement for FY 2016-17 only after getting the relevant projected power requirement information / figures from the four DISCOM Utilities. It is therefore GRIDCO nowhere does the projection of power procurement in isolation but does so after duly taking the DISCOM Utilities into confidence.

Power Procurement Cost

81. During the FY 2014-15 and the current FY 2015-16, there was severe strain on the hydro stations due to low rainfall. Reduction in hydro reservoir level during FY 2014-15 left a cascading effect on the availability of hydro power during FY 2015-16. Therefore, there has been a fall in the availability in the cheaper hydro power and consequent purchase of costly thermal power to fill the energy requirement gap during FY 2015-16. In the process, GRIDCO has to incur extra power purchase costs during FY 2015-16 due to purchase of high cost thermal power replacing hydro power.
82. GRIDCO has estimated the availability, the rates and the quantum of power procurement during FY 2016-17 based on the approval of the Regulators, viz., OERC and CERC etc., and in doing so, GRIDCO has followed the merit order principle whereby the costs are kept at minimum.
83. Surplus power, after meeting the state demand, is traded to generate surplus revenue that helps in reducing the tariff burden on the State consumers. To ensure availability in the State grid long term PPAs are required to be signed with plants

- located in the region. Afterwards, it becomes difficult to back out from the signed PPAs because of large scale investments.
84. GRIDCO, however, appreciates the suggestions to source cheaper power by adopting merit order power procurement strategy and chalking out a 5-year power procurement plan etc. in respect of energy demand projection.
85. GRIDCO shares concerns of the public while balancing high cost procurement from the central sector stations with falling prices in the Power Exchanges & in the short-term Power Market. It anticipates positive outcome from its efforts to surrender costly power and avail more from short term power market. In fact, GRIDCO along with the Government of Odisha, has been following up with Govt. of India for de-allocation power from high cost NTPC-Barh-STPS. But, till such time the effort is not materialized. GRIDCO is bound by terms of PPA to pay the capacity charges and avail minimum quantity of power in scheduling or on forced injection mode due to minimum technical requirement.
86. Last year the Commission did not approve energy drawl from NTPC 6 Barh STPS. This station is not regulated by State Commission. The tariff is determined by CERC. Therefore, GRIDCO had to accept and pay the demand due to legal obligations. This also is a normal practice in all long term PPAs.
87. However, GRIDCO has projected the proposed Tariff for TPPS & OPGC Stations with the use of Domestic Coal instead of imported coal which has gone down significantly in recent times due to increase in coal production by the M/s. Coal India.
88. Based on supply from OHPC between April 15 to Nov. 15 at 3361.55 MU and that from Machhakund 172.47 MU during the same period, GRIDCO has assumed purchase of 5042 MU of energy much below the design capacity of 5676 MU. This leads to Rs.435 crore revenue gap during 2015-16 (8 months). Tariff of OPGC, filed by it, and as determined by the Commission for FY 2016-17, would be acceptable and applicable to GRIDCO.
89. The domestic coal supply has improved, prices stabilized. Price of imported coal has come down and availability has improved. The blending is between 10% to 20% is well within CERC limits. Therefore, impression of public that tariff shall have an upward revision due to coal is a misconception at present.
90. GRIDCO has not proposed any procurement from CGPs due to apprehension that there might power surplus situation arising out of power availability from firm sources i.e. long term PPAs and CGPs are infirm sources. Sourcing form the CGPs in emergency/force majeure conditions are not ruled out, if the economics

of power procurement is worked out in GRIDCO's favour. Moreover, power from either IPPs or CGPs are more or less at equal rate.

91. The appeal filed by the IPP - Vedanta against the OERC Tariff Order dated 12.06.2013 for the period from 2010-11 to 2013-14 is sub-judice at present and the basis for determination of MYT for the control period 2014-19 depends on it.

The tariff proposed and to be fixed by the Commission shall be provisional in nature subject to determination of final tariff (MYT) as per which the final reconciliation and adjustments shall be made. Regarding 7% /5% power sent out to be supplied to GRIDCO at Variable Cost (as per the Clause 2.2.(i)) of the consolidated PPA dated 19.12.2012, a meeting was held with executives of M/s. Vedanta-IPP on 26.12.2015 and as per the discussion, a draft minutes was forwarded to the IPP for views and final signing. The IPP is yet to revert with its views for which signing of the MOM is being delayed. In spite of repeated requests to the IPP to submit the present status of linkage coal supply (actual quantum received from MCL Unit wise), the IPP is yet to comply with GRIDCO's request. Though the allocation of coal block was cancelled vide the Hon'ble Apex Courts Order dated 25.08.2014 and 24.09.2014 in respect of the IPP of M/s. Vedanta Ltd., but it is availing coal supply through linkage on regular basis like other IPP i.e. M/s. GMR Kamalanga Energy Ltd. Thus, GRIDCO's contention is that till de-allocation of coal blocks, the State entitlement of 7% at variable cost stands intact and after that 5% at variable cost may be considered as per the consolidated PPA 19.12.2012 in view of de-allocation of coal blocks.

92. Further, the observations of Hon'ble APTEL are *ö*interim in nature*ö* and *ö*Final Order*ö* is yet to be pronounced in Appeal No.25 of 2014 which is basically against the impugned Tariff Order of the Commission dated 12.6.2013, wherein the Commission is the first Respondent and thus, is well aware of the proceedings made till date. Regarding the considered view of M/s. Vedanta that *ö*GRIDCO can avail the said 5% of the power at variable cost, provided Station generation exceeds 80% PLF*ö*, neither any such provision has been mentioned in the Consolidated PPA dated 19.12.2012 nor there is any kind of such direction from the Department of Energy, Govt. of Odisha to GRIDCO in this regard till date. M/s. Vedanta-IPP has not submitted all facts on records correctly before the Commission. In May,2015, for the first time, the IPP submitted a claim to the tune of Rs.70 Crore (upto March,15) refundable by GRIDCO on account of consideration of 5% power at variable cost instead of 7% power (being considered by GRIDCO) in view of coal block de-allocation.
93. For NTPC Stations, the tariff is being determined by the CERC and as the final Tariff Order is expected from CERC at any point of time, GRIDCO therefore has to keep the Commission informed regarding the same for provision in the ARR,

- so that the extra burden (if any) can be absorbed without any major financial burden on GRIDCO. Whereas, in case of the IPP of M/s. Vedanta-Ltd, it is the State Commission who determines the final tariff and decided the provisional tariff, pending finalization of MYT for Control Period, 2014-19. Therefore, the Petitioner GRIDCO considered it prudent to follow the principle of the Commission while proposing the provisional tariff for FY 2016-17.
94. M/s. Vedanta-IPP may not be compared with NTPC stations and treated similarly as both of them are totally differently placed Stations and the relevant Regulatory Forums that determine the tariff. In compliance to the Interim Orders of the APTEL dated 28.03.2014 and 29.11.2014, GRIDCO had made payment of Rs.164 Crore (in installments) to Vedanta, which was for the period 2010-11 to 2013-14, pending final decision in Appeal No.25 of 2014.
- PGCIL Transmission Charges**
95. Consistent, logical and factual submission by GRIDCO led to change in the stand taken by the Authorities at the Centre and finally, Hon'ble CERC agreed with the stand taken by GRIDCO along with the other eastern States like Bihar, Jharkhand and West Bengal to reduce and re-fix the PoC Charges for Odisha and other Eastern States. This led to savings of about Rs.100 Crore per annum only on account of payment of PoC Charges for our State.
- Interest on long term Liabilities**
96. GRIDCO's borrowing as on 31.03.2016 is likely to touch a provisional amount of about Rs.6300 Crore (Rs.5613 Crore towards loan and around Rs.674 Crore towards interest) which is mostly on account of payment towards power purchase to the Generators.
97. Past losses of GRIDCO have arisen for reason that the DISCOM Utilities have not been able to pay the current as well as the outstanding power purchase dues of GRIDCO and all the claims of GRIDCO have not been passed through in the BSP although most of them have been recognized by the Commission in the truing-up exercise. The revenue gap has risen due to the above reasons has been financed through loans from Banks / FIs as there is no avenue for GRIDCO to replenish such gaps from any other sources. Unless such costs are allowed in the BSP, GRIDCO is likely to fall into the "Debt Trap" and its operations may come to a halt. Unless the proposed BSP is allowed, GRIDCO's financials will not see any turn-around and it is very likely that the organization may fall into debt trap.
98. Interest is always expenditure needs to be allowed to GRIDCO. Because, GRIDCO does not have any other avenues of income except tariff (BSP) which

can compensate the payment of interest on the Government loans. Therefore, the suggestion not to include the interest on Government loans may not be accepted.

99. Similarly, in its duties as the "Sole Bulk Supplier" of power to the four DISCOMs in the State, GRIDCO has borrowed heavily and has been paying interests thereon in order to keep supplying power even though the DISCOMs have not fully cleared the power purchase dues. Unless, GRIDCO settles the power purchase bills of the generators, the State will be subjected to power regulation which otherwise will affect the economic activities in the State and seriously jeopardize the public interest. Therefore, the suggestion of not to allow GRIDCO the interest is without any sound logic.
100. Restricting power supply to the DISCOMs would certainly result in "Power Regulation" to the State which GRIDCO as a responsible entity, has been avoiding over the years by managing the payment through its own finances including the borrowings. Loan to the power utilities in India by commercial banks was withheld for some time in the recent past as there was general instruction by the Reserve Bank of India not to lend to the power sector because of the perceived risk.

Other Expenses

101. Administrative & General Expenses (about Rs. 11.33Crore) are minimal forming 0.16% of its huge turnover of about Rs.7000 Crore. Therefore, GRIDCO is of the opinion that its A&G expenses are minimum by any standards. Depreciation and R&M Expenses are more or less in conformity with the projections made by GRIDCO in the application.
102. GRIDCO deserves to get RoE @16% on its paid-up Equity as per the relevant Regulations in place alike any other Utility. Allowance of RoE is very important as it will enable GRIDCO to service the huge loan liabilities in absence of any depreciation (as GRIDCO does not have any assets). Hence, GRIDCO deserves to get "RoE" because it has been working as the "Shock Absorber" of the Odisha Power Sector despite its deteriorated financial condition.

Past Losses and Special Appropriation

103. GRIDCO had to pay arrear Fixed Cost of TPPS amounting to Rs.740 Crore for the 5-year period from 2009 to 2014 as per the relevant CERC Order dated 15.05.2014 in Petition No. 304 of 2009, but not on account of energy charge due to coal price.

Miscellaneous Receipt

104. Trading income of GRIDCO is given in the table below.

Table - 8
Power Trading by GRIDCO from 2008-09 to 2015-16 (April-Dec'15)
(Provisional)

Year \Rightarrow	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16 (Apr'15- Dec.'15)
Energy (MU)	34.88	0.90	64.20	40.33	810.68	1565.42	974.71	365.73
Power Trading (Rs. Crore)	24.43	0.79	32.05	15.82	414.59	664.60	448.107	149.068

105. GRIDCO, during trading, utilizes the suggestions / recommendations made in the öElectricity Demand Forecasting and Development of Power Trading Strategyö report wherever feasible and also exercises instant prudence / judgment by itself in order to avoid / minimize the physical and financial risks associated with Power Trading Activity which is very dynamic in nature, especially during the present subdued Power Market where both low volumes and low prices are the order of the day.

BSP

106. The average BSP of GRIDCO was reduced during earlier years i.e. from 270.24 P/U during FY 2012-13 to 265.27 P/U during FY 2013-14 and further to 263.21 during FY 2014-15. This was possible because of normal availability of hydro power during such years.
107. GRIDCO has prayed for recovery of its revised Aggregate Revenue Requirement (ARR) of Rs.9227.67 Crore for FY 2016-17 (in place of earlier ARR of Rs.9097.94 Crore submitted on 30.11.2015) at the proposed revised Bulk Supply Price (Energy Charge) @362.32 P/U (in place of earlier proposed BSP of 357.23 P/U submitted on 30.11.2015) along with levy of conditional Demand Charges @Rs.250/KVA/Month (provided the actual SMD of the DISCOM Utilities exceeds 110% of the permitted or approved SMD).
108. To reduce power purchase cost and the BSP, GRIDCO, as far as possible, adopts the merit order principle coupled with sourcing the low cost power for the State in order to facilitate low power tariff for the State consumers. Besides, GRIDCO undertakes prudent sales of surplus power as are available from time to time in order to reduce the burden of power tariff on the consumers of the State. GRIDCO is hopeful that with the State share of additional power flowing into GRIDCO's basket in the coming future, we can best hope that the Odisha Power Sector will turn around for better.
109. The trend of BSP change is given in the table below.

Table - 9

Particulars	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Average BSP (P/U)	125.84	120.85	119.92	122.15	122.2	170.25	231.65	270.74	265.27	263.21	284.29
% Change	-3.85%	-3.96%	-0.77%	1.85%	0.04%	39.32%	36.07%	16.87%	-2.02%	-0.78%	7.98%

It may be observed that except three years i.e. FY 2010-11, 2011-12 & 2012-13, there has been negligible to moderate rise (during FY 2008-09, FY 2009-10 & FY 2015-16) or reduction in the average BSP (during years of 2005-06 to 2007-08 & during FY 2013-14 FY 2014-15). There has been not a single case of hefty rise in the BSP. In fact, had there been hefty rises in BSP, GRIDCO would not have borrowed to such a large extent.

110. The BSP approved by the Commission has always been inadequate to take care of the ARR of GRIDCO. In fact, the Commission has been leaving uncovered revenue gaps / Revenue Deficits while approving the ARR & BSP of GRIDCO over the years. GRIDCO is not being allowed a rightful BSP and the approved BSP also falls short of the requirement for which GRIDCO has been experiencing revenue deficits and therefore, borrowing year after year in order to recoup the shortfall in revenue. Therefore, GRIDCO may not be faulted on any count as it is GRIDCO which keeps on supplying power to the State even at the cost of its financials because, it has been mandated to arrange for supply of power to meet the requirement. Power being an essential commodity, its supply has to be on or else there would not be any economic activity. Any default by GRIDCO to pay the power purchase dues will result in öPower Regulationö to the State to the detriment of the industry as well as the common people.
111. GRIDCO may be allowed to recover its legitimate dues including past loans and dues as the same have been incurred and the power sourced by GRIDCO has been consumed in the State. GRIDCO is an Organization manned by a handful of employees where the entire expense of the Organization is only a fraction i.e. 0.24% of its proposed ARR of Rs.9227.67 Crore during FY 2016-17. In fact, proposed power purchase cost including pass through and interest payout is about Rs.9047 Crore (both of which are un-controllable expenses since uncontrollable Power Purchase Cost gives rise to increased loans and interest thereon), forming more than 98% of the projected ARR during FY 2016-17, in all fairness, ought to be allowed to GRIDCO. In fact, GRIDCO is suffering due to paucity of manpower. Since there are no assets with GRIDCO, it is dependent on the infrastructural facilities of OPTCL, the State Transmission Utility. GRIDCO's entire expenses including Employees Cost, A&G Expenses etc. form a fraction of its proposed net ARR of Rs.9227.67 Crore and is even less than 0.12%.

Miscellaneous Issues

112. Accounts of GRIDCO including the expenses towards employees cost are being audited as per the statutory provisions of the Companies Act.
113. The need for induction of manpower / outsourcing the work is welcome. However, GRIDCO being a Government Organization, the final decision to this effect depends on the State Government.
114. GRIDCO fulfills its responsibilities as the “State Designated Entity” under the “Single Buyer Model” to keep supplying power round the year to the four DISCOM Utilities for onward retail sale to the State consumers without inflicting the danger of power regulation on the State.
115. GRIDCO has been persistently following up with the DISCOMs to settle the power purchase and other dues which have now touched to about Rs.5128 Crore (Approx.) as on March, 2015. However, despite GRIDCO’s efforts, the DISCOM Utilities have been failing to pay the dues for which GRIDCO has been raising this matter time and again before the Commission for suitable redressal.
116. The outstanding dues against different Government consumers and industries are matters concerning the DISCOMs. However, with regard to payables and receivables of GRIDCO concerning the State Government, GRIDCO has submitted that GRIDCO is liable to pay about Rs.1307.42 Crore (provisional) to the Government of Odisha as on March, 2015.
117. GRIDCO levies Delayed Payment Surcharge (DPS) as approved by the Commission in the ARR & BSP Orders of respective years. However, non-settlement of full dues by the DISCOM Utilities remains the greatest problem.
118. The AT&C Loss of around 52% has been reduced to about 37-38% over the last 15 years in case of Odisha’s four DISCOM Utilities. Therefore, there is some achievement in this direction, albeit slow. With regard to the escalating BSP Dues payable by DISCOM Utilities to GRIDCO, GRIDCO is constantly following with them and is hopeful that the same would be settled with improvement of DISCOMs’ finances.
119. GRIDCO has been showing receivables from DISCOMs in its Books of Accounts and bills the DISCOMs by levying DPS on the unpaid amount as per the relevant Orders of the Commission from time to time.
120. GRIDCO being a bulk purchaser of power from various generators within and outside the State and at the same time being an intermediary bulk supplier of power to the four DISCOM Utilities in the State, there does not remain enough scope with GRIDCO to take steps for energy conservation. Energy Conservation

as an effective tool can be best practiced in the retail segment by the DISCOM Utilities and also within the domain of the Generators. However, GRIDCO does not rule out its role as an Energy Conservator by being a facilitator or a promoter of such programs like the one it carried out by being the “Nodal Agency of CAPEX Program in the DISCOM Utilities” whereby energy conservation programs could be possible indirectly because of renovation and modernization of distribution network leading to saving of electricity.

121. The Distribution Licensees are independent entities as they were before and their establishment expenses are not clubbed with GRIDCO. The Books of Accounts and the operations of the said DISCOM Utilities continue to be separate and independent of GRIDCO. What has happened is that the management and control of the erstwhile RIL Managed DISCOMs have been vested with the Office of the Chairman-cum-Managing Director of GRIDCO & OPTCL in his capacity as the “Administrator” of the said DISCOM Utilities as per the OERC Order dated 04.03.2015 in Case No. 55 of 2013 under the overall supervision of the Principal Secretary (Energy), Government of Odisha.

VIEWS OF THE GOVT. OF ODISHA (Para 122)

122. Govt. of Odisha vide their Letter No. 2091 dated 11.03.2016 have communicated their views/suggestions on various issues involving tariff setting for FY 2016-17. The issues those affect the Bulk Supply Price of GRIDCO are indicated below:
 - (a) Failure of monsoon is not within control of human being. However, the hydro generation is only about 20 to 28% of the total requirement of power of the State. If DISCOMs will reduce their AT&C losses by 1%, it will have an impact of around Rs. 80 to 90 Crores, which will augment the revenue of the DISCOMs. This will help to reduce the impact of costly power purchase by replenishing hydro generation shortfall. Further, GRIDCO is not going to procure surplus power from CGPs and Co-generation plants till 31st March, 2016.
 - (b) The Obligated Entities including GRIDCO are fulfilling the RPO target as specified by the Commission and further increase in the future RPO by the new OERC Renewable Regulation, 2015 will boost the Renewable Power Market in the State. Department of Energy, Government of Odisha is shortly coming out with a holistic and elaborate source-wise State Renewable Energy Policy known as “Odisha Renewable Energy Policy” with aggressive Renewable Energy (RE) targets to be met within specific timeframe in line with the vision of 175 GW Capacity Addition Target by the Government of India by 2022. The draft “Odisha RE Policy” is on the verge of finalization

which will not only accelerate the Renewable Energy Sector in the State but also ease the present power situation.

- (c) The State Government, in principle agreeing to purchase 350 MW Solar Power to be generated from Ordnance Factory, Badmal by SECI, Government of India. Govt. is also contemplating to start Solar Park for generation of 1000 MW solar Power under GoI Scheme. 15 out of 20 MW Solar power will be grid connected from Manamunda of Baudh District within 31st March, 2016. Similarly, 100 MW power will be generated from small hydel projects within 3 years for which Govt. of Odisha and Govt. of Andhra Pradesh are going to sign agreement.
- (d) The earning from UI (Inter State UI from Eastern Region) has also been considerably reduced due to the disciplined behavior of GRID constituents as compared to earlier years. Besides, the Intra State UI i.e. SLDC UI Charges are also not being paid by the DISCOM Utilities to GRIDCO which causes a rise in BSP.

OBSERVATIONS OF THE STATE ADVISORY COMMITTEE (SAC) (Para 123)

123. The State Advisory Committee (SAC) was convened on 18.02.2016 to discuss about the proposed ARR and Tariff Applications of different utilities in the state for FY 2016-17. The members of the SAC deliberated on the various issues and the observations /suggestions of the SAC Members pertaining to ARR & Tariff of GRIDCO are mentioned hereunder.
- (a) Demand of power has gone down due to economic recession. The quantum of power available and the peak demand in summer should be calculated in advance, so that there will be proper power regulation in future, if required. If the availability and requirement is balanced, good service can be provided. Power restriction should be avoided as the State's power position is good vis-a-vis other states.
 - (b) The condition of industries was very precarious due to increased tariff burden as well as unreliable supply. They are all going out of the DISCOMs' net, which is harmful for the DISCOMs as well as for the power sector as a whole. The power intensive industries are in difficult situations due to the financial slowdown. Some neighbouring states have even started giving incentive to them in the form of reduction in tariff. In such a situation, any further increase in tariff would wipe out their business. The Commission should therefore now reduce cross-subsidy to save industry. The steel plants are acquiring power from outside through open access and the Commission should provide them with an incentive, so that they will purchase power from the DISCOMs

benefiting the sector as a whole. It is now the time that the Govt. should give revenue subsidy like other states.

- (c) GRIDCO is neither exporting power nor buying enough power for the State. The quantum of power purchase is low as compared to the demand, implying the event of a crisis and load shedding. A study should be conducted to look into the difference in cost of power between Central and State power stations.

COMMISSION'S OBSERVATIONS & ANALYSIS OF GRIDCO's PROPOSAL (Para 124 to 321)

Legal Status of GRIDCO

124. The legal status of GRIDCO has been clarified by the Commission in its ARR and BSP order for FY 2011-12 and 2012-13 vide orders dtd.18.03.2011 and 23.03.2012 respectively. That GRIDCO is a valid legal entity has also been upheld by the Hon'ble Supreme Court of India in Civil Appeal No.5722 of 2006 (Gajendra Haldia Vrs. GRIDCO and Others). GRIDCO, by acting as a Single Buyer State designated entity, has been ensuring supply of cheap and quality power to the DISCOMs which ultimately protects the interest of the consumers. It acts as a shock absorber and protects DISCOMs from possible Power Regulation by the Generator(s) due to any cash-flow problem. Therefore, the Commission has rightly recognized GRIDCO as a öDeemed Trading Licenseeö. The issue of trading margin is not applicable to GRIDCO who sales power inside the State of Odisha to the DISCOMs after resolving the cost of all power suppliers.
125. On detailed scrutiny and examination of the Aggregate Revenue Requirement and Bulk Supply Price Application of GRIDCO for FY 2016-17 and subsequent rejoinders filed by them, the written and oral submissions of the objectors, the Commission now orders as follows.

Principle followed for approval of ARR for FY 2016-17

126. The Commission, for determination and approval of the ARR of GRIDCO for FY 2016-17 continues to follow the same principles as in the previous year along with the principles laid down in its terms and conditions for determination of tariff and continues to be guided by the provisions of the Tariff Policy as well as other statutory notifications and directives, while giving due considerations to the complexities of the Odisha Power Sector.
127. Tariff determination involves adoption of various assumptions and principles to arrive at the individual ARR components for the next financial year and hence, is in the nature of reasonable and prudent estimation. The actual turn of events may be different and this will be considered in the truing-up exercise. The

Commission, as in the previous years, has continued to determine the ARR for the FY 2016-17 using the following principles.

128. The cost of power purchase for GRIDCO, which constitutes about 95% of the total cost structure, has been considered on a merit-order basis, with state hydro generation as per design energy and state thermal generation being computed based on the generation plan submitted by OPGC and the cost being considered as per norms of OERC Regulations. Availability from the Eastern Region CGSs has been considered as per the allocation of shares in these stations and the applicable CERC tariff. The drawal from IPPs, CGPs, Cogeneration Plants & energy from renewable sources have been considered based on the proposal of GRIDCO, the requirement of the state and legal obligations.
129. All the liabilities of the DISCOMs payable to GRIDCO are in a back-to-back arrangement with various lenders, financial institutions and GRIDCO continues to service these liabilities, even though the DISCOMs have not been able to meet their payment obligations to GRIDCO in full and in time during the previous years. The servicing cost (corresponding interest charges on these liabilities) forms a part of the BSP and is being paid by GRIDCO.
130. Following the separation of the transmission business and given to OPTCL along with related assets, liabilities and personnel w.e.f 01.04.2005, GRIDCO does not possess any assets on its books. It continues, however, to carry the burden of past liabilities, accumulated over a period of time to service operational losses and non-payment of arrears by the DISCOMs in time in the past. The Commission has, over the last few years, recognized 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 our earlier orders, to avoid a huge additional burden being passed on to the retail consumers, the Commission has provided for the servicing a substantial part of debt liabilities from the non-core activities of GRIDCO, namely earnings from export of power and un-scheduled interchanges charges, after meeting the full requirement of DISCOMs.
131. The Commission has scrutinised in detail the energy requirement proposed by the DISCOMs for FY 2016-17. Based on the energy availability, the Commission is of the view that after drawal of power from all state-owned generating stations both Thermal and Hydro, the states share from central generating stations, and drawal from IPPs, Renewable and captive co-generation sources, some surplus energy will be available after meeting the State demand for FY 2016-17, which has been calculated on normative loss basis. The quantum of surplus energy may be increased /reduced based on hydrology and/or projected drawal from IPPs and central sector, if not materialized as estimated on normative basis.

Quantum of Power Purchase

132. GRIDCO as a deemed trading licensee procures power from the generating stations inside and outside the State to meet the requirements of the consumers of the State. The power purchased by GRIDCO is transmitted through the OPTCL system and supplied to the DISCOMs. There are four Distribution Companies operating within the State. They purchase power in bulk from GRIDCO for supply to the consumers of the state.
133. GRIDCO Ltd. as well as DISCOMs have submitted their ARR for FY 2016-17 to the Commission for approval. The figures filed by GRIDCO and DISCOMs in their ARR for 2016-17 on quantum of energy drawl by DISCOMs from GRIDCO are examined and estimated based on the quantum of present drawl of power and estimated additional load growth during FY 2016-17 for EHT & HT industries and RGGVY & BGJY consumers.
134. The Distribution Companies have furnished projections for drawal of power from GRIDCO during FY 2016-17 and GRIDCO has projected the total power purchase to be made from the Generators after taking into account the requirement of distribution companies and emergency requirement of CGPs owning industries and the energy loss in transmission system of OPTCL.
135. The quantum of power to be purchased during the FY 2016-17 in respect of the four distribution companies has been assessed and approved by the Commission while determining the Revenue Requirement and tariff for the DISCOMs in Case Nos. 60/2015 (CESU), 57/2015 (NESCO), 58/2015 (WESCO) and 59/2015 (SOUTHCO) by following the guidelines of the Regulations quoted above. The Commission has approved the quantum of power to be purchased for the FY 2016-17 relating to CESU, NESCO, WESCO and SOUTHCO as 8570 MU, 5450 MU, 7050 MU and 3470 MU respectively adding up to 24540 MU.
136. The Commission has also approved 3.70% towards transmission loss in the OPTCL system for the FY 2016-17 as per their filing. The details of transmission loss have been furnished in the tariff order for OPTCL for the FY 2016-17 in Case no 55 of 2015.
137. After having determined the quantum of power purchase for the DISCOMs, the Commission has to estimate the quantum of energy lost on account of transmission at EHT within the State for delivery to the DISCOMs. The Commission has taken into account the sale of emergency power to CGPs and approves the same at 10 MU for 2016-17 after considering the submission of GRIDCO and actual drawal of CGPs during the first six months of the current FY 2015-16. The details on the estimated requirement of power purchase for use within the State is indicated in the table below:

Table –10
Purchase of Power by GRIDCO for State Use for FY 2016-17

(In MU)

Name of the DISCOMs	Commission's Approval for FY 2015-16	GRIDCO's Proposal in ARR FY 2016-17	DISCOM's Proposal for FY 2016-17	Commission's Approval for FY 2016-17
CESU	8780.00	8905.00	8904.87	8570.00
NESCO	5250.00	5583.00	5583.11	5450.00
WESCO	7350.00	7450.00	7160.00	7050.00
SOUTHCO	3420.00	3530.00	3550.00	3470.00
TOTAL DISCOMs	24800.00	25468.00	25197.98	24540.00
CGP	10.00	10.00	-	10.00
TOTAL SALE	24810.00	25478.00	-	24550.00
Transmission loss at EHT in MU (DISCOMs Purchase only)	966.23 (@ 3.75% Transmission loss)	978.91 (@ 3.70% Transmission loss)	-	942.87 (@ 3.70% Transmission loss)
Total Purchase	25776.23	26456.91	-	25492.87

138. The Commission has approved the energy drawal by DISCOMs for FY 2016-17 considering the present drawal pattern of DISCOMs and the projections made by them for additional load growth. Hence there should not be any variations from the approved drawal. The DISCOMs need to plan their drawal keeping in view the deviation settlement mechanism and actual reduction in losses, in consultation with GRIDCO.

Simultaneous Maximum Demand (SMD) in MVA

139. GRIDCO in its filing has submitted that based on its request, the DISCOM Utilities have furnished their estimation of SMD for FY 2016-17 to GRIDCO. However, in order to arrive at a pragmatic projection with respect to the SMDs for FY 2016-17 for each of DISCOM Utilities, GRIDCO has considered the highest SMD of each DISCOM Utility that occurred during 1st half of FY 2015-16 as the estimated SMD against the concerned DISCOM Utility for FY 2016-17. GRIDCO has indicated the OERC approval of SMD for FY 2015-16 along with the highest SMDs recorded during the 1st six months of FY 2015-16, the projection of SMDs furnished by the DISCOM Utilities for FY 2016-17, based on which GRIDCO has made the projection of SMDs in respect of each DISCOM Utilities for FY 2016-17 as under:

Table – 11
DISCOM-WISE Projection of SMDs for FY 2016-17

DISCOM Utilities	OERC approval for 2015-16	Highest SMD (MVA per month) recorded during FY 2015-16 (Apr'15 to Sept'15)	DISCOMs Projection of SMD for FY 2016-17	GRIDCO's Projection of SMD of DISCOMs for FY 2016-17
	(MVA/Month)	(MVA/Month)	(MVA/Month)	(MVA/Month)
CESU	1460.00	1427.66	1872.00	1427.66
NESCO	880.00	835.36	980.00	835.36
WESCO	1240.00	1272.75	1350.00	1272.75
SOUTHCO	560.00	544.78	600.00	544.78
TOTAL	4140.00	4080.55	4802.00	4080.55

140. GRIDCO has submitted to the Commission to suitably determine and approve the SMDs for each of the DISCOM Utilities for FY 2016-17 keeping in view of their actual SMDs during FY 2015-16 and the likely load growth in the near future.
141. Bulk Supply Price (BSP) contains a component of demand charge which is calculated on the basis of average system demand of the distribution companies. In its ARR application, GRIDCO did not agree with the simultaneous maximum demand submitted by DISCOM Utilities to GRIDCO as it appears to be at higher side. The DISCOMs in their ARR filing have also projected a higher maximum demand keeping in view the up-coming load growth on account of rural electrification under RGGVY and BGJY. The monthly demand of DISCOMs for the period from April'15 to Dec'15 is furnished in the table below:

Table - 12
Demand in MVA during 2015-16 (Upto Dec' 15)

	CESU	NESCO	WESCO	SOUTHCO	ALL ODISHA
Apr-15	1303.00	807.89	1272.75	531.27	3914.92
May-15	1405.09	818.95	1163.53	539.11	3926.68
Jun-15	1370.22	835.86	1208.18	537.50	3951.76
Jul-15	1381.80	812.58	1133.32	532.48	3860.18
Aug-15	1427.66	817.62	1075.98	544.78	3866.04
Sep-15	1349.64	835.36	1148.06	506.92	3839.98
Oct-15	1314.04	854.93	1150.55	540.46	3859.98
Nov-15	1267.82	806.41	1057.96	532.63	3664.81
Dec-15	1214.80	742.01	944.01	531.83	3432.65
AVERAGE (4/15 to 12/15)	1337.12	814.62	1128.26	533.00	3813.00

142. It is observed from the above table that the summation of billing demand has fluctuated from months to months and has reached a peak of 3951.76 MVA in the month of June, 2015. However, the sum of the maximum demand of each

DISCOMs comes to 4100.12 (CESU-1427.66 + NESCO-854.93 + WESCO-1272.75 + SOUTHC0-544.78) during the period from April to December, 2015.

143. The Commission analyzed the demand pattern of DISCOMs during the current FY 2015-16 (upto December, 2015) and observed that the Average SMD of the DISCOMs has been reduced from what was approved by the Commission for the FY 2015-16. The reason can be attributed to recession. After recasting the estimated requirement of power, it is observed that due to rural electrification and load growth, there may be an additional requirement of about 761.55 MU by the DISCOMs during FY 2016-17. Thus, for meeting this additional demand of 761.55 MU, the additional MVA requirement has been worked out to be 96.59 MVA. So, the Commission has estimated the Demand of the DISCOMs for FY 2016-17 taking the maximum demand during April, 2015 to December, 2015 plus the estimated demand on account of additional load growth during FY 2016-17. Accordingly, the total estimated demand approved by the Commission works out to 4200 MVA for DISCOMs, the details of which are given in the table below:

**Table - 13
Demand in MVA 2016-17**

DISCOMs	OERC Approval for 2015-16	Proposal 1 by DISCOMs for 2016-17	Proposal 1 by GRIDCO for 2016-17	Actual avg SMD during 4/15 to 12/15	Maximum SMD during 4/15 to 12/15	Additio nal Load growth as estimat ed for 2016-17 (MU)	Additio nal load growth convert ed to MVA at 0.9 power factor	Maxim um SMD during 4/15 to 12/15 + Additio nal load growth	OERC Approval for 2016-17
CESU	1460.00	1872.00	1427.66	1337.12	1427.66	172.29	21.85	1449.51	1450.00
NESCO	880.00	980.00	835.36	814.62	854.93	301.89	38.29	893.22	890.00
WESCO	1240.00	1350.00	1272.75	1128.26	1272.75	117.65	14.92	1287.67	1290.00
SOUTHC0	560.00	600.00	544.78	533.00	544.78	169.72	21.53	566.31	570.00
All Odisha	4140.00	4802.00	4080.55	3813.00	4100.12	761.55	96.59	4196.72	4200.00

Note : For estimation purpose Diversity Factor is taken as unity.

144. Taking into account the SMD in different months of 2015-16 and the additional load projected by the DISCOMs, the SMD for 2016-17 has been fixed at 4200 MVA, within which the DISCOMs should operate subject to an overdrawal of maximum 10% in a month.

Purchase of Power from Different Generating Stations

State Hydro

145. GRIDCO's proposal and Commission's approval on drawal of power from various stations of OHPC for the FY 2016-17 are given in the table below, the details of which have been dealt in Case No.52/2015 for determination of tariff and revenue requirement of OHPC, where the Commission has considered the existing design energy of OHPC power stations for the purpose.

Table –14
Drawal from State Hydro Stations (in MU)

Source of Generation	FY 2015-16	FY 2016-17	
	Commission's Approval	GRIDCO's Proposal	Commission's Approval
OHPC (Old Stations)	3676.86	3593.35	3676.86
Upper Indravati	1942.38	1922.96	1942.38
Machhkund	262.50	262.50	262.50
Total Hydro	5881.74	5778.81	5881.74

146. The design energy of Machhkund Power Station is 525 MU. Considering Odisha share of 50% towards energy drawal from this station, the Commission approves an availability of 262.50 MU from Machhkund. The Commission desires that the State should draw at least 50% of Machhkund generation every day in a planned manner. GRIDCO/OPTCL and SOUTHCOPC should co-ordinate to maximise the drawal from Machhkund.

IB Thermal Power Station of OPGC

147. Orissa Power Generation Corporation (OPGC) owns IB Thermal Power Station at Banharpalli in Dist. Jharsuguda with an installed capacity of 2x210 MW at present. In its ARR application for FY 2016-17, GRIDCO has projected to draw the net energy of 2928.42 MU from OPGC based on the normative auxiliary energy consumption of 9% (as per the Terms and Conditions of for Determination of Generation Tariff Regulation, 2014) and PLF of 87.47% as furnished by OPGC in its generation plan for FY 2016-17. However, OPGC has filed an application before the Commission for determination of generation tariff of its 2x210 MW Ib Thermal Power Station at Banaharpali, Jharsuguda for FY 2016-17 which has been registered in Case No.53 of 2015. In its order passed in Case No.53 of 2015, the Commission has considered net energy of 2861.50 MU for drawl by GRIDCO during the FY 2016-17 considering auxiliary consumption of 8.5% and PLF of 85% as per the OERC Generation Tariff Regulation, 2014. The same has been considered for determination of ARR and BSP of GRIDCO for FY 2016-17.

Talcher Thermal Power Station (TTPS)

148. Talcher Thermal Power Station having installed capacity of 460 MW is owned and operated by NTPC, but its generation is fully dedicated to the State. The net energy availability to GRIDCO has been projected at 3150.40 MU at the plant availability of 87.35% with adjustment of Auxiliary Consumption of 10.50%. The NTPC will get full capacity charge at normative plant availability and any deviation from normative plant availability will attract higher/lower capacity charge as the case may be. However, based on the submission of GRIDCO, the Commission approves the net drawl of 3150.40 MU from TTPS for the FY 2016-17, taking into account the projected plant availability of 87.35% & Auxiliary Consumption of 10.50% as projected by GRIDCO.

Captive Generating Plants (CGPs) and Captive Co-generation Plants

149. In its filing GRIDCO has not proposed to procure power from the CGPs and Co-generation Plants during the FY 2016-17 in view of adequate availability of power due to State share in various existing & up-coming Power Plants in the State. However, GRIDCO has indicated that procurement of power from CGPs may be resorted to depending upon exigencies / force majeure conditions. However, in its reply to the Commission's query, GRIDCO has submitted that it has not been possible to project any energy drawal from non-firm power sources like the CGPs/ Co-Gen. Plants as GRIDCO is first required to consider the availability of power from the firm sources like the State entitlement of power from the various Power Stations located within and outside the State and any non-drawal from these entitled sources would tantamount to payment of penalty in terms of paying the Fixed Cost and other associated charges, if any irrespective of drawal. As such the projected power demand of DISCOMs for FY 2016-17 is less as compared to the availability of power from different entitled sources, with good quantum of surplus energy due to recession. Under the circumstances, it has not been possible on the part of GRIDCO to project any procurement of power from CGPs. / Co-Gen. Plants located in the State. However, the option of drawing power from CGPs / Co-Gen. Plants in an emergency deficit scenario is not ruled out entirely.
150. Considering the objections/suggestions of some objectors, the Commission observed that a good quantum of surplus power could be available from CGPs and Co-generation Plants within the state during the ensuing year 2016-17. The Commission is also mandated by the Electricity Act, 2003 to encourage generations from Co-generation Plants. Hence, the present approval for drawl of energy shall not be a limiting factor for drawl of power from CGPs and Cogeneration plants by GRIDCO to meet the demand of the State. GRIDCO may

purchase available power from CGPs and Co-generation plants for state consumption in case of excess state demand or shortfall in drawal from other sources than the approved quantum and with economical prudence for the ensuing year. However, GRIDCO shall inform the Commission in case of such excess drawl of power for the state use. Further, the Commission also directs GRIDCO to purchase the available surplus power from CGPs and Co-generation plants for trading purposes after meeting the state demand subject to commercial viability.

Renewable Energy

Small Hydro Sources:

151. GRIDCO has submitted to procure around 320 MU of renewable energy from small hydro sources that would be available to GRIDCO during FY 2016-17 as given in the table below.

**Table – 15
Proposed Drawal from Small Hydro Sources for FY 2016-17**

Sl. No.	Name of the SHEPs	Installed Capacity (MW)	Energy drawal during the 1st six months of 2015-16 (MU)	Proposed Energy procurement for FY 2016-17 (MU)
1.	Meenaskhi Small Hydro	37	128.94	220.00
2.	SAMAL Small Hydro	20	50.51	100.00
	Total		179.45	320.00

152. Considering the above proposal of GRIDCO, the Commission allows GRIDCO to purchase 320 MU of renewable energy from these two SHEPs for consumption in the state during FY 2016-17.

Bio-mass Energy:

153. GRIDCO in its ARR application had proposed to purchase 160 MU of renewable energy from biomass sources during the FY 2016-17 ie. 100 MU from the 20 MW plant of M/s. Salivahan Green Energy Ltd. and 60 MU from the 10 MW plant of M/s. Octant Industries Ltd. However, in a reply to the Commission's query, GRIDCO submitted that as per the latest Status Report furnished by M/s. Swarnajyoti Agrotech and Power Ltd. (Formerly, M/s. Octant Industries Ltd.), the 10 MW Biomass Plant, being developed by them near Sambalpur, is expected to be commissioned by December, 2016. Considering the COD of the plant, the Commission estimates that only about 15 MU of energy will be available from this Biomass Plant during FY 2016-17 in place of 60 MU as proposed by GRIDCO. Hence, the energy availability from both these plants is estimated at 115 MU during FY 2016-17. Accordingly, the Commission approves the drawl of

energy by GRIDCO from biomass sources during the FY 2016-17 as given in the table below.

Table – 16
Drawal from Bio-mass Energy Sources for FY 2016-17

Sl. No.	Name of the Plants	Installed Capacity (MW)	Proposed energy procurement during FY 2016-17 (MU)	Approved energy procurement during FY 2016-17 (MU)
1.	M/s. Shalivahan Green Energy Limited	20	100	100
2.	M/s. Swarnajyoti Agrotech and Power Ltd.	10	60	15
	Total	30	160	115

Solar Energy:

154. In its submission, GRIDCO has proposed to procure 230 MU of Solar Energy from the following sources during the FY 2016-17 and is hopeful to meet its Solar Power Purchase Obligation by exploring possibilities of purchasing solar power from other sources during the year.
- (i) 13 MU from 8 Nos. of Solar PV Projects of 1 MW capacity each commissioned in the State under 'Rooftop PV and Small Solar Power Generation Programme' (RPSSGP) guidelines of MNRE, GoI.
 - (ii) 34 MU from 20 MW Solar capacity as per the Power Sale Agreement (PSA) executed with NTPC Vidyut Vyapar Nigam Limited (NVVNL) on 12th January 2011 under 'New Projects Scheme' under Phase-1 of Jawaharlal Nehru National Solar Mission (JNNSM) where Solar capacity bundled with equal quantum of thermal capacity from the unallocated quota of the NTPC Coal Based Stations available to GRIDCO.
 - (iii) 17 MU from 10 MW Solar capacity as per the PPA executed with NTPC on 26.04.2011 to procure Solar power from both 5 MW Solar PV project at Dadri in U.P. & 5 MW Solar PV Project at Faridabad in Haryana.
 - (iv) 8 MU from the 5 MW Solar PV Project developed by M/s Alex Green Energy Ltd. under OREDA State Scheme at Patnagarh in Bolangir district.
 - (v) 42 MU from 25 MW Solar PV Project developed by M/s ACME Odisha Solar Power Pvt. Ltd. in Bolangir district under OREDA State Scheme Phase-II.
 - (vi) 116 MU from 70 MW Solar Capacity allocated to GRIDCO through SECI under Viable Gap Funding (VGF) Scheme under JNNSM Phase-II, Batch-1, which is expected to be available to GRIDCO during FY 2016-17
155. The above proposal of GRIDCO is summarised in the Table below:

Table - 17
Proposed Drawal of Solar Power during FY 2016-17

Sl. No.	Solar RE Sources	Energy Proposed for procurement during FY 2016-17 (MU)
1.	8 Nos. of Solar PV projects of 1 MW each under RPSSGP	13.00
2.	20 MW from NVVN through 'New Projects scheme' under JNNSM, Phase-I	34.00
3.	10 MW through NTPC from Solar PV projects at Dadri & Faridabad of 5 MW each	17.00
4.	5 MW from M/s Alex Green Energy Ltd. under OREDA State Scheme	8.00
5.	25 MW from M/s ACME Odisha Solar Power Pvt. Ltd. under OREDA State Scheme Phase-II	42.00
6.	70MW through Solar Energy Corporation of India (SECI) under JNNSM, Phase II, Batch-I	116.00
Total		230.00

156. The Commission approves the above proposal of GRIDCO to procure 230.00 MU from Solar RE Sources. Thus, the total procurement of Renewable Energy during FY 2016-17 from Solar, Bio-mass & Small Hydro Sources comes to 665.00 MU, which is approved by the Commission for State use. The source-wise power procurement from Renewable Energy sources are indicated in the Table below:

Table - 18
Drawal from Renewable Energy Sources during FY 2016-17

Sl. No . .	RE Sources	Energy approved for Procurement during FY 2016- 17 (MU)	Percentage w.r.t. the total estimated drawl of DISCOMs (%)	RPO fixed in the Regulation for FY 2016-17 (%)
A.	Non-Solar			
(i)	Small Hydro Electric Project (SHEP)	320.00	1.30	
(ii)	Energy from Bio-mass	115.00	0.47	
	Sub-Total (Non-Solar)	435.00	1.77	3.00
B.	Solar	230.00	0.94	1.50
C.	Total (Solar & Non-Solar)	665.00	2.71	4.50

(*) *Sale of power to DISCOMs including emergency power supply to CGPs has been estimated at 24550 MU.*

157. However, the Commission observed that the estimated sale of power to DISCOMs including emergency power supply to CGPs is 24550 MU for state consumption and the estimated quantum of energy available to GRIDCO from Renewable Sources in total is very less to meet the Renewable Purchase

Obligation (RPO) fixed by the Commission for the FY 2016-17. In a reply to the Commission's query GRIDCO has submitted that they have a plan to procure renewable energy from different sources to fulfill the RPO targets for the FY 2016-17. Therefore, the Commission directs GRIDCO to explore all possibilities to purchase renewable power from different sources to meet the RPO fixed by the Commission for FY 2016-17. GRIDCO should also make efforts to encourage renewable power producers and facilitate them for setting up of renewable power plants, sources of which are available in our State, in order to reduce the burden on the consumers of the State on account of RECs as per RPO.

Independent Power Producers (IPPs)

M/s. Vedanta Ltd.

158. In its submission, GRIDCO has stated that as per the existing consolidated PPA dated 19.12.2012 with M/s Vedanta Ltd.(erstwhile M/s. Sesa Sterlite Limited), the Unit-2 of the IPP having 600 MW capacity out of total capacity of 4x600 MW is dedicated to the State and connected to OPTCL network through 220 KV VAL-Budhipadar D/C Line. As per the said PPA, M/s SSL shall provide GRIDCO 25% of the power sent out at the tariff approved by OERC i.e. at fixed charge plus variable charge and 7% of the power sent out at variable charge only. But the IPP has not been supplying to its full ex-bus generation capacity from Unit #2, citing transmission constraint in contrast to the fact that the onus/responsibility of construction of dedicated transmission line for evacuation of State share of power lies with the IPP as per Section 10 of the Electricity Act,2003. However, GRIDCO has been contesting before Hon'ble APTEL regarding the transmission capacity of the existing 220 kV VAL-Budhipadar Double Circuit line which is sub-judice at present. As no Generation Plan has been submitted by the IPP, based on the provisions of the PPA, operational norms fixed for 600MW unit size in the OERC (Terms and Conditions of Tariff for Determination of Generation Tariff), Regulation, 2014 i.e. Auxiliary Energy Consumption @6%) and normative PLF of 85% and in view of the continuation of linkage coal supply to the IPP, GRIDCO has proposed to procure 4200MU (2400X.94X365X24X.85X.25) at the rate consisting of Fixed Charges plus Energy Charge (ECR), and 1176 MU (2400X.94X365X24X.85X.07) from the IPP at Variable Charge Rate during the FY 2016-17.
159. The Commission scrutinised the above proposal of GRIDCO and it is observed that the Commission vide its order dt.27.01.2016 passed in Case No.21 of 2015 has directed that the unit-II (600 MW) of the 4x600 MW power plant of M/s. Vedanta Ltd. will continue to remain as IPP and must remain connected to STU as state dedicated unit and the other three Units ó I, III & IV of the power plant

are converted to Captive Generating Plant w.e.f. 01.04.2015 based on the assurance of M/s Vedanta Ltd. that in case of low or no generation in Unit-II, the petitioner shall meet its commitment in the PPA from the converted CGP units and its pricing shall be as per the relevant IPP Regulations of the Commission. The quantum of power supply to GRIDCO towards state entitlement should be 25% (at full cost) and 7%/5% (variable cost) of the total energy sent out from the power station (4x600 MW) as per the PPA in force. However, supply to GRIDCO must be 25% plus 7%/5% of total energy sent out from the power station or total ex-bus generation from Unit-II whichever is higher. Such quantum of power supply should not be disturbed at any point of time. Now it is claimed that coal block allotted to M/s Vedanta Ltd. has been cancelled. Hence, at present GRIDCO entitled to avail 25% plus 5% of the total energy sent out from the 4X600 MW power plant of M/s Vedanta Ltd. Accordingly, the state share of energy from this power plant is computed to be 5039.45 MU during the FY 2016-17 considering PLF of 85% and auxiliary consumption of 6%. GRIDCO is directed to purchase its full share from the power plant of M/s. Vedanta Ltd. for State consumption either through the existing system of STU or through alternative route.

M/s GMR Kamalanga Energy Ltd.

160. GRIDCO has further submitted that based on the terms and conditions of the PPA dated 04-01-2011 executed PPA with M/s GMR Kamalanga Energy Ltd. (M/s GKEL), GRIDCO is entitled for 25% of the energy sent out from its 4x350 MW Thermal Power Plant (IPP) at the tariff to be determined by the OERC. Further, the power generated in excess of 80% PLF shall be made available to the State at variable cost. Apart from the entitlement, GRIDCO had procured additional power from the IPP at the time of requirement to meet the State demand at the provisional tariff in effect. From 18th March, 2015 onwards, the Unit #3 of the IPP is connected with the STU and supplying power to the State through dedicated 400kV DC GMR-Meramundai transmission line. After supplying the State share of power, the IPP is selling the balance power generated from its Unit #3 through Short Term Open Access. Since the IPP has not submitted its generation plan for FY 2016-17, considering 25% of normative ex-bus capacity of the total thermal plant at 80% PLF and 9% Auxiliary Energy Consumption as per OERC Generation Tariff Regulations, 2014, GRIDCO proposed to procure 1674 MU from GKEL during FY 2016-17 at FCR & ECR. Further, as per the PPA, all power generated beyond 80% PLF shall be procured at Energy Charge Rate (ECR).
161. The Commission observed that out of the 1400 MW (4x350 MW), three generating units having installed capacity of 1050 (3x350 MW) of the IPP M/s.

GMR Kamalanga Energy Ltd. (GKEL) have already been commissioned and the 4th unit is expected to be commissioned during 13th plan. As per the PPA with M/s. GKEL the State share is 25% of the energy sent out. Accordingly the energy availability to GRIDCO from M/s. GKEL for the FY 2016-17 comes to 1720.03 MU with 80% PLF and 6.5% auxiliary consumption based on the CERC norms.

M/s Nava Bharat Ventures Ltd.

162. As per the PPA executed by GRIDCO with M/s Nava Bharat Ventures Limited (M/s NBVL) GRIDCO, GRIDCO is entitled to 14% of the power sent out at Energy Charge Rate/Variable Cost to be determined by OERC, if coal block is allocated within the State. Otherwise, NBVL shall supply 12% of the power sent out at Variable Cost / Energy Charge Rate. Since M/s. NBVL has not submitted its generation plan for the FY 2016-17, GRIDCO has proposed to procure 40MU from this IPP considering 9.0% auxiliary consumption as per OERC Generation Tariff Regulations, 2014 and 65% PLF, being a new plant, at the provisional Variable / Energy Charge Rate as per its entitlement of 12% of the power sent out from the power plant (no coal block has been allotted but NBVL have informed that coal shall be purchased from MCL through linkage route).
163. The Commission observed that the installed capacity of the IPP of M/s Nava Bharat Ventures Limited (M/s NBVL) is 60 MW with the State share of 12% at variable cost since no coal block is stated to have been allotted to NBVL at present. Considering the auxiliary consumption of 9% and PLF of 85% as per OERC Generation Tariff Regulations, 2014, the energy availability to GRIDCO comes to 48.79 MU. Hence, the Commission approves the same for procurement by GRIDCO during the FY 2016-17.

M/s Jindal India Thermal Power Ltd.

164. The IPP of M/s Jindal India Thermal Power Limited (M/s JITPL) is of the capacity of 3x600 MW, out of which two units have been commercially operated. As per PPA with M/s JITPL, GRIDCO is entitled for 14% of the power sent out at Variable Cost, to be determined by the Commission, if coal block is allocated within the State. Otherwise, JITPL shall supply 12% of the power sent out at Variable Cost. As reported by JITPL, allocation of coal block against Unit #1 (600 MW) has been cancelled by Hon'ble Supreme Court of India. At present JITPL is submitting schedule to ERLDC @12% of its total declared day ahead schedule. Since the IPP has not submitted the generation plan for FY 2016-17, GRIDCO proposes to procure 1008 MU considering 6% AEC as per OERC Generation Tariff Regulations, 2014, 85%PLF and State entitlement @12% from JITPL subject to clarification on linkage coal supply by MCL.

165. The Commission observed that out of the 1200 MW (2X600 MW) of M/s Jindal India Thermal Power Ltd. (M/s JITPL), Considering the State share of 12% at present, PLF of 85% and auxiliary consumption of 6%, energy availability to the state from this IPP is estimated to 1007.89 MU. Hence, the Commission approves the same for procurement by GRIDCO during the FY 2016-17.

M/s. Ind-Barath Energy (Utkal) Ltd.

166. GRIDCO has further submitted that as the 1st Unit (350MW) of the IPP of M/s. Ind-Barath Energy (Utkal) Limited (IBEUL) is in advance stage of commissioning and expected to be operational soon, based on the provisions of PPA dated 04-01-2011, considering 9% AEC as per OERC Generation Tariff Regulations, 2014,65%PLF(being a new plant) and State entitlement @12%, GRIDCO proposes to procure 218MU from this upcoming IPP during FY2016-17, apart from infirm power at provisional ECR to be fixed by the Commission.
167. The Commission observed that the 1st Unit (350MW) of the IPP of M/s. Ind-Barath Energy (Utkal) Limited (IBEUL) is expected to be commissioned soon. GRIDCO is entitled to purchase the State share of 12% (14% if coal block is allocated) at variable cost. Considering the State share of 12% at present, PLF of 85% and auxiliary consumption of 6%, energy availability to the state from this IPP is estimated to 284.59 MU. However, the Commission approves 218 MU as proposed by GRIDCO to be purchased from this upcoming IPP during the FY 2016-17 for State consumption.
168. GRIDCO has further stated that it has executed Power Purchase Agreements (PPAs) with a number of IPPs, which are in various stages of implementation. Out of which 3130 MW is scheduled to be commissioned by the end of FY 2016-17 with Odisha Share of 683.70 MW. However, keeping in view the uncertainty of commissioning of the forthcoming IPPs, GRIDCO has restricted its proposal to procure power from the aforesaid IPPs which are fully or partly in operation for the purpose of estimation of ARR. Hence, the total estimation of GRIDCO is 8316 MU, which is to be procured from the IPPs during the FY 2016-17.
169. The Commission has estimated the total availability of 8100.74 MU from the above IPPs, out of which the Commission approves 8034.16 MU to be purchased by GRIDCO during the FY 2016-17 for consumption in the state. However, depending on the requirement, cost and availability, GRIDCO may purchase more quantum of energy from the IPPs in the event of non-availability of energy from other sources and/or increase in state demand than the estimation. In fact, GRIDCO should draw the full quantum of State's share of power from the IPPs as per the PPA to have export earnings after meeting the State's requirement. The

proposal of GRIDCO and approval of the Commission in respect of purchase of power from the IPPs during the FY 2016-17 is as indicated in the table below.

Table - 19
Power Procurement from the IPPs during FY 2016-17

IPPs	Proposal of GRIDCO (MU)	Approval of the Commission (MU)
Vedanta Limited	5376.00	5039.45
GMR Kamalanga Energy Ltd.	1674.00	1720.03
Jindal India Thermal Power Ltd.	1008.00	1007.89
Nav Bharat Ventures Ltd.	40.00	48.79
Ind Barath Energy(Utkal) Ltd.	218.00	218.00
Total	8316.00	8034.16

Power Purchase from Central Generating Stations

170. Odisha has been allocated shares in all the NTPC stations located in the Eastern Region as well as from the Chukha and Tala Hydro Electric Projects in Bhutan and Teesta Hydro Electric Project in Sikkim. The entitlement from these stations is based on share allocation made by the CEA/MoP from time to time. The energy accounting from these stations is done on a monthly basis as per the ABT based Regional Energy Accounts (REA) prepared by the Eastern Regional Power Committee.

Central Transmission Loss:

171. The constituents of power utilities of the Eastern Region share the losses occurring in the Central Transmission System as per the Point of Connection (PoC) Methodology. In the ARR filling for 2016-17, GRIDCO has projected different percentage of transmission loss in the Eastern Region Power System in respect of power procurement from different Central Generating Stations. The station-wise losses have been arrived at by GRIDCO, based upon the injection loss and withdrawal loss data of the current financial year (upto the month of Oct'15) as available from the NLDC Website.
172. GRIDCO has further stated that as per the new Inter-state transmission charges sharing Regulation (POC Regulation) total transmission loss of the CTU are to be divided equally among the injectors (Generators) and Drawees (Beneficiaries). The loss component attributable to Generators is regarded as the “Injection Loss”. In the instant case, since the Generators are different their injection losses are different based on the load flow study conducted by NLDC. These losses are determined in weekly basis and are published in NLDC site. Similarly, GRIDCO being a beneficiary has to bear the “withdrawal loss” towards the central sector

drawl. This again is determined by NLDC based on load flow study for the withdrawal zone Odisha on weekly basis and published in their site. Further, GRIDCO have entered into agreements with ISGSs (FSTPS, KHSTPS, TSTPS and Barh STPS) to draw power on cost plus basis. As such, GRIDCO is bearing the injection losses of these stations in addition to its withdrawal losses.

173. The Commission scrutinized proposal of GRIDCO on Central Transmission Losses with reference to the figures published in NLDC site and it is observed that the scheduled PoC loss in the eastern regional system varies from week to week for Odisha injection and Odisha withdrawal. After scrutiny, the Commission considered the average transmission loss for drawal of power from individual central generating stations based upon the injection loss and withdrawal loss data of the current financial year (upto the month of December,2015) as submitted by GRIDCO for estimation of power purchase cost of GRIDCO, which is given below:

Table - 20
Percentage of System Loss considered for Central Stations

Name of power stations	Central Transmission Loss proposed by GRIDCO for FY 2016-17 (%)	Central Transmission Loss considered by the Commission for FY 2016-17 (%)
TSTPS -I	3.18	2.67
TSTPS -II	3.43	3.16
FSTPS- I, II & III	2.40	2.09
KHSTPS - I &II	2.43	2.21
Barh- II	2.65	2.27
Chhuka & Tala	2.65	2.16
Teesta-V	2.65	2.29

Central Hydro Generating Stations

174. **Chukha:** Odisha has been assigned a share of 15.19% from ER allocation of 270 MW out of the installed capacity of 336 MW (4x84 MW) of Chukha Hydro Power Station, Bhutan. Drawl from Chukha has been projected by GRIDCO at 262.85 MU for FY 2016-17 considering the average drawal of last 6 years i.e. from FY 2009-10 to 2014-15. After deducting central sector loss of 2.65%, the net availability to GRIDCO is projected at 256.00 MU for the FY 2016-17.
175. The Commission scrutinized the proposal of GRIDCO and observed that though the drawal of GRIDCO from Chukha was 275.41 MU during the FY 2013-14 against the approval of 268.08 MU; the same was 260.39 MU during the FY 2011-12, 237.58 MU during the FY 2012-13 and 247.41 MU during the FY 2014-15 against the approval of 279.79 MU, 279.53 MU and 267.30 MU respectively.

So the Commission approves the drawal from Chukha hydro station at 259.86 MU for FY 2016-17 considering the average drawal of last 5 years i.e. from FY 2010-11 to 2014-15. After deducting the Central Loss of 2.16%, the net drawal of GRIDCO comes to 254.24 MU for FY 2016-17.

176. **TALA:** GRIDCO has an allocated share of 4.25% i.e 43.35 MW from Tala HEP, Bhutan having installed capacity of 1020 MW (6X170 MW). GRIDCO has proposed to draw 144.25 MU of energy from Tala HEP during FY 2016-17 by averaging previous 5 years drawal i.e. from FY 2010-11 to 2014-15. After deducting Central Sector Loss of 2.65%, the net availability to GRIDCO is projected as 140.43 MU during FY 2016-17. After scrutiny, the Commission estimates the net drawal of 141.13 MU from Tala Hydro Power Station considering the Central Sector Loss of 2.16% in place of 2.65% as proposed by GRIDCO.
177. **TEESTA:** GRIDCO in its ARR application has submitted that the annual design energy of Teesta-V HEP (510 MW) situated in Sikkim is 2572.67 MU. Considering 12% free energy to Home State & 1.2% of Auxiliary Consumption, the annual saleable energy of the project is 2236.808 MU. Considering the share of GRIDCO as 23.40% of the saleable energy, GRIDCO proposes to procure 509.54 MU of energy during the year 2016-17 after deducting the Central Sector loss of 2.65% as shown in the table below.

Table - 21

Design Energy (MU)	2572.67
Annual Saleable Energy available considering 1.2% Auxiliary Consumption and 12% free energy for home state (MU)	2236.81
GRIDCO Share (%)	23.40
Availability (MU)	523.41
After deducting Central Transmission Loss @ 2.65% (MU)	509.54
Proposed drawal for FY 2015-16 (MU)	510.00

178. The Commission scrutinized the proposal of GRIDCO with reference to Regional Energy Account (REA) prepared by ERPC. It is observed that the GRIDCO is entitled to get a share of 20.59% on the total generation less auxiliary consumption. So the Commission estimates a drawal of 523.36 MU considering the share of 20.59% of 2541.80 MU i.e. the design energy less auxiliary consumption of 1.2%. After considering the central sector transmission loss of 2.29%, the Commission approves the net drawl of 511.37 MU from Teesta HEP during FY 2016-17.

Central Thermal Generating Stations

179. GRIDCO has submitted that Clause 36 (A) of CERC (Determination of Terms & Conditions of Tariff) Regulations, 2014 effective from 01.04.2014 to 31.03.2019 stipulates “Normative Annual Plant Availability Factor (NAPAF)” as under:

“(a) All Thermal Generating Stations, except those covered under clauses (b), (c), (d), & (e) - 85%
Provided that in view of shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.”

The above provision shall be reviewed based on actual feedback after 3 years from 01.04.2014.”

Based on the above provision of CERC Tariff Regulations, 2014, NTPC has been raising bills on 83% NAPAF for recovery of Fixed Charges from 01.04.2014 onwards.

The actual Plant Availability Factor for the months from April 15 to Sept 15 and the percentage of Cumulative Availability of power from CGSs for the 1st six-months of FY 2015-16 varies from 74.24% to 97.54% as given in the table below. However, based on the afore-said CERC Tariff Regulations, 2014, GRIDCO proposes NAPAF of 83% for the NTPC-ER Stations for FY 2016-17 as per the bills raised by NTPC at present.

Table-22
Cumulative Availability (%) of CGSs for the 1st six-months of FY 2015-16

Stations	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Cumulative Availability (%)	Cumulative Availability (NAPAF) proposed by GRIDCO for FY 2016-17 (%)
TSTPS Stage-I	97.46	98.15	97.24	96.94	96.31	88.21	95.74	83
TSTPS Stage-II	98.47	99.66	79.09	93.11	74.73	95.10	90.01	83
FSTPS-I&II	97.82	93.89	90.02	89.21	86.81	83.51	90.21	83
FSTPS-III	15.09	41.61	56.86	63.57	68.76	69.00	52.57	83
KhSTPS St-I	75.37	86.52	83.52	86.85	88.65	89.26	85.07	83
KhSTPS St-II	99.73	98.44	98.90	99.09	98.83	90.11	97.54	83
Barh STPS II.	45.21	68.31	77.19	82.01	85.23	87.05	74.24	83

180. The projection of net power procurement from the Central Thermal Generating Stations (CGSs) of Eastern Region for FY 2016-17 is estimated by GRIDCO as 7837.22 MU considering the allocated share of GRIDCO, NAPAF of 83%, Auxiliary Consumption as per the CERC Tariff Regulations, 2014 and the Central Sector Transmission Loss specific to each of the Stations as per the Point of Connection (PoC) Methodology. The details of power procurement from each of the Central Thermal Generating Stations (CGSs) as projected by GRIDCO are given in the table below:

Table - 23
Availability of Power from Central Generating NTPC Stations for FY 2016-17

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons (%)	NAPAF (%)	Net availability (ESO) (MU)	GRIDCO Share (%)	Ex-bus Availability (MU)	Central Tr. Loss %	GRIDCO share after C.S. Trans. Loss (MU)
TSTPS -I	1000	5.75	83	6852.73	31.97	2190.78	3.18%	2121.11
TSTPS -II	2000	5.75	83	13705.46	10.00	1370.55	3.43%	1323.54
FSTPS-I & II	1600	6.47	83	10880.61	13.81	1502.48	2.40%	1466.42
FSTPS-III	500	5.75	83	3426.36	16.87	578.17	2.40%	564.29
KhSTPS -I	840	9.00	83	5557.80	15.40	855.95	2.43%	835.15
KhSTPS -II	1500	5.75	83	10279.09	2.24	230.07	2.43%	224.48
Barh STPS- II	1320	5.75	83	9045.60	14.79	1337.68	2.65%	1302.24
TOTAL				59747.65		8065.68		7837.23

181. The Commission scrutinised the proposal of GRIDCO and observed that as per the CERC Tariff Regulations, 2014, though the NAPAF of the Central Thermal generating stations is fixed at 85%, in view of shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed based on actual feedback after 3 years from 01.04.2014. Therefore, the Commission accepts the proposal of GRIDCO for considering NAPAF of the central thermal power stations at 83% for FY 2016-17 for estimation of the ARR of GRIDCO. The Commission observed that GRIDCO is purchasing bundled solar power which includes thermal power from the unallocated quota of the NTPC stations. Hence, the share of thermal power purchase by GRIDCO from NTPC station increases accordingly. The state share of power from ER-NTPC stations inclusive of the said bundle thermal power has been considered by the Commission based on the REA for the month of Dec 2015. Considering the Central Sector transmission loss provisionally as stated earlier and NAPAF of 83%, the details of GRIDCO's drawl from Central Thermal Stations, estimated for the FY 2016-17 are given in the table below:

Table - 24
Drawal From Central Thermal Generating Stations for FY-2016-17

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons. (%)	Availability considering 83% PLF & Auxiliary Consum. (MU)	GRIDCO Share (%)	GRIDCO Share (MU)	Estimated Share excluding Central Sector Transmission Loss (MU)	GRIDCO's proposal excluding Central Sector Transmission Loss (MU)
TSTPS 6I	1000	5.75	6852.73	32.344	2216.45	2157.27	2121.11
TSTPS 6II	2000	5.75	13705.46	10.000	1370.55	1327.24	1323.54
FSTPS-I& II	1600	6.47	10880.75	14.184	1543.28	1511.02	1466.42
FSTPS-III	500	5.75	3426.36	17.150	587.61	575.33	564.29
KhSTPS 6I	840	9.00	5557.80	15.775	876.74	857.36	835.15
KhSTPS6II	1500	5.75	10279.09	2.621	269.37	263.42	224.48
BarhSTPS-I&II	1320	5.75	9045.60	14.788	1337.68	1307.32	1302.24
TOTAL	8365		59747.79		8201.68	7998.96	7837.23

NTPC-Barh Super Thermal Power Station-Stage- II

182. In its ARR & BSP application for the FY 2015-16 GRIDCO has submitted that Ministry of Power (MoP), Govt. of India vide Order dated 03.07.2012 notified allocation of power from Barh STPS-I (1980 MW i.e. 3x660 MW) and Barh STPS-II (1320 MW i.e. 2x660 MW) of NTPC in Bihar. As per the said order, GRIDCO has 12.57% share allocation from Barh-II. ERPC vide their letter dtd. 14.11.2014 intimated the CoD of Unit IV of Barh-II at 00.00 hrs. of 15.11.2014. Further, ERPC vide letter dated 24.12.2014 revised the allocation of GRIDCO from 12.57% to 14.79% in accordance with the MoP allocation Order dated 24.12.2014. Based on the cost consideration, Govt. of Odisha have requested MoP, GoI several times for de-allocation of power from upcoming NTPC Stations outside the State which includes the Units of Barh-II. However, till now, de-allocation has not been made. However, Ministry of Power, Govt. of India has already issued notification inviting proposal from alternative buyers, which has not been identified till now. In the meantime, GRIDCO has received a letter from NTPC vide letter dtd. 30.10.2015, wherefrom it is understood that the trial run operation of the 2nd Unit of Barh Stage-II (i.e. Unit-V) has already been started and NTPC intends to declare the Unit commercially operative subsequent to the completion of trial operation. Hence, GRIDCO expected that Unit-V shall be put into commercial operation during the year 2016-17. Moreover, though the requisition from Barh-II, Unit-IV has been made nil by GRIDCO since Dec 4, yet some power is being allocated to GRIDCO in the plea of technical minimum generation. As such, a total 86 MU quantum of power has been scheduled to GRIDCO during the period from April 5 to Sept 5 without any requisition from

GRIDCO. Hence, considering the both Units of Barh- II (Unit-IV and Unit-V) in operation, GRIDCO has calculated the drawl of power from both the Units at 1302.24 MU for FY 2016-17 after taking into account Odisha share of 14.79% and Central Sector Loss of 2.65%. Further, based on the petition filed by NTPC before CERC for Barh STPS Stage- II, GRIDCO has projected the landed cost of power from this station at 571.88 Paisa/unit for the FY 2016-17 including the central transmission charge of 27.67 Paisa/unit.

183. The Commission observed that the cost of power from this new generating station is very high compared to the rate of power available from IPPs and other sources inside the State. Deptt. Of Energy, Govt. of Odisha has been following-up with Ministry of Power, Govt. of India for de-allocation of State's share of power from the Barh STPS as well as costly power from other up-coming NTPC power stations located outside of the State except North Karanpura Super Thermal Power Station of NTPC situated in Bihar. Therefore, the Commission does not consider the proposal of GRIDCO for drawal of 1302.24 MU from Barh STPS-II (Unit- 4&5) for State use during the FY 2016-17 and also direct GRIDCO and the State Government to expedite the matter with Ministry of Power, Govt. of India for earliest de-allocation of power to the State of Odisha from this thermal generating station of NTPC or appeal before CERC/APTEL for reduction of tariff in respect of Barh-STPS of NTPC. In the event of failure with the above efforts, legal options may be explored.

Summary of the proposal for purchase of power and approval by OERC

184. As mentioned above, the total estimated availability of power from different sources comes to 29565.09 MU. However, the total power requirement for drawal by DISCOMs for State use comes to 25492.87 MU. Since, the least cost power is available for state consumption, this costly power from Central Thermal Generating Stations has not been considered in the ARR of GRIDCO for consumption inside the State. However, GRIDCO may trade this power and earn some revenue to bridge the past gap. Hence, taking the least cost power procurement for the state from different generating stations, the Commission approves quantum of purchase for FY 2016-17 as given in the table below:

Table – 25
Quantum of Power Purchase from Various Sources for FY 2016-17
(Figures in MU)

Sources of Purchase	Commission's Approval for State Drawl for 2015-16	GRIDCO's Proposal for 2016-17	Estimated Availability for 2016-17	Commission's Approval for State Drawl for 2016-17
HYDRO (OLD)	3,676.86	3593.35	3,676.86	3,676.86
Indravati	1,942.38	1922.96	1,942.38	1,942.38
Machakund	262.50	262.50	262.50	262.50
Total Hydro	5,881.74	5778.81	5881.74	5,881.74
OPGC	2838.27	2928.42	2861.50	2861.50
TTPS (NTPC)	3177.32	3150.40	3150.40	3150.40
IPPs	6636.35	8316.00	8100.74	8034.16
CGPs	-	-	-	-
Co-Generation Plants	1224.62	-	-	-
Small Hydro	320.00	320.00	320.00	320.00
Biomass Energy	125.00	160.00	115.00	115.00
Solar Energy	127.00	230.00	230.00	230.00
TOTAL STATE	20330.30	20883.63	20659.38	20592.80
CHUKHA HPS	260.35	256.00	254.24	254.24
Tala HPS	141.60	141.00	141.13	141.13
Teesta-V HPS	512.37	510.00	511.37	511.37
Total Central Hydro	914.32	907.00	906.75	906.75
TSTPS-I	2162.69	2121.11	2157.27	2157.27
TSTPS-II	1332.44	1323.54	1327.24	1327.24
FSTPS-I & II	-	1466.42	1511.02	-
FSTPS-III	-	564.29	575.33	-
KhTPS-I	773.89	835.15	857.36	245.41
KhTPS-II	262.58	224.48	263.42	263.42
Barh STPS-II	-	1302.24	1307.32	-
Total Central Thermal	4531.61	7837.23	7998.96	3993.32
Total Central Sector	5445.93	8744.23	8905.71	4900.07
TOTAL GRIDCO	25776.23	29627.86	29565.09	25492.87

Power Procurement Cost

185. 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 station based on the relevant rules, regulations and documents available.

OHPC Stations

186. OHPC has submitted the application for approval of its Annual Revenue Requirement and Tariff of its individual power stations separately for the FY 2016-17 in terms of Section 62, 64 and 86 of the Electricity Act, 2003 which has registered as Case No.52/2015. The tariff approved for OHPC Stations in the said case will be considered for determination of the power procurement cost of GRIDCO in respect of all stations of OHPC.
187. Accordingly, the cost of power purchase by GRIDCO from each of the power stations of OHPC is given in the table below:

Table – 26
Cost of Power Purchase from OHPC Stations for FY 2016-17

Name of the Power Station	Quantum of Power Purchase for 2016-17 (MU)	Approved Average Tariff for 2016-17 (P/U)	Cost of Power Purchase for FY 2016-17 (Rs. Cr.)
Burla	677.16	140.03	94.82
Chipilima	485.10	53.70	26.05
Balimela	1171.17	90.52	106.02
Rengali	519.75	116.08	60.33
Upper Kolab	823.68	54.87	45.19
Upper Indravati	1942.38	75.36	146.37
Sub-Total	5619.24	85.20	478.78
Machhkund	262.50	47.92	12.58
Total	5881.74	83.54	491.36

IB Thermal Power Station of OPGC

188. OPGC for the first time has filed its ARR & Tariff application before OERC for determination of Generation Tariff of its 2x210 MW Ib Thermal Power Station for the year 2016-17, which has been registered as Case No.53 of 2015. The Commission in its order passed in Case No.53 of 2015 has determined the capacity charge of 70.11 p/u and energy charge of 120.15 p/u for the said power station of OPGC. Hence the cost of power purchase for procurement of 2861.50 MU from OPGC comes to Rs.544.43 crore at an average rate of 190.26 p/u. Further, in the said tariff order of OPGC, the Commission has provisionally approved an amount of Rs.53.06 crore to be reimbursed by OPGC from GRIDCO towards year end charges for the FY 2016-17. The said amount of Rs. 53.06 Crore has been considered by the Commission in the ARR of GRIDCO for FY 2016-17 and GRIDCO shall reimburse the same after scrutiny of the relevant documents.

Talcher Thermal Power Station (TTPS)

189. Talcher Thermal Power Station is owned and operated by NTPC and tariff for this generating station is determined by Central Electricity Regulatory Commission (CERC).
190. **Fixed Charges:** GRIDCO has submitted that as per the Tariff Order dated 15.05.2014 in Petition No.304 of 2009, the year wise Annual Fixed Charges for the period from 2009-10 to 2013-14 have been fixed by the CERC, which is sub-judice in APTEL at present. Further, NTPC-TTPS has filed the Tariff Petition before the CERC for the period 2014-19 as per the CERC Tariff Regulations, 2014. But NTPC-TTPS is currently claiming the Monthly Fixed Charges provisionally as per the Annual Fixed Charge (AFC) of Rs.373.5929 Crore as applicable for FY 2013-14. However, in the present application, GRIDCO has considered the Fixed Cost of TTPS as Rs.422.527 Crore for FY 2016-17 based on the Petition filed by NTPC-TTPS for fixation of Tariff for the period from 2014-19. Accordingly, GRIDCO has worked out the Fixed Cost per Unit of energy from TTPS as 134.12 P/U at the projected PLF of 87.35% and Aux. Energy Consumption of 10.50% for the proposed drawal of 3150.40 MU for FY 2016-17.
191. After scrutiny of the submissions of GRIDCO, the Commission observed that CERC vide its Order dated 15.05.2014 in Petition No.304 of 2009 has determined the Annual Fixed Charge (AFC) of Rs.373.5929 Crore for FY 2013-14 in respect of TTPS (NTPC). Further due to revision of MAT rate the Fixed cost comes to Rs.361.742 Cr., on which NTPC is currently claiming the Monthly Fixed Charges bills to GRIDCO provisionally. However, the latter has filed an appeal before APTEL, New Delhi against the said Order dated 15.05.2014 which has been admitted as Appeal No.180 of 2014 and has also filed a Writ Petition before Hon'ble High Court of Orissa against the CERC Tariff Regulation, 2009 in the matter of high normative O & M expenditures and relaxed norms of operation of Thermal Power Plant of TTPS. Both the petitions of GRIDCO are now sub-judice before the respective judicial Forums. Further, the submission of NTPC before CERC for determination of fixed charges of TTPS for the period 2014-19 is yet to be finalized. Hence, the Commission provisionally consider the fixed cost of TTPS at Rs.373.593 crore for the FY 2016-17 as per approval of CERC for 2013-14 subject to final decision by the said authorities. Accordingly, the fixed charge per unit comes to 118.59 p/u for drawal of 3150.40 MU from TTPS during the FY 2016-17.
192. **Energy Charges:** GRIDCO has stated that as per the final Tariff Order by the CERC dated 15.05.2014 in Petition No. 304 of 2009 in consonance with the CERC Tariff Regulations, 2009, the Base Energy Charge for TTPS has been fixed

as 108.475 P/U. Further, in the said Tariff Order, it has been mentioned that NTPC-TTPS is entitled to compute and recover the energy charges in accordance with Clause 21(6)(a) of the CERC Tariff Regulations, 2009. Accordingly, NTPC-TTPS is claiming the Energy Charges every month based on the Price and GCV of Coal and Oil for that month. However, based on the trend of Energy Charge Rate (ECR) as claimed by TTPS-NTPC in last six months, GRIDCO has considered 15% escalation over and above the monthly highest Energy Charge of 141.80P/U and thus, proposes 163.07 P/U towards Energy Charges for FY 2016-17 as given in the table below:

Table -27
Fuel Price Adjustment (FPA) OF TTPS (in P/U)

Apr-15	May-15	June-15	July-15	Aug-15	Sept-15	Monthly Average Energy Charge	Monthly Highest Energy Charge	GRIDCO's proposal for FY 2016-17 considering 15% escalation on 141.80 P/U
138.70	139.90	141.80	141.80	140.80	141.40	140.73	141.80	163.07

193. The Commission scrutinized the proposal of GRIDCO and observed that NTPC-TTPS is entitled to compute and recover the energy charges as per Clause 21(6)(a) of the said Regulations. Accordingly, NTPC-TTPS is claiming the Energy Charges every month based on the Price and GCV of Coal and Oil for that month. However, for computation of ARR & BSP of GRIDCO for the FY 2016-17, the Commission provisionally approves the variable charge of TTPS @ 149.27 P/U considering 10% escalation over 135.70 P/U i.e., the average of ten months of energy charges claimed by NTPC during the period from April, 2015 to January, 2016 in respect of TTPS.

194. **Year-end Charges:** GRIDCO has projected the year-end charges of TTPS to the tune of Rs.26.23 crore for the FY 2016-17 based on the pro-rated assessment of actual charges paid by GRIDCO during 1st six months of the FY 2015-16, which includes electricity duty, charges towards water cess, UI charges, SLDC charges and incentive. The Commission on examination of the claims provisionally approves (i) Electricity duty of Rs. 11.09 crore calculated @ 30 paise/unit on auxiliary consumption of the generation at 87.35% PLF, (ii) Water Charge / Cess of Rs.0.25 crore, (iii) SLDC Charges of Rs.0.38 Crore and (iv) Rs.4.24 Crore towards incentive on excess generation beyond the normative PLF. The claim for UI Charges is not being allowed in the tariff since the possibility of overdrawl or underdrawl cannot be predicted at this moment. Thus, the total year-end charges approved for 2016-17 comes to Rs.15.96 crore. The year-end charges proposed by

GRIDCO and approved by the Commission for the FY 2016-17 is shown in the table below:

Table – 28
Year-End Charges of TTPS for FY 2016-17

ITEM	OERC approval for FY 2015-16	GRIDCO's Proposal for FY 2016-17	(Rs. in crore)
Electricity duty	7.46	7.86	11.09
Water Cess / Charge	0.25	0.25	0.25
UI overdrawl	0.00	5.05	0.00
SLDC charges	0.38	0.41	0.38
Incentive	6.25	12.65	4.24
Total (Rs. Crore)	14.33	26.23	15.96
ESO (MU)	3177.32	3150.40	3150.40
Per unit cost (P/U)	4.51	8.33	5.07

195. After taking into account all the above estimated cost, the approved tariff for TTPS power comes to 272.92 p/u comprising of fixed cost of 118.59 p/u, variable charges of 149.27 p/u and year end charges of 5.07 p/u. Hence, the total power procurement cost from NTPC-TTPS during FY 2016-17 is estimated at Rs.859.81 Crore for the approved drawl of 3150.40 MU.

Captive Generation Plants (CGPs) and Co-generation Plants

196. GRIDCO has proposed not to procure any power from the CGPs and Co-generation Plants during the FY 2016-17 in view of adequate availability of power due to State's share in various existing & up-coming Power Plants in the State. GRIDCO has further indicated that procurement of power from CGPs may be resorted to depending upon exigencies / force majeure conditions. However, the Commission has directed GRIDCO to purchase the available surplus power from CGPs and Co-generation plants at the existing ceiling rate fixed by the Commission for trading purposes after meeting the state demand subject to commercial viability. In case of any revision in CGP price for FY 2016-17 the revised price shall be applicable and any adjustment in revenue due to such price revision will be considered in the truing up exercise.

Power Purchase from Renewable Sources

197. In its ARR application for FY 2016-17, GRIDCO has planned to procure 220 MU from Meenakhi Small Hydro Electric Project and 100 MU from Samal Small Hydro Electric Project @ Rs.3.68 per unit during FY 2016-17. The total

procurement cost of this 320 MU of energy from small hydro sources has been estimated at Rs.117.76 crore.

198. The Commission in its Order dtd.19.05.2011 passed in Case Nos.17 & 24 of 2011 have fixed Rs.3.68 per Kwh (inclusive of 4 Paise per Kwh as trading margin of PTC) towards procurement of power by GRIDCO from PTC in respect of drawal from Lower Kolab & Middle Kolab SHEPs of M/s.MPL. Similarly, the Commission vide its order dated 04.02.2016 passed in Case No. 15/2015 have fixed Rs.3.71 per Kwh (inclusive of 4 Paise per Kwh as trading margin of PTC) towards procurement of power by GRIDCO from PTC in respect of drawal from Samal Barrage SHEP of M/s. OPCL. Earlier the Commission has approved procurement of 220 MU from M/s.MPL and 100 MU from M/s. OPCL by GRIDCO for the ensuing year 2016-17. Accordingly, the Commission approves Rs.118.06 Cr towards procurement of 320 MU of power at the rate of 368.94 P/U from the said small hydel sources during FY 2016-17.
199. The Commission has approved 115.00 MU to be procured from Biomass sources. The rate will be governed by the order of the Commission dtd.15.01.2014 where the Commission has determined the generic tariff for Biomass energy for the control period 2013-14 to 2015-16 and order dtd.01.03.2014 where the tariff for Biomass energy has been re-determined for the previous control period 2010-11 to 2012-13. Accordingly the Commission approves cost of Rs.68.35 crore at the average of 594.30 p/u for procurement of 115.00 MU (100MU from M/s. Shalivahan Green Energy Ltd. @ 596 P/U & 15 MU from M/s. Octant Industries Ltd. @ 583 P/U) from Biomass renewable sources for the purpose of computation of ARR of GRIDCO for the FY 2016-17.
200. GRIDCO has proposed to procure 230 MU of solar energy from different sources at the total cost of Rs.163.30 cr. with an average rate of 709.98 p/u as indicated in the Table below:

**Table -29
Procurement & Cost of Solar Power during FY 2016-17**

Sl. No.	Solar RE Sources	Energy (MU)	Rate (P/U)	Total Cost (Rs. Cr.)
1	8 Nos. of Solar PV projects of 1 MW each under RPSSGP	13	628	8.16
2	20 MW from NVVN through 'New Projects scheme' under JNNSM, Phase-1	34	1065	36.21
3	5 MW through NTPC from Solar PV project at Dadri	8.5	1294	11.00
4	5 MW through NTPC from Solar PV project at Faridabad	8.5	935	7.95
5	5 MW from M/s Alex Green Energy Ltd.	8	700	5.60

Sl. No.	Solar RE Sources	Energy (MU)	Rate (P/U)	Total Cost (Rs. Cr.)
	through OREDA State Scheme			
6	25 MW from M/s ACME Odisha Solar Power Pvt. Ltd.	42	728	30.58
7	70MW through Solar Energy Corporation of India (SECI) under JNNSM, Phase 6II, Batch-I	116	550	63.80
	Total	230	709.98	163.30

201. The Commission has scrutinized the above proposal of GRIDCO along with the energy bills raised by the solar generators in recent past and approves the same for the computation of ARR of GRIDCO for the FY 2016-17. Accordingly, the procurement cost comes to Rs.163.30 crore at an average rate of 709.98 p/u for procurement of total 230 MU of solar power during the FY 2016-17.
202. The Commission has approved a purchase of 665 MU from renewable energy sources (both solar and non-solar) based on the proposal of GRIDCO and availability of such power, which is inadequate to meet the RPO fixed by the Commission for FY 2016-17. In its submission GRIDCO has stated that they have planned to procure renewable energy from different other sources during the ensuing year to fulfill the RPO. Now, the Commission allows a corpus of Rs.30 Cr. which will be utilized in exigency exclusively for purchase of renewable power and shall be recouped from time to time.

IPPs

203. In its application, GRIDCO has submitted that the tariff Order for the IPP of M/s. Vedanta Ltd. (erstwhile Sesa Sterlite Ltd) passed by the Commission for the period from FY 2009-10 to 2013-14 has been challenged before the APTEL and the order is awaited. Further M/s. SSL has filed the MYT petition before the Commission from the FY 2014-15 to 2018-19 which is pending before the Commission. In the meantime, the M/s. Vedanta Ltd. has filed another petition admitted in Case No.21 of 2015 for conversion of its existing IPP having (4X600MW) 2400MW installed capacity to CGP which at present is also pending before the Commission. However, pending disposal of the aforesaid appeal before the ATE and the MYT petition before OERC, GRIDCO in its application has proposed to procure power from M/s. Vedanta Limited @ 233.46 P/U for the FY 2016-17, consisting of fixed charge of 92 P/U and energy charge of 141.46 P/U (i.e. average energy charge of TSTPS from April-15 to Sept-15). M/s. SSL shall provide GRIDCO 25% of the power sent out at the tariff approved by the Commission and 7% of the power sent out variable cost. Hence out of the total energy of 5376 MU GRIDCO has projected 1176 MU @ 141.46 Paisa/Unit i.e. at

variable charge and balance 4200 MU @ 233.46 Paisa/Unit i.e. fixed charges plus variable charges. Accordingly total power procurement cost has been projected at Rs. 1146.89 Crore for procurement of 5376 MU at an average rate of 213.34 P/U during FY 2016-17.

204. The Commission observed that the MYT petition filed by M/s. Vedanta Ltd. (erstwhile Sesa Sterlite Ltd) before the Commission for the FY 2014-15 to 2018-19 is yet to be disposed of. However, in the meantime M/s. Vedanta Limited had filed another petition before the Commission on 17.06.2015 with the prayer to declare its 4x600 MW power plant at Jharsuguda as Captive Power Plant (CGP) or alternatively to declare the Unit-IV of the same power plant as CGP, which was registered as Case No. 21/2015. The Commission vide its order dated 27.01.2016 passed in the said Case has concluded that Unit-II of the 4x600 MW power plant of M/s. Vedanta Ltd. will continue to remain as IPP and connected to the State Grid. Quantum of power supply to GRIDCO towards State entitlement should be 25% (at full cost) and 7% / 5% (at variable cost) of total energy sent out from the power station as per the PPA in force. The Unit-II must remain connected to STU as State dedicated unit and accordingly supply to GRIDCO must be 25%+7%/5% of total energy sent out from the power station or total ex-bus generation from Unit-II whichever is higher. Such quantum of power supply should not be disturbed at any point of time. Unit I, III & IV of the power plant are converted to CGP w.e.f. 01.04.2015. The above conversion is based on the assurance of the Petitioner that in case of low or no generation in Unit-II, the Petitioner shall meet its commitment in the PPA from the CGP units and its pricing shall be as per the relevant IPP Regulations of the Commission. The coal used for generating power for State entitlement shall be linkage coal / captive mines allocated to the Petitioner for State use.
205. In view of the above, for the purpose of computation of ARR of GRIDCO for the FY 2016-17, it will be prudent to provisionally consider the fixed cost as approved by OERC for FY 2013-14 to be applicable for the FY 2016-17. Similarly for energy charge as approved for Talcher Super Thermal Power Station of NTPC in Odisha has been considered provisionally for the IPP of M/s. Vedanta Ltd. In this order the Commission has considered the variable charge of TSTPS-I at 145.97 P/U. In view of the above, the Commission fixes the provisional tariff for the IPP of M/s. Vedanta Ltd. for the FY 2016-17 at 236.22 p/u comprising of the energy charge of 145.97 p/u and fixed charges of 90.25 p/u. The Commission has earlier approved the power procurement of 5039.45 MU from M/s. Vedanta Ltd. for state use, out of which 839.91 MU i.e. 5% of the state share due to non-availability of coal mines will be charged at variable cost and balance procurement of 4199.54 MU will be charged at the full tariff i.e. fixed cost plus

- variable cost. Further, the Commission allows Rs. 9.65 Crore in tariff towards payment of E.D. on normative auxiliary consumption. Accordingly, the power procurement cost comes to Rs.1124.28 crore at an average rate of 223.10 p/u considering the approved quantum of 5039.45 MU to be procured from M/s. Vedanta Ltd. for state use during the FY 2016-17. As stated earlier this figures are provisional and the final tariff will be determined by the Commission after disposal of the petition filed by M/s. Vedanta Ltd. before the Commission.
206. Further, GRIDCO has submitted that CERC vide its Order dated 12.11.2015 in Petition No.77/GT/2013 have pronounced the final tariff order in respect the IPP of M/s. GMR Kamalanga Energy Ltd. (GKEL) till 31st March, 2014 and it shall be operative subject to outcome of the Appeal No.74/2014 filed by GRIDCO before the APTEL, which is now sub-judice. As GKEL has not submitted any information /data regarding the tentative tariff, therefore, considering the principle as adopted by the Commission in the ARR order of FY 2015-16, GRIDCO hereby proposes to procure 1674 MU of energy from GKEL during FY2016-17 at provisional rate of 275 P/U. However, any power supplied beyond 80% PLF shall be procured at an Energy Charge Rate of 141.46 P/U. Thus; the total proposed procurement cost from GKEL for 1674 MU @ 275 P/U (provisionally) is projected to be Rs.460.35 Crore for FY 2016-17.
207. The Commission observed from the submission of GRIDCO that as per PPA with M/s. GMR Kamalanga Energy Ltd., GRIDCO is entitled to procure 25% of the power sent out at the tariff to be determine by the Commission and the power generated in excess of 80% PLF shall be made available to the state at variable cost. The estimation of 1720.03 MU is found to be at 80% PLF. Hence, pending decision of the APTEL in Appeal No.74/2014 filed by GRIDCO, the Commission considers 1720.03 MU i.e. generation at 80% PLF at a provisional rate of 275 p/u as proposed by GRIDCO for the purpose of computation of ARR of GRIDCO for FY 2016-17. However, any excess generation beyond 80% PLF shall be purchased by GRIDCO at the provisional variable cost of 145.97 P/U (i.e. approved average energy charge of TSTPS), which will be taken care of in truing up exercise. Accordingly, the power procurement cost comes to Rs.473.01 crore at the provisional rate of 275 p/u considering the approved quantum of 1720.03 MU to be procured from M/s. GMR Kamalanga Energy Ltd. for state use during the FY 2016-17.
208. Further, GRIDCO has submitted that M/s Jindal India Thermal Power Ltd. (M/s JITPL) has filed an application before the Commission for approval of Energy Charge Rate (ECR) at 180.37 P/kWh for FY2013-14 and 2014-15 respectively in respect of its IPP. M/s. JITPL is supplying power @12% of tentative day ahead declaration citing the fact that allocation of coal block has been cancelled by

Hon'ble Supreme Court of India. However, pending disposal of the application of M/s JITPL, GRIDCO has proposed to procure 1008 MU power from JITPL at a provisional ECR of 141.46 P/U as proposed in case of other IPPs like Vedanta Ltd, GKEL & NBVL subject to approval of final tariff by the Commission. Accordingly, the total proposed procurement cost from JITPL for 1008 MU @141.46 P/ kWh is projected to be Rs.142.59 Crore for FY 2016-17.

209. The Commission has earlier approved for purchase the low cost power of 1007.89 MU from the IPP of M/s JITPL during the FY 2016-17 for State use at variable cost. Pending finalisation of the tariff of such power from M/s JITPL, the Commission considers a provisional rate of 145.97 p/u for the energy to be procured from the IPP of M/s JITPL during the FY 2016-17 as considered for the other IPPs i.e. at the estimated variable charge of TSTPS-I. Accordingly, the power procurement cost comes to Rs.147.12 cr. @ 145.97 p/u for purchase of 1007.89 MU by GRIDCO for State use.
210. Further, GRIDCO has proposed to procure 40 MU from M/s Nava Bharat Ventures Limited (M/s NBVL) during the FY 2016-17 for state use at the provisional Energy Charge Rate of 141.46 P/kWh as proposed in case of other IPPs like Vedanta Ltd, GKEL & JITPL till fixing of final tariff by the Commission with a total cost of Rs. 5.66 Crore. The Commission has earlier approved for purchase of 48.79 MU from the IPP of M/s NBVL during the FY 2016-17 for State use at variable cost. Pending finalisation of the tariff of such power from M/s NBVL, the Commission considers a provisional rate of 145.97 p/u for the energy to be procured from the IPP of M/s NBVL during the FY 2016-17 as considered for the other IPPs i.e. the estimated variable charge of TSTPS-I. Accordingly, the power procurement cost comes to Rs.7.12 cr. @ 145.97 p/u for purchase of 48.79 MU by GRIDCO for State use.
211. Further, in view of anticipated COD declaration of 1st Unit (350MW) of the IPP of M/s. Ind Barath Energy(Utkal) Limited (IBEUL), GRIDCO has proposed to procure 218 MU (@ 12% of energy sent out from the IPP) during FY 2016-17 at Energy Charge Rate of 141.46 P/kWh and thus the procurement cost is projected to be Rs.30.84Crore. The Commission has earlier approved 218 MU for purchase from the IPP of M/s NBVL during the FY 2016-17 for State use at variable cost. Considering the provisional rate of 145.97 p/u, as considered for the other IPPs i.e. the estimated variable charge of TSTPS-I, the Commission estimates the power procurement cost of Rs.31.82 cr. @ 145.97 p/u for purchase of 218 MU by GRIDCO for State use.
212. Thus, the procurement cost of total 8034.16 MU from the above IPPs is Rs.1783.35 cr. at an average rate of 221.97 p/u as shown in the Table below:

Table -30
Power Procurement & Cost from IPPs during FY 2016-17

IPPs	Quantity	Provisional Rate	Cost
	(MU)	(P/U)	(Rs. Crore)
M/s. Vedanta Ltd.	5039.45	223.10	1124.28
M/s GMR Kamalanga Ltd.	1720.03	275.00	473.01
M/s Jindal India Thermal Power Ltd.	1007.89	145.97	147.12
M/s Nava Bharat Ventures Ltd.	48.79	145.97	7.12
M/s. Ind Barath Energy (Utkal) Ltd.	218.00	145.97	31.82
Total	8034.16	221.97	1783.35

213. Pending the finalization of the tariff for the aforesaid IPPs, the Commission considered the above price provisionally only for the purpose of computation of ARR of GRIDCO for the FY 2016-17. However, GRIDCO may make payment of the energy bill of these IPPs after due scrutiny as per the PPA. Further, the Commission directs that deviations/adjustment in revenue, if any, after finalization of tariff shall be accounted for in the truing up exercise, if need arises.

Central Hydro Generating Stations

214. **Chukha:** In its application, GRIDCO had submitted that the procurement cost of power from Chukha for FY 2016-17 has been calculated based on the rate claimed in the bill served to GRIDCO for September, 2015, which comes to 184.00 P/U including trading margin @ 4 paise/unit to be paid to PTC India as Nodal Agency. GRIDCO had, therefore, proposed a rate of energy charges at 189.01 paise/unit for 2016-17 including Central Transmission Loss of 2.65%. Thus, the power purchase cost of 256.00 MU was worked out by GRIDCO to Rs.48.39 crore. However, in its additional submission, GRIDCO has submitted that as per the office memorandum dated 06.01.2016 of the Ministry of Power, Govt. of India and the letter dated 07.01.2016 of the Executive Director (Marketing), M/s. PTC India Ltd., the present subsidy of 45 P/U extended by the Ministry of External Affairs, Govt. of India to the beneficiaries in respect of Chukha HEP is going to be phased out, whereby there will be a reduction in subsidy of 25 P/U in first phase w.e.f. 1st April, 2016 and 20 P/U in the second phase w.e.f. 1st April, 2017. Accordingly, the projected tariff for Chukha HEP w.e.f 01.04.2016 is given as 209 P/U including PTC margin of 4 P/U and that from 01.04.2017, it is going to be 229 P/U. Taking into consideration of the above revised tariff, GRIDCO has projected the power procurement cost from Chukha at Rs. 54.96 crore for procurement of 256.00 MU during FY 2016-17 @ 214.69 P/U including Central Transmission Loss, but excluding transmission charges of PGCIL.

215. The Commission scrutinized the submission of GRIDCO and approves the rate of 213.61 paise/unit considering the central transmission loss @ 2.16% for the power procurement from Chukka for FY 2016-17 as proposed by GRIDCO. So the cost for Chukka power comes to Rs.54.31 crore for the approved drawal of 254.24 MU for FY 2016-17. The details are given in Table below.

Table – 31

	GRIDCO's Proposal for FY 2016-17	Commission's Approval for FY 2016-17
Net Energy Drawal (MU)	256.00	254.24
Energy Charge (P/U)	209.00	209.00
Energy Charge incl. Tr. Loss (P/U)	214.69 (C.T.L. of 2.65%)	213.61 (C.T.L. of 2.16%)
Cost of Chukka Power (Rs. Crore)	54.96	54.31

216. **TALA:** GRIDCO has submitted that the rate of 202 P/U including trading margin @ 4 paise/unit paid to PTC India as Nodal Agency has been considered for estimating the power purchase cost from TALA during the FY 2016-17. This rate of 202 P/U is based on the bills served to GRIDCO w.e.f. 24.11.2011. Considering Central Transmission Loss of 2.65%, the rate of TALA Power comes to 207.50 p/u. Taking the drawl of 141.00 MU, the power purchase cost from TALA HEP comes to Rs.29.26 crore for the FY 2016-17 excluding transmission charges of PGCIL.
217. The average rate per unit of TALA power is worked out by GRIDCO to 206.46 p/u considering central transmission loss of 2.16% for FY 2016-17, which is accepted by the Commission. Hence, the total cost of TALA Power comes to Rs.29.14 crore for the approved drawal of 141.13 MU for FY 2016-17. The details are given in Table below.

Table – 32

	GRIDCO Proposal for 2016-17	Commission's Approval for 2016-17
Net Energy Drawal MU	141.00	141.13
Energy Charge (P/U)	202.00	202.00
Energy Charge incl. Tr.Loss (P/U)	207.50 (C.T.L. of 2.65%)	206.46 (C.T.L. of 2.16%)
Cost of Tala Power (Rs. In Cr.)	29.26	29.14

218. **TEESTA:** GRIDCO has stated that the Energy Charge Rate (ECR) being claimed by NHPC0TEESTA in the present bills is 116.90 P/U. The ECR in case of TEESTA station constitute 50% of the total charges and balance 50% constitute the fixed charges. Thus, the per unit fixed charge for TEESTA station works out to be 116.90 p/u, the total per unit cost being 233.80 p/u. Considering the central sector loss @ 2.65% the proposed rate for TEESTA works out to be 240.16 p/u.

So, the estimated power purchase cost from TEESTA6V HEP comes to Rs.122.48 crore considering the proposed drawl of 510.00 MU for FY 2016-17.

219. After due scrutiny, the Commission observed that as per the latest bill of January, 2016, the Annual Fixed charges of TEESTA-V is Rs. 522.86 crore and accordingly the average rate of TEESTA Power comes to 233.76 p/u considering the saleable energy of 2236.78 MU. Hence, the Commission considers the same provisionally and calculate the average rate per unit of TEESTA power @ 239.23 P/U inclusive of central transmission loss of 2.29% for FY 2016-17. Accordingly, the cost of TEESTA power comes to Rs.122.34 crore for the approved drawal of 511.37 MU during FY 2016-17. The details are given in Table below.

Table – 33

	GRIDCO Proposal for FY 2016-17	Commission's Approval for FY 2016-17
Net Energy Drawal MU	510.00	511.37
Energy Charge (P/U)	233.80	233.76
Energy Charge incl. Tr. Loss (P/U)	240.16 (C.T.L. of 2.65%)	239.23 (C.T.L. of 2.29%)
Cost of Teesta Power (Rs. In Crore)	122.48	122.34

Central Sector Thermal Power Stations:

220. GRIDCO in its ARR filing submitted that the Capacity Charges (Fixed Cost) of respective NTPC Stations are being claimed by NTPC as per the relevant Tariff Orders / Regulations notified by the CERC applicable from time to time. NTPC has filed Petitions before the CERC as per the CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Fixed Cost for its various Generating Stations which is pending before the CERC. However, the Capacity Charges of the relevant NTPC Stations are now being billed on GRIDCO by applying the Fixed Cost already determined by the Central Commission as per the earlier CERC (Terms and Conditions of Tariff) Regulations, 2009 valid for the period from 2009-14, factoring the actual tax rate. Since the Tariff Petitions have already been filed by NTPC before CERC for determination Fixed as well as Variable Cost as per the CERC (Terms and Conditions of Tariff) Regulations, 2014, GRIDCO has considered the revised Fixed Cost as per the Petitions filed before CERC for different NTPC Stations.
221. Accordingly, GRIDCO has projected to pay about Rs.989.40 Crore as Capacity Charge (Fixed Charge) towards its share from NTPC Stations at the availability of 83% irrespective of the drawl from these Stations during FY 2016-17. The apportionment of Fixed Cost has been made as per the share of GRIDCO from Central Thermal Stations. With inclusion of Central Transmission Loss (CTL),

the projected Fixed Cost applicable to GRIDCO for its share of energy drawal from different Stations are shown in the Table below:

Table -34
Fixed Cost proposed by GRIDCO for CGS NTPC –ER Stations for FY 2016-17

Central Thermal Stations	Annual Fixed cost for FY 2013-14 as per CERC Order 2009-14	Annual Fixed cost billed by NTPC as per actual tax rate for the year 15-16 @ 23.399%	Annual Fixed Cost projected by GRIDCO for FY 2016-17 (as per filing made by NTPC)	GRIDCO share	GRIDCO's share of Fixed Cost for FY15-16 at normative availability of 83%	GRIDCO's Proposed drawal for FY16-17 after C.S. Loss	Fixed Cost
	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(%)	(Rs. Cr.)	(MU)	(P/U)
TSTPS-I	590.23	549.24	648.27	31.97	207.25	2121.11	97.71
TSTPS-II	1125.88	1075.16	1174.26	10.00	117.43	1323.54	88.72
FSTPS-I&II	908.76	866.22	1036.84	13.81	143.18	1466.42	97.64
FSTPS-III	586.62	567.54	559.29	16.87	94.37	564.29	167.24
KhSTPS-I	552.84	524.48	602.00	15.40	92.71	835.15	111.01
KhSTPS-II	1270.64	1215.71	1226.90	2.24	27.46	224.48	122.33
Barh-II (Unit-IV & V)	* 880.49	878.65	** 2076.00	14.79	307.00	1302.24	235.75
TOTAL	5915.46	5677.01	7323.57		989.40	7837.22	126.24

* Rs. 880.49 Cr. has been derived on 83% of Annual Fixed cost filed by NTPC before CERC for Unit-IV only.

** Rs. 2076.00 Cr. has been considered as per filing made by NTPC for both Unit-IV & V on commercial operation.

222. **Fixed Cost:** Tariff of Central Thermal Generating Stations is governed by CERC tariff notifications. Though NTPC have filed Petitions before the CERC as per the CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Fixed as well as Variable Cost for its Generating Stations, CERC have not yet issued the tariff Orders. Further, the Capacity Charges of the relevant NTPC Stations are now being billed on GRIDCO based on the Fixed Cost determined by the Central Commission as per the previous CERC (Terms and Conditions of Tariff) Regulations, 2009, factoring the actual tax rate applicable to NTPC for respective years. However, GRIDCO in its ARR Application for the FY 2016-17 has considered the Fixed Cost as per the filing of NTPC based on the new CERC Tariff Regulations, 2014. The Commission scrutinized the proposal of GRIDCO and observed that the fixed cost for the Central Thermal Generating Stations is yet to be determined by CERC for the period 2014-19. The annual fixed cost filed by NTPC for its generating station before CERC as per Regulation, 2014 is much higher than the approved fixed cost as per Regulation, 2009. The revised fixed cost presently billed by applying the actual tax rate applicable to NTPC for respective years may also vary for the ensuing year. Therefore, the Commission consider the fixed cost of NTPC-ER stations which is already approved for FY 2013-14 as per CERC Regulation, 2009-2014 to calculate the power purchase cost

of central sector thermal stations provisionally based on the latest share allocation to the state by MoP as is shown in table below:

Table – 35
Fixed Cost considered by the Commission for Central Thermal Stations for 2016-17

Name of Power Station	Fixed cost approved by CERC (Rs. In Cr.)	GRIDCO share estimated by the Commission (%)	GRIDCO's proposal for its share of Fixed Cost (Rs. In Cr.)	GRIDCO's proposal including Central Tr. Loss (P/U)	Commission's approval of Fixed Cost for 2016-17 (Rs. In Cr.)	Estimated energy Drawal after Central Tr. Loss (MU)	Commission's approval including Central Tr. Loss (P/U)
TSTPS -I	590.412	32.344	207.25	97.71	190.96	2157.27	88.52
TSTPS -II	1125.881	10.000	117.43	88.72	112.59	1327.24	84.83
FSTPS-I&II	908.761	14.184	143.18	97.64	128.89	1511.02	85.30
FSTPS-III	586.620	17.150	94.37	167.24	100.60	575.33	174.86
KhSTPS - I	552.844	15.775	92.71	111.01	87.21	857.36	101.72
KhSTPS-II	1270.638	2.621	27.46	122.33	33.30	263.42	126.41

223. **Energy Charge Rate (ECR):** GRIDCO stated that as per the CERC Tariff Regulation, 2009-14, the cost of Secondary Fuel Oil (SFO) was included in fixed cost of the Thermal Central Generating Stations (CGSs). However, as per the CERC Tariff Regulations, 2014-19, it will now be included in the Energy Charges of CGS. However, at present, NTPC is raising bills as per the earlier Regulations, 2009-14. Since NTPC has already filed Tariff Petition before the CERC based on the new Tariff Regulations, 2014-19, GRIDCO in its ARR application has projected the ECRs as filed by NTPC before the CERC based on the new Tariff Regulations, 2014-19 and adding the applicable Central Sector Transmission Loss as shown in the table below:

Table – 36
Energy Charge Rate (ECR) of NTPC Stations for FY 2016-17 Projected by GRIDCO

Central Thermal Stations	Weighted Average ECR of 1 st six months of FY 2015-16 (Apr.'15 to Sept.'15)	Energy Charge Rate (ECR) of NTPC Stations recasted by GRIDCO as per the New Regulation 2014-19	Energy Charge Rate as per the Petition filed by NTPC for the Tariff period 2016-17	Projection for FY 2016-17 including Central Sector Loss (Considering the figures mentioned in the Tariff Petition filed by NTPC)
	(P/U)	(P/U)	(P/U)	(P/U)
TSTPS-I	141.99	140.34	160.511	165.78
TSTPS-II	140.46	138.88	160.511	166.21
FSTPS-I&II	293.65	289.36	293.083	300.29
FSTPS-III	294.00	293.82	294.873	302.12
KhSTPS-I	267.92	265.80	295.141	302.49
KhSTPS-II	246.60	247.62	282.08	289.11
Barh STPS-II (Unit-IV)	399.13	399.13	300.182	308.35
Barh STPS-II (Unit-V)			300.182	308.35

224. Actual bills submitted by NTPC to GRIDCO are scrutinized and it is observed that the ECR has been decreased as compare to the approval for FY 2015-16. The details Price of Coal , GCV & ECR as per bill served by NTPC to GRIDCO for the period from April, 2015 to January, 2016 are given in the table below:

Table-37
Price of Coal & GCV of CGS

MONTH	FSTPS – I & II			FSTPS-III	KSTPS-I			KSTPS-II	TSTPS-I			TSTPS-II
	Cost of Coal (Rs./MT)	GCV of Coal Kcal/Kg	ECR Rs./KWH	ECR Rs./KWH	Cost of Coal (Rs./MT)	GCV of Coal Kcal/Kg	ECR Rs./KWH	ECR Rs./KWH	Cost of Coal (Rs./MT)	GCV of Coal Kcal/Kg	ECR Rs./KWH	ECR Rs./KWH
Apr-15	3,449.8	3,153.0	2.80	2.81	2,474.0	2,775.0	2.39	2.28	1,991.4	3,396.0	1.47	1.47
May-15	3,424.5	3,237.0	2.71	2.72	2,450.8	2,871.0	2.29	2.19	1,552.1	3,301.0	1.18	1.18
Jun-15	3,375.8	3,297.0	2.62	2.64	2,454.0	2,820.0	2.33	2.28	1,896.8	3,128.0	1.52	1.52
Jul-15	3,549.7	3,312.0	2.74	2.76	2,513.0	2,757.0	2.44	2.28	1,778.9	3,101.0	1.44	1.44
Aug-15	3,963.6	3,428.0	2.96	3.00	2,962.7	2,867.0	2.77	2.60	1,760.4	3,263.6	1.35	1.35
Sep-15	4,523.5	3,550.0	3.26	3.29	2,497.8	2,981.0	2.25	2.14	1,631.8	3,187.9	1.28	1.29
Oct-15	4,237.7	3,565.0	3.04	3.06	2,856.5	3,032.0	2.53	2.42	1,518.0	3,234.5	1.18	1.18
Nov-15	3,848.6	3,567.0	2.76	2.78	2,759.0	2,710.0	2.73	2.62	1,514.3	3,036.0	1.25	1.25
Dec-15	2,904.2	3,454.0	2.15	2.17	2,831.4	2,950.0	2.57	2.50	1,588.0	3,057.0	1.30	1.30
Jan-16	3,673.5	3,555.0	2.64	2.66	2,445.9	3,072.0	2.14	2.04	1,552.9	3,042.5	1.28	1.28
Avg from 4/15 to 1/16	3,695.1	3,411.8	2.77	2.79	2,624.5	2,883.5	2.44	2.33	1,678.5	3,174.8	1.33	1.33

225. From the above table it is found that the ECR for FSTPS-I & II are varied from 215.00 p/u to 326.00 p/u, for FSTPS-III it varies from 217.00 p/u to 329.00 p/u, for KhSTPS-I, it varies from 214.00 p/u to 277.00 p/u, for KhSTPS-II, it varies from 204.00 p/u to 262.00 p/u and for TSTPS-I & II, it varies from 118.00 p/u to 152.00 p/u for the period from April, 2015 to January, 2016. It is observed that the ECRs of different central generating stations have not followed a particular pattern in their variations. Therefore, reaching a conclusion on likely ECRs of different power stations for the ensuing year is difficult. The comparisons of ECRs of different years are given below.

Table – 38
Energy Charge Rate (ECR) in Paise /Unit

	Approval for 2015-16	GRIDCO Proposal for 2016-17 (as per the Petition filed by NTPC)	Avg. actual for 2015-16 upto Jan.,16	Max ECR from 04/15 to 01/16	Min ECR from 04/15 to 01/16	ECR for Jan., 2016
	ECR (P/U)	ECR (P/U)	ECR (P/U)	ECR (P/U)	ECR (P/U)	ECR (P/U)
TSTPS-I		160.51				128.10
TSTPS-II	147.10	160.51	132.70	152.00	117.80	128.30
FSTPS- I & II	304.29	293.08	277.10	326.10	215.20	264.40
FSTPS- III	296.90	294.87	279.20	328.50	216.90	266.30
KHSTPS-I	266.44	295.14	244.10	277.10	224.70	213.50
KHSTPS-II	251.51	282.08	233.00	261.50	213.70	203.90

226. The wide variation in ECR in recent times may be due to use of different types of coal used by NTPC in its plants for power generation. Hence, the actual ECR of the Central Thermal Power Stations for the ensuing year is unpredictable. Therefore, the Commission, for the purpose of computation of ARR of GRIDCO, estimated the ECR of the Central Thermal Power Stations for FY 2016-17 with an escalation of 10% over the average of actual ECR of the last ten months i.e. from April, 2015 to January, 2016, as indicated in Table below.

Table – 39
Energy Charge Rate (ECR) of CGSs approved for 2016-17

(Paise/Unit)

Stations	GRIDCO's Proposal for 2016-17 (as per the Petition filed by NTPC)	Actual Average ECR for the period from April, 2015 to Jan.,16 (excluding central Tr. Loss)	Approval of the Commission considering 10% escalation over the Avg. of actual ECR from April, 2015 to Jan, 2016 (excluding central Tr. Loss)	Approval of the Commission including central Tr. Loss
TSTPS-I	160.51	132.70	145.97	149.97
TSTPS 6II	160.51	132.70	145.97	150.73
FSTPS- I & II	293.08	277.10	304.81	311.32
FSTPS 6 III	294.87	279.20	307.12	313.68
KHSTPS 6I	295.14	244.10	268.51	274.58
KHSTPS 6 II	282.08	233.00	256.30	262.09

227. In case of any variation in ECR during 2016-17 over and above the rate approved by the Commission, the same may be recovered in accordance with the procedure and guidelines outlined in Appendix-7 read with the Regulations 60 of the OERC (Conduct of Business) Regulations, 2004. This would be over and above the normal tariff applicable. Alternatively such additional expenditure would be considered while determining the tariff for FY 2017-18.
228. **Year-end Adjustment Charges (YEA):** GRIDCO had proposed the year-end adjustment charges of central generating stations for FY 2016-17 to the tune of Rs.15.52 crore in line with the actual for FY 2014-15 and FY 2015-16 (April to Sept 15) along with the projected Central Sector loss without considering FPA of secondary fuel oil.
229. The Commission scrutinized the above proposal of GRIDCO and accepted the Year End Charges of Rs.9.34 Crore for the FY 2016-17 which is at the level of the actual Year End Charges for the FY 2014-15. However, for Electricity Duty, the Commission approved Rs.6.57 Crore considering normative auxiliary consumption for FY 2016-17 and the Commission does not allow incentive due to consideration of normative generation. Accordingly, the year-end charges

approved by the Commission including central transmission loss are given in the table below.

Table – 40
Year End Charges Approved for the FY 2016-17

Central Generating Stations	Water/ Pollution Cess (Rs. Cr.)	Electricity Duty (Rs. Cr.)	SOC & MOC charges (Rs. Cr.)	Total (Rs. Cr.)	Estimated energy Drawal including Central Tr. Loss (MU)	Rate excluding loss (P/U)	GRIDCO Proposal including loss (P/U)
TSTPS óI	0.10	4.06	0.49	4.65	2216.45	2.10	2.19
TSTPS-II	0.06	2.51	0.27	2.84	1370.55	2.07	6.84
FSTPS- I & II	0.96	0.00	0.31	1.27	1543.28	0.82	0.88
FSTPS ó III	0.00	0.00	0.19	0.19	587.61	0.32	0.35
KhSTPS óI	0.06	0.00	0.21	0.27	876.74	0.31	0.33
KhSTPS óII	0.01	0.00	0.04	0.05	269.37	0.19	0.24

Transmission Charge for PGCIL System

230. GRIDCO in its ARR application submitted that Transmission charges of PGCIL are being determined applying the norms and principles laid down by CERC from time to time. CERC vide its Order dtd.15.06.2010 have notified a Regulation known as CERC (Sharing of Inter State Transmission Charges and Losses) Regulation, 2010 which has been effective from 01.07.2011. The said Regulation has been amended vide CERC notifications dt.24.11.2011, 28.03.2012 and 01.04.2015 respectively. According to this Regulation, PGCIL Charges shall be levied applying a new methodology known as Hybrid Methodology, which shall be sensitive to distance, direction as well as quantum of power flow using load flow studies. The sharing of Inter-State Transmission System (ISTS) Charges shall be based on the technical and commercial information provided by various customers to the evaluating agency known as Implementing Agency which shall calculate the point of connection rates for every customer (such as generator or demand customer) using the aforesaid method. The Point of Connection (PoC) rates shall be on Rs/MW/Month basis. Subsequently, CERC vide its Order dtd.14.07.2015 have furnished the Slab PoC Rates for the period May to June, 2015 taking into consideration the 3rd Amendment Regulations.
231. Accordingly, GRIDCO has received first part of the Bill (Bill #1) towards recovery of charges for use of transmission assets of ISTS licensees amounting to Rs.27.63 Crore for the month of April 15 for the approved Long Term Access (LTA) of 1223.72 MW. Based on the Weighted Average of Withdrawal Charges

and Reliability Support Charges applicable for Odisha from May¹⁵ to Sept¹⁵, and considering an escalation of 10% on Account of Asset Addition, GRIDCO proposes to pay an amount of Rs.253.48 Crore for the ensuing year 2016-17.

232. GRIDCO has not been receiving any Bill towards the second part of Bill (Bill #2) due to absence of additional Medium Term Open Access. The third part of the Bill (Bill #3), which is basically quarterly adjustment in nature, has been received by GRIDCO on Quarterly basis. GRIDCO has received the bills on this account amounting to Rs.13.88 Crore for the period from Jan,15 to Mar,15 and Rs. (-) 6.94Crore for the period from Apr¹⁵ to Jun¹⁵. The (-) figure is due to adjustment towards revision of Bill #1 for the month of May¹⁵ & Jun¹⁵ as per the 3rd Amendment to PoC Regulations. An amount of Rs 7.54Cr each for May¹⁵ and Jun¹⁵ has been refunded to GRIDCO after the said revision and the same has been adjusted in the said Bill #3. Considering the above, Bill #3 for the period Apr¹⁵ to Jun¹⁵ apparently comes out to be Rs.8.14 Cr. Accordingly, GRIDCO proposes Rs.44.02 Crore towards Bill #3 for the ensuing year 2016-17. PGCIL is also furnishing the deviation bills (Bill #4) as per the provision mentioned in the Regulation which is based on deviation from the approved withdrawal. However, considering the bills received during the last six months and prorating the same for a year, GRIDCO proposes an amount of Rs. 0.26 Crore payable towards Bill #4 for the ensuing year FY 2016-17.
233. Besides the above, GRIDCO has paid Rs.3.21 Crore towards ULDC and Communication Charges for the period from Apr¹⁵ to Sep¹⁵. Basing on this and prorating the same, GRIDCO. Proposes to pay an amount of Rs.6.42 Crore for the ensuing year i.e. FY 2016-17. However, GRIDCO has received an amount of Rs. 17.58 Crore towards Short-Term Open Access (STOA) Charges for the period from April,15 to Sept,15. Accordingly, GRIDCO proposes Rs.35.16 Crore to be received on account of STOA Charges for the ensuing year 2016-17.
234. With the above submission, GRIDCO has estimated the net amount of Rs.269.02 Crore payable towards Transmission Charges for the ensuing year FY 2016-17. Considering energy drawal of 10,006.84 MU and after allowing 2.83% of CTU loss, the per unit PGCIL Transmission Charge including loss has been worked out by GRIDCO to 27.67 P/U.
235. The Commission observed that the tariff for central transmission system is fixed by the principles and norms lay down by the CERC from time to time. Hence, the Commission feels it prudent to provisionally consider the PGCIL transmission charges in line with the CERC Regulations for the purpose of computation of the ARR of GRIDCO for FY 2016-17. The Commission scrutinized the submission of GRIDCO and estimated the PoC charges towards Bill #1 at Rs.253.48 crore based on the average of the charges paid from May¹⁵ to Dec.¹⁵ as per CERC

Orders for the FY 2015-16 and pro-rating the same for the whole year and also considering an escalation of 10% on account of asset addition. Hence the Commission provisionally approves the same amount of Rs.253.48 crore towards Bill #1 for the ensuing year 2016-17. Similarly, the Commission scrutinized the Bill #3 raised quarterly by PGCIL for the period from April 15 to Sept 15 and pro-rating the same for the whole year the amount comes to Rs.31.22 crore. The Commission provisionally approves the same for the ensuing year 2016-17. The Commission scrutinized the Bill #4 towards Deviation charges of PGCIL for the period from April 15 to Dec 15 and pro-rating the same for the whole year the amounts comes to Rs.0.47 crore. The Commission provisionally approves the same for the ensuing year 2016-17. Further the Bill #2 has not yet been raised by PGCIL to GRIDCO due to absence of additional medium-term Open Access. Accordingly, the Commission provisionally approves the total amount of Rs.285.16 crore towards transmission charges of PGCIL for the FY 2016-17 on account of Bill #1, Bill #3 and Bill #4 against Rs.297.76 crore proposed by GRIDCO.

236. The Commission also scrutinized the ULDC & Communication Charges as proposed by GRIDCO in the ARR for FY 2016-17 and provisionally approves Rs.6.42 crore for pass through in the tariff as proposed by GRIDCO. Further the Commission observed that GRIDCO has collected an amount of Rs.23.37 Crore from the Short-term OA Customers during April 15 to Dec 15. Prorating the same for the whole year (i.e. 12 months), the amount comes to Rs.31.15 Crore. Hence the Commission provisionally considers the amount of Rs.31.15 crore towards collection from Short-term Open Access Customers during the ensuing year 2016-17 and deducts of the same from the total Transmission charges.
237. Taking all the above costs into account the Commission approves the PGCIL transmission charge payable by GRIDCO including the average Central Sector Loss of 2.45% for the year 2016-17 at 29.21 P/U. The details of total cost towards PGCIL transmission charges is indicated in the table below:

Table – 41
PGCIL Transmission Charges for FY 2016-17

Particulars	GRIDCO's Proposal	Commission's Approval
Transmission charge payable by GRIDCO for 2016-17 towards Bill#1 (Rs. Cr.)	253.48	253.48
Deviation charges proposed towards bill #4 (Rs. Cr.)	0.26	0.47
Year End Charges proposed towards Bill #3 (Rs. Cr.)	44.02	31.22
Total (Rs. Cr.)	297.76	285.16
ULD and Communication Charges (Rs. Cr.)	6.42	6.42

Particulars	GRIDCO's Proposal	Commission's Approval
Less: allocable to short term customers(Rs. Cr.)	(-) 35.16	(-) 31.15
Net amount payable by GRIDCO towards Transmission Charges (Rs. Cr.)	269.02	260.43
Energy drawal by GRIDCO before Central Sector Loss (MU)	10006.84	9129.14 (considering full share of GRIDCO from central sector)
PGCIL Transmission Charge (P/U)	26.88	28.53
Weighted Average Central Sector Transmission Loss %	2.83%	2.45%
PGCIL Transmission Charge including loss (P/U)	27.67	29.24

238. Taking all the above cost into account the summary of power purchase from Central Thermal Generating Stations and its cost for GRIDCO estimated for FY 2016-17 is given in the table below:

Table – 42

Sl. No.	Generators	Estimated Energy (MU)	Fixed Cost (Rs. In Crore)	Fixed Cost (P/U)	Energy Charge Rate (P/U)	Other Cost (P/U)	Total Rate (P/U)	TOTAL Cost (Rs Cr)
1	TSTPS St-I	2157.27	190.96	88.52	149.97	2.15	240.65	519.14
2	TSTPS St-II	1327.24	112.59	84.83	150.73	2.14	237.70	315.49
3	FSTPS I & II	1511.02	128.89	85.30	311.32	0.84	397.46	128.89*
4	FSTPS III	575.33	100.60	174.86	313.68	0.33	488.87	100.60*
5	KhTPS St-I	857.36	87.21	101.72	274.58	0.31	376.61	154.67**
6	KhTPS St-II	263.42	33.30	126.41	262.09	0.19	388.69	102.39
NB:	(i) The rates include Central Transmission Loss. (ii) * Not consider for State drawal. Full fixed cost is allowed. (iii) ** 245.40 MU only is considered for State drawal. Full fixed cost is allowed.							

239. Further, GRIDCO has projected an amount of Rs.2.93 crore towards payment of ERLDC fees and charges consisting of System Operation Charges (SOC) and Market Operation Charges (MOC) for the FY 2016-17. GRIDCO submitted that CERC vide its order dtd.18.05.2015 had framed Regulation on CERC (Fees and Charges of Regional Load Despatch Centres & Other Related Matters) Regulations, 2015 which is applicable during the control period from 01.04.2014 to 31.03.2019, based on which ERLDC shall levy and collect fees and charges from the users towards its SOC and MOC. GRIDCO being the *State Designated Entity* under the *Single Buyer Model* has the Odisha Share allocation from the Central Sector Generating Stations in its favour and thus comes under the category of Distribution Utility/ Buyers and hence, liable to pay the SOC & MOC claimed by the ERLDC. The total projected SOC & MOC payable by GRIDCO to

ERLDC is calculated as Rs.3.10 crore for the ensuing year 2016-17. The Commission approves the same and pass through in the tariff.

240. GRIDCO's proposal for the cost of power purchase from various generating stations and the Commission's approval based on least cost power purchase for the FY 2016-17 are given in the table below:

Table – 43
GRIDCO's Proposal & Commission's Approval for FY 2016-17

Generators	GRIDCO's PROPOSAL			COMMISSION's APPROVAL		
	Energy	Total Rate	Total cost	Energy	Total Rate	Total cost
	MU	P/U	Rs.in Cr.	MU	P/U	Rs.in Cr.
HYDRO (OLD)	3,593.35	164.70	591.81	3,676.86	90.41	332.41
Indravati	1,922.96	108.12	207.91	1,942.38	75.36	146.37
Machakund	262.50	47.92	12.58	262.50	47.92	12.58
Total Hydro	5,778.81	140.57	812.30	5,881.74	83.54	491.36
OPGC	2,928.42	216.90	635.18	2,861.50	190.26	544.43
TTPS (NTPC)	3,150.40	305.51	962.49	3,150.40	272.92	859.81
IPPs	8,316.00	214.81	1,786.33	8034.16	221.97	1783.35
Total CGPs	-					
Renewable						
Total Small Hydro	320.00	368.00	117.76	320.00	368.94	118.06
Biomass Energy	160.00	573.50	91.76	115.00	594.30	68.35
Solar Energy	230.00	710.00	163.30	230.00	709.98	163.30
TOTAL STATE	20,883.63	218.79	4,569.12	20,592.80	195.63	4,028.66
CHUKHA	256.00	242.34	62.04	254.24	213.61	54.31
Tala HPS	141.00	235.18	33.16	141.13	206.46	29.14
Teesta-V	510.00	267.84	136.60	511.37	239.23	122.34
Total Central Hydro	907.00	255.57	231.80	906.75	226.95	205.79
TSTPS St-I	2,121.11	293.35	622.23	2,157.27	240.65	519.14
TSTPS St-II	1,323.54	289.44	383.08	1,327.24	237.70	315.49
FSTPS I & II	1,466.42	426.48	625.40		397.46	128.89
FSTPS III	564.29	497.39	280.67		488.87	100.60
KhTPS St-I	835.15	441.50	368.72	245.40	376.61	154.67*
KhTPS St-II	224.48	439.37	98.63	263.42	388.69	102.39
Barh STPS ó I & II	1,302.24	571.88	744.72	-	-	-
Total Central Thermal	7,837.23	398.54	3,123.45	3,993.32	330.85	1,321.19
Total Central Sector	8,744.23	383.71	3,355.25	4,900.07	311.62	1,526.97
From other sources						
PGCIL Tr Charge						260.43
ERLDC Charges			2.93		0.63	3.10
Additional Purchase of RE						30.00
TOTAL GRIDCO	29,627.86	267.56	7,927.30	25,492.87	229.44	5,849.16
Power Banking Inflow	153.36					
Power Banking Outflow	633.78					
TOTAL	29,147.44	271.97	7,927.30	25,492.87	229.44	5,849.16

NB: * 245.40 MU is considered for State drawal. Full fixed cost is allowed.

Rebate for Prompt Payment from the Generators

241. 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 @ 1.25% per month is payable by GRIDCO to the generators.
242. 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 DISCOMs for payment through L.C.

Pass through of Arrear Power Purchase Dues

243. GRIDCO has proposed expenses of Rs.477.90 crore incurred/to be incurred till 2016-17 as a pass through in the ARR of 2016-17. The details of proposed expenses claimed by GRIDCO as a pass through is given hereunder.

Arrear payment to NTPC in respect of TTPS:

244. GRIDCO has submitted that CERC vide its Order dated 15.05.2014 in Petition No. 304 of 2009 has pronounced the Final Tariff Order in respect of TTPS, wherein the Annual Fixed Charges for the FY 2009-10 to 2013-14 has been revised. Based on the said Order, NTPC-TTPS had raised the Arrear Bill for an amount of Rs.740.7249 Crore (i.e. Principal of Rs.564.5170 Crore + interest of Rs.176.2079 Crore) in June-2014 pertaining to the period 2009-10 to 2013-14 to be paid in 6 equal monthly installments. However, after discussion with NTPC, the installment period has been extended to 18 months, but NTPC charged 13.36% interest on the arrear amount till be liquidation of the entire arrear. The interest amount claimed by NTPC on this account is Rs.28.85 crore. Based on the submission made by GRIDCO the Commission had allowed the total arrear dues as a pass through in the ARR for FY 2015-16. Accordingly, GRIDCO had already paid an amount of Rs.329 Crore till December, 2014, the another sum of Rs.300 crore on 26.03.2015 and the balance amount of Rs.111.55 crore was paid in three installments by June, 2015. However, as per the direction of the Commission GRIDCO has requested NTPC to waive the claimed interest amount of Rs.28.85 crore, but NTPC did not accede to the request of GRIDCO.
245. Besides above, GRIDCO has submitted that at present NTPC-TTPS is claiming the monthly Fixed Charges @ Rs.373.5929 Crore provisionally (i.e. Annual Fixed Charges approved for FY 2013-14 vide CERC Order dated 15.05.2014). However, pursuant to the CERC (Terms and Conditions of Tariff) Regulations, 2014, NTPC in a fresh petition filed before the CERC in the matter of

determination of tariff for the Control Period from 2014-19 in respect of TTPS, applied for approval of AFC in excess of Rs.373.593 Crore i.e. for an amount of Rs.377.52 Crore for FY 2014-15, Rs.398.211 Crore for FY 2015-16 and Rs. 422.527 Crore for FY 2016-17. The Application of NTPC is pending before the CERC for disposal. Due to such application of NTPC before CERC, GRIDCO is burdened additionally to the extent of differential AFC of Rs.28.55 Crore for the last two years (i.e. for FY 2014-15 & FY 2015-16) which is over and above the prevailing AFC of Rs.373.593 Crore. The additional AFC burden for the entire Tariff period of 5 years from FY 2014-15 to FY 2018-19, is calculated as Rs.235.258 Crore as given in Table below which also includes Rs.28.55 Crore of additional AFC for two years from FY 2014-15 to FY 2015-16.

Table – 44
Fixed Cost Arrears of TTPS (NTPC)

	2014-15	2015-16	2016-17	2017-18	2018-19	TOTAL
F.C. Billed by NTPC provisionally (Rs. Cr.)i.e. @ AFC for FY:14-15	373.593	373.593	373.593	373.593	373.593	1867.96
F.C due by NTPC as per filling before CERC (Rs. In Cr)	377.52	398.211	422.527	443.316	461.646	2103.22
Differential amount to be paid by GRIDCO to NTPC (Rs. Cr.)	3.9298	24.6182	48.9339	69.7233	88.0531	235.258
Additional AFC Burden calculated for 2 years from FY 2014-15 to FY 2015-16	28.55					

246. In view of the above, GRIDCO has prayed the Commission to allow Rs.28.55 Crore (i.e. Rs.3.9298 Crore +Rs.24.6182Crore) as pass through of differential arrear against FY 2014-15 and 2015-16 in respect of NTPC-TTPS in the ARR & BSP for FY 2016-17 subject to decision of Hon'ble Odisha High Court and APTEL as the matter has been appealed in these Forums by GRIDCO.
247. The Commission observed that GRIDCO has filed an appeal before APTEL, New Delhi against the CERC Tariff Order dated 15.05.2014 passed in Petition No.304 of 2009 which has been admitted as Appeal No.180 of 2014. Similarly, GRIDCO has also filed a Writ Petition before Hon'ble High Court of Orissa against the CERC Tariff Regulation, 2009 in the matter of high normative O & M expenditures and relaxed norms of operation of Thermal Power Plant of TTPS. Both the petitions of GRIDCO are now sub-judice before the respective Forums. Therefore, at present the Commission does not allow Rs.28.55 Crore of differential arrear against FY 2014-15 and 2015-16 in respect of NTPC-TTPS as pass through in the ARR & BSP of GRIDCO for FY 2016-17. However, it may be considered by the Commission in the ARR for the future years after due scrutiny subject to outcome of the decision of the Hon'ble High Court of Orissa. Further, regarding the interest of Rs.28.85crore as proposed by GRIDCO towards

interest Charges, the Commission advises GRIDCO to take up matter with NTPC again at appropriate level to waive this amount and should plead before CERC for early decision on fixed cost and exemption of interest component for the revised fixed cost.

Arrear payment to NTPC in respect of Barh STPS-II

248. GRIDCO has submitted that the Commission did not consider the energy and procurement cost towards purchase of power from Barh STPS-II (UNIT-IV) in the approval of ARR & BSP for FY 2015-16 stating that steps ought to be taken for surrender of such costly power. Accordingly, Government of Odisha have requested GoI, MoP for de-allocation of power Odisha share from Barh STPS of NTPC and pursuant to such request, Ministry of Power, Government of India notified for such de-allocation seeking interest from other States to avail such power so that suitable reallocation could be considered. However, till now none of the States has expressed willingness to purchase such surrendered power from Barh Station. In view of above, GRIDCO is entirely bearing the financial burden towards entitlement of power from Barh-II (Unit-IV) Station. GRIDCO has already paid an amount of Rs.167.14 Crore from November 14 to September 15 consisting of Capacity Charges (Rs.111.76 Cr.), Energy Charges (Rs.55.28 Cr.), RLDC Charges (Rs.0.09 Cr.) and Water Cess (Rs. 0.01 Cr.). Since, GRIDCO has paid this amount of Rs.167.14 Crore and de-allocation is yet to be effected by Ministry of Power, Govt. of India, GRIDCO had prayed the Commission to allow the same as pass through in the ARR for FY 2016-17. Considering the above proposal of GRIDCO, the Commission allowed the amount of Rs.167.14 crore towards arrear dues of Barh STPS-II of NTPC in the ARR of GRIDCO for the FY 2016-17.

Arrear payment in respect of TEESTA-V HEP

249. GRIDCO has submitted that NHPC-TEESTA, through supplementary bills relating to revision of FERV for FY 2014-15 has raised additional arrears of Rs.8.231 Crore and Deferred Tax liability of Rs.0.447 Crore and also Deferred Tax liability and Charge of Rs. 0.203 Crore towards PAFY etc., total amounting to Rs.8.881 Crore as given in the table below. Accordingly, GRIDCO has prayed the Commission to allow the same as pass through in the ARR & BSP for FY 2016-17.

Table- 45

(Rs. In Crore)

SL. No.	Invoice No.	Particulars	Arrear Billed
1	NH/GRIDCO/227 dtd.29.06.2015	Suppl. Bills towards revision of FERV for FY 2014-15	8.231
2	NH/GRIDCO/232 dtd.16.10.2015	Deferred Tax Revision for FY 2014-15	0.447
3	NH/GRIDCO/233 dtd. 21.10.2015	Charge in PAFY for FY 2014-15	0.203
			Total 8.881

250. After scrutiny of the proposal of GRIDCO, the Commission allows the same as pass through in the ARR of GRIDCO for FY 2016-17.

Arrear Payment of M/s. Vedanta Ltd. (erstwhile Sesa Sterlite Ltd):

251. GRIDCO has submitted that they have already paid Rs.164.00 Crore towards power purchase dues of M/s. Vedanta Limited (erstwhile Sesa Sterlite Ltd), Jharsuguda for the year 2010-11 to FY 2013-14 as per Interim Orders dated 28.03.2014 and 29.11.2014 of Hon'ble APTEL in Appeal No. 25/2014 and 279/2014, under protest. The matter continues to be sub-judice. Since, the arrear has already been paid by GRIDCO by 07.11.2015 in six installments under protest and without pre-judice to its rights, GRIDCO has requested for pass through of this amount in the ARR & BSP for FY 2016-17. Further, GRIDCO in its additional submission has stated that the IPP of M/s. Vedanta Ltd. (Formerly, M/s. Sesa Sterlite Ltd.), Jharsuguda have submitted an invoice dated 29.04.2015 for payment of differential coal cost for FY 2013-14 amounting to Rs.37,18,99,489/- duly certified by the statutory auditor. After detailed verification of the said certified / pre-audited claim, GRIDCO has provisionally accepted an amount of Rs. 36,90,06,350/- for payment to the IPP subject to signing of Minutes of Meeting (MoM) dated 26.12.2015. GRIDCO expected that the MoM shall be signed shortly and the above payment shall be released by it. Therefore, GRIDCO prayed the Commission to allow the above sum of Rs.36,90,06,350/- as pass through in favour of GRIDCO in the ARR & BSP for FY 2016-17.
252. The Commission observed that GRIDCO has already paid the amount of Rs. 164.00 Crore to M/s. Vedanta Ltd. towards arrear power purchase dues under protest as per the interim order of the Hon'ble APTEL. Therefore, the Commission considers the submission of GRIDCO and allows Rs. 164.00 Crore towards arrear power purchase dues of M/s. Vedanta Ltd. as pass through in the ARR of GRIDCO for FY 2016-17. In case, the matter subjudice before the Hon'ble APTEL is decided ultimately in favour of GRIDCO then the amount paid in excess shall be true up in GRIDCO account in the subsequent year. Further, regarding the claim of Rs. 36.90 Crore towards differential coal cost of M/s

Vedanta Ltd., the Commission observed that GRIDCO has accepted the said amount for payment to M/s. Vedanta Ltd. after verification of the documents. Therefore, the Commission allows the said amount of Rs. 36.90 Crore as pass through in the ARR for FY 2016-17 towards differential coal cost of M/s. Vedanta Ltd., if due.

Arrear towards Reactive Energy Charges

253. GRIDCO in its submission has stated that it has already paid Rs.0.87 Crore to ER Reactive Pool Account towards Reactive Energy Charges during the period from April 15 upto 8th November 15 and prayed the Commission to consider the same as pass through in the ARR & BSP for FY 2016-17. After scrutiny, the Commission allows the same as pass through in the ARR of GRIDCO for FY 2016-17.

Arrear towards half yearly Fuel Price Adjustment (FPA) Bill of OPGC

254. GRIDCO in its additional submission has stated that OPGC, vide its invoices dated 09.10.2015 and 08.12.2015, have raised a claim of half yearly Fuel Price Adjustment (FPA) bills amounting to Rs.19,54,18,554/- (in total) in respect of power supplied to GRIDCO during the period from April-15 to Sept-15, which is payable by GRIDCO as per the provisions of PPA dated 13.08.1996 and amended Power Purchase Agreement (PPA) dated 19.12.2012 and GRIDCO has already released payment of the aforesaid amount on 16.11.2015 and 30.12.2015 respectively. Therefore, GRIDCO prayed the Commission to allowing the said amount of Rs.19,54,18,554/- as pass through in favour of GRIDCO in the proposed ARR & BSP for FY 2016-17. The Commission considered the above proposal of GRIDCO and allows the said amount of Rs. 19.54 Crore in the ARR of GRIDCO for FY 2016-17 towards arrear FPA bill of OPGC for FY 2015-16 which has already been paid by GRIDCO.

Additional Payment towards PGCIL Charges

255. Further, GRIDCO in its submission during the hearing stated that it has a receipt a supplementary bill dated 01.01.2016 towards FERV on principal and interest for ULDC state sector assets for the period from October, 2014 to September, 2015. Further two other similar bills have been received by GRIDCO from PGCIL towards additional principal and interest charges upto the month of January, 2016. The total amount payable by GRIDCO due to the above three bills works out to Rs. 1.22 Crore. GRIDCO has prayed the Commission to include the said amount in the ARR for the FY 2016-17. The Commission observed that at the end of the FY 2015-16 the actual PGCIL charges could be ascertained and the differential amount than the approval of the Commission may be claimed by GRIDCO in next

year or the said amount could be factored in the truing up exercise. Therefore, the Commission does not allow the claim of GRIDCO amounting to Rs. 1.22 Crore in the ARR for FY 2016-17 towards additional principal and interest charges of PGCIL.

Open Access Charges for availing Solar Power from Out-side States

256. Further, GRIDCO in its submission during the hearing stated that due to non-availability of solar power inside the State GRIDCO has proposed to source the same from outside the State i.e. 15 MW solar capacity from Rajasthan through NTPC Vidyut Vyapar Nigam Limited (NVVNL) and 50 MW solar capacity (40 MW from Gujarat & 10 MW from Rajasthan) through Solar Energy Corporation of India (SECI). GRIDCO has stated that while supplying such solar energy, the aforesaid states will levy additional charges like STU Charges, Open Access Charges etc., which is likely to the tune of Rs. 6.20 Crore in addition to the power procurement cost proposed by GRIDCO in its application. Therefore, GRIDCO has prayed the Commission to include the said amount of Rs. 6.20 Crore in the ARR of GRIDCO for FY 2016-17. The Commission observed that there is a short fall of solar power in our State in order to fulfill the solar power obligation by GRIDCO. Hence, there is requirement of GRIDCO to purchase solar power from outside the State so that GRIDCO can meet the solar power obligation and avoid purchase of REC. Therefore, the Commission considers the proposal of GRIDCO and allows the amount Rs. 6.20 Crore as pass through in the ARR of GRIDCO for FY 2016-17.

Reimbursement to OHPC during FY 2016-17

257. The Commission while passing the order in ARR and Tariff application of OHPC for the FY 2016-17 in Case No.52 of 2015 has allowed an amount of Rs.12.29 Crore for the reimbursement by OHPC from GRIDCO during the FY 2016-17 as given in the table below. The Commission approves the same in the ARR of GRIDCO for the FY 2016-17.

Table – 46

(Rs. in Cr.)

Component of Costs	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
(a) License fee for use of water for generation of electricity	0.525	0.832	1.183	0.684	0.490	1.962	5.68
(b) ED on Auxiliary Consumption	0.08	0.13	0.18	0.10	0.07	0.29	0.85
(c) SLDC charges							1.53
(d) Application fees and publication expenses							0.26
(e) Foreign Exchange			3.71				3.71

Component of Costs	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
Fluctuation loss of PFC loan of Balimela HEP							
(f) Contribution to ERPC							0.26
(g) Reimbursement of Income tax paid during FY 2014-15							0.00
Total							12.29

Reimbursement to OPGC during FY 2016-17

258. The Commission while passing the order in ARR and Tariff application of OPGC for the FY 2016-17 in Case No.53 of 2015 has allowed an amount of Rs.53.06 Crore for the reimbursement by OPGC from GRIDCO during the FY 2016-17 as given in the table below. The Commission approves the same in the ARR of GRIDCO for the FY 2016-17.

Table- 47

Sl. No	Particulars	OERC Approved for FY 2016-17
1	Incentive	-
2	Electricity Duty	7.97
3	Water Cess and Water Charges	7.08
4	Tax and Cess on land	0.22
5	Electricity Inspection Fees	-
6	SOC and MOC for SLDC	0.35
7	ERPC Charges	0.16
8	Income Tax	37.07
9	Ash Utilisation expenses	-
10	Fuel Price Adjustment Charges	-
11	Recovery of ARR and Tariff Petition Fees	0.21
12	Sub-total of Year End Charges	53.06
13	Reimbursement of Addl. Capitalization	-
14	Grand Total	53.06

Summary of Pass Through Expenses in the ARR & BSP for FY 2016-17

259. The proposed and approved Pass Through expenses in the ARR of GRIDCO for FY 2016-17 relating to Power Purchase Cost are given below:

Table - 48

(Rs. In Crore)

Particulars	Proposal of GRIDCO	Commission's approval
(i) Arrear in respect of TPPS (Differential AFC to be paid by GRIDCO to NTPC for the period from FY 2014-15 to FY 2016-17	28.55	0.00

Particulars	Proposal of GRIDCO	Commission's approval
(ii) Arrear paid to NTPC Stations (Barh-II) for the period from Nov 14 to Sept 15	167.14	167.14
(iii) Arrear of Teesta-V towards of revision of AFC, FERV and Tax & Charge in PAFY for FY 2014-15	8.88	8.88
(iv) Arrear towards Reactive Energy Charges paid to ER Pool Account from April 15 to 8 th Nov 15	0.87	0.87
(v) Arrear Energy Charges towards M/s. Vedanta Ltd. from FY 2010-11 to 2013-14	164.00	164.00
(vi) Differential Claim of Coal Cost to M/s. Vedanta Ltd. for FY 2013-14	36.90	36.90
(vi) Arrear towards half yearly Fuel Price Adjustment (FPA) Bill of OPGC for FY 2015-16	19.54	19.54
(vii) Additional Payment towards PGCIL Charges	1.22	0.00
(viii) Open Access Charges for availing Solar Power from outside the State	6.20	6.17
(ix) Reimbursement to OHPC during FY 2016-17	44.60	12.29
(x) Reimbursement to OPGC during FY 2016-17	-	53.06
Total amount for pass Through in the ARR & BSP for FY 2016-17	477.90	468.85

GRIDCO FINANCE

Truing up of GRIDCO

260. In para 279 of the BSP order 2015-16, it was mentioned that the Commission will undertake truing-up exercise only after the audited accounts of GRIDCO for the financial year 2013-14 are available.
261. GRIDCO in its tariff filing for FY 2016-17 submitted the audited accounts for the financial year 2014-15 and 2013-14. Truing up exercise has been finalized upto FY 2012-13 (para 257, 258, 259 of BSP order 2014-15). Upto 2012-13 the approved gap worked out to (-)3010.08 crore. For FY 2013-14 and 2014-15 the truing up exercise is undertaken basing on the following principles.
- (i) Power purchase cost is allowed as per actuals shown in Audited Accounts.
 - (ii) Employees cost is allowed on actuals based on Audited Accounts.
 - (iii) Repair and Maintenance cost is allowed as per actuals.
 - (iv) A & G cost is allowed as per actuals subject to limit approved in ARR.
 - (v) Interest on loan is allowed as per actual except interest on loan from State Government.

- (vi) Depreciation is allowed as per actual.
- (vii) Amortization of regulatory assets as claimed by GRIDCO has been allowed.
- (viii) Exceptional item such as provision for Bad & Doubtful Debt, Receivables written off, Sundry Credit balance written off has not been allowed in truing up, as valid reason for booking such items has not been available in the note to accounts.
262. Based on the above principle the truing up exercise for FY 2013-14 and 2014-15 has been undertaken and depicted in table below:-

Table-49

Particulars	2013-14				2014-15			
	OERC Approval	Actuals	TRUE UP	DIFERENCE	OERC Approval	Actuals	TRUE UP	DIFERENCE
Expenditure								
Power Purchase including wheeling	5509.51	6192.21	6192.21	-682.7	5788.75	5740.85	5740.85	47.9
Employee Cost (less expense capitalised)	4.99	4.27	4.27	0.72	5.73	5.33	5.33	0.4
R & M Cost	0.2	0.23	0.23	-0.03	0.3	0.06	0.06	0.24
A & G Cost	3.36	4.37	3.36	0	3.88	5.7	3.88	0
Gross Interest	494.11	483.76	463.69	30.42	416.64	504.67	484.6	-67.96
<i>Less: Capitalisation</i>	0	0		0	0	0	0	0
<i>Less: Interest receivable from Distcos</i>	0	0		0	0	0	0	0
Net Interest	494.11	483.76	463.69	30.42	416.64	504.67	484.60	-67.96
Depreciation	0.35	0.22	0.22	0.13	0.26	0.47	0.47	-0.21
Damage due to cyclone	0	0	0	0	0	0	0	0
Other Expenses(ERLDC fees) & others	0	46.29	46.29	-46.29	0	24.64	24.64	-24.64
Bad Debts	0			0			0	0
Total Expenditure	6012.52	6731.35	6710.27	-697.75	6215.56	6281.72	6259.83	-44.27
Prior Period Adjustments	0	783.02	0	0	0	180.76	0	0
Special appropriation to cover Previous loss	166.33	328.71	328.71	-162.38	243.97	284.71	284.71	-40.74
Previous Loss	0	0		0				0
Contingency Reserve	0	0		0				0
Repayment of Principal	0	0		0				0
Reasonable Return/ Income Tax	0	1.5	1.5	-1.5		20.83	20.83	-20.83
TOTAL COST	6178.85	7844.58	7040.48	-861.63	6459.53	6768.02	6565.37	-105.84
TOTAL REVENUE	6180.92	6380.24	6380.24	199.32	6463.12	6647.67	6647.67	184.55
Difference- in Cost and Revenue(Profit / (loss))	2.07	-1464.34	-660.24	-662.31	3.59	-120.35	82.30	78.71
Add: Approved gap in ARR				2.07				3.59
True up on adjustment of Approved gap in ARR				-660.24				82.30
Cummulative TRUEUP				-3670.32				-3588.02

The gap approved upto 31.3.2012-13	(-)	3010.08
Gap for 2013-14	(-)	660.24
Gap for 2014-15	(+)	82.30
Total Gap upto 31.3.2015		3588.02

263. The Commission allowed amortization of regulatory assets upto 2012-13, the year wise details of which are given below:-

Upto 2010-11	1019.51 crore
2011-12	709.67 crore
2012-13	<u>887.77 crore</u>
	<u>2616.95 crore</u>

For the year 2013-14 and 2014-15 the Commission allows amortization to the tune of Rs.971.07 crore (3588.02-2616.95) which shall be utilized for repayment of loan.

264. In line with the previous BSP order, the Commission has not considered the amortization of regulatory assets of the above amount as a pass through on the ARR. As stated in the previous BSP orders the amortized amount shall be funded from trading revenue, UI charges, other miscellaneous receipt and budgetary support from the govt. of Odisha.

Employees cost

265. The Annual Revenue Requirement for the Financial Year 2016-17 filed by GRIDCO includes an amount of Rs.10.71crores towards employees cost, which is analysed in the table below:-

Table - 50

	2015-16 (Approved)	2016-17 (Proposed)	2014-15 (Audited)
Basic Pay+GP	1.74	2.84	1.82
DA	2.10	2.77	1.93
HRA	0.26	0.32	0.24
Medical Reimbursement	0.09	0.20	0.12
Others	0.28	0.55	0.16
Terminal benefits	1.06	1.62	0.72
Contractual engagement	0.34	0.37	0.33
7 th Pay Impact	-	2.04	-
Total	5.87	10.71	5.32

Basic Pay + GP

266. The figure as per the audited data for the FY 2014-15 was Rs.1.82 crore. GRIDCO in the reply to queries of the Commission reported that the actual cash

outflow on Basic Pay + GP from April, 2015 to November, 2015 (for a period of 8 month) was Rs.1.42 crore. Extrapolating the same for a period of 12 months and factoring in 3% annual increment the figure for the FY 2016-17 works out to Rs.2.13crore. Commission therefore accepts the figure of 2.13 crore for FY 2016-17 towards basic pay and G.P.

Dearness Allowance:

267. The present rate w.e.f. 1.7.2015 is 119%. Last time the rise in DA with effect from 1st July, 2015 was to the extent of 6%. Assuming the rise in DA @6% w.e.f. 01.01.2016, 01.07.2016 and 01.01.2017, the annual average DA for the financial year 2015-16 is pegged at 131%.
268. In respect of other major expenditure such as medical allowance, HRA, Terminal benefits the following principle has been adopted.
- i. Medical reimbursement 5% of Basic Pay + GP
 - ii. House rent allowance 15% of Basic Pay + GP limiting to claim made by licensee in these filing.
 - iii. Terminal benefits for FY 2016-17 have been allowed at Rs.1.62 crore as proposed by GRIDCO.
 - iv. Impact of 7th Pay Commission amounting to Rs.2.04 crore has been disallowed.
269. With the above principle the approved employees cost for 2016-17 is shown in table below:-

Table – 51

	2015-16 (App.)	2016-17 (Prop.)	2016-17 (App.)
Basic Pay + GP	1.74	2.84	2.13
DA	2.10	2.77	2.79
HRA	0.26	0.32	0.32
Expenses on contractual engagement	0.34	0.37	0.37
Medical reimbursement	0.09	0.20	0.11
Others	0.28	0.55	0.55
Terminal liabilities	1.06	1.62	1.62
Impact of 7 th Pay commission	-	2.04	-
Total	5.87	10.71	7.89

Commission approves an amount of Rs.7.89 crore towards employees cost for 2016-17 as against an amount of Rs.10.71 crore proposed by the licensee.

Repair Maintenance

270. During Financial Year 2016-17, GRIDCO proposes an amount of Rs.0.25 crore towards repair & maintenance under the head air conditioner, computer, vehicle, furniture and office equipment. The Commission approves the same as a pass through in the ARR for FY 2016-17.

Administration & General Expenses

271. During Financial Year 2016-17, GRIDCO proposed an amount of Rs.11.33 crores under the head Administrative and General Expenses, inclusive of an amount of Rs.1.50 crores towards license fee payable to OERC and Rs.3.55 crore towards expenses as Escrow audit. Thus, excluding license fee and Escrow audit, the A & G expenses would be Rs.6.28 crore (11.33-1.50-3.55). The Commission considers the approved figure of Rs.2.63 crore last year and factor in the annual inflation of (-) 0.90% for FY 2016-17. The amount works out to Rs.2.62 crore. Over and above the amount, the licence fee applicable for 2016-17 amounting to Rs.1.50 crore is allowed. Thus the Commission approves an amount of Rs.4.12 crore under the head Administration and General Expenses for FY 2016-17. Regarding the amount claimed under Escrow Audit to the tune of Rs.3.55 crore, the Commission views that the same will be allowed as per actual in the next year's ARR subject to submission of Escrow Audit report to the Commission. As A&G is a controllable cost GRIDCO need to manage the expenses prudently within limits as raised by the objectors.

Depreciation

272. Under this head GRIDCO has proposed Rs.0.72 crore towards the depreciation on fixed assets (vehicle, furniture and office equipment etc.) for the FY 2016-17. The Commission approves the same as a pass through in the ARR for FY 2016-17.

Interest on Loan

273. During FY 2016-17, GRIDCO proposed an amount of Rs.582.04 cr. towards interest and finance charges. Subsequently, GRIDCO in its compliance to query proposed additional interest liability to the tune of Rs.66.71 crore on additional loan amount of Rs.500.00 crore. Thus, revised interest liability for FY 2016-17 works out to Rs.648.75 crore (582.04+66.71).
274. On scrutiny of the figure submitted by the licensee, it is found that all loans upto 31.03.2008 inherited by GRIDCO at the time of demerger of GRIDCO into GRIDCO & OPTCL has been accepted and recognized by the Commission. The interest liability of the above loan has been allowed by the Commission as a pass through in the revenue requirement in earlier BSP order. Subsequent to demerger

GRIDCO claimed the following loans, year wise details of which are given below:

Table -52

Rs. in cr.

Year	Loan availed	Interest Claimed
<u>Upto 31.03.2008</u>		
(i) Govt. Loan	162.54	20.07
(ii) NTPC Bond	1102.87	85.04
2008-09(Act.)	300.00	Nil
2009-10(Act.)	1213.00	11.30
2010-11(Act.)	1640.71	76.82
2011-12(Act.)	864.16	39.92
2012-13(Act.)	843.83	5.20
2013-14(Act.)	483.50	34.60
2014-15 (Act.)		
(i) Bank Loan	990.50	31.55
(ii) OHPC Bond	619.00	49.52
	Sub-total	81.07
2015-16	1300.00	185.55
2016-17	1000.00	100.00
	Total Interest	639.57
Guarantee Commission		9.18
	Total Interest + Guarantee Commission	648.75

275. The Commission in line with the earlier order accepts outstanding loan position of GRIDCO upto 31.03.2008. On this account GRIDCO has claimed Rs.105.11 cr. including interest impact of Rs.20.07 cr. towards Govt. loan. In line with the earlier orders, the Commission disallows interest on State Govt. loan to the tune of Rs.20.07 cr. for FY 2016-17.
276. Balance interest amount of Rs.85.04 cr. (105.11-20.07) is towards NTPC Tax Free Bond. The Commission in its securitization order dated 20.7.2006 approved repayment schedule of loans and bonds which also includes NPTC special tax free bond. As per the securitization order the bond is supposed to be liquidated by 2015-16. On this loan the Commission all along allowed interest as a pass through in the ARR upto FY 2015-16. Since, the tenure of the bond is upto 2015-16 any additional interest on such bond as claimed by the GRIDCO is not justified. In fact GRIDCO has also submitted that the unpaid liability (both principal and interest) towards NTPC bond should be borne by Govt. of Odisha and accordingly

they have made a request to Govt. of Odisha. The Commission therefore, disallows the interest burden of Rs.85.04 cr. payable to NTPC for FY 2016-17.

277. In the last tariff order the Commission allowed interest on loans availed from 2008-09 to 2014-15 except interest on OHPC Bond. Regarding the claim of Rs.49.52 Cr. towards interest on securitized dues of OHPC, the same is disallowed following detailed findings given in the tariff order para 290 for the FY 2015-16. Further, OHPC has not yet shown this interest income as their receivable in their ARR.
278. The final figure for consideration of interest as per discussion made above is worked out as follows:

Table -53

(Rs. Cr.)

Total claim of interest	639.57
Less disallowed	254.63
(i) Interest on Govt. loan	20.07
(ii) Interest on NTPC Bond	85.04
(iii) Interest on OHPC Bond	49.52
(iv) Interest on proposed loan during 2016-17 (not yet availed)	100.00
Net interest	384.94
Guarantee Commission	9.18
Total Interest including Guarantee Commission	394.12

279. The Commission made certain important observations regarding the responsibility of Govt. of Odisha in providing necessary administrative and political support so that necessary climate of compliance on the part of DISCOMs and the consumers would have been created (para 292 of the tariff order for FY 2015-16). The Govt. departments including municipalities should have acted as model consumers in making prompt payment of their electricity dues. Unfortunately, arrears from various govt. departments have shown upward trend and stands at a huge figure of Rs.350.45 cr. as on 31.03.2015. The track record of pre-paid meter scheme and energy police stations is also quite dismal. In view of the above, the Commission reiterates its concern expressed in the last tariff order and feels that the entire burden of interest should not be passed on to the consumers of the state. In the meantime it is gathered that GRIDCO has opted to join UDAY Scheme notified by Govt. of India. Govt. of Odisha has recommended the same to Central Government. This proposal is likely to be accepted in the FY 2016-17 which inter alia would lead to substantial reduction in interest liability of DISCOMs. This will ease interest servicing of GRIDCO. Accordingly, 15% of the amount mentioned above should be borne in all fairness by GRIDCO and Govt.

280. The final amount allowed as interest and Guarantee Commission is shown in the table below:

Table -54

(Rs. cr.)

Net Interest determined above	384.94
Less 15% on the above	57.74
Add Guarantee Commission	9.18
Total Allowed	336.38

The Commission therefore allows an amount of Rs. 336.38 cr. towards interest as a pass through in the ARR for the FY 2016-17

Special Appropriation of Repayment of Principal

281. For the FY 2016-17 GRIDCO has proposed Special Appropriation of Rs.2366.99 crore under the following heads:-

**Table - 55
Special Appropriation claimed by GRIDCO**

(Rs. in Crore)

Particulars	Loan Repayment Dues	Interest Dues	Total
State Govt. Loan	162.54	335.91	498.45
NTPC-GoO Special Bonds (Rs.1102.87 Crore)	818.81	237.14	1055.95
Sub-total	981.35	573.05	1554.40
Bank Loans	812.59	-	812.59
Total	1793.94	573.05	2366.99

State Govt. Loan & NTPC Bond

282. Under this head GRIDCO has shown an amount of Rs.1554.40 crore towards principal and interest dues. However, GRIDCO proposed the following inorder to reduce the financial burden as well as to avoid tariff shock to the consumer of the State.
- Repayment of NTPC-GOI Bond dues will continue to be paid by the Govt. of Odisha;
 - Repayment of dues to Govt. of Odisha by GRIDCO will be kept in abeyance
283. As such GRIDCO deferred the repayment of Govt. dues of Rs.1554.40 crore and not claimed as a part of ARR for FY 2016-17. The Commission approves the same.

Bank Loan

284. Under this head GRIDCO propose an amount of Rs.812.59 crore towards repayment of Bank loan borrowed from the year 2008-09 to 2015-16 (upto September, 2015).
285. As per the submission of GRIDCO, the total cash deficit from 2008-09 to 2015-16 (upto September, 2015) becomes Rs.10070.24 crore. To meet the cash deficit GRIDCO has availed loan Rs.7854.69 crore and balance shortfall (about Rs.2215.55 crore) was met by way of defaulting in payment of interest on State Govt. loan, NTPC bond and also by postponing the payment of power purchase dues to the generators. A table showing approved revenue gap, actual revenue gap, total cash deficit and loan avail is depicted below:

Table-56

(Rs. Crore)

FY	Actual Power Pur. Cost (P/U)	Appd. Power Pur. Cost (P/U)	Approved BSP (P/U)	Approved Gap	Profit/(loss) in P&L Accounts	Loan Repayment	BSP Dues defaulted by DISCOMs	Total Cash Deficit	Loan availed to meet deficit
2008-09	151	127	122	410.05	98.14	374.26	163.94	440.06	300.00
2009-10	197	148	122	882.85	(1560.84)	205.06	164.22	1,930.12	1213.00
2010-11	198	175	170	806.15	(587.86)	328.15	297.01	1,213.02	1640.71
2011-12	228	210	232	746.05	(936.81)	382.40	269.74	1,588.95	864.16
2012-13	237	236	271	700.58	31.79	777.69	590.01	745.90	943.83
2013-14	214	229	265	707.60	(1464.34)	1006.57	167.30	2638.21	483.50
2014-15	214	227	263	884.18	(120.35)	868.31	86.91	1075.57	1609.49
2015-16 (Upto Sept.Ø15)	223	230	284	882.06	115.56	413.19	140.78	438.41	800.00
Total				6019.52	(4424.71)	4355.63	1879.91	10070.24	7854.69

286. GRIDCO further stated that as per Tariff Policy, depreciation on fixed assets shall be utilized for payment of principal component of loan. In case of GRIDCO, there is virtually no fixed asset and hence, no depreciation is available to GRIDCO to meet the cash deficit arising due to the above reasons. Although as per direction of Commission GRIDCO has to recoup such deficit by way of trading of surplus power and UI, no such improvement has taken place and GRIDCO at the end of the year is ending up with huge deficit. Under such circumstances GRIDCO submits that the loans from bank as well as interest thereon may be considered as a pass through in the ARR of GRIDCO. GRIDCO therefore proposed an amount

of Rs.812.59 crore under the head Special Appropriation of expenses for meeting the principal repayment of bank loan.

287. The Commission took note of the submission made by the licensee. In para 295 and 296 of the BSP order for the FY 2014-15, the Commission made the following observation. The same is extracted below:

"295. The repayment liability of the State Govt. loan as well as Bank loan put a huge burden on the Bulk Supply Price of DISCOMs. The Commission feels that in order to keep the BSP at a reasonable level, the repayment liability should not be considered as pass through in the ARR of GRIDCO so that the revenue requirement of GRIDCO is kept at minimum and DISCOMs will have the benefit of the lower BSP. In this context it is necessary to analyse in depth the generation potential of OHPC and its commercial implication. A large number of objectors have pointed out that by proper planning with regard to storage of water in the reservoir and having satisfied the need for flood control and irrigation in the normal monsoon year OHPC can generate much more than its design energy. We have already provided for generation of 5881 MU and any generation beyond the design energy available to GRIDCO can be traded with profit and this amount can be made available for repayment of loan. In the current year Tariff Hearing OHPC submitted that GoO directed them to restrict generation. The Commission is, therefore, of the view that lesser generation from OHPC is not so much due to monsoon failure but because of administrative Order issued by GoO from time to time. In the present context the Commission would like to advise the Govt. to revisit its earlier assumption with regard to storage capacity for flood control and irrigation. The Commission is of the view that by proper planning and redesigning of priorities, power generation of OHPC can go beyond the design energy without sacrificing obligation towards flood control and irrigation. The Commission feels that a proper day to day planning and co-ordination with different purchaser within and outside the State, GRIDCO on conservative estimate will be able to trade about 2500 MU of power and generate a substantial amount of revenue, which can be utilised for repayment of principal loan liabilities.

296. *In view of this Commission decides the following measures to be taken by GRIDCO:-*

- a) *A separate head may be created under GRIDCO account where the revenue from trading of surplus power above design energy of OHPC, UI Charges and other miscellaneous receipts, shall be shown as receipts for repayment of principal. Since GRIDCO is fully owned Govt. of Odisha undertaking the State Govt. shall monitor and ensure that the money kept under this separate head is utilised only for repayment of loan.*

- b) *In case the earmarked fund receipts as mentioned above is not sufficient to meet the repayment obligation of principal amount of loan, the State Govt. may make budget provision for the differential amount and pay the same to Banks/Financial Institutions through GRIDCO.*
- c) *For the time being repayment of the principal amount along with interest on State Govt. loans and Bonds may be deferred till the financial health of GRIDCO becomes sound.*

Hence, in view of the above decision of the Commission, the repayment liability recognized by the Commission through amortisation of Regulatory Asset as stated in the Para above has not been considered as a pass through in the revenue requirement for the year 2014-15.”

288. The Commission for the FY 2015-16 took the same stand and not considered the amount of Rs.882.06 cr. as a pass through under the head special appropriation. For FY 2016-17 the Commission reiterates its decision and not considered the amount of 812.59 crore as a pass through in the revenue requirement.
289. Based on normative parameters for most generating stations and GRIDCO's projection for CGP, Co-generation and IPP power, the total availability is estimated at 29565 MU. After deducting the estimated state requirement of 25493 MU, there is a surplus of 4072 MU which GRIDCO can trade. The quantum of surplus may be more if drawal from State Hydro, CGPs, Co-generation plants and IPPs is maximized.
290. The Commission is aware of the past record of GRIDCO in negotiating both ways trading for export of its surplus power as well as import of power at time of need. GRIDCO is also a member of power exchange of the country for participation of both ways trading of power. Apart from bi-lateral trading, UI exchange, GRIDCO also has adopted the banking route for trading of power. In the past, GRIDCO has managed to its best of capability both ways of trading of power for the best interest of Odisha Power Sector. The Commission, therefore, desires that GRIDCO should continue to procure maximum power from CGPs and IPPs of the State and try to trade the surplus power, after meeting the State need. Similarly, at the time of shortage at different period of the year and different hours of the day, GRIDCO may import power through trading and UI exchange. GRIDCO through SLDC, may have close interaction with OHPC generating stations for backing down their generation to minimum technical limit, at time of Grid Frequency of 49.96 Hz or above and maximize generation at 49.50 Hz or below. GRIDCO may daily analyze the state hydro generation Vs. Grid Frequency at every 15 minutes interval and advise course correction to the generators, if necessary.

291. In form F-18 of the filing GRIDCO submitted a statement of revenue from sale of power (Trading and UI) as per which the revenue from trading and UI amounts to Rs.739.90 crore. However, the actual position will be known after the year is over. In reply to query, GRIDCO furnished the amount of power traded and UI during FY 2013-14 and FY 2014-15 which are given below:-

Table -57

(Rs. In cr.)

Financial year	Power Trading	U.I	Total
2013-14	664.60	44.53	709.13
2014-15	456.32	34.09	490.41

292. During the above financial year the amount of loan repayment towards bank and financial institution was approved at Rs.591.38 crore and for FY 2014-15 the repayment of bank loan was approved at Rs.887.77 crore. Although the amount of principal payment in these two years is more than the trading revenue, the Commission recognizes the fresh loan availed by GRIDCO in the year 2015-16 for meeting the deficit in the cash flow and allows interests on the loan in the ARR of 2016-17. In view of the above, the repayment of bank loan amounting to Rs.812.59 crore is not allowed towards special appropriation as claimed by GRIDCO.

Return on Equity

293. GRIDCO proposes Rs.92.27 crore towards Return on Equity (RoE) @ 16% on its Equity Capital of Rs.576.71 crore in line with National Tariff Policy and OERC Tariff Regulations. In line with the previous BSP orders, the Commission disallows the return on equity as a pass through in the revenue requirement for FY 2016-17.

Other Income/ Miscellaneous Receipts

294. During the FY 2016-17 GRIDCO expects to earn an amount of Rs.6.85 crore (at existing approved tariff) from proposed emergency sale of 10 MU to long term customers like NALCO & IMFA as per the MoU signed with these entities. The Commission approves an amount of Rs.6.85 crore for FY 2016-17.

Receivables from DISCOMs and Others

Securitized Dues

295. GRIDCO in its filing submitted that the DISCOMs have defaulted payment of Rs.2085.33 crore by 31.03.2015 towards securitized dues as per the direction of the Commission vide order dated 01.12.2008. The DISCOMs wise default is given below:-

Table -58

Particulars	Unpaid as on 31-03-2015
WESCO	294.70
NESCO	303.37
SOUTHCO	259.98
CESU	1227.28
Total	2085.33

296. GRIDCO requested the Commission to direct DISCOMs for making regular payment of the securitized dues along with the defaulted dues for improving the cash flow. The securitization order of the Commission dtd.01.12.2008 finalised the amounts outstanding as on 31.03.2005 to be discharged by the respective DISCOMs to GRIDCO in 120 monthly (maximum) equal installments starting from financial year 2006-07 and ending in 2015-16. Therefore GRIDCO submitted the Commission to give suitable direction to the DISCOMs so that the dues will be realized within the terminal year 2015-16 in line with the Commission's order dtd.01.12.2008.
297. The Commission dealt the issue in the BSP as well as RST tariff orders of previous years. A statement showing the amount approved by the Commission in the ARR amount due as per the securitization order the amount paid by the utilities over and above the 100% current BST bills, adjustment against the securitized amount and balance default amount is given in Table below:

Table - 59
Dues as per OERC Order Dt. 01-12-2008 and Actual Payment

(Rs. crore)

Sl No	Particulars	WESCO	NESCO	SOUTHCO	Sub- Total	CESU	Grand Total
1	BST						
	OB 01-04-99	46.18	41.66	26.50	114.34	80.16	194.50
	From 01-04-99 to 31-03-05	118.41	194.83	47.19	360.43	605.20	965.63
	Sub total	164.59	236.49	73.69	474.77	685.36	1,160.13
2	DPS on Above	58.72	87.20	32.02	177.94	526.41	704.35
3	Loan						
	Principal	138.46	94.64	134.36	367.46	307.61	675.07
	Interest	60.31	41.05	58.43	159.79	162.86	322.65
	Sub total	198.77	135.69	192.79	527.25	470.47	997.72
4	Outstanding as on 31-03-2005 vide OERC Order Dated 01-12-2008 (1+2+3)	422.08	459.38	298.50	1,179.96	1,682.24	2,862.20
5	Average per month	3.52	3.83	2.49	9.84	14.02	23.86

Sl No	Particulars	WESCO	NESCO	SOUTHCO	Sub- Total	CESU	Grand Total
6	Due from 2006-07 to 2014-15 as per securitisation order				-		
	2006-07	42.24	45.96	29.88	118.08	168.24	286.32
	2007-08	42.24	45.96	29.88	118.08	168.24	286.32
	2008-09	42.24	45.96	29.88	118.08	168.24	286.32
	2009-10	42.24	45.96	29.88	118.08	168.24	286.32
	2010-11	42.24	45.96	29.88	118.08	168.24	286.32
	2011-12	42.24	45.96	29.88	118.08	168.24	286.32
	2012-13	42.24	45.96	29.88	118.08	168.24	286.32
	2013-14	42.24	45.96	29.88	118.08	168.24	286.32
	2014-15	42.24	45.96	29.88	118.08	168.24	286.32
	Total	380.16	413.64	268.92	1062.72	1514.16	2576.88
7	Excess BSP paid by DISTCOs to be adjusted against securitised dues						
A	Downward Revision of BST in 2007-08	88.31	3.32	11.07	102.70	93.37	196.07
B	Payment by DISCOMS over and above the current						
	2006-07	36.83	41.36	-	78.19	-	78.19
	2007-08	4.40	41.36	9.53	55.29	-	55.29
	2008-09	-	65.00	5.86	70.86	32.47	103.33
	2009-10	2.00	-	9.69	11.69	80.50	92.19
	2010-11	-	-	-	-	-	-
	Total B	43.23	147.72	25.08	216.03	112.97	329.00
C	Total (A+B)	131.54	151.04	36.15	318.73	206.34	525.07
8	Shortfall upto 31.3.2015 (6 - 7 C) as per securitization order	248.62	262.60	232.77	743.99	1307.82	2051.81

298. The Commission in its Business Plan order dated 21.3.2014 stated the following:-

53. The three Reliance managed DISCOMs have not submitted in detailed action plan for liquidation of the arrears of GRIDCO as per Commission's direction dated 01.12.2008. CESU in its submission stated that it will start paying its outstanding dues of GRIDCO from the FY2015-16 and it may liquidate all its outstanding by FY 2020-21.

The Commission vide para 26 of the order 01.12.2008 had mentioned the following:-

"We order that DISTCOs shall repay the outstanding loans including interest along with securitized BST dues as at 31st March, 2005 in 120 monthly (maximum) equal installments starting from the FY 06-07 ending in 2015-16. They shall also continue to pay the monthly BST dues regularly through LC as per the bulk supply arrangement."

53. Every year the Commission in its tariff order gives direction to the DISCOMs to pay the outstanding arrears of GRIDCO as per the schedule given by the Commission. But the DISCOMs made continuous default and have not carried out the direction of the Commission. Commission therefore, directs the licensee to clear the dues of GRIDCO by the end of 2015-16 as per the order of the Commission. The Commission shall take a review after FY 2014-15 and may pass necessary directions in this regard to the DISCOMs.
299. Inspite of the direction of the Commission as mentioned above, the DISCOMs defaulted in payment of the securitized dues to the GRIDCO. The term of the securitization order is going to be completed by 31.03.2016. The Commission directs all the DISCOMs to submit their action plan for liquidation of arrear securitized dues by 01.05.2016.

400 Crore NTPC Bond dues

300. GRIDCO submitted that the DISCOMs have failed to honour the OERC order dated 29-03-2012 read with corrigendum Order dated 30.03.2012 against the Bond dues of Rs.308.45 Crore. In the said order OERC had directed the erstwhile REL managed DISCOMs to pay Rs.50 Crore by the end of April 2012 and at least @Rs.10 Crore per month w.e.f. May 2012 so that the entire amount shall be cleared by the end of FY 2012-13 or else the order will stand non-est. The erstwhile R-Infra managed DISCOMs have paid Rs.62 Crore by 31-10-2014, besides payment of Rs.50 Crore in March 2012 leaving a balance of Rs.195.36 Crore. On this issue the Commission have given direction to both GRIDCO and DISCOMs several times for compliance of the order. The Commission again reiterates the same and directs both GRIDCO and DISCOMs to comply the order dtd.29.03.2012 in case No.107 of 2011.

Non-payment of BSP dues and Year End Adjustment Bills of DISCOMs

301. Apart from the outstanding securitized dues as mentioned in the above para, GRIDCO submitted that the FY 2011-12 onwards the DISCOMs have started defaulting in payment of current BSP bill in addition to the yearend adjustment bills payable to GRIDCO. Because of such failure of DISCOMs the revenue

deficit faced by GRIDCO has widened leading to cash crunch. Therefore GRIDCO prays the Commission to prevail upon the DISCOMs for making regular payment of BSP and other dues of GRIDCO. A table showing outstanding dues of BSP and year end adjustment payable by DISCOMs is given as under.

Table - 60
**Outstanding Dues relating to Current BSP and Year end Adjustment bills of
DISCOMs payable to GRIDCO**

Particulars	WESCO	NESCO	SOUTHCO	CESU	(Amount Rs. Crore) TOTAL
BSP Bills- 2011-12	210.48	53.74	5.52	-	269.74
BSP Bills- 2012-13	265.06	324.95	-	-	590.01
BSP Bills- 2013-14	22.43	57.87	40.01	-	120.31
BSP Bills- 2014-15	17.42	13.66	94.94	-	126.02
BSP Bills- 2015-16 (upto Sept-15)	-	-	82.6	58.18	140.78
Sub Total	515.39	450.22	223.07	58.18	1246.86
Year end Adj. Bills- 2008-09	69.08	-	36.72	58.14	163.94
Year end Adj.Bills-2009-10	-	87.47	32.81	43.94	164.22
Year end Adj.Bills-2010-11	46.80	22.65	60.24	167.32	297.01
Sub Total	115.88	110.12	129.77	269.40	625.17
Grand Total	631.27	560.34	352.84	327.58	1872.03

- 302. The Commission directs the DISCOMs to settle the issue with GRIDCO and submit a signed joint reconciliation statement by 31.05.2016 after paying the outstanding dues of GRIDCO in full.
- 303. The Commission further directs the DISCOMs to pay the current BSP bill in full by renewing the Letter of Credit (LC) or through SOD.
- 304. The summary of the ARR of GRIDCO approved for the FY 2015-16 is given below:

Table -61
Revenue Requirement of GRIDCO for FY 2016-17

	Particulars	Approved for 2015-16	Proposed	(Rs. in Cr.)	
				2016-17	Revised proposal
A	Expenditure				
	Cost of Power Purchase	5927.67	7920.72	7927.30	5849.16
	Employee costs	5.87	10.72	10.72	7.89
	Repair & Maintenance	0.30	0.25	0.25	0.25
	Administrative and General Expenses	4.13	11.33	11.33	4.12
	Depreciation	0.42	0.72	0.72	0.72
	Other expenses (ERLDC Charges)				
	Interest Chargeable to Revenue (including guarantee commission)	280.25	582.04	648.75	336.38
	Sub-Total	6218.64	8525.78	8599.07	6198.52

	Particulars	Approved for 2015-16	Proposed	2016-17	
				Revised proposal	Approved for 2016-17
A	Expenditure				
	Less: Expenses capitalized				
	Total expenses (Total of A)	6218.64	8525.78	8599.07	6198.52
B	Special appropriation				
	Carry forward of Previous Loss through amortization of Regulatory Assets				
	Repayment of principal for the loan	-	812.59	812.59	0.00
	Pass Through of Power Purchase Dues (Ref: Table- 48)	838.15	414.04	477.90	468.85
	Total of B	838.15	1226.63	1290.49	468.85
C	Return on Equity	-	92.27	92.27	0.00
	TOTAL (A+B+C)	7056.79	9844.68	9981.83	6667.37
D	Less Miscellaneous Receipt	6.85	6.85	6.85	6.85
E	Less receivable from DISCOMs				
F	Less receivable from outside States				
G	Revenue proposed from trading of surplus power	-	739.89	739.89	-
H	Total Revenue Requirement	7049.94	9097.94	9235.09	6660.52
I	Expected Revenue (Full year) from DISCOMs	7050.30	7239.50	9235.09	6702.94
J	GAP (+/-)	(+)0.36	(-) 1858.44	-	42.42

305. As against GRIDCO's net revenue requirement of Rs.6660.52 crore after adjustment of miscellaneous receipts of Rs.6.85 crore, it will recover Rs.6702.94 crore from DISCOMs through energy charges for the year 2016-17 with a surplus of Rs. 42.42 Crore. The said surplus amount will be utilized by GRIDCO towards differential power purchase dues of Central Thermal Generating Stations after issuance of Tariff Order by CERC for the control period FY 2015-19.

Design for Bulk Supply Pricing Methodology

306. The Commission has been following a particular methodology considering the uniqueness of Odisha power sector for a long time. The State Designated Agency GRIDCO holds all the Power Purchase Agreements (PPAs) with the Generators on behalf of State Government. Therefore, power purchased from Generators is pooled at GRIDCO end and thereafter supplied to DISCOMs. It is not possible to allocate particular power stations to a DISCOM since the Power Purchase Agreement of that Generator has been made with the GRIDCO and not with a particular DISCOM. Moreover, DISCOMs have also Bulk Supply Agreement (BSA) with GRIDCO. This has been a legacy of the past. The allocation of power from a generator to a particular DISCOM shall be a possibility only when the PPAs will be allocated to DISCOMs as per the decision of the Government.

Therefore, the Commission has no alternative but to consider the pooled power purchase cost of GRIDCO while designing the BSP of DISCOMs.

307. OERC has been following a uniform retail tariff policy. Considerations of public interest for consumers of the entire State warrants continuance of a uniform retail tariff policy, and a retail tariff for each distribution Utility based solely on its ARR and its expected revenue ought not to be considered in isolation. The law requires the Commission to take into consideration not only the annual revenue requirement and the expected revenue of the distribution Utility but also such policy inputs for safeguarding consumers interest one of which is a uniform retail tariff for the whole State, vide Section 61(d) of the Electricity Act, 2003. Moreover, uniformity of retail tariff for the whole State is in line with the National Tariff Policy; vide Para 8.4(2) thereof. Only when distribution Utilities show appreciable rise in their respective levels of efficiency by reducing distribution losses, both technical and commercial, a question of rewarding efficiency by a differential retail tariff may arise. This is not the case now. Besides, the benefit of differential Bulk Supply Price has been an accepted practice, as the State transmission network serves the whole State as a single backbone system and the consumers of Odisha have been paying for the cost of this transmission system uniformly. The distribution companies have little contribution towards the growth and development of the EHT industries and yet a distribution Utility would reap substantial higher revenue than another distribution Utility by virtue of mere concentration of EHT industries in its area. It is just and proper that differential Bulk Supply Price should be higher for the DISCOMs with higher concentration of HT/EHT industries than for those with little HT/EHT load. Therefore, with differential Bulk Supply Price there is no necessity of shifting away from the uniform retail tariff prevailing in the state of Odisha.
308. Until we move away from the uniform RST structure, the higher bulk pricing mechanism should give a signal to the utility having higher EHT & HT concentration that improved performance at LT through higher LT sale would enable that utility to get power at a lower rate. That is to say, such utility should endeavour to convert lost units to billing units at LT resulting in reduction of commercial loss, which needs to be encouraged.
309. Tariff is essentially intended to balance the conflicting interest of various stakeholders like the distribution Utilities and various groups of consumers as well as the generators. Some amount of judgement is to be exercised while determining the bulk supply price for distribution utilities. The process has to be fair, transparent, with sound logic, so that the revenue earned by the utilities are adequate to service all their expenditures like the cost of employees, servicing the

interest burden, meet return on equity in addition to meeting the cost of power purchase which constitute a substantial part of their revenue requirement.

310. At this point, we are taking into consideration the extent of revenue that a distribution utility is likely to earn for sale of power to HT & EHT groups of consumers. Besides, the volume of sale at LT is an important criterion where the loss level is high and the expected revenue realisation is low. Thus, the Bulk Supply Price (BSP) is fixed in a manner that makes all the distribution utilities more or less financially viable.

Demand Charges

311. Like the ARR approval of GRIDCO for FY 2015-16, there shall not be any levy of separate maximum demand charges upto the permitted SMD in a month for the Distribution Utilities for the FY 2016-17. 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.250 per KVA per month. This is again subject to the condition that the annual average SMD shall be limited to the SMD approved in the order. This is necessary to maintain the load planning and system stability. In case the annual average SMD is more than the approved SMD, then overdrawal amount shall attract the penalty @ Rs.250 per KVA per month, notwithstanding the fact that a utility might have paid the SMD charges for exceeding the permitted SMD in any month.

Determination of Bulk Supply Price

312. GRIDCO has proposed a BSP @ 362.62 P/U to be levied on the DISCOMs towards their purchase of power. The Commission determines the Bulk Supply Price in such a way that their expected estimated revenue shall be sufficient to pay the power bills, the transmission charge bills including SLDC charges and they shall meet their statutory obligations including meeting the expenses towards establishment, maintenance and other allied expenses.
313. The details of Bulk Supply Price as well as the quantum of energy approved by the Commission for each DISCOM are presented in a table below:

Table – 62
Bulk Supply Price and Quantum of Energy for FY 2016-17

Name of the DISCOMs	Existing Bulk Supply Price i.e. approved for FY 2015-16 (P/U)	Quantum of Energy for sale during FY 2016-17 (MU)	Total Revenue for FY 2016-17 (Rs. Crore)	Bulk Supply Price approved for FY 2016-17 (P/U)
CESU	285.00	8570.00	2313.90	270.00
NESCO	302.00	5450.00	1618.65	297.00
WESCO	310.00	7050.00	2086.80	296.00
SOUTHCO	200.00	3470.00	683.59	197.00
Total	284.29	24540.00	6702.94	273.14

314. The above approved revenue has to be realized by GRIDCO from the DISCOMs through escrow mechanism. In case of any default in monthly BSP dues by the DISCOMs, they are liable for imposition of power regulations. It is directed that GRIDCO should resort power regulation to the DISCOMs to the extent of non-payment of monthly BSP dues.

Charges for Overdrawal of Energy

315. GRIDCO in its application proposes that any excess drawl of energy by a Distribution and Retail Supply Utility during a month over and above the approved drawal would be payable on provisional basis at the highest OERC approved power purchase rate fixed for a station for the FY 2016-17 (which includes transmission charges & transmission loss) on a monthly basis instead of the normal differential BSP applicable to the respective DISCOMs subject to final year-end adjustment considering the highest power purchase rate/cost including the rate(s) of energy drawn through UI / Deviation Settlement of the month plus transmission charges and transmission loss.
316. However, the Commission has already framed suitable guidelines/regulations for intra-state ABT, which will be binding on all the users of the system. As the Commission have introduced Intra-state ABT between GRIDCO and DISCOMs, in the 1st phase (in a separate order), the issue of overdrawal / underdrawal of energy will be adjusted through un-scheduled interchange mechanism. The schedule energy shall be billed by GRIDCO and paid by DISCOMs as per the present Tariff Order of the Commission. Any deviation from the scheduled energy shall be billed by SLDC and paid by DISCOMs as per the prevalent UI rate. The Commission may at latter date notify the Intra-State Deviation Settlement regulations which would replace the existing ABT Regulations.

Rebate

317. For payment of bills through a letter of credit or by cash within two working days (excluding holidays under N.I. Act, 1881), 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 Utilities, a rebate of 1% shall be allowed. However, payment by DISCOMs within the specified period shall be first adjusted towards current months dues raised in the bill. If the current dues are fully met within the specified time period, GRIDCO shall allow rebate. Payments over and above the current dues shall be adjusted towards the arrears after rebate.

Late Payment Surcharge

318. In case payment of bills by the Distribution Utilities 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 on the unpaid amount.

Duty and Taxes

319. The Commission approves that statutory levy/duty/tax/cess/toll etc. imposed under any law from time to time shall be charged over and above the bulk supply price fixed by the Commission.
320. The Bulk Supply Price in respect of GRIDCO as indicated below will become effective from 1st April, 2016 and shall continue until further orders.

Table -63

Name of the DISCOMs	Paise/ Kwh
CESU	270
NESCO	297
WESCO	296
SOUTHCO	197

321. The application of GRIDCO in Case No.54 of 2015 is disposed of accordingly.

(A. K. DAS)
MEMBER

(S. P. SWAIN)
MEMBER

(S.P. NANDA)
CHAIRPERSON