

**ODISHA ELECTRICITY REGULATORY COMMISSION  
PLOT NO. 4, CHUNUKOLI, SHAILASHREE VIHAR,  
BHUBANESWAR-751021**

\*\*\*\*\*

**Present: Shri U. N. Behera, Chairperson  
Shri A. K. Das, Member  
Shri S. K. Parhi, Member**

**CASE NO. 73 OF 2018**

**DATE OF HEARING : 05.02.2019**

**DATE OF ORDER : 29.03.2019**

**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 2019-20 under Section 86(1) (a) & (b) and other applicable provisions of the Electricity Act, 2003 read with OERC (Terms and Conditions for Determination of Tariff) Regulations, 2004 and OERC (Conduct of Business) Regulations, 2004.**

**ORDER**

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. GRIDCO Ltd. has done so. The Commission has taken the filing of GRIDCO Ltd. into consideration even though GRIDCO Ltd. as a deemed trading licensee under the 5<sup>th</sup> Proviso to Section 14 of the Electricity Act, 2003 (hereinafter referred to as “the Act”) as it is outside the purview of Section 62 of the said Act. The prices at which GRIDCO Ltd. supplies power to the Distribution Utilities has been regulated and made same as the procurement price fixed for the Distribution Utilities under Section 86(1) (b) of the Act. The Bulk Supply Price fixed for the Utilities would not be applicable for supply of surplus power by GRIDCO to any other person anywhere even after satisfying the requirements of the Distribution Utilities of Odisha. The price at which GRIDCO Ltd.

would supply power to Distribution Utilities of Odisha has to be determined with reference to the Aggregate Revenue Requirement (ARR) of GRIDCO Ltd. Hence GRIDCO Ltd. was called upon to file its Aggregate Revenue Requirement (ARR) for ensuing Financial Year i.e. for FY 2019-20.

**PROCEDURAL HISTORY (Para- 2 to 7)**

2. The Commission directed GRIDCO Ltd. to publish its Aggregate Revenue Requirement (ARR) and determination of Bulk Supply Price (BSP) application in the approved format in two leading and widely circulated daily newspapers one in odia and one in English and the matter was also posted on the Commission's website ([www.orierc.org](http://www.orierc.org)) in order to invite objections/suggestions from the intending objectors. The said public notice was published in the leading daily newspapers, Commission's website and GRIDCO Ltd.'s website. 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 GRIDCO Ltd. for FY 2019-20, the Commission received 10 nos. of objections/ suggestions from the following persons/ associations/ institutions/ licensees: -
  - (1) M/s. Ferro Alloys Corporation Limited (FACOR), GD-2/10, Chandrasekharpur, Bhubaneswar-751023, (2) Odisha Power Generation Corporation Ltd., Zone-A, 7<sup>th</sup> Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023, (3) M/s. Utkal Chamber of Commerce & Industry Ltd., N-6, IRC Village, Nayapalli, Bhubaneswar-751015, (4) Sri Ananda Kumar Mohapatra, Power Analyst, S/o Jachindranath Mohapatra, Plot No.639/1021, Laxmi Vihar, Basuaghai, Badagada, Tankapani Road, Bhubaneswar-751002, (5) M/s. Swain & Sons Power Tech Pvt. Ltd., K-8/82, Kalinga Nagar, Ghatikia, Bhubaneswar-751003, (6) North Odisha Chamber of Commerce and Industry (NOCCI), Ganeswarpur Industrial Estate, Januganj, Balasore-756019, (7) M/s. Vedanta Limited, At-Bhurkhamunda, Po-Kalimandir, Dist-Jharsuguda, Odisha-768202, (8) Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour & President Upobhokta Mahasangha, Plot No. 302 (B), Beherasahi, Nayapalli, Bhubaneswar-751012, (9) Shri Alekha Chandra Mallick, S/o Late Harekrushna Mallick, Plot No. 335, City Garden, Raghunathpur, Bhubaneswar,

Khurda-754005 and (10) Shri R.P.Mahapatra, Retd. Chief Engineer & Member (Gen.), Plot No-775 (P), Lane-3, Jayadev Vihar, Bhubaneswar-751013.

4. The applicant submitted its reply to the issues raised by the above objectors during hearing of the case. Further, 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 2019-20. The Consumer Counsel-WISE, Pune presented its views on the matter in the hearing.
5. The date for hearing was fixed on 05.02.2019 at 11.00 AM and it was duly notified in the leading newspapers mentioning the list of the objectors, time and place of hearing. The Commission had also issued individual notice to the objectors and the applicant for hearing of the above matter on 05.02.2019. The Commission also issued notice to the Department of Energy, Government of Odisha informing them about the date, time and place of hearing and requesting to send its authorized representative to take part in the proceeding.
6. In its consultative process, the Commission conducted a public hearing at its premises on 05.02.2019 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) Shri Hemant Sharma, CMD, GRIDCO Ltd. (2) Shri M.V. Rao, M/s. Ferro Alloys Corporation Limited (FACOR), GD-2/10, Chandrasekharapur, Bhubaneswar-751023, (3) Shri Ritwik Mishra, GM(R&CA) on behalf of M/s. Odisha Power Generation Corporation Ltd., Zone-A, 7<sup>th</sup> Floor, Fortune Towers, Chandrasekharapur, Bhubaneswar-751023, (3) Shri L. Pangari, Sr. Advocate & Sri S.K.Nath, Advocate on behalf of M/s. Utkal Chamber of Commerce & Industry Ltd., N-6, IRC Village, Nayapalli, Bhubaneswar-751015, (4) Sri Ananda Kumar Mohapatra, Power Analyst, S/o-Jachindranath Mohapatra, Plot No.639/1021, Laxmi Vihar, Basuaghai, Badagada, Tankapani Road, Bhubaneswar-751002, (5) Shri Bibhu Charan Swain, Director, M/s. Swain & Sons Power Tech Pvt. Ltd., K-8/82, Kalinga Nagar, Ghatikia, Bhubaneswar-751003 and also on behalf of (6) North Odisha Chamber of Commerce and Industry (NOCCI), Ganeswarpur Industrial Estate, Januganj, Balasore-756019, (7) Sri Ninad

Nigam, Dy. Manager, M/s. Vedanta Limited, At-Bhurkhamunda, Po-Kalimandir, Dist-Jharsuguda, Odisha-768202, (8) Shri Ramesh Ch. Satpathy, Secretary, National Institute of Indian Labour & President Upobhokta Mahasangha, Plot No.302(B), Beherasahi, Nayapalli, Bhubaneswar-751012, (9) Shri R.P.Mahapatra, Retd. Chief Engineer & Member (Gen.), Plot No-775 (P), Lane-3, Jayadev Vihar, Bhubaneswar-751013, (10) Ms. Niharika Pattanayak, ALO, Department of Energy, Govt. of Odisha, Bhubaneswar. Nobody is present on behalf of Shri Alekha Chandra Mallick. The written notes of submission filed in the above case were taken in to consideration by the Commission.

7. The Commission convened the State Advisory Committee (SAC) meeting on 20.02.2019 at 3.00 PM in the Conference Hall of the OERC on Bulk Supply Price proposal of the licensee for FY 2019-20. 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 AND BULK SUPPLY PRICE (BSP) FOR THE FY 2019-20 (Para- 8 to 31)**

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 Distribution & Supply Utilities (hereinafter called as 'DISCOMs') in the State of Odisha 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 generators for supply the same to DISCOM Utilities. Under the existing Bulk Supply Agreements between the DISCOM Utilities and the GRIDCO, the DISCOM Utilities are required to purchase power from GRIDCO at a regulated price to be determined and approved by the Commission. The Commission is empowered under the Electricity Act, 2003 to determine the power procurement price of the DISCOM Utilities. This procurement price incidentally happens to be the Bulk Supply Price at

which GRIDCO supplies power to the DISCOM Utilities. 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, as provided in the OERC (Conduct of Business) Regulations, 2004 and other related Regulations and as per Section 86 (1) (a) & (b) and other applicable provisions of the Electricity Act, 2003, GRIDCO is required to submit its Aggregate Revenue Requirement (ARR) before OERC for determination of the procurement price of the DISCOM Utilities. 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 2019-20 to enable it to carry out its functions of bulk supply to DISCOM Utilities and emergency supply to CGPs.

### **Projection of Demand and Energy**

9. The Simultaneous Maximum Demand (SMD) of DISCOM Utilities for the FY 2019-20 has been projected by GRIDCO at 5040 MVA per month. GRIDCO has stated that it is based on the projection of the DISCOM Utilities and shown on the higher side because of the enhanced load arising due to power supply to cover all households particularly under the Rural Electrification in the State. GRIDCO has projected the energy requirement of 27958 MU for the FY 2019-20, consisting of 27953 MU for sale to DISCOM Utilities and 5 MU for emergency power supply to the CGPs like NALCO and IMFA.

### **Quantum of Power Procurement**

10. GRIDCO has projected to procure 28897.16 MU of energy during the FY 2019-20 considering the energy requirement of 27958 MU for DISCOM Utilities and CGPs and 939.16 MU towards transmission loss @ 3.25% in STU system.

**Table -1**  
**Demand and energy projection of GRIDCO for FY 2019-20**

Particulars	Projection for FY 2019-20
SMD for DISCOM Utilities (MVA per month)	5040
Energy Demand of DISCOM Utilities (MU)	27953.00
Emergency Power to CGPs (MU)	5.00
Transmission Loss @ 3.25% (MU)	939.16
Energy Required to be purchased by GRIDCO to meet the power demand of DISCOM Utilities & CGPs (MU)	<b>28897.16</b>
Available Energy (MU)	28897.16

## Power Purchase Cost Projected for FY 2019-20

11. The detailed cost of power purchase as furnished by GRIDCO for FY 2019-20 is reproduced hereunder in Table below.

**Table -2**  
**Summary of Proposed Power Procurement Cost during FY 2019-20**

Stations	Availability (After Transformation Loss and Auxiliary Consumption) (MU)	Rate (P/U)	Total cost (Rs.Cr.)
HHEP	657.59	157.73	103.72
CHEP	346.50	79.28	27.47
Rengali	663.30	98.46	65.31
Upper Kolab	780.12	63.84	49.80
Balimela	1173.15	88.05	103.29
<b>OHPC(Old)</b>	<b>3620.66</b>	<b>96.55</b>	<b>349.59</b>
Indravati	1950.30	82.19	160.30
<b>Sub-Total OHPC</b>	<b>5570.96</b>	<b>91.53</b>	<b>509.89</b>
Machhkund	262.50	51.16	13.43
<b>Total State Hydro</b>	<b>5833.46</b>	<b>89.71</b>	<b>523.32</b>
OPGC (I & II)	2861.60	253.91	726.59
OPGC (III & IV)	4574.98	333.00	1523.47
TTPS	3336.04	311.97	1040.74
Small Hydro	417.00	382.21	159.38
Biomass Energy	80.00	578.00	46.24
Wind Energy	260.00	298.46	77.60
Solar Energy	686.00	533.24	365.80
CGPs	0.00	0.00	0.00
Co-generation Plants	0.00	0.00	0.00
IPPs	4771.19	270.86	1292.31
<b>Total State</b>	<b>22820.27</b>	<b>252.21</b>	<b>5755.45</b>
TSTPS Stg.-I	2213.05	317.52	702.69
TSTPS Stg.-II	1361.96	295.19	402.04
FSTPS-I & II	1549.10	356.83	552.77
FSTPS-III	0.00	0.00	0.00
KhSTPS Stg.-I	0.00	0.00	0.00
KhSTPS Stg.-II	109.78	373.11	40.96
Barh-STPS-II	0.00	0.00	0.00
<b>Total Central Thermal</b>	<b>5233.89</b>	<b>324.51</b>	<b>1698.46</b>
Chukha	261.00	285.86	74.61
TALA	135.00	261.11	35.25
Teesta	447.00	279.35	124.87
<b>Total Central Hydro</b>	<b>843.00</b>	<b>278.45</b>	<b>234.73</b>
<b>Total EREB</b>	<b>28897.16</b>	<b>266.07</b>	<b>7688.64</b>
<b>SOC &amp; MOC Charges</b>			<b>2.20</b>
<b>GRAND TOTAL</b>	<b>28897.16</b>	<b>266.15</b>	<b>7690.82</b>

**Pass through of arrear dues paid / to be paid during FY 2019-20**

12. GRIDCO has not proposed any past expenses as pass through in the ARR for the FY 2019-20. However, they have indicated to include such expenses while filing the Truing-up Petition before the Commission for the relevant period along with the Audited Accounts.

**Special Appropriation for Loan and Interest towards Past Power Purchase Liabilities**

13. GRIDCO has proposed the special appropriation of Rs. 1016.93 Crore towards repayment of Banks Loans, Bond dues, Inter Corporate Loan from OMC Ltd. and Securitised dues of OHPC for recovery through the ARR and BSP for FY 2019-20 and deferment of the balance amount of Rs. 1955.05 Crore relating to repayment of Govt. Loan and NTPC-GoO Bond dues.

**Interest, Financing and Other expenses**

14. GRIDCO has proposed to incur expenses about Rs. 429.92 Crore during the FY 2019-20 on account of Interest on Loans, Employees Cost, A&G Expenses, R&M and Depreciation etc. as shown in the table below.

**Table -3**

**Interest, Financing & Other expenses for FY 2019-20 (Rs. Crore)**

<b>Particulars</b>	<b>GRIDCO proposal for FY 2019-20</b>	
1. Interest & Financial Charges		<b>409.41</b>
2. Other Costs:		
a. Employee Cost	12.84	
b. A&G Cost	6.66	
c. Repair & Maintenance Cost	0.25	
<b>Sub-Total</b>		<b>19.75</b>
3. Depreciation		<b>0.76</b>
<b>Total (1+2+3)</b>		<b>429.92</b>

15. Out of the total Interest and Financial Charges of Rs. 545.15 Crore, GRIDCO has considered Rs.409.41 Crore as pass through in the ARR for FY 2019-20 after deferment of Rs.106.05 Crore of interest payable to the State Government and Rs.29.69 Crore towards interest on SOD.
16. Proposed employees cost of Rs.12.84 Crore for FY 2019-20 includes the arrear amounting to Rs.1.70 Crore on account of implementation of the 7th Pay Commission recommendation.

### Other Income / Miscellaneous Receipts

17. GRIDCO expects to earn an amount of Rs. 3.48 Crore during FY 2019-20 from the proposed emergency power sale of 5 MU to long term customers like NALCO and IMFA at existing approved rate of 695 P/U.

### Receivable from DISCOM Utilities and other parties

18. DISCOM Utilities have defaulted in payment of Rs.2117.44 Crore towards securitized dues (as on 31.03.2018), Rs.664.27 Crore towards Year-end-Adjustment (YEA) Bills (FY 2007-08 to FY 2010-11) and Rs. 4320.65 Crore towards BSP bills (upto September, 2018). Further, Rs.195.36 Crore is outstanding against three erstwhile R-Infra managed DISCOM Utilities as on 31.03.2018 towards the dues of Rs.400.00 Crore Bond.

### Aggregate Revenue Requirement (ARR)

19. The proposal for Aggregate Revenue Requirement of GRIDCO for FY 2019-20 is summarized in the Table below.

Table -4

#### Proposed Aggregate Revenue Requirement of GRIDCO for FY 2019-20 (Rs. Crore)

Particulars		<b>Alternative-1 Proposed ARR (Considering pass through of Principal Repayment)</b>	<b>Alternative-2 Proposed ARR (Without considering pass through of Principal Repayment)</b>
Power Purchase cost		<b>7690.82</b>	<b>7690.82</b>
Interest & Financing Charges		409.41	409.41
Employees Cost		12.84	12.84
A&G Expenses		6.66	6.66
R & M Expenses		0.25	0.25
Depreciation		0.76	0.76
<b>Sub Total</b>		<b>8120.74</b>	<b>8120.74</b>
<b>Pass Through of Past Power Purchase Expenses</b>		-	-
<b>Special Appropriation</b>			
State Govt. Loans & Interest (Rs.558.65 Crore) (Deferred)	-		
NTPC-GoO Special Bonds & Interest (Rs.1396.40 Crore) (Deferred)	-	<b>1016.93</b>	-
OHPC Securitized Dues	88.43		
Repayment of Bank / Commercial Loans	928.50		
<b>Gross Revenue Requirement</b>		<b>9137.67</b>	<b>8120.74</b>

<b>Particulars</b>		<b><u>Alternative-1</u> Proposed ARR (Considering pass through of Principal Repayment)</b>	<b><u>Alternative-2</u> Proposed ARR (Without considering pass through of Principal Repayment)</b>
Less: Miscellaneous Receipts from Emergency & Back-up Power Sale to NALCO & IMFA		3.48	3.48
<b>Net Revenue Requirement to be recovered from DISCOM Utilities</b>		<b>9134.19</b>	<b>8117.26</b>

#### **Proposed Revenue Earning at Existing BSP**

20. GRIDCO estimates to earn revenue of Rs 7733.48 Crore during FY 2019-20 from the anticipated sale of 27953 MU to DISCOM Utilities at the existing average BSP of 276.66 P/U for 2018-19.

#### **Excess / Deficit in the ARR for FY 2019-20**

21. GRIDCO has proposed that it would suffer revenue deficit of Rs. 1400.71 Crore considering the net ARR of Rs. 9134.19 Crore and the revenue of Rs.7733.48 Crore to be earned from sale of the proposed energy of 27953 MU to DISCOM Utilities during FY 2019-20 at the existing BSP for FY 2018-19. In its alternate proposal GRIDCO has proposed the revenue deficit at Rs. 383.78 Crore considering the net ARR of Rs. 8117.26 Crore, which excludes the special appropriation of Rs. 1016.93 Crore towards repayment of Banks Loans and Securitized dues of OHPC. The details are shown in the Table below:

**Table -5**  
**Excess / Deficit on Revenue Requirement for FY 2019-20**

(Rs. Crore)

<b>Particulars</b>	<b><u>Alternative-1</u> Proposed Deficit (Considering pass through of Principal Repayment in ARR)</b>	<b><u>Alternative-2</u> Proposed Deficit (Without considering pass through of Principal Repayment in ARR)</b>
Total Revenue Requirement	<b>9137.67</b>	<b>8120.74</b>
<i>Less:</i> Misc. Receipt from Emergency sale of Power to NALCO & IMFA	3.48	3.48
<b>Net Revenue Requirement to be recovered from DISCOM Utilities</b>	<b>9134.19</b>	<b>8117.26</b>
Revenue Receipt from DISCOM Utilities at the existing BSP	7733.48	7733.48
<b>Gap i.e. Surplus / Deficit (-)</b>	<b>(1400.71)</b>	<b>(383.78)</b>

### Proposal for Revision of Bulk Supply Price

22. In its ARR & BSP Application, GRIDCO has submitted that with the present BSP for the FY 2018-19, it cannot meet its estimated revenue requirement for the FY 2019-20 as it results in revenue deficit of Rs. 1400.71 Crore under Alternative-1 (where Repayment of Principal is included) and Rs. 383.78 Crore (when Repayment of Principal is excluded) under Alternative-2 as indicated in the above table. In order to meet this deficit, GRIDCO has prayed before the Commission for upward revision of Bulk Supply Price for the FY 2019-20. In the existing single part BSP method, GRIDCO proposes to recover the estimated Net Revenue Requirement of Rs.9134.19 Crore under Alternative-1 (where Repayment of Principal is included) or Rs.8117.26 Crore under Alternative-2 (where Repayment of Principal is excluded) from the DISCOM Utilities through Energy Charge at the average BSP of 326.77 P/U or 290.39 P/U respectively and levy of a conditional demand charge Rs. 250/KVA/Month only in both the alternatives when the actual SMD of DISCOM Utilities in a month exceeds the permitted monthly SMD (110% of the approved SMD), to take care of monthly variations subject to Year-End Adjustment within the permitted annual SMD i.e. 110% of the approved annual SMD.

**Table - 6**  
**Proposed Bulk Supply Price (BSP) for FY 2019-20**

<b>Particulars</b>	<b><u>Alternative-1</u> (Considering pass through of Principal Repayment in ARR)</b>	<b><u>Alternative-2</u> (Without considering pass through of Principal Repayment in ARR)</b>
<b>Net ARR estimated to be recovered through BSP (Rs. Crore)</b>	9134.19	8117.26
<b>Energy proposed for sale to DISCOMs Utilities (MU)</b>	27953.00	27953.00
<b>Proposed Average BSP to recover the Net ARR through Energy Charges only (P/U)</b>	<b>326.77</b>	<b>290.39</b>

### Other Allied Submissions to Facilitate GRIDCO for Recovery of its Expenses

#### Demand Charges

23. GRIDCO proposes that the Demand Charges may be levied @ Rs.250/KVA/Month from DISCOM Utilities under both the above Alternatives, i.e. Alternative-1 (with inclusion of Repayment of Principal) and Alternative-2 (with exclusion of Repayment of Principal). When the actual SMDs of DISCOMs in a month exceeds the permitted

Monthly SMDs (110% of the approved SMD), the DISCOM Utilities will be billed by GRIDCO and paid by DISCOMs on provisional basis towards the excess SMD to take care of monthly variations. However, such Charges will be adjusted at the end of the year if the actual Annual SMD remains within the Permitted Annual SMD i.e. 110% of the approved Annual SMD. If not, the Demand Charges for the excess SMDs may be levied at the above proposed rate

#### **Over Drawl and Year End Charges**

24. GRIDCO proposes that any excess drawal of energy by a Distribution and Retail Supply License (DISCOM Utilities) during a month over and above the approved energy quantum (Approved MU for FY 2019-20 X No. of days of the relevant month / 365 days) would be payable on provisional basis at the highest OERC approved Power Purchases Rate fixed for a Station for FY 2019-20 (which includes transmission charges and transmission loss) on a monthly basis instead of the normal differential BSP applicable to the respective DISCOMs subject to final Year End Adjustment (YEA) 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.

#### **Fuel Price Adjustment (FPA)**

25. 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 Bulk Supply Price subject to maximum of 25% of the approved Average Bulk Supply Price which will be passed on to consumers in the same month along with their normal energy bills served to the consumers at a rate which will be arrived at by considering their approved monthly sale quantum to the consumers (approved quantum for the financial year/12 months).

#### **Rebate**

26. GRIDCO proposes that a rebate of 2% on monthly energy bill may be allowed in case of full payment of current month's BSP within two working days (except holidays under NI Act) of raising of BSP invoice. In case of payment of part of current BSP within two working days and balance current BSP dues within 30 days of raising of

BSP invoice, 2% rebate for payment of bill within two working days and 1% rebate for payment of balance current BSP beyond two working days and within thirty days may be allowed. For payment of full BSP dues within 30 days, 1% rebate may be allowed. However, no rebate be allowed, if full BSP is not paid within thirty days.

#### **Delayed Payment Surcharge**

27. GRIDCO proposes that the monthly charges together with other charges and surcharge on account of delayed payments, if any, shall be payable within 30 days from the date of bill. If payment is not made within the said period of 30 days, delayed payment surcharge at the rate of 1.50% (One point five percent) per month shall be levied pro-rata for the period of delay from the due date, i.e. from the 31st day of the bill, on the amount remaining unpaid (excluding arrears on account of delayed payment surcharge).

#### **Escrow Arrangement**

28. DISCOMs are approaching GRIDCO to allow escrow relaxation towards employee cost and R&M expenses in each month. Since there is no specific direction in the ARR 2018-19 to allow escrow relaxation, GRIDCO is facing inconvenience. Keeping in view the overall interest of the sector, the Commission may pass suitable direction as may be deemed necessary without affecting the interest of GRIDCO.

#### **Carry Forward of Revenue Gap**

29. GRIDCO prays that the proposed Annual Revenue Requirement & Bulk Supply Price be made applicable from 1st April 2019. However, in case of a gap between the approved revenue requirements for FY 2019-20 and the revenue realized, the Commission may kindly approve to carry forward the gap for adjustment during the future years.

#### **Summary of Tariff Filing for FY 2019-20**

30. GRIDCO has prayed the Commission to approve the following for FY 2019-20:
- i) consider to allow all the genuine Costs as proposed in the Application and accordingly, approve the ARR and Bulk Supply Price (BSP) for FY 2019-20 and make the same effective from 1st April 2019;
  - ii) allow carry forward of the additional costs, if any, for recovery in the future BSP or pass through of the same in the Truing-up Exercise;

- iii) consider to hear the Truing-up Petition of GRIDCO upto FY 2016-17 along with the hearing of the ARR & BSP Application of GRIDCO for FY 2019-20.
  - iv) allow recovery of any cost/s due to the Electricity Duty/ Water Cess levied by the Government of Odisha and any other Statutory levy/ Duty/ Tax/ Cess / Toll etc. which shall be charged over and above the Bulk Supply Price.
31. During the hearing, the licensee-GRIDCO was allowed at the outset to give a power point presentation regarding its ARR and BSP application for the FY 2019-20. 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 observations and suggestions regarding the submission of the licensee. Based on their nature and type, these objections/suggestions have been categorized broadly as indicated here under.

**VIEWS OF THE OBJECTORS AND CONSUMER COUNSEL ON THE BULKSUPPLY PRICE PROPOSAL FOR FY 2019-20 (Para 32 to 81)**

**Consumer Counsel**

32. Design of BSP for DISCOM Utilities has direct impact on consumer tariff; therefore, WISE, the Consumer Counsel has made the following observations on the ARR of GRIDCO for consideration of the Commission. WISE has stated to review the energy availability from all sources, specifically the low availability from IPPs along with the power purchase costs claimed by GRIDCO in respect of various power stations; not to consider the high cost power purchase from central thermal stations and finalise the procurement strictly based on merit order despatch principle; review the cost projected for OPGC unit # 3 & 4; to review the energy procurement from renewable energy projects for meeting the RPO target set by the Commission; to review the transmission loss and transmission charges in case of central sector projects; to suitably determine the power procurement rates for IPPs; to verify the proposed special appropriation and repayment of loans; not to allow interest on proposed new loan; and to verify the actual employee cost, R&M cost, A&G cost and trading income of GRIDCO.

**Views of Objectors**

**Legal Issues:**

33. GRIDCO has to submit its license conditions and intimate the regulations based on which it has filed its ARR and BSP Application.

34. GRIDCO is an Electricity Trader under Section 14(c) of EA, 2003 and is therefore entitled to 'Trading Margin'. Therefore, determination of ARR and BSP is not in accordance with the provisions of the Statute.
35. As a trader, GRIDCO should be allowed a trading margin between 4 P/U to 7 P/U for the total energy handled by it as its ARR. Any additional ARR beyond the trading margin should not be passed to the consumer.

#### **Availability of power**

36. Projections of GRIDCO on availability from power from various sources need to be scrutinized by the Commission. Power availability of OHPC may be considered on the actual performance for past years with additional capacities build up.
37. GRIDCO may be advised to procure maximum power available from the captive power plants in the state and then avail the allocation of Central Power Stations in merit order to meet the power requirement of the State Consumers.
38. 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 60-70 paisa per unit of all categories of consumers taking into account the BSP proposed by GRIDCO.
39. GRIDCO has indicated that the drawal from Barh STPS-II and FSTPS-III will be nil. However, in spite of the refusal of the commission, GRIDCO has drawn high cost power from both the STPS during FY 2018-19. This is not justified and GRIDCO should submit whether prior approval of the Commission was taken.
40. It will be always beneficial for GRIDCO to procure all the available surplus power from CGP in the State, as the CGP power is not associated with any transmission loss, POC / STU transmission charges, POC losses and other associated cost and cheaper than NTPC power. A specified quantum of power may be fixed by the Commission to be purchased from captive power plants in Odisha and the tariff of the same may be approved looking into the present cost of generation.
41. Despite availability of less cost IPP power, GRIDCO has projected to purchase only 4771.19 MU. The Commission may direct GRIDCO to harness maximum power from IPPs.

42. GRIDCO should explore to purchase cheap power available from power exchange as far as possible instead of procuring costly power from central sector and follow merit order to meet the power requirement of the state.
43. GRIDCO should chalk out five-year plan, looking to the power availability from the IPPs and future load demand and explore the possibility to surrender the allocation of costly power, in order to avoid the payment of fixed charges in the event of non-drawl of the allocated quota from central stations.
44. Solar power is available in Odisha at less than 500 P/U. But the same has been projected at higher rate in the ARR of GRIDCO. GRIDCO has not considered the shortfall in RPO for the FY 2011-12 to FY 2018-19 in its ARR. GRIDCO has to submit the year-wise RPO obligation and compliance status.
45. The Percentage of loss in the STU for the earlier two years (FY 2015-16 and FY 2016-17) was less than 3%. The Commission may approve 2% transmission loss for FY 2019-20.

#### **Power purchase cost**

46. The Commission may direct GRIDCO to buy cheaper power from IPPs, CGPs and power exchanges through open access instead of costlier power from the central sector.
47. GRIDCO should discuss with OHPC to reduce the price claimed in its ARR application for FY 2019-20.
48. The energy charges of OPGC for FY 2019-20 need to be projected considering the provisions regarding the norms of operation and the fuel prices and GCV to be considered, as per approved amended PPA.
49. OPGC has not proposed for any generation from its Stage-II Units in its petition, but GRIDCO has proposed to procure 4574.98 MU. The tariff of 333 P/U arrived at by GRIDCO for such power needs cross verification as the price is very high compare to average price of 266.15 P/U. OPGC power supply to GRIDCO should be less than Rs 3 per unit as a direct consequence of captive coal mines.
50. GRIDCO should surrender its quota and should not buy costlier power from NTPC. The State Government has to place the matter at appropriate level. GRIDCO has to file appeal in ATE against CERC decision for such unrealistic prices fixed by CERC

for central stations. The Commission has already disallowed GRIDCO to procure power from Farakka and Barh, but GRIDCO is scheduling power from these stations, paying energy charges and burdening the consumers unnecessarily.

51. GRIDCO is planning to buy power from inter-state IPP at higher price. Instead of buying high cost power, GRIDCO can buy power from IEX at an affordable rate so that there will not be much financial burden on the general consumer.
52. M/s Vedanta requested to approve the provisional fixed cost as 114 /U as submitted by GRIDCO and provisional variable charges as 172.02 P/U as per prevailing revised price of linkage coal.
53. GRIDCO has a PPA for 50% share with the upcoming NTPC's super critical power station 2X800 MW located at Darlipali in Sundergarh district of Odisha. According to latest status report of CEA the power station is likely to achieve COD in February 2019 and September 2019. Hence, under long term PPA obligation GRIDCO would be having at least 2807 MU in FY 2019-20. Even if the said quantum is not availed by GRIDCO, the fixed cost burden is required to be borne by GRIDCO. GRIDCO should submit the revised ARR taking into account the inter-alia NTPC supply for the year.
54. The high cost power purchased by GRIDCO for the inaction of the State Govt, by not encouraging for implementation of low cost solar plants in the state. Hence, GRIDCO should not be allowed to purchase high cost power more than the power purchase rate of Solar Energy Corporation of India.

#### **Employee cost**

55. GRIDCO has to justify the abnormal increase in Employees Cost and to share details of their present staff and future employee projection for next 2 years.

#### **A&G, R&M and Depreciation**

56. GRIDCO has to justify, why it has always crossed the approved A&G expenses without obtaining necessary approval from the Commission. A&G expenses of GRIDCO for FY 2019-20 may be approved at Rs 5 Crore.
57. The depreciation cost of GRIDCO for FY 2019-20 may be approved at Rs 1.1 crore.
58. R&M cost of GRIDCO for FY 2019-20 may be approved at Rs 0.28 crore only.

### **Loan / Pass through expenses**

59. M/s. Vedanta Ltd. has submitted that GRIDCO in its ARR Application has not proposed any expenses towards pass through of past power purchase dues. But the past energy bills of M/s. Vedanta Ltd. amounting to Rs 342 crore towards differential amount with respect to block year 2010-14 is pending with GRIDCO. Further, GRIDCO is also defaulting on payment of regular monthly energy invoices since July 2017 to the tune of Rs 1952.28 crore. GRIDCO may be directed to make provisions for such payments in the ARR.
60. GRIDCO should not be allowed to avail loan for bridging the cash gap due to its default in collecting its due from DISCOMs. Even if GRIDCO has availed any loan without approval of the Commission, then provision of principal and interest for the same should not be allowed. Some objectors prayed to reject the proposal of payment of principal and interest of the loan of Rs 1426.36 crore indicated in the instant petition.
61. GRIDCO should not be allowed to purchase high cost power by incurring loan. If GRIDCO does this, the Govt of Odisha being the owner of GRIDCO has to borne the losses incurred by GRIDCO towards the loan liabilities and no burden should be passed on to the consumers.

### **Revenue gap and BSP**

62. Any increase in BSP will have direct bearing on retail supply tariff and the burden of such increase in BSP was being loaded on EHT & HT consumers. The Commission may look into the increasing gap of RST & BSP.
63. GRIDCO has proposed increase of 50.11 P/U as compared to previous year's BSP. This will lead to increase of 60-70 P/U in tariff to all category consumers. The Commission should scrutinize the ARR proposed by GRIDCO to avoid increase in BSP.
64. GRIDCO has to produce plan and proposal to purchase low cost power to reduce the bulk supply tariff for FY 2019-20. It is necessary to rationalize the bulk supply price to prevent undue burden on the consumer of the state.

### **Other issues**

65. Actual data submitted by GRIDCO for FY 2017-18 is neither authenticated nor audited. GRIDCO should disclose previous year data for which audit has been conducted. In the absence of truing up of GRIDCO for last three financial years, it is not prudent to determine the BSP for FY 2019-20. Hence, the Commission may dismiss the instant petition.
66. Some objectors have raised doubts that GRIDCO has tampered the data in connection with sale and purchase of power and presented the same in its filings, which is subject to cross verification by the Commission. GRIDCO should supply power procurement bills / invoice along with abstract thereof for the total units purchased during FY 2017-18 for cross verification.
67. Lapses of energy audit caused incapability to account for the inadvertent power injected by CGPs. SLDC has recorded 1500 MU of inadvertent power per annum but no payment has been made to CGPs.
68. OPGC submitted that escrow mechanism is an established payment security mechanism which is to safeguard the interest of both GRIDCO as well as generators like OPGC. Any relaxation in escrow to the DISCOMs would not only encourage them to default in payment but also encourage their lackadaisical approach towards improving their operational efficiency.
69. GRIDCO has failed to recover its dues from DISCOMs and has not taken any action to regulate power supply. On the other hand, there is clamour for relaxation of escrow account. The debt made on account of default of BSP dues by DISCOMs is not being serviced by them. There is no penalty on the DISCOMs for such non-performance and the debt is being serviced by consumers. There is no provision in the Statute for GRIDCO, a deemed trader, to service the creditors of the DISCOMs.
70. Some objectors stated that GRIDCO should submit its audited balance sheet, without which the truing up exercise and determination of ARR and tariff will be an unnecessary exercise. GRIDCO should also share its Business Plan, Performance Review related document in ARR.
71. Some objectors wanted to know whether the accounts of GRIDCO are being audited as per statutory provision.

72. Tariff determination should be necessarily guided by the Electricity Act, 2003 stating Multi-Year Tariff (MYT) Principles in addition to the other guidelines to give an element of certainty.
73. GRIDCO should produce the MOUs signed with IPPs who will be generating power from the year 2019-20 and its status report.
74. GRIDCO has to produce the amount receivable from different DISCOMs till Dec'2018 and what action GRIDCO has taken to recovery the said amount.
75. GRIDCO should produce information about what steps they have taken to develop mini-hydro projects and solar power projects in the State.
76. GRIDCO has to produce the details of escrow relaxation given to different DISCOMs month wise since 1st April 2015 to till December 2018 and how many days the practice will continue.
77. GRIDCO has to produce why other IPPs have not yet generated power for the use of state demand and what action the GRIDCO has taken.
78. GRIDCO has to produce the details outstanding against different govt. consumers and private industries till 31st Dec, 2018 along with action taken report.
79. GRIDCO should produce year wise status report of power trading to outside of the state since 2008-09 till date Dec, 2018 month wise.
80. GRIDCO has to produce the list of IPPs/ Hydro / Mini Hydro power stations those are going to generate power during the FY 2019-20.
81. GRIDCO has to produce a vision document about what action for awareness of consumers have taken for energy conservation in the state of Odisha.

#### **GRIDCO's RESPONSE TO THE OBJECTORS (Para 82 to 135)**

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

#### **Legal issues**

83. GRIDCO is a Deemed Trading Licensee under 5th Proviso to Section 14 of the Electricity Act, 2003. Further, being a wholly State owned Undertaking, GRIDCO is engaged in the business of purchase of electricity in bulk from various generators located in & outside Odisha and the State share of power from the Central Generators

for supply in bulk to the four Electricity Distribution Utilities in the State of Odisha. Besides, GRIDCO's legal existence and the nature of its business have also been upheld by OERC in multiple occasions in various previous ARR & BSP Orders, particularly the ARR & BSP Order for FY 2011-12 & FY 2012-13 and the subsequent ARR & BSP Orders.

84. The issue that GRIDCO is an Electricity Trader and hence, be allowed only Trading Margin @ 4 P/U, has long been settled by the Supreme Court of India in Appeal No. 5722 of 2006 (Gajendra Haldea vrs. GRIDCO & Others). GRIDCO is an "Intra-State Trader" and not an "Inter State Trader" to whom Trading Margin @ 4 P/U is applicable.
85. GRIDCO, in the ARR & BSP Application for FY 2019-20 presented itself as a Deemed Trading Licensee as approved by the OERC and as the "State Designated Entity" (as approved by the State Government) to arrange for bulk procurement of State share of Power from various Generators for bulk supply through the Retail Supply Licensees of four DISCOM Utilities for onward retail supply to the Electricity Consumers in the State. GRIDCO has never attempted to say anything beyond the approval of the Commission or the approval by the State Government in respect of its Status. GRIDCO is a Deemed Intra State Power Trader and such Status of GRIDCO has even been upheld by the Supreme Court of India in the Civil Appeal No. 5722 of 2006 (Gajendra Haldia vrs. GRIDCO & Others) contrary to the assumption of Inter State Trader as assumed.

#### **Availability of power**

86. Power Availability from OHPC during FY 2019-20 has been proposed by GRIDCO as per the Generation Plan submitted by OHPC to GRIDCO for the purpose of including the same in GRIDCO's ARR & BSP Application. Accordingly, the Drawal from OHPC has been projected as 5570.96 MU for FY 2019-20(excluding Machhkund Power) which is close to the Design Energy of 5676 MU.
87. For the estimation of procurement from Unit-3 & 4 of OPGC, GRIDCO has projected the same by taking into account the relevant e-mail dated 14.11.2018 which was attached as ED-IV in the Volume-II of the ARR & BSP Application of GRIDCO for FY 2019-20.

88. GRIDCO has followed the Principle of Merit Order in the matter of projection of Power Procurement during FY 2019-20 to ensure that the State Consumers bears the least Cost Burden and in doing so, GRIDCO has not factored any Power Purchase from high Cost Stations like NTPC-Barh, FSTPS-III & KhSTPS-I in the ARR & BSP Application for FY 2019-20.
89. GRIDCO along with Government of Odisha are in constant communication with the Central Government to arrange for surrender of Odisha share of Power from this costly Up-coming Station along with other costly NTPC Stations located outside Odisha (except North Karanpura STPS). However, the same has not been possible as of date as the Government of India has not re-allotted the Odisha share of power to any other State(s) stating that no prospective Buyer States are available. Persistent efforts and follow-up with Government of India by GRIDCO & the Govt. of Odisha led to de-allocation of Odisha share of costly 155 MW power from New Nabi Nagar STPS for re-allocation in favour of Uttar Pradesh during 2017.
90. GRIDCO is also equally concerned about the Power Procurement Cost and hence, has been adopting the Merit Order Policy of sourcing the power right from the beginning of its Energy Sourcing Activity. Drawal of firm power from the Generators with whom PPAs have been signed, has to be sourced in order to economize the procurement cost.
91. In respect of harnessing maximum power from the IPPs, GRIDCO submitted that it will try its best to maximize the drawal from the IPPs during the FY 2019-20, subject to availability of such power.
92. The present Annual Revenue Requirement(ARR) and Bulk Supply Price (BSP) Application of GRIDCO for FY 2019-20 has been filed before the Commission for approval of the Power Procurement Plan to meet the power Demand of the State in an optimal manner. Specific Issues on Technical, Commercial and Non-supply of adequate Coal etc. in the FY 2018-19 are not relevant in the Present Proceeding which have been raised by M/s Vedanta. Such Issues raised in the Objections by M/s. Vedanta Ltd. may be filed separately before the Commission for resolution. However, GRIDCO very hopeful that M/s. Vedanta Ltd. will fully endeavor towards fulfilling their various obligations including supply of Power to the State under the PPA as well as the different Orders of the Commission issued from time to time.

93. GRIDCO has been in the practice of procuring power through Power Exchanges including the IEX on “as and when required” basis when such procurement works out to be commercially more lucrative than the costly power from Central Sector Power Stations.
94. GRIDCO appreciates the suggestions to source cheaper power by adhering to the Merit Order Power Procurement Strategy and Chalking out a 5-year Power Procurement Plan etc. in respect of energy projection and demand.
95. The “Electricity Demand Forecasting and Development of Power Trading Strategy”, report by M/s. Feedback Infra, the Consultant, is likely to submit the relevant Report to GRIDCO shortly. Based on the advice / recommendations in the Report, GRIDCO will initiate necessary action to maximize the benefits from Power Trading including minimization of associated risks. However, the present Power Market (Power Exchanges) is extremely subdued where both low volumes and low prices are order of the day which leaves very little room for GRIDCO to earn any surplus revenue from Power Trading.
96. Apart from the procured capacity of 57 MW from 3 (Three) Nos. of Small Hydel Projects of the State, GRIDCO has also executed PPA with 6 (Six) Nos. of SHEP Developers from 2014 onwards for a total capacity of 86 MW after issuance of Techno-Economic Clearance (TEC) by the State Technical Committee. It may be mentioned that construction work can be commenced only after the execution of Implementation Agreement, for which EIC (Elect.), Govt. of Odisha is the Nodal Agency. Out of 86 MW tied up capacity, 42 MW capacity from 2 (Two) Nos. of Small Hydel projects are expected to be commissioned during FY 2019 -20.
97. GRIDCO is committed to fulfil the Solar RPO and accordingly, at present GRIDCO is procuring power from 411 MW solar capacity. For future RPO requirement also, power will be totally procured by GRIDCO from the following solar projects, which are in the pipeline.
- a. Implementation of 275 MW Solar Park Project in Phase -1 by GEDCOL out of the total allocated capacity of 1000 MW at Sambalpur & Boudh District;
  - b. Implementation of 200 MW Solar PV power Project by NEEPCO at Babandh, Dhenkanal under MNRE CPSU Scheme;

- c. Implementation of 75 MW by M/s Aditya Birla Renewables Limited, Mumbai under the GRIDCO Bidding Process;
  - d. 300 MW Solar power through SECI under MNRE ISTS-connected Solar Power Project Scheme;
  - e. Implementation of 40 MW Solar Capacity by NHPC at Jagannath Prasad in Ganjam District under MNRE CPSU Scheme;
  - f. Implementation of 8 MW by GEDCOL at the un-utilized land of OPTCL Grid Sub-Stations;
98. GRIDCO has not considered the shortfall in RPO for the year 2011-12 to 2018-19 in the ARR. GRIDCO is trying its all-out effort to optimize procurement of Renewable power from all available sources without much affecting the RST of the general consumers .
99. At present Odisha is having 538.7 MW of Renewable Energy capacity, out of which 413.7 MW is installed inside the State. Also GRIDCO is buying another 125 MW from outside the state towards fulfilling the RPO. Further, 914.5 MW solar capacity & 307 MW non-solar capacity are at different stages of implementation towards future requirements.
100. GRIDCO has considered the projection of the Energy Demand as furnished by the DISCOMs and added the Transmission Loss to arrive at the Projected Energy Requirement of the State for procurement by GRIDCO during FY 2019-20. The projected Transmission Loss @3.25% of the Intra State Transmission System by the STU i.e. OPTCL (Odisha Power Transmission Corporation Ltd.) for FY 2019-20 has been considered by GRIDCO in its current ARR & BSP Application for FY 2019-20.
101. The actual Transmission Loss for FY 2017-18 has been derived as 3.34% and 3.29% for FY 2018-19 (1st Six Months). Projection of 3.25% transmission loss has been assumed by the OPTCL for FY 2019-20 which GRIDCO has quoted in its ARR & BSP Application.
102. GRIDCO has been in the practice of trading whenever there is an opportunity. However, such opportunities are rare since most of the times when Market Prices are low, our Hydro is running at minimum and the net payable price including the related expenditures is more than the variable cost of the highest cost station's surrender of

power. Similarly, when the Prices are high, our Hydro Stations are running at full capacity to meet the State Demand, thus leaving no scope for such Sale.

**Power purchase cost**

103. GRIDCO has estimated the availability of energy, the Rates and the quantum & Cost of Power Procurement during FY 2019-20 based on the approval of various relevant Regulators, viz., Odisha Electricity Regulatory Commission (OERC), the Central Electricity Regulatory Commission (CERC) and the Demand Projections furnished by the DISCOMs etc and in doing so, GRIDCO has followed the “Merit Order Principle” whereby the power purchase costs are kept at the minimum. The ARR & BSP Application for FY 2019-20 states in detail, the rationale and logic behind the projected Power Procurement and Rate from each Power Station. Besides, the ARR & BSP Application will also be subject to further scrutiny by the Regulator (OERC) for approval and therefore, the anxiety of the Objector that GRIDCO overcharges the rate of power procurement from different Stations / sources, is not correct since the OERC is going to approve the Power Quantum & related Costs, only after due scrutiny and prudent check.
104. The Generation Tariff as approved for OHPC by the Commission will be followed by GRIDCO to source hydro power from OHPC during FY 2019-20. GRIDCO will only pay to the OHPC at the corresponding OERC approved tariff for FY 2019-20 and not as per the projected tariff by OHPC.
105. GRIDCO submitted that the ARR & Tariff Application of OPGC for FY 2019-20 will be subjected to the regulatory scrutiny and approval through a due process of public hearing. GRIDCO will only pay to the OPGC at the corresponding OERC approved Tariff for FY 2019-20 and not as per the projected Tariff by OPGC / GRIDCO.
106. The final order in Case No.33 of 2018 for Redetermination of the Tariff of OPGC (Unit #1 and #2) is awaited. The submission of GRIDCO in the said Petition in respect of Annual Fixed Charges, Energy Charges, Operational Parameters (including AEC%), Reimbursement of Electricity Duty (ED) may be considered by the Commission. Unless, the Final Order in Case No.33 of 2018 is pronounced by Commission, no further views can be submitted by GRIDCO at this point of time. GRIDCO submitted that the OERC Order in Case No.33 of 2018 may form the basis of tariff determination exercise in respect of OPGC for FY 2019-20. GRIDCO has

also furnished its objections / views on tariff application of OPGC in Case No.70 of 2018 for FY 2019-20, which may kindly be considered while approving the Tariff of OPGC(Unit #1 and #2) in ARR & BSP Order of GRIDCO for FY 2019-20.

107. GRIDCO has quoted the renewable energy project rates as per availability considering the RPO Obligations. The Weighted Average Rates of Solar Power is reducing but remains a little higher because of earlier committed Solar Power (at a comparative higher Rates) for which long term PPAs were signed. But there is consistent reduction in the price of procurement of Solar Power which are basically a Discovered Price, now-a-days.
108. Solar power is being procured through Competitive Bidding at Discovered Tariff only. SECI Discovered Tariff may not be applicable for the Solar Projects to be commissioned in Odisha as these are Site Specific Rates due to different % of Capacity Utilization Factor (CUF).

#### **Loan / pass through expenses**

109. For the poor performance of DISCOMs, GRIDCO's legitimate claim ought not to be denied. GRIDCO is availing loan to meet the Working Capital gap which arises due to inadequate tariff / reduced payment by DISCOMs as compared to the BSP dues. GRIDCO is availing loans for timely payment of power purchase cost to the Generators in order to avoid power regulation and to ensure uninterrupted supply of power to the State. This is being done for the overall benefit of the consumers of the State and in greater public interest. All revenues collected by DISCOMs are escrowed to GRIDCO. Whatever revenue is flowing to the Escrow Account, GRIDCO is realizing the same after allowing Escrow Relaxation towards Employees Cost etc.
110. Since the DISCOM Utilities are not fully clearing the dues of GRIDCO, effectively, GRIDCO forced to arrange term loan for payment of power purchase dues. It is known that restricting power supply to the DISCOMs' because of non-payment 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. GRIDCO's Principal and Loan Repayment during FY 2019-20, are genuinely estimated along with the basis of arriving at such figures. GRIDCO has prayed the Commission to approve the same after necessary prudent check.

111. In respect of losses of GRIDCO to be borne by the State Govt. and no burden to be passed on the consumers, GRIDCO stated that such issues beyond its purview to comment upon.

### **Revenue gap and BSP**

112. The approval and fixation of average Bulk Supply Price (BSP) of GRIDCO and the recovery of BSP are decided by the Commission based on the relevant Principles & Provisions under the Act and Regulations framed thereunder along with the prudence exercised by the Commission. What GRIDCO proposes in its ARR & BSP Application for FY 2019-20 reflects recovery of its genuine costs through the proposed BSP. The approval of the ARR & BSP by the OERC is decided independently through a consultative as well as public hearing process where all the stakeholders including the public are given a hearing by the Commission.
113. To reduce power purchase cost and thereby the Bulk Supply Tariff, GRIDCO, adopts the Merit Order Power Procurement Principle coupled with sourcing the low cost power in order to ensuring a low tariff for the State consumers. Besides, GRIDCO also undertakes trading of surplus power as are available from time to time in order to maximize surplus earning to reduce the burden on the consumers. However, due to depressed power market during recent times, the scope for earning any surplus revenue through power trading has been limited. Nevertheless, GRIDCO is hopeful that with the State share of additional power in the coming future, Odisha Power Sector will turn around for better.
114. GRIDCO may be allowed recovery of 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 expenses of Rs.20.51Crore (i.e. Rs.12.84 Crore towards Emp. Cost + Rs. 6.91 Crore towards A & G and R & M Expenses + Rs.0.76 Crore towards Depreciation) excluding Power Purchase cost, loan & Interest expenses etc. This expenditure is only 0.22% of its proposed ARR of Rs.9134.21Crore for FY 2019-20. The proposed un-controllable power purchase cost and other allied relevant costs and interest pay-out is more than 90% of the proposed net ARR for FY 2019-20 which should be allowed to GRIDCO.

### **Other issues**

115. Because of huge outstanding dues payable by the DISCOMs to GRIDCO, the DISCOMs are not entitled to draw any amount towards their Employee Cost and R&M Expenses from the ESCROW Account. Further, DISCOMs are not in a position to manage their Employee Cost and R&M expenditure because of insufficient Non-Escrow Revenue. However, in order to avoid labour unrest (due to non-payment of monthly Salary & Wages), disruption in power supply and overall interest of the state power sector, GRIDCO is allowing Escrow Relaxation to the DISCOMs towards their Employee Cost and limited amount towards the R&M Expenses. However, GRIDCO seeks specific directions from the OERC to this effect.
116. Annual Reports of GRIDCO for FY 2015-16, 2016-17 & 2017-18 were submitted to the Commission separately while complying to the OERC queries.
117. Regarding Business Plan GRIDCO has submitted that earlier the matter was discussed, but consciously could not be taken up further considering the fact that GRIDCO is an Aggregator with its role as State Designated Entity to facilitate power procurement on behalf of the State to meet the entire power requirements of the all four DISCOM Utilities in Odisha. OERC has been approving the Business Plan of the DISCOM Utilities from time to time where GRIDCO remains as an active participant offering its views, especially with regard to its role as the sole Bulk Supplier of power to the DISCOM Utilities. Even though the estimated power requirement is approved by the Commission for four DISCOM Utilities in their Business Plan, the principal responsibility of fulfilling such power requirement always falls on GRIDCO to arrange for the bulk procurement and supply of required power at the regulated price in time so that the interest of the State Consumers is always served and protected. Thus, GRIDCO to have a separate Business Plan of its own will be self-inflicting / defeating in nature.
118. Truing Up exercise up to 31st March, 2015 has already been completed by OERC in the ARR and BSP Order for FY 2016-17. In order to facilitate the Truing-Up exercise upto 31st Mar' 2018, Audited Accounts of FY 2015-16, FY 2016-17 & FY 2017-18 have already been submitted to the Commission for needful action. The Truing-up Petitions for the above referred Periods were submitted by GRIDCO before the Commission both in hard as well as soft copies as per the requirements of the

Commission. The delay in Truing-up for FY 2015-16 & FY 2016-17 was basically due to the delay in finalization & audit of accounts of GRIDCO. GRIDCO follows a 3-Stage Audit Process (Internal Audit, Statutory Audit & Audit by the Office of the CA & G) which is one of the reasons for delay in the completion of audit of the accounts. As soon as the Accounts were finalized for the above years the Truing-up petition was filed by GRIDCO before the Commission along with the Audited Accounts for the respective years.

119. GRIDCO never submits any false / wrong data before the Commission with an intention to win favour of the Commission. As per the requirements of the Commission, GRIDCO submits the necessary information in time and such information at times becomes provisional, when same is not the audited. However, GRIDCO furnishes the final & audited statements of its accounts before the Commission to account for the audited figures, which are always taken in to account by the Commission for allowance / dis-allowance of any expenses to GRIDCO for all purposes including in the Truing-up exercise.
120. GRIDCO has been submitting the information in respect of performance review as directed by the Commission from time to time. Data on Performance Review of GRIDCO for FY 2017-18 and FY 2018-19 (Apr'18 to Sep'18) have also been submitted before the Commission on 17.12.2018.
121. Power procurement from CGPs is almost non-existent during FY 2018-19 and whatever little power is procured, has been only through inadvertent injection by the CGPs without any valid Scheduling / Contract. Therefore, GRIDCO has not considered such power and as such, it may not be possible to furnish any energy bills / documents to this effect. Besides, the matter regarding such inadvertent injection by the CGPs is under consideration of the Commission for a decision. Apart from the above, APTEL in the past, has also ruled that inadvertent power injected by the CGPs without prior scheduling / valid contract should not be payable.
122. On the issue of the application of MYT Principle in determination of tariff, the Commission is empowered to decide, not GRIDCO.
123. M/s. Vedanta Ltd had raised extraneous issues which are not coming under the ARR application filed by GRIDCO for FY 2019-20 in Case No.73 of 2018. However, GRIDCO would prefer to reply on issues pertaining to ARR of GRIDCO only.

M/s.Vedanta Ltd did not supply entitled power of GRIDCO from converted CGP Units when power could not be supplied from IPP Unit. The status of generation of power from Unit#2 (600 MW) vis-a-vis other three CGP (3 X 600 MW) Units is as shown below in the Table below:

**Table- 7**  
**M/s. Vedanta's shortfall in supply of State entitlement**

Month of Supply	Quantum of scheduled power supplied to GRIDCO	Ex-Bus Generation from Unit#2	Ex-Bus Generation from CGP Units (#1,#3 & #4)	30% of Total generation from CGP and IPP Units	Shortfall in supply of State Entitlement
	MU	MU	MU	MU	MU
Apr-18	62.69	0.00	1019.91	305.97	243.28
May-18	7.29	0.00	758.21	227.46	220.17
Jun-18	11.40	0.00	692.10	207.63	196.23
Jul-18	64.09	0.00	994.69	298.41	234.32
Aug-18	28.60	0.00	673.08	201.92	173.32
Sep-18	22.94	0.21	813.21	244.03	221.09
Oct-18	7.11	0.00	612.34	183.70	176.59
Nov-18	72.07	73.67	705.93	233.88	161.81
<b>Total</b>	<b>276.18</b>	<b>73.88</b>	<b>6269.46</b>	<b>1903.00</b>	<b>1626.82</b>
<b>Average</b>	<b>34.52</b>	<b>9.24</b>	<b>783.68</b>	<b>237.88</b>	<b>203.35</b>

124. As per discussion and mutual agreement with GRIDCO, M/s Vedanta was given opportunity to supply State Entitlement of power from alternate sources (i.e. VAL-I-CGP (9 X 135 MW) and Power Exchanges) but there has been no substantial improvement in supply to GRIDCO.

125. Regarding pass through of past arrear dues of M/s. Vedanta Ltd. in the proposed of GRIDCO for FY 2019-20, GRIDCO has submitted that a huge outstanding dues against short supply of power is pending for payment by M/s. Vedanta Ltd to GRIDCO. Further, Commission's order dated 17.04.2017 in Case No. 8 of 2017, on the matter of calculation of Plant Availability Factor, has been challenged by GRIDCO before APTEL in Appeal No.358 of 2018 in Case No. 8 of 2017. Regarding adjustment of excess supply of power against the shortfall quantum, the matter is sub-judice before OERC in Case No.68 of 2018.

126. Regarding payment to M/s. Vedanta Ltd. against its regular energy invoices since July-2017, GRIDCO submits that the cost of power supplied by M/s. Vedanta Ltd. in monthly energy invoices has been duly adjusted and net payable/receivable amount has been intimated by GRIDCO every month. Raising the monthly fixed charges considering the Annual Fixed Charges (AFC) derived on its own by M/s. Vedanta

Ltd., considering the interest on Working Capital for two months, is not tenable under OERC Tariff Order dated 29.06.2018 in Case No. 95 of 2013.

127. In so far as the quantum and rate of power purchase for the month of Dec'18 in respect of Central Thermal and Central Hydro stations are concerned, the same are furnished in the Table below.

**Table- 8**  
**Power Procurement from Central Thermal & Hydro Station during Dec.'18 (Prov.)**

Sl. No	Name of Central Station	Quantum purchased during Dec'18 (MU)	Rate (Paisa/Kwh)	Cost of Purchase (Rs. in Crore)
1	<b>FSTPS-I&amp;II</b>	143.790	309.22	44.46
2	<b>FSTPS-III</b>	48.720	377.84	18.41
3	<b>KhSTS-I</b>	85320	321.41	27.42
4	<b>KhSTS-II</b>	42.140	272.67	11.49
5	<b>TSTPS-I</b>	85.871	251.29	21.58
6	<b>TSTPS-II</b>	133.471	229.44	30.62
7	<b>BarhSTPS-II</b>	128.578	387.37	49.81
8	<b>Tala HPS</b>	0.070	216.00	0.02
9	<b>Chukha HPS</b>	2.283	240.16	0.55
10	<b>Teesta-V</b>	18.562	392.75	7.29

128. An amount of Rs.7561.18 Crore (Provisional) is receivable from the four DISCOM Utilities towards the dues relating to BSP bills, Loans, NTPC Bond & Transfer Scheme Receivables (considering BSP Bills upto Nov'2018 and DISCOMs Payment upto 28th January, 2019) as given in the Table below.

**Table- 9**  
**Outstanding dues from DISCOMs**

Particulars	(Rs. in Crore)				
	WESCO	NESCO	SOUTHCO	CESU	Total
BSP dues	1619.31	923.10	979.65	1367.43	4884.9
Securitized dues	294.70	303.37	259.98	1277.18	2135.23
Rs.400 Cr NTPC Bond	--	48.91	146.45	--	195.36
Transfer scheme receivable	12.10	6.74	29.91	118.85	167.60
Cash support	--	--	--	174.00	174.00
<b>Total</b>	<b>1926.11</b>	<b>1282.12</b>	<b>1415.99</b>	<b>2937.46</b>	<b>7561.68</b>

129. To ensure the recovery of dues of GRIDCO, the revenue of DISCOMs is escrowed to GRIDCO and the performance of DISCOMs is being closely monitored at different levels to improve their operational and commercial efficiency to ensure improvement in flow of funds. Further, GRIDCO levies Delayed Payment Surcharge (DPS) on the outstanding dues as approved by the OERC in the respective years.

130. Government of Odisha is concerned to bring in systematic development of the Odisha Power Sector in Generation, Transmission as well as in the Distribution Segment. The State Government have taken up initiatives to invest in creation and strengthening of the distribution network for reduction losses in the system as well as to ensure better service delivery to the Consumers and at the same time for better revenue earning of the DISCOMs. A few of the schemes taken up with Government funding, particularly in the distribution segment are indicated below.

**Table- 10**  
**Some of the Distribution Projects undertaken / being undertaken with State Govt.**  
**Funds / Assistance**

Sl. No.	Scheme	Scope	Project Outlay (Rs. Crore) (Approx.)
1	Odisha Distribution System Strengthening Project <b>(ODSSP)</b>	Construction of 473 New 33/11 KV Sub-Stations	3850
2	Odisha Dedicated Agriculture & Fishery Feeder <b>(ODAFFP)</b>	Construction of 11 KV Dedicated Agricultural & Fishery Feeders	150
3	Biju Gramya Jyoti Yojana <b>(BGJY)</b>	Electricity to all Villages/ Habitations having Population less than 100	1760
4	Biju Saharanchala Vidyutikaran Yojana <b>(BSVY)</b>	Electricity to People living in Areas of Urban Local Bodies having Population 100 or Less	140
5	State Capital Region Improvement Project <b>(SCRIPS)</b>	24x7 Un-interrupted and Reliable Power Supply in the State Capital Region	1500
6	Capital Expenditure <b>(CAPEX)</b>	Renovation/ Modernization/ New Primary & LT Sub-Stations and Lines	960
<b>TOTAL</b>			<b>8,360</b>

131. GRIDCO is procuring the available power from the IPPs which are now in operation in the State and is closely monitoring the progress of other IPPs. The list of IPPs which are in operation and expected to be operational in near future has already been furnished by GRIDCO.
132. The year-wise status of Power Trading undertaken by GRIDCO from FY 2008-09 to FY 2018-19 (Up to Decemebr'18) is furnished in the Table below.

**Table- 11**  
**Power Trading by GRIDCO from FY 2008-09 to FY 2018-19 (April-Dec.'18) (Provisional)**

Year ⇒	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19* (Apr.-Dec.)
Energy (MU)	34.88	0.90	64.20	40.33	810.68	1565.42	974.71	384.74	321.10	306.91	669.55
Revenue (Rs. Crore)	24.43	0.79	32.05	15.82	414.59	664.60	448.107	155.11	89.33	142.26	347.26

\*Includes Power Sale through Trading (both inside & Outside the State).

133. GRIDCO being a Bulk Purchaser (Bulk Trader having no-network of its own) of power from various generators within and outside the State and an intermediary Bulk Supplier of power to the DISCOM Utilities in the State, there does not remain enough scope with GRIDCO to take steps for energy conservation.
134. In its tariff filing GRIDCO has already submitted the details of Power Banking activities during FY 2018-19 (April'18 to Dec.'18 – Provisional) and a brief note on General Terms and Conditions in respect of Power Banking.
135. The details of RE achievement by GRIDCO since January, 2019 and Renewable Projects (Solar & Non-Solar) which are in the pipeline are furnished below:

**Table- 12**  
**RE Achievements of GRIDCO upto January, 2019**

Technology	RE Capacity inside the State (MW)	RE Capacity from outside the State (MW)
Solar	336.7	75
Wind	-	50
Small Hydro	57	-
Biomass	20	-
MSW	-	-
<b>Total</b>	<b>413.7</b>	<b>125</b>

**Table- 13**  
**Renewable Projects (Solar & Non-Solar) of the State in pipeline**

Sl. No.	Name of the Developer	Installed Capacity (MW)	Project Location	Type of project	PPA Executed on	Likely Date of Purchase
1	Sri Avantika Power Projects Private Limited	3 x 6 =18	Saptadhara SHEP, Jamjhuri River, Koraput	SHEP (non- Solar)	29.10.2014	October' 19
2	Baitarani Power Project Private Limited	3 x 8 =24	Lower Baitarani SHEP, Dargarisila, Badajori, Keonjhar	SHEP (non- Solar)	18.12.2015	Dec' 19
3	Sharvani Energy Pvt. Ltd.	2 x 7.5=15	River Kolab, Dumajhuri SHEP Koraput	SHEP (non- Solar)	28.09.2006	May' 20
4	ReNew Power Ventures Pvt. Ltd. (Through	100	Madhya Pradesh	Wind	24.11.2017	May' 19

Sl. No.	Name of the Developer	Installed Capacity (MW)	Project Location	Type of project	PPA Executed on	Likely Date of Purchase
	SECI )					
5	Through SECI From MNRE Wind Scheme, Phase-III	50	To be intimated by M/s. SECI	Wind	23.03.2018	December' 19
6	Through SECI From MNRE Wind Scheme, Phase-IV	100	To be intimated by M/s. SECI	Wind	15.06.2018	FY 2019-20
7	GEDCOL Solar Park Project, Phase -1	275	Sambalpur, Boudh	Solar	FY 2018-19	FY 2019-20
8	GEDCOL Roof top Project on Gross Metering basis	16.5	15 Cities of Odisha	Solar	FY 2018-19	FY 2019-20
9	GEDCOL Solar Projects on un-utilised land of OPTCL Sub-Stations	8	Baripada, New Bolangir, Jayanager Sub-stations	Solar	FY 2018-19	FY 2019-20
10	NEEPCO	200	Babandh, Dhenkanal	Solar	LoI has been issued	FY 2020-21
11	Aditya Birla Renewables Ltd., Mumbai	75	Boudh, Deogarh	Solar	28.12.2018	FY 2019-20
12	SECI ISTS- connected Solar scheme	300	To be intimated by M/s. SECI	Solar	21.08.2018	October 2019
13	NHPC	40	Jagannathprasad, Ganjam	Solar	In-principle approval has been given	FY 2020-21
	<b>Total</b>	<b>936.50</b>				

### **OBSERVATIONS OF THE STATE ADVISORY COMMITTEE (Para- 136)**

136. The State Advisory Committee (SAC) was convened on 20.02.2019 to discuss about the proposed ARR and Tariff Applications of different utilities in the state for FY 2019-20. 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) The DISCOM Utilities have now started power cut without permission of the Commission due to short supply of power, which is likely to continue for the ensuing year. Hence, GRIDCO and OPTCL may be directed to make suitable plan for availing required quantum of power in order to avoid power cut.

(b) GRIDCO is not availing State share of power from the existing IPPs, which is cheaper than the power availed by GRIDCO from other sources. There is no provision in the PPA to penalise them. The matter may be moved to the State Government for a suitable remedy of this problem.

(c) GRIDCO has continuously failed to meet the RPO fixed by Commission. Development of solar, wind and small hydro projects in the State is not upto the

mark. The Commission and the State Government should look into the matter seriously.

- (d) The Commissioner-cum-Secretary, Deptt. of Energy, Govt. of Odisha stated that requirement of power for the State during FY 2019-20 has been estimated by GRIDCO at about 28000 MU. Now, there is short supply of power from the existing IPPs like M/s. JITPL and M/s. Vedanta Ltd. M/s. JITPL is running intermittently due to its internal problems and availability of power from M/s. Vedanta Ltd. is low because of non-availability of required quantity of coal. However, GRIDCO is now drawing State share of power from M/s. GMR Kamalanga Energy Ltd. Further, the IPP of M/s. Ind-Barath Utkal Energy Ltd. is now closed down due to their internal problems. However, he stated that in spite of non-availability of power from the IPPs, GRIDCO will be comfortable of getting matchable quantum of power from other sources during FY 2019-20. Now, management of water resources in the reservoirs is being done very prudently so that there will be optimum generation by the OHPC hydro power stations. NTPC Super Thermal Power Project at Darlipalli in Sundargarh District and OPGC expansion project (Unit-3 & 4) is likely to be commissioned in the ensuing year, from which GRIDCO will avail the State share of power of 400 MW and 660 MW respectively. However, he stated that due to increase in price of coal, the cost of power will increase proportionately.
- (e) Regarding RPO compliance and development renewable power projects in the State, the Commissioner-cum-Secretary, DoE stated that Govt. of Odisha is taking steps for development of small hydro and solar PV power plants in the State. Further, GRIDCO has executed PPAs with SECI to avail solar power from the solar plants outside the State. He stated that now the gap of RPO is in decreasing trend and by the end of the ensuing year, GRIDCO will by and large catch the RPO target.

**VIEWS OF THE GOVT. OF ODISHA (Para- 137)**

137. Govt. of Odisha vide their Letter No. 2283 dated 12.03.2019 have communicated their views/suggestions on various issues involving tariff setting for FY 2019-20. The issues those affect the Bulk Supply Price of GRIDCO are indicated below:

- (a) Regarding the issue of up-valuation of assets pertaining to OPTCL, Generators and other licensees, the Government for the time being agrees with the views of the Commission to keep in abeyance the up-valuation of assets like previous years. Considering the prevailing situation, the Govt. agrees to extend the status-quo on up-valuation till FY 2019-20.
- (b) The State Government is making huge investment in power infrastructure through various schemes in the sector of electricity like ODSSP, IPDS, DDUGJY, BGJY, BSVY, Saubhagya etc. Government is also making equity infusion in OPGC, OCPL, OHPC, GEDCOL and OPTCL. In the meanwhile 2x660 MW OPGC expansion power project is nearing completion and will supply power to the State Grid in near future which will ultimately fulfil the power demand security of the State for coming years. Similarly, GEDCOL has already installed 24 MW solar powers and around 1000 MW of solar power will be available in the State through GEDCOL.

**COMMISSION’S OBSERVATIONS & ANALYSIS OF GRIDCO’S PROPOSAL (Para -138 to 314)**

**Legal Status of GRIDCO**

138. 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 DISCOM Utilities which ultimately protects the interest of the consumers. It acts as a shock absorber and protects DISCOM Utilities from possible Power Regulation by the Generator(s) due to any immediate cash-flow problem. Therefore, the Commission has appropriately recognized GRIDCO as a “Deemed Trading Licensee”. Under such circumstances we view that trading margin is not applicable to GRIDCO which sells power to the DISCOM Utilities inside the State of Odisha by procuring power on payment of the power purchase cost to all the suppliers. The Commission notes the concerns of the objectors and exercises due prudence in allowing ARR to the entity as applicable in similarly placed situations.

139. On detailed scrutiny and examination of the Aggregate Revenue Requirement and Bulk Supply Price Application of GRIDCO for FY 2019-20 and subsequent rejoinders filed by them, the written and oral submissions of the objectors, the Commission now decides as follows.

**Principle followed for approval of ARR for FY 2019-20**

140. The Commission, for determination and approval of the ARR of GRIDCO for FY 2019-20, 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. It 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.
141. 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 2019-20 using the following principles.
142. The cost of power purchase for GRIDCO, which constitutes about 97% 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 / PPA. 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 and energy from renewable sources have been considered based on the proposal of GRIDCO, the requirement of the state and legal obligations.
143. All the liabilities of the DISCOM Utilities 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 DISCOM Utilities 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) appropriately pruned in circumstances forms a part of the BSP and is being paid by GRIDCO.

144. 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 asset on its books. It continues, however, to carry the burden of past liabilities, accumulated over a period of time to service the operational losses and non-payment of dues by the DISCOM Utilities in time. The Commission has, over the last few years, recognized these liabilities to be serviced from 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 servicing a substantial part of debt liabilities from the non-core activities of GRIDCO, namely earnings from export of power and un-scheduled interchange charges, after meeting the requirement of DISCOM Utilities.
145. The Commission has scrutinised in detail the energy requirement proposed by the DISCOM Utilities for FY 2019-20. 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 state's 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 2019-20, 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 for the ensuing year on normative basis.

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

146. 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 DISCOM Utilities.
147. GRIDCO Ltd. as well as DISCOM Utilities have submitted their ARR applications for FY 2019-20 to the Commission for approval. In their applications, the Distribution Companies have furnished projections for drawal of power from GRIDCO during FY 2019-20 and GRIDCO has projected the total power purchase to be made from the Generators after considering the requirement of distribution companies, emergency requirement of industries owning CGPs and the energy loss in OPTCL transmission

system. The figures filed by GRIDCO and DISCOM Utilities in their ARR applications on quantum of energy drawl by DISCOM Utilities from GRIDCO are examined and estimated by the Commission based on the quantum of present drawl of power and expected additional load growth during FY 2019-20.

148. The quantum of power to be purchased by the four Distribution Utilities during the FY 2019-20 has been assessed and approved by the Commission while determining their Revenue Requirement and Tariff in Case Nos. 77/2018 (CESU), 75/2018 (NESCO), 74/2018 (WESCO) and 76/2018 (SOUTHCO), following the provisions in the existing Regulations. The Commission has approved the quantum of power to be purchased for the FY 2019-20 relating to CESU, NESCO, WESCO and SOUTHCO as 9740 MU, 6310 MU, 7750 MU and 4040 MU respectively adding up to 27840 MU.
149. The Commission has approved 3% transmission loss in the OPTCL system for the FY 2019-20 and has provided the same in the OPTCL tariff order for the FY 2019-20 passed in Case no 71 of 2018.
150. Having determined the quantum of power purchase for the DISCOM Utilities, the Commission has estimated the quantum of energy lost on account of transmission at EHT within the State for delivery to the DISCOM Utilities. The Commission has taken into account the sale of emergency power to CGPs and approves the same at 30 MU for 2019-20 after considering the submission of GRIDCO and the actual sale of 35.94 MU to the CGPs towards emergency power during the first six months of the current FY 2018-19. Further, as per the performance review data for the FY 2017-18, GRIDCO has sold 85.95 MU to the CGPs out of which sale of emergency power to the CGPs of NALCO & IMFA is 34.43 MU. The details on the estimated requirement of power purchase for use within the State is indicated in the table below:

**Table –14**  
**Purchase of Power by GRIDCO for State Use for FY 2019-20**  
**(In MU)**

<b>Name of the DISCOMs</b>	<b>Commission's Approval for FY 2018-19</b>	<b>GRIDCO's Proposal in ARR for FY 2019-20</b>	<b>Commission's Approval for FY 2019-20</b>
CESU	9070.00	9853.00	9740.00
NESCO	6140.00	6350.00	6310.00
WESCO	7120.00	7700.00	7750.00
SOUTHCO	3660.00	4050.00	4040.00

Name of the DISCOMs	Commission's Approval for FY 2018-19	GRIDCO's Proposal in ARR for FY 2019-20	Commission's Approval for FY 2019-20
<b>TOTAL DISCOMs</b>	<b>25990.00</b>	<b>27953.00</b>	<b>27840.00</b>
CGP	10.00	5.00	30.00
<b>TOTAL SALE</b>	<b>26000.00</b>	<b>27958.00</b>	<b>27870.00</b>
Transmission loss at EHT in MU (DISCOMs Purchase only)	803.81 (@ 3.00% Transmission loss)	939.16 (@ 3.25% Transmission loss)	861.03 (@ 3.00% Transmission loss)
<b>Total Purchase</b>	<b>26803.81</b>	<b>28897.16</b>	<b>28731.03</b>

151. The Commission has approved the energy drawal by the DISCOM Utilities for FY 2019-20 considering their present drawal pattern and the projections made by them for additional load growth. Hence there should not be variations from the approved drawal. The DISCOM Utilities need to plan their drawal in consultation with GRIDCO keeping in view the deviation settlement mechanism and actual reduction in losses.

#### **Simultaneous Maximum Demand (SMD) in MVA**

152. GRIDCO in its filing has submitted that the total estimated SMD for the FY 2019-20 is derived as 5040 MVA per month through summation of the SMD projected by the four DISCOM Utilities i.e. (CESU-2040 MVA/month, NESCO-1020 MVA/month, WESCO-1300 MVA/month & SOUTHCO- 680 MVA/month). The details of SMD approved by the Commission for FY 2018-19, highest actual SMD occurred during first six months of FY 2018-19 and the projection for FY 2019-20 are given below:

**Table – 15**  
**DISCOM-WISE Projection of SMD for FY 2019-20**  
**(MVA/Month)**

DISCOM Utility	OERC approval for FY 2018-19	Highest SMD recorded during FY 2018-19 (Apr.'18 to Sept'18)	DISCOMs Projection of SMD for FY 2019-20	GRIDCO's Projection of SMD of DISCOMs for FY 2019-20
<b>CESU</b>	1580.00	1579.05	2040	2040
<b>NESCO</b>	990.00	973.29	1020	1020
<b>WESCO</b>	1350.00	1223.53	1300	1300
<b>SOUTHCO</b>	610.00	613.54	680	680
<b>TOTAL</b>	<b>4530.00</b>	<b>4389.41</b>	<b>5040</b>	<b>5040</b>

153. However, GRIDCO has submitted that the SMDs projected for FY 2019-20 is shown on the higher side because of the enhanced load arising due to power supply to cover all Households particularly under Rural Electrification in the State.
154. The Commission observed that 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 has considered the simultaneous maximum demand as furnished by DISCOM Utilities to GRIDCO. The Commission, from the RST application of DISCOM Utilities, observed their monthly demand for the period from April' 18 to Dec' 18 as given in the table below:

**Table - 16**  
**Demand in MVA during 2018-19 (Upto Dec' 18)**

	<b>CESU</b>	<b>NESCO</b>	<b>WESCO</b>	<b>SOUTHCO</b>	<b>ALL ODISHA</b>
<b>Apr-18</b>	1,475.94	857.64	1,222.33	588.37	4,144.29
<b>May-18</b>	1,552.54	942.91	1,186.62	587.34	4,269.41
<b>Jun-18</b>	1,579.05	923.46	1,098.68	586.88	4,188.07
<b>Jul-18</b>	1,459.18	973.31	1,054.98	590.17	4,077.64
<b>Aug-18</b>	1,490.07	916.26	1,008.92	607.39	4,022.63
<b>Sep-18</b>	1,502.93	934.09	1,086.43	613.54	4,136.99
<b>Oct-18</b>	1,575.21	892.96	1,087.01	581.18	4,136.36
<b>Nov-18</b>	1,377.69	862.29	1,134.23	579.54	3,953.74
<b>Dec-18</b>	1,206.85	802.00	986.95	581.45	3,577.24
<b>Average (4/18 to 12/18)</b>	1,468.83	900.55	1,096.24	590.65	4,056.26

155. It is observed from the above table that the summation of demand has fluctuated from month to month and has reached a peak of 4269.41 MVA in the month of May, 2018. However, the sum of the maximum demand of each DISCOM Utilities comes to 4388.23 (CESU-1579.05+ NESCO-973.31 + WESCO-1222.33 + SOUTHCO-613.54) during the period from April to December, 2018.
156. The Commission analyzed the demand pattern of DISCOM Utilities during the current FY 2018-19 (upto December, 2018) and observed that the Average SMD of the DISCOM Utilities has reduced from the approved SMD for the FY 2018-19. After recasting the estimated requirement of power, it is observed that due to Soubhagya Scheme and load growth, there is likely increase of additional requirement of about 1771.38 MU by the DISCOM Utilities during FY 2019-20. Thus, the matching MVA requirement works out to be 224.68 MVA. So, the Commission has estimated the Demand of the DISCOM Utilities for FY 2019-20 taking the maximum demand during April, 2018 to December, 2018 plus the estimated demand on account of

additional load growth during FY 2019-20. Accordingly, the total estimated demand is 4612.91 MVA for all the DISCOM Utilities combined. However, the WESCO Utility has projected the SMD of 1300 MVA for the ensuing year 2019-20 considering the past record and additional load growth in their area of supply. Hence, the Commission while determining the SMD for DISCOM Utilities has limited the SMD of WESCO Utility at 1300 MVA. The details of estimation of SMD for the DISCOM Utilities are given in the table below:

**Table - 17  
Demand in MVA 2019-20**

DISCOMs	OERC Approval for 2018-19	Proposal by DISCOMs for 2019-20	Proposal by GRIDCO for 2019-20	Average SMD during 4/18 to 12/18	Maximum SMD during 4/18 to 12/18	Additional Load growth as estimate -ed for 2019-20 (MU)	Additional load growth converted to MVA at 0.9 power factor	Maximum SMD during 4/18 to 12/18 + Additional load growth in MVA	OERC Approval for 2019-20
<b>CESU</b>	1580.00	2040.00	2040.00	1,468.83	1,579.05	631.10	80.05	1,659.10	1,660.00
<b>NESCO</b>	990.00	1020.00	1020.00	900.55	973.31	679.70	86.21	1,059.52	1,060.00
<b>WESCO</b>	1350.00	1300.00	1300.00	1,096.24	1,222.33	71.62	9.08	1,231.42	1,300.00
<b>SOUTHCO</b>	610.00	680.00	680.00	590.65	613.54	388.95	49.33	662.87	660.00
<b>All Odisha</b>	<b>4530.00</b>	<b>5040.00</b>	<b>5040.00</b>	<b>4,056.26</b>	<b>4,388.23</b>	<b>1,771.38</b>	<b>224.68</b>	<b>4,612.91</b>	<b>4,680.00</b>

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

157. Considering the SMD in different months of 2019-20 and the additional load projected by the DISCOM Utilities, the SMD for 2019-20 has been fixed at 4680MVA, within which the DISCOM Utilities are likely to operate subject to an overdrawal of maximum 10% in a month.

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

#### **State Hydro**

158. The details of energy available to GRIDCO from various power stations of OHPC have been dealt in Case No.69/2018 while determining the tariff and revenue requirement of OHPC, where the Commission has considered the existing design energy of OHPC power stations for the purpose. GRIDCO's proposal and Commission's approval on drawal of energy from OHPC stations for the FY 2019-20 are given in the table below.

**Table –18**  
**Drawal from State Hydro Stations (in MU)**

Source of Generation	FY 2018-19	FY 2019-20	
	Commission's Approval	GRIDCO's Proposal	Commission's Approval
OHPC (Old Stations)	3676.86	3620.66	3676.86
Upper Indravati	1942.38	1950.30	1942.38
Machhkund	262.50	262.50	262.50
<b>Total Hydro</b>	<b>5881.74</b>	<b>5833.46</b>	<b>5881.74</b>

159. The design energy of Machhkund Joint Venture H.E. Project is 525 MU. Considering Odisha share of 50% towards energy drawal from this station, the Commission has approved an availability of 262.50 MU from Machhkund. However, the Commission desires that the State should draw at least 50% of Machhkund generation every day in a planned and economical manner. GRIDCO/OPTCL and SOUTHCO should co-ordinate to maximise the drawal from Machhkund in consultation with Government of Odisha whenever necessary.

**IB Thermal Power Station of OPGC**

160. Orissa Power Generation Corporation (OPGC) owns IB Thermal Power Station at Banharpalli in Dist. Jharsuguda with an existing installed capacity of 2x210 MW (Unit-I & II) from which GRIDCO is entitled to draw 100% power. In its ARR application for FY 2019-20, GRIDCO has projected to procure the net energy of 2861.60 MU from the existing Units (I & II) of OPGC based on the normative auxiliary energy consumption of 9% and PLF of 85.47%. However, the Commission observed that OPGC in its generation plan for the FY 2019-20 has estimated the gross generation of 3085.94 MU from Unit-I & II of its IB Thermal Power Station. Considering Auxiliary Energy Consumption of 9.5% as per PPA, the net energy available to GRIDCO will be 2792.78 MU. Accordingly, the Commission approves the drawal of 2792.78 MU from Unit-I & II of IB Thermal Power Station of OPGC for the FY 2019-20 for determination of ARR and BSP of GRIDCO.

161. Further, GRIDCO has submitted that the expansion project (Unit-III & IV) of OPGC having installed capacity of 1320 MW (2x660 MW) is expected to be commissioned during the FY 2019-20 and as per PPA, GRIDCO as the State Designated Entity is entitled to procure contracted capacity to the tune of 50% of installed capacity at the tariff to be determined by CERC. Accordingly, GRIDCO has proposed to procure 4574.98 MU of power from the OPGC expansion project (Unit-III & IV) at 83.95 %

PLF considering auxiliary energy consumption of 5.75 % as per CERC norms. The Commission observed that the Units-III & IV of the OPGC expansion project have not yet been completed, although GRIDCO in its reply to the Commission's query had intimated that Unit-III & IV of OPGC expansion project were expected to be completed by January, 2019 and March, 2019 respectively. Further, after completion of the project, it may require some more time for commercial operation of the generating units after their commissioning and trial run. Therefore, the Commission, for determination of ARR and BSP of GRIDCO, approves the drawal of only 726.93 MU (including supply of infirm power prior to the commercial operation of the generating units) from the expansion project of OPGC (Units-III & IV) during the FY 2019-20 for State requirement.

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

162. 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 from TTPS has been projected at 3336.04 MU by GRIDCO considering PLF of 92.25% and Auxiliary Consumption of 10.50%. Based on the submission of GRIDCO, the Commission approves the net drawal of 3336.04 MU from TTPS for the FY 2019-20.

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

163. In its filing GRIDCO has proposed not to procure power from the CGPs and Co-generation Plants during the FY 2019-20 for State consumption. However, GRIDCO has submitted that procurement of power from CGP sources may be resorted to depending upon the relative economics and/or under exigencies/force majeure conditions. Some of the objectors stated that since the CGPs of our state are having adequate surplus capacity, GRIDCO should procure a specified quantum of power from CGPs considering the fact that the price of CGP power is cheaper in comparison to the tariff at which GRIDCO buys power from the Central Generating Stations. They further stated that the CGP power is not associated with any transmission loss, PoC / STU transmission charges and other associated cost. They have requested the Commission to specify certain quantum of CGP power in the ARR and BSP order of GRIDCO to be purchased from the CGPs for State consumption at the tariff decided by the Commission looking into the present cost of generation. GRIDCO may procure

the same through tendering process. In its reply, GRIDCO has stated that they have not completely ruled out sourcing of power from the CGPs, rather they are following merit order power procurement as a policy. Therefore, GRIDCO may resort to source power from CGPs provided the economics of power procurement works out in favour of GRIDCO and also depending on the power supply and demand situation of the State and also in exigency/force majeure conditions justifying such procurement. GRIDCO further stated that CGP power is not a firm source of power since the CGPs are essentially meant for the captive consumption and hence, GRIDCO cannot propose procurement of a definite quantum of power from the CGPs. GRIDCO further submitted that drawal of firm power from the generators with whom they have signed PPAs, has to be sourced in order to economise the procurement cost, otherwise the liability of payment of fixed cost remains with GRIDCO irrespective of any energy drawal. In view of the above, GRIDCO has not proposed any drawal of power from CGPs / Co-Gen. Plants during FY 2019-20 for State consumption.

164. Considering the objections/suggestions of the objectors as well as the submissions of GRIDCO, the Commission observe that contribution of CGPs in industrial growth, maintaining voltage profile and meeting the shortages cannot be ignored. There is scope for drawal of power particularly when the marginal cost of such power is low compared to the other power stations. Hence, the Commission advise GRIDCO to purchase available surplus power from the CGPs and Co-generation plants for state consumption in case of excess state demand or shortfall in drawal from other sources as approved by Commission. Further, the Commission also directs GRIDCO to purchase the available surplus power from CGPs and Co-generation plants at a negotiable price for trading purposes after meeting the state demand subject to commercial viability.

### **Renewable Energy**

#### **Small Hydro Sources:**

165. GRIDCO has submitted that two more SHEPs namely Baitarani Power Projects Pvt. Ltd. having installed capacity of 24 MW and Saptadhara SHEP of M/s. Avantika Power Projects Pvt. Ltd. having installed capacity of 18 MW are expected to be commissioned during FY 2019-20. Therefore, GRIDCO has proposed to procure 417 MU of renewable energy from small hydro sources that would be available to GRIDCO during FY 2019-20 as given in the table below.

**Table – 19**  
**Proposed Drawal from Small Hydro Sources for FY 2019-20**

<b>Sl. No.</b>	<b>Name of the SHEPs</b>	<b>Installed Capacity (MW)</b>	<b>Energy drawal during the 1st six months of 2018-19 (MU)</b>	<b>Proposed Energy procurement for FY 2019-20 (MU)</b>
1.	Meenaskhi Small Hydro	37	111.94	220.00
2.	SAMAL Small Hydro	20	45.80	100.00
3.	Baitarani Power Projects Pvt. Ltd.	24	--	65.00
4.	Saptadhara SHEP by Avantika Power Projects Pvt. Ltd.	18	--	32.00
	<b>Total</b>	<b>99</b>	<b>157.74</b>	<b>417</b>

166. The Commission approves the above proposal of GRIDCO and allows GRIDCO to purchase 417 MU of renewable energy from aforesaid SHEPs for consumption in the state during FY 2019-20.

**Bio-mass Energy:**

167. GRIDCO in its ARR application has proposed to purchase only 80 MU of renewable energy from biomass sources during the FY 2019-20 i.e. from the 20 MW plant of M/s. Shalivahan Green Energy Ltd.

168. The Commission approves the above proposal of GRIDCO and allows GRIDCO to purchase 80 MU of renewable energy from said Bio-mass Plant for consumption in the state during FY 2019-20.

**Wind Energy:**

169. In its submission GRIDCO had stated that they have executed an agreement with PTC on 20.07.2017 to avail 50 MW wind power allotted through M/s. Solar Energy Corporation of India Ltd. (SECI) under the “1000 MW ISTS connected wind power projects scheme, Phase-I” of MNRE, Govt. of India. Accordingly, 50 MW wind power has been allocated to GRIDCO from M/s. Ostro Kutch Wind Pvt. Ltd. located in Kutch District of Gujarat, from which GRIDCO is now availing power w.e.f. 24.08.2018 through PTC at the tariff of 353 p/Kwh. GRIDCO has also signed an agreement with M/s. SECI on dated 24.11.2017 for availing 100 MW Wind power under the “ISTS connected wind power projects scheme, Phase-II” of the MNRE, Govt. of India at the Tariff of 272 Paise per kWh. In its reply to the Commissions queries GRIDCO has submitted that they will avail 50 MW Wind Power through SECI under MNRE “ISTS connected wind power projects scheme, Phase-III”, which

is expected to be available from December, 2020 with the drawal of an additional quantum of 30 MU during the FY 2019-20 (4 months). Accordingly, GRIDCO has proposed to avail 290 MU of wind power from the allocated 200 MW wind capacity in total. The Commission approves the same and allows GRIDCO to procure the proposed 290 MU wind power during the FY 2019-20.

**Solar Energy:**

170. In its submission, GRIDCO has proposed to procure 686 MU of Solar Energy from the following sources during the FY 2019-20.
- (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 12<sup>th</sup> 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 of 5 MW from Dadri Solar PV project in U.P. and another 5 MW from Faridabad Solar PV Project 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 Viability Gap Funding (VGF) Scheme under JNNSM Phase-II, Batch-1.
  - (vii) 450 MU from 270 MW capacity Solar PV Projects allocated to GRIDCO through SECI under Viability Gap Funding (VGF) Scheme under JNNSM Phase-II, Batch-IV.
171. GRIDCO has further submitted that GEDCOL is implementing the 4 MW Rooftop Solar PV Project on 177 nos. of non-residential Govt. buildings in Bhubaneswar and

Cuttack under net-metering Regulations. GRIDCO expects the generation of around 6 MU of Solar energy during the FY 2019-20, which will be deemed procurement by GRIDCO through CESU and considered for meeting the RPO by GRIDCO.

172. The proposal of GRIDCO for procuring solar energy during the FY 2019-20 is summarised in the Table below :

**Table – 20**  
**Drawal of Solar Power during FY 2019-20**

Sl. No.	Solar RE Sources	Energy for procurement during FY 2019-20 (MU)
1.	8 Nos. of Solar PV projects of 1 MW each under RPSSGP	13.00
2.	20 MW Bundled Power 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 , Batch-I	8.00
5.	25 MW from M/s ACME Odisha Solar Power Pvt. Ltd. under OREDA State Scheme Batch-II	42.00
6.	70 MW through Solar Energy Corporation of India (SECI) under VGF Scheme under JNNSM, Phase –II, Batch-I	116.00
7	270 MW through SECI under VGF Scheme under JNNSM, Phase –II, Batch-IV	450.00
	<b>Sub Total (for procurement by GRIDCO)</b>	<b>680.00</b>
8	4 MW Rooftop Solar PV Project implemented by GEDCOL on the non-residential Govt. buildings in Bhubaneswar and Cuttack	6.00
	<b>Total (for the purpose of meeting RPO by GRIDCO)</b>	<b>686.00</b>

173. The Commission approves the above proposal of GRIDCO to procure 680.00 MU from Solar RE Sources. Thus, the total procurement of Renewable Energy during FY 2019-20 from Solar, Bio-mass, wind and Small Hydro Sources comes to 1467.00 MU, which is approved by the Commission for State use. However, considering the solar energy of 6 MU from 4 MW Rooftop Solar PV Project implemented by GEDCOL on the non-residential Govt. buildings in Bhubaneswar and Cuttack, the total energy from solar sources shall be 686.00 MU for the purpose of meeting RPO by GRIDCO. Thus the total renewable energy for the purpose of meeting RPO shall be 1473.00 MU. The source-wise power procurement from Renewable Energy sources are indicated in the Table below:

**Table – 21**  
**Drawal from Renewable Energy Sources during FY 2019-20**

Sl. No.	RE Sources	Renewable Energy approved for drawal during FY 2019-20 (MU)	Percentage w.r.t. the total estimated drawl of DISCOMs (%)	RPO fixed in the Regulation for FY 2019-20 (%)
A.	<b>Non-Solar</b>			
(i)	Small Hydro Electric Project (SHEP)	417.00	1.50	
(ii)	Bio-mass Energy	80.00	0.29	
(iii)	Wind Energy	290.00	1.04	
	<b>Sub-Total (Non-Solar)</b>	<b>787.00</b>	<b>2.83</b>	<b>5.50</b>
B.	<b>Solar</b>	<b>686.00</b>	<b>2.46</b>	<b>5.50</b>
C.	<b>Total (Solar &amp; Non-Solar)</b>	<b>1473.00</b>	<b>5.29</b>	<b>11.00</b>

(\*) *Sale of power to DISCOMs including emergency power supply to CGPs has been estimated at 27870 MU.*

174. The Commission observed that the estimated sale of power to DISCOMs including emergency power supply to CGPs is 27870 MU for state consumption and the estimated quantum of energy available to GRIDCO from Renewable Sources in total is 1473 MU. With procurement of renewable energy of this magnitude GRIDCO will not be able to meet 50% of the Renewable Purchase Obligation (RPO) fixed by the Commission for the FY 2019-20. GRIDCO has submitted that it is trying its best to explore the possibility to procure more solar power for the state in order to increase the share of renewable energy in the overall energy basket of the state. In its reply to the Commission's query GRIDCO has submitted that they are willing to purchase the required quantum of renewable energy in order to fulfil its RPO of 11% during the FY 2019-20. But the availability of such energy has been posing a constraint to GRIDCO. GRIDCO submitted that it has executed Power Purchase Agreement with SECI on dated 20.09.2018 to avail 300 MW Solar Power under MNRE ISTS-connected Solar Power Project Scheme which is expected to be available to GRIDCO by October 2020. Further, it has executed PPA with M/s. Aditya Renewable Pvt. Ltd, Mumbai on 28.12.2018 for procuring 75 MW Solar Power which is likely to be available to GRIDCO by March 2020. GRIDCO has also signed PPA with M/s. MSW Bhubaneswar Ltd. on dated 22.02.2016 for procuring 11.5 MW power from its Waste to Energy Power Project. But, the same could not start any construction work or progress so far due to land dispute. Also GRIDCO has signed tri-partite agreement with M/s. MAA Dharani Mahila Sangha (SHG) and SOUTHCO for procuring surplus

power from their 25 KW captive Bio-mass Power Plant. GRIDCO has submitted that they will explore to buy additional Renewable Power through the traders and hopeful to fulfil its RPO as specified by the Commission in near future.

175. The Commission observed that in past GRIDCO has also submitted to purchase renewable energy from different new sources to fulfil the RPO and some of them has not yet been materialized. Therefore, the Commission directs GRIDCO to be proactive so that the proposed renewable energy projects are commissioned in scheduled time. GRIDCO should explore all possibilities to purchase renewable power from some other sources to meet the RPO fixed by the Commission for FY 2019-20. 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 purchase of RECs as per RPO Regulations.

#### **Independent Power Plants (IPPs)**

176. In its application GRIDCO has submitted that out of the 5 nos. of commercially commissioned IPPs in the State, GRIDCO is presently procuring power from 3 nos. of IPPs (namely, M/s. Vedanta Ltd., M/s. GKEL & M/s. JITPL) as per the provisions of Power Purchase Agreements and orders of the appropriate Commissions from time to time. Hence, GRIDCO has restricted its proposed quantum of procurement of power only from these IPPs. GRIDCO has indicated that procurement of power from other two IPPs (namely, M/s. Ind-Barath Energy (Utkal) Ltd and M/s. NBVL) has not yet started. There is less likelihood of commencement of supply of power by these two IPPs in view of various problems /difficulties associated with evacuation system, coal linkage, coal handling system, metering issues etc. and therefore, energy drawal from the two IPPs has not been considered in the present ARR & BSP Application for FY 2019-20. Based on the above proposal of GRIDCO, the Commission does not consider any procurement of power from the IPPs of M/s. Ind-Barath Energy (Utkal) Ltd and M/s. NBVL during the FY 2019-20 for State consumption. However, the Commission direct that when these IPPs will be in operation, GRIDCO should avail State share power from them at variable cost for State consumption by reducing the schedule of high cost power.

**M/s. Vedanta Ltd.**

177. In its submission, GRIDCO has stated that the quantum of power to be procured from M/s. Vedanta Ltd-IPP shall be as per Para 35 ( c ) of the Commission's Order dated 27.01.2016 passed in Case No.21 of 2015 i.e. 25% +5% (instead of 7% due to de-allocation of coal blocks). But M/s. Vedanta Ltd-IPP is not complying to the said order of the Commission. GRIDCO has requested the IPPs to submit their Generation Plan and Tentative Tariff proposal for FY 2019-20. In response, except M/s. GKEL, no other IPP has furnished their Tentative Generation Plan to GRIDCO. The normative generation from the Unit#2 i.e. the IPP Unit of M/s. Vedanta Ltd. at 85% PLF and after 6% auxiliary energy consumption is 4199.54 MU (600X0.94 X0.85X8.76). Besides, 5% of total normative Energy Sent Out from the thermal plant (i.e. three converted CGPs unit and one IPP Unit) has been taken at normative PLF of 85% and auxiliary energy consumption of 6% which is equal to 840 MU i.e. 5% of (2400X.94X0.85X8.76). While 4199.54 MU needs to be supplied at total rate consisting of Energy Charge Rate (ECR) and Fixed Charge Rate, 840 MU will be supplied at Energy Charge Rate (ECR) only in line with the provisions of consolidated Power Purchase Agreement dated 19.12.2012. Though the total normative quantum of power towards State entitlement from the M/s. Vedanta Ltd. works out to 5039.54 MU or say, 5040 MU, M/s. Vedanta Ltd. has grossly failed to supply the State share of power in spite of several requests made by GRIDCO. GRIDCO had also intimated DoE, GoO and the Commission from time to time regarding non-supply of State entitlement of power by M/s. Vedanta Ltd. from its IPP unit.
178. GRIDCO has further submitted that the actual supply of power from M/s. Vedanta Ltd.-IPP during the 1st six months of FY 2018-19 (April'18 to Sept.'18) is only 197.01 MU and prorating the same for the whole year the total quantum expected to be supplied during of FY 2018-19 would be 394.02 MU only. The supply of power to GRIDCO by M/s. Vedanta Limited has been quite erratic and is abysmally low in gross violation to the assurance given by the M/s. Vedanta Ltd. that has been duly recorded in the Commission's Order dated 27.01.2016 in Case No.21 of 2015. Because of non-supply of power by M/s. Vedanta Ltd., GRIDCO is facing difficulty to manage the State demand and compelled to procure high cost power/over draw and pay penalty under DSM mechanism. GRIDCO has discussed with M/s. Vedanta Ltd.

to explore other routes for arranging supply of State entitlement power to GRIDCO so that the GRIDCO does not fail in its duty to meet its mandate of supplying power to the consumers of the State through the DISCOM Utilities. Though M/s. Vedanta Ltd. had come up with alternative options of supplying State entitlement power from its VAL-I (CGP) and from power exchanges, such supply was still not sufficient to fulfil the State entitlement. Therefore, GRIDCO has prayed the Commission to direct M/s. Vedanta Ltd to supply State entitlement of power to GRIDCO without any default. In absence of the Tentative Generation Plan and very low supply of power by M/s. Vedanta Ltd., GRIDCO has projected the energy drawal from this IPP as 2100 MU based on the average drawal of last two years i.e. FY 2016-17 (3247 MU) and FY 2017-18 (1018 MU).

179. The Commission scrutinised the above proposal of GRIDCO and observed that as per the Commission's order dated 27.01.2016 passed in Case No. 21/2015, 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 – I, III & IV of the power plant are converted to Captive Generating Plant w.e.f. 01.04.2015. As per the said order, the quantum of power supply to GRIDCO towards state entitlement should be 25% at full cost and 7% / 5% (depending upon the allotment of coal block within the state) of the total energy sent out of the power station at variable cost, as per the PPA in force. The power supply to GRIDCO must be 25% of the total energy sent out or total ex-bus generation from Unit-II whichever is higher plus 7%/5% of the total energy sent out from the power station. Such quantum of power supply should not be disturbed at any point of time. M/s Vedanta Ltd. had given assurance that in case of low or no generation in Unit-II, it 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. GRIDCO should secure compliance of orders in State interest. The Commission further observed that as per the OERC (Terms and Conditions of Determination of Generation Tariff) Regulations, 2014, the normative PLF is 85%. Considering PLF of 85% and auxiliary consumption of 6%, the energy availability from the State dedicated Unit-II (IPP) of the thermal power plant of M/s. Vedanta Limited comes to 4199.54 MU which will be purchased by GRIDCO at the tariff determined by the Commission and energy availability towards 5% State entitlement is 839.91 MU to be purchased at variable

cost. Accordingly, the state share of energy from this power plant is computed to be 5039.45 MU. The Commission approves same quantum of energy for procurement by GRIDCO from the thermal power plant of M/s. Vedanta Ltd. during the FY 2019-20 for State consumption.

**M/s. GMR Kamalanga Energy Ltd.**

180. GRIDCO has submitted that based on the terms and conditions of the PPA dated 04.01.2011 executed with M/s. GMR Kamalanga Energy Ltd. (M/s. GKEL), GRIDCO is entitled for 25% of the energy sent out from the 4x350 MW Thermal Power Plant (IPP) at the tariff to be determined by the CERC. Further, the power generated in excess of 80% PLF shall be made available to the State at variable cost (energy charge rate). Only three nos. of generating units of this power plant have been commissioned till date. GRIDCO has submitted that the normative quantum of power at 85% PLF and 5.75% Auxiliary Energy Consumption, as fixed in the CERC tariff order dated 29.06.2018 in Petition No.61/GT/2018, comes to 1842.19 MU ( $1050 \times 0.25 \times 0.9425 \times 0.85 \times 8.76$ ) which equals to the State entitlement of power @ 25% from the IPP. However, in view of State's requirement coupled with low supply of power by M/s. Vedanta Ltd and M/s. JITPL, GRIDCO has considered to procure power from the IPP of GKEL based on the drawal pattern of energy from this IPP during the first six months of the FY 2018-19. Therefore, GRIDCO has proposed to procure 2217.72 MU of power from M/s. GKEL during FY 2019-20.
181. The Commission observed that as per the PPA with M/s. GKEL the State share is 25% of the energy sent out from the station bus plus power generated in excess of 80% PLF which shall be available to the State at variable cost. Since the IPP of M/s. GKEL is supplying power to more than one state, its tariff has been determined by CERC. The Commission further observed that the present installed capacity of the IPP is 1050 MW (3x350 MW) and considering normative plant availability of 85% and auxiliary consumption at 5.75% as per CERC norms, the net generation comes to 7368.75 MU. Further, considering plant availability of 80% and auxiliary consumption of 5.75%, net generation comes to 6935.29 MU. As per the PPA, energy available to GRIDCO is 25% of energy sent out at 80% PLF i.e. 1733.82 MU (25% of 6935.29 MU) plus excess power generated beyond 80% PLF i.e. 433.46 MU (7368.75 MU – 6935.29 MU). Thus, total energy available to GRIDCO comes to 2167.28 MU (1733.82 MU + 433.46 MU). Hence, the Commission approves 2167.28 MU to be procured by GRIDCO from this IPP during the FY 2019-20 for State consumption.

**M/s Jindal India Thermal Power Ltd.**

182. GRIDCO has submitted that 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 12% (after de-allocation of coal blocks by the Hon'ble Supreme Court of India) of the power sent out at Variable Cost/Energy Charge Rate (ECR) to be determined by the Commission. At present JITPL is declaring schedule to ERLDC for supply of power to GRIDCO from its two no. of units on short term basis i.e. day ahead basis. GRIDCO submitted that in case of M/s. JITPL the State entitlement of 12% of Energy Sent Out (ESO) largely depends upon the availability of its Generating Units since M/s. JITPL is having linkage coal in respect of State entitlement for Unit#1 only. However, M/s. JITPL is not supplying power to GRIDCO as per the State entitlement. In this regard, GRIDCO has proposed the Commission in Case No. 01/2017 (pending before the Commission in the matter of approval of PPA) for incorporation of penalty clause in the PPA in case of short supply of power by JITPL. The Department of Energy, Government of Odisha have been apprised by GRIDCO regarding non-compliance of provisions of existing contract/agreement by JITPL. There is also backlog quantum of power pertaining to past period as well as against current year supply which is yet to be supplied by JITPL to GRIDCO. During first six months of FY 2018-19 the IPP has supplied only 219.57 MU to GRIDCO. On pro-rata basis GRIDCO has projected to procure 453.47 MU during FY 2019-20.
183. The Commission observed that out of the 1200 MW (2X600 MW) of M/s JITPL, considering the State share of 12%, PLF of 85% and auxiliary consumption of 5.75%, energy availability to the State from this IPP would be 1010.57 MU. Therefore, the Commission approves the same for procurement by GRIDCO from the IPP of M/s. JITPL during FY 2019-20. The Commission advises GRIDCO to coordinate and assist M/s. JITPL for improvement in its coal supply situation and purchase full quantum of energy towards State share from this IPP during FY 2019-20 as this energy is available at the variable cost only.
184. The Commission has estimated the total availability of 7892.21 MU towards State share of energy from the IPPs within the State those are presently supplying power to GRIDCO and approves the same to be purchased by GRIDCO during the FY 2019-20 for consumption in the State. The Commission has observed that GRIDCO has

proposed very less quantum of energy drawal from the IPPs, which is much less than the State entitlement as per the agreement stating that the IPPs are not supplying the State share of power unilaterally. The Commission direct GRIDCO to pursue the matter with the State Government and secure compliance of law through all available options. In fact, GRIDCO should draw the full quantum of State's share of power from the IPPs as per the PPA for State use and also to have export earnings after meeting the State's requirement, if commercially viable. 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. The proposal of GRIDCO and approval of the Commission in respect of purchase of power from the IPPs during the FY 2019-20 is as indicated in the table below.

**Table - 22**  
**Power Procurement from the IPPs during FY 2019-20**

<b>IPPs</b>	<b>Proposal of GRIDCO (MU)</b>	<b>Availability estimated by the Commission (MU)</b>	<b>Approval of the Commission (MU)</b>
Vedanta Limited	2100.00	5039.45	5039.45
GMR Kamalanga Energy Ltd.	2217.72	2167.28	2167.28
Jindal India Thermal Power Ltd.	453.47	1010.57	1010.57
<b>Total</b>	<b>4771.19</b>	<b>8217.30</b>	<b>8217.30</b>

#### **Power Purchase from Central Generating Stations**

185. Odisha has been allocated shares in 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 Sikim. 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:**

186. 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. As per the Inter-state transmission charges sharing Regulation (POC Regulation), total transmission loss of the CTU is 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 on weekly basis and are published in NLDC site. Similarly, GRIDCO being a beneficiary has to bear the “withdrawal loss” towards its drawal from the central sector generating stations. This is also determined by NLDC based on load flow study for the withdrawal zone of Odisha on weekly basis and published in their website. Therefore, GRIDCO is bearing the injection losses of these stations in addition to its withdrawal losses. In its ARR filing for 2019-20, GRIDCO has been arrived at the station-wise transmission loss percentages of different Central Generating Stations in the Eastern Region Power System considering the average of injection loss and withdrawal loss data of those stations from the month of April, 2018 to September, 2018 as available from the NLDC Website.

187. The Commission scrutinized the 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 transmission loss for drawal of power from individual central generating stations based upon the average injection loss and withdrawal loss data available on NLDC website from April, 2018 to November, 2018 on the drawal of GRIDCO, for estimation of power purchase cost of GRIDCO for the FY 2019-20, which is given below:

**Table - 23**  
**Percentage of System Loss considered for Central Stations**

<b>Name of power stations</b>	<b>Central Transmission Loss proposed by GRIDCO for FY 2019-20 (%)</b>	<b>Central Transmission Loss considered by the Commission for FY 2019-20 (%)</b>
TSTPS -I	2.50	2.41
TSTPS -II	2.97	2.85
FSTPS- I & II	1.98	1.99
FSTPS- III	1.98	1.99
KHSTPS - I	2.31	2.22
KHSTPS - II	2.31	2.41
Chukha	2.49	2.45
Tala	2.49	2.49
Teesta-V	3.03	2.75

### **Central Hydro Generating Stations**

188. **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 Electric Project, Bhutan. GRIDCO has projected the drawl of 268.14 MU from Chukha for FY 2018-19 considering the average drawal of last 6 years i.e. from FY 2012-13 to 2017-18. Deducting central sector loss of 2.49%, the net availability to GRIDCO is projected at 261.00 MU for the FY 2019-20.
189. The Commission scrutinized the above proposal of GRIDCO and observed that the drawal of GRIDCO from Chukha during the period from FY 2013-14 to 2017-18 were 275.41 MU, 247.41 MU, 272.39 MU, 312.17 MU & 263.90 respectively, which varies from 247.41 MU during FY 2014-15 to 312.17 MU during the FY 2016-17. With the above variations, the Commission approves the drawl from Chukha hydro station at 274.26 MU for FY 2019-20 considering the average drawal of last 5 years i.e. from FY 2013-14 to 2017-18. After deducting the Central Transmission Loss @ 2.45%, the net drawal of GRIDCO comes to 267.54 MU for FY 2019-20.
190. **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 137.98 MU of energy from Tala HEP during FY 2019-20 by averaging previous 6 years drawal i.e. from FY 2012-13 to 2017-18. After deducting Central Sector Loss of 2.49%, the net availability to GRIDCO is projected as 135.00 MU for FY 2019-20.
191. After scrutiny, the Commission observed that the drawal of GRIDCO from Tala Hydro Power Station during the period from FY 2013-14 to 2017-18 were 153.82 MU, 139.33 MU, 139.61 MU, 140.57 MU & 122.81 MU respectively, which varies from 122.81 MU during FY 2017-18 to 153.82 MU during the FY 2013-14. With the above variations, the Commission approves the drawl from Tala Hydro Power Station at 139.23 MU for FY 2019-20 considering the average drawal of last 5 years i.e. from FY 2013-14 to 2017-18. After deducting the Central Transmission Loss @ 2.49%, the net drawal of GRIDCO from Tala Hydro Power Station comes to 135.76 MU for FY 2019-20.
192. **TEESTA:** GRIDCO in its ARR application has submitted that Teesta-V HEP having installed capacity of 510 MW is situated in Sikkim and Odisha has a share of 23.40% of the saleable energy from this power station. The annual design energy of Teesta-V

HEP is 2572.67 MU. Considering 12% free energy to Home State & 1.20% of Auxiliary Consumption, the annual saleable energy of the project is 2236.81 MU. Considering Odisha share of 23.40% of the saleable energy and deducting the Central Sector loss of 3.03% GRIDCO has proposed to procure net energy of 447.00 MU from Teesta-V HEP during FY 2019-20.

193. 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% from annual saleable energy of 2541.83 MU i.e. the design energy less auxiliary consumption @ 1.20%. Considering the central sector transmission loss of 2.75%, the Commission approves the net drawl of 508.97 MU from Teesta-V HEP during FY 2019-20
194. The Commission approves the total energy drawal of 912.27 MU from the Central Hydro Generating Stations during the FY 2019-20 against 843 MU as proposed by GRIDCO. The proposal of GRIDCO and approval of the Commission are summarised in the Table below:

**Table – 24**  
**Drawal from Central Hydro Stations during FY 2019-20**

<b>Central Hydro Stations</b>	<b>Installed Capacity (MW)</b>	<b>GRIDCO Share (%)</b>	<b>GRIDCO Share of installed capacity (MW)</b>	<b>Proposed drawal for FY 2019-20 after C.S. loss (MU)</b>	<b>Energy drawal approved by the Commission for FY 2019-20 after C.S. loss (MU)</b>
<b>Chukha</b>	336 (4*84) (ER Allocation =270)	15.19	41.013	261.00	267.54
<b>Tala</b>	1020 (6*170)	4.25	43.350	135.00	135.76
<b>Teesta-V</b>	510 (3*170)	20.59	105.009	447.00	508.97
<b>TOTAL</b>				<b>843.00</b>	<b>912.27</b>

#### **Central Thermal Generating Stations**

195. GRIDCO has submitted that existing CERC (Determination of Terms & Conditions of Tariff) Regulations, 2014 is effective from 01.04.2014 to 31.03.2019. The new CERC Tariff Regulations with revised Terms and Conditions of Tariff is expected to come in to force with effect from 01.04.2019. In absence of the new CERC Terms and Conditions of Tariff Regulations, 2019-24 at the time of filing the application,

GRIDCO has considered the norms of operation for Central Thermal Generating Station as per the existing CERC Tariff Regulations, 2014.

196. 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.”*

197. GRIDCO stated that the Tariff Orders of all the Central Thermal Stations except Barh-II for the period 2014-19 have been pronounced by the CERC. In these Orders, CERC have stated that in view of shortage of domestic coal supply, the target Plant Availability was then allowed as 83% for 3 years from FY 2014-15 to FY 2016-17. Now that this period is over, the PLF is considered as 85% for FY 2017-18 and FY 2018-19 in terms of the Regulation 36 (A)(a) of the CERC Tariff Regulations, 2014. Due to aforesaid reasons GRIDCO has projected energy drawal from NTPC stations at 85% availability. The actual Plant Availability for the months from April’18 to Sept’18 and the percentage of Cumulative Availability of power from CGSs for the 1st six-months of FY 2018-19 submitted by GRIDCO varies from 77.42% to 90.59% as given in the table below.

**Table-25**  
**Cumulative Availability of CGSs for the 1st six-months of FY 2018-19 & Proposed Cumulative Availability for FY 2019-20**

Stations	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Cumulative Availability (%)	Cumulative Availability % (NAPAF%) proposed for CGSs by GRIDCO for FY 2019-20
TSTPS Stage-I	91.42	94.43	87.48	80.95	79.83	81.09	85.85	85
TSTPS Stage-II	94.78	94.20	85.95	58.87	64.65	66.54	77.42	85
FSTPS-I&II	51.03	74.79	93.90	86.91	81.00	95.39	80.51	85
FSTPS-III	93.92	95.36	77.79	89.07	93.06	93.77	90.53	85
KhSTPS St-I	94.14	95.87	92.07	74.85	90.96	96.02	90.59	85
KhSTPS St-II	96.91	74.61	75.30	82.11	99.11	74.94	83.85	85

198. Further, GRIDCO has mentioned that, as far as practicable, they are avoiding drawal of State share of costly thermal power from NTPC Stations viz., FSTPS-I, II & III, as energy drawal from these stations was not allowed by the Commission in the ARR of FY 2018-19. However, huge energy deficit in the State arising due to significant low generation by the IPPs, such as, M/s. Vedanta Ltd. & M/s. JITPL, has forced GRIDCO to purchase power from NTPC Generating Stations during the year 2018-19 to meet the State Demand. GRIDCO has mentioned that the shortfall of energy drawal from IPPs to the tune of 2578 MU is being compensated mostly by drawal from State Hydro (545 MU), Central Thermal Stations (1715 MU) and Central Hydro (181 MU) etc. during April'18 to Sep'18. Even drawal from high cost Thermal Stations like FSTPS-III (289.027 MU) and Barh-II (691.431 MU) was resorted to as a matter of necessity although drawal from such high Cost Stations was not allowed by the Commission during the approval of ARR of 2018-19. GRIDCO has submitted that in the above situation they are forced to draw power from high cost Stations to fulfil the demand of the State as a matter of inevitability.
199. In view of the above difficulties and uncertainties of power availability from non-firm sources like CGPs and the Short-term Power Market coupled with the consequential negative economics of procuring power from such outside sources, GRIDCO has proposed to draw full quantum of power at 85% availability from the Central Generating Stations by considering the relevant allocated share in favour of Odisha as derived from the Regional Energy Account (REA) of Eastern Regional Power Committee (ERPC), Auxiliary Consumption as per the existing CERC Tariff Regulations, 2014 and the Central Sector Transmission Loss specific to each of the Stations, as per the Point of Connection (PoC) Methodology. GRIDCO has submitted that drawal from Central Generating Thermal Stations has been proposed in the present application avoiding the high cost power from these Stations and the allocation of such costly power is proposed as a judicious trade-off between the power trading by GRIDCO and supply to the State consumers so that the interest of the State consumers are best protected. However, in the eventuality of power requirement, drawal of such costly power may be considered by the Commission for inclusion / pass through in the ARR & BSP of GRIDCO.

200. Considering the above parameters, GRIDCO has proposed the total energy drawal of 5223.89 MU from Central Thermal Generating Stations of Eastern Region for FY 2019-20 as given in the Table below:

**Table - 26**  
**Availability of Power from Central Generating NTPC Stations FY-2019-20**

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons (%)	Based on NAPAF% as per Para 36 (A) of CERC Regn.,2014	Net Availability (ESO) (MU)	GRIDCO Share (%)	Ex-bus Availability (MU)	Central Trans. Loss (%)	GRIDCO share after the applicable C.S. Trans. Loss (MU)	Energy drawal proposed for FY 2019-20
TSTPS Stg.-I	1000	5.75	85	7,017.86	32.34	2,269.87	2.50	2,213.05	2,213.05
TSTPS Stg.-II	2000	5.75	85	14,035.71	10.00	1,403.57	2.97	1,361.96	1,361.96
FSTPS-I&II	1600	6.47	85	11,142.79	14.18	1,580.44	1.98	1,549.10	1,549.10
FSTPS-III	500	5.75	85	3,508.93	17.15	601.77	1.98	589.84	0.00
KhSTPSStg-I	840	9.00	85	5,691.72	15.77	897.86	2.31	877.17	0.00
KhSTPSStg-II	1500	5.75	85	10,526.78	2.62	275.87	2.31	269.51	109.78
<b>TOTAL</b>				<b>51,923.79</b>		<b>7,029.38</b>		<b>6,860.63</b>	<b>5,233.89</b>

201. GRIDCO has submitted that in the ARR & BSP order of GRIDCO for FY 2018-19, the Commission had not approved any drawal of power from FSTPS-I, II & III and Barh STPS-II and approved a part drawal from KhTPS-I for State consumption keeping in view the higher energy charge rate of these stations and availability of low cost power from other sources. But State share of fixed cost of these central power stations was allowed by the Commission in the ARR of GRIDCO except Barh STPS-II. GRIDCO has stated that in view of less drawal from IPPs, GRIDCO is constrained to draw power from all of the Central Generating Stations in order to meet the power demand of the State. However, in its application for the FY 2019-20, GRIDCO has not proposed for any drawal of high cost power from FSTPS-I, II & III and Barh STPS-II. The Commission further observed that the Ministry of Power vide its Allocation Order No.3/6/2018-OM dated 19.02.2019 has de-allocated the State share of power come Barh STPS-II w.e.f. 20.02.2019.
202. The Commission examined the submissions of GRIDCO and observed that the norms provided in the existing CERC Tariff Regulations, 2014-19 is applicable upto the FY 2018-19 and GRIDCO, in its ARR application for the FY 2019-20, has considered the norms of these Regulations for computation its drawal from the Central Generating Stations. Accordingly, the NAPAF of the Central Thermal generating stations has been taken by GRIDCO at 85%. The Commission observed that recently CERC has

notified the new Tariff Regulations, 2019-24 on 07.03.2019 and no tariff orders has been issued by CERC in respect of the subject Central Thermal Generating Stations. Therefore, the Commission accepts the proposal of GRIDCO and provisionally considers the norms of the existing CERC Tariff Regulations, 2014-19 for the purpose of computation of availability of power from these power stations during the FY 2019-20.

203. The Commission further 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 stations 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 January, 2019. Considering the Central Sector transmission loss and NAPAF of 85% provisionally as stated earlier, the availability of power from Central Thermal Stations estimated for the FY 2019-20 and GRIDCO's drawal as per requirement are given in the table below:

**Table - 27**  
**Drawal From Central Thermal Generating Stations for FY-2019-20**

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons. (%)	Availability considering 85% PLF & Auxiliary Consum. (MU)	GRIDCO Share (%)	GRIDCO Share (MU)	Central Trans. Loss (%)	Estimated Share after Central Sector Transmission Loss (MU)	OERC Approval for Purchase (MU)
TSTPS -I	1000	5.75	7017.86	32.344	2269.87	2.41	2215.16	2215.16
TSTPS -II	2000	5.75	14035.71	10.000	1403.57	2.85	1363.57	1363.57
FSTPS-I& II	1600	6.47	11142.94	14.184	1580.47	1.99	1549.02	1549.02
FSTPS-III	500	5.75	3508.93	17.150	601.77	1.99	589.80	0.00
KhSTPS -I	840	9.00	5691.72	15.775	897.86	2.22	877.93	0.00
KhSTPS-II	1500	5.75	10526.78	2.621	275.86	2.41	269.22	269.22
<b>TOTAL</b>	<b>7440</b>		<b>51923.94</b>		<b>7029.40</b>		<b>6864.70</b>	<b>5396.97</b>

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

204. As mentioned above, the total estimated availability of power from different sources comes to 33721.72 MU, whereas total power requirement of GRIDCO is estimated at 28731.03 MU. Since, the least cost power is available, costly power from certain Central Thermal Generating Stations has not been considered in the ARR of GRIDCO for consumption inside the State. However, GRIDCO may trade this power if commercially viable 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 2019-20 as given in the table below:

**Table – 28**  
**Quantum of Power Purchase from Various Sources for FY 2019-20**

(Figures in MU)

Sources of Purchase	Commission's Approval for State Drawl for 2018-19	GRIDCO's Proposal for 2019-20	Estimated Availability for 2019-20	Commission's Approval for State Drawl for 2019-20
HYDRO (OLD)	3676.86	3620.66	3676.86	3676.86
Indravati	1942.38	1950.30	1942.38	1942.38
Machakund	262.50	262.50	262.50	262.50
<b>Total Hydro</b>	<b>5881.74</b>	<b>5833.46</b>	<b>5881.74</b>	<b>5881.74</b>
OPGC (I & II)	2912.82	2861.60	2792.78	2792.78
OPGC (III & IV)	-	4574.98	4574.98	726.93
TTPS (NTPC)	3376.07	3336.04	3336.04	3336.04
IPPs	7889.53	4771.19	8217.30	8217.30
CGPs	-	-	-	-
Co-Generation Plants	-	-	-	-
Small Hydro	320.00	417.00	417.00	417.00
Biomass Energy	80.00	80.00	80.00	80.00
Wind Energy	22.00	260.00	290.00	290.00
Solar Energy	680.00	686.010	680.00	680.00
<b>TOTAL STATE</b>	<b>21162.17</b>	<b>22820.27</b>	<b>26269.84</b>	<b>22421.79</b>
CHUKHA HPS	262.18	261.00	267.54	267.54
Tala HPS	138.80	135.00	135.76	135.76
Teesta-V HPS	512.84	447.00	508.97	508.97
<b>Total Central Hydro</b>	<b>913.82</b>	<b>843.00</b>	<b>912.27</b>	<b>912.27</b>
TSTPS-I	2229.92	2213.05	2215.16	2215.16
TSTPS-II	1371.85	1361.96	1363.57	1363.57
FSTPS-I & II	-	1549.10	1549.02	1549.02
FSTPS-III	-	-	589.80	-
KhTPS-I	854.37	-	877.93	-
KhTPS-II	271.69	109.78	269.22	269.22
<b>Total Central Thermal</b>	<b>4727.83</b>	<b>5233.89</b>	<b>6864.70</b>	<b>5396.97</b>
<b>Total Central Sector</b>	<b>5641.65</b>	<b>6076.89</b>	<b>7776.96</b>	<b>6309.24</b>
<b>TOTAL GRIDCO</b>	<b>26803.81</b>	<b>28897.16</b>	<b>34046.81</b>	<b>28731.03</b>

### Power Procurement Cost

205. The cost of power is the highest component in the revenue requirement of GRIDCO. The Commission, for determination of the cost of power purchase, has exercised due diligence in arriving at the cost in respect of each of the power stations based on the relevant rules, regulations and documents available.

## **OHPC Stations**

206. OHPC has submitted the application for approval of its Annual Revenue Requirement and Tariff of its individual power stations separately for the FY 2019-20 in terms of Section 62, 64 and 86 of the Electricity Act, 2003 which has been registered as Case No.69/2018. 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.
207. Accordingly, the cost of power purchase by GRIDCO from each of the power stations of OHPC is given in the table below:

**Table – 29**  
**Cost of Power Purchase from OHPC Stations for FY 2019-20**

<b>Name of the Power Station</b>	<b>Quantum of Power Purchase for 2019-20 (MU)</b>	<b>Approved Average Tariff for 2019-20 (P/U)</b>	<b>Cost of Power Purchase for FY 2019-20 (Rs. Cr.)</b>
Burla	677.16	126.46	85.64
Chipilima	485.10	74.06	35.93
Balimela	1171.17	60.70	71.09
Rengali	519.75	125.78	65.38
Upper Kolab	823.68	76.47	62.99
Upper Indravati	1942.38	88.52	171.94
<b>Sub-Total</b>	<b>5619.24</b>	<b>87.73</b>	<b>492.95</b>
Machhkund	262.50	51.33	13.48
<b>Total</b>	<b>5881.74</b>	<b>86.10</b>	<b>506.43</b>

## **IB Thermal Power Station of OPGC**

208. OPGC has also filed its ARR & Tariff application before OERC for determination of Generation Tariff of its existing 2x210 MW Ib Thermal Power Station for the year 2019-20, which has been registered as Case No.70 of 2018. The Commission in its order passed in Case No.70 of 2018 has determined the annual capacity charges to the tune of Rs. 240.96 Crore and energy charge @ 150.68 P/U for the said power station of OPGC. Hence the procurement cost for the approved drawal of 2792.78 MU from the existing units of OPGC comes to Rs.661.78 Crore at an average rate of 236.96 P/U.
209. GRIDCO has further submitted that as per the approved PPA dated 04.01.2011, GRIDCO is entitled to procure contracted capacity to the tune of 50% of installed capacity (2X660 MW) of OPGC expansion projects (Unit-III & IV) at a tariff to be

determined by CERC. GRIDCO has proposed to procure 4574.98 MU from this expansion project at a tentative tariff of Rs.3.33/kWh pending determination of its tariff, as per the Draft Minutes drawn following the second meeting of the Govt. of Odisha Appointed Committee, with the total cost of Rs. 1523.47 Crore. Though we have approved a quantum of 726.93 MU in this order for procurement from the expansion unit of OPGC during the FY 2019-20 but tariff for this expansion project has not yet been determined by CERC. Further, the approved energy of 726.93 MU includes infirm power of the generating units. The Commission further observe that as per the Tariff Regulations, *“Supply of infirm power shall be accounted as deviation and shall be paid for from the regional or State deviation settlement fund accounts in accordance with the CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 as amended from time to time. Provided that any revenue earned by the generating company from sale of infirm power after accounting for the fuel expenses shall be applied for reduction in capital cost.”* The Commission further observe that as per CERC Deviation Settlement Mechanism Regulations, the price under deviation settlement mechanism is related to the daily average Area Clearing Price (ACP) of the power exchange, which cannot be determined earlier. The Commission further find that in case the generating units of OPGC expansion project cannot be operated commercially during the ensuing year, GRIDCO will have to pay for it as per the above CERC Regulation. Since this price cannot be estimated beforehand due to the reasons as stated above we are approving the provisional price which is similar to that of variable cost of existing units (I & II) of OPGC which is 150.68 P/U. Accordingly, the cost of power procurement from the subject OPGC expansion project during FY 2019-20 has been estimated at Rs.109.53 Crore towards purchase of the approved quantum of 726.93 MU.

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

210. GRIDCO has submitted that the Tariff Petition No. 334/GT/2014 filed by NTPC in respect of TTPS for the period 2014-19 as per the CERC Tariff Regulations, 2014, has been disposed of by CERC vide Order dated 26.09.2016. But NTPC has challenged the CERC (Terms and Conditions of Tariff) Regulations, 2014 before Hon'ble Delhi High Court in W.P. (C) No.1641 of 2014 and GRIDCO has become a party to it. Further, GRIDCO has also filed a Writ Petition against the said Regulations before the Hon'ble Odisha High Court which has been admitted as W.P.

(C) No.12122 of 2015 and Hon'ble Odisha High Court vide Order dated 03.11.2015 had granted an interim stay on the said CERC Regulations, 2014. Further, another case W.P. (C) No. 18695 of 2014 filed earlier against CERC Regulations, 2009 before the Hon'ble High Court of Odisha is also sub-judice at present. Besides, the appeals filed before the APTEL by NTPC and GRIDCO against the CERC Order 14.05.2015 (Petition No.304/2009) admitted as Appeal No.175/2014 and 180/2014 respectively are also sub-judice at present. Further, a case has been filed against CERC Order dtd. 26.09.16 (Petition no 334/GT/2014) before the APTEL in the matter of non-carrying out of R&M phase-IV works on TTPS Stage-II by NTPC in spite of in-principle approval given by the CERC vide Order dtd. 07.06.2013 passed in Petition No. 212/2010.

211. **Fixed Charges:** Pending the aforesaid petitions at different judicial Forums, NTPC-TTPS, at present, is claiming the monthly Fixed Charges as per the Annual Fixed Charge as applicable for FY 2018-19 i.e. Rs. 445.48 Crore as per the CERC Tariff Order dated 26.09.2016 along with the cost towards total moisture correction in GCV. Accordingly, GRIDCO has worked out the Fixed Cost per unit of energy from TTPS as 133.53 P/U for FY 2019-20 at the projected PLF of 92.25 % and Aux. Energy Consumption of 10.50 % for the proposed energy drawal of 3336.04 MU.
212. After scrutiny of the submissions of GRIDCO, the Commission observed that Talcher Thermal Power Station (TTPS) is owned and operated by NTPC and tariff for this generating station has not yet been determined by CERC for the FY 2019-20. However, CERC vide its Order dated 26.09.2016 passed in Petition No. 334/GT/2014 has determined the Annual Fixed Charge (AFC) of Rs.445.478 Crore for FY 2018-19 along with the cost towards total moisture correction in GCV in respect of TTPS (NTPC). Hence, the Commission considers the fixed cost of TTPS at Rs.445.478 Crore provisionally for the FY 2019-20 for determination of ARR and BSP of GRIDCO. Accordingly, the fixed charge per unit comes to 133.53 P/U for drawal of 3336.04 MU from TTPS during the FY 2019-20.

**Energy Charges:**

213. GRIDCO has submitted that as per the CERC Tariff Order dated 26.09.2016 in Petition No. 334 of 2014 in consonance with the CERC Tariff Regulations, 2014, the Base Energy Charge for TTPS has been fixed as 110.187 Paise/kWh. 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 Regulation 21(6) (a) of the Tariff Regulations, 2014. Accordingly, NTPC-TTPS is claiming the Monthly Energy Charges every month as per the Energy Charge Rate (ECR) worked out from the landed price and GCV of coal and oil for that month and considering the operational parameters laid down in CERC Tariff Regulation, 2014. However, based on the trend of ECR as claimed by TTPS-NTPC during April, 2018 to September, 2018, GRIDCO has considered the monthly average Energy Charge of 169.07 P/U towards the ECR for FY 2019-20.

214. The Commission scrutinized the proposal of GRIDCO and observed that NTPC-TTPS is claiming the Energy Charges every month as per Clause 21(6) (a) of the CERC Tariff Regulations, 2014 based on the Price and GCV of Coal and Oil etc. for that month. Accordingly, considering the data on coal and oil price and GCV of Coal etc. from the monthly bills of last eight months i.e. from April, 2018 to November, 2018 as claimed by NTPC in respect of TTPS, the average energy charge rate is computed at 172.85 P/U. Hence, for the purpose of computation of ARR & BSP of GRIDCO for the FY 2019-20, the Commission provisionally approves the energy charge rate of 172.85 P/U for drawal of energy from TTPS as given in the table below.

**Table-30**  
**Energy Charge Rate (ECR) of TTPS** (in P/U)

Apr-18	May-18	June-18	July-18	Aug-18	Sept-18	Oct-18	Nov-18	Monthly Average Energy Charge	ECR approved for FY 2019-20 considering the monthly average ECR from Apr, 18 to Nov, 18
169.6	157.3	173.5	175.8	179.7	174.4	179.4	173.6	172.85	172.85

215. **Year-end Adjustment Charges:** GRIDCO has projected the year-end adjustment charges of TTPS to the tune of Rs.31.24 Crore for the FY 2019-20 based on the pro-rated assessment of actual charges paid by GRIDCO during 1<sup>st</sup> six months of the FY 2018-19, 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.21.53 Crore calculated @ 55 paise/unit on auxiliary consumption of the generation at 92.50 % PLF, (ii) Water Charge / Cess of Rs.0.12 Crore, (iii) SLDC Charges of Rs.0.36 Crore and (iv) Rs.13.53 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 2019-20 comes to Rs.35.54 Crore. The year-end charges proposed by GRIDCO and approved by the Commission for the FY 2019-20 is shown in the table below:

**Table – 31**  
**Year-End Charges of TTPS for FY 2019-20**

ITEM	OERC approval for FY 2018-19	GRIDCO's Proposal for FY 2019-20	OERC approval for FY 2019-20
Electricity duty	21.78	20.76	21.53
Water Cess / Charge	0.12	0.12	0.12
UI overdrawl	0.00	4.28	0.00
SLDC charges	0.36	0.39	0.36
Incentive	15.53	5.69	13.53
<b>Total (Rs. Crore)</b>	<b>37.79</b>	<b>31.24</b>	<b>35.54</b>
<b>ESO (MU)</b>	3376.07	3336.04	3336.04
<b>Per unit cost (P/U)</b>	<b>11.19</b>	<b>9.36</b>	<b>10.65</b>

216. After taking into account all the above estimated cost, the approved tariff for TTPS power comes to 317.03 P/U comprising of fixed cost @ 133.53 P/U, energy charges @ 172.85 P/U and year end charges @ 10.65 P/U. Hence, the total power procurement cost from NTPC-TTPS during FY 2019-20 is estimated at Rs.1057.66 Crore for the approved drawl of 3336.04 MU.

#### **Captive Generation Plants (CGPs) and Co-generation Plants**

217. GRIDCO has proposed not to procure any power from the CGPs and Co-generation Plants during the FY 2019-20 in view of adequate availability of power due to State's share in various existing and 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 2019-20 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 Energy Sources**

### **Small Hydro**

218. In its ARR application for FY 2019-20, GRIDCO has proposed to procure 220 MU from Meenakhi Small Hydro Electric Project of M/s. MPL @ 368 P/U and 100 MU from Samal Small Hydro Electric Project of M/s. OPCL @ 371 P/U including PTC trading margin of 4 P/U in both the cases. Further, GRIDCO has proposed to procure 97 MU of energy from the two nos. of forthcoming SHEPs i.e. M/s Baitarani Power Projects Pvt. Ltd. (65 MU) & M/s Avantika Power Projects Pvt. Ltd. (32 MU) at the rate of 426 P/U as specified by the Commission for the 2<sup>nd</sup> Control period and as per the PPA executed with these SHEPs on 18.12.2015 & 29.10.2014 respectively. The total procurement cost of this 417 MU of energy from small hydro sources has been estimated by GRIDCO at Rs.159.38 Crore.
219. The Commission in its Order dtd.19.05.2011 passed in Case Nos.17 & 24 of 2011 have fixed 368.00 P/U (inclusive of 4 P/U 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 371.00 P/U (inclusive of 4 P/U 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. Further, the Commission observed that GRIDCO has proposed to procure 65 MU of energy from the SHEP of M/s Baitarani Power Projects Pvt. Ltd. and 32 MU from the SHEP of M/s Avantika Power Projects Pvt. Ltd. during FY 2019-20. But both the projects are yet to be commissioned. The Commission, vide its order dated 15.01.2014 passed in Case No. 80/2013 has determined the generic tariff of 426 P/U for the SHEPs of 5 MW to 25 MW capacity, which is applicable for the projects commissioned during the 2<sup>nd</sup> Control Period i.e. during the FY 2013-14 to 2017-18. The generic tariff order for the next Control Period is yet to be issued by the Commission. Therefore, the Commission provisionally consider the tariff of 426 P/U for procurement of 97 MU of renewable energy from the said SHEPs as proposed by GRIDCO. The Commission has approved procurement of 417 MU by GRIDCO from Small Hydro sources i.e. 220 MU from Lower Kolab & Middle Kolab SHEPs of M/s.MPL, 100 MU from Samal Barage SHEP of M/s. OPCL, 65 MU from M/s Baitarani Power Projects Pvt. Ltd. and 32 MU from the SHEP of M/s Avantika Power Projects Pvt. Ltd. for the

ensuing FY 2019-20. Accordingly, the Commission approves Rs.159.38 Cr towards procurement of total 417 MU of energy from the said small hydel sources during FY 2019-20 at an average rate of 382.21 P/U.

### **Bio-mass Energy**

220. GRIDCO has proposed to procure Biomass Energy of 80 MU from M/s. Shalivahan Green Energy Ltd. during FY 2019 -20 at a cost of Rs. 46.24 Crore @ 578 P/U till determination of the relevant tariff by the Commission. The Commission observed that as proposed by GRIDCO 80 MU of energy has been approved for procurement during FY 2019-20 from Bio-mass plant of M/s. Shalivahana Green Energy Ltd., which was commissioned during the FY 2011-12 i.e. during the control period from FY 2010-11 to 2012-13. Hence the tariff of this biomass plant will be governed by the order of the Commission dtd.01.03.2014 passed in Case No. 16/2013 where the tariff for Biomass energy has been re-determined for the control period 2010-11 to 2012-13 based on the variable cost determined for the control period FY 2013-14 to 2015-16. Thereafter, variable cost of energy from biomass sources has not been revisited by the Commission. Therefore, the Commission decides to consider the variable cost of biomass energy determined for the FY 2015-16 to be applicable for the FY 2019-20 towards procurement of power by GRIDCO from the Biomass plant of M/s. Shalivahana Green Energy Ltd. Accordingly the Commission approves cost of Rs. 46.24 Crore at the provisional rate of 578 P/U for procurement of 80 MU of Biomass energy from M/s. Shalivahana Green Energy Ltd. for the purpose of computation of ARR of GRIDCO for the FY 2019-20.

### **Wind Energy**

221. GRIDCO has submitted that they will avail 85 MU at the tariff of 353 P/U through PTC from the 50 MW wind power allocated under the “1000 MW ISTS connected wind power projects scheme, Phase-I” of MNRE, Govt. of India. Further, GRIDCO will avail 175 MU at the Tariff of 272 P/U through SECI from 100 MW Wind power allocated under the “ISTS connected wind power projects scheme, Phase-II” and another 30 MU at the tariff of 259 P/U through SECI from additional 50 MW allocated under “ISTS connected wind power projects scheme, Phase-III” of the MNRE, Govt. of India during the FY 2019-20. Accordingly, GRIDCO has proposed to purchase 290 MU of wind power during the FY 2019-20 with the procurement cost

of Rs. 85.38 Crore. The Commission accepts the above proposal of GRIDCO and approves procurement cost of Rs.85.38 Crore at an average rate of 294.40 P/U towards purchase of 290 MU of wind energy by GRIDCO during the FY 2019-20 for State consumption.

### Solar Energy

222. GRIDCO has proposed to procure 680 MU of solar energy from different sources at the total cost of Rs. 365.80 Crore with an average rate of 533.24 P/U during the FY 2019-20 as indicated in the Table below:

**Table -32**  
**Procurement & Cost of Solar Power during FY 2019-20**

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. through OREDA State Scheme	8	700	5.60
6	25 MW from M/s ACME Odisha Solar Power Pvt. Ltd.	42	728	30.58
7	70 MW through Solar Energy Corporation of India (SECI) under JNNSM, Phase –II, Batch-I	116	550	63.80
8	270 MW through Solar Energy Corporation of India (SECI) under JNNSM, Phase-II, Batch-IV	450	450	202.50
	<b>Total</b>	<b>680</b>	<b>537.94</b>	<b>365.80</b>

223. The Commission has scrutinized the above proposal of GRIDCO along with the current energy bills raised by the solar generators and approves the same for the computation of ARR of GRIDCO for the FY 2019-20. Accordingly, the procurement cost comes to Rs. 365.80 crore at an average rate of 537.94 P/U for procurement of total 680 MU of solar power during the FY 2019-20.
224. The Commission, in the above paragraphs, has approved a purchase of 1467 MU from renewable energy sources (both solar and non-solar) during the FY 2019-20 based on the proposal of GRIDCO and availability of the same. But such available quantum of renewable energy is inadequate to meet the RPO fixed by the Commission for FY 2019-20. In its submission GRIDCO has stated that they are committed to procure

renewable energy from all the available sources during the ensuing year to fulfil the RPO. It is to mention here that in the ARR of GRIDCO for the FY 2016-17, the Commission had allowed a corpus of Rs.30 Cr. to be utilized in exigency exclusively for purchase of renewable power in case of any shortfall of fund for purchase of the same. Since GRIDCO had not procured more than the approved quantum of Renewable Energy during the FY 2016-17 and 2017-18, the corpus amount of Rs. 30 Cr. was not utilized. Hence, in the tariff order for the FY 2018-19, the Commission had directed GRIDCO to utilise the said Rs.30 Cr. towards purchase of additional quantum of renewable energy during the current year 2018-19. But from the submission of GRIDCO it is observed that GRIDCO has procured only 441.30 MU of renewable energy (both solar and non-solar) upto the month of November, 2018 against the approval of 1102 MU for the FY 2018-19. It appears that GRIDCO may not be able to purchase the approved quantum of renewable energy by the end of the current FY 2018-19. Hence, the aforesaid amount of Rs.30 Cr. might have not been utilized in the current year for procurement of additional quantum of renewable energy over and above the approved quantum. Therefore, the Commission directed GRIDCO to utilise the said amount of Rs.30 Cr. towards purchase of additional quantum of renewable energy during the ensuing FY 2019-20.

### **Independent Power Plants (IPPs)**

#### **M/s. Vedanta Ltd.**

225. In its application, GRIDCO has submitted that the Multi Year Tariff (MYT) Petition filed by M/s Vedanta Ltd for FY 2014-15 to 2018-19 in Case No.95 of 2013 and application for interim tariff in Case No.38 of 2016 (truing up for the period 2010-11 to 2013-14) have already been disposed of by the Commission vide order dated 26.02.2018 and 29.06.2018 respectively. Accordingly, for FY 2018-19 in respect of M/s. Vedanta Ltd., the Commission has fixed a provisional tariff of 260.96 P/U (fixed charge component of 114.40 P/U and energy charge of 162.70 P/U) towards procurement of power by GRIDCO from the said IPP. At present, M/s. Vedanta Ltd-IPP is raising monthly energy bills based on ECR as per the ARR order of GRIDCO and Capacity Charges are claimed considering Annual Fixed Charges (AFC) as per their own calculation considering receivable component of working capital for two months thereby deviating from AFC fixed by the Commission in Order dated 29.06.2018 taking into account the PAFM% calculated on its own and not as issued

by SLDC each month. GRIDCO accepts the energy bills at OERC approved provisional tariff for FY 2018-19 and makes payment accordingly. However, for computation of ARR for FY 2019-20, GRIDCO has considered the Fixed Charge of 114.40 P/U as fixed by the Commission in the ARR order of GRIDCO for FY 2018-19. In absence of monthly coal and oil data, not being submitted by M/s. Vedanta Ltd for first six months of FY 2018-19 (i.e. April'18 to Sept'18), the provisional Energy Charge Rate of 162.70 P/U has been considered by GRIDCO as fixed in the ARR order of GRIDCO for FY 2018-19 in respect of M/s. Vedanta Ltd-IPP. GRIDCO has prayed the Commission to direct M/s. Vedanta Ltd to furnish the coal and oil data to GRIDCO in duly prescribed format to arrive at the actual ECR. Accordingly, GRIDCO has estimated the power procurement cost as Rs. 569.90 Crore towards purchase of 2100 MU from M/s. Vedanta Ltd. during FY 2019-20.

226. 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 in Case No.95 of 2013 has been disposed of vide its order dated 29.06.2018. No further tariff order has been issued by the Commission for determination of tariff of the IPP Unit-II of M/s. Vedanta Ltd. Further, the Commission in its order dated 27.01.2016 passed in Case No. 21/2015 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 allowed to be 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.

227. In view of the above, for the purpose of computation of ARR of GRIDCO for the FY 2019-20, the Commission considers the fixed cost as approved for FY 2018-19 in its aforesaid order dated 29.06.2018 passed in Case No.95 of 2013. In the said order the Commission has approved the Annual Capacity Charge of Rs. 1597.73 Crore for the FY 2018-19 for the entire 2400 MW power station. GRIDCO share comes to Rs. 399.42 Crore for the dedicated Unit-II of 600 MW capacity, out of the total 2400 MW capacity of the power station. Accordingly, the per unit fixed cost is considered at 95.11 P/U on normative generation. Further, considering the average linkage coal & oil price indicated in the monthly bills of M/s. Vedanta Limited from the month of April'18 to Oct'18 as submitted by GRIDCO, the average ECR is computed as 160.49 P/U. Accordingly, the provisional tariff for the IPP of M/s. Vedanta Ltd. for the FY 2019-20 is considered at ECR of 160.49 P/U and fixed charge rate of 95.11 P/U. The Commission has approved the power procurement of 5039.45 MU (4199.54 MU at fixed & variable cost and 839.91 at variable cost only) from M/s. Vedanta Ltd. for state use. Further, the Commission allows Rs. 17.69 Crore in tariff towards payment of E.D. on normative auxiliary consumption. Accordingly the average tariff for M/s. Vedanta Ltd comes to 243.26 P/U. The Commission provisionally consider the same for the FY 2019-20 for procurement of power from M/s. Vedanta Ltd. Therefore, the power procurement cost is estimated at Rs.1225.91 Crore considering the approved power procurement of 5039.45 MU from M/s. Vedanta Ltd. for state use during the FY 2019-20.

**M/s GMR Kamalanga Energy Ltd.**

228. GRIDCO has submitted that CERC vide its order dated 29.06.2018 passed in Petition No.61/GT/2016 have pronounced the tariff order for the control period 2014-19 in respect of procurement of power by GRIDCO from M/s. GKEL for the contracted capacity of 262.5 MW i.e. State share of 25% of the present installed capacity of 1050 MW. The Annual Fixed Charges fixed by CERC in respect of M/s. GKEL for the control period 2014-19 in the said order are as follows:

**Table - 33**

<b>Item</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>AFC (Rs. Cr.)</b>	1228.8875	1255.9932	1272.9462	1280.7911	1258.9628
<b>GRIDCO's Share of AFC (Rs.Cr.)</b>	307.2219	313.9983	318.2373	320.1977	314.7407

229. Since no further tariff order has been issued by CERC, GRIDCO has considered the Annual Fixed Charges of Rs.314.7407 Crore for the FY 2019-20 towards state share of 25% contracted capacity from the IPP of M/s. GKEL which has been approved by CERC for the FY 2018-19. Accordingly, GRIDCO has computed the per unit fixed cost at 170.64 P/U. Further, considering the average of actual monthly Energy Charge Rate (ECR) for the period April'18 to Sept'18 based on use of linkage coal and SHAKTI coal by M/s. GKEL, GRIDCO has worked out the ECR to be 145.40 P/U. Hence, the tariff proposed by GRIDCO comes to 316.08 P/U. Further, GRIDCO has proposed for the incentive @ 50 P/U on the excess drawal of power above the State share. Accordingly, for the proposed drawal of 2217.72 MU from M/s. GKEL during the FY 2019-20, GRIDCO has estimated the power procurement cost of Rs. 655.88 Crore i.e. State share of 1844 MU @ 316.08 P/U and excess drawal of 373.72 MU @ 195.40 P/U (ECR-145.40 P/U + Incentive-50 P/U).
230. The Commission observed that the application filed by M/s. GKEL before CERC for determination of tariff for the control period 2014-19 has already been disposed of by CERC vide their order dated 29.06.2018 passed in Petition No.61/GT/2016. According to the said order, GRIDCO share of AFC is Rs. 314.74 Crore towards 25% of the State share of installed capacity. GRIDCO has to pay this amount towards drawal of State share of power from M/s. GKEL. Further, considering the actual of ECR claimed by M/s. GKEL in the monthly bills from the month of April'18 to Nov.'18, as submitted by GRIDCO, the average ECR is computed as 145.35 P/U which has been considered by the Commission for procurement of power from M/s. GKEL during FY 2019-20. Earlier in this order the Commission has approved 2167.28 MU to be procured by GRIDCO from M/s. GKEL during FY 2019-20. Hence, the total energy charges for procurement of approved quantum of 2167.28 MU comes to Rs. 315.02 Crore. Accordingly, the total power procurement cost is arrived at Rs. 629.76 Crore at an average rate of 290.58 P/U for drawal of the approved quantum of 2167.28 MU for state use during the FY 2019-20.

**M/s Jindal India Thermal Power Ltd.**

231. GRIDCO has submitted that the application of M/s. JITPL for determination of ECR of its IPP has been disposed of by the Commission vide its order dated 26.02.2018 passed in Case No.26 of 2014, wherein the Commission had concluded that "*the issue of determination of tariff of the power to be sold by the Petitioner and to be purchased*

by Respondent GRIDCO purely falls under exclusive jurisdiction of Central Electricity Regulatory Commission (CERC)”. The said order of the Commission has been challenged by GRIDCO before the APTEL in Appeal No.250/2018 and matter is now sub-judice.

232. GRIDCO has submitted that as per the provisions of subsisting contract, M/s. JITPL is to supply power 12% of energy sent out from its IPP. GRIDCO submitted that M/s. JITPL is not submitting the details of landed price and GCV of coal and oil data separately in prescribed format to GRIDCO along with the monthly energy bills and thus it is not possible on the part of GRIDCO to derive the actual monthly ECR. Based on the actual quantum of power supplied by M/s. JITPL during first six months of the FY 2018-19, GRIDCO has proposed to procure 453.57 MU of power from M/s. JITPL during the FY 2019-20 at a provisional ECR of 146.70 P/U as fixed by the Commission in the ARR and BSP order of GRIDCO for FY 2018-19. Accordingly, GRIDCO has proposed the procurement cost of Rs. 66.52 Crore towards purchase of 453.57MU from M/s. JITPL during FY 2019-20 at the ECR of 146.70 P/U.
233. The Commission has approved purchase of 1010.57 MU from the IPP of M/s JITPL during the FY 2019-20 for State use at variable cost/ECR. Considering the submission of GRIDCO and the average linkage coal price indicated in the monthly bills of M/s. JITPL from the month of April, 18 to Nov., 18 as submitted by GRIDCO, the ECR comes to 171.25 P/U. Pending finalisation of the tariff of such power from M/s JITPL, the Commission considers the ECR as 171.25 P/U provisionally for the energy to be procured from the IPP of M/s JITPL during the FY 2019-20 for the purpose of computation of ARR of GRIDCO. Accordingly, the power procurement cost comes to Rs. 173.06 Crore for purchase of the approved quantum of 1010.57 MU by GRIDCO for State use.
234. Thus, the procurement cost of total 8217.30 MU from the above IPPs is estimated to the tune of Rs.2028.73 Crore at an average rate of 246.89 P/U as shown in the Table below:

**Table -34**  
**Power Procurement & Cost from IPPs during FY 2019-20**

IPPs	Quantity	Average Rate (Prov.)	Cost
	(MU)	(P/U)	(Rs. Crore)
M/s. Vedanta Ltd.	5039.45	243.26	1225.91
M/s GMR Kamalanga Ltd.	2167.28	290.58	629.76
M/s Jindal India Thermal Power Ltd.	1010.57	171.25	173.06
<b>Total</b>	<b>8217.30</b>	<b>246.89</b>	<b>2028.73</b>

235. The Commission has considered the above price for the purpose of computation of ARR of GRIDCO for the FY 2019-20. However, GRIDCO may make payment of the energy bill of these IPPs after due scrutiny as per the PPA and tariff determined by the appropriate Commission. Further, the Commission directs that deviations /adjustment in revenue, if any, on this account shall be considered in the truing up exercise.

#### **Central Hydro Generating Stations**

236. **Chukha:** In its application, GRIDCO has considered the rate of 240.16 P/U (including trading margin @ 4 P/U) for procurement of power from Chukha hydro power station during the FY 2019-20 based on the Office Memorandum dated 08.03.2018 of Ministry of External Affairs, Govt. of India along with the PTC letter No. C/PTC/Chukha/7388 dtd.13.03.2018. GRIDCO has, therefore, proposed a rate of 246.14 P/U towards drawal of power from Chukha hydro power stations for the FY 2019-20 including Central Transmission Loss of 2.49%, but excluding transmission charges of PGCIL. Thus, the power purchase cost of 261.00 MU as proposed by GRIDCO works out to Rs. 64.24 crore.

237. The Commission scrutinized the submission of GRIDCO and approves the rate of 246.19 P/U considering the central transmission loss @ 2.45% for the power procurement from Chukka for FY 2019-20. So the cost for Chukka power comes to Rs. 65.87 crore for the approved drawal of 267.54 MU for FY 2019-20. The details are given in Table below.

**Table – 35**

	<b>GRIDCO's Proposal for FY 2019-20</b>	<b>Commission's Approval for FY 2019-20</b>
Net Energy Drawal (MU)	261.00	267.54
Energy Charge (P/U)	240.16	240.16
Energy Charge incl. Tr. Loss (P/U)	246.14 (C.T.L. of 2.49%)	246.19 (C.T.L. of 2.45%)
<b>Cost of Chukka Power (Rs. Cr.)</b>	<b>64.24</b>	<b>65.87</b>

238. **TALA:** GRIDCO has proposed the rate of 216.00 P/U (including trading margin @ 4 P/U payable to PTC India) for estimating the power purchase cost from TALA during the FY 2019-20. This rate of 216 P/U is based on the bills served to GRIDCO. Considering Central Transmission Loss of 2.49%, the rate of TALA Power comes to 221.37 P/U. Considering the drawal of 135.00 MU, the power purchase cost from

TALA HEP worked out by GRIDCO at Rs.29.88 Crore for the FY 2019-20 excluding transmission charges of PGCIL.

239. The Commission scrutinized the above proposal of GRIDCO and approves the rate of 221.52 P/U considering the central transmission loss @ 2.49% for the power procurement from TALA HEP for FY 2019-20. So the cost of TALA power comes to Rs.30.07 Crore for the approved drawal of 135.76 MU for FY 2019-20. The details are given in Table below.

**Table – 36**

	<b>GRIDCO Proposal for 2019-20</b>	<b>Commission's Approval for 2019-20</b>
Net Energy Drawal MU	135.00	135.76
Energy Charge (P/U)	216.00	216.00
Energy Charge incl. Tr.Loss (P/U)	221.37 (C.T.L. of 2.49%)	221.52 (C.T.L. of 2.49%)
<b>Cost of Tala Power (Rs. In Cr.)</b>	<b>29.88</b>	<b>30.07</b>

240. **TEESTA:** GRIDCO has stated that the Energy Charge Rate (ECR) being claimed by NHPC-TEESTA in the present bills is 116.30 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 116.30 P/U, the total per unit cost being 232.60 P/U. Considering the central sector loss @ 3.03% the proposed rate for TEESTA works out to 239.64 p/u. So, the power purchase cost from TEESTA-V HEP estimated by GRIDCO comes to Rs.107.12 crore considering the proposed drawal of 447.00 MU for FY 2019-10.
241. After due scrutiny, the Commission observed that as per the CERC order dated 16.08.2016, the Annual Fixed charges of TEESTA-V is approved at Rs. 520.32 crore and accordingly the average rate of TEESTA Power comes to 232.62 P/U considering the saleable energy of 2236.81 MU. Hence, the average rate per unit of TEESTA power computed to be 239.19 P/U inclusive of central transmission loss of 2.75% for FY 2019-20. Accordingly, the cost of TEESTA power comes to Rs.121.74 Crore for the approved drawal of 508.97 MU during FY 2019-20. The details are given in Table below.

**Table – 37**

	<b>GRIDCO Proposal for FY 2019-20</b>	<b>Commission's Approval for FY 2019-20</b>
Net Energy Drawal MU	447.00	508.97
Energy Charge (P/U)	232.60	232.62
Energy Charge incl. Tr. Loss (P/U)	239.64 (C.T.L. of 3.03%)	239.19 (C.T.L. of 2.75%)
<b>Cost of Teesta Power (Rs. In Crore)</b>	<b>107.12</b>	<b>121.74</b>

### **Central Sector Thermal Power Stations:**

242. 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 from time to time. The existing tariff orders issue by CERC in respect of the Central Thermal Generating stations are based on the CERC (Terms and Conditions of Tariff) Regulation, 2014, which is applicable up to 31.03.2019. In the absence of new tariff orders, the Annual Fixed Charges (AFC) fixed by CERC for the FY 2018-19 have been considered by GRIDCO in its application for determination of fixed cost of the respective central generating stations for FY 2019-20. As per the existing CERC Tariff Orders, the measurement of GCV of coal on “as received basis” shall be taken from the loaded wagons at the unloading point either manually or through Hydraulic Augur. Hence, CERC has decided to compute the fuel components and the energy charges in the Working Capital by provisionally taking the GCV of coal on “as billed basis” and allowing the adjustment for total moisture as per the formula given as under:

$$\text{GCVX} (1-\text{TM}) / (1-\text{IM})$$

Where, GCV= Gross Calorific value of coal

TM= Total moisture, IM= Inherent moisture

243. In view of above, CERC has computed the cost of fuel components in Working Capital at 83% NAPAF for the year 2014-15, 2015-16 and 2016-17 and at 85% NAPAF for the year 2017-18 & 2018-19 and based on “as billed” GCV of coal and price of coal procured by NTPC for the preceding three months. Similarly, the Energy Charge Rate (ECR) has been computed by CERC basing on the billed GCV with an adjustment on account of coal received at the Generating Station for equilibrated basis in the billed GCV of M/s. Coal India. Similar contentions have been mentioned by CERC for TSTPS-I vide Order dated 29.07.2016 at Para 81 and 83 regarding the issue of calculation of fuel components in Working Capital and Energy Charge Rate. Accordingly, NTPC has recalculated the AFC as determined by the CERC considering revised interest on working capital based on Total Moisture Correction in GCV as narrated above.
244. GRIDCO has further submitted that NTPC is raising the Capacity Charges of its Generating Stations on GRIDCO by applying the Fixed Cost already determined by the Central Commission in its tariff Orders for FY 2014-19 considering the total moisture correction. The same has been considered by GRIDCO for the FY 2019-20.

GRIDCO has made the apportionment of Fixed Cost as per the state share in the pool and with inclusion of Central Transmission Loss (CTL), the Projected Fixed Cost applicable for state share of energy drawal from different Stations is worked out by GRIDCO as Rs. 922.10 Crore as shown in the Table below:

**Table-38**  
**Annual Fixed Cost Projected by GRIDCO for NTPC-ER Stations for FY 2019-20**

Central Thermal Stations	AFC for FY2018-19 as per CERC Order (Rs. Cr.)	Revised AFC based on Interest on Working Capital adjusted towards Moisture Correction in GCV	Projected AFC by GRIDCO for FY19-20 (Rs. Cr.)	GRIDCO Share (%)	GRIDCO F.C. share for FY 2019-20 at normative availability of 85% (Rs. Cr.)	GRIDCO's Proposed drawal for FY 2019-20 after C.S. Loss (MU)	Fixed Cost (P/U)
<b>TSTPS -I</b>	674.01	676.26	676.26	32.34	218.73	2213.05	98.84
<b>TSTPS -II</b>	1007.23	1012.59	1012.59	10.00	101.26	1361.96	74.35
<b>FSTPS-I&amp;II</b>	914.80	930.04	930.04	14.18	131.91	1549.10	85.15
<b>FSTPS-III</b>	525.44	527.82	527.82	17.15	90.52	589.84	153.47
<b>KhSTPS-I</b>	603.63	606.35	606.35	15.77	95.65	877.17	109.04
<b>KhSTPS-II</b>	1149.96	1155.82	1155.82	2.62	30.29	269.51	112.39
<b>TOTAL</b>	<b>4875.07</b>	<b>4908.88</b>	<b>4908.88</b>		<b>668.36</b>	<b>6860.63</b>	<b>97.42</b>

\* The AFC for aforementioned stations has been calculated as per the Tariff Orders of CERC for the period 2014-19 and revised therefrom due to recalculation of interest on working capital basing upon the total moisture correction in GCV in compliance with CERC Order.

245. **Fixed Charges:** The Commission scrutinized the above proposal of GRIDCO and observed that since no tariff orders have been issued for the FY 2019-20 in respect of NTPC-ER Thermal Generating Stations, GRIDCO has considered the Fixed Charges of as per the tariff orders issued by CERC for the period from 2014-19. Further, NTPC is now raising the bills towards Fixed Charges of its Generating Stations on GRIDCO by applying the Fixed Charges determined by the Central Commission in its tariff Orders for FY 2014-19 considering the total moisture correction in working capital. The Commission further observed that in its original application GRIDCO has computed the AFC of all the NTPC-ER stations as indicated in the above table. But while computing the total power purchase cost of these generating stations, GRIDCO has not taking into account the AFC of FSTPS-III and KhSTPS-I as no drawal of power has been proposed from these two power stations. Further, AFC has been considered partly in respect of KhSTPS-II, since part drawal of energy out of the state share has been consider for this power station. However, in its additional submission, GRIDCO has considered the AFC of all the NTPC-ER stations towards State's share as these amounts has to be paid by GRIDCO to NTPC irrespective of drawal of

energy from the NTPC-ER stations. Therefore, to calculate the power purchase cost of central sector thermal stations towards State share of power for the FY 2019-20, the Commission provisionally considers the State share of AFC in respect of NTPC-ER stations as approved by CERC in its Tariff Orders for the FY 2018-19 considering the total moisture correction in working capital, as shown in the table below:

**Table – 39**  
**Fixed Cost considered by the Commission for Central Thermal Stations for 2019-20**

Name of Power Station	Fixed cost approved by CERC for 2018-19 (Rs. Cr.)	Revised Fixed cost with total moisture correction in GCV (Rs. Cr.)	State share (%)	GRIDCO's proposal for its share of Fixed Cost for 2019-20 (Rs. Cr.)	GRIDCO's proposal including Central Tr. Loss (P/U)	OERC approval of Fixed Cost for 2019-20 (Rs. Cr.)	Estimated energy after Central Tr. Loss (MU)	OERC approval including Central Tr. Loss (P/U)
<b>TSTPS –I</b>	674.005	676.257	32.344	218.73	98.84	218.73	2215.16	98.74
<b>TSTPS –II</b>	1007.234	1012.591	10.000	101.26	74.35	101.26	1363.57	74.26
<b>FSTPS-I&amp;II</b>	923.435	930.041	14.184	131.91	85.15	131.91	1549.02	85.16
<b>FSTPS-III</b>	525.437	527.824	17.150	90.52	153.47	90.52	589.80	153.48
<b>KhSTPS- I</b>	603.631	606.345	15.775	95.65	109.04	95.65	877.93	108.95
<b>KhSTPS–II</b>	1149.465	1155.825	2.621	30.29	112.39	30.29	269.22	112.51

246. **Energy Charge Rate (ECR):** GRIDCO has submitted that the new CERC Tariff Regulations with revised Terms and Conditions of Tariff is expected to come in to force with effect from 01.04.2019. In absence of the new CERC Terms and Conditions of Tariff Regulations, 2019-24 at the time of filing the application, the norms of operation for Central Thermal Generating Stations has been considered by GRIDCO as per the existing CERC Tariff Regulations, 2014. Accordingly, the landed cost of coal of all the Central Generating Stations has been derived as per the existing formula. As per the CERC Tariff Regulations, 2014-19, the Energy Charges of Central Generating Stations shall include Charges towards both Primary as well as Secondary Fuel Oil (SFO) & shall be payable by every Beneficiary for the total energy scheduled to be supplied to each of such Beneficiaries during the Calendar month on ex-Power Plant basis. At present, NTPC is claiming the Monthly Energy Charges every month as per the ECR worked out from the landed price of coal and GCV and oil for that month and considering the operational parameters laid down in CERC Tariff Regulation, 2014. Keeping in view the present trend of Energy charges GRIDCO has projected the Energy Charge Rate computed as per the CERC Tariff Regulation for 2014-19, including the Central Sector Loss as shown in the table below:

**Table – 40**  
**Energy Charge Rate of NTPC Stations Projected by GRIDCO for FY 2019-20**

Central Thermal Stations	Weighted Average ECR of 1 <sup>st</sup> six months of FY 2018-19 (Apr.'18 to Sept.'18) as billed by NTPC	Projection of ECR by GRIDCO for FY 2019-20 including Central Sector Loss
	(P/U)	(P/U)
TSTPS-I	169.93	174.29
TSTPS-II	170.01	175.20
FSTPS-I&II	226.95	231.55
FSTPS-III	228.90	233.53
KhSTPS-I	225.36	230.67
KhSTPS-II	215.88	220.97

247. Actual bills submitted by NTPC to GRIDCO from the month of April, 2018 to November, 2018 are scrutinized and the Commission observed that the average ECR of the TSTPS Stage I & Stage II has been lower than the other central sector thermal stations. The details of Price of Coal, GCV & ECR as per the bills served by NTPC to GRIDCO for the period from April, 2018 to November, 2018 are given in the table below:

**Table-41**  
**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-18	3,479.95	3,839.00	2.341	2.355	2,894.20	3,290.00	2.381	2.276	2,020.46	3,196.00	1.608	1.608
May-18	3,231.92	3,811.00	2.191	2.203	2,481.04	3,205.00	2.097	2.005	2,054.21	3,021.00	1.727	1.727
Jun-18	3,207.81	3,771.00	2.198	2.214	2,475.90	3,225.00	2.080	1.988	2,097.16	3,043.00	1.751	1.750
Jul-18	3,343.56	3,689.00	2.341	2.356	2,785.81	3,185.00	2.370	2.266	1,984.21	2,741.00	1.837	1.838
Aug-18	3,425.75	3,838.00	2.306	2.323	2,848.79	3,285.00	2.352	2.248	1,812.33	2,924.00	1.581	1.581
Sep-18	2,358.12	3,594.00	1.699	1.708	2,752.80	3,236.00	2.307	2.206	1,685.70	2,704.00	1.590	1.590
Oct-18	3,513.47	3,652.00	2.484	2.497	2,661.06	3,287.00	2.197	2.100	1,936.53	2,624.00	1.878	1.882
Nov-18	3,508.00	3,738.00	2.423	2.439	2,655.26	3,225.00	2.234	2.135	2,138.44	2,808.00	1.938	1.924
<b>Avg from 4/18 to 11/18</b>	<b>3,258.57</b>	<b>3,741.50</b>	<b>2.250</b>	<b>2.264</b>	<b>2,694.36</b>	<b>3,242.25</b>	<b>2.253</b>	<b>2.153</b>	<b>1,966.13</b>	<b>2,882.63</b>	<b>1.735</b>	<b>1.734</b>

248. From the above table, it is observed that the ECRs of the central generating stations have not followed a particular pattern in their variations. Therefore, reaching at the conclusion on likely ECRs of different power stations for the ensuing year is unpredictable. Therefore, the Commission, for the purpose of computation of ARR of GRIDCO for FY 2019-20, considers the average of actual ECR of first eight months of the current FY 2018-19 (i.e. from April, 2018 to November, 2018) of the Central Thermal Power Stations as indicated in Table below.

**Table – 42**  
**Energy Charge Rate (ECR) of CGSs approved for 2019-20**

Central Thermal Stations	(Paise/Unit)		
	GRIDCO's Proposal for 2019-20 (including Loss)	Approval of the Commission considering the Avg. of actual ECR from April, 2018 to Nov, 2018 (excluding central Tr. Loss )	Approval of the Commission including central Tr. Loss
TSTPS-I	174.29	173.51	177.79
TSTPS-II	175.20	173.37	178.45
FSTPS-I & II	231.55	225.00	229.57
FSTPS -III	233.53	226.40	231.00
KHSTPS-I	230.67	225.28	230.40
KHSTPS-II	220.97	215.33	220.64

249. In case of any variation in ECR during 2019-20 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 2020-21.

250. **Year-end Adjustment Charges (YEA):** GRIDCO had proposed the year-end adjustment charges of central generating stations for FY 2019-20 to the tune of Rs. 19.20 crore based on the actual for FY 2017-18 along with the projected Central Sector loss.

251. The Commission examined the above proposal of GRIDCO and approved the Year-end Charges of Rs.13.43 Crore for the FY 2019-20 which is at the level of the actual Year-end Charges for the FY 2017-18 as proposed by GRIDCO except electricity duty and incentive. For Electricity Duty, the Commission approves Rs. 12.33 Crore for FY 2019-20 considering normative auxiliary consumption and the Commission does not allow incentive due to consideration of normative generation. The details of the year-end charges approved by the Commission are given in the table below.

**Table – 43**  
**Year End Charges Approved for the FY 2019-20**

Central Generating Stations	Water/ Pollution Cess (Rs. Cr.)	Electricity Duty (Rs. Cr.)	SOC & MOC charges (Rs. Cr.)	Total (Rs. Cr.)	Estimated energy after Central Tr. Loss (MU)	Rate including loss (P/U)	GRIDCO Proposal including loss (P/U)
TSTPS –I	0.03	7.62	0.17	7.82	2215.16	3.53	4.67

Central Generating Stations	Water/Pollution Cess (Rs. Cr.)	Electricity Duty (Rs. Cr.)	SOC & MOC charges (Rs. Cr.)	Total (Rs. Cr.)	Estimated energy after Central Tr. Loss (MU)	Rate including loss (P/U)	GRIDCO Proposal including loss (P/U)
TSTPS-II	0.03	4.71	0.08	4.82	1363.57	3.53	5.92
FSTPS- I & II	0.49	-	0.13	0.62	1549.02	0.40	0.41
FSTPS – III	0.01	-	0.05	0.06	589.80	0.10	0.09
KhSTPS –I	0.02	-	0.07	0.09	877.93	0.10	0.11
KhSTPS –II	0.00	-	0.02	0.02	269.22	0.08	0.07

252. Taking all the above costs into account, the summary of estimated power purchase cost in respect of drawl power from Central Thermal Generating Stations by GRIDCO for FY 2019-20 is given in the table below:

**Table –44**  
**Summary of Power Purchase Cost from Central Generating Stations for FY 2019-20**

Sl. No.	Generators	Estimated Energy (MU)	Approved drawal of Energy (MU)	Fixed Cost (Rs. Cr.)	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	2215.16	2215.16	218.73	98.74	177.79	3.53	280.06	620.38
2	TSTPS St-II	1363.57	1363.57	101.26	74.26	178.45	3.53	256.25	349.41
3	FSTPS I & II	1549.02	1549.02	131.91	85.16	229.57	0.40	315.13	488.14
4	FSTPS III	589.80	0.00	90.52	153.48	231.00	0.10	384.58	90.52 *
5	KhTPS St-I	877.93	0.00	95.65	108.95	230.40	0.10	339.45	95.65 *
6	KhTPS St-II	269.22	269.22	30.29	112.51	220.64	0.08	333.23	89.71
<b>NB:</b>	(i) The rates include Central Transmission Loss. (ii) * No energy is considered for State drawal. Full fixed cost is allowed.								

#### **Transmission Charges for PGCIL System**

253. GRIDCO in its ARR application has 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 CERC (Sharing of Inter State Transmission Charges and Losses) Regulation, 2010, amended vide CERC notifications dated 24.11.2011, 28.03.2012 and 01.04.2015. The last amendment came into force with effective from 01.05.2015. According to this Regulation, PGCIL Charges shall be shared applying 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 on quarterly basis for every customer (such as generator or demand

customer) using the aforesaid method, for which Orders are being published by the CERC for the specified period from time to time. The Point of Connection (PoC) rates shall be on Rs/MW/Month basis. CERC vide its Order dtd.06.05.2016 have furnished the Slab PoC Rates for the period from April to June, 2018 taking into consideration the 3<sup>rd</sup> Amendment Regulations.

254. GRIDCO has submitted that as per the aforesaid CERC Regulations, the CTU bills for levy of PoC Charges shall be calculated in the following manner.

- The first part of the CTU bill shall recover charges for use of the transmission assets of ISTS licensees based on the Point of Connection methodology at the approved injection and withdrawal quantum for a beneficiary at the applicable PoC rate; (Bill #1)
- The second part of the bill shall recover charges for Additional Approved Medium Term Open Access; (Bill #2)
- The third part of the bill shall be used to adjust any variations in interest rates, FERV, rescheduling of commissioning of transmission assets as allowed by the Commission for any ISTS Licensees; (Bill #3)
- The fourth part of the bill shall be a Deviation bill which shall charge the Designated Customer for deviation from the sum of the Approved withdrawal/injection, (Bill #4)

255. In its ARR and BSP application for the FY 2019-20 dated 30.11.2018 GRIDCO had proposed the PGCIL Transmission Charges @ 39.72 P/U for the projected procurement of 6076.89 MU of energy from the Central Generating Stations basing on the bills raised by PGCIL for the first quarter of FY 2018-19. However, in its additional submission GRIDCO has stated that PGCIL has raised bills for the subsequent months of the FY 2018-19 at higher PoC rates, which has been paid by GRIDCO. Therefore, in its submission GRIDCO has proposed for revised PGCIL transmission charges of Rs. 566.10 Crore @ 62.67 P/U for their projected power procurement from the Central Generating Stations.

256. The Commission observed that the tariff for central transmission system is fixed by the principles and norms laid 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 2019-20. The Commission scrutinized the submission of GRIDCO and estimated the PoC charges of Rs. 513.37 Crore towards Bill #1 based on the average of the monthly charges paid / to be paid by GRIDCO during the FY 2018-19 as per CERC Orders. Hence, the Commission provisionally approves the amount of Rs.513.37 Crore towards Bill #1 for the ensuing year 2019-20. In case the actual payment by GRIDCO during FY 2019-20 exceeds or decrease this approved amount, the differential amount shall be considered in truing up exercise. Similarly, the Commission scrutinized the Bill #3 raised for the month from April'18 to Sept'18 by PGCIL and pro-rating the same for the whole year, the amount anticipated is Rs.44.46 crore. The Commission provisionally approves the same for the ensuing year 2019-20. The Commission scrutinized the Bill #4 towards Deviation charges of PGCIL and provisionally approves an amount of Rs. 4.77 crore for the ensuing year 2019-20. The Commission observed that Bill #2 has not yet been raised by PGCIL to GRIDCO due to absence of additional medium-term Open Access. Further, the commission does not consider an amount of Rs.0.09 crore as claimed by GRIDCO towards arrear of PoC charges. Accordingly, the Commission provisionally approves the total amount of Rs. 562.60 Crore towards transmission charges of PGCIL for the FY 2019-20 on account of Bill #1, Bill #3 and Bill #4.

257. The Commission also scrutinized the ULDC & Communication Charges as proposed by GRIDCO and provisionally approves Rs.2.83 crore as pass through in its ARR for FY 2019-20. Further the Commission observed that GRIDCO has collected an amount of Rs. 55.06 Crore from the Short-term Open Access Customers during April'18 to Dec'18. Prorating the same for the whole year, the amount comes to Rs.73.41 Crore. Hence, the Commission provisionally considers the amount of Rs.73.41 crore towards collection from Short-term Open Access customers during the ensuing year 2019-20 and deducts the same from the total transmission charges.
258. Taking all the above costs into account the Commission approves a net amount of Rs. 492.02 Crore payable by GRIDCO to PGCIL towards transmission charges with projected average Central Sector Loss of 2.38% for the FY 2019-20. The details of total cost towards PGCIL transmission charges is indicated in the table below:

**Table – 45**  
**PGCIL Transmission Charges for FY 2019-20**

<b>Particulars</b>	<b>Commission's Approval</b>
Transmission charge payable by GRIDCO towards Bill#1 (Rs. Cr.)	513.37
Deviation charges proposed towards bill #4 (Rs. Cr.)	4.77
Year End Charges proposed towards Bill #3 (Rs. Cr.)	44.46
<b>Total (Rs. Cr.)</b>	<b>562.60</b>
ULD and Communication Charges (Rs. Cr.)	2.83
Less: Amounts collected from short-term OA customers (Rs. Cr.)	(-) 73.41
Net amount payable by GRIDCO towards Transmission Charges (Rs. Cr.)	<b>492.02</b>

259. Further, GRIDCO has proposed for an amount of Rs.2.20 Crore towards payment of ERLDC fees and charges consisting of System Operation Charges (SOC) and Market Operation Charges (MOC) for the FY 2019-20. GRIDCO submitted that CERC vide its order dtd.18.05.2015 had framed 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. 2.20 Crore for the ensuing year 2019-20. Considering the parameters approved in this order, the Commission approves Rs. 2.20 Crore as pass through in the ARR of GRIDCO towards SOC & MOC of ERLDC for the FY 2019-20.
260. 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 2019-20 are given in the table below:

**Table –46**  
**GRIDCO's Proposal & Commission's Approval for FY 2019-20**

<b>Generators</b>	<b>GRIDCO's PROPOSAL</b>			<b>COMMISSION's APPROVAL</b>		
	<b>Energy</b>	<b>Total Rate</b>	<b>Total cost</b>	<b>Energy</b>	<b>Total Rate</b>	<b>Total cost</b>
	<b>MU</b>	<b>P/U</b>	<b>Rs.in Cr.</b>	<b>MU</b>	<b>P/U</b>	<b>Rs.in Cr.</b>
HYDRO (OLD)	3620.66	96.55	349.59	3676.86	87.31	321.01
Indravati	1950.30	82.19	160.30	1942.38	88.52	171.94
Machakund	262.50	51.17	13.43	262.50	51.33	13.48

	GRIDCO's PROPOSAL			COMMISSION's APPROVAL		
<b>Total Hydro</b>	<b>5833.46</b>	<b>89.71</b>	<b>523.32</b>	<b>5881.74</b>	<b>86.10</b>	<b>506.43</b>
OPGC 1 & 2 <sup>nd</sup> Unit	2861.60	253.91	726.60	2792.78	236.96	661.78
OPGC 3 & 4 <sup>th</sup> Units	4574.98	333.00	1523.47	726.93	150.68	109.53
TTPS (NTPC)	3336.04	311.97	1040.74	3336.04	317.04	1057.66
IPPs	4771.19	270.86	1292.31	8217.30	246.89	2028.73
<b>Renewable Sources</b>						
Small Hydro	417.00	382.21	159.38	417.00	382.21	159.38
Biomass	80.00	578.00	46.24	80.00	578.00	46.24
Wind	260.00	298.46	77.60	290.00	294.40	85.38
Solar	686.00	533.24	365.80	680.00	537.94	365.80
<b>Total RE</b>	<b>1443.00</b>	<b>449.77</b>	<b>649.02</b>	<b>1467.00</b>	<b>447.71</b>	<b>656.79</b>
<b>TOTAL STATE</b>	<b>22820.27</b>	<b>252.21</b>	<b>5755.46</b>	<b>22421.79</b>	<b>223.93</b>	<b>5020.92</b>
CHUKHA	261.00	285.86	74.61	267.54	246.19	65.87
Tala HPS	135.00	261.09	35.25	135.76	221.52	30.07
Teesta-V	447.00	279.36	124.87	508.97	239.19	121.74
<b>Total Central Hydro</b>	<b>843.00</b>	<b>278.45</b>	<b>234.73</b>	<b>912.27</b>	<b>238.61</b>	<b>217.68</b>
TSTPS St-I	2213.05	317.52	702.69	2215.16	280.06	620.38
TSTPS St-II	1361.96	295.19	402.04	1363.57	256.25	349.41
FSTPS I & II	1549.10	356.83	552.77	1549.02	315.13	488.14
FSTPS III	-	426.81	-	-	384.58	90.52 *
KhTSP St-I	-	389.54	-	-	339.45	95.65 *
KhTSP St-II	109.78	373.15	40.96	269.22	333.23	89.71
<b>Total Central Thermal</b>	<b>5233.89</b>	<b>324.51</b>	<b>1698.45</b>	<b>5396.97</b>	<b>321.26</b>	<b>1733.82</b>
<b>Total Central Sector</b>	<b>6076.89</b>	<b>318.12</b>	<b>1933.18</b>	<b>6309.24</b>	<b>309.31</b>	<b>1951.50</b>
PGCIL Tr Charge			**			492.02
ERLDC Charges			2.20			2.20
<b>TOTAL GRIDCO</b>	<b>28897.16</b>	<b>266.15</b>	<b>7690.85</b>	<b>28731.03</b>	<b>259.88</b>	<b>7466.64</b>

NB: \* No energy is considered for State drawal. Full fixed cost is allowed.

\*\* PGCIL Transmission charge is included in the purchase Cost.

261. The Commission's approval of power purchase for State consumption is based on the merit order dispatch principles in order to keep the power procurement cost at lower levels. Hence, any deviation from the merit order dispatch principle should be avoided by GRIDCO. In past years, it is observed that there has been differences between the Commission's approval and actual drawal of energy by GRIDCO. Therefore, the Commission directs GRIDCO to follow the merit order dispatch principle while purchasing power for State consumption. Any major deviation in real time power purchase should be intimated to the Commission. The Commission shall review the quantum and cost of power purchase based on merit order during performance review of GRIDCO. Accordingly, GRIDCO shall furnish the relevant data during the review of its performance along with the justification and rationales in case of any deviation

from merit order dispatch principle. The Commission shall also consider the same along with other expenses during truing up exercise.

**Rebate for Prompt Payment from the Generators**

262. 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. 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.

**Reimbursement to OHPC during FY 2019-20**

263. The Commission while passing the order in ARR and Tariff application of OHPC for the FY 2019-20 in Case No.69 of 2018 has allowed an amount of Rs. 26.61 Crore provisionally for reimbursement by GRIDCO during the FY 2019-20 as given in the table below. The Commission approves the same in the ARR of GRIDCO for the FY 2019-20.

**Table – 47**

(Rs. in Cr.)

Component of Costs	RHEP	UKHEP	BHEP	HHEP	CHEP	UIHEP	Total
(a) License fee for use of water for generation of electricity	0.68	1.08	1.54	0.89	0.64	2.55	<b>7.38</b>
(b) ED on Auxiliary Consumption	0.58	0.92	1.30	0.75	0.54	2.16	<b>6.24</b>
(c) SLDC charges							<b>1.64</b>
(d) Application fees and publication expenses							<b>0.26</b>
(e) Contribution to ERPC							<b>0.16</b>
(f) Reimbursement of Income tax paid during FY 2017-18							<b>10.93</b>
<b>Total</b>							<b>26.61</b>

**Reimbursement to OPGC during FY 2019-20**

264. The Commission while passing the order in ARR and Tariff application of OPGC for the FY 2019-20 in Case No.70 of 2018 has allowed an amount of Rs. 23.67 Crore provisionally for reimbursement by GRIDCO during the FY 2019-20 as given in the table below. The Commission approves the same in the ARR of GRIDCO for the FY 2019-20.

**Table- 48**

Sl.No.	Particulars	OERC Approval for FY 2019-20
1	Electricity Duty	13.17
2	Water Cess and Water Charges	6.86
3	Tax and Cess on Land	0.19
4	SOC and MOC for SLDC	0.38
5	ERPC Charges	0.16

Sl.No.	Particulars	OERC Approval for FY 2019-20
6	Income Tax	38.67
7	Recovery of ARR and Tariff Petition Fees	0.30
8	Water Conservation Fund	-
	<b>Total</b>	<b>59.73</b>

### Truing up of GRIDCO

265. GRIDCO in its submission has stated that they have submitted the true-up expenditure of GRIDCO for FY 2015-16 & FY 2016-17 along with the Audited Accounts for the respective years which have been registered as Case No. 67 of 2018. GRIDCO has prayed the Commission to pass Truing-up order of GRIDCO along with the ARR & BSP order for FY 2019-20. Since, the Commission has heard the matter in a separate case, the same will be dealt separately.

### Employees cost

266. The Annual Revenue Requirement for the Financial Year 2019-20 filed by GRIDCO includes Rs.12.84 crore towards employees cost, which is given in the table below:-

**Table – 49**

Sl No	Particulars	Previous Year (FY 2017-18)	Current Year (FY 2019-20)	Ensuing Year (FY 2019-20)
<b>A</b>	<b>Salary &amp; Allowance</b>			
1	Basic Pay	1.75	4.58	5.72
2	Grade Pay	0.43	0.07	-
3	<b>Dearness Allowance</b>	3.04	0.85	0.86
4	<b>House Rent Allowance</b>	0.30	0.35	0.39
5	Other Allowance	0.03	0.05	0.29
6	Over-time	-	-	-
7	Bonus	-	-	-
	<b>Sub-total (A)</b>	<b>5.55</b>	<b>5.90</b>	<b>7.25</b>
<b>B</b>	<b>Additional Employee Cost</b>			
1	Wage/Salary revision if any	-	-	-
2	Contractual Engagement	0.55	0.48	0.53
3	Out Sources Engagement	-	-	-
4	others if any	0.02	0.02	0.03
	<b>Sub-total (B)</b>	<b>0.57</b>	<b>0.50</b>	<b>0.55</b>
<b>C</b>	<b>Other Employee Cost</b>			
1	Medical Expenses (allowance+Reimbursement)	0.15	0.13	0.15
2	Leave Travel Concession	0.003	0.005	0.01
3	Interim Relief to Staff	-	-	-
4	Encashment of Earned Leave	-	-	-
5	Honorarium	0.06	0.05	0.05
6	Ex-gratia	0.10	0.10	0.10
7	Staff Welfare Expenses	0.06	0.06	0.06
8	Miscellaneous	0.01	0.01	0.01
	<b>Sub-total (C)</b>	<b>0.38</b>	<b>0.36</b>	<b>0.39</b>
<b>D</b>	<b>Terminal Benefits</b>			
1	Pension	0.54	0.54	1.14
2	Gratuity	-	-	-

Sl No	Particulars	Previous Year (FY 2017-18)	Current Year (FY 2019-20)	Ensuing Year (FY 2019-20)
3	Leave Salary	0.21	0.51	0.63
4	Other (including contribution to NPS)	0.08	1.07	1.18
	<b>Sub-total (D)</b>	<b>0.83</b>	<b>2.12</b>	<b>2.95</b>
	<b>Arrear towards implementation of 7th Pay Commission(E)</b>			<b>1.70</b>
<b>E</b>	<b>Total Employees Cost (A+B+C+D+E)</b>	<b>7.34</b>	<b>8.88</b>	<b>12.84</b>
<b>F</b>	Less: Employees Cost Capitalised	-	-	-
<b>G</b>	<b>Net Employee Cost ( E- F)</b>	<b>7.34</b>	<b>8.88</b>	<b>12.84</b>
	<b>TOTAL</b>	<b>7.34</b>	<b>8.88</b>	<b>12.84</b>

### Basic Pay + GP

267. GRIDCO in the reply to queries of the Commission reported that the actual cash outflow on Basic Pay + GP from April 2018 to November 2018 (for a period of 8 month) was Rs.3.31crore. The Basic pay and GP for FY 2019-20 is extrapolated to arrive at Basic pay for FY 2019-20 including 7<sup>th</sup> pay recommendations. The said calculation is shown in the following table:

### Basic Pay

**Table-50**

(Rs in Crore)

Calculation of Basic Pay and GP	FY 2017-18 (Actual before implementation of 7th pay )	FY 2019-20 (From April 18 to Nov 18) actual	FY 2019-20 (Extrapolated for the whole year)	FY 2019-20 approved
<b>Basic Pay and GP</b>	2.27	3.31	4.97	5.11

### Dearness Allowance:

268. The Govt of Odisha implemented the 7<sup>th</sup> Pay Commission with effect from 01.01.2016. The DA was also changed as per the 7<sup>th</sup> pay recommendations and the following table shows the notified DA by Govt of Odisha and projected DA thereof for FY 2019-20.

**Table- 51**

Effective Date	Rate	Status
01.01.2016	nil	Approved By GoO
01.07.2016	2%	Approved By GoO
01.01.2017	4%	Approved By GoO
01.07.2017	5%	Approved By GoO
01.01.2018	7%	Approved By GoO
01.07.2018	9%	Approved By GoO
01.01.2019	11%	Projected
01.07.2019	13%	Projected
01.01.2020	15%	Projected

As per the above table the DA rate for FY 2019-20 is assumed to be 13%.

269. Following principle has been adopted for passing of other items of Employee cost.
- i. The arrear pertaining to 7<sup>th</sup> pay recommendations has been projected at Rs. 1.70 crore. Since GRIDCO has already implemented the 7<sup>th</sup> pay recommendations the Commission w.e.f June 2018, the commission allows 40% of the arrear in the ARR to be passed on to the tariff for FY 2019-20.
  - ii. House rent allowance has been allowed to the tune of Rs 0.39 cr as claimed in the ARR.
  - iii. Terminal benefit, Medical reimbursement and all other expenses items claimed under the Employee cost have been allowed.
270. With the above principle the approved employees cost for 2019-20 is shown in table below:-

**Table – 52**

	<b>Particulars</b>	<b>(FY 2019-20) Proposed</b>	<b>(FY 2019-20) Approved</b>
<b>A</b>	<b>Salary &amp; Allowance</b>		
1	Basic Pay	5.72	5.11
2	Grade Pay		
3	<b>Dearness Allowance</b>	0.86	0.66
4	<b>House Rent Allowance</b>	0.39	0.39
5	Other Allowance	0.29	0.29
6	Over-time		
7	Bonus		
	<b>Sub-total (A)</b>	<b>7.25</b>	<b>6.45</b>
<b>B</b>	<b>Additional Employee Cost</b>		
1	Wage/Salary revision if any		
2	Contractual Engagement	0.53	0.53
3	Out Sources Engagement		
4	others if any	0.03	0.03
	<b>Sub-total (B)</b>	<b>0.55</b>	<b>0.55</b>
<b>C</b>	<b>Other Employee Cost</b>		
1	Medical Expenses (allowance + Reimbursement)	0.15	0.15
2	Leave Travel Concession	0.01	0.01
3	Interim Relief to Staff		
4	Encashment of Earned Leave		
5	Honorarium	0.05	0.05
6	Ex-gratia	0.1	0.10
7	Staff Welfare Expenses	0.06	0.06
8	Miscellaneous	0.01	0.01
	<b>Sub-total (C)</b>	<b>0.39</b>	<b>0.39</b>

	<b>Particulars</b>	<b>(FY 2019-20) Proposed</b>	<b>(FY 2019-20) Approved</b>
<b>D</b>	<b>Terminal Benefits</b>		
1	Pension	1.14	1.02
2	Gratuity		
3	Leave Salary	0.63	0.56
4	Other (including contribution to NPS)	1.18	1.02
	<b>Sub-total (D)</b>	<b>2.95</b>	<b>2.61</b>
	<b>Arrear towards implementation of 7th Pay (E)</b>	<b>1.70</b>	<b>0.68</b>
<b>E</b>	<b>Total Employees Cost (A+B+C+D+E)</b>	<b>12.84</b>	<b>10.68</b>
<b>F</b>	Less: Employees Cost Capitalised		
<b>G</b>	<b>Net Employee Cost ( E- F)</b>	<b>12.84</b>	<b>10.68</b>

271. The Commission approves an amount of Rs.10.68 crore towards employees cost for 2019-20 as against proposed amount of Rs.12.84 crore.

### **Repair Maintenance**

272. During Financial Year 2019-20, GRIDCO proposes an amount of Rs.0.25 crore towards repair & maintenance under the head AMC of computers, vehicles, furniture and office equipment. The Commission approves an amount of Rs.0.25 crore as a pass through in the ARR for FY 2019-20.

### **Administration & General Expenses**

273. During Financial Year 2019-20, GRIDCO proposed an amount of Rs.6.66 crore under the head Administrative and General Expenses, inclusive of an amount of Rs.1.90 crore towards license fee payable to OERC and Rs.0.15 crore towards ERPC membership fees and Rs. 0.01 crore towards ERPC fund.
274. The Commission considers the approved figure of Rs.2.90 crore last year and factoring in the expected annual inflation of (+) 5.0% for FY 2019-20, the amount works out to Rs.3.05 crore. Over and above the amount, the licence fee applicable for 2019-20 amounting to Rs.1.90 crore and ERPC membership fees/ Fund of Rs.0.16 crore are also allowed. The details of such is given in the following table:

**Table – 53**

<b>Description</b>	<b>Rs. in Crore</b>
Normal A&G approved for FY 2019-20	2.90
Annual Inflation for 2019-20@ 5%	3.05
License Fees for 2019-20	1.90
ERPC membership fees/ Fund	0.16
<b>Total A&amp;G for 2019-20 (Approved)</b>	<b>5.11</b>

275. Thus the Commission approves an amount of Rs.5.11 crore towards Administration and General Expenses for FY 2019-20 with a rider that GRIDCO shall make all endeavours to reduce the A&G costs by prudent management of resources.

### Depreciation

276. Under this head GRIDCO has proposed Rs.0.76 crore towards the depreciation on fixed assets (vehicle, furniture and office equipment etc.) for the FY 2019-20 as detailed in the Format F-13 of their ARR submission. The Commission approves the same as pass through in the ARR of GRIDCO for the FY 2019-20.

### Interest and Financial Charges

277. GRIDCO has proposed the total interest on loans and financial charges related to Power Purchase at Rs.545.15 Crore including Rs. 17.12 crore towards guarantee commission, Rs. 59.50 crore towards interest payable during FY 2019-20 on loans to be availed during Dec 2018 to March 2019 and Rs. 42.50 crore towards proposed interest payable on the bank loan to be availed during FY 2019-20. The proposal of GRIDCO on Interest and Financial Charges as submitted in Format F-2 is shown in the following table:

**Table- 54**

Sl No	Particulars	Rate of int. (%) 01-04-18	Ensuing Year (FY 2019-20)					
			Principal		Interest		Closing Bal.	
			Received	Repayment	Due	To be paid	Principal	Interest
<b>A</b>								
1	State Govt.(WCL)	13.00%	-	-	15.60	15.60	120.00	312.21
2	St.Govt (OPGC Adj.)	10.50%	-	-	4.47	4.47	42.54	83.90
3	NTPC (Govt.Bonds)	8.50%	-	-	85.98	85.98	818.81	577.59
	<b>Sub-total</b>		-	-	<b>106.05</b>	<b>106.05</b>	<b>981.35</b>	<b>973.70</b>
<b>B</b>	<b>Availed During FY 2009-10</b>							
4	Union Bank STL- V	9.00%		-	8.22	8.22	100.00	-
	<b>Sub-total</b>		-	-	<b>8.22</b>	<b>8.22</b>	<b>100.00</b>	<b>-</b>
<b>C</b>	<b>Availed During FY 2010-11</b>							
5	Allahabad Bank - IV	8.45%	-	-	-	-	-	-
6	Syndicate Bank-II_200cr	10.35%	-	-	-	-	-	-
7	Canara -III_200 cr TL	8.40%	-	-	-	-	-	-
8	Bank of India _100cr_I	8.50%	-	-	-	-	-	-
9	Bank of India _200cr_II	8.30%	-	-	-	-	-	-
10	Union Bank-	8.40%	-	-	-	-	-	-

Sl No	Particulars	Rate of int. (%) 01-04-18	Ensuing Year (FY 2019-20)					
			Principal		Interest		Closing Bal.	
			Received	Repayment	Due	To be paid	Principal	Interest
	VII_190_2010-12							
11	Andhra Bank_III_2010-12	8.65%	-	1.60	0.01	0.01	0.00	-
12	Canara_IV -100_2010-11	8.40%	-	-	-	-	-	-
13	IOB_I - 200_2010-11	8.65%	-	28.56	3.55	3.55	25.49	-
	<b>Sub-total</b>		-	<b>30.16</b>	<b>3.56</b>	<b>3.56</b>	<b>25.49</b>	-
<b>D</b>	<b>Availed During FY 2011-12</b>							
14	Union Bank - SOD	8.40%	-	-	29.69	29.69	298.88	-
15	Bond PF/2012-13 (140 cr)	10.82%	-	5.25	0.22	0.22	- 1.89	-
	<b>Sub-total</b>		-	<b>5.25</b>	<b>29.91</b>	<b>29.91</b>	<b>296.99</b>	-
<b>E</b>	<b>Availed During FY 2012-13</b>							
16	Real Growth PPB_2012-50cr	10.40%	-	50.00	0.63	0.63	-	-
	<b>Sub-total</b>		-	<b>50.00</b>	<b>0.63</b>	<b>0.63</b>	-	-
<b>F</b>	<b>Availed During FY 2013-14</b>							
17	GRIDCO Bond_2013-127.50cr	8.79%	-	-	11.21	11.21	127.50	-
18	Odisha Gramya Bank_II_136cr	8.65%	-	27.24	3.39	3.39	28.96	-
19	Bank of India_III_100 cr	8.30%	-	20.04	2.69	2.69	21.51	-
	<b>Sub-total</b>		-	<b>47.28</b>	<b>17.29</b>	<b>17.29</b>	<b>177.97</b>	-
<b>G</b>	<b>Availed During FY 2014-15</b>							
20	Bank of India_IV_300 cr	8.30%	-	60.00	12.67	12.67	119.77	-
21	OHPC Loan_619 cr	8.00%	-	88.43	-	-	489.54	-
	<b>Sub-total</b>		-	<b>148.43</b>	<b>12.67</b>	<b>12.67</b>	<b>609.31</b>	-
<b>H</b>	<b>Availed During FY 2015-16</b>							
22	Canara_V-100_2015-16	8.40%	-	19.99	2.87	2.87	23.29	-
23	OMC TL-I_II_& III 1500cr_2012-16	8.50%	-	200.40	23.32	23.32	147.67	-
24	Bank of India_V_500 cr	8.30%	-	62.50	32.25	32.25	353.67	3.74
25	Andhra_IV - 200cr	8.65%	-	40.08	6.13	6.13	49.01	-
	<b>Sub-total</b>		-	<b>322.97</b>	<b>64.57</b>	<b>64.57</b>	<b>573.64</b>	<b>3.74</b>
<b>I</b>	<b>Availed During FY 2016-17</b>							

Sl No	Particulars	Rate of int. (%) 01-04-18	Ensuing Year (FY 2019-20)					
			Principal		Interest		Closing Bal.	
			Received	Repayment	Due	To be paid	Principal	Interest
26	Union Bank-VIII_300_2016-17	8.40%	-	60.00	13.24	13.24	125.00	-
27	Union Bank-IX_500_2016-17	8.20%		100.00	33.92	33.92	358.32	-
28	Canara Bank_VI_200 cr 2016-17	8.30%		40.00	13.18	13.18	136.67	-
29	Uco_Bank_300 Cr_2016-17	8.45%		60.00	19.70	19.70	199.34	-
30	Andhra _V - 200cr_2016-17	8.65%		40.00	15.76	15.76	159.97	-
31	Odisha GB_III_25cr	8.65%		2.50	2.07	2.07	22.49	-
	<b>Sub-total</b>		<b>-</b>	<b>302.50</b>	<b>97.87</b>	<b>97.87</b>	<b>1,001.79</b>	<b>-</b>
<b>J</b>	<b>Availed During FY 2017-18</b>							
32	IOB_II - 300_2017-18	8.55%		<b>50.00</b>	<b>21.26</b>	<b>21.26</b>	220.82	-
33	Odisha Gramya Bank_IV_40 CR	8.20%		<b>3.33</b>	<b>3.24</b>	<b>3.24</b>	36.65	-
34	Andhra_Bank_VI_100CR	8.20%		<b>20.00</b>	<b>7.47</b>	<b>7.47</b>	79.95	-
35	Canara Bank_VII_100 CR	8.15%		<b>13.33</b>	<b>16.21</b>	<b>16.21</b>	186.67	-
36	Allahabad Bank_V-150 CR	8.25%		<b>23.68</b>	<b>11.51</b>	<b>11.51</b>	126.32	-
	<b>Sub-total</b>		<b>-</b>	<b>110.34</b>	<b>59.69</b>	<b>59.69</b>	<b>650.41</b>	<b>-</b>
<b>K</b>	<b>Availed During FY 2019-20</b>							
37	Bank of India_VI_300 cr	8.50%			<b>25.57</b>	<b>25.57</b>	300.00	-
	<b>Sub-total</b>		<b>-</b>	<b>-</b>	<b>25.57</b>	<b>25.57</b>	<b>300.00</b>	<b>-</b>
	<b>TOTAL (A+B+...+K)</b>		<b>-</b>	<b>1,016.93</b>	<b>426.03</b>	<b>426.03</b>	<b>4,716.95</b>	<b>977.44</b>
<b>L</b>	<b>Add: Financial Charges</b>	0.50%	-	-	<b>17.12</b>	<b>17.12</b>	-	-
<b>M</b>	<b>Add: Rebate to Customer</b>		-	-	-	-	-	-
<b>N</b>	<b>Add: Proposed Loan for FY 18-19(Dec-Mar)</b>	8.50%	-	-	59.50	59.50	700.00	-
<b>O</b>	<b>Add: Proposed Loan for FY 19-20(Apr-Mar)</b>	8.50%	1,000.00		42.50	42.50	1,000.00	-
<b>P</b>	<b>Grand Total (A to O)</b>		<b>1,000.00</b>	<b>1,016.93</b>	<b>545.15</b>	<b>545.15</b>	<b>6,416.95</b>	<b>977.44</b>
	Govt. Guarantee Loan						<b>2,701.40</b>	<b>3.74</b>
	Secured		-	662.51	232.44	232.44	2,370.69	3.74
	Unsecured		1,000.00	354.42	312.71	312.71	4,046.26	973.70
	<b>Total</b>		<b>1,000.00</b>	<b>1,016.93</b>	<b>545.15</b>	<b>545.15</b>	<b>6,416.95</b>	<b>977.44</b>

278. In the tariff order for FY 2016-17 the Commission allowed interest on loans availed from 2008-09 to 2015-16 except interest on OHPC Bond. The Commission similarly allows the interest impact on loan availed for that period in this ARR, based on the figure finalized as per the annual accounts.
279. The commission in earlier orders have observed that there is no need for GRIDCO to borrow further from banks, if it is able to collect the approved revenue from DISCOMs. The inability of GRIDCO to collect such revenue has landed GRIDCO in a situation of borrowing from banks. The Commission in the tariff order 2017-18 observed that *GRIDCO in reality landed in deficit balance i.e. the revenue received from DISCOMs is not sufficient to discharge even power dues of the generators, which is quite alarming. If this situation persists, every year GRIDCO will resort to borrowing from Banks, the interest impact of which will be passed on to the consumer. Therefore, the Commission is not inclined to accept the interest liability on loan availed by GRIDCO for the year 2016-17, which is attributable to inability of GRIDCO to mobilize the internal resource by way of collection of BSP dues from DISCOMs. Hence, the interest impact on loan for the year 2016-17 has not been considered by Commission in determining the ARR for FY 2017-18. In this regard Para-279 of the ARR & BSP order for the FY 2016-17 may be referred. GRIDCO is advised to fill the gap from collection of arrears from the DISCOM Utilities.*
280. In reply to the commission's query GRIDCO has furnished the outstanding amounts due from DISCOMs which is shown in the table as below:

**Table – 55**

	<b>Particulars</b>	<b>WESCO</b>	<b>NESCO</b>	<b>SOUTHCO</b>	<b>CESU</b>	<b>Remarks</b>
A	Outstanding dues as on 31.03.2018.	1335.4	818.34	602.38	980.86	As per audited accounts
B	Bills of BSP dues from 01.04.2018 to 30.11.2018.	1522.3	1138.4	487.25	1710.45	Current monthly bills
		63.91	47.56	7.94	80.48	Prior period debit bills
C	Payment received against such bills and period.	911.54	811.28	48	1106.35	Payment against 4/18 bill onwards
D	Any other receipts from DISCOMs during such period.	729.12	280.07	343.1	526.05	Payment against balance dues of 2017-18
<b>E</b>	<b>Net outstanding dues of DISCOMs as on 30.11.2018.</b>	<b>1281</b>	<b>912.96</b>	<b>706.47</b>	<b>1139.39</b>	<b>4039.82</b>

281. As seen from the above table that the outstanding dues from four DISCOMs is Rs. 4039.82 crore as on 30.11.2018 which may be collected to meet the power purchase dues. The Commission in line with the earlier order disallows the interest on further loans taken after FY 2015-16.
282. In view of the above analysis the interest approved for FY 2019-20 is given in the following table:

**Table - 56**

(Rs. Cr.)

Total interest proposed	<b>545.15</b>
Less disallowed:	
(i) Interest on Govt. loan	20.07
(ii) Interest on NTPC Bond	85.98
(iii) Interest on loan availed during the FY 2016-17	97.87
(iv) Interest on loan during the FY 2017-18	59.69
(v) Interest on loan for the FY 2019-20	25.57
(v) Interest on loan proposed for the FY 2019-20( Dec 18 to Mar 19)	59.50
(v) Interest on loan proposed for the FY 2019-20( Apr 19 to Mar 20)	42.50
Total interest disallowed	<b>391.18</b>
Total Interest allowed	<b>153.97</b>

283. The Commission accordingly allows Rs.153.97 crore towards interest and financial charges for FY 2019-20.

**Special Appropriation of Repayment of Principal**

284. For the FY 2019-20 GRIDCO has proposed Special Appropriation of Rs.1016.93 crore under the following heads:-

**Table - 57**

**Special Appropriation claimed by GRIDCO**

(Rs. in Crore)

Particulars	Loan Repayment Dues	Interest Dues	Total
State Govt. Loan	162.54	396.11	558.65
NTPC-GoO Special Bonds (Rs.1102.87 Crore)	818.81	577.59	1396.4
<b>Sub-Total (A) (Proposed to be deferred)</b>	<b>981.35</b>	<b>973.7</b>	<b>1955.05</b>
Bank Loans & Inter Corporate Loan (OMC)	<b>928.5</b>	-	<b>928.5</b>
OHPC Securitized Dues	88.43		88.43
<b>Sub-Total(B)</b>	<b>1016.93</b>		<b>1016.93</b>
<b>Grand Total (A+B)</b>	<b>1998.28</b>	<b>973.70</b>	<b>2971.98</b>

285. GRIDCO has proposed to defer the State Govt. loan & interest and NTPC-GoO special bonds & interest to the tune of Rs.1955.05 crore as shown in the above table.
286. The balance of commercial bank loan and inter corporate loan (OMC) amounting Rs.1016.93 crore (principal repayment) is proposed as special appropriation to be recovered in the ARR.
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 regarding the disallowance of repayment liability through amortisation of Regulatory Asset . 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 2016-17, 2017-18 and 2019-20 has taken the same stand and did not consider such amounts as a pass through under the head special appropriation in the revenue requirement. Commission directed GRIDCO to collect the BSP arrear from the DISCOM Utilities, proactively.
289. However the Commission considers that the market fluctuations are likely to swing to the advantage of GRIDCO. The Commission therefore directs that GRIDCO should continue to procure power from CGPs and IPPs of the State and market the surplus power in order to reduce the accumulated loss. To overcome the deficit situation GRIDCO is further directed to make all out effort for collection from DISCOMs its current dues and also arrear dues finalized in the securitization order dt.01.12.2008 of the Commission to avoid borrowings.

#### **Return on Equity**

290. GRIDCO has not proposed any amount towards Return on Equity (RoE) for FY 2019-20, hence not considered by the Commission.

#### **Other Income/ Miscellaneous Receipts**

291. During the FY 2019-20 GRIDCO expects to earn an amount of Rs.3.48 Crore (at existing approved tariff) from proposed emergency sale of 5 MU to long term customers like NALCO & IMFA as per the MoU signed with these entities. The Commission approves an amount of Rs. 20.85 Crore for FY 2019-20, considering emergency power sale of 30 MU @ 695.00 P/U.

#### **Receivables from DISCOMs and Others**

##### **Securitized Dues**

292. GRIDCO in its filing submitted that the DISCOMs have defaulted payment of Rs.2117.44 Crore by 31.03.2018 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**  
**Outstanding Securitised Dues payable by DISCOMs to GRIDCO**  
**(Rs. in Crore)**

<b>Particulars</b>	<b>Unpaid as on 31-03-2018</b>
WESCO	285.41
NESCO	294.87
SOUTHCO	259.98
CESU	1277.18
<b>Total</b>	<b>2117.44</b>

The Commission directs GRIDCO to collect the dues during the ensuing year.

**Rs. 400 Crore NTPC Bond dues**

293. GRIDCO submitted that apart from securitise dues, the DISCOMs have failed to honour the OERC order dated 29-03-2012 read with corrigendum Order dated 30.03.2012 on 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 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 as on 31.03.2018.

294. On this issue the Commission have given direction to both GRIDCO and DISCOMs several times for compliance of the order. The Commission reiterates the same and directs both GRIDCO and DISCOMs to comply the order dtd.29.03.2012 in case No.107 of 2011. GRIDCO take all necessary actions to collect the above arrear dues.

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

295. GRIDCO in the ARR has further submitted that besides the default in securitised dues and Rs.400 crore of bond the DISCOMs have made default in payment of BSP dues and year-end bill amounting Rs.4984.92 crore. The details of which is given below.

**Table- 59**  
**Outstanding Dues relating to Current BSP and Year end Adjustment bills of DISCOMs payable to GRIDCO**  
**(Amount Rs. Crore)**

<b>Particulars</b>	<b>WESCO Utility</b>	<b>NESCO Utility</b>	<b>SOUTHCO Utility</b>	<b>Sub-Total</b>	<b>CESU</b>	<b>TOTAL</b>
BSP Bills as on 31.03.2018	1197.77	719.18	449.24	2366.19	706.56	3072.75

Particulars	WESCO Utility	NESCO Utility	SOUTHCO Utility	Sub- Total	CESU	TOTAL
BSP Bills-FY2019-20 (April'18 to Sept-'18)	317.95	131.85	365.07	814.87	433.03	1247.90
<b>Sub Total</b>	<b>1515.72</b>	<b>851.03</b>	<b>814.31</b>	<b>3181.05</b>	<b>1139.59</b>	<b>4320.65</b>
Year-end Adj.Bills-2007-08 to FY 2010-11	137.67	99.16	153.14	389.97	274.30	664.27
<b>Grand Total</b>	<b>1653.39</b>	<b>950.19</b>	<b>967.45</b>	<b>3571.03</b>	<b>1413.89</b>	<b>4984.92</b>

296. The Commission directs both GRIDCO and DISCOMs to file a reply before the Commission regarding action plan taken for liquidation of the arrears as stated above by 31.05.2019.

297. The summary of the ARR of GRIDCO approved for the FY 2019-20 is given below:

**Table -60**  
**Revenue Requirement of GRIDCO for FY 2019-20**

(Rs. in Cr.)

Particulars	Approved for 2018-19	Proposed for 2019-20	Approved for 2019-20
<b>Items of Expenses</b>			
Cost of Power Purchase	6951.38	7690.82	7466.64
Employee costs	9.90	12.84	10.68
Repair & Maintenance Expenses	0.28	0.25	0.25
Administrative and General Expenses	4.96	6.66	5.11
Depreciation	1.10	0.76	0.76
Interest Chargeable to Revenue	212.61	409.41	153.97
<b>Total Expenses</b>	<b>7180.23</b>	<b>8120.74</b>	<b>7637.41</b>
<b>Special Appropriation</b>			
Amortization of Regulatory Assets			
Repayment of principal (Bank and Commercial Loans)	0	1016.93	0
Pass Through of Power Purchase Dues	201.38	0	86.34
<b>Total Special Appropriation</b>	<b>201.38</b>	<b>1016.93</b>	<b>86.34</b>
<b>Return on Equity</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL (A+B+C)</b>	<b>7381.61</b>	<b>9137.67</b>	<b>7723.75</b>
Less Miscellaneous Receipt	6.95	3.48	20.85
Revenue proposed from trading of surplus power	0	0	0
<b>Net Revenue Requirement</b>	<b>7374.66</b>	<b>9134.19</b>	<b>7702.90</b>
Expected Revenue (Full year) from DISCOMs	<b>7190.34</b>	<b>7733.48</b>	<b>7529.96</b>
<b>GAP (+/-)</b>	<b>(184.32)</b>	<b>(1400.71)</b>	<b>(172.94)</b>
Energy Sale to DISCOMs (MU)	<b>25990</b>	<b>27953</b>	<b>27840</b>
Average BSP (Paisa per Unit)	<b>276.66</b>	<b>326.77</b>	<b>270.47</b>

298. GRIDCO has proposed power purchase cost of Rs. 7690.82 Crore at average BSP of 326.77 P/U. It is observed from above table that the Commission has estimated the net

revenue requirement of GRIDCO to the tune of Rs.7702.90 Crore after adjustment of miscellaneous receipts of Rs.20.85 Crore and GRIDCO will recover Rs.7529.96 Crore from the DISCOM Utilities through energy charges during the FY 2019-20 leaving a negative gap of Rs.172.94 Crore. The Commission has estimated the energy availability of 34046.81 MU to GRIDCO from different sources during FY 2019-20 and the State requirement has been estimated at 28731.03 MU, leaving a surplus availability of 5315.78 MU. The Commission directs GRIDCO for trading of the available surplus power on prudent commercial principles in the market after meeting the State requirement and adjust the revenue earnings from trading and UI accounts towards meeting the above gap and past losses.

### **Design for Bulk Supply Pricing**

299. 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 DISCOM Utilities. It is not possible to allocate particular power station to a DISCOM Utility since the Power Purchase Agreement of that Generator has been made with the GRIDCO and not with a particular DISCOM Utility. Moreover, DISCOM Utilities have also Bulk Supply Agreement (BSA) with GRIDCO. This is a past legacy. The allocation of power from a generator to a particular DISCOM Utility shall be a possibility only when the PPAs will be allocated to DISCOM Utilities 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 DISCOM Utilities.
300. 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. The 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 the 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 DISCOM Utilities 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.

301. 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.
302. 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.
303. At this point, we are taking into consideration the extent of revenue that a distribution utility 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 financially near viable.

## Demand Charges

304. Like the ARR approval of GRIDCO for previous years, 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 2019-20. 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 by DISCOM Utilities @ 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 quantum 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

305. GRIDCO has proposed a BSP @ 326.77 P/U to be levied on the DISCOM Utilities towards their purchase of power during FY 2019-20. Now, 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 also meet their statutory obligations including meeting the expenses towards establishment, maintenance and other allied expenses. The gap in the revenue requirement in the present order is recognised by the Commission.
306. The details of Bulk Supply Price as well as the quantum of energy approved by the Commission for each DISCOM Utility are presented in a table below:

**Table – 61**  
**Bulk Supply Price and Quantum of Energy for FY 2019-20**

Name of the DISCOMs	Existing Bulk Supply Price i.e. approved for FY 2018-19 (P/U)	Quantum of Energy for sale during FY 2019-20 (MU)	Total Revenue for FY 2019-20 (Rs. Crore)	Bulk Supply Price approved for FY 2019-20 (P/U)
CESU	274.00	9740.00	2542.14	261.00
NESCO	301.00	6310.00	1880.38	298.00
WESCO	300.00	7750.00	2356.00	304.00
SOUTHCO	197.00	4040.00	751.44	186.00
<b>Total</b>	<b>276.66</b>	<b>27840 .00</b>	<b>7529.96</b>	<b>270.47</b>

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

**Charges for Overdrawal of Energy**

308. 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 power purchase rate for a station approved by the Commission for the FY 2019-20 (which includes transmission charges & transmission loss) on a monthly basis instead of the normal differential BSP applicable to the respective DISCOM Utilities 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.
309. The Commission has already framed 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 DISCOM Utilities in the 1<sup>st</sup> 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**

310. For payment of bills through a letter of credit or by cash within two working days (excluding holidays under N.I. Act, 1881) of presentation of bills, a rebate of 2% shall be allowed on current dues. If the payments are made by a mode other than through a letter of credit but within a period of one month by the Distribution Utilities, a rebate of 1% shall be allowed. However, payment by DISCOM Utilities 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**

311. 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**

312. 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.
313. The Bulk Supply Price in respect of GRIDCO as indicated below will become effective from 1<sup>st</sup> June, 2019 and shall continue until further orders.

**Table -62**

<b>Name of the DISCOMs</b>	<b>Paise/ Kwh</b>
CESU	261
NESCO	298
WESCO	304
SOUTHCO	186

314. The application of GRIDCO in Case No. 73 of 2018 is disposed of accordingly.

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

**Sd/-**  
**(U. N. BEHERA)**  
**CHAIRPERSON**