

**ODISHA ELECTRICITY REGULATORY COMMISSION  
BIDYUT NIYAMAK BHAWAN  
PLOT NO. 4, CHUNOKOLI, SHAILASHREE VIHAR,  
BHUBANESWAR-751021**

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**Present: Shri U. N. Behera, Chairperson  
Shri S. K. Parhi, Member  
Shri G. Mohapatra, Member**

**CASE NO. 72 OF 2020**

**Date of Hearing : 09.02.2021**

**Date of Order : 26.03.2021**

**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 2021-22, 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 coincides with 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 ARR for ensuing Financial Year i.e. for FY 2021-22.

**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 had directed GRIDCO Ltd. to file its rejoinder to the objections filed by the various objectors before the Commission and to serve copy on them.
3. In response to the aforesaid public notice in respect to the ARR and BSP application of the GRIDCO Ltd. for FY 2021-22, the Commission received 8 nos. of objections/suggestions from the following persons/ associations/ institutions/ licensees: -
  - (1) Sri Ananda Kumar Mohapatra, Power Analyst, S/o. Jachindranath Mohapatra, Plot No.639/1021, Lane-2, Laxmi Vihar, P.O: Bankual, Tankapani Road, Bhubaneswar, Dist.-Khurda-751002
  - (2) M/s. Visa Steel Limited, Kalinganagar Industrial Complex, At/Po-Jakhapura-755026, Dist-Jajpur, Odisha
  - (3) M/s. Grinity Power Tech Pvt. Ltd., At-K-8/82, Kalinga Nagar, Ghatikia, Bhubaneswar-751029
  - (4) Shri Ramesh Chandra Satpathy, Secretary, National Institute of Indian Labour and President Upobhokta Mahasangha, Plot No.302(B), Beherasahi, Nayapalli, Bhubaneswar-751012
  - (5) Shri R.P.Mahapatra, Retd. Chief Engineer & Member (Gen.), Plot No-775 (P), Lane-3, Jayadev Vihar, Bhubaneswar-751013
  - (6) M/s. Indian Energy Exchange, Plot No.C-001/A/1, 9<sup>th</sup> Floor, Max Towers, Sector-16B, Noida, Goutam Buddha Nagar, Uttar Pradesh-201301
  - (7) M/s. Vedanta Limited, At-Bhurkamunda, Po-Kalimandir, Dist-Jharsuguda, Odisha-768202
  - (8) Odisha Power Generation Corporation Ltd. (OPGC), Zone-A, 7<sup>th</sup> Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023.
4. The applicant submitted its reply to issues raised by the above objectors during hearing of the above 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 had appointed to World Institute of Sustainable Energy (WISE), Pune, as Consumer Counsel for objective analysis of the licensee's Aggregate Revenue Requirement and Bulk Supply Price proposal for FY 2021-22. The Consumer Counsel-WISE, Pune presented its views on the matter during the hearing.

5. The date for hearing was fixed as 09.02.2021 at 10.30 AM and the Commission had decided to conduct the hearing through virtual mode due to COVID-19 pandemic situation in the State. Further, the Commission had also made arrangements in the hearing hall of OERC for the objectors to participate in the hearing through video conferencing. It was duly notified in the leading newspapers mentioning the list of the objectors, time and place of hearing. The Commission had issued individual notice to the applicant and the objectors for hearing of the above matter on 09.02.2021 through video conferencing. The Commission had 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 their authorized representative to take part in the proceeding.
6. In its consultative process, the Commission conducted a public hearing through video conferencing on 09.02.2021 and heard the Applicant, Objectors, Consumer Counsel and the Representative of Dept. of Energy, Govt. of Odisha at length. The following persons participated in the hearing process.  
  
(1) Shri Gagan Swain, Director (Finance), GRIDCO Ltd. (2) Sri Ananda Kumar Mohapatra, Power Analyst (3) Shri Vikas Goel & Sri Bibhu Charan Swain on behalf of M/s. Visa Steel Limited (4) Shri Alekha Chandra Mallick the authorized representative of M/s. Grinity Power Tech Pvt. Ltd. (5) Shri Ramesh Ch. Satpathy (6) Shri R.P.Mahapatra (7) Shri Rutwik Mishra, GM, Odisha Power Generation Corporation Ltd. and (8) Ms. Niharika Pattanayak, ALO, Department of Energy, Government of Odisha. Nobody was present on behalf of M/s. Indian Energy Exchange and M/s. Vedanta Ltd. 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 22.02.2021 at 11 A.M. on Bulk Supply Price proposal of the licensee for the FY 2021-22 through video conferencing due to COVID-19 situation. 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 2021-22 (Para 8 to 34)**

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') 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 Annual 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 2021-22 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 2021-22 has been projected by GRIDCO at 4978 MVA per month. GRIDCO has mentioned that SMD decreased in Apr-Sep 2020 due to reduction in Industrial and commercial load in the system. SMD in Oct 2020-Mar 2021 is expected to grow as against first 6 months of the year. GRIDCO has projected the energy requirement of 27375.02 MU for FY 2021-22, consisting of 27315.02 MU for sale to DISCOMs and 60 MU for Emergency Power Supply to Captive Generating Plants (CGPs) like NALCO and IMFA.

### Quantum of Power Procurement

10. GRIDCO has projected to procure 28221.67 MU of energy during FY 2021-22 considering the energy requirement of 27375.02 MU for DISCOMs and CGPs and 846.65 MU towards transmission loss @ 3.00% in STU system.

**Table -1**  
**Demand and Energy Projection of GRIDCO for FY 2021-22**

Particulars	Projection for FY 2021-22
SMD for DISCOMs Utilities (MVA per month)	4978.00
Energy Demand of DISCOMs Utilities (MU)	27315.02
Emergency Power to CGPs (MU)	60.00
Transmission Loss @ 3.00% (MU)	846.65
Energy Required to be purchased by GRIDCO to meet the power demand of DISCOMs Utilities & CGPs (MU)	<b>28,221.67</b>
Available Energy (MU)	35,290.03
Surplus energy	7068.36

### Power Purchase Cost Projected for FY 2021-22

11. The detailed cost of power purchase as furnished by GRIDCO for FY 2021-22 is reproduced hereunder in Table below.

**Table -2**  
**Proposed Power Procurement Cost during FY 2021-22**

Station Name	Energy Availability (MU)	Rate (P/U)	Total Cost (Rs Cr.)
HHEP	660.56	134.97	89.16
CHEP	485.10	76.88	37.29
Balimela	1171.17	68.26	79.95

Station Name	Energy Availability (MU)	Rate (P/U)	Total Cost (Rs Cr.)
Rengali	519.75	131.74	68.47
Upper Kolab	823.68	82.83	68.23
<b>OHPC(Old)</b>	<b>3660.26</b>	<b>93.74</b>	<b>343.10</b>
Indravati	1942.38	94.41	183.38
Machkund	259.88	244.20	63.46
<b>Total State Hydro</b>	<b>5862.52</b>	<b>100.63</b>	<b>589.94</b>
OPGC - 1 & 2	2726.34	260.92	711.36
OPGC - 3 & 4	5700.21	313.92	1796.22
TTPS	3287.68	320.36	1053.23
<b>Total State Thermal</b>	<b>11714.23</b>	<b>303.97</b>	<b>3560.81</b>
Renewables	2702.35	379.62	1025.88
CGPs	-	-	-
Co- generation Plants	-	-	-
M/s. GMR Kamalanga Energy Ltd.	1844.00	336.79	621.05
M/s. Vedanta Ltd.	2956.00	250.53	740.58
JITPL (IPP)	-	-	-
Total IPP	4800.00	283.67	1361.62
<b>Total State availability</b>	<b>25079.10</b>	<b>260.71</b>	<b>6538.25</b>
FSTPS-I&II	184.20	489.16	90.10
FSTPS-III	373.42	548.21	204.71
KhSTPS Stg.-I	186.65	432.10	80.65
KhSTPS Stg.-II	171.14	389.70	66.69
TSTPS Stg.-I	2157.92	353.35	762.51
TSTPS Stg.-II	1346.00	297.43	400.35
Darlipali-Unit-1	2608.02	317.61	828.32
Darlipali- Unit-2 (New)	1086.67	317.61	345.13
Barh-1 - New	606.73	564.21	342.32
North karanpura - New	243.86	421.71	102.84
<b>Total Central Thermal</b>	<b>8964.61</b>	<b>359.60</b>	<b>3223.63</b>
Chukha	255.43	249.10	63.63
Tala	144.42	224.04	32.36
Teesta	504.22	172.24	86.85
Mangdechhu	342.26	434.60	148.74
<b>Total Central Hydro</b>	<b>1246.33</b>	<b>266.04</b>	<b>331.58</b>
<b>Total EREB</b>	<b>10210.94</b>	<b>348.18</b>	<b>3555.21</b>
<b>Total Availability</b>	<b>35290.03</b>	<b>286.03</b>	<b>10094.05</b>
PGCIL Charges	-	-	<b>699.19</b>
SOC &MOC Charges	-	-	<b>1.79</b>
<b>GRAND TOTAL</b>	<b>35290.03</b>	<b>305.89</b>	<b>10795.03</b>

12. GRIDCO has submitted that against demand of 28221.67 MU, it has availability of 35290.03 MU resulting in surplus energy of 7068.36 MU. GRIDCO plans to sell all

the surplus power in exchanges which has variable cost below the real time rate in exchange. GRIDCO submitted that the trading in real time basis shall be optimised based on the net realisation per unit of sale, the availability including the forced scheduling power by the Load despatcher as per minimum technical requirement/Grid requirement etc and impacts, if any due to change in the regulations. GRIDCO has estimated the revenue of Rs.1464.70 by selling the entire surplus power at the average variable cost of 213 p/u. Accordingly GRIDCO has proposed the Power Purchase Cost for regulated power as Rs. 9330.34 Crore after deducting the earnings from trading of the surplus power (total power purchase cost of Rs.10795.03 Crore minus revenue earning of Rs.1464.70 Crore from surplus power).

**Pass through of arrear dues paid / to be paid during FY 2021-22**

13. GRIDCO has submitted to consider the claim of Rs.777.66 Crore under Pass Through while approving the ARR & BSP for FY 2021-22, which includes uncontrollable cost of STU chargers for RE procurement, Arrears for revision of tariff of M/s Salivahan Green Energy Ltd from FY 2016-17, deferred tax liability of Teesta-V HEP, additional power purchase cost of NTPC plants that have been paid by GRIDCO but is not reflected in tariffs approved by the Commission, and pass through of OPGC expenses.

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

14. GRIDCO has submitted that it has outstanding loan balance of Rs 6,564.19 Cr as on 31st March 2020 with repayment liability of Rs 1164.97 Cr in FY 2021-22. Due to non-cost reflective BSP, disallowance of carrying cost on Regulatory assets and huge receivables, the loan liability has increased over the year. GRIDCO proposed to first meet such loan liability from Margin from sale of surplus power as directed by the Commission in its previous orders. As the trading margin will be very low due to present market condition, GRIDCO requested to create a Separate Mechanism to meet Net Repayment liability post adjustment of Margin.
15. GRIDCO has estimated a trading margin of Rs. 41.71 Crore from sale of surplus power after deducting the variable cost of purchase of such power, which is insufficient to meet the repayment liability of Rs 1164.97 Crore in FY 2021-22. Therefore, GRIDCO has proposed to deduct margin earned from sale of surplus

power (sale price minus variable charges) from the repayment liability for the year and allow the balance repayment amount Rs.1123.26 Crore in the following manner:

- i Allow as a part of the annual revenue requirement,
- ii Allow a regulatory surcharge recovery as a percentage of bulk supply tariff, or
- iii Allow as a regulatory asset with an amortisation in a defined period of 3 to 5 years, as the Commission deems fit.

### **Interest, Financing and Other expenses**

16. GRIDCO has proposed to incur about Rs.588.06 Crore during the FY 2021-22 towards expenses on account of interest, Employees Cost, A&G Expenses, R&M and Depreciation etc. GRIDCO has considered Rs. 559.90 Crore towards interest and financial charges considering deferment of the interest payable to the State Government. GRIDCO proposed Rs.18.80 Crore towards employees cost for FY 2021-22 including the balance arrear amounting to Rs.0.81 Crore on account of implementation of the 7<sup>th</sup> Pay Commission recommendation. The details of above expenses are shown in the table below:

**Table -3**  
**Interest, Financing & Other expenses for FY 2021-22 (Rs. Crore)**

Particulars	GRIDCO proposal for FY 2021-22	
1. Interest & Financial Charges		559.90
2. Other Costs:		
a. Employee Cost		18.80
b. A&G Cost		7.33
c. Repair & Maintenance Cost		0.70
3. Depreciation		1.33
<b>Total (1+2+3)</b>		<b>588.06</b>

### **Return on Equity**

17. GRIDCO has claimed the Return on Equity (RoE) of Rs.92.27 Cr for FY 2021-22 considering the return @16% on its equity base of Rs.576.71 Crore.

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

18. GRIDCO expects to earn an amount of Rs. 42.90 Crore during FY 2021-22 from the proposed emergency power sale of 60 MU to long term customers like NALCO and IMFA at existing approved BSP of 715 P/U.

### Receivable from DISCOM Utilities and other parties

19. GRIDCO has submitted that the outstanding securitized dues payable by DISCOMs is about Rs.2117.45 Crore as on 30.09.2020. Further, an amount of Rs.3308.29 Crore is outstanding on DISCOMs towards current BSP and Year-End-Adjustment (YEA) Bills as on 30.09.2020. Further, an amount of Rs.195.36 Crore towards Bonds is due from DISCOMs as on 31.03.2019 towards Rs.400.00 Crore NTPC Bond.
20. GRIDCO has submitted that the receivables of GRIDCO from DISCOMS for sale of power amounts to Rs.3991.00 Crore as on 30th September 2020 out of which Rs. 2692 crores or 67% of total is due for more than 6 months. Owing to this, GRIDCO has been availing term loans to meet the working capital gap. With the sale of CESU and the ongoing sale process of other three DISCOMs under Section 20 of the Electricity Act 2003, there are concerns on realization of past receivables from DISCOMs. This will have an impact on servicing of short term loans. In view of this, GRIDCO has submitted that a mechanism be put in place for principal and interest repayment of short term loans availed to bridge the working capital gap arising due to concerns on non-realization of BSP dues from DISCOMs.

### Aggregate Revenue Requirement (ARR)

21. The proposal for Aggregate Revenue Requirement of GRIDCO for FY 2021-22 is summarized in the Table below.

**Table -4**  
**Proposed Aggregate Revenue Requirement of GRIDCO for FY 2021-22**

<b>Particulars</b>	<b>Amount (Rs Crore)</b>
Power purchase cost	9330.34
Interest and financial charges	559.90
Employee cost	18.80
Administrative and General Expenses	7.33
Repair & Maintenance	0.70
Depreciation	1.33
Return on Equity	92.27
<b>Sub-Total</b>	<b>10010.66</b>
Pass through Power Purchase Cost	777.66
<b>Gross Revenue Requirement</b>	<b>10788.32</b>
Less: Revenue from Emergency Sales	42.90
Net ARR	10745.42

### Proposed Revenue Earning at Existing BSP

22. GRIDCO has estimated to earn revenue of Rs.7846.41 Crore during FY 2021-22 from the anticipated sale of 27315.02 MU to DISCOMs at the existing average BSP of 287.70 P/U.

### Excess / Deficit in the ARR for FY 2021-22

23. GRIDCO has proposed that it would suffer revenue deficit of Rs.2899.02 Crore considering the proposed ARR of Rs.10745.42 Crore and the revenue of Rs.7846.41 Crore to be earned from sale of the proposed energy of 27315.02 MU to DISCOMs during FY 2021-22 at the existing BSP Rate. The details are shown in the Table below.

**Table -5**  
**Excess / Deficit on Revenue Requirement for FY 2021-22**  
**(Rs. Crore)**

ITEM	Amount
Total Revenue Requirement	10788.32
<i>Less:</i> Misc. Receipt from Emergency sale of Power to NALCO & IMFA	42.90
<b>Net Revenue Requirement to be recovered from DISCOM</b>	10745.42
Revenue Receipt from DISCOMs at the existing BSP	7846.41
<b>Gap i.e. Surplus / (Deficit)</b>	<b>(2899.02)</b>

### Proposal for Revision of Bulk Supply Price

24. GRIDCO has submitted that with the present BSP, it cannot meet its estimated revenue requirement for the FY 2021-22 as it results in revenue deficit of Rs.2899.02 Crore as indicated in the above table. In order to meet the estimated deficit, GRIDCO has prayed before the Commission for upward revision of average Bulk Supply Price to 393.39 P/U for the FY 2021-22 as shown in table below:

**Table - 6**  
**Proposed Bulk Supply Price (BSP) for FY 2021-22**

SL. No.	Particulars	Proposed BSP for FY 2021-22
1	Net Revenue to be recovered through BSP (RS. Crore)	7846.41
2	Energy proposed for sale to DISCOMs (MU)	27315.02
3	Proposed Average BSP to recover the Net ARR through Energy charges only (P/U)	393.39

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

### **Demand Charges**

25. GRIDCO proposes that the Demand Charges may be levied @ Rs.250/kVA/Month from DISCOM Utilities 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 it shall be 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 of Rs.250/kVA//Month.

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

26. GRIDCO has submitted that it presently bills the DISCOMs at the corresponding OERC approved applicable BSP Rate(s) in terms of the Hon'ble APTEL Judgement dated 07.05.2018 in Appeal No. 55 of 2015 till Deviation Settlement Mechanism (DSM) Regulation by the Commission is pronounced and implemented in the State of Odisha. Further, GRIDCO has filed a review petition before the Commission against the ARR & BSP Order for FY 2019-20 (Case No.51/2019) wherein GRIDCO has prayed before the Commission to address the issue of billing of overdrawal energy by the DISCOMs.
27. However, GRIDCO has proposed that any excess drawal of energy by a Distribution and Retail Supply Licensees (DISCOMs) during a month over and above the approved energy quantum (Approved MU for FY 2021-22 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 2021-22 (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)**

28. 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**

29. 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 part payment of current BSP dues within two working days and balance amount within 30 days of raising of BSP invoice, 2% rebate on the amount paid within two working days and 1% rebate may be allowed on the balance amount paid beyond two working days, but within thirty days. For payment of full BSP dues within 30 days, 1% rebate may be allowed. However, no rebate will be allowed if full BSP is not paid within thirty days.

**Delayed Payment Surcharge**

30. GRIDCO has proposed that the surcharge for delayed payment of BSP bills after a period of 30 days from the date of submission of bills may be retained at 1.5% (one point five percent) per month.

**Escrow Arrangement**

31. DISCOMs are approaching GRIDCO to allow escrow relaxation towards employee cost and R&M expenses in each month. There is no specific direction in the ARR of FY 2020-21 to allow escrow relaxation. GRIDCO has prayed the Commission to pass suitable directions as may be deemed necessary without affecting the interest of GRIDCO. Till the Commission decides any change in escrow arrangement, GRIDCO follows the directions issued by the Commission in the BSP order for the FY 2014-15.

**Carry Forward of Revenue Gap**

32. GRIDCO has prayed that the proposed Annual Revenue Requirement & Bulk Supply Price be made applicable from 1st April 2021. However, in case of a gap between the approved revenue requirements for FY 2021-22 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 2021-22**

33. GRIDCO has prayed the Commission to approve the following for FY 2021-22:
- i) Consider allowing all the uncontrollable reasonable costs as proposed in the petition above and accordingly, approve the ARR and Bulk Supply Price (BSP) for FY 2021-22 and make the same effective from 1st April 2021;
  - ii) Allow carry forward of the unrecovered additional costs for recovery in the future BSP or pass through of the same in the truing-up exercise;
  - iii) Consider to pass the Order on the Truing-up Petition of GRIDCO filed based on the Audited Accounts of GRIDCO for & up to the FY 2015-16 to FY 2018-19 along with amortization plan;
  - iv) Approve the fixed charges as payable by GRIDCO to the generating stations for the all existing and new stations to be recovered from DISCOMs through BSP, wherever PPA is tied up on overall long term energy planning of the State even if energy is not scheduled in any year from stations based on MoD principles and change in demand trend of the State;
  - v) Issue appropriate directions to the distribution companies/ Licensees to pay all outstanding dues to GRIDCO;
  - vi) Allow a suitable mechanism to recover the shortfall towards DISCOMs' receivable arising out of sale of CESU, and the ongoing sale of WESCO, NESCO and SOUTHCO, which amounts to Rs.6019 Cr. as on 31st March 2020, in a planned manner in next five years after the purchase consideration for these distribution companies is adjusted;
  - vii) Create a separate regulatory surcharge to amortize regulatory assets accumulated till FY 2019-20 after accounting for revenue from sale of surplus power and allow carrying cost in regulatory assets accumulated till FY 2020-21. Such mechanism of regulatory gap recovery need to meet at least the servicing of special appropriation (repayment of principal);
  - viii) Allow recovery of the additional cost/s due to over-drawal of energy, fuel price adjustment / fuel surcharge adjustment etc. or on account of any other statutory increase/s, significant rise in the fuel cost, Electricity Duty/ Water Cess levied by the Government of Odisha and any other Statutory levy/ Duty/ Tax/ Cess / Toll etc. etc. if any, be passed on to GRIDCO on account of the OERC / CERC / Tribunal / Court Orders etc. or the like, as surcharge during the year on quarterly basis;
34. 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 2021-22. 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

GRIDCO. Based on their nature and type, these objections/observations have been categorized broadly as indicated here under.

**VIEWS OF THE OBJECTORS AND CONSUMER COUNSEL ON THE BULK SUPPLY PRICE PROPOSAL FOR FY 2021-22 (Para 35 to 100)**

**Consumer Counsel**

35. Design of BSP for DISCOMs 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 requested 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 power purchase 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; allow principal repayment through trading income as per the Commission's directive; to review the proposed pass through expenses especially the high cost power purchase claimed during FY 2020-21 should not be part of present BSP determination process; not to allow interest on proposed new loans and loans availed from FY 2016-17 onwards as per Commission's earlier orders; and to verify the actual employee cost, R&M cost, A&G cost and trading income of GRIDCO.

**Views of Objectors**

**Legal Issues:**

36. GRIDCO is an Electricity Trader under Section 14(c) of EA, 2003 and is therefore entitled to 'Trading Margin'. Hence, determination of ARR and BSP of GRIDCO is not in accordance with the provisions of the Statute.
37. The Commission may only determine a trading margin for GRIDCO without taking into account the past losses and interest liabilities.
38. Trading margin worked out by GRIDCO is at 23.30 P/U, which is unusually high. The approved trading margin of PTC is only 7 P/U for inter-state trading for the energy drawn by GRIDCO from Mangdechhu HEP in Bhutan.

39. An objector requested the Commission to be guided by Regulations and License Conditions of GRIDCO while hearing of the present tariff petition of GRIDCO.
40. GRIDCO should be allowed a trading margin between 4 P/U and 7 P/U. The ARR of GRIDCO excluding Power Purchase cost should be Rs 137.77 Cr. considering trading margin of 4 p/u and Rs 241.11 Cr. considering the trading margin of 7 p/u. However, the ARR proposed by GRIDCO is Rs 680.33 Cr. for FY 2021-22 excluding the proposed Power Purchase Cost, which is a huge amount and has no basis. The ARR of GRIDCO beyond Rs 241.11 Cr. should not be passed on to consumers.

**Availability of power**

41. As per M/s Vedanta Ltd., GRIDCO has projected State's energy demand of 28221 MU based on the projection by four DISCOMs, including transmission losses of 3% for FY 2021-22. Except WESCO, other DISCOMs have projected increment in energy requirement between 9% to 15%; however, the growth in energy sales to DISCOMs is below 6% during last four years.
42. M/s Vedanta has submitted that actual compounded annual growth rate of power demand in past ten years (FY 2011 to 2020), based on SMD comes out to 2.40% as against 9.6% CAGR as predicted in 17th EPS. Therefore, GRIDCO is in surplus power position having excess to the tune of ~1000 MW to meet future peak demand of power requirement and to ensure energy security. GRIDCO ought to relieve the PPAs, because existence of such surplus power would mean the payment of additional fixed costs by GRIDCO without scheduling any power and ultimately burdening the end consumer of the state at large.
43. As per M/s. Vedanta Ltd., GRIDCO is having energy surplus to the tune of 16363 MU in current FY 2021 including Vedanta's 25% share of power. This surplus position will prevail till FY 2030. Although GRIDCO is making all efforts to maximize trading of surplus power in exchange; however, the exchanges price band over the last year makes this proposition risky and unstable in long run. GRIDCO is forced to dump power in exchanges incurring losses which made a pass through in tariff. Hence, if surplus power from M/s Vedanta is reduced, then GRIDCO would not be compelled to dump the same in exchange for a loss.
44. Some objectors have stated that the assessment of energy requirement by GRIDCO is at lower side. It is expected that there will be sharper increase in the demand for

electricity starting from 01.04.2021 due to restoration of normalcy after mass vaccination of COVID 19. Growth of power consumption of the state is 1% per annum which is very low than the GDP of the State.

45. GRIDCO's submission regarding the generation profile of hydro stations is not correct to extent of reliability of hydro power sources. Hydropower has substantial contribution in overall power bucket of Odisha; hence, considering hydro power as volatile, procurement of excess power from other sources is not at all acceptable. GRIDCO has to optimize power procurement portfolio including RE power.
46. Govt. of India is expecting a share of 25% of power generated from renewable sources by 2027, so PLF of thermal power stations would reduce, thereby increasing the selling volume on exchanges. Considering the trend of price at exchange, GRIDCO can only make partial recovery of fixed charges and will continue to bear the additional fixed charges.
47. GRIDCO is only making submission regarding procurement of renewable power, but has consistently failed to procure the required quantity. Penalty for meeting the renewable power obligation in accordance to RPO regulations may be levied.
48. The submission of GRIDCO regarding quantum of energy supplied by M/s Vedanta is not correct. M/s. Vedanta Ltd has submitted a letter with details of energy quantum supplied to GRIDCO from FY 2010-2019 for reconciliation of energy quantum. M/s. Vedanta Ltd has submitted that its generation plan is based on the linkage coal allocated (2.57 MMT) and as per the Commission's earlier directions, there shall be no shortfall for power supply by it during FY 2021-22. The power generated from the linkage coal shall be supplied to GRIDCO.
49. The PPA for procurement of power from Units 3&4 of Banaharpali TPS of OPGC, Mangdechhu HEP (Bhutan), Darlipalli STPS are yet to be approved by the Commission. Hence no power should be sourced from these power stations until approval of PPA and only based on Merit Order.
50. GRIDCO has not proposed any procurement of power from CGPs and the reasons submitted are not proper and adequate. An Objector proposed that GRIDCO should procure a specified minimum quantum of power from CGPs of State depending on availability considering the fact that the tariff of CGP is cheaper than that of Central Generating Stations (NTPC). He requested the Commission to pass appropriate order

so as to ensure a specified quantum of power to be purchased from Captive Power Plants in Odisha and the tariff of the same may be approved looking into the present cost of the generation.

51. Non-cost infirm power is being injected by the CGPs into the State grid. GRIDCO should include the same in its projected availability for the FY 2021-22. The injection of 1012.33 MU by the CGPs are infirm/inadvertent power having no cost to GRIDCO, but later sold the same to DISCOMs to meet the demand against which GRIDCO collects revenue from DISCOMs. The Commission needs to consider above non-cost infirm power in the ARR of GRIDCO.
52. GRIDCO fails to project the low-cost power of IPPs & violates the merit order principle. CAG has expressed deep concern over the non-performance of GRIDCO and its failure to procure state quota power from IPPs despite of the penal clause of PPAs. GRIDCO has projected only 4800MU energy availability from IPPs.
53. No action has been taken by GRIDCO against the two IPPs namely Ind-Barata Energy (Utkal Ltd) and NBVL for non-supply of state quota power. One objector requested the commission to seek the report from GRIDCO on procurement of state quota power from above two IPPs.
54. Vedanta Ltd. has violated the PPA (approved by Commission dtd. 27.02.2016 in case No.21/2015) many times by not supplying state quota power as per PPA. GRIDCO has also not taken any action to enforce penalty clauses of the PPA. The violation of the provision of the PPA done by the Vedanta & JITPL and inaction of the GRIDCO has caused the later to procure high cost central sector power, floated loans, revenue gaps, high debt service charges, rise up retail supply tariff and misuse of fossil fuel, which causes burden on the State consumers. The Commission needs to take pragmatic view on the matter.

#### **Power purchase cost**

55. OPGC has proposed annual fixed cost as Rs 301.61 crore for FY 2021-22 and requested the Commission to approve the same, while GRIDCO has proposed annual fixed cost as Rs 248.97 crore for OPGC.
56. GRIDCO has proposed the Energy charges of 1.48/kWh for Units-I & II of OPGC considering “As billed” GCV of coal and the parameters (IM%, TM% as per CIMFER report, actual landed cost of coal and oil, GCV of coal and oil for August 2019 to

November 2019) as per OPGC tariff order dated 22.04.2020 and Commission's order dated 28.10.2020 in Case No. 43 of 2017. But OPGC has filed an Appeal No.189 of 2020 before the APTEL against the Commission's said Order dated 28.10.2020 on GCV for tariff computation.

57. OPGC has stated that any radical departure from past practice based on the order dated 28.10.2020 in case no 43 of 2017 would be violation of GRIDCO's unequivocal commitment before the APTEL. OPGC submitted that the status quo ought to be maintained as far as the question of GCV is concerned, subject to outcome of the proceedings in Appeal No.189 of 2020 pending before the Hon'ble APTEL.
58. OPGC has proposed energy charges as Rs 1.68 /kWh (base value) considering the norms of operation as per the approved amended PPA and the fuel price and GCV as per the half yearly fuel price adjustment for FY 2020-21. OPGC submitted that the same may be considered while projecting the power purchase cost of GRIDCO for FY 2021-22. OPGC also requested to direct GRIDCO to reimburse other charges on actual basis in accordance with the provisions of the approved amended PPA.
59. M/s Vedanta has submitted that it has filed tariff petition in Case No. 20 of 2020 for determination of tariff to be applicable from 1st Apr 2019 to 31st March 2024. The computation of energy charge rate is as per Table-47 of its petition wherein gross heat rate is mentioned as 2375 kcal/kWh and Auxiliary Power Consumption as 6%. However, GRIDCO has considered GCV without factoring the adjustment of moisture content in GCV.
60. To protect and safeguard the plant's critical assets, Vedanta has requested the Commission to allow the pass through of year end charges (ED on Aux power of Rs 11.75 Crore, Water Transfer of Rs 3.45 Crore, Water charges of Rs 12.64 Crore and SOC and MOC of Rs 0.42 Crore for Unit-2.
61. M/s Vedanta submitted that it has not yet received the outstanding dues pending since long though the Commission vide order dated 22.06.2020 in Case No 68 of 2018 has directed GRIDCO to settle the arrear amount within two months from the date of order. M/s Vedanta prayed to direct GRIDCO to immediately release all admitted dues (without any set-off or adjustment) and 75% of all disputed dues as per the terms of PPA along with late payment surcharge of 1.25% pm as applicable in PPA.

62. GRIDCO has determined price in exchange for the surplus energy of 7068.36 MU @ 213 P/U and includes in its ARR. The margin between the variable cost of these power stations and price exchange is only 6 P/U (213-207). This cost should not be included in the ARR as it is already included as fixed cost.
63. GRIDCO has proposed to buy costlier power from NTPC @ 6.40 Rs/unit instead of buying it from state based CGP (captive generating plant) @ 2.75 Rs/unit. GRIDCO should not be allowed to purchase high cost power more than the power purchase rate of Solar Energy Corporation of India. GRIDCO should surrender its quota and should not buy costlier power from NTPC. The Commission has already disallowed GRIDCO to procure power from Farakka but still GRIDCO is scheduling Power from NTPC and paying bills and burdening the consumers unnecessarily.
64. 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 the consumers will increase by 60-70 paisa of all categories of consumers taking into account the BSP proposed by GRIDCO, increase in transmission charges of OPTCL and distribution losses of the DISCOMs.
65. An objector requested the Commission to direct GRIDCO to purchase cheap power available from power exchange under open access instead of procuring costly power from central sector and to follow merit order scheduling to meet power requirement of the State.
66. Energy drawl from the central sector for the purpose of computation of central transmission charges is not matched with the projected availability of power.
67. Total power purchase cost of GRIDCO is computed at Rs. 10795.03 Crore for procurement of 35290 MU whereas the projected power sale to DISCOMs for FY 2021-22 is 27315 MU leaving surplus power of 7975 MU available with GRIDCO to trade during FY 2021-22. DISCOMs can't be forced to bear the fixed cost of such surplus power traded by GRIDCO. An Objector requested the Commission to look into such unfair practices of GRIDCO and direct GRIDCO to bear its own inefficiencies in power trading.

#### **Employee cost**

68. GRIDCO has projected employee cost expenditure at Rs 18.80 Crore for FY 2021-22 against Rs 10.28 Crs as approved by the Commission for FY 2020-21. GRIDCO

should furnish the details of their present staff and future employee projection for the next two years and also to justify the proposed abnormal increase in employee cost.

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

69. GRIDCO has projected A&G Expenses of Rs. 7.33 Crore for FY 2021-22 against Rs. 5.26 Cr as approved by the Commission for FY 2020-21. GRIDCO should justify whether its accounts are being audited as per statutory provisions of the Companies Act.
70. GRIDCO has proposed the Depreciation expenditure at Rs 1.33 Crore for FY 2021-22 against Rs. 1.03 Crore as approved for FY 2020-21. The Commission may approve the same through the prudence check.
71. The R&M cost of Rs 0.07 Crore proposed by GRIDCO for FY 2021-22 against the approved cost of Rs 0.25 Cr for FY 2020-21 may be approved by the Commission through prudence check.

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

72. GRIDCO should not be allowed to avail loan for bridging the cash gap due to its default in collecting its dues from DISCOM.
73. The Objectors requested for prudent checking of the pass through dues proposed by GRIDCO for FY 2021-22, because the projected pass through dues is too high in comparison to the approval done by the commission earlier.
74. GRIDCO had the opportunity for re-phasing the loans under MCLR but it didn't take any action during April 2016 to January 2017 to negotiate with the banks to move to MCLR linked loans. However, it took delayed action in February 2017 and incurred avoidable payment of interest worth Rs 16.76 Cr for such delay.

#### **Return on equity**

75. GRIDCO is not entitled to Return on Equity. The order of APTEL may be continued and RoE should not be considered for ARR determination of GRIDCO. One objector stated that it is not prudent to allow RoE of GRIDCO till it makes losses.

#### **Revenue gap and BSP**

76. It is necessary to rationalize the bulk supply price to prevent undue burden on the consumer of the State. GRIDCO had proposed BSP of 381.29 P/U for the FY 2020-21

and now proposed 393.39 P/U for the ensuing year 2021-22. GRIDCO is projecting very high BSP every year for approval, which should not be allowed by the Commission, because of GRIDCO's inaction to produce low cost power.

77. The state demand is projected at 28221.67 MU and GRIDCO can procure its proposed quantum of 35290.03 MU from various sources and trade the surplus quantum of energy to meet its projected deficit amount. There is no need to increase BSP.
78. GRIDCO has to furnish its plan and proposal to purchase low cost power and to reduce the bulk supply price for FY 2021-22.
79. The Objectors requested the Commission to look into the matter for cost reduction in the interest of state as there are plenty of opportunities to reduce the cost proposed by GRIDCO.
80. The revenue from sale of surplus power of 7975 MU is grabbed by GRIDCO as it is unethically included in ARR of GRIDCO to determine the BSP. The total fixed cost of this surplus power will be more than Rs 1102.00 Crore because it belongs to central sector generators. GRIDCO should be directed to disclose aggregate revenue requirement of the proposed surplus power.
81. The negative revenue gap of Rs 2899.02 Cr projected by the GRIDCO for the ensuing FY 2022 is factually wrong and should be re-casted.

#### **Other issues**

82. IEX has submitted that the Commission may consider formalizing the optimization through market by evolving appropriate procedure for considering short term market rates while finalizing the Merit Order of the DISCOMs/GRIDCO. On the similar ground, the UPERC has issued the Draft Merit Order Despatch and Power Purchase Optimization Regulation, 2020, wherein it is mandated to consider the opportunities in the market while procuring power. The Commission may consider evolving appropriate framework by which the STOA/Power Exchange rates can be considered as a part of the merit order of DISCOMs/GRIDCO.
83. The introduction of GTAM has opened avenues for the development of organized renewable energy market to provide an alternate market-based route to the RE generators to sell their green power and to the buyers to fulfil their RPO at competitive price with flexibility of entry and exit in the market. M/s IEX requested

the Commission to allow an explicit provision of RE power purchase through GTAM market to the DISCOMs/GRIDCO and to consider the above mentioned suggestions while finalising the current Tariff Petition of GRIDCO.

84. The arrear dues of the DISCOMs to GRIDCO are increasing from year to year and touched astronomical proportions being Rs 3308.29 Crore by Nov' 2020 towards BSP and Year-end Adjustment Bills. There is no penalty on DISCOMs for such non-payment of dues. The debt is being serviced by the consumers on account of the failure of the DISCOMs to reduce the AT&C losses. There is no provision in the Statute for GRIDCO to service the creditors of the DISCOMs. GRIDCO should not burden the consumers of State by condoning the non-performance of the DISCOMs.
85. The Govt of Odisha is the owner of GRIDCO and therefore any loss incurred by GRIDCO has to be borne by the State Govt. and no burden should be passed on to the consumers of the State on account of the loan availed by GRIDCO to meet its losses.
86. GRIDCO should negotiate with OHPC to reduce the price claimed by OHPC in its ARR application for FY 2021-22. GRIDCO and OHPC should sit together and see that the mini hydro projects now available under OPGC should be transferred to OHPC for low cost power generation.
87. GRIDCO has to produce the details of power purchase and per unit rate per month since April'2020 to December'2020 in respect of Central thermal power stations and Central hydro power stations.
88. GRIDCO has to produce the amount receivable from different DISCOMs till Dec'2020 and what action GRIDCO has taken to recover the said amount.
89. GRIDCO should produce all the case matter pending with IPPs those are generating power from the year 2018-19 along with the present status. GRIDCO should also produce why other IPPs have not yet generated power and what action has taken by GRIDCO.
90. GRIDCO should produce information about the steps taken by it to develop mini-hydro projects and solar power projects in the State. GRIDCO has to produce the list of IPPs/ Hydro / Mini Hydro power stations those are going to generate power during the FY 2021-22.

91. GRIDCO has to produce the details of escrow relaxation to different DISCOMs month wise since 1st April 2018 to till December 2020.
92. GRIDCO should produce year-wise status report of power trading to outside the State from 2010 till date Dec' 2020.
93. GRIDCO has to produce a vision document about what action for awareness of consumers have taken for energy conservation in the State of Odisha.
94. GRIDCO has to submit its audited balance sheet, business plans, truing up exercise, performance review related documents in ARR.
95. GRIDCO has to submit the copy of energy bills served by the CGP and RE based power plants in its application.
96. The commission may direct GRIDCO to chalk out the five year plan, in view of power availability from the IPPs in the State and future load demand.
97. GRIDCO has failed to discharge its obligations upon the power conferred to it as "State Designated Entity" by Govt of Odisha. Necessary penal actions may be initiated against GRIDCO under Section 94 & 95 of the Act, in order to establish fair act of law. An Objector requested the Commission to issue necessary direction and stricture to GRIDCO so as to make them disciplined in future without committing any unfair and un-prudent practices.
98. According to report of CAG, out of the eight nos. of power sector PSUs, the net worth of GRIDCO is fully eroded and reached at a negative net worth of Rs 3853.75 Cr. CAG also reported that there are inefficiencies, irregularities and non-performance of GRIDCO for the year ended March, 2018.
99. GRIDCO has under-valued the infirm power injected by CGPs into the grid & for which the objectors requested to the Commission to pass out at least 1000 MU of inadvertent/infirm power in the proceeding while approving the ARR and BSP of GRIDCO. GRIDCO needs to clarify on payment to CGP from FY 2015 to FY 2018 towards injection of for infirm/inadvertent power by them, whereas it earned revenue by selling/utilizing such infirm power of 354.86 MU during FY 2018-19, but didn't pay any amount to CGPs. There is a need for prudent check and cross verification of the matter.

100. An objector requested the Commission to direct GRIDCO to make detailed presentation of CGPs in Director's report for information of Govt of Odisha and the consumers of the State.

**GRIDCO's RESPONSE TO THE OBJECTORS (Para 101 to 179)**

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

**Legal issues**

102. GRIDCO has apprised that "Trading Margin only to be allowed to GRIDCO as per the Statutory Provisions" may not be correct due to GRIDCO's existence in the State as a "Deemed Trading Licensee" which is consistent as per law and has been long settled by the Commission particularly in the ARR & BSP Order for FY 2011-12 & that of FY 2012-13 and reiterated in the subsequent ARR & BSP Orders wherein the Commission has ruled that GRIDCO's continuance & its submission of ARR & BSP Application before the OERC is as per the provisions of the law and is in the interest of the State as well as in the interest of the Consumers. Besides, GRIDCO's Role in the Odisha Power Sector is not merely limited to a trader but goes much beyond because of the following reasons:

- GRIDCO shoulders the responsibility of procurement and supply of power to the four DISCOMs in order to meet the State demand, ensuring uninterrupted power supply to the State consumers.
- GRIDCO has been notified as the "State Designated Entity" by the Govt. of Odisha vide Notification No. 7947 dated 17.08.2006, to procure power from various sources to ensure power sale to DISCOMs through State Grid;
- GRIDCO procures the Odisha share of power from the Central Generating Stations on behalf of the State Government;
- GRIDCO holds 49% of Government Equity in the Four DISCOM Utilities;
- Moreover, GRIDCO strictly undertakes all its operations under the Regulatory Provisions of the OERC, CERC & the Electricity Act, 2003 to sub-serve the Public Interest which may not be true in case of a Power Trader who looks after business interest only. Being a deemed power trading licensee, GRIDCO serves the State power sector at the cost of its financials to safe-guard the public interest.

- The proposition of applicability of trading margin of PTC @ 7 P/U by PTC is not applicable as GRIDCO acts as State Designated Entity to perform its obligation as the bulk supplier of power to the DISCOMs to meet the State Demand.
  - The contention of the stake holder “GRIDCO is an Electricity Trader and hence, be allowed Trading @ 4 P/U”, has been long settled by the Hon’ble Supreme Court of India in Appeal No. 5722 of 2006 (Gajendra Haldea vs. GRIDCO & Others). GRIDCO has reiterated that it is an “Intra-State Trader” and not an “Inter-State Trader” and therefore, Trading Margin @ 4 P/U is not applicable to GRIDCO. 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.
103. GRIDCO may be allowed for recovery of its legitimate dues including power procurement costs, servicing of past loans and dues as the same have been incurred and the energy being sourced by GRIDCO has been consumed in the State. Moreover, GRIDCO has contractual obligations to serve the generators and financing agencies for supply of power and finances to GRIDCO. Further, GRIDCO is an Organization manned by a handful of employees where the entire expenses of Rs.28.16 Crore (i.e. Rs.18.80 Crore towards Employee Cost, Rs.7.33 Crore towards A & G Expenses, Rs.1.33 crore towards R & M Expenses and Rs.0.70 Crore towards Depreciation excluding Power Purchase cost, loan & interest expenses etc.), which is only a fraction i.e. 0.26% of its proposed net ARR of Rs.10745.42 Crore during FY 2021-22. The un-controllable proposed power purchase cost and allied costs and interest payout is nearly about 99.28% of the proposed net ARR for FY 2021-22.
104. Further, the contention regarding availing grant from the State Government, GRIDCO submitted that it never gets any grant from State Govt. rather the revenue deficit has been financed through borrowing with State Govt. Guarantee during past couple of years. Further Govt. of Odisha is providing budgetary allocation for strengthening of Transmission & Distribution network in this State through CAPEX program and not funding any working capital requirement.

### **Energy sales**

105. GRIDCO submitted that the sales projection has been done based on the energy projections given by the DISCOMs to GRIDCO. The energy requirements of the DISCOMs depend mainly on two factors. (i) Category wise sales to end consumers.

(ii) Distribution loss trajectory as decided by DISCOMs. As the three DISCOMs, i.e., TPCODL, TPWODL, TPSODL have already been privatized, loss reductions are expected from these DISCOMs. In case of loss reduction by the DISCOMs, it is envisaged that their energy requirements will not increase unexpectedly.

106. TPCODL has projected requirement from GRIDCO in FY 2021-22 to grow by 9% over FY 2020-21 projected figures. It has projected sales growth of 11% in domestic category and 15% in EHT category. NESCO utility has projected energy requirement from GRIDCO in FY 2021-22 to grow by 15% over the projected figures for FY 2020-21. It has projected sales growth of 12% in domestic category, 12% in large industry and 16% in general purpose <100KVA category. TPSODL has projected requirement from GRIDCO in FY 2021-22 to grow by 9% over FY 2020-21 projected figures. It has projected sales growth of 11% in domestic category, 16% in large industry and 15% in irrigation category. TPWODL has projected requirement from GRIDCO in FY 2021-22 to grow by 3% over FY 2020-21 projected figures. It has projected sales growth of 18% in domestic category, -1% in large industry and 9% in irrigation category.
107. As envisaged by the objectors that due to the covid vaccination, the sales will increase at a very high rate, may not be materialised. Government of India has clarified that it will take around a year to vaccinate sufficient population to completely contain the pandemic. Hence, sales will gradually increase as against quick rebound. International Monetary Fund (IMF) has projected Indian economy to grow approximately at 11%, while GRDCO has projected YoY sales growth at 8% for FY 2021-22 which is at a higher side compared to previous years' estimations. As per the ARR & BSP petition for FY 2021-22, historically sales projection lies in the range of -3% to 5%. In spite of this, GRIDCO has projected sales growth of 8% considering this scenario.

#### **Availability of power**

108. On the queries of the objectors for energy requirement and availability for FY 2021-22, GRIDCO has submitted the following:
- a) Management of availability and supply of power vis-a-vis demand of power in the State of Odisha is the mandated responsibility of GRIDCO as the 'State Designated Entity'. GRIDCO endeavours to fulfil the responsibility of arranging

power supply for the State consumers through the DISCOMs by optimizing the power procurement costs and by following prudent practices.

- b) Merit Order Dispatch (MOD) schedule is being followed by GRIDCO while procuring power from different generators having Long-Term Power Purchase Agreements (LT-PPAs) with GRIDCO.
  - c) In order to minimize the Fixed Cost burden of surrendered power, GRIDCO makes all-out effort to explore power trading opportunities. This has also been permitted by the Commission in various ARR & BSP Orders of GRIDCO, so that the burden on state consumers can be reduced to the maximum possible extent.
  - d) Due to ongoing Covid-19 pandemic, demand has been severely affected and fallen sharply as against the projected scenario. However, as the pandemic relaxes and the economy gradually opens up, there shall be sharp increase in the overall demand of the State with increase in the demand of industrial, commercial, institutional consumers. The projections are made considering the data available from the DISCOMs who have forecasted demand of their respective areas based on projected annual growth.
109. GRIDCO has proposed for procurement of RE power to the tune of 3044.61 MU (1479.00 MU of Solar & 1565.61 MU of Non-Solar Energy) during FY 2021-22. Moreover, GRIDCO is always committed to make procurement of RE Power as per the mandate/ directives of the Commission to fulfil the RPO target.
110. GRIDCO has not considered the shortfall in RPO for the year 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 is not fully correct. In fact, GRIDCO is procuring RE Power (Solar & Non-Solar) as available within and outside the State, thereby meeting the RPO target to the maximum possible extent. GRIDCO has been complying with the State designated Renewable Energy Agency, OREDA with regard to periodic compliances on Renewable energy.
111. Further, with ISTS charges and losses waiver up to June'2023, GRIDCO is able to purchase 350 MW solar power at very competitive rates. The KUSUM Scheme to be implemented in the State is of higher tariff (i.e. Rs.3.08/kWh) than the rate of above mentioned RE power. Only to promote the Central Scheme for the benefit of framers and land owners of the State, GRIDCO has agreed to purchase around 100 to 200 MW of power through KUSUM Scheme.

112. GRIDCO has executed 09 nos. of PPAs with different SHEP Developers, out of which 06 Nos. of PPAs were executed in 2006 and the rest are from 2014 onwards to procure 119 MW power from the proposed SHEPs. The list is furnished below:

**Table - 7**  
**List of the SHEPs with whom GRIDCO has executed PPAs**

Sl. No.	Name of the Small Hydro	Installed Capacity (MW)	Name of the River/Canal/ Dam-Toe	Name of the District	PPA Date
1.	Saptadhara SHEP by Sri Avantika Power Projects Pvt. Ltd.	18	Kolab	Malkanagiri	29.10.2014
2.	Indravati I & II SHEP by Indravati Power Pvt. Ltd.	21.5	Indravati Canal	Mahipani & Tuteuruguda, Kalahandi	27.11.2015
3.	Bargarh Head Regulator SHEP by Kakatiya Chemicals Pvt. Ltd.	9	Baragarh Canal	Baragarh	02.12.2015
4.	Lower Baitarani SHEP by Baitarani Power Project Pvt. Ltd.	24	Baitarani	Dargarisila, Badajori, Keonjhar	18.12.2015
5.	Khargpur SHEP by Sidheswari Power Generation Pvt. Ltd.	16.5	Kolab	Kharagpur, Koraput	07.11.2016
6.	Outlet drop of Jeypore Main Canal SHEP by M/s Jeypore Hydro Power Projects pvt. Ltd.	6	Jeypore Main Canal	Koraput	24.11.2006
7.	Jalaput Dam Toe SHEP by Odisha Power Consortium Ltd.	18	Machhkund	Koraput	28.09.2006
8.	Dumajhori SHEP by M/s. Sharvani Energy Pvt. Ltd.	15	Kolab	Koraput	28.09.2006
9.	Salandi Dam Toe SHEP by M/s Salandi Hydro Power Projects Pvt. Ltd.	9	Salandi	Keonjhar	28.09.2006
<b>Total Capacity =</b>		<b>119 MW</b>			

113. Out of these projects, 24 MW Lower Baitarani SHEP by M/s Baitarani Power Project Pvt. Ltd is already commissioned with effect from August, 2020. Another two SHEPs by M/s Sri Avantika Power Projects Pvt. Ltd. and M/s Kakatiya Chemicals Pvt. Ltd. have started the construction work and 3.5 MW of Lower Indravati SHEP is in the pipe line.

114. In respect of development of Solar Power in Odisha, GRIDCO is presently procuring about 612 MW of power from Solar sources, out of which 387 MW are commissioned in the State and balance 225 MW are being availed from outside the State (Gujarat- 40 MW, Rajasthan- 175 MW, Uttar Pradesh- 5 MW & Haryana- 5 MW). Further, 479.15 MW of non-solar power will also be available by the end of FY 2021-22. In conformity to "Odisha RE Policy-2016" dated 25.11.2016 and the OERC Gazette

notification dated 10.09.2015, GRIDCO has planned for solar capacity addition of 1478 MW by the year 2022. Therefore, GRIDCO with support of the Govt. of Odisha is trying its level best to ensure maximum solar power in the State.

115. GRIDCO submitted that as per Notification dated 08.03.2019 of MoP, GoI, GRIDCO has included energy purchased from Mangdechhu HEP under renewable energy for RPO compliance.
116. GRIDCO may consider to procure power from CGPs provided the economics of power procurement works out in GRIDCO's favour and also depending on the power supply & demand configurations of the State and the exigency conditions justifying such procurement from CGPs. CGPs are infirm sources and hence, GRIDCO can't propose definite quantum of power to be procured from CGPs which is essentially meant for captive consumption.
117. Drawal of firm power from the Generators with whom PPAs have been signed, has to be sourced in order to economize the procurement cost; otherwise the liability of payment of Fixed Cost remains with GRIDCO irrespective of any energy drawal. The projected power procurement of about 35290.03 MU during FY 2021-22 from such firm Stations shall meet the required projected demand of the DISCOMs for the consumption within the State and therefore, there is no opportunity left for any procurement of energy from infirm CGP sources during the ensuing year. However, the option of sourcing power from CGPs has been kept open for procurement under "force majeure" or "exigency conditions", which, in all fairness, may be considered as being quite logical.
118. GRIDCO had planned the energy requirement of the State based on demand projections of 17th EPS released during March, 2007. As per 17th EPS, demand of the State was estimated to grow to 10074 MW by FY 2021-22. Considering the above projection, GRIDCO has executed PPAs with NTPC, OPGC and IPPs. Once the capacity has been tied up and PPAs have been signed, GRIDCO is contractually bound to service the PPA. GRIDCO is following merit order principles to purchase power from sources with higher variable cost only when low cost power is not available. GRIDCO has projected energy procurement from high cost stations which is force scheduled by ERLDC to run the plant.

119. GRIDCO is entitled of power from five Independent Power Plants (IPPs) in the State. However, out of these five stations, two are yet to come. M/s. Ind-Barath Utkal Energy Ltd has become NPA and has been taken to NCLT for resolution process; while M/s. NBVL is having difficulties with evacuation system. Other three IPPs from which GRIDCO is currently entitled to draw power are namely M/s. Vedanta Ltd, M/s. GKEL and M/s JITPL.
120. M/s. JITPL (2 X600 MW) has challenged the MOU with Government of Odisha and PPA with GRIDCO before the Hon'ble High Court of Odisha in Writ Petition No. 18150 of 2018. Based on an interim stay order dated 16.05.2019, M/s. JITPL is not supplying power to the State since 22.05.2019. M/s. JITPL has also challenged the PPA approval order of the Commission dated 04.06.2019 passed in Case No.1/2017 before APTEL. GRIDCO has filed petition before the Commission (Case No. 28 of 2020) under Section 142 for non-payment of compensation by M/s. JITPL towards non-supply of power to GRIDCO. GRIDCO is taking action for vacating stay order of Hon'ble High Court and will also take all-out effort to procure State entitlement of power of 1007 MU from M/s. JITPL during FY 2021-22. However, in view of no supply of power by M/s. JITPL since May-2019 onwards in view of on-going cases before different forum of law, GRIDCO has not proposed any quantum of power to be procured from M/s. JITPL during FY 2021-22. The proposal of GRIDCO is without prejudice to the various on-going cases in different legal forums and subject to prudent decision by OERC.
121. Regarding short supply of power by M/s. Vedanta, GRIDCO submitted that as per generation plan submitted by M/s. Vedanta Ltd. for FY 2021-22, it shall supply 2956 MU of power from Unit # 2 (600 MW) i.e. IPP Unit. The legitimate entitlement of power for the state at normative generation works out to be 5039 MU of power as per the OERC's order dated 27.01.2016 in Case No.21 of 2015. Therefore, there shall be shortfall to the tune of 2083 MU of power from IPP of Vedanta during FY 2021-22. Further, no reasons of such low generation / supply have been cited by M/s. Vedanta Ltd. In order to avoid over projection of power availability, GRIDCO has taken generation projection as submitted by M/s. Vedanta.
122. Actual supply of power from IPPs is varying from the State's entitlement. The Commission is approving excess units to be supplied from IPPs in comparison to the actual for which GRIDCO is negatively impacted. Due to the allowance of excess

cheaper power from IPP sources, the Commission is disallowing the power to be supplied at a higher rate from NTPC stations. Such deviation in projections results in lower BSP and GRIDCO has to borrow from market to pay for costly power. Further, the interest on loans has also been disapproved by the Commission resulting in double blow to GRIDCO.

123. GRIDCO is always making trading of surplus power of high cost stations when trading price exceeds the variable charges of the respective station, which resulted in recovery of costs towards capacity charges of these stations.

**Power purchase cost**

124. Under the prevalent regulatory regime, the generation tariff of OHPC is being approved by OERC and GRIDCO purchases power from OHPC at the approved tariff. OHPC has submitted its ARR & Tariff Application for FY 2021-22 before the Commission for approval. GRIDCO will make payments to OHPC towards power procurement costs at the OERC approved tariff for FY 2021-22 and not as per the projected tariff by OHPC.
125. GRIDCO's submission with respect to OPGC's ARR filing for FY 2021-22 in Case No. 71/2020, are summarised below in the table below.

**Table -8**  
**GRIDCO's Response on OPGC's ARR Application for FY 2021-22**  
**(Rs. Crore)**

<b>Particulars</b>	<b>Corresponding to Original Project Cost</b>	<b>Corresponding to Additional Capitalisation</b>	<b>Total</b>	<b>GRIDCO's submissions</b>
Depreciation	0.00	24.39	24.39	Plant is fully depreciated so there is no depreciation on original project cost. With regards to depreciation on additional capitalization, the same may be subject to the Commission's order in Case no. 54/2018.
Return on Equity	72.00	8.79	80.79	The debt equity ratio may be considered as per the Government Notification dated 21.06.2008 while working out the tariff.
Interest on Loan	0.00	6.37	6.37	
	176.35	-	176.35	Subject to prudence check by the Commission

<b>Particulars</b>	<b>Corresponding to Original Project Cost</b>	<b>Corresponding to Additional Capitalisation</b>	<b>Total</b>	<b>GRIDCO's submissions</b>
Interest on Working Capital	13.19	0.51	13.71	Subject to prudence check by the Commission
<b>Total Annual Fixed Cost</b>	<b>261.54</b>	<b>40.07</b>	<b>301.61</b>	All components of fixed charges may be fixed on the principles in Case no. 69/2019 for tariff of 2020-21 and the Tariff Regulations 2020.

126. GRIDCO submitted that in one hand OPGC is raising the question of maintaining status quo and in the other hand misinterpreting the approved amended PPA for determination of GCV in its own way. Maintaining status quo does not give liberty to OPGC to take the GCV value as per their wish and suitability. The indicative GCV as per the Commission's Order in Case no. 69 of 2019, i.e. Tariff Order dated for FY 2020-21, may be adopted for computation of ECR and working capital pending interim order of APTEL in I.A. No. 1632 of 2020 in Appeal No. 189 of 2020. Or else, the Commission may take the median value of GCV provisionally i.e. 3250.5 Kcal/kg, of the allotted Grade of coal, i.e. 3101 Kcal/kg to 3400 Kcal/kg (G14 Grade), for the computation of the tariff of OPGC Units-I&II, both for ECR and Working Capital, with reasonable justice to both the parties during the interim period. For Other Charges of OPGC, the Water Cess and Water Charges is being reimbursed by GRIDCO as per the actuals basing on the actual consumption.
127. GRIDCO further submitted that from the Minutes of Meeting dated 03.07.2012, it is observed that in order to maintain a balance between industry use and hydroelectric power generation and to avoid under-utilisation of generating units, a policy has been framed in compliance to order of Hon'ble High Court dated 30.03.2012 vide W.P. (C) No. 8409 of 2011. To claim Energy Compensation Charges (ECC), the unit rate of energy will be Rs.3.00/kWh for the year 2005-06 which is to be escalated at the rate of 10% per annum thereafter. In its ARR application, OPGC has claimed for reimbursement of Energy Compensation Charges (ECC) for an amount of Rs. 8,42,40,037 in respect of Unit #1 and #2 for the period from 2005-06 up to March, 2019 based on Government of Odisha letter dated 31.07.2012. However, on scrutiny of bill raised by OHPC on OPGC, neither any such figure nor its detail calculation could be found from the said document. Thus, the claim lacks sufficient documents to

scrutinise and arrive at an opinion regarding efficient and optimised utilisation of water by OPGC and other modalities.

128. Further, OPGC has not sufficiently explained why the additional charges payable to OPGC for drawl of water in the form of energy compensation is to be reimbursed by GRIDCO instead of being met from O & M expenses being paid under relaxed norms fixed in the subsisting PPA. Therefore, such claims are not acceptable to GRIDCO and the OPGC may be directed to meet such expenses from its O & M expenses. Regarding reimbursement of contribution by OPGC towards creation of Water Conservation Fund as per Resolution of Department of Water Resources, Government of Odisha dated 03.11.2015, GRIDCO shall reimburse the amount as per the instalment paid by OPGC subject to necessary direction by the Commission and submission of all supporting documents in this regard.
129. Regarding penalty amount of Rs.1,87,03,456/- imposed on OPGC by Main Dam Division, Burla, Department of Water Resources, Government of Odisha pertaining to the period 12.06.2013 to 28.06.2013 (16 days) and accrued interest of Rs.6,84,35,459/-, GRIDCO shall not ever reimburse such amount which is on account of inefficiency/lacuna on the part of OPGC. Therefore, the Commission may not entertain such claims of OPGC which will impose unwarranted burden on the State consumers. GRIDCO shall reimburse the claim of OPGC subject to necessary direction from the Commission and on scrutiny of all supporting documents to be provided by the OPGC along with their claim including supporting documents in respect of recovery of ARR and tariff petition fee and publication expenses.
130. Regarding claim of additional capitalisation by OPGC from FY 2015-16 to 2021-22, GRIDCO submitted that OPGC had filed separate application under Case No.54 of 2018 for consideration of Additional Capitalisation from FY 2015-16 to FY 2018-19 and the matter is sub-judice before the Commission i.e. hearing concluded and the Order is reserved.
131. However, in the petition for determination of ARR for FY 2021-22, OPGC has considered the additional capitalisation for FY 2015-16, FY 2016-17 and FY 2017-18 as claimed in Case no. 54 of 2018 and additional capitalization for FY 2018-19 as claimed in case no. 69 of 2019 and the actual additional capitalisation for FY 2019-20, the proposed additional capitalization for FY 2020-21 and FY 2021-22.

132. Any additional capitalisation allowed to OPGC during short period of remaining life may lead to a surge in tariff of power procured from OPGC by the sole beneficiary GRIDCO and which will be ultimately passed on to the consumers of the State. OPGC may come up with a separate detailed/comprehensive application for Renovation and Modernisation of the Unit#1 and #2 as a whole, with the proposal of life extension of thermal Units #1 and #2 before the Commission, which may be duly considered along with extension of useful life of the plant accordingly. Moreover, as submitted by GRIDCO in Case No.54 of 2018, allowing Additional Capitalisation solely depends upon the status and road map of installation of Flue Gas Desulphurisation (FGD) in compliance to Environmental norms set by Ministry of Environment, Government of India vide notification dated 07.12.2015. Therefore, the Commission may not consider either the additional capitalisation claimed by OPGC or its impact on tariff for FY 2021-22.
133. GRIDCO submitted that it has considered the total entitlement of State share of power from various generating stations. The total availability of energy towards the state share arrives at 35290.03 MU with estimated cost of Rs. 10795.03 Crore. Due to surplus power after meeting the projected state demand of 27315.02 MU, GRIDCO has made provision for trading of surplus power of 7068.36 MU at an expected trading price of 213 P/U during FY 2021-22 with incremental revenue of Rs.42 Crore. The expected trading price in the energy exchange has been projected at 213.12 P/U considering the subdued trading market and the surplus capacity at national level due to decreasing demand over the last couple of the years.
134. GRIDCO submitted that it is under obligation to make payment of the fixed charges of the respective stations irrespective of energy drawal in the event of nil / less scheduling by GRIDCO and remain effective over the contractual periods as per the embedded provisions of PPAs. Accordingly, GRIDCO has considered the liability of paying the fixed costs of all the stations in the ARR for FY 2021-22. The contention of non-inclusion of Fixed Cost of the stations in the ARR shall neither waive out nor reduce the contractual obligation of GRIDCO because of earlier irrevocable contractual commitment made by the State to avail power supply to meet the long term demand over a specified period. Accordingly, the power procurement costs including both capacity charges & energy charges need to be considered by the Commission while approving the ARR & BSP of GRIDCO.

135. GRIDCO also submitted that various SERCs have allowed fixed cost of plants even with dismal PLFs due to unavailability of coal, etc. The State Regulatory Commissions such as UPERC, MPERC, and RERC are allowing the fixed charges for the stranded generating assets.

**Table-9**  
**Indicative list of plants with high variable cost and approved fixed cost**

State	Plant Name	Capacity (MW)	PLF %	Energy Purchase (MU)	Fixed Charges Amount (Rs Cr.)	Variable Charges Amount (Rs Cr.)
Uttar Pradesh	NTPC (Auraiya GPS)	213	9%	59.98	126.06	29.29
Uttar Pradesh	NTPC (Anta GPS)	91	20%	15.47	64.34	11.26
Uttar Pradesh	IPP Bajaj Energy (BEPL Khambhakhera)	90	9%	77.99	123.24	29.32
Uttar Pradesh	IPP Bajaj Energy (BEPL Barkhera)	90	11%	62.65	121.95	23.65
Uttar Pradesh	IPP Bajaj Energy (BEPL Maqsoodapur)	90	12%	58.65	122.39	22.33
Madhya Pradesh	NTPC (Kawas GPP)	140	11%	564.98	86.91	155.37
Madhya Pradesh	NTPC (Gandhar GPP)	117	4%	692.98	89.92	148.99
Madhya Pradesh	NTPC (Solapur STPS, Unit 1)	311.98	4%	-	180.82	-
Madhya Pradesh	IPP (Jaypee Bina Power)	350	18%	-	504.75	-
Madhya Pradesh	Satpura Phase III	420	34%	1,429.34	407.73	370.20
Rajasthan	NTPC (Anta GTPS)	83	3%	30.00	43.00	12.45
Rajasthan	NTPC (Auriya GTPS)	61	7%	28.00	28.00	11.20
Rajasthan	NTPC (Dadri GPS)	77	22%	116.00	31.00	48.84
Rajasthan	State Owned (KaTPP 2)	600	44%	1,196.00	635.00	324.12
Rajasthan	CTPP Unit 5	660	51%	2,281.00	725.00	485.85

136. GRIDCO further submitted that in the judgment of Hon'ble APTEL in Appeal No. 255 of 2014 in the matter of Damodar Valley Corporation (DVC) versus Jharkhand State Electricity Regulatory Commission (JSERC), regarding disallowance of power purchase cost, Hon'ble APTEL held that fixed charges need to be paid and approved even if power is not scheduled. The relevant extract of the order is submitted below:

*“As regards the Appellant’s allegation that the State Commission erred in disallowing the actual power purchase cost for FY 2013-14 which is incurred by the Appellant*

*and not allowed in the projected power purchase cost for FYs 2014-15 and 2015-16, after careful examination of this issue, we find that the Appellant has arranged on long term basis the power required under its command area from the generating units of the Central Sector as well as other generating stations and it has to determine fixed cost as per the long term PPAs for power procurement irrespective of whether the Appellant schedules the power made by these generating stations or not. Looking into this merit, we are inclined to accept the same particularly, in light of the Central Commission's Regulations which State that if the utility has been able to declare the capacity to the level as prescribed in the Regulations, the consumers have to bear the fixed charges even if they are not scheduling the power and this is in light of the fact that Appellant has tied up long term PPAs for sourcing its power requirement. Hence, we direct the State Commission to consider entire fixed cost of power purchase as determined by the Central Commission vide its different Orders from the generating stations of CPSUs and other IPPs for meeting the power obligations of the Appellant.”*

*“As regards the power purchase cost is concerned, the State Commission is hereby directed to re-determine the same keeping in view the fixed charges of the power purchase cost as approved by the Central Commission and incurred by the Appellant duly audited, should be reconsidered subject to the prudent check as advised above. Hence the present Appeal filed by the Appellant has been allowed partly on the only issue regarding the consideration of power purchase cost.”*

137. GRIDCO submitted that all types of planning to meet future demand including for transmission and generation capacity is done on the basis of capacity in MW terms and not in energy or MU terms. The Fixed Charge arising out of such tie ups is to be paid on the basis of availability factor of such tied-up capacity and not in terms of scheduled energy. GRIDCO thus requests the Commission to approve the fixed cost of all generating stations.
138. Regarding the approval of PPA for Units-III & IV of OPGC, GRIDCO has filed before OERC for the approval of the PPA vide Case No. 67/2019 and OERC's order for the same is awaited. Further, for Mangdechhu HEP, Bhutan, GRIDCO has filed for the approval of the PPA before OERC vide Case No. 61/2020 and the Commission's order for the same is awaited. Also, with respect to the PPA for Darlipalli STPS, GRIDCO has filed for the approval of the PPA to OERC vide Case

No. 65/2019 and OERC's order for the same is also awaited. GRIDCO stated that it has duly been following the principle of Merit Order Dispatch while projecting future demand & the same principle would be followed once PPAs with the above three plants are approved by the Commission.

139. GRIDCO along with the Government of Odisha, has been following up with the Central Government since 2012, for de-allocation of high cost Power. In respect of Odisha share of Power from NTPC Kanti-Bijlee, Muzzafarpur, Bihar and NTPC-Barh-I STPS, GRIDCO in close co-ordination with the Govt. of Odisha, has requested the Ministry of Power, Government of India to de-allocate the said State Share. Accordingly, Govt. of India in Ministry of Power has taken cognizance of the request and notified GRIDCO's proposal for surrender of Odisha share of power from these power stations. However, GRIDCO has proposed the Power Procurement Cost from NTPC based Thermal Power Plants at the projected Tariff for FY 2021-22 within the range of 297 P/kWh to 564 P/kWh, but not at 640 P/kWh.
140. GRIDCO has entered into PPAs to meet the long term demand with various generators. The proposition of power procurement from the Power Exchange instead of procuring costly power from the central sector looks lucrative considering the present subdued market with lower trading price, which may cater the short term demand of the state. However, the above proposition may not hold good to meet the state demand in the long run. GRIDCO functioning as the State Designated Entity is responsible for steady power supply in the state which is achieved through long term power purchase agreements.
141. GRIDCO's Pool Cost Statement for the period April'20 to Nov'20 indicating the cumulative Monthly Power Purchase Costs with Quantum & Rate of Central Thermal Stations & Central Hydro Stations along with other generators are submitted before OERC. Power purchase for the month of Dec'20 in respect of Central Thermal and Central Hydro stations is indicated hereunder:

**Table-10**  
**Power Purchase by GRIDCO from Central Generating Stations during**  
**December, 2020**

Sl. No.	Name of Central Station	Quantum purchased during Dec'20 (MU)	Rate (Paisa/kWh)	Cost of Purchase (Rs. Crore)
1	FSTPS-I&II	53.49	471.47	25.22

Sl. No.	Name of Central Station	Quantum purchased during Dec'20 (MU)	Rate (Paisa/kWh)	Cost of Purchase (Rs. Crore)
2	<b>FSTPS-III</b>	30.66	508.07	15.58
3	<b>KhSTS-I</b>	25.18	444.72	11.20
4	<b>KhSTS-II</b>	8.92	422.49	3.77
5	<b>TSTPS-I</b>	145.02	318.79	46.23
6	<b>TSTPS-II</b>	86.24	291.06	25.10
7	<b>DSTPS-I</b>	294.21	333.57	98.14
8	<b>Chukha HPS</b>	9.83	240.16	2.36
9	<b>Tala HPS</b>	2.16	216.00	0.47
10	<b>Teesta-V</b>	20.93	414.38	8.67
11	<b>Mangdechhu</b>	11.16	419.00	4.68

142. Regarding proposition of non-increase in the BSP due to surplus capacity available with GRIDCO for FY 2021-22, GRIDCO submitted that although demand for FY 2021-22 is marginally at a lower level, creating avenues for sale of surplus power through trading. As the power procurement cost comprising both energy charges & capacity charges creates contractual obligation on the part of GRIDCO to avail energy drawal in the long run interest of the state which would necessitate for implementation of cost reflective tariff. GRIDCO has tied up PPAs with existing central sector generating stations. Further, due to prevailing low demand, there is an energy surplus scenario which is expected to continue till FY 2024-25.
143. GRIDCO is trying to meet its RPO targets as set out by OERC but since the demand in the State is not high, GRIDCO now plans to meet its cost from the existing PPAs and then source any additional power from other sources to meet the state requirement. The current cost of solar power is around Rs. 3.00/unit, but the variable costs of plants like Farakka, Talcher, Kahalgaon, Barh-I are in the range of Rs. 2.07/unit to Rs. 2.87/unit. Hence, procuring power from renewable sources like solar power will prove to be a costly as compared with variable charges of central generating stations, and in turn this will help protect the consumers of the state from costly power.
144. The Generation Tariff in respect of various generators from whom GRIDCO sources power, are being approved by the State Commissions (SERCs) or the Central Commission (CERC) as applicable and also as per the provisions prevailing in the corresponding PPA. The suggestion to keep the Power Purchase Rate below the Solar

Energy Rate of SECI may not be practically possible as tariff in respect of the power stations are determined based on the relevant regulatory principles and regulations in force and also influenced by the varying prices of inputs like coal, lignite, biomass etc, which becomes the determinative price/ rate for sourcing of power from the respective stations. Further the Commission determines the BSP of GRIDCO after due scrutiny and prudence check of all the costs associated with procurement of power.

145. On the suggestions to encourage the low cost power and disallow purchase of high cost power, GRIDCO submitted that at the time of signing the PPAs with central generating stations, there was a deficit situation in the State and also the rates at the Exchanges were high, which facilitated for selling of any additional surplus power to the Exchanges to earn revenue for GRIDCO. But currently, the demand has not risen as expected as per the 17th EPS. With expected CoD of Barh - I, North Karanpura and Darlipalli, GRIDCO is estimated to be in power surplus position. Further, Energy Charge Rate (ECR) depends on the GCV of coal, price of coal, etc. Fixed Charges are decided as per yearly escalation and CERC norms. It is not in the jurisdiction of GRIDCO to decide the prices, thus variable charges of expensive stations are an uncontrollable factor.
146. GRIDCO submitted that transmission charges are calculated based on contracted transmission capacity in MW. The detailed calculations of energy drawl are provided in technical formats TRT-12. The actual energy availability is considered based on PLF considered ranging from 55-85%. Thus, energy availability and energy drawl for transmission charges will not be equal. Further, the Transmission Loss prior to implementation of CERC (Sharing of Interstate Transmission Charges and Losses) Regulations, 2020 was in the range of 1.47% to 2.02% during the period from Apr'20 to Oct'20. Consequent to the implementation of the new Regulations, 2020, the loss has been determined on PAN India basis with continuous upward increasing trend i.e., 3.54% during the 1st week period of Nov'2020 which has reached at 3.92 % during the 1st week of Dec'20, with a 0.38% increase in 5 week period. The above increased quantum of loss has been allocated to GRIDCO for the central sector power. The loss rate may further increase during FY 2021-22. Therefore, GRIDCO prayed to consider for allowing the central sector loss as per the new Regulations being implemented with effect from 1st Nov'2020 and also the latest transmission loss, which will be

determined by NLDC, prior to approval of ARR of GRIDCO for increased power procurement costs from Central Generating Stations.

147. GRIDCO further submitted that in real time, GRIDCO try to match demand of power with supply and back down stations when there is limited demand but stations cannot be backed down beyond a certain minimum level due to technical constraints. Further, sale through exchange is also undertaken whenever the prevailing market rates makes an economically strong case to sell such stranded power. GRIDCO submitted that the rates discovered in the power market are of dynamic nature and it sells surplus power in the power market at the rates prevailing in the market at that specific time. The power market works as per demand-supply scenario.
148. Gross power purchase cost projected for FY 2021-22 is 305.89 P/U including variable charges of 162.53 P/U. GRIDCO has projected to sell 7068.36 MU at the rate of 213.12 P/U. GRIDCO submitted that correct yardstick to measure benefit or loss is to do analysis of marginal cost against marginal revenue instead of average cost analysis, i.e. compare variable cost of power with the price of power in the exchange as GRIDCO has to bear fixed cost even if it does not purchase power from stations. Gross variable charges for FY 2021-22 for State demand is 162.53 P/U and Net variable cost of power after reducing sale of surplus power 151.34 P/U only. GRIDCO has planned to sell such surplus power in exchange when variable cost is lower than the price in the exchange which would result in net marginal benefit of Rs 41.71 Cr to be passed on to consumers of the State by way of reduction in special appropriation claim of GRIDCO as directed by the Commission in previous orders. If GRIDCO does not sell power in exchange, then GRIDCO would have to bear fixed cost but would not be able to claim benefit of marginal revenue from exchange.
149. GRIDCO is contractually obliged to various generators through long term PPA to procure power for meeting peak demand of the State in the long run irrespective of the energy consumed on year to year. In the recent years due to lower demand coupled with surplus capacity in the State as well as the country as a whole, the energy demand has sharply declined, resulting in surplus power capacity with consequential sharp fall in the trading price. Thus, GRIDCO requested the Commission to approve sale of surplus power as projected by GRIDCOO and pass benefit of Rs 41.71 Cr from sale of such power to consumers of the State.

150. GRIDCO submitted that injection of inadvertent power from CGPs or any other sources is levy of additional cost due to imposition of penalty on GRIDCO as per the DSM Regulations. As per the order of the Hon'ble APTEL dated 08.05.2017 in Appeal No. 120 of 2016 & IA No. 272 of 2016, any inadvertent power injected to the system without scheduling to be treated as free power and attracts no cost. The APTEL in its order stipulates that "the generator can't pump electricity into the grid without having consent/ contractual agreement with the distribution licensee and without approval / scheduling power by the SLDC. Injection of such energy by generator is not entitled for any payments". Regarding proposition for inclusion of inadvertent /infirm power to the tune of at least 1000 MU with cost as suggested by the objector, is violation of the said order APTEL.
151. In case of Power Procurement Costs for M/s Vedanta Ltd. For FY 2021-22, GRIDCO submitted that M/s Vedanta Ltd. has not yet provided the data in Revised Form-15 consisting of TM & IM data of Coal for calculation of "As received" GCV of coal for the period from April'2020 to October'2020. Therefore, GRIDCO has also not considered the 'As Received' GCV for calculation of ECR and considered the provisional ECR of Vedanta as per the ARR Order of GRIDCO for the FY 2020-21. All other points raised by Vedanta are extraneous to the ARR application of GRIDCO and shall be addressed through Case no 20 of 2020 during finalization of Generation Tariff of Vedanta for the period from 2019-20 to 2023-24 and are subjected to prudence check by the Commission.

**Loan / pass through expenses**

152. GRIDCO, a deemed trader to service the creditors of DISCOMs, has been mandated by the State Government as the "State Designated Entity" to avail the State share of power from generators to meet the power demand of the State by supplying the power in bulk to the four DISCOMs. Since the DISCOMs were not fully clearing the dues of GRIDCO effectively within due time and also due to the revenue gap because of non-approval of the cost reflective tariff by the Commission over the years, GRIDCO has been compelled to arrange term loans for payment of power purchase dues to avail rebate. Restricting power supply to the DISCOMs because of non-payment of BSP dues by DISCOMs would certainly result in "Power Regulation" to the State which is being avoided by GRIDCO over the years by managing the payment through its own finances including the borrowings with Govt. Guarantee at competitive financing cost.

153. After vesting of erstwhile CESU & WESCO Utility, SOUTHCO Utility with effect from 1st June 2020 & 1st Jan'2021 respectively by the Commission, the above three utilities have been privatized with transfer of day to day management control with 51% shareholding in the respective DISCOMs for bringing efficiency in the distribution sector. The Commission in the vesting order has stipulated for recovery of arrear dues from consumers over stipulated period for settlement of past dues of GRIDCO prior to vesting of the Utility. GRIDCO is quite optimistic with the recent privatization and anticipates improvement in the overall operational performance of the DISCOMs in the coming future with better financials resulted in settlement of Past dues of GRIDCO.
154. GRIDCO has submitted pass through cost of Rs. 777.66 crore in its ARR application as the same has been incurred towards additional cost of power procurement from OPGC, NTPC Central Hydro Station, SGEL arrear charges due to consequent upon the revision of tariff, STU charge of other state towards RE power and differential costs claimed by the generators, previously not approved by the Commission.

**Employee Cost, A&G Expenses, and Return on Equity**

155. The details of projection of GRIDCO towards Employees Cost have been furnished in prescribed Form-9 along with the ARR & BSP application for FY 2021-22. Employee cost of Rs. 18.80 crore has been projected for various components including salary to regular employees, outsourced personnel, terminal benefits towards leave salary and pension contribution of the existing employees, balance 7th pay arrear. DA @ 28% of basic pay has been considered for FY 2021-22. During Nov'2020, ten nos. of regular employees have joined GRIDCO with deputation from OPTCL. Further around six executives are expected to join shortly to fill-up the existing vacancy.
156. With regard to the Administrative & General Expenses, GRIDCO submitted that the details of projection towards A & G Cost have been furnished in OERC Form-11. Out of the total projected expenses of Rs.7.33 Crore, the major expenses considered are towards Annual License Fees of Rs.1.90 Crore, Legal Expenses Fees of Rs. 2.11 Crore and the balance expenses to the tune of Rs. 3.32 crore, which are quite minimal with respect to the annual turnover and the normal functioning of GRIDCO.

157. GRIDCO stated that its projections on Depreciation and R&M Expenses are based on realistic assessments and are quite minimal and hence, the same may be considered & approved by the Commission.

**Return on Equity**

158. GRIDCO has claimed RoE of Rs. 92.27 Crore @ 16% on the equity base of Rs 576.71 Cr as per the regulations framed by the Commission. The Commission may consider to allow the Return on Equity @16% on the “Paid-up Equity” as per the relevant Regulations in place as applicable to other utilities as the same will enable GRIDCO to meet any eventualities.
159. With regard to GRIDCO’s net worth, GRIDCO submitted that the same has been turned negative due to increased liabilities arising out of the outstanding power purchase dues payable by the DISCOMs to GRIDCO and non-cost reflective tariff over the years.

**Revenue Gap and BSP**

160. In respect of losses of GRIDCO to be borne by the State Government and no burden to be passed on the consumers, GRIDCO stated that such issues are beyond its purview to comment upon. OERC and the State Govt. may consider for deciding upon the above suggestion.
161. On the matter of reduction of power purchase cost and thereby the Bulk Supply Tariff, GRIDCO submitted that GRIDCO always strives to undertake round the clock efforts for trading of surplus power as available from time to time in order to maximize surplus earning and optimized the fixed cost burden which would reduce the burden of power tariff on the consumers of the State. However, due to subdued power market and the surplus capacity throughout the country in the recent years, the scope for adequate earning through power trading has been limited. Nevertheless, GRIDCO is hopeful that with the State share of additional power flowing into GRIDCO’s basket in the coming future, GRIDCO can best hope that the Odisha Power Sector will turn around to have un-interrupted power supply at the most competitive price.
162. GRIDCO submitted that the objector has calculated per unit cost taking energy purchase as denominator which is wrongly highlighted. However, BSP is calculated taking energy sales as denominator and not energy purchased. The per unit BSP realization as approved in the BSP order by Commission at 270.47 P/U for FY 2020-

21 (271.09 P/U from 01.04.2020 to 30.9.2020 & 287.70 P/U from 01.10.2020 to 31.03.2021) has not recovered the costs incurred by GRIDCO during the aforesaid period. Higher BSP is also due to lower sales growth considering impact of Covid-19 and economy is still recovering from after-effects of both demand and supply disruption which is an uncontrollable factor.

**Other issues**

163. GRIDCO submitted that the contention of development of mini hydel project is beyond the purview of GRIDCO.
164. Regarding escrow relaxation and non-payment of arrear dues by DISCOMs to GRIDCO and consequent of non-imposition of penalty by GRIDCO on the DISCOMs, GRIDCO submitted that it has been reflecting such receivables in its Books of Accounts and issues invoices to the DISCOMs by levying Delayed Payment Surcharge (DPS) on the unpaid amount as per the relevant Orders of OERC as applicable for the respective financial year.
165. GRIDCO submitted that distribution segment is the important link in the Power Sector Value Chain. Reduction of AT&C losses by the DISCOMs has not been significant as compared to the bench-marks fixed by the Commission in the past years. With regard to the outstanding BSP Dues payable by DISCOMs to GRIDCO, GRIDCO has made constant follow up with them for settlement of outstanding dues.
166. The Commission in the vesting order of erstwhile CESU, WESCO and SOUTHCO Utilities has stipulated for recovery of arrear dues from consumers over stipulated period for settlement of past dues of GRIDCO. GRIDCO is quite optimistic with the recent privatization and anticipates improvement in the overall operational and financial performance of the DISCOMs in the coming future with better financials resulted in settlement of past dues of GRIDCO.
167. GRIDCO is aware of the mechanism submitted by IEX as regards to the substitution of power from high cost ECR based stations with the low cost power available in the market. However, the energy rates in the Power Exchange usually remains low during the off-peak hours of the day as the energy demand in the market also remains low and also during these hours the demand of Odisha falls. Though the power from costlier ECR based CGS is surrendered as per merit order, power from the same gets forced scheduled. Therefore, purchase of power from Power Exchange shall

negatively impact GRIDCO's portfolio. To suffice the above, the real time situation basis may be considered by the Commission that presently the rates in the Exchange are remaining low from 00:00 hrs to 06:00 hrs, i.e. the average rate during the said hours in Day Ahead Market (DAM) of IEX is hovering around Rs. 2.00/ kWh. During this period, the State also experiences a fall in demand thus resulting in huge surplus availability. Consequently, power from costlier ECR based thermal power stations is being surrendered as per Merit Order, hydro power generation is being ramped down and in spite of the low rates, GRIDCO has been selling power in DAM from the available surplus pool which comprises of low cost ECR based thermal power stations such as NTPC Darlipali, GKEL etc. which otherwise would have been surrendered to avoid any penal injection to the central grid. Thus, chances of substitution of power from high cost ECR based station with the low cost power available in the Exchange is quite bleak.

168. GRIDCO submitted that since at present GRIDCO is experiencing a power surplus position, it is selling its surplus power across different platforms of the power exchanges, as and when opportunity arises to boost up its revenue. Further, purchase of power from the power exchanges can only be considered when the rates prevailing in the exchange is less than the variable cost of the generators.
169. GRIDCO has executed long-term RE contracts (Solar, Wind, Small Hydro, Biomass) for procuring of RE power towards fulfilling RPO, at very competitive rates. With introduction of G-TAM w.e.f 21<sup>st</sup> August 2020, GRIDCO is exploring the possibility for procuring power through the short-term contract route for meeting the pending RPO targets. However, now the tariff of long-term RE power is more competitive than the short-term RE power. Even if G-TAM is available in four contracts, viz Intra-day, Day Ahead Contingency, Daily & Weekly, the quantum available for purchase is very less. It is always desirable to source around 10% power through short-term route. G-TAM for buying and selling of RE power towards RPO is certainly an alternate for sourcing of RE but it is at a very nascent stage now and can be utilized more in future, based on the RE quantum and competitive tariff. It is expected that G-TAM market will grow and can be utilized commercially to procure both solar & non-solar power in future.
170. The Annual Reports of GRIDCO for FY 2018-19 and FY 2019-20 which encompass the Audited Annual Accounts for the respective years have already been submitted to

the Commission separately while complying to OERC queries on the ARR & BSP Application for FY 2021-22 along with the month-wise Cash Flow statement of GRIDCO for FY 2020-21 (Up to Nov'20). Since GRIDCO is a State PSU, its accounts are being audited as per the provisions of the Companies Act as well as by the Comptroller & Auditor General (C & AG) of India.

171. Regarding Business Plan, GRIDCO has stated that it is an “Aggregator” with its role as “State Designated Entity” to facilitate power procurement to meet the entire power requirements of the four DISCOMs in Odisha. OERC has been approving the Business Plan of the DISCOMs 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 four DISCOMs. Even though the estimated power requirement is approved by the Commission for four DISCOMs 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 the required power at regulated price in time so that the interest of the State consumers is protected. Thus, GRIDCO to have a separate Business Plan of its own will be self-defeating in nature and therefore, has been shelved in the greater interest of the State.
172. GRIDCO has stated that the Truing-Up exercise pertaining to GRIDCO has been done till FY 2014-15 by the Commission along with the ARR and BSP order for FY 2016-17. GRIDCO has already filed the Truing-Up applications before the Commission till FY 2018-19 along with the Audited Accounts for FY 2015-16, FY 2016-17, FY 2017-18 & FY 2018-19. For the Truing-up applications of GRIDCO for FY 2015-16, FY 2016-17, FY 2017-18, the public hearing has been completed by OERC and for FY 2018-19, the public hearing is scheduled to be held on 13.04.2021.
173. Regarding submission of performance review related documents; GRIDCO submitted that the information documents in respect of its performance review are being filed as directed by the Commission from time to time. Data on performance review of GRIDCO for FY 2019-20 and first half of the FY 2020-21 (Apr'20 to Sep'20) have been submitted before the Commission on 30.06.2020 and 22.12.2020 respectively and the Commission has also conducted the review of the performance of GRIDCO on 01.07.2020 and 23.12.2020 respectively. However, the information on performance review of GRIDCO including that of other power utilities of the State is available in the Commission’s website, [www.orierc.org](http://www.orierc.org) for reference of the public.

174. Regarding detailed statements / bills in respect of power procurement from CGPs and RE sources, GRIDCO submitted that the power procurement from such sources is nil during the FY 2020-21, thus raising of bill by the CGPs does not arise. The power procurement bills for procurement of power from RE sources have been submitted.
175. The reduction of AT&C Losses by the DISCOMs has not been significant as compared to the bench-marks fixed by the Commission in the preceding years. With regard to recovery of dues, GRIDCO has made constant follow up for settlement of outstanding dues.
176. GRIDCO submitted that an amount of Rs.5963.21Crore is receivable from the four DISCOMs under different Head of Accounts. Taking into account BSP billing up to Nov'2020 and payments up to 31.12.2020, the Status is given as detailed below.

**Table-11**  
**GRIDCO's Receivable from DISCOMs**

Particulars	(Rs. in Crore)					
	WESCO	NESCO	SOUTHCO	CESU	TPCODL	Total
BSP dues up to 31.12.2020	647.12	730.88	787.18	844.39	381.44	3391.01
Securitized dues upto 31.12.2020	180.55	207.67	167.60	750.78		1306.60
DPS payable upto 31.03.2005	58.72	87.20	32.02	526.41		704.35
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>898.49</b>	<b>1081.40</b>	<b>1163.16</b>	<b>2414.43</b>	<b>381.44</b>	<b>5938.92</b>

177. Regarding the query raised by the objector about the action taken by GRIDCO for recovery of dues, GRIDCO submitted that to ensure the recovery of dues, the revenue of DISCOMs are escrowed where Union Bank of India is acting as the Escrow Agent. DISCOMs performance is being monitored at different levels to improve their operational and commercial efficiency and settlement of past BSP dues.
178. The year-wise status of power trading by GRIDCO from FY 2010-11 to FY 2020-21 (April'20 to Decemebr'20) is furnished in the Table below:

**Table-12**  
**Power Trading by GRIDCO from FY 2010-11 to FY 2020-21 (April-Dec.'20) (Provisional)**

Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21 (Apr'20- Dec.'20)
Energy	64.20	40.33	810.68	1565.42	974.71	384.74	321.10	187.59	731.09	1727.91	4216.63

(MU)											
Power Trading (Rs. Cr.)	32.05	15.82	414.59	664.60	448.107	155.11	89.33	44.57	379.21	577.95	1066.06

179. Regarding preparation of a “Vision Document” by GRIDCO in respect of Energy Conservation in the State, GRIDCO submitted that GRIDCO being a Bulk Purchaser / Bulk Trader of power from various generators within and outside the State and at the same time being an intermediary Bulk Supplier of power to the four DISCOMs in the State, there is no scope with GRIDCO to take steps for energy conservation. However, GRIDCO submitted that energy conservation as an effective tool can be best practiced in the retail segment by the DISCOMs and also within the domain of the generators.

**OBSERVATIONS OF THE STATE ADVISORY COMMITTEE (Para- 180)**

180. The State Advisory Committee (SAC) was convened on 22.02.2021 through video conferencing to discuss about the proposed ARR and Tariff Applications of different utilities in the state for FY 2021-22. 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 role of GRIDCO needs to be revisited and redefined by OERC. It is not clear whether GRIDCO is a power purchaser, trader or collector. Except five States, other States in India do not have a similar organization. It appears that GRIDCO is coming to the rescue of some of the non-payment DISCOMS, which in long run may be a non-sustainable business model.
- (b) There is an excess availability of about 9000 MU with GRIDCO and GRIDCO is compelled to sell it at a price lower than BSP. This excess power can be utilized to reduce the burden of HT and EHT customer and promote consumption. It could also be utilized for the agriculture sector. Reduction in Industry tariff and an increase in LT tariff may be beneficial. Industry should get a special tariff and Government should give subsidy to LI points. Energy assets in Odisha should be earning net revenue for the State rather than being a liability.
- (c) There should be more focus on solar and other renewable power as Odisha is lacking green initiative. Solar/Micro-Hydro/Micro-Grid/E-mobility/Storage scenario is dismal in the State and there is no project in areas of advanced power transmission and distribution. Wind and Solar generation should be promoted and the transmission system should be capable enough for smooth integration of

renewable energy. The solar firm initiative, the pumped storage initiative, KUSUM scheme, and micro hydro initiatives need to be aggressively pursued. Though pumped storage is expensive, every effort should be made ensuring returns on investment, since Odisha has surplus power but no load growth. There should be effective implementation of KUSUM Scheme and renewable power should also be given to industries.

- (d) There should be review for utilisation of surplus power from CGPs and IPPs by cutting down purchase of costly power from central sector. Technical focus on reducing base cost of power generation is required.
- (e) The gap of Rs.250 cr. in ARR of GRIDCO could not be realised because of COVID situation last year which would be passed on during the ensuing year. Further, the power purchase price of OHPC and NTPC is going up and its effect on BSP will be about 9 to 10 paise/unit. This will put a pressure on the consumers of the State. The equity to DISCOMs will also entail some commitment by GRIDCO. Use of trading revenue by GRIDCO to meet its deficit is not possible now, hence fixed cost of the generators have to be met as per agreement made by GRIDCO. In addition there should be robust mechanism to collect arrears of DISCOMs and also the surplus cash of DISCOMs should be passed on to GRIDCO.
- (f) Since there was an increase in tariff in October 2020, it may be too early to impose another increase for the FY 2021-22.
- (g) Director (Finance), GRIDCO stated that the GRIDCO is responsible for energy security in the State, but though there is surplus power of about 10,000 MU, demand in power markets is low. While GRIDCO has fulfilled its role as a trading utility it is not making profit due to the fall in demand. The gap in ARR is due to non-payment of DISCOMs which is being funded through loan by Government guarantee. GRIDCO is trying to address these issues by renegotiating interest rate on loans, merit order dispatch, optimisation of procurement and phasing out of the old generating stations. GRIDCO also has planned to meet 11% RPO obligation and has tied up 1000 MU of Renewable Energy.

- (h) The Chairperson informed that last year tariff order of OERC was about to be issued in March, 2020 when COVID lockdown took place and the order was issued with no hike in tariff. When consumption picked up in the month of September, 2020 hearing was held and tariff was raised by 20 paise and still Rs.250 crores remains uncovered in the ARR of GRIDCO. With regard to the ARR and Tariff hearing, he said it is an annual exercise and private companies have nothing to do with that. As per the schedule of privatisation, he said that Tata Power had taken over management of CESU on 1<sup>st</sup> June, 2020, SOUTHCO & WESCO on 1<sup>st</sup> Jan, 2021 and NESCO would be privatised soon. He said that GRIDCO has to pay for power to the Central Generating Companies and default of payment would lead to deduction of Central Share of Taxes. In order to secure payment of GRIDCO Letter of Credit of two months billing has been opened by the DISCOMs with GRIDCO. He added that a ten year trajectory of loss reduction has been given to the private utilities as loss goes down, tariff will also comedown. Regarding the contention that Odisha is surplus in power and therefore, there is no need to revise tariff, he stated that while this is assured through PPAs, it carries a cost. Though the State's requirement is about 28000 MU, nearly 38000 MU is available and we have to pay the fixed cost for it. GRIDCO has sought for about Rs.1600 crore more in ARR for FY 2021-22 over FY 2020-21 towards fixed cost which will add around 80 p/u in tariff.
- (i) The Chairperson also noted that SAC members had raised about cost based tariff and subsidy and if the Government wishes to give subsidy to remove the cross subsidy, they may submit it in writing. He also pointed out that HT/EHT industries are going for open access or CGPs. As a result the volume of sales is going down putting pressure on the rest of the consumers. He asked the Government of Odisha to respond to it.

**VIEWS OF THE GOVT. OF ODISHA (Para- 181)**

181. Govt. of Odisha vide their Letter No. 3333, dated 24.03.2021 have communicated their views/suggestions on various issues involving tariff setting for FY 2021-22 as follows:

**(a) Keeping in abeyance of up-valuation of assets**

Regarding the issue of up-valuation of assets pertaining to OPTC'L, Generators and other licensees, the Government for the time being agree with the views of the Commission to keep in abeyance the up-valuation of assets like previous years. Considering the present difficult situation, the Govt. agrees to extend the status-quo on up-valuation for 5 years from FY 2021-22 to 2025-26.

**(b) Provision of subsidy under Section 65 of the Electricity Act, 2003**

In view of the increasing power demand, massive investments have been made by the State Government for up gradation of transmission and distribution systems which is primarily in the nature of capital subsidy to keep the tariff low for all categories of consumers. The Government, therefore, do not agree to provide any subsidy for any class of consumers under Section 65 of the Electricity Act, 2003.

**(c) Return on non-cash equity infusion of Rs.647 Cr. in OPTCL**

Government vide its notification No. 11080 dt. 31<sup>st</sup> December 2020 have converted the Bonds of Rs. 400 Crore and interest outstanding of about Rs. 247 Crore to equity share capital investment of Government in OPTCL. However, in order to bring down its effect on the tariff, OERC may not allow any return on this equity for the time being. However, OPTCL may not be allowed to incur losses and requisite provision may be made for proper upkeep of the transmission assets.

**COMMISSION'S OBSERVATIONS AND ANALYSIS OF GRIDCO'S PROPOSAL (Para 182 to 375)**

**Legal Status of GRIDCO**

182. 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.

183. On detailed scrutiny and examination of the Aggregate Revenue Requirement and Bulk Supply Price Application of GRIDCO for FY 2021-22 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 2021-22**

184. The Commission, for determination and approval of the ARR of GRIDCO for FY 2021-22, 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.
185. 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 2021-22 using the following principles.
186. 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.
187. All the liabilities of the DISCOM Utilities payable to GRIDCO are in a back-to-back arrangement with various lenders, financial institutions and GRIDCO continue 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 certain circumstances forms a part of the BSP and is being paid by GRIDCO.

188. 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 arising out of non-payment of dues by the DISCOM Utilities in time. 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.
189. The Commission has scrutinised in detail the energy requirement proposed by the DISCOM Utilities for FY 2021-22. 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 2021-22, which has been calculated on normative loss basis. The quantum of surplus energy may increase or reduce basing on hydrology and/or projected drawal from IPPs and central sector, though this has been estimated for the ensuing year on normative basis.

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

190. 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.
191. GRIDCO Ltd. as well as DISCOM Utilities have submitted their ARR applications for FY 2021-22 to the Commission for approval. In their applications, the Distribution

Companies have furnished projections for drawal of power from GRIDCO for FY 2021-22 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 basing on the quantum of present drawl of power and expected additional load growth during FY 2021-22.

192. The quantum of power to be purchased by the four Distribution Utilities during the FY 2021-22 has been assessed and approved by the Commission while determining their Revenue Requirement and Tariff in Case Nos. 78/2020 (TPCODL), 76/2020 (NESCO), 75/2020 (WESCO/TPWODL) and 77/2020 (SOUTHCO/TPSODL), following the provisions in the existing Regulations. The Commission has approved the quantum of power to be purchased for the FY 2021-22 relating to TPCODL, NESCO, TPWODL and TPSODL as 9290 MU, 5880 MU, 8600 MU and 4100 MU respectively adding to 27870 MU for all the DISCOMs.
193. The Commission has approved 3% transmission loss in the OPTCL system for the FY 2021-22 and has provided the same in the OPTCL tariff order for the FY 2021-22 passed in Case No. 73 of 2020.
194. Having determined the quantum of power purchase for the DISCOMs, the Commission has estimated the quantum of energy lost on account of transmission at EHT within the State for delivery to the DISCOMs. The Commission has taken into account the sale of emergency power to CGPs and approves the same at 60 MU for 2021-22 based on the submission of GRIDCO. The actual sale of 32.03 MU to the CGPs (NALCO & IMFA) towards emergency power during the first six months of the current FY 2020-21 has been taken into consideration. The details on the estimated requirement of power purchase for use within the State is indicated in the table below:

**Table –13**  
**Purchase of Power by GRIDCO for State Use for FY 2021-22**  
**(In MU)**

<b>Name of the DISCOMs</b>	<b>Commission's Approval for FY 2020-21</b>	<b>GRIDCO's Proposal in ARR for FY 2021-22</b>	<b>Commission's Approval for FY 2021-22</b>
TPCODL	9470.00	9195.00	9290.00

Name of the DISCOMs	Commission's Approval for FY 2020-21	GRIDCO's Proposal in ARR for FY 2021-22	Commission's Approval for FY 2021-22
NESCO	6570.00	5800.00	5880.00
WESCO/TPWODL	8000.00	8250.00	8600.00
SOUTHCO/TPSODL	4050.00	4070.00	4100.00
<b>TOTAL DISCOMs</b>	<b>28090.00</b>	<b>27315.00</b>	<b>27870.00</b>
CGP	60.00	60.00	60.00
<b>TOTAL SALE</b>	<b>28150.00</b>	<b>27375.00</b>	<b>27930.00</b>
Transmission loss at EHT in MU (DISCOMs Purchase only)	868.76 (@ 3.00% Transmission loss)	846.65 (@ 3.00% Transmission loss)	861.96 (@ 3.00% Transmission loss)
<b>Total Purchase</b>	<b>29018.76</b>	<b>28221.65</b>	<b>28791.96</b>

195. The Commission has approved the energy drawal by the DISCOM Utilities for FY 2021-22 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**

196. GRIDCO in its filing has submitted that the total estimated SMD of the State for the FY 2021-22 is 4978 MVA per month. The details of SMD approved by the Commission for FY 2020-21, highest actual SMD which has occurred during first six months of FY 2020-21 and the projection of GRIDCO for FY 2021-22 are given below:

**Table- 14  
DISCOM-WISE Projection of SMD for FY 2021-22  
(MVA/Month)**

DISCOM Utility	OERC approval for FY 2020-21	Highest SMD recorded during FY 2020-21 (Apr.'20 to Sept'20)	DISCOMs Projection of SMD for FY 2021-22	GRIDCO's Projection of SMD of DISCOMs for FY 2021-22
TPCODL	1670	1532	1946	1946
NESCO	1130	981	1100	1100
WESCO/TPWODL	1300	1235	1488	1488
SOUTHCO/TPSODL	680	595	700	700
<b>State SMD</b>	<b>4780</b>	<b>4139</b>	<b>4978</b>	<b>4978</b>

197. GRIDCO has submitted that the SMDs recorded for April to September, 2020 was 4139 MVA against the SMD of 4337 MVA recorded in FY 2019-20. The decreased in SMD in April to September, 2020 is due to reduction in industrial and commercial load in the system on account of Covid-19 situation. The SMD in October, 2020 to March, 2021 is estimated to grow upto 4292 MVA. With opening up of the economy, the industrial demand is likely to increase and the SMD for FY 2021-22 is expected to reach at 4978 MVA as projected by the DISCOMs.
198. 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'20 to Dec'20 as given in the table below:

**Table - 15**  
**Demand in MVA during 2020-21 (Upto Dec' 20)**

	<b>TPCODL</b>	<b>NESCO</b>	<b>WESCO/TPWODL</b>	<b>SOUTHCO/TPSODL</b>	<b>Total</b>
<b>Apr-20</b>	1286.73	721.85	1021.29	527.98	3557.85
<b>May-20</b>	1439.31	834.59	970.24	558.34	3802.48
<b>Jun-20</b>	<b>1531.83</b>	836.70	1138.57	557.16	4064.26
<b>Jul-20</b>	1499.31	840.27	1253.85	565.23	4158.66
<b>Aug-20</b>	1443.73	<b>980.50</b>	1076.49	578.98	4079.71
<b>Sep-20</b>	1342.46	732.85	<b>1422.64</b>	<b>594.58</b>	<b>4092.53</b>
<b>Oct-20</b>	-	786.20	1181.06	578.87	2548.13
<b>Nov-20</b>	-	680.28	1110.65	576.09	2367.02
<b>Dec-20</b>	-	652.06	1104.50	568.74	2325.30
<b>Average (4/20 to 12/20)</b>	1423.90	785.03	1142.14	567.33	3918.40

199. It is observed from the above table that the summation of demand has fluctuated from month to month and has reached a peak of 4092.53 MVA in the month of Sept, 2020. However, the sum of the maximum demand of each DISCOM Utilities comes to 4529.55 (TPCODL- 1531.83 + NESCO- 980.50 + WESCO/TPWODL- 1422.64 + SOUTHCO/TPSODL- 594.58) during the period from April to December, 2020.
200. The Commission analyzed the demand pattern of DISCOM Utilities during the current FY 2020-21 (upto December, 2020) and observed that the Average SMD of the DISCOMs has reduced from the approved SMD for the FY 2020-21. After recasting the estimated requirement of power, it is observed that due to normalcy in

industrial load after COVID-19 situation and the scheme for electricity to every household, there is likely increase of additional requirement of about 3660.23 MU by the DISCOMs during FY 2021-22 over the FY 2020-21 (prorating the actual upto December, 2020). Thus, the matching MVA requirement works out to be 464.26 MVA. So, the Commission has estimated the Demand at 4993.81 MVA for all the DISCOMs combined taking the maximum demand during April, 2020 to December, 2020 plus the estimated demand on account of additional load growth during FY 2021-22. The details of estimation of SMD for the DISCOMs are given in the table below:

**Table - 16  
Demand in MVA for FY 2021-22**

DISCOMs	OERC Approval for 2020-21	Proposal by DISCOMs for 2021-22	Proposal by GRIDCO for 2021-22	Average SMD during 4/20 to 12/20	Maximum SMD during 4/20 to 12/20	Additional Load growth as estimated for 2021-22 (MU)	Additional load growth converted to MVA at 0.9 power factor	Maximum SMD during 4/20 to 12/20 + Additional load growth in MVA	OERC Approval for 2021-22
<b>TPCODL</b>	1670.00	1946.00	1946.00	1423.90	1531.83	1164.33	147.69	1679.52	1680.00
<b>NESCO</b>	1130.00	1100.00	1100.00	785.03	980.50	1026.85	130.24	1110.74	1100.00
<b>TPWODL</b>	1300.00	1400.00	1488.00	1142.14	1422.64	929.03	117.84	1540.48	1540.00
<b>TPSODL</b>	680.00	700.00	700.00	567.33	594.58	540.02	68.50	663.08	700.00
<b>All Odisha</b>	<b>4780.00</b>	<b>5146.00</b>	<b>5234.00</b>	<b>3918.40</b>	<b>4529.55</b>	<b>3660.23</b>	<b>464.26</b>	<b>4993.81</b>	<b>5030.00</b>

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

201. Considering the SMD in different months of FY 2020-21 and the additional load projected by the DISCOMs and the proposal of GRIDCO, the SMD for 2021-22 has been fixed at 5030 MVA, 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**

202. The details of energy available to GRIDCO from various power stations of OHPC have been dealt in Case No. 70/2020 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 2021-22 are given in the table below.

**Table –17**  
**Drawal from State Hydro Stations (in MU)**

Source of Generation	FY 2020-21	FY 2021-22	
	Commission's Approval	GRIDCO's Proposal	Commission's Approval
OHPC (Old Stations)	3676.86	3660.26	3676.86
Upper Indravati	1942.38	1942.38	1942.38
Machhkund	262.50	259.88	262.50
<b>Total Hydro</b>	<b>5881.74</b>	<b>5862.52</b>	<b>5881.74</b>

203. 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 TPSODL should co-ordinate to maximise the drawal from Machhkund in consultation with Government of Odisha whenever necessary.

**IB Thermal Power Station of OPGC**

204. 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 2021-22, GRIDCO has projected to procure the net energy of 2726.34 MU from the existing Units (I & II) of OPGC based on the generation plan submitted by OPGC. The Commission observed that net energy generation of OPGC comes to 2280.50 MU considering the normative auxiliary energy consumption of 9.50% and PLF of 68.49% as per PPA. However, as per the generation plan of OPGC for the FY 2021-22 net energy availability to GRIDCO is estimated at 2726.34 MU from Units-I & II of its IB Thermal Power Station considering PLF of 81.88% and normative auxiliary consumption of 9.50%. Accordingly, the Commission approves the net drawal of 2726.34 MU from Units-I & II of IB Thermal Power Station of OPGC for the FY 2021-22 for determination of ARR and BSP of GRIDCO as proposed by GRIDCO based on the generation plan of OPGC.

205. Further, GRIDCO has submitted that OPGC has projected net export of 5687.46 MU to GRIDCO during FY 2021-22 from its expansion Units- III & IV (2x660 MW) for contracted capacity of 75% considering PLF of 70.11% and auxiliary consumption of 6.30%. However, GRIDCO has estimated a drawal of 5700.21 MU from OPGC

Units-III & IV at 75% contracted capacity considering PLF of 70.11% as projected by OPGC and auxiliary consumption of 6.25% based on the norms of OERC Tariff Regulations for the generating units above 600 MW.

206. The Commission observed that Department of Energy, Government of Odisha, vide its Notification No. 10485 dated 20.12.2018, have enhanced the contracted capacity of OPGC expansion project Units-III&IV (2x660 MW) from 50% to 75% of the installed capacity for the period from the COD of the station to 31.03.2023 and 100% w.e.f. 01.04.2023 till completion of 25 years i.e. upto 31.03.2048. Accordingly, GRIDCO has entered into a supplementary PPA with OPGC on 24.01.2019. Now GRIDCO has proposed to procure 5700.21 MU (75% of the estimated net energy sent out) from the OPGC expansion project (Unit-III & IV) during the FY 2021-22 considering auxiliary consumption of 6.25% and PLF of 70.11% as projected by OPGC. The Commission accepted the proposal of GRIDCO for availability of 5700.21 MU from OPGC Unit-III & IV towards 75% State share. The Commission has approved a provisional a tariff of 309 P/Kwh for procurement of power from Unit-III & IV of OPGC for the purpose of Computation of ARR of GRIDCO. However, considering the merit order principle, the Commission approves the drawal of 4208.22 MU from OPGC Unit-III & IV during the FY 2021-22 for computation of ARR and BSP of GRIDCO.

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

207. 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. In its ARR application, GRIDCO has projected the net energy availability of 3287.68 MU from TTPS considering PLF of 91.16% and Auxiliary Consumption of 10.50%. However, the Commission observed that CERC, at Para-33 of its order dated 29.09.2016 passed in Petition No. 334/GT/2014 in the matter of tariff of TTPS (460 MW) for the period from 01.04.2014 to 31.03.2019, have observed as given below:

*“We have examined the submissions of the petitioner. It is observed that the Commission vide its order dated 19.06.2002 in Petition No. 62/2000 had extended the life of the generating station up to the year 2021 and allowed the R&M works under Phase-I, Phase-II and Phase-III schemes. The works claimed are within the scope of works allowed under R&M Phase II & III, accordingly the expenditure of 963.00 lakh for expenditure toward TG and auxiliaries under R&M works are allowed for the period of 2014-19.”*

208. Further, at Para-13 of the said order it is mentioned that,

*“X x x x x. The petitioner has further submitted that the in-principle approval of R&M Phase-IV activities beyond 2014 was provided by the Commission vide order dated 07.06.2013. After the issuance of the order, the petitioner took a comprehensive view on carrying out the R&M Phase-IV works and concluded that R&M Phase-IV scheme would not ensure the reliable operation of Stage-II units for further extended life of 15 years from date of the completion of this scheme further and accordingly decided not to carry out left over R&M schemes (R&M Phase-IV) beyond 2014. X x x x x x x.”*

209. From the above order of the CERC, the Commission observed that the life of Talcher Thermal Power Station (TTPS) had been extended up to the year 2021 and no further order have been issued by CERC regarding life extension of the generating station beyond the year 2021. Therefore, the Commission do not consider any drawal by GRIDCO from TTPS during the FY 2021-22. However, as long as TTPS is in operation, GRIDCO should draw power from this power station for export earnings after meeting the State requirement. Further, GRIDCO may also purchase power from this power station following merit order principle in the event of non-availability of energy from the sources approved by the Commission and/or increase in State demand than the present approval.

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

210. In its filing GRIDCO has proposed not to procure power from the CGPs and Co-generation Plants during the FY 2021-22 for State consumption. GRIDCO has submitted that with coming up of OPGC Unit # 3 & 4 (2x660 MW) and NTPC-Darlipalli (800 MW), NTPC- North Karanpura, NTPC-Barh-I and renewable capacity addition, there would not be any power requirement from CGP sources during the ensuing FY 2021-22 on regular basis. However, procurement of power from CGP sources may be resorted to depending on the power supply and demand situation of the State with relative economics and also in exigencies/force majeure conditions justifying such procurement. GRIDCO has stated that since CGP power is not a firm power and it is essentially meant for captive consumption, GRIDCO cannot proposed for procurement of a definite quantum of power from the CGP. Some of the objectors have stated that the reasons submitted by GRIDCO not to procure power from the CGPs are not proper. GRIDCO should procure a specified minimum quantum of power from CGPs of the State depending on the availability. It will be always beneficial for GRIDCO to procure available surplus power from CGPs as the CGP power is cheaper than NTPC power and not associated with any transmission loss,

PoC / STU transmission charges and other associated costs. They have requested the Commission to specify certain quantum of CGP power purchase by GRIDCO from the CGPs for State consumption at the tariff decided by the Commission looking into the present cost of generation. In its reply, GRIDCO has stated that GRIDCO may consider 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. The projected power procurement of about 35290.03 MU of energy during FY 2021-22 from such firm stations shall meet the required projected energy demand of the DISCOM Utilities for the consumption within the State and therefore, there is no opportunity left for any procurement of energy from infirm CGP Sources during the ensuing year. However, the option of sourcing power from CGPs has been kept open under force majeure or exigency conditions.

211. Considering the objections/suggestions of the objectors as well as the submission 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 directs 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. While purchasing such power GRIDCO must ensure that the price of the CGP power is cheaper than variable component of firm power. 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:

212. GRIDCO has submitted that apart from the existing Meenakshi and Samal Small Hydro Projects, 24 MW SHEP power from Lower Baitarani SHEP by M/s Baitarani Power Projects Pvt. Ltd. is made available to GRIDCO from August, 2020. It is further expected that, 18 MW Saptadhara SHEP by M/s Sri Avantika Power Projects Pvt Ltd. shall be commissioned by March, 2021 and 09 MW Bargarh Head Regulator SHEP by M/s Kakatiya Industries Pvt. Ltd. shall be commissioned by June, 2021. GRIDCO has also executed PPA with M/s OPGC on dated 30.05.2020 to procure all the power from 650 kW (2 x 325 kW) Biribati Mini Hydel Project located across Taladanda Canal at Cuttack and 500 kW (2 x 250 kW) Kendupatna Mini Hydel Project located across Kendrapada Canal at Salepur, Cuttack. Accordingly, GRIDCO has proposed to procure 458.35 MU of renewable energy from small hydro sources that would be available to GRIDCO during FY 2021-22 as given in the table below.

**Table – 18**  
**Proposed Drawal from Small Hydro Sources for FY 2021-22**

Sl. No.	Name of the SHEPs	Installed Capacity (MW)	Energy drawal during the 1st six months of 2020-21 (MU)	Proposed Energy procurement for FY 2021-22 (MU)
1.	Meenaskhi Small Hydro	37	135.32	200.00
2.	SAMAL Small Hydro	20	44.61	80.00
3.	Lower Baitarani Small Hydro	24	23.20	150.00
4.	Saptadhara Small Hydro	18	-	20.00
5.	Baragarh Head Reguletor Small Hydro	09	-	8.00
6.	Biribati & Kendupatana Mini Hydro (OPGC)	1.15	-	0.35
	<b>Total</b>	<b>109.15</b>	<b>203.13</b>	<b>458.35</b>

213. The Commission approves the above proposal of GRIDCO and allows GRIDCO to purchase 458.35 MU of renewable energy from aforesaid SHEPs for consumption in the state during FY 2021-22.

### Bio-mass Energy:

214. GRIDCO in its ARR application has proposed to purchase only 80 MU of renewable energy from biomass sources during the FY 2021-22 i.e. from the 20 MW Bio-mass plant of M/s. Shalivahan Green Energy Ltd.

215. 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 2021-22.

**Wind Energy:**

216. GRIDCO has submitted that they has executed Power Sale Agreements (PSA) with PTC India Ltd. and SECI to purchase wind power under different schemes of MNRE, GoI where CTU Charges and Losses are waived off for lifetime of the Wind Power Plant as given below:
- a. GRIDCO has signed PSA with PTC on dated 20.07.2017 to avail 50 MW “Wind Power” through “ISTS Connected Wind Power Projects Scheme” of MNRE, Govt. of India. This 50 MW of Wind Power has been allocated to GRIDCO from M/s. Ostro Kutch Wind Pvt. Ltd. located in Kutch District of Gujarat at the applicable tariff of 353 Paise per kWh including Trading Margin of 7 Paise per kWh of M/s.PTC India Ltd.
  - b. GRIDCO has signed PSA with SECI on dated 24.11.2017 for availing 100 MW Wind power under the “ISTS Connected Wind Power Projects Scheme, Phase-II” of MNRE, Govt. of India, at the applicable tariff of 272 Paise per kWh including Trading Margin of 7 Paise per kWh of SECI.
  - c. GRIDCO has executed PSA with SECI on dated 23.03.2018 to avail 50 MW Wind Power under the “ISTS Connected Wind Power Projects Scheme, Phase-III” of MNRE, Govt. of India. The applicable tariff for Wind power in Phase-III is 252 Paise per kWh including Trading Margin of 7 Paise per kWh of SECI.
  - d. GRIDCO has executed PSA with SECI on dated 15.06.2018 to avail 100 MW Wind Power under the “ISTS Connected Wind Power Projects Scheme, Phase-IV” of MNRE, Govt. of India. The applicable tariff for Wind power in Phase-IV is 259 Paise per kWh, including Trading Margin of 7 Paise per kWh of SECI.
  - e. GRIDCO has executed PSA with SECI on dated 22.08.2019 to avail 50 MW Wind Power under the “ISTS Connected Wind Power Projects Scheme, Phase-VI” of MNRE, Govt. of India. The applicable tariff for Wind power in Phase-VI is 290 Paise per kWh including Trading Margin of 7 Paise per kWh of SECI.
217. Accordingly, GRIDCO has proposed to draw 685 MU of Wind power during FY 2021- 22 from PTC & SECI out of the allocated 350 MW Wind Capacity.

**Table-19**  
**Proposed Procurement of Wind Energy by GRIDCO for FY 2021-22**

<b>Name of the Sources</b>	<b>Proposed Energy Procurement for FY 2021-22 (MU)</b>
MNRE ISTS connected Wind Power Projects Scheme Batch -I through PTC	150.00
MNRE ISTS connected Wind Power Projects Scheme Batch -II through SECI	300.00
MNRE ISTS connected Wind Power Scheme Batch -III through SECI	30.00
MNRE ISTS connected Wind Power Projects Scheme Batch -IV through SECI	175.00
MNRE ISTS-connected Wind Power Projects Scheme Batch -VI through SECI	30.00
<b>Total</b>	<b>685.00</b>

218. The Commission considered the above proposal of GRIDCO and allows GRIDCO to procure 685 MU of wind energy during the FY 2021-22 for state consumption.

**Solar Energy**

219. In its submission, GRIDCO has proposed to procure 1479 MU of Solar Energy from the following sources during the FY 2021-22.

- (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 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 Viable Gap Funding (VGF) Scheme under JNNSM Phase-II, Batch-I.
  - (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.
  - (viii) 120 MU from the 75 MW Solar PV project developed by M/s Aditya Birla Renewables Limited, selected under GRIDCO e-bidding Scheme as per the Ministry of Power, Government of India Resolution dated 03.08.2017.
  - (ix) 480 MU from the 300 MW Solar Power being procured through SECI under ISTS-connected Solar power Projects Scheme which is expected to be available by October 2020.
  - (x) 187 MU from the 200 MW Solar power allocated to GRIDCO through SECI under ISTS-connected Solar power Projects Scheme, which is expected to be available during FY 2021-22 (from July, 2021 onwards).
  - (xi) 5 MU from the upcoming 8 MW Solar PV Project developed by GEDCOL in 5 nos. of location (3 nos. of OPTCL sub-stations, one at Mukhiguda Power House and another is Manamunda Solar Project of GEDCOL) in the un-utilized surplus land.
220. GRIDCO has further submitted that it will avail 6 MU solar energy during FY 2021-22 from the 4 MW Rooftop Solar PV Project implemented by GEDCOL in 177 nos. of non-residential Govt. buildings in twin-city of Cuttack and Bhubaneswar under net-metering Regulations, which will be deemed procurement by GRIDCO through CESU and considered for meeting the RPO by GRIDCO.
221. The proposal of GRIDCO for procuring solar energy during the FY 2021-22 is summarised in the Table below :

**Table –20**  
**Drawal of Solar Power during FY 2021-22**

Sl. No.	Solar RE Sources	Energy for procurement during FY 2021-22 (MU)
1.	8 Nos. of Solar PV projects of 1 MW each under RPSSGP	13.00

Sl. No.	Solar RE Sources	Energy for procurement during FY 2021-22 (MU)
2.	20 MW Bundled Power from NRVNL 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
8	75 MW from M/s Aditya Birla Renewables Ltd. procured through GRIDCO e-bidding process	120.00
9	300 MW Solar power through SECI under ISTS-Connected Solar Power projects scheme	480.00
10	200 MW Solar power through SECI under ISTS-Connected Solar Power projects scheme	187.00
11	8 MW from GEDCOL implemented Solar Plants in Un-utilised surplus land	5.00
12	Under MNRE RTS-II Scheme implemented by OREDA	1.00
	<b>Sub Total (for procurement by GRIDCO)</b>	<b>1473.00</b>
13	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>1479.00</b>

222. The Commission approves the above proposal of GRIDCO to procure 1479 MU from Solar Sources. Thus, the total procurement of Renewable Energy during FY 2021-22 from Solar, Bio-mass, wind and Small Hydro Sources approved by the Commission for State use comes to 2702.35 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 2021-22**

Sl. No.	RE Sources	Renewable Energy approved for drawal during FY 2021-22 (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)	458.35	1.64	
(ii)	Bio-mass Energy	80.00	0.29	
(iii)	Wind Energy	685.00	2.45	
	<b>Sub-Total (Non-Solar)</b>	<b>1223.35</b>	<b>4.38</b>	<b>5.50</b>

<b>B.</b>	<b>Solar</b>	<b>1479.00</b>	<b>5.30</b>	<b>5.50</b>
<b>C.</b>	<b>Total (Solar &amp; Non-Solar)</b>	<b>2702.35</b>	<b>9.68</b>	<b>11.00</b>

(\*) *Sale of power to DISCOMs including emergency power supply to CGPs has been estimated at 27930 MU.*

223. The Commission observed that the estimated sale of power to DISCOMs including emergency power supply to CGPs is 27930 MU for state consumption and the estimated quantum of energy available to GRIDCO from Renewable Sources is 2702.35 MU for the purpose of meeting RPO. With procurement of renewable energy of this magnitude GRIDCO will not be able to meet the Renewable Purchase Obligation (RPO) fixed by the Commission. In its reply to the Commission's queries, GRIDCO has stated that as per MoP Notification dated 08.03.2019, State share of power of 79.01 MW from Mangdechhu HEP will be treated as renewable power as it is commissioned after 08.03.2019 (COD-August, 2019). GRIDCO is expected to avail 342.26 MU from Mangdechhu HEP during FY 2021-22 which needs to be considered as Renewable source instead of the source as non-solar RPO. Adding this 342.26 MU with the above purpose renewable energy of 2702.35 MU, the total renewable energy comes to 3044.61 MU. Accordingly, GRIDCO will be able to meet the RPO target of 11%. GRIDCO has further stated that as of now, no MSW Power Project, Bagasse based co-generation project or any other Bio-mass power project is under pipeline to supply power to GRIDCO.
224. The Commission observed that GRIDCO is expected to avail 342.26 MU from Mangdechhu HEP during FY 2021-22 towards State share of 79.01 MW from this power station the commercial operation of which has been declared in August, 2019. GRIDCO has further stated that as per MoP, GoI Notification dated 8<sup>th</sup> March 2019, generation from new large hydro plants shall be considered under Renewable energy. Accordingly, GRIDCO has prayed the Commission to consider the energy purchased from Mangdechhu as Renewable source. The Commission observed that as per the Office Memorandum notified by GoI dated 8<sup>th</sup> March, 2019, large hydropower projects (capacity > 25 MW) are declared as renewable energy sources. Hydropower Purchase Obligation (HPO) is notified as a separate entity within non-solar RPO and the HPO shall cover all large hydropower projects commissioned after issue of this office memorandum. However, the Commission further observed that in the order dated 29.01.2021 of MoP, GoI, it is clarified that hydropower imported from outside India shall not be considered for meeting HPO. Since, Mangdechhu HEP is situated in

Bhutan that is outside India, the power imported by GRIDCO from this HEP shall not be considered for meeting the HPO under non-solar RPO. Therefore, the Commission do not allow for inclusion of the proposed drawl of 342.26 MU by GRIDCO from Mangdechhu IPP as renewable energy for meeting the RPO by GRIDCO. Therefore, the Commission directs GRIDCO to explore all possibilities to purchase renewable power from some other sources to meet the target RPO. 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)**

225. In its application GRIDCO has submitted that 5 Nos. of IPPs in the State have yet been commissioned. Out of which M/s. Ind-Barath Utkal Energy Limited has become MPS and taken to NCLT for resolution process while M/s. Nava Bharat Venture Limited is having difficulties with evacuation system. These two IPPs have not yet been supplied power to GRIDCO. Therefore, GRIDCO has not considered any drawal from these two IPPs for the FY 2021-22. Considering 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 2021-22 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. GRIDCO has further submitted that out of the other 3 nos. of IPPs (namely, M/s. Vedanta Ltd., M/s. GKEL & M/s. JITPL), M/s. JITPL have challenged the MoU with Government of Odisha and PPA with GRIDCO before the Hon'ble High Court of Orissa in W.P.(C). No. 18150/2018. Based on an interim stay order dated 16.05.2019 M/s. JITPL is not supplying power to the State since 22<sup>nd</sup> May, 2019. Therefore, GRIDCO has restricted its proposed quantum of procurement of power only from the IPPs of M/s. Vedanta Ltd. and M/s. GKEL the FY 2021-22. GRIDCO has further submitted that the IPPs are not supplying the State entitlement power as approved by the Commission. Such deviation results in lower BSP and GRIDCO has to draw costly power from the market or high cost Central power which is being disallowed by the Commission. Therefore, GRIDCO has prayed the Commission to approve energy

availability from the IPPs based on the realistic levels as submitted by it. GRIDCO has submitted the actual drawal from the IPPs and approval of the Commission for the last four years as given in the Table below:

**Table-22**  
**Actual Vrs. Approved Power Purchase from the IPPs (MU)**

IPPs	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20		Actual (Avg.)
	OERC	Actual	OERC	Actual	OERC	Actual	OERC	Actual	
M/s. Vedanta Ltd.	5039.45	3246.85	5039.45	970.89	5039.45	902.09	5039.45	747.84	1466.92
M/s GKEL	1720.03	1371.87	1517.10	1487.50	1842.19	1702.44	2167.28	1814.75	1594.14
M/s. JITPL	1007.89	319.25	503.95	250.64	1007.89	261.14	1010.57	11.95	210.75
<b>Total</b>	<b>7767.37</b>	<b>4937.97</b>	<b>7060.50</b>	<b>2709.03</b>	<b>7889.53</b>	<b>2865.67</b>	<b>8217.30</b>	<b>2574.54</b>	<b>3271.80</b>

**M/s. Vedanta Ltd.**

226. In its submission, GRIDCO has stated that as per generation plan submitted by M/s. Vedanta Ltd for FY 2021-22, it shall supply 2956 MU of power from Unit # 2 (600 MW) i.e. IPP Unit. The legitimate entitlement of power for the State at normative generation works out to be 5039 MU as per the Commission's order dated 27<sup>th</sup> January 2016 in Case No.21 of 2015. Therefore, there shall be shortfall to the tune of 2083 MU of power from IPP of Vedanta during FY 2021-22. Further, no reason for such low supply has been cited by Vedanta. In order to avoid over projection of power availability, GRIDCO has proposed to draw 2956 MU during the ensuing year 2021-22 as per the generation projection submitted by Vedanta. GRIDCO has prayed the Commission to direct Vedanta to supply full entitlement of power to the State.
227. 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 Tariff Regulations, 2020, the normative auxiliary consumption for the thermal generating stations with unity capacity of more than 300 MW is 5.75% and additional 0.8% where tube type coal mill is used. M/s. Vedanta Limited being a respondent to the ARR application of GRIDCO has submitted that its IPP Unit-II is having tube type coal mills; hence 0.8% is to be added for effective auxiliary consumption, which comes to 6.55%. Therefore, considering PLF of 85% and auxiliary consumption of 6.55%, the State share of energy from the thermal power plant of M/s. Vedanta Limited comes to 5009.97 MU.

228. The Commission observed that M/s. Vedanta Limited is an objector to the present case. In its submission M/s. Vedanta Limited has stated that the Commission, in its order dated 27.01.2016 in Case No. 21/2015 under Para-35 had observed that the coal to be used for supplying power to GRIDCO shall be linkage coal. Further, the Commission in its order dated 22.06.2020 in Case No. 68/2018 has observed that “.....GRIDCO is entitled to purchase power from the IPP of M/s. Vedanta Limited to the extent of power generated from the linkage coal since it is supplied to M/s. Vedanta for State use and GRIDCO may purchase power beyond that upto the State entitlement if it is commercially cheaper.....”
229. M/s. Vedanta Limited has further submitted that 2.57 MMT of linkage coal has been allocated to the IPP-Unit-II and considering the average GCV of 3000 Kcal/Kg and normative operation of parameters as per CERC Tariff Regulation, 2020, M/s. Vedanta Ltd. has submitted the estimated generation plan of 3214 MU.
230. From the above, the Commission observed that the State share of energy from the thermal power plant of M/s. Vedanta Limited has been computed at 5009.97 MU. But GRIDCO has proposed to draw 2956 MU from M/s. Vedanta Limited during FY 2021-22. Further, as an objector M/s. Vedanta Limited has submitted its generation plan at 3214 MU for FY 2021-22 to the extent of supply of linkage coal by MCL as per the Commission’s earlier orders mentioned above. Therefore, considering the estimated generation of 3214 MU as submitted by M/s. Vedanta Limited and auxiliary consumption at 6.55%, the Commission considers only 3003.48 MU to be purchased by GRIDCO from the IPP of M/s. Vedanta Limited during FY 2021-22 for State consumption. However, GRIDCO must have to purchase power from the IPP of M/s. Vedanta Limited to the extent of generation from the available linkage coal. Further,

as per the Commission's order dated 22.06.2020 in Case No. 68/2018, it may purchase power beyond that, if it is commercially cheaper.

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

231. GRIDCO has submitted that as per 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). Only three nos. of generating units of this power plant have been commissioned till date. CERC while determining the tariff of M/s. GKEL has considered normative quantum of power at 85% PLF and 5.75% auxiliary consumption. Considering 25% State entitlement, PLF of 85% and auxiliary consumption of 5.75%, GRIDCO has proposed to procure 1844 MU from M/s. GKEL during FY 2021-22.
232. 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 at 80% PLF and power generated in excess of 80% PLF 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. As per CERC Tariff Regulations, 2019, the auxiliary consumption shall be 6.25% for the IPP of M/s. GKEL. 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 6.25% as per CERC norms, the net generation comes to 7329.66 MU. Further, considering plant availability of 80% and auxiliary consumption of 6.25%, net generation comes to 6898.50 MU. As per the PPA, energy available to GRIDCO is 25% of energy sent out at 80% PLF i.e. 1724.62 MU (25% of 6898.50 MU) plus excess power generated beyond 80% PLF i.e. 431.16 MU (7329.66 MU – 6898.50 MU). Thus, total energy available to GRIDCO would be 2155.78 MU (1724.62 MU + 431.16 MU). However, considering the present installed capacity of the IPP is 1050 MW (3x350 MW) and normative plant availability of 85% and auxiliary consumption at 6.25% as per CERC norms, the net generation comes to 7329.66 MU and the energy towards 25% towards State share comes to 1832.41 MU. Accordingly, M/s. GKEL has made its generation plan and indicated that the actual supply by it may be more than the estimated energy of 1832 MU. In its application GRIDCO has projected to draw 1844 MU from M/s. GKEL during FY 2021-22. Hence, basing on the proposal of GRIDCO, the Commission approves 1844.00 MU to

be procured by GRIDCO from the IPP of M/s. GKEL during the FY 2021-22 for State consumption.

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

233. GRIDCO has submitted that M/s Jindal India Thermal Power Limited (M/s. JITPL) has challenged the MoU with Government of Odisha and PPA with GRIDCO before the Hon'ble High Court of Orissa in W.P.(C). No. 18150/2018. Based on an interim stay order dated 16.05.2019 M/s. JITPL is not supplying power to the State since 22<sup>nd</sup> May, 2019. Further, M/s. JITPL challenged the PPA approval order dated 04.06.2019 passed by the Commission in Case No. 01/2017 before the Hon'ble APTEL. Therefore, GRIDCO has not considered any drawal from M/s. JITPL for the FY 2021-22.
234. The Commission observed 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 dated 05.01.2011 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. Considering the State share of 12%, PLF of 85% and auxiliary consumption of 6.25%, energy availability to the State from the existing 1200 MW (2X600 MW) capacity of this IPP of M/s JITPL would be 1005.21 MU. The Commission further observed that M/s. JITPL has challenged the MoU and PPA with GRIDCO before the Hon'ble High Court of Orissa in W.P.(C). No. 18150/2018 and based on the interim stay order dated 16.05.2019 of Hon'ble High Court in this writ petition, M/s. JITPL is not supplying power to the State since 22.05.2019. M/s. JITPL has also challenged the Commission's order dated 04.06.2019 passed in Case No.01/2017 before the Hon'ble APTEL on the matter of PPA approval. Therefore, GRIDCO has proposed not to draw any power from the IPP of M/s. JITPL. In view of the above, the Commission do not considered any drawal by GRIDCO from the IPP of M/s. JITPL during the FY 2021-22 for computation of ARR of GRIDCO. However, the Commission directs GRIDCO to take up the matter with State Government and pursue the cases related to M/s. JITPL at different judicial forum for early resolution of the disputes. In fact GRIDCO should purchase full quantum of energy towards State share from this IPP as this energy will be available at the variable cost only.

235. The Commission has estimated the total availability of 8170.96 MU towards State share of energy from the IPPs presently operating in the State. However, considering the present trend of supply of power to GRIDCO, the Commission approves 4847.48 MU as stated above to be purchased by GRIDCO during the FY 2021-22 for consumption in the State. The Commission observed that the quantum of energy drawal from the IPPs as proposed by GRIDCO is much less than the State entitlements as some IPPs are not supplying the State share of power. The Commission direct GRIDCO to pursue the matter with the State Government and secure compliance of law through all the available options. GRIDCO should also facilitate M/s. Vedanta Limited for allotment of more quantum of linkage coal so that GRIDCO can 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. Further, 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 present approval. The proposal of GRIDCO and approval of the Commission in respect of purchase of power from the IPPs during the FY 2021-22 is as indicated in the table below.

**Table - 23**  
**Power Procurement from the IPPs during FY 2021-22**

<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	2956.00	5009.97	3003.48
GMR Kamalanga Energy Ltd.	1844.00	2155.78	1844.00
Jindal India Thermal Power Ltd.	0.00	1005.21	0.00
<b>Total</b>	<b>4800.00</b>	<b>8170.96</b>	<b>4847.48</b>

**Power Purchase from Central Generating Stations**

236. Odisha has been allocated shares in the NTPC stations located in the Eastern Region as well as from the Chukha, Tala and Mangdechhu 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 by considering plant availability factor, plant load factor and auxiliary consumption as per CERC Tariff Regulations, 2019. The central transmission loss is considered as per CERC (Sharing of Inter State

Transmission Charges and Losses) Regulations, 2020. The percentage of share allocation in favour of Odisha is considered based on the Regional Energy Accounts (REA) prepared by the Eastern Regional Power Committee for the month of September, 2020.

#### **Central Transmission Loss:**

237. GRIDCO has submitted that earlier Inter-state transmission losses were calculated based on the injection loss and withdrawal loss data. But from 1<sup>st</sup> November, 2020, the central transmission losses will be calculated at all India level as per CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020. GRIDCO has considered Inter State Transmission Loss of 3.59% basing on the limited available data of 3 week period i.e. from 1<sup>st</sup> November 2020 and projected the same for FY 2021-22.
238. 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. After scrutiny, the Commission considered the transmission loss for drawal of power from individual central generating stations as proposed by GRIDCO for estimation of power purchase for the FY 2021-22.

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

239. **Chukha:** GRIDCO submits that Odisha has a share of 15.19% out of ER allocation of 270 MW from Chukha Hydro Electric Project of Bhutan (4x84 MW). GRIDCO has projected the drawl of 264.94 MU from Chukha HEP for FY 2021-22 considering the average drawal of last 6 years i.e. from FY 2014-15 to 2019-20. Deducting central sector loss of 3.59%, the net availability to GRIDCO is projected at 255.43 MU for the FY 2021-22.
240. The Commission scrutinized the above proposal of GRIDCO and observed that the drawal of GRIDCO from Chukha during the period from FY 2014-15 to 2019-20 were 247.41 MU, 272.39 MU, 312.17 MU, 263.90 MU, 223.86 MU and 269.90 MU respectively, which varies from 223.86 MU during FY 2018-19 to 312.17 MU during the FY 2016-17. With the above variations, the Commission approves the drawl from Chukha hydro station at 264.94 MU for FY 2021-22 considering the average drawal of last 6 years i.e. from FY 2014-15 to 2019-20. After deducting the Central

Transmission Loss @ 3.59%, the net drawal of GRIDCO comes to 255.43 MU for FY 2021-22.

241. **TALA:** Odisha has an allocated share of 4.25% from Tala HEP, Bhutan having installed capacity of 1020 MW (6X170 MW). GRIDCO has proposed to draw 149.80 MU of energy from Tala HEP during FY 2021-22 by averaging previous 6 years drawal i.e. from FY 2014-15 to 2019-20. After deducting Central Sector Loss of 3.59%, the net availability to GRIDCO is projected as 144.42 MU for FY 2021-22.
242. After scrutiny, the Commission observed that the drawal of GRIDCO from Tala Hydro Power Station during the period from FY 2014-15 to 2019-20 were 139.33 MU, 139.61 MU, 140.57 MU, 122.81 MU, 107.96 MU and 125.71 MU respectively, which varies from 122.81 MU during FY 2017-18 to 140.57 MU during the FY 2016-17. With the above variations, the Commission approves the drawl from Tala Hydro Power Station at 129.33 MU for FY 2021-22 considering the average drawal of last 6 years i.e. from FY 2014-15 to 2019-20. After deducting the Central Transmission Loss @ 3.59%, the net drawal of GRIDCO from Tala Hydro Power Station comes to 124.69 MU for FY 2021-22.

**Mangdechhu HEP (Bhutan):**

243. GRIDCO has submitted that Odisha has share of 10.97% (equivalent to 79.01 MW) from Mangdechhu Hydro Electric Project in Bhutan having Installed Capacity of 720 MW. GRIDCO has estimated normative energy of 266.91 MU from Mangdechhu HEP during FY 2021-22 considering 40% PLF and central transmission loss of 3.59%. However, the actual gross energy purchased by GRIDCO during October, 2019 to September, 2020 from Mangdechhu HEP is 355.59 MU. Therefore, in the present application GRIDCO has considered to draw net energy of 342.26 MU from Mangdechhu HEP during FY 2021-22 to considering central transmission loss of 3.59% on the gross procurement of 355.59 MU during October, 2019 to September, 2020.
244. GRIDCO in its application has estimated the normative energy of 266.91 MU from Mangdechhu HEP towards State's share. However, considering the actual gross energy of 355.59 MU purchased during October, 2019 to September, 2020 from Mangdechhu HEP and central transmission loss of 3.59%, GRIDCO has proposed to draw 342.26 MU from Mangdechhu HEP during FY 2021-22. The Commission

accepts the proposal of GRIDCO and considers 342.26 MU to be purchased by GRIDCO from Mangdechhu HEP during FY 2021-22 for State consumption.

245. **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 and 1.20% of Auxiliary Consumption, the annual saleable energy of the project is 2236.78 MU. Considering Odisha share of 23.40% of the saleable energy and deducting the Central Sector loss of 3.59% GRIDCO has proposed to procure net energy of 504.22 MU from Teesta-V HEP during FY 2021-22.
246. 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 2541.80 MU i.e. the design energy less auxiliary consumption @ 1.20%. Considering the central sector transmission loss of 3.59%, the Commission approves the net drawl of 504.57 MU from Teesta-V HEP during FY 2021-22.
247. The Commission approves the total energy drawal of 1226.94 MU from the Central Hydro Generating Stations during the FY 2021-22 against 1246.33 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 2021-22**

Central Hydro Stations	Installed Capacity (MW)	GRIDCO Share (%)	GRIDCO Share of installed capacity (MW)	Proposed drawal for FY 2021-22 after C.S. loss (MU)	Energy drawal approved by the Commission for FY 2021-22 after C.S. loss (MU)
<b>Chukha</b>	336 (4*84) (ER Allocation =270)	15.19	41.01	255.43	255.43
<b>Tala</b>	1020 (6*170)	4.25	43.35	144.42	124.69
<b>Mang-dechhu</b>	720 (4*180)	10.97	79.01	342.26	342.26
<b>Teesta-V</b>	510 (3*170)	20.59	105.01	504.22	504.57
<b>TOTAL</b>			<b>268.38</b>	<b>1246.33</b>	<b>1226.94</b>

### **Central Thermal Generating Stations**

248. GRIDCO has submitted that the CERC (Determination of Terms & Conditions of Tariff) Regulations, 2019 (in short, CERC Tariff Regulations, 2019) effective from 01.04.2019 to 31.03.2024. As per the CERC Terms and Conditions of Tariff, 2019, the Norms of Operation for Normative Annual Plant Availability Factor (NAPAF) for Thermal Generating Station as mentioned at Clause 49 (A) is read as under:

*“(a) For all Thermal Generating Stations, except those covered under clauses (b), (c), (d), & (e) - 85%*

*X x x x x x x x x x.”*

249. GRIDCO has submitted that it has to pay fixed charges based on actual availability declared by the generator or at 85% normative capacity whichever is lower. Normative Plant availability factor has been considered as 85% for TSTPS-I, TSTPS-II, FSTPS-I&II, FSTPS-III, KhSTPS-I, KhTPS-II as per CERC norms. But the Plant availability factor for DSTPS is considered at 70% considering issues with synchronization in initial years and fixed charges been reduced accordingly.

250. For calculating variable cost, GRIDCO has taken PLF of 85% for plants which have low variable cost but for plants which have higher variable cost, it has considered 55% PLF considering minimum technical requirement to run a plant. But for DSTPS PLF is considered at 70% considering Synchronization issues.

251. GRIDCO has further submitted that it has estimated energy availability of FSTPS I & II and FSTPS III with operational period of 3 and 4 months respectively in FY 2021-22 considering useful life of plant ending in FY 2021-22 and planning not source any power beyond the useful life of the asset and convey the same to NTPC. In case any power is sourced beyond its useful life, GRIDCO pray the Commission to approve both additional fixed cost and variable cost as a Pass Through in the next ARR petition. The projected power procurement from NTPC stations during the FY 2021-22 as proposed by GRIDCO is given hereunder:

**Table-25**  
**Projected Power Procurement from NTPC-ER Stations for FY 2021-22**

<b>Central Thermal Stations</b>	<b>Installed Capacity (MW)</b>	<b>GRIDCO Share (%)</b>	<b>Aux. Cons. (%)</b>	<b>PAF/PLF Considered</b>	<b>Ex-bus Availability (MU)</b>	<b>GRIDCO Proposal for procurement after the 3.59% C.S Trans. Loss (MU)</b>
TSTPS Stg.-I	1000	32.34%	7.05%	85.00%	2,238.27	2,157.92
TSTPS Stg.-II	2000	10.00%	6.25%	85.00%	1,396.13	1,346.00
FSTPS-I&II	1600	14.18%	6.78%	55.00%	191.06	184.20
FSTPS-III	500	17.15%	6.25%	55.00%	387.32	373.42
KhSTPS-I	840	15.77%	9.00%	55.00%	193.60	186.65
KhSTPS-II	1500	2.62%	6.25%	55.00%	177.51	171.14
DSTPS (Unit-I)	800	58.82%	6.25%	70.00%	2705.13	2608.02
<b>TOTAL</b>	<b>8240</b>				<b>7289.02</b>	<b>7027.34</b>

**Power purchase from new Central generating stations**

252. GRIDCO has submitted that the new NTPC stations such as North Karanpura (Unit-I), Barh-I and Darlipali (Unit-II) are expected to become operational in FY 2021-22 as given below:

**Table-26**  
**CoD of New plants expected in FY 2021-22**

<b>Plant</b>	<b>Expected CoD</b>
North Karanpura (Unit-I)	1/12/2021
Barh-I	1/04/2021
Darlipali (Unit-II)	1/11/2021

253. GRIDCO submitted that the above new plants are expected to achieve the PAF of around 70% due to initial synchronization challenges against the normative PAF of 85%. GRIDCO has considered the PAF at 70% for these stations and fixed charges has been accordingly been reduced (Fixed charges/85%\*70%). However, to calculate variable charges, PLF for North Karanpura and Darlipali is taken at 70% while PLF for Barh-I is taken at 55% considering higher variable cost and minimum technical requirement to run a plant. GRIDCO has requested the Commission to approve the same. The projected power procurement by GRIDCO from these new stations of NTPC for FY 2021-22 is indicated hereunder:

**Table-27**  
**Projected Power Procurement from new stations in FY 2021-22**

<b>Central Thermal Stations</b>	<b>Installed Capacity (%)</b>	<b>GRIDCO Share (MW)</b>	<b>Aux. Cons. (%)</b>	<b>PLF Considered</b>	<b>Ex-bus Availability (Mu)</b>	<b>GRIDCO Proposal for Procurement after the 3.59% C.S. Trans. Loss (MU)</b>
North Karanpura	660	20.00%	6.25%	70.00%	252.95	243.86
Barh-I	660	21.11%	6.25%	55.00%	1,888.05	606.73
Darlipali (Unit-II)	800	58.82%	6.25%	70.00%	1,127.14	1,086.67
<b>Total</b>	<b>2120</b>				<b>3,268.14</b>	<b>1,937.26</b>

254. The Commission observed that the upcoming thermal power stations i.e. Barh-I and North Karanpura Thermal Power Stations have not yet been commissioned. Further, the PPAs with GRIDCO in respect of these power stations have not yet been vetted by the Commission and GRIDCO has proposed the provisionally tariff of these power stations as NTPC has not yet filed its tariff petition before CERC in respect of these power stations. Furthermore, the variable cost proposed by GRIDCO for these power stations is more than the variable cost proposed for Darlipalli TPS. Therefore, the Commission do not consider any drawl of power and fixed charges in respect of Barh-I and North Karanpura Thermal Power Stations of NTPC for the FY 2021-22.

255. The Commission examined the submissions of GRIDCO and provisionally considers the plant availability factor as proposed by GRIDCO for the purpose of computation of availability of power from the central thermal power stations of NTPC during the FY 2021-22. 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, 2021. Considering the NAPAF of 85%/70%/55% and Central Sector transmission loss of 3.59% as proposed by GRIDCO, the availability of power from Central Thermal Stations (except Barh-I and North Karanpura TPS) estimated for the FY 2021-22 and GRIDCO's drawal as per the requirement are given in the table below:

**Table - 28**  
**Drawal From Central Thermal Generating Stations for FY 2021-22**

Central Thermal Stations	Installed Capacity (MW)	Aux. Cons. (%)	Plant Availability Factor (PAF) considered (%)	GRIDCO Share (%)	GRIDCO Share (MU)	Central Trans. Loss (%)	Estimated Energy after Central Sector Transmission Loss (MU)	OERC Approval for Purchase (MU)
TSTPS –I	1000	7.05	85	32.344	2238.56	3.59	2158.20	2158.20
TSTPS –II	2000	6.25	85	10.000	1396.13	3.59	1346.00	1346.00
FSTPS-I& II (3 months)	1600	6.78	55	14.183	254.81	3.59	245.67	0.00
FSTPS-III	500	6.25	55	17.150	387.32	3.59	373.42	0.00
KhSTPS-I (4 months)	840	9.00	55	15.775	193.66	3.59	186.70	0.00
KhSTPS-II	1500	6.25	55	2.621	177.55	3.59	171.18	0.00
DSTPS (Unit-I)	800	6.25	70	58.82	2705.13	3.59	2608.02	2608.02
DSTPS-II (Unit-II)	800	6.25	70	58.82	1127.14	3.59	1086.67	1086.67
<b>TOTAL</b>					<b>8480.30</b>		<b>8175.86</b>	<b>7198.89</b>

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

256. The Commission observed that the total estimated availability of power from different sources comes to 34584.39 MU, whereas total power requirement of GRIDCO is estimated at 28791.96 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 from different generating stations for the State consumption, the Commission approves the quantum of purchase for FY 2021-22 as given in the table below:

**Table – 29**  
**Quantum of Power Purchase from Various Sources for FY 2021-22**

Sources of Purchase	Commission's Approval for State Drawl for 2020-21	GRIDCO's Proposal for 2021-22	Estimated Availability for 2021-22	Commission's Approval for State Drawl for 2021-22
HYDRO (OLD)	3676.86	3660.26	3676.86	3676.86
Indravati	1942.38	1942.38	1942.38	1942.38
Machakund	262.50	259.88	262.50	262.50
<b>Total Hydro</b>	<b>5881.74</b>	<b>5862.52</b>	<b>5881.74</b>	<b>5881.74</b>
OPGC (I & II)	2743.56	2726.34	2726.34	2726.34
OPGC (III & IV)	4631.78	5700.21	5700.21	4208.22
TTPS (NTPC)	3254.22	3287.68	-	-
IPPs	6230.85	4800.00	8170.96	4847.48

Sources of Purchase	Commission's Approval for State Drawl for 2020-21	GRIDCO's Proposal for 2021-22	Estimated Availability for 2021-22	Commission's Approval for State Drawl for 2021-22
CGPs	-	-	-	-
Co-Generation Plants	-	-	-	-
Small Hydro	385.00	458.35	458.35	458.35
Biomass Energy	80.00	80.00	80.00	80.00
Wind Energy	752.80	685.00	685.00	685.00
Solar Energy	1019.00	1479.00	1479.00	1479.00
<b>TOTAL STATE</b>	<b>24978.95</b>	<b>25079.09</b>	<b>25181.59</b>	<b>20366.13</b>
CHUKHA HPS	259.48	255.43	255.43	255.43
Tala HPS	130.80	144.42	124.69	124.69
Mangdechhu	270.00	342.26	342.26	342.26
Teesta-V HPS	510.00	504.22	504.57	504.57
<b>Total Central Hydro</b>	<b>1170.28</b>	<b>1246.33</b>	<b>1226.94</b>	<b>1226.94</b>
TSTPS-I	1509.01	2157.92	2158.20	2158.20
TSTPS-II	1360.52	1346.00	1346.00	1346.00
FSTPS-I & II	-	184.20	245.67	-
FSTPS-III	-	373.42	373.42	-
KhTPS-I	-	186.65	186.70	-
KhTPS-II	-	171.14	171.18	-
DSTPS (Unit-I)		2608.02	2608.02	2608.02
DSTPS-II (Unit-II)		1086.67	1086.67	1086.67
North Karanapura-I (Unit-I)		243.86	-	-
Barh-I (Unit-I)		606.73	-	-
<b>Total Central Thermal</b>	<b>2869.53</b>	<b>8964.61</b>	<b>8175.86</b>	<b>7198.89</b>
<b>Total Central Sector</b>	<b>4039.81</b>	<b>10210.94</b>	<b>9402.80</b>	<b>8425.83</b>
<b>TOTAL GRIDCO</b>	<b>29018.76</b>	<b>35290.03</b>	<b>34584.39</b>	<b>28791.96</b>

257. GRIDCO has proposed to purchase 35290.03 MU from all available sources. Out of which 28221.67 MU is estimated by GRIDCO towards State requirement and balance 7068.36 MU of energy is proposed for procurement towards trading purpose. However, the Commission has estimated availability of 34584.39 MU during FY 2021-22 from different sources, out of which procurement of 28791.96 MU is estimated towards State requirement.

#### **Power Procurement Cost**

258. 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**

259. OHPC has submitted the application for approval of its Annual Revenue Requirement and Tariff of its individual power stations separately for the FY 2021-22 in terms of Section 62, 64 and 86 of the Electricity Act, 2003 which has been registered as Case No.70/2020. 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.
260. Accordingly, the cost of power purchase by GRIDCO from each of the power stations of OHPC is given in the table below:

**Table – 30**  
**Cost of Power Purchase from OHPC Stations for FY 2021-22**

<b>Name of the Power Station</b>	<b>Quantum of Power Purchase for 2021-22 (MU)</b>	<b>Approved Average Tariff for 2021-22 (P/U)</b>	<b>Cost of Power Purchase for FY 2021-22 (Rs. Cr.)</b>
Burla	677.16	126.29	85.52
Chipilima	485.10	74.02	35.91
Balimela	1171.17	64.89	75.99
Rengali	519.75	128.10	66.58
Upper Kolab	823.68	80.91	66.65
Upper Indravati	1942.38	88.06	171.04
<b>Sub-Total</b>	<b>5619.24</b>	<b>89.28</b>	<b>501.69</b>
Machhkund	262.50	137.29	36.04
<b>Total</b>	<b>5881.74</b>	<b>91.42</b>	<b>537.73</b>

261. Though this order has been made applicable w.e.f. 04.04.2021, the Commission in the tariff order of OHPC in Case No. 70/2021 has directed OHPC to raise its monthly energy bill for the entire month of April, 2021 as per the revised tariff determined by the Commission for FY 2021-22 since ARR is determined for the whole financial year 2021-22.

## **Ib Thermal Power Station of OPGC**

262. GRIDCO has submitted that for purchase of power from OPGC Units-I&II during FY 2021-22, they have provisionally considered Annual Fixed Charges of Rs. 248.97 Crore, as approved by the Commission for the FY 2020-21, along with Energy Charge Rate (ECR) of 153.91 Paise/kWh and Year End charges of Rs. 60.58 Crores determined in the said order. However, the Commission in its order dated 28.10.2020 in Case No. 43 of 2017 in the matter of GCV of coal utilised by OPGC (Units-I&II) has directed to work out GCV of coal as follows:

“14. XXX This is because the measurement of GCV on total moisture basis at power station end is the practice generally followed by the industry and it determines the volume of coal the power station requires to generate a particular quantity of energy.

*GCV of coal as delivered to the power station (total moisture basis)*  
 $= GCV \times (1-TM) / (1-IM)$  Where:

*GCV = Gross Calorific value of coal as billed by coal supplier.*

*TM = Total moisture as per CIMFR report.*

*IM = Inherent moisture as per CIMFR report.*

*The above formula should form the basis of calculation of GCV of coal on “as delivered basis” for computation of energy charge. The above formula shall take care of total moisture in calculation of GCV which is the prevalent industry practice.”*

263. GRIDCO has further submitted that OPGC is claiming the ECR of 153.91 Paise/kWh as computed by the Commission in the tariff order for FY 2020-21 and has not provided actual monthly data in respect of “As billed” GCV of Coal, IM%, TM% as per CIMFR Report, actual landed cost of coal and oil, GCV of coal and oil for first six months of FY 2020-21. However, GRIDCO has derived the ECR to be 147.60 Paise/kwh for FY 2021-22 considering the aforesaid parameters from Table-10 and Table-11 of OPGC Tariff order dated 22.04.2020 for FY 2020-21 and average GCV of 3250 KCal/kg (average of G-13 grade i.e. 3101 to 3400 Kcal/kg).
264. The Commission observed that OPGC has filed its ARR & Tariff application before OERC for determination of Generation Tariff of its existing Units-I & II (2x210 MW) Ib Thermal Power Station for the year 2021-22, which has been registered as Case No.71 of 2020. The Commission in its order passed in Case No.71 of 2020 has determined the annual capacity charges to the tune of Rs. 260.76 Crore and energy charge @ 152.81 P/U for the said power station of OPGC. Hence the procurement cost for the approved drawal of 2726.34 MU from the Units-I & II of OPGC comes to Rs.677.37 Crore at an average rate of 248.45 P/U.
265. Though this order has been made applicable w.e.f. 04.04.2021, the Commission in the tariff order of OPGC in Case No. 71/2021 has directed OPGC to raise its monthly energy bill for the entire month of April, 2021 as per the revised tariff determined by the Commission for FY 2021-22 since ARR is determined for the whole financial year 2021-22.

266. Further, GRIDCO has submitted that the tariff for OPGC Units III & IV is yet to be determined by the Commission. OPGC has not submitted tariff application in respect of its Unit #3 and #4 for FY 2021-22. However, OPGC vide email message dated 14th October 2020, has informed GRIDCO to consider the provisional tariff of Rs.3.09/kWh towards cost of power of Unit #3 and #4 to be procured during FY 2021-22. Pending tariff submission, GRIDCO has proposed to considered the provisional tariff of Rs 3.09/kWh towards purchase of power from Unit #3 and #4 of OPGC. GRIDCO has further submitted that they have forecasted the year end charges of Rs. 32.72 Crore towards procurement of such power by prorating the actual year end charges of Rs. 16.86 Crore for the period from April to September, 2020. The year-end charges consist of electricity duty, water charges/cess, SOC & MOC and DSM charges. Accordingly, GRIDCO has projected the Power Procurement Cost of Rs.1796.23 Crore towards proposed procurement of 5700.21 MU of energy from OPGC Units-III & IV during FY 2021-22.
267. The Commission observed that in earlier paragraphs 4208.22 MU has been approved for drawal by GRIDCO from the expansion Units-III & IV of OPGC during the FY 2021-22. The tariff for these expansion units of OPGC has not yet been determined by the Commission. Therefore, considering the submission of GRIDCO, the Commission approves a provisional tariff of 309 P/U for procurement of power from Units-III & IV of OPGC for the purpose of computation of ARR of GRIDCO for the FY 2021-22. Accordingly, the cost of power procurement by GRIDCO from the OPGC Units-III&IV during FY 2021-22 has been estimated at Rs.1300.34 Crore towards purchase of the approved quantum of 4208.22 MU at the provisional tariff of 309 P/U. After determination of tariff of Units-III & IV of OPGC, the differential amount inclusive of year-end charges, if any, shall be considered in the truing up exercise of GRIDCO.

**Talcher Thermal Power Station (TTPS)**

268. GRIDCO has submitted that pursuant to CERC Tariff Regulations 2019 for the control period 2019-24, NTPC has filed tariff application with CERC for TTPS. The Order of CERC on this application is pending as CERC is now non-functional based on orders of Hon'ble Supreme court. Therefore, GRIDCO has relied on submission of NTPC in its tariff petition filed before CERC for tariff period FY 2019-24 to arrive at fixed cost for FY 2021-22. GRIDCO further submits that it is relying on actual data of NTPC bills to arrive at energy charges based on the actual data for first 6 months of

FY 2020-21. Accordingly, GRIDCO has proposed the fixed cost of Rs. 407.47 Crore and energy charge rate of 187.48 p/u for energy drawal of 3287.68 MU from TTPS for FY 2021-22. GRIDCO has further estimated the year-end charges of TTPS for FY 2021-22 by prorating the actual year-end charges from April to September, 2020. The submission of GRIDCO is summarised hereunder:

**Table-31**  
**Power Purchase Cost of TTPS (Rs Cr.)**

<b>Name of the Power Stations</b>	<b>Energy (MU)</b>	<b>Fixed charges (Rs Cr.)</b>	<b>Variable charges (Rs. Cr.)</b>	<b>Year End charges (Rs Cr.)</b>	<b>Total Projected Cost (Rs Cr.)</b>	<b>Unit Rate (including reimbursement charges) (P/U)</b>
TTPS	3,287.68	407.47	616.38	29.37	1,053.23	320.36

269. The Commission observed that the life of Talcher Thermal Power Station (TTPS) had been extended up to the year 2021 and no further order have been issued by CERC regarding life extension of the generating station beyond the year 2021. Therefore, the Commission, in earlier paragraphs, has not considered any drawal by GRIDCO from TTPS during the FY 2021-22. Therefore, there is no requirement for determination of procurement price of TTPS for computation of ARR of GRIDCO for FY 2021-22.

### **Power Purchase from Renewable Energy Sources**

#### **Small Hydro**

270. In its ARR application for FY 2021-22, GRIDCO has proposed to procure 200 MU from Meenakhi Small Hydro Electric Project of M/s. MPL @ 368 P/U and 80 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. GRIDCO has also proposed to procure 150 MU of energy from M/s Baitarani Power Projects Pvt. Ltd at the rate of 507 P/U as specified by the Commission for the 3<sup>rd</sup> Control period and as per the PPA executed with this SHEP. Further, GRIDCO has proposed to draw power from the forthcoming SHEPs i.e. 20 MU of energy from Saptadhara SHEP of M/s. Sri Avantika Power Project Pvt. Ltd. @ 426 P/U as per PPA dated 29.10.2014 and 80 MU from Bargarh Head Regulator SHEP of M/s. Kakatya Industries Pvt. Ltd. @ 426 P/U as per PPA dated 02.12.2015. GRIDCO has also proposed to draw 0.35 MU from Biribati and Kendupatana Mini Hydel Projects of OPGC @ 391 P/U during FY 2021-22. Accordingly, GRIDCO has proposed the total power procurement cost of Rs. 191.39

Crore towards purchase of total 458.35 MU of energy from small and mini hydel sources an average rate of 417 P/U during FY 2021-22.

271. 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 150 MU of energy from the SHEP of M/s Baitarani Power Projects Pvt. Ltd. during FY 2021-22 @ 507 P/U as per the rate specified by the Commission for the 3<sup>rd</sup> control period, in accordance with the PPA executed between GRIDCO and M/s Baitarani Power Projects Ltd. The Commission further observed that GRIDCO has proposed to draw 20 MU of energy from Saptadhara SHEP and 8 MU of energy from Baragarh Head Regulator SHEP @ 426 P/U as per the PPAs executed with them. Further, GRIDCO is to purchased power from the 2 nos. of mini hydel projects of OPGC i.e. Biribati MHP and Kendupatana MHP at the rate of 391 P/U as per the Commission's order dated 05.01.2019 passed in Case No. 35/2018. The Commission accepts the proposal of GRIDCO and provisionally approves procurement of total 458.35 MU by GRIDCO from the proposed Mini and Small Hydro sources during the FY 2021-22 for state consumption with total procurement cost of Rs.191.39 Crore at an average rate of 417.57 P/U.

#### **Bio-mass Energy**

272. GRIDCO has proposed to procure Biomass Energy of 80 MU from M/s. Shalivahan Green Energy Ltd. during FY 2021-22 at a cost of Rs. 56.64 Crore @ 708 P/U as per the Commission's order dated 01.10.2020 passed in Case No. 12/2019. The Commission accepts the proposal of GRIDCO and approves the procurement cost of Rs. 56.64 Crore towards procurement of 80 MU of Biomass energy from M/s. Shalivahana Green Energy Ltd. at the average rate of 708 P/U for computation of ARR of GRIDCO for the FY 2021-22.

## Wind Energy

273. GRIDCO has submitted that 350 MW Wind power is expected to be made available to GRIDCO during FY 2021-22, 50 MW in Phase-I through M/s PTC India Ltd. @353 P/U, 100 MW @272 P/U in Phase-II, 50 MW @ 252 P/U in Phase-III, 100 MW @ 259 P/U in Phase-IV and another 50 MW @ 290 P/U in Phase-VI all through SECI MNRE ISTS-connected Wind Power Project Schemes. GRIDCO is proposed to procure around 685 MU of Wind Energy @ 286.33 P/U for an amount of Rs. 196.14 Crore from the above Projects, as detailed below:

**Table-32**  
**Proposed Procurement & Cost of Wind Energy for FY 2021-22**

Sl. No.	Scheme Name	Proposed Energy as per maximum range in the PSA (MU)	Rate (P/U)	Estimated cost (Crore)
1	MNRE ISTS-Connected Wind Power Scheme through PTC Phase-I	150	353	52.95
2	MNRE ISTS-Connected Wind Power Scheme through SECI, Phase-II	300	272	81.60
3	MNRE ISTS-Connected Wind Power Scheme through SECI, Phase-III	30	252	7.56
4	MNRE ISTS-Connected Wind Power Scheme through SECI, Phase-IV	175	259	45.33
5	MNRE ISTS-Connected Wind Power Scheme through SECI, Phase-VI	30	290	8.70
<b>Total Wind Energy</b>		<b>685</b>	<b>286.33</b>	<b>196.14</b>

274. After scrutiny the Commission accepts the above proposal of GRIDCO and approves the procurement cost of Rs.196.14 towards purchase of 685 MU of wind energy by GRIDCO Crore during the FY 2021-22 at an average rate of 286.33 P/U for State consumption.

## Solar Energy

275. GRIDCO has proposed to procure 1479 MU of solar energy from different sources at the total cost of Rs. 581.71 Crore with an average rate of 393.31 P/U during the FY 2021-22 including the solar energy of 6 MU towards deemed purchase through TPCODL from 4 MW Roof-top Solar PV project developed by GEDCOL under net

metering regulation. The Commission examined the above proposal of GRIDCO and approves the procurement cost of Rs. 578.30 Crore at an average rate of 391.00 P/U for purchase of total 1479 MU of solar power during the FY 2021-22, the details as indicated in the Table below:

**Table -33**  
**Procurement & Cost of Solar Power during FY 2021-22**

<b>Sl. No.</b>	<b>Solar RE Sources</b>	<b>Energy (MU)</b>	<b>Rate (P/U)</b>	<b>Total Cost (Rs. Cr.)</b>
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
9	75 MW from M/s. Aditya Birla Renewables Limited under GRIDCO e-bidding	120	306	36.72
10	300 MW through SECI under ISTS-Connected Solar Power Projects Scheme	480	260	124.80
11	200 MW through SECI under ISTS-Connected Solar Power Projects Scheme (July,21 to Mar, 22)	187	265	49.56
12	8 MW from GEDCOL implemented in unutilized surplus land	5	284	1.42
13	Under MNRE RTS-II Scheme implemented by OREDA	1	-	-
	<b>Sub-Total (Procurement by GRIDCO)</b>	<b>1473</b>	<b>392.60</b>	<b>578.30</b>
14	Deemed purchase through TPCODL from 4 MW Rooftop Solar PV Project implemented by GEDCOL under net metering regulation	6.00	-	-
	<b>Total (for the purpose of meeting RPO by GRIDCO)</b>	<b>1479.00</b>	<b>391.00</b>	<b>578.30</b>

276. The Commission, in the above paragraphs, has approved a purchase of 2702.35 MU from renewable energy sources (both solar and non-solar) during the FY 2021-22 based on the proposal of GRIDCO and availability of the same. But such available quantum of renewable energy is inadequate to meet the target RPO. In earlier paragraph, the Commission has directed GRIDCO to explore all possibilities to

purchase renewable power from some other sources to meet the target RPO. The Commission further observed 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, 2017-18, 2018-19 and 2019-20 the corpus amount of Rs. 30 Cr. was not utilized. Hence, in the tariff order for the FY 2020-21, the Commission had directed GRIDCO to utilise the said Rs.30 Cr. towards purchase of additional quantum of renewable energy during the current year 2020-21. But from the submission of GRIDCO it is observed that GRIDCO has procured only 1084.13 MU of renewable energy (both solar and non-solar) upto the month of November, 2020 against the approval of 2236.80 MU for the FY 2020-21. It appears that GRIDCO may not be able to purchase the approved quantum of renewable energy by the end of the current FY 2020-21. 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 2021-22 for meeting the RPO.

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

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

277. 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 truing up for the period 2010-11 to 2013-14 in Case No.38 of 2016 have already been disposed of by the Commission vide order dated 26.02.2018 and 29.06.2018 respectively. Accordingly, in respect of M/s. Vedanta Ltd., the Commission in the ARR Order of GRIDCO for FY 2020-21 has fixed a provisional tariff of 251.29 P/U (fixed charge component of 95.11 P/U and energy charge of 168.52 P/U) towards procurement of power by GRIDCO from the said IPP. GRIDCO has further submitted that the Commission vide recent Gazette Notification dated 26<sup>th</sup> August 2020 notified OERC (Terms and Conditions) of Determination of Tariff Regulations, 2020 effective from dated 26<sup>th</sup> August 2020, have fixed GCV of Coal to

be considered on “As Received” basis. Relevant Regulation 3(ff) is as mentioned below:

*3(ff).GCV as Received means the GCV of coal as measured at the unloading point of the thermal generating station through collection, preparation and testing of samples from the loaded wagons, trucks, ropeways, Merry-Go Round (MGR), belt conveyors and ships in accordance with the IS 436 (Part-1/ Section 1)- 1964; Provided that the measurement of coal shall be carried out through sampling by third party to be appointed by the generating companies in accordance with the guidelines, if any, issued by the Central Government/Commission;*

*Provided further that samples of coal shall be collected either manually or through hydraulic augur or through any other method considered suitable keeping in view the safety of personnel and equipment;*

*Provided also that the generating companies may adopt any advance technology for collection, preparation and testing of samples for measurement of GCV in a fair and transparent manner; Provided that GCV of as Received coal shall be found out by taking GCV of coal on as billed basis and allowing an adjustment for total moisture as the formula given as under:*

$$GCV \times (1-TM) / (1-IM)$$

Where: GCV = Gross Calorific Value of Coal

TM = Total Moisture

IM Inherent Moisture

Considering the “As Billed” GCV data provided by Vedanta along with energy bills for the month of June, 2020 to October, 2020 the weighted average ECR works out by GRIDCO at 152.46 P/U. Therefore, GRIDCO has proposed ECR of 152.46 P/U for procurement of power from Vedanta during FY 2021-22.

**Table-34**  
**Energy charge rate (ECR) of Vedanta IPP from June-Oct 2020**

Month	June-20	Jul-20	Aug-20	Sep-20	Oct-20
LPPF (Rs. /kg)	1.966	1.968	2.008	2.068	2.184
CVPF (in kCal /kg)	3,489	3,421	3,387	3,440	3,549
GHR (in kCal /kwh)	2375	2375	2375	2375	2375
SFC (in ml/kWh)	1	1	1	1	1
CVSF (in kCal/ml)	9.85	9.85	9.85	9.85	9.85
LPSFi (in Rs. /Lit.)	0.0372	0.03998	0.03824	0.0398	0.038119
AUX (in %age)	6	6	6	6	6
ECR (in Paise/kWh)	1.457	1.490	1.532	1.555	1.589
Average(in Paise/kWh)					<b>152.46</b>

278. Further GRIDCO has submitted that it has estimated Year End charges of Rs 2.38 Cr for FY 2021-22 by prorating actual of Apr-Jun 2020. Accordingly, GRIDCO has

estimated the power procurement of Rs.740.58 Crore towards purchase of proposed energy of 2956.00 MU from M/s. Vedanta Ltd during FY 2021-22 @ 250.53 P/U, the details as given below:

**Table-35**  
**Power purchase cost of Vedanta IPP for FY 2021-22**

<b>Name of the Power Stations</b>	<b>Energy (MU)</b>	<b>Fixed Charges (Rs. Cr.)</b>	<b>Variable Charges (Rs. Cr.)</b>	<b>Year End Charges (Rs. Cr.)</b>	<b>Total Projected Cost (Rs. Cr.)</b>	<b>Unit Rate (Including Reimbursement Charges) (P/U)</b>
Vedanta	2,956.00	280.38	450.67	9.53	740.58	250.53

279. The Commission observed that the MYT petition filed by M/s. Vedanta 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. In the said order the fixed cost was approved at 95.11 P/U for FY 2018-19. However, now considering auxiliary consumption of 6.55% as per the OERC Generation Tariff Regulations, 2020, per unit fixed cost is computed at 95.67 P/U. The Commission provisionally considers the fixed cost of 95.67 P/U and ECR of 152.46 P/U for the purpose of computation of ARR of GRIDCO for the FY 2021-22. Further, the Commission allows Rs.19.31 Crore in tariff towards payment of E.D. on normative auxiliary consumption, the per unit cost of which comes to 3.86 P/U. Accordingly the average tariff for M/s. Vedanta Ltd comes to 251.99 P/U. The Commission has earlier approved 3003.48 MU to be procured by GRIDCO from M/s. Vedanta Ltd. for state use during the FY 2021-22. Therefore, the power procurement cost is estimated at Rs.756.84 Crore @ 251.99 P/U for the approved quantum of 3003.48 MU from M/s. Vedanta Ltd. during the FY 2021-22.

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

280. 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 - 36**

<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

281. Since no further tariff order has been issued by CERC, GRIDCO has considered the Annual Fixed Charges of Rs.314.74 Crore for the FY 2021-22 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. Further, considering the average of actual monthly Energy Charge Rate (ECR) for the period April'20 to Sept'20 based on use of linkage coal and SHAKTI coal by M/s. GKEL, GRIDCO has worked out the ECR to be 166.11 P/U. Accordingly, for the proposed drawal of 1844 MU from M/s. GKEL during the FY 2021-22, GRIDCO has estimated the power procurement cost of Rs. 621.05 Crore at an average rate of 336.79 P/U.
282. The Commission observed that CERC vide their order dated 29.06.2018 passed in Petition No.61/GT/2016, has determined the tariff for the control period 2014-19. 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'20 to Sept.'20, as submitted by GRIDCO, the average ECR is computed as 166.11 P/U which has been considered by the Commission for procurement of power from M/s. GKEL during FY 2021-22. In earlier paragraph, the Commission has approved 1844 MU to be procured by GRIDCO from M/s. GKEL during FY 2021-22. Hence, the total energy charge for procurement of approved quantum of 1844 MU comes to Rs. 306.31 Crore. Accordingly, the total power procurement cost is arrived at Rs. 621.05 Crore (Fixed charges- Rs. 314.74 Crore + Total Energy Charges Rs. 306.31 Crore) at an average rate of 336.79 P/U for drawal of the approved quantum of 1844 MU for state use during the FY 2021-22.

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

283. GRIDCO has submitted that in view of no supply of power by JITPL since May-2019 onwards in view of on-going cases before different forum of law, GRIDCO has not proposed any quantum of power to be procured from JITPL during FY 2021-22,

which is without prejudice to the various on-going cases in different legal forums and subject to prudent decision by the Commission. As per the Para 13(ii) of the Commission's Order dated 04.06.2019 in case no. 1/2017 and 64/2017 in the matter of incorporation of compensation clause in the PPA, a compensation provision in the PPA in case of default of M/s. JITPL to supply the GRIDCO share of power should be incorporated. The compensation should be equal to the variable cost of the Central Thermal Generating Station approved by the Commission for purchase of power by GRIDCO and situated at the margin of the merit order dispatch for that year. GRIDCO has submitted that by taking plea of various court cases M/s. JITPL has been denying to pay the compensation amount claimed in line with the above Order of the Commission by GRIDCO for short supply by M/s. JITPL.

284. The Commission has observed that M/s. JITPL has stopped supplying State share of power to GRIDCO since 23.05.2019 and advised GRIDCO to take up the matter with State Government and pursue the cases related to M/s. JITPL pending at different judicial forum and to make endeavour to purchase State share of energy towards from this IPP as this energy will be available at the variable cost only. However, based on the submission of GRIDCO, the Commission has not approved any drawal of power from the IPP of M/s JITPL during the FY 2021-22. Regarding incorporation of compensation provision in the PPA in case of default of M/s. JITPL to supply the GRIDCO share of power, the matter would be dealt separately on proper application of GRIDCO.
285. In view of the above, the power procurement cost of total 4847.48 MU from the above IPPs is estimated to the tune of Rs.1377.89 Crore at an average rate of 284.25 P/U as shown in the Table below:

**Table -37**  
**Power Procurement & Cost from IPPs during FY 2021-22**

IPPs	Quantity	Average Rate (Prov.)	Cost
	(MU)	(P/U)	(Rs. Crore)
M/s. Vedanta Ltd.	3003.48	251.99	756.84
M/s GMR Kamalanga Ltd.	1844.00	336.79	621.05
M/s Jindal India Thermal Power Ltd.	-	-	-
<b>Total</b>	<b>4847.48</b>	<b>284.25</b>	<b>1377.89</b>

286. The Commission has provisionally considered the above price of the IPPs for the purpose of computation of ARR of GRIDCO for the FY 2021-22. However, GRIDCO should 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

287. **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 2021-22 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 249.10 P/U including Central Transmission Loss of 3.49% towards drawal of power from Chukha hydro power stations for the FY 2021-22, but excluding transmission charges of PGCIL. Thus, the power purchase cost of 255.43 MU as proposed by GRIDCO works out to Rs. 63.63 crore.

288. The Commission scrutinized the submission of GRIDCO and approves the rate of 249.10 P/U considering the central transmission loss @ 3.49% for power procurement from Chukka HEP for FY 2021-22 as proposed by GRIDCO. So the cost for Chukka power comes to Rs. 63.63 Crore for the approved drawal of 255.43 MU for FY 2021-22. The details are given in Table below:

**Table – 38**

	<b>GRIDCO's Proposal for FY 2021-22</b>	<b>Commission's Approval for FY 2021-22</b>
Net Energy Drawal (MU)	255.43	255.43
Energy Charge (P/U)	240.16	240.16
Energy Charge incl. Tr. Loss (P/U)	249.10 (C.T.L. of 3.59%)	249.10 (C.T.L. of 3.59%)
<b>Cost of Chukka Power (Rs. Cr.)</b>	<b>63.63</b>	<b>63.63</b>

289. **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 2021-22. This rate of 216 P/U is based on the bills served to GRIDCO in accordance to the PTC Letter No.C/PTC/Tala/14169 dated 09.12.2016. Considering Central Transmission Loss of 3.59%, GRIDCO has estimated the rate of TALA Power at 224.04 P/U. Considering the drawl of 144.42 MU, the power purchase cost from TALA HEP worked out by GRIDCO at Rs.32.36 Crore for the FY 2021-22 excluding transmission charges of PGCIL.

290. The Commission scrutinized the above proposal of GRIDCO and approves the rate of 224.04 P/U considering the central transmission loss @ 3.59% for the power procurement from TALA HEP for FY 2021-22 as proposed by GRIDCO. So the cost of TALA power comes to Rs.27.94 Crore for the approved drawal of 124.69 MU for FY 2021-22. The details are given in Table below:

**Table – 39**

	<b>GRIDCO Proposal for 2021-22</b>	<b>Commission's Approval for 2021-22</b>
Net Energy Drawal MU	144.42	124.69
Energy Charge (P/U)	216.00	216.00
Energy Charge incl. Tr.Loss (P/U)	224.04 (C.T.L. of 3.59%)	224.04 (C.T.L. of 3.59%)
<b>Cost of Tala Power (Rs. In Cr.)</b>	<b>32.36</b>	<b>27.94</b>

291. **MANGDECHHU:** In the present ARR and BSP Application for FY 2021-22, GRIDCO has considered 419 P/U (412 P/U + PTC Margin of 7 P/U) as the rate for Mangdechu Power. GRIDCO has submitted the copies of the protocol to the Agreement between the Govt. of the Republic of India & the Royal Govt. of Bhutan regarding Mangdechu HEP dtd.23.04.2019 and the Power Sale Agreement executed between PTC & GRIDCO dtd.30.08.2019 to this effect. Considering Central Transmission Loss of 3.59%, the rate of Mangdechu power has computed at 434.60 P/U. Accordingly, GRIDCO has estimated the power purchase cost of Mangdechu power at Rs.148.75 Crore for procurement of 342.26 MU @ 434.60 P/U during FY 2021-22.

292. The Commission scrutinized the above proposal of GRIDCO and approves the rate of 434.60 P/U considering the central transmission loss @ 3.59% for the power procurement from Mangdechhu HEP for FY 2021-22 as proposed by GRIDCO. Hence, the cost of Mangdechhu power comes to Rs.148.75 Crore for the approved drawal of 342.26 MU during FY 2021-22. The details are given in Table below:

**Table – 40**

	<b>GRIDCO's Proposal for 2021-22</b>	<b>Commission's Approval for 2021-22</b>
Net Energy Drawal MU	342.26	342.26
Energy Charge (P/U)	419.00	419.00
Energy Charge incl. Tr.Loss (P/U)	434.60 (C.T.L. of 3.59%)	434.60 (C.T.L. of 3.59%)
<b>Cost of Mangdechhu Power (Rs. In Cr.)</b>	<b>148.75</b>	<b>148.75</b>

293. **TEESTA:** GRIDCO has stated that pursuant to CERC Tariff Regulations 2019, which came in force from 1st April 2019 for the control period 2019-24, NHPC has filed tariff applications with CERC for its central hydro plants. Order of CERC on tariff application is pending as CERC is non-functional based on orders of Hon'ble Supreme court. GRIDCO submitted that it has relied on submission of NHPC in its tariff petition filed with CERC to arrive at tariff for FY 2021-22. GRIDCO has prayed the Commission to approve power purchase cost of Teesta based on petition filed by NHPC with CERC or based on final order of CERC once it becomes operational again. The proposal of GRIDCO is summarized in the table below:

**Table-41  
Power purchase cost of Teesta V**

<b>Name of the Power Stations</b>	<b>Energy (MU)</b>	<b>Fixed Charges (Rs. CR.)</b>	<b>Variable Charges (Rs. Cr.)</b>	<b>Year End Charges (Rs. Cr.)</b>	<b>Total Projected Cost (Rs. Cr.)</b>	<b>Unit Rate (Including Reimbursement Charges (P/U))</b>
Teesta V	504.22	43.42	43.42	-	86.85	172.24

294. After due scrutiny, the Commission observed that as per the filing of NHPC before CERC, the Annual Fixed charges of TEESTA-V for FY 2021-22 is Rs. 421.81 Crore and accordingly the average rate of TEESTA Power comes to 165.95 P/U considering the net energy sent out of 2541.80 MU (design energy less normative auxiliary consumption). Hence, the average rate per unit of TEESTA power computed to be 172.13 P/U inclusive of central transmission loss of 3.59% for FY 2021-22. Accordingly, the cost of TEESTA power comes to Rs.86.85 Crore for the approved drawal of 504.57 MU during FY 2021-22. The details are given in Table below:

**Table – 42**

	<b>GRIDCO Proposal for FY 2021-22</b>	<b>Commission's Approval for FY 2021-22</b>
Net Energy Drawal MU	504.22	504.57
Energy Charge (P/U)	-	165.95
Energy Charge incl. Tr. Loss (P/U)	172.24 (C.T.L. of 3.59 %)	172.13 (C.T.L. of 3.59%)
<b>Cost of Teesta Power (Rs. In Crore)</b>	<b>86.85</b>	<b>86.85</b>

**Central Sector Thermal Power Stations**

295. GRIDCO has submitted that pursuant to CERC Tariff Regulations, 2019 for the control period 2019-24, NTPC has filed tariff applications before CERC for its central plants, which are still pending as CERC is now non-functional based on orders of

Hon'ble Supreme Court. GRIDCO has relied on submission of NTPC in its tariff petition filed with CERC for tariff period FY 2019-24 to arrive at fixed cost of NTPC Thermal Stations for FY 2021-22. Further, GRIDCO is relying on actual data of NTPC bills to arrive at energy charges based on actual data of first 6 months of FY 2020-21. Thus GRIDCO has prayed the Commission to approve power purchase cost of central stations based actual 6 months energy charge bills and on petition filed by NTPC with CERC or based on final order of CERC once it becomes operational again. GRIDCO has further submitted that it has estimated Year End charges for FY 2021-22 by prorating actual data for the period Apr-Sep 2020 and prayed the Commission to approve the same. The power purchase cost of NTPC Thermal Power stations as proposed by GRIDCO for the FY 2021-22 are given in the table below:

**Table-43**  
**Proposed Power Purchase Cost of NTPC Thermal Stations for FY 2021-22**

<b>Name of the Power Stations</b>	<b>Energy (MU)</b>	<b>Fixed Charges (Rs. Cr.)</b>	<b>Variable Charges (Rs. Cr.)</b>	<b>Year End Charges (Rs. Cr.)</b>	<b>Total Projected Cost (Rs. Cr.)</b>	<b>Unit Rate (Including Reimbursement Charges (P/U))</b>
FSTPS-I	184.20	37.05	52.91	0.15	90.10	489.16
FSTPS-III	373.42	99.72	104.49	0.50	204.71	548.21
KHSTPS-I	186.65	38.02	42.55	0.08	80.65	432.10
KHSTPS-II	171.14	29.82	36.85	0.02	66.69	389.70
TSTPS-I	2,157.92	298.77	450.97	12.76	762.51	353.35
TSTPS-II	1,346.00	117.81	278.24	4.30	400.35	297.43
DSTPS(Unit-I)	2,608.02	537.56	280.01	10.76	828.32	317.61
<b>Total</b>	<b>7,027.34</b>	<b>1,158.75</b>	<b>1,246.02</b>	<b>28.57</b>	<b>2,433.34</b>	<b>346.27</b>

**Upcoming Central Thermal Stations**

296. GRIDCO has submitted that it has forecasted cost of generation from upcoming NTPC stations based on provisional tariff submitted by NTPC as is summarized below:

**Table-44**  
**Per unit cost of upcoming NTPC Stations (Rs/kWh)**

<b>Name of the Power Stations</b>	<b>FC/Unit</b>	<b>VC/Unit</b>
North Karanpura	2.30	1.32
Barh-I	1.95	2.48

297. GRIDCO has further submitted that it has relied on submission of NTPC in its tariff petition filed with CERC for Darlipali to arrive at fixed cost for FY 2021-22 and on

the actual data of NTPC Darlipali (Unit-I) for first 6 months of FY 2021-22 to arrive at energy charges Darlipali (Unit-II). GRIDCO has submitted that estimating Year End charges of upcoming new plants based on Year End charges of the older plants is found to be at higher side. Thus, GRIDCO has estimated the Year End charges of new plants based on forecast of Year End charges of DSTPS (Unit-I) as it is a new plant. The Summary of cost of power from the upcoming NTPC stations is as below:

**Table-45**  
**Proposed Power Purchase Cost of Upcoming NTPC Stations for FY 2021-22**

Name of the Power Stations	Energy (MU)	Fixed Charges (Rs. Cr.)	Variable Charges (Rs. Cr.)	Year End Charges (Rs. Cr.)	Total Projected Cost (Rs. Cr.)	Unit Rate (Including Reimbursement Charges (P/U))
Darlipali (Unit-II)	1,086.67	223.98	116.67	4.48	345.13	317.61
Barh-I	606.73	183.75	156.07	2.50	342.32	564.21
North karanpura	243.86	68.44	33.39	1.01	102.84	421.71
<b>Total</b>	<b>1,937.26</b>	<b>476.17</b>	<b>306.13</b>	<b>7.99</b>	<b>790.30</b>	<b>407.94</b>

298. The Commission observed that the upcoming thermal power stations i.e. Barh-I and North Karanpura Thermal Power Stations have not yet been commissioned. Further, the PPAs with GRIDCO in respect of these power stations have not yet been vetted by the Commission and GRIDCO has proposed the provisionally tariff of these power stations as NTPC has not yet filed its tariff petition before CERC in respect of these power stations. Furthermore, the variable cost proposed by GRIDCO for these power stations is more than the variable cost proposed for Darlipalli TPS. Therefore, the Commission do not consider any drawl of power and fixed charges in respect of Barh-I and North Karanpura Thermal Power Stations of NTPC for the FY 2021-22.

299. **Fixed Charge:** The Commission scrutinized the proposal of GRIDCO and observed that since no tariff orders have been issued for the FY 2021-22 in respect of NTPC-ER Thermal Generating Stations, GRIDCO has considered the Fixed Charges of as per the filing of NTPC before CERC for the period from 2019-24. However, the Commission has provisionally considered the fixed cost of NTPC thermal generating stations (except Darlipali) based on the present bills raised by NTPC to GRIDCO for the month of November, 2020 and factoring the plant availability at which GRIDCO has proposed to draw power from these stations. But for Darlipali TPS (2x800 MW), the Commission has considered the filing of NTPC before CERC as no tariff order

has been issued by CERC earlier in respect of this new power station. As per the filing of the NTPC, the fixed cost of Darlipali TPS is Rs.2219.45 Crore. Since, the same has not yet been approved by the CERC, the Commission has provisionally considered 85% of the fixed charge proposed by NTPC for Darlipali HEP and 70% PAF as proposed by GRIDCO for the purpose of computation of ARR of GRIDCO. Any deviation after approval of the same by CERC shall be considered in truing up exercise of GRIDCO.

300. **Energy Charge Rate (ECR):** The Commission observed that GRIDCO has computed the energy charge rate of NTPC stations for the FY 2021-22 based on actual data of first 6 months of FY 2020-21. For the Darlipalli TPS (Unit-II) GRIDCO has proposed variable cost of 107.36 P/U which is the average variable cost of Darlipalli TPS (Unit-I) during first 6 months of FY 2020-21. The Commission scrutinized the bills submitted by NTPC to GRIDCO from the month of April, 2020 to January, 2021 and observed that the average ECR of the Darlipalli is lower than the other central sector thermal stations. The ECR as per the bills served by NTPC to GRIDCO for the period from April, 2020 to January, 2021 are given in the table below:

**Table-46**  
**Average ECR of Central Generating Stations for the period from Apr'20 to Jan'21**

	FSTPS - I & II	FSTPS- III	KSTPS-I	KSTPS -II	TSTPS-I	TSTPS - II	DARLIPALLI
MONTH	ECR Rs./ KWH						
Apr-20	2.945	2.891	2.260	2.143	2.009	1.854	1.087
May-20	2.942	2.766	2.252	2.085	1.910	1.997	1.037
Jun-20	2.818	2.766	2.134	2.024	1.941	1.922	1.018
Jul-20	2.608	2.560	2.104	1.996	2.037	2.021	1.022
Aug-20	2.599	2.551	2.150	2.040	2.079	2.064	1.021
Sep-20	2.688	2.639	2.289	2.171	2.119	2.100	1.025
Oct-20	2.731	2.680	2.402	2.278	2.133	2.114	1.052
Nov-20	2.685	2.636	2.335	2.214	2.073	2.055	1.100
Dec-20	2.640	2.591	2.335	2.214	1.893	1.877	1.042
Jan-21	2.590	2.542	2.220	2.105	1.853	1.817	1.112
<b>Avg. ECR from 4/20 to 01/21</b>	<b>2.725</b>	<b>2.663</b>	<b>2.248</b>	<b>2.127</b>	<b>2.003</b>	<b>1.981</b>	<b>1.051</b>

301. 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 not possible. Therefore, the Commission, for the purpose of computation of ARR of GRIDCO for FY 2021-22, considers the average of actual ECR of first ten months of

the current FY 2020-21 (i.e. from April, 2020 to January, 2021) of the Central Thermal Power Stations as indicated in Table below.

**Table – 47**  
**Energy Charge Rate (ECR) of CGSs approved for 2021-22**  
**(Paise/Unit)**

Central Thermal Stations	GRIDCO's Proposal for 2021-22 (including Loss)	Approval of the Commission considering the Avg. of actual ECR from April'20 to Jan'21 (excluding central Tr. Loss )	Approval of the Commission including central Tr. Loss
TSTPS-I	208.98	200.32	207.78
TSTPS-II	206.72	198.11	205.49
FSTPS-I & II	287.24	272.55	282.70
FSTPS -III	279.82	266.30	276.22
KHSTPS-I	227.97	224.78	233.15
KHSTPS-II	215.32	212.67	220.59
DSTPS-I	107.37	105.13	109.05
DSTPS-II	107.37	105.13	109.05

302. In case of any variation in ECR during 2021-22 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 2022-23.
303. **Year-end Adjustment Charges (YEA):** GRIDCO had proposed the year-end adjustment charges of central generating stations for FY 2021-22 to the tune of Rs. 28.57 crore based on the actual data for the period Apr-Sep 2020 and prorating the same for the whole year. In addition the Year End charges of DSTPS (Unit-II), has been proposed by GRIDCO at Rs. 7.99 Crore based on the forecast of year end charges of DSTPS (Unit-I).
304. The Commission examined the above proposal of GRIDCO and approved the Year-end Charges of Rs.28.12 Crore for the FY 2021-22 in respect of NTPC thermal power stations. The Year End Charges for old NTPC station has been calculated based on the actual Year End charges for the FY 2019-20 except electricity duty which have been considered by the Commission based on normative auxiliary consumption. The Commission does not allow any incentive due to consideration of normative generation. However, the Year End Charges for Darlipalli HEP has been calculated based on the bills raised by NTPC to GRIDCO for Darlipalli-I during the current year

and the electricity duty on normative auxiliary consumption. The details of the year-end charges approved by the Commission are given in the table below:

**Table –48**  
**Year End Charges Approved for the FY 2021-22**

Central Generating Stations	Electricity Duty (Rs. Cr.)	SOC & MOC charges (Rs. Cr.)	Total (Rs. Cr.)	Estimated energy after Central Tr. Loss (MU)	Rate including loss (P/U)
TSTPS –I	12.56	0.20	12.76	2158.20	5.91
TSTPS-II	4.20	0.10	4.30	1346.00	3.19
FSTPS- I & II	0.00	0.15	0.15	245.67	0.61
FSTPS – III	0.00	0.05	0.05	373.42	0.13
KhSTPS –I	0.00	0.08	0.08	186.70	0.43
KhSTPS –II	0.00	0.02	0.02	171.18	0.12
DSTPS-I	5.23	0.15	5.38	2608.02	4.13
DSTPS-II	5.23	0.15	5.38	1086.67	4.13
<b>Total</b>	<b>27.22</b>	<b>0.90</b>	<b>28.12</b>		

305. Taking all the above costs into account, the summary of estimated power purchase cost in respect of drawl of power from Central Thermal Generating Stations by GRIDCO for FY 2021-22 is given in the table below:

**Table –49**  
**Summary of Power Purchase Cost from Central Generating Stations for FY 2021-22**

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	2158.20	2158.20	214.66	99.48	207.78	5.91	313.17	675.88
2	TSTPS St-II	1346.00	1346.00	99.70	74.07	205.49	3.19	282.75	380.58
3	FSTPS I & II	245.67	0.00	32.47	176.25	282.70	0.61	459.55	-
4	FSTPS III	373.42	0.00	89.28	239.09	276.22	0.13	515.45	-
5	KhTSPS St-I	186.70	0.00	31.36	168.04	233.15	0.43	401.62	-
6	KhTSPS St-II	171.18	0.00	29.88	174.62	220.59	0.12	395.32	-
7	DSTPS-I	2608.02	2608.02	456.92	175.20	109.05	4.13	288.37	752.09
8	DSTPS-II	1086.67	1086.67	190.39	175.20	109.05	4.13	288.37	313.37
<b>NB:</b> The rates include Central Transmission Loss.									

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

306. GRIDCO has submitted that the Transmission Charges of PGCIL & other Inter-State Transmission System are being determined as per the norms and principles laid down by the CERC from time to time. Now, CERC has notified CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 on dtd. 04.05.2020.

According to the said Regulations, the Inter-State Transmission System charges shall have the following components:

- a. National Component (NC)
- b. Regional Component (RC)
- c. Transformer Component (TC)
- d. AC system component (ACC)

307. GRIDCO has stated that as per the said Regulations, the Inter-State Transmission System charges shall be calculated on all India basis and the sharing of Transmission Charges for DICs shall be based on Ex-post calculation and on monthly basis. Further, since the calculations are to be made on all India basis and sufficient data are not available, as well as the billing in new regulation is not yet started, it is extremely difficult on the part of GRIDCO to find the exact amount of Monthly Transmission Charges (MTC) / exact quantity of LTA, under the New Regulations. Therefore, certain assumptions are taken to arrive at the end results in line with the new Regulations. Basing on the All-India MTC of the Second Quarter (Q2) of 2019-20 and 2020-21, the MTC for 2021-22 has been estimated at Rs.3426.31 Crore which has been segregated to different components. Taking these components as base, the Transmission Charges of Odisha has been calculated month-wise, taking into consideration of the LTAs of the upcoming Generators of Barh, Darlipali and North Karanpura. The total Transmission Charges for Odisha for the FY 2021-22 is estimated to be Rs.699.19 Cr. The energy drawal by GRIDCO from Central Sector has been estimated as 17542.59 MU on LTA basis and monthly basis. The assumptions taken by GRIDCO are given below:

- i. Usage Based Component (AC-UBC) and Balance Component (AC-BC) components are in 40-60 ratio.
- ii. National Component-Renewable Energy (NC-RE) components are merged in AC as Monthly Transmission Charges (MTC) of NC-RE is not available.
- iii. FACTS Elements like STATCOMs, SVCs, Bus Reactors, Spare Transformers etc. are merged in AC, as the MTC of such elements are not available
- iv. MTC of Inter-Connecting Transformers (ICTs) are merged in AC components
- v. LTA of 2020-21 Q2 has been taken as reference and LTAs of upcoming generating stations are considered w.e.f. the expected CoD
- vi. The net impact of STOA transaction is considered as NIL.
- vii. Energy drawl by GRIDCO from Central Sector has been considered on monthly basis basing on LTA

308. Further, as per Clause-10 of the said Regulations, 2020, the Transmission Loss for ISTS shall be calculated on All India average basis for each week. The Loss for the last three weeks is declared by POSOCO as 3.54%, 3.57% and 3.66%. Considering

the average loss of 3.59% as CTU loss, per unit PGCIL Transmission Charge including loss works out to be 41.34 P/U. As the transmission charges are levied as capacity charges, the average per unit PGCIL Transmission charges will increase if the scheduling of power will be lesser. The computation of Transmission charges for FY 2021-22 is given in the table below:

**Table-50**  
**Transmission charges for FY 2021-22 (Rs Cr.)**

Particulars	FY 2021-22
Net amount payable by GRIDCO towards Transmission Charges	699.19
Energy Drawal by GRIDCO before Central Sector Loss (MU)	17542.59
PGCIL Transmission Charge (Paise/Unit)	<b>39.86</b>
Average All India Central Sector Transmission Loss (%)	<b>3.59%</b>
PGCIL Transmission Charge including loss (Paise/Unit)	<b>41.34</b>

309. 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. CERC has notified CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 on dtd. 04.05.2020. The Commission observed that for the current FY 2020-21, the Commission had allowed Rs.625.40 Crore towards PGCIL transmission charges factoring the amount receivable from short-term open access customers. Now, GRIDCO has proposed Rs.699.19 Crore towards PGCIL Transmission charges for the FY 2021-22 and replying to the Commission's queries GRIDCO has submitted that it has received Rs.55.05 Crore from Short-term open access customers till February, 2021. Prorating the same for the whole year, it is estimated that GRIDCO would receive Rs.60.05 Crore from STOA customer during FY 2020-21. Considering the same for the FY 2021-22 and factoring it with the proposed transmission charges of Rs.699.19 Crore, the net transmission charges of PGCIL system comes to Rs.639.14 Crore. Therefore, the Commission provisionally approves Rs.639.14 Crore towards transmission charges of PGCIL system for the FY 2021-22.
310. GRIDCO has further submitted that as per CERC (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations 2019, the RLDC fees and charges shall comprise Regional Load Despatch Centre fees to be recovered by POSOCO towards registration for commencement of Grid access and scheduling and annual charges to be collected in the form of annual LDC charges from the users. The RLDC charges shall be collected equally (1/3rd of Monthly Charges) from the users

i.e. (a) Distribution Licensees & Buyers, (b) Generating Stations & Sellers and (c) Transmission Licensees. GRIDCO has forecasted POSOCO charges of Rs 1.79 Cr. as expenses for FY 2021-22 by prorating actual expenses for Apr-Sep 2020. The Commission accepts the proposal of GRIDCO and allow Rs.1.79 Crore in the ARR of GRIDCO towards POSOCO charges for the FY 2021-22. The details of transmission charges and POSOCO charges payable by GRIDCO for the FY 2021-22 are given in the table below:

**Table – 51  
PGCIL Transmission Charges for FY 2021-22**

<b>Particulars</b>	<b>Commission's Approval</b>
Transmission charge payable by GRIDCO factoring the amount receivable from STOA customers (Rs. Cr.)	639.14
POSOCO Charges (Rs. Cr.)	1.79
<b>Total amount payable by GRIDCO (Rs. Cr.)</b>	<b>640.93</b>

311. 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 2021-22 are given in the table below:

**Table –52  
GRIDCO's Proposal & Commission's Approval for FY 2021-22**

<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)	3660.26	93.74	343.10	3676.86	89.93	330.65
Indravati	1942.38	94.41	183.38	1942.38	88.06	171.04
Machakund	259.88	244.19	63.46	262.50	137.29	36.04
<b>Total Hydro</b>	<b>5862.52</b>	<b>100.63</b>	<b>589.94</b>	<b>5881.74</b>	<b>91.42</b>	<b>537.73</b>
OPGC 1 & 2 <sup>nd</sup> Unit	2726.34	261.14	711.96	2726.34	248.45	677.37
OPGC 3 & 4 <sup>th</sup> Units	5700.21	315.12	1796.23	4208.22	309.00	1300.34
TTPS (NTPC)	3287.68	320.35	1053.22	-	-	-
IPPs	4800.00	283.67	1361.63	4847.48	284.25	1377.89
<b>Renewable Sources</b>						
Small Hydro	458.35	417.57	191.39	458.35	417.57	191.39
Biomass	80.00	708.00	56.64	80.00	708.00	56.64
Wind	685.00	286.33	196.14	685.00	286.33	196.14
Solar	1479.00	393.31	581.71	1479.00	391.00	578.29
<b>Total RE</b>	<b>2702.35</b>	<b>379.62</b>	<b>1025.87</b>	<b>2702.35</b>	<b>378.36</b>	<b>1022.46</b>
<b>TOTAL STATE</b>	<b>25079.09</b>	<b>260.73</b>	<b>6528.85</b>	<b>20366.13</b>	<b>241.37</b>	<b>4915.79</b>
CHUKHA	255.43	249.10	63.63	255.43	249.10	63.63
Tala HPS	144.42	224.04	32.36	124.69	224.04	27.94
Mangdechhu	342.26	434.60	148.75	342.26	434.60	148.75
Teesta-V	504.22	172.23	86.84	504.57	172.13	86.85

Generators	GRIDCO's PROPOSAL			COMMISSION's APPROVAL		
	Energy	Total Rate	Total cost	Energy	Total Rate	Total cost
	MU	P/U	Rs.in Cr.	MU	P/U	Rs.in Cr.
<b>Total Central Hydro</b>	<b>1246.33</b>	<b>266.04</b>	<b>331.57</b>	<b>1226.94</b>	<b>266.65</b>	<b>327.16</b>
TSTPS - I	2157.92	353.35	762.51	2158.20	313.16	675.85
TSTPS - II	1346.00	297.44	400.35	1346.00	282.75	380.58
FSTPS -I & II	184.20	499.16	90.10	-	-	-
FSTPS -III	373.42	548.21	204.71	-	-	-
KhTPS - I	186.65	432.10	80.65	-	-	-
KhTPS - II	171.14	389.70	66.69	-	-	-
DSTPS-I	2608.02	317.61	828.33	2608.02	288.37	752.09
DSTPS-II	1086.67	317.60	345.13	1086.67	288.37	313.37
North Karanpura	243.86	421.71	102.84	-	-	-
Barh-I	606.73	564.21	342.32	-	-	-
<b>Total Central Thermal</b>	<b>8964.61</b>	<b>359.60</b>	<b>3223.64</b>	<b>7198.89</b>	<b>294.75</b>	<b>2121.89</b>
<b>Total Central Sector</b>	<b>10210.94</b>	<b>248.18</b>	<b>3555.21</b>	<b>8425.83</b>	<b>290.66</b>	<b>2449.05</b>
PGCIL Tr. Charge			699.19			639.14
ERLDC Charges			1.79			1.79
<b>TOTAL GRIDCO</b>	<b>35290.03</b>	<b>305.89</b>	<b>10795.04</b>	<b>28791.96</b>	<b>278.06</b>	<b>8005.77</b>
<b>Less: Revenue from trading of surplus power</b>	<b>7068.36</b>	<b>207.22</b>	<b>1464.70</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net GRIDCO</b>	<b>28221.67</b>	<b>330.61</b>	<b>9330.34</b>	<b>28791.96</b>	<b>278.06</b>	<b>8005.77</b>

NB: The rates include Central Transmission Loss.

312. The Commission has not allowed any drawal from some of the Central Generating Stations except TSTPS-I&II and Darlipalli-I&II considering merit order despatch principle. GRIDCO has entered into PPAs with numbers of Central Generating Stations and IPPs within the State. If, GRIDCO draws power from all those stations it will have surplus availability of power. Even, if GRIDCO does not draw power from the power stations which are having PPA, it will have to pay fixed cost to those power stations which will eventually be passed on to the consumers as tariff burden. In order to avoid passage of unnecessary cost to the consumers, the Commission has not considered the fixed cost of those power stations from which GRIDCO would not draw power due to surplus availability. Therefore, GRIDCO should take up this matter with the State Government to whom central allocation of power has been made for payment of fixed cost of those stations. The estimated redundant fixed charges of those stations would be Rs. 183.00 Crore for FY 2021-22.

313. 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 level. 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 justifications 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**

314. 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 made within due date.

**Pass through of costs in the ARR & BSP of GRIDCO for FY 2021-22**

315. GRIDCO has submitted that the uncontrollable costs, such as of STU chargers of other State towards RE procurement, arrears of M/s. Shalivahan Green Energy Limited (SGEL) due to tariff revision, Deferred Tax liability of Teesta-V HEP and additional power purchase cost of NTPC plants have been paid by GRIDCO which was not approved by the Commission the ARR of GRIDCO for the FY 2020-21. Further, GRIDCO has claimed pass through of different charges to OPGC for the FY 2021-22. In total GRIDCO has claimed an amount of Rs. 777.65 Crore under Pass Through in its ARR for FY 2021-22 as detailed here under.

### **Charges paid for STU charges of other States for RE procurement**

316. GRIDCO has submitted that it has paid STU charges of Rs 5.08 Cr during Apr-Sep 2020 to other States for sourcing the Renewable Energy from outside the State which was not approved in the ARR & BSP order. Based on conservative assessment of bills, GRIDCO has estimated that Pass Through expenses for the entire FY 2020-21 would be 1.5 times of the actual expenses during Apr-Sep 2020. Thus, GRIDCO has proposed an amount of Rs.7.63 Cr. as pass through expenses in the ARR for the FY 2021-22 on account of STU charges for RE procurement from outside the State during FY 2020-21. The Commission accepted the proposal of GRIDCO and allows Rs. 7.63 Crore as pass through in the ARR of GRIDCO for the FY 2021-22 on account of STU charges for RE procurement from outside the State.

### **Arrear payment to M/s. SGEL**

317. GRIDCO has submitted that in its order dated 01.10.2020 passed in Case No. 12/2019 the Commission has revised the applicable tariff for 20 MW biomass based project of M/s. SGEL from FY 2016-17 onwards. Accordingly, GRIDCO has paid Rs 14.70 Crore to M/s. SGEL as per year-wise tariff revision as given below and prayed the Commission. to approve the same as pass through in the ARR for the FY 2021-22.

**Table-53**  
**Pass Through of arrear of M/s. SGEL (Rs Cr.)**

<b>Particulars</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>Total</b>
Amount paid on account of tariff revision of SGEL	1.10	1.84	3.96	5.46	2.34	<b>14.70</b>

318. The Commission accepted the above proposal of GRIDCO and allows Rs. 14.70 Crore as pass through in the ARR of GRIDCO for the FY 2021-22 on account of tariff revision of M/s. SGEL.

### **Payment to Central Hydro Stations**

319. GRIDCO has submitted that it has paid an amount of Rs. 10.34 Crore during Apr-Sep 2020 towards Deferred Tax liability of Teesta-V HEP. Based on historical assessment of bills, GRIDCO has estimated that the amount for the entire FY 2020-21 would be 1.5 times of the actual expenses during Apr-Sep 2020. Thus, GRIDCO has proposed an amount of Rs.15.51 Crore as Pass Through in the ARR for FY 2021-22 on account of Deferred Tax liability of Teesta-V HEP. The Commission accepted the proposal of

GRIDCO and allows Rs. 15.51 Crore as pass through in the ARR of GRIDCO for the FY 2021-22 towards Deferred Tax liability of Teesta-V HEP.

**Additional Power Procurement Cost from NTPC Stations**

320. GRIDCO has submitted that additional power purchase cost, over and above the cost approved by the Commission for the FY 2020-21, is found to be Rs 477.73 Crore based on the actual bills received till September 2020. GRIDCO has assessed that additional power purchase cost for NTPC plants would be around 1.5 times of actuals of the first 6 months of the FY 2020-21. Thus GRIDCO has proposed the additional power purchase cost of Rs 716.60 Cr. towards power purchase from NTPC plants during full year of FY 2020-21, as pass through expenses in the ARR of GRIDCO for the ensuing year 2021-22. The details is given in the table below:

**Table-54**  
**Additional Power Purchase Cost of NTPC Stations (Rs Cr.)**

<b>Plant</b>	<b>Approved Power (MU)</b>	<b>Approved Power (Rs. CR.)</b>	<b>Actual Units(MU)</b>	<b>Actual Cost (Rs. Cr.)</b>	<b>Differential cost Claimed (Rs. CR.)</b>	<b>Pass Through For FY 2021-22 (Rs. Cr.)</b>
2020-21						
FSTPS-I &II	-	-	200.68	132.74	132.74	199.11
FSTPS-III	-	-	103.84	75.94	75.94	113.91
KHSTPS-I	-	-	130.90	74.25	74.25	111.38
KHSTPS-II	-	-	32.12	12.76	12.76	19.14
TSTPS-I	1,509.01	269.97	559.87	209.62	(60.34)	(90.51)
TSTPS-II	1,360.52	193.93	427.15	126.23	(67.70)	(101.55)
DSTPS	-	-	961.94	310.08	310.08	465.12
<b>Total</b>	<b>2,869.53</b>	<b>463.89</b>	<b>2,416.49</b>	<b>941.63</b>	<b>477.73</b>	<b>716.60</b>

321. GRIDCO has prayed the Commission to allow the above claim as pass through in its ARR for the FY 2021-22. If the Commission do not allow the same, it will result in non-payment of charges to generators due to lack of funds with GRIDCO and with non-payment of dues, the generators like NTPC could regulate power which would affect quality of power in the State.

322. The Commission observed that in the ARR and BSP order of GRIDCO for FY 2020-21, the quantum of power purchase from the different NTPC thermal stations was approved based on the merit order despatch principles and GRIDCO was directed to follow the merit order principle while purchasing power for the State consumption. Since, GRIDCO has entered into PPA with a numbers of generators; the estimated

availability of power was much more than the estimated state demand. In the ARR & BSP order of GRIDCO for the FY 2020-21, the Commission had estimated the surplus availability of 5941.37 MU with GRIDCO and left a negative gap of Rs.250.60 Crore in the ARR of GRIDCO. Further, the Commission had directed GRIDCO for trading of the available surplus power on prudent commercial principles in the market after meeting the state requirement and adjust the revenue earning from trading and UI sources towards meeting the above gap and past losses. In case the above gap is not met from the trading and UI account, the balance amount shall be considered in the truing up exercise of GRIDCO. Further, the FY 2020-21 has not yet been completed and GRIDCO has forecasted the differential power purchase cost for the whole year by prorating the actual for the first 6 months of the year 2020-21. Therefore, the Commission do not consider the proposal of GRIDCO to pass through the forecasted differential power purchase cost of Rs. 716.60 Crore in the ARR of FY 2021-22. This will be considered in the truing up exercise of GRIDCO.

**Reimbursement to OPGC during FY 2021-22**

323. GRIDCO in its application has submitted for pass through of Rs. 23.20 Crore in the ARR for the FY 2021-22 towards ED, water cess, SOC & MOC charges and DSM charges of OPGC. The Commission while passing the order in ARR and Tariff application of OPGC for the FY 2021-22 in Case No.71 of 2020 has allowed an amount of Rs. 67.15 Crore provisionally for reimbursement by GRIDCO during the FY 2021-22 as given in the table below. The Commission approves the same in the ARR of GRIDCO for the FY 2021-22.

**Table- 55**

<b>Sl.No.</b>	<b>Particulars</b>	<b>OERC Approval for FY 2021-22 (Rs. in Crore)</b>
1	Electricity Duty	12.98
2	Water Cess and Water Charges	8.37
3	Tax and Cess on Land	0.19
4	SOC and MOC for SLDC	0.34
5	ERPC Charges	0.16
6	Income Tax	38.67
7	ARR and Tariff Petition Fees	0.30
8	Water Conservation Fund	6.13
	<b>Total</b>	<b>67.15</b>

### Reimbursement to OHPC during FY 2021-22

324. The Commission while passing the order in ARR and Tariff application of OHPC for the FY 2021-22 in Case No.70 of 2020 has allowed an amount of Rs. 85.16 Crore provisionally for reimbursement by GRIDCO during the FY 2021-22 as given in the table below. The Commission approves the same in the ARR of GRIDCO for the FY 2021-22.

**Table – 56**

**(Rs. in Cr.)**

<b>Component of Costs</b>	<b>RHEP</b>	<b>UKHEP</b>	<b>BHEP</b>	<b>HHEP</b>	<b>CHEP</b>	<b>UIHEP</b>	<b>Total</b>
(a) License fee for use of water for generation of electricity	0.788	1.248	1.775	1.026	0.735	2.943	<b>8.514</b>
(b) ED on Aux. Consumption	0.289	0.458	0.651	0.376	0.270	1.079	<b>3.122</b>
(c) Differential ED on Aux. Consumption for the period from 05.11.2016 to 31.03.2017	0.126	0.199	0.284	0.163	0.117	0.470	<b>1.359</b>
(d) SLDC charges							<b>1.370</b>
(e) Application fees and publication expenses for FY 2021-22							<b>0.265</b>
(f) Differential Publication Expenses for FY 2019-20							<b>0.021</b>
(g) Differential Publication Expenses for FY 2020-21							<b>0.029</b>
(h) Contribution to ERPC							<b>0.160</b>
(i) Reimbursement of Income tax paid during FY 2019-20							<b>42.900</b>
(j) Reimbursement towards additional 20% share of Machhakund Project							<b>27.420</b>
<b>Total</b>							<b>85.160</b>

325. The pass through expenses proposed by GRIDCO and approved by the Commission is summarized in the table given below:

**Table-57**

**Pass Through Expenses approved for FY 2021-22 (Rs Cr.)**

<b>Particulars</b>	<b>Proposed by GRIDCO</b>	<b>Approved by the Commission</b>
STU charges of Other States for RE power	7.63	7.63
Arrear dues of M/s. SGEL	14.71	14.70
Deferred Tax liability of Teesta-V HEP	15.51	15.51
Additional Power Purchase Cost from NTPC	716.60	0.00
Reimbursement to OPGC	23.20	67.15
Reimbursement to OHPC	-	85.16
<b>Total</b>	<b>777.65</b>	<b>190.15</b>

## GRIDCO FINANCE

### Employees cost

326. The Annual Revenue Requirement for the Financial Year 2021-22 filed by GRIDCO includes Rs.18.80 crore towards employees cost, which is given in the table below:-

**Table – 58**

SI No	Particulars	Previous Year (FY 2019-20)	Current Year (FY 2020-21)	Ensuing Year (FY 2021-22)	Assumptions
<b>A</b>	<b>Salary &amp; Allowance</b>				
1	Basic Pay	5.45	10.92	11.25	
2	Grade Pay	-	-	-	
3	Dearness Allowance	0.84	1.86	3.15	12 % of Basic pay
4	House Rent Allowance	0.29	0.31	0.59	
5	Other Allowance	0.09	0.10	0.10	5 % of Basic pay
6	Over-time	-	-	-	
7	Bonus	-	-	-	
	<b>Sub-total (A)</b>	<b>6.67</b>	<b>13.18</b>	<b>15.09</b>	
<b>B</b>	<b>Additional Employee Cost</b>				
1	Wage/Salary revision if any	-	-	-	
2	Contractual Engagement	-	-	-	
3	Out Sources Engagement	0.61	0.63	0.65	
4	others if any	-	-	-	
	<b>Sub-total (B)</b>	<b>0.61</b>	<b>0.63</b>	<b>0.65</b>	
<b>C</b>	<b>Other Employee Cost</b>				
1	Medical Expenses (allowance+ Reimbursement)	0.12	0.13	0.13	
2	Leave Travel Concession	0.013	-	-	
3	Interim Relief to Staff	-	-	-	
4	Encashment of Earned Leave	-	-	-	
5	Honorarium	0.04	0.04	0.04	
6	Ex-gratia	0.10	0.11	0.13	
7	Staff Welfare Expenses	-	-	-	
8	Miscellaneous	0.01	0.01	0.01	
	<b>Sub-total (C)</b>	<b>0.28</b>	<b>0.28</b>	<b>0.31</b>	
<b>D</b>	<b>Terminal Benefits</b>				
1	Pension	0.85	1.00	1.03	20 % of Basic+GP
2	Gratuity	-	-	-	
3	Leave Salary	0.58	0.68	0.70	11 % of Basic+GP
4	Other (including contribution to NPS)	0.18	0.21	0.21	2 % of Basic+GP
	<b>Sub-total (D)</b>	<b>1.61</b>	<b>1.88</b>	<b>1.94</b>	
	<b>Arrear towards implementation of 7th Pay Commission(E)</b>		<b>-</b>	<b>0.81</b>	
<b>E</b>	<b>Total Employees Cost (A+B+C+D)</b>	<b>9.17</b>	<b>15.98</b>	<b>18.80</b>	
<b>F</b>	<b>Less: Employees Cost Capitalised</b>	<b>-</b>	<b>-</b>	<b>-</b>	
<b>G</b>	<b>Net Employee Cost ( E- F)</b>	<b>9.17</b>	<b>15.98</b>	<b>18.80</b>	
	<b>TOTAL</b>	<b>9.17</b>	<b>15.98</b>	<b>18.80</b>	

### Basic Pay + GP

327. GRIDCO in the reply to queries of the Commission reported that the actual cash outflow on Basic Pay + GP from April 2020 to November 2020 (for a period of 8

month) was Rs.3.68 Crore. The Basic pay and GP for FY 2020-21 is extrapolated to arrive at Basic Pay for FY 2021-22 including 7<sup>th</sup> pay commission recommendations. The calculation is shown in the following table:

**Table-59**

(Rs in Crore)

Basic & GP	Apr 20 to Nov 20	3.68
	Average per month	0.46
	Prorated for 2020-21	5.52
Approved for 2021-22 (3% AI)		5.69

**Dearness Allowance:**

328. The Govt of Odisha implemented the 7<sup>th</sup> Pay Commission report 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 2020-21.

**Table-60**

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	12%	Approved By GoO
01.07.2019	17%	Approved By GoO
01.01.2020	20%	Projected
01.07.2020	23%	Projected
01.01.2021	26%	Projected
01.07.2021	<b>29%</b>	Projected
01.01.2022	32%	Projected

As per the above table the DA rate for FY 2021-22 is assumed to be 29%.

329. Following principle has been adopted for passing of other items of Employee cost.
- The arrear pertaining to 7<sup>th</sup> pay recommendations has been projected at Rs 0.81 crore. The commission allows the same with the assumption that the Govt of Odisha, will notify the balance 50% of the 7<sup>th</sup> pay arrear in the ensuing year. The projected amount of Rs. 0.81 crore is passed on to the tariff for FY 2021-22.
  - House rent allowance has been allowed to the tune of Rs 0.28 Crore.

iii. Medical reimbursement and all other expenses items claimed under the Employee cost have been allowed.

iv. Terminal Liability has been allowed as per the actual cash outgo basis taking into account the actual payment to be made. GRIDCO has projected R. 1.94 crore on account of the payment of pension, Gratuity, Leave salary and Employer's contribution of the NPS scheme. The same is allowed to be passed on to the tariff for FY 2021-22.

330. With the above principle the approved employees cost for FY 2021-22 is shown in table below:-

**Table – 61**

	<b>Particulars</b>	<b>Proposed (FY 2020-21)</b>	<b>Approved (FY 2021-22)</b>
<b>A</b>	<b>Salary &amp; Allowance</b>		
1	Basic Pay	11.25	5.69
2	Dearness Allowance	3.15	1.65
3	House Rent Allowance	0.59	0.28
4	Other Allowance	0.10	0.10
	<b>Sub-total (A)</b>	15.09	7.71
<b>B</b>	<b>Additional Employee Cost</b>		
1	Wage/Salary revision if any		
2	Out Sources/ Contractual Engagement	0.65	0.65
3	others if any		
	<b>Sub-total (B)</b>	0.65	0.65
<b>C</b>	<b>Other Employee Cost</b>		
1	Medical Expenses (allowance+Reimb.)	0.13	0.13
2	Leave Travel Concession		
3	Interim Relief to Staff		
4	Encashment of Earned Leave		
5	Honorarium	0.04	0.04
6	Ex-gratia	0.13	0.13
7	Staff Welfare Expenses		
8	Miscellaneous	0.01	0.01
	<b>Sub-total (C)</b>	0.31	0.31
<b>D</b>	<b>Terminal Benefits</b>		
1	Pension	1.03	1.03
2	Gratuity	0	0
3	Leave Salary	0.70	0.70
4	Other (including contribution to NPS)	0.21	0.21
	<b>Sub-total (D)</b>	1.94	1.94

	<b>Particulars</b>	<b>Proposed (FY 2020-21)</b>	<b>Approved (FY 2021-22)</b>
	Arrear towards implementation of 7th Pay (E)	0.81	0.81
<b>E</b>	<b>Total Employees Cost (A+B+C+D+E)</b>	18.80	11.42
<b>F</b>	Less: Employees Cost Capitalized	-	-
<b>G</b>	<b>Net Employee Cost ( E- F)</b>	<b>18.80</b>	<b>11.42</b>

331. The Commission approves an amount of Rs.11.42 crore towards employees cost for FY 2021-22 as against proposed amount of Rs.18.80 crore.

#### **Repair Maintenance**

332. During Financial Year 2021-22, GRIDCO have proposed an amount of Rs.0.70 crore towards repair & maintenance under the head AMC of computers, vehicles, furniture and office equipment. The Commission approves an amount of Rs.0.70 crore as a pass through in the ARR for FY 2021-22.

#### **Administration & General Expenses**

333. During Financial Year 2021-22, GRIDCO proposed an amount of Rs. 7.33 crore under the head Administrative and General Expenses, inclusive of an amount of Rs.1.90 crore towards license fee payable to OERC, Professional charges of 2.23 crore, communication expenses of Rs 1.02 crore and Miscellaneous expenses of Rs. 2.07 crore. The Commission considers the approved figure of Rs.3.20 crore last year and factoring in the expected annual inflation of (+) 5.0% for FY 2021-22, the amount works out to Rs.3.36 crore. Over and above the amount, the licence fee applicable for FY 2021-22 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-62**  
**A&G Expenses for 2021-22**

<b>Description</b>	<b>Rs. in Crore</b>
Normal A&G approved for FY 2020-21	3.20
Annual Inflation for 2021-22@ 5%	0.16
Normal A&G approved for FY 2021-22	3.36
License Fees for 2021-22	1.90
ERPC membership fees/ Fund	0.16
<b>Total A&amp;G for 2021-22 (Approved)</b>	<b>5.42</b>

334. Thus the Commission approves an amount of Rs.5.42 crore towards Administration and General Expenses for FY 2021-22 with a rider that GRIDCO shall make all endeavours to reduce the A&G costs by prudent management of resources.

### Depreciation

335. Under this head GRIDCO has proposed Rs.1.33 crore towards the depreciation on fixed assets (vehicle, furniture and office equipment etc.) for the FY 2021-22. The Commission approves the same as pass through in the ARR of GRIDCO for the FY 2021-22.

### Interest and Financial Charges

336. The proposal of GRIDCO on Interest and Financial Charges as submitted in Format F-2 is shown in the following table:

**Table-63**

Sl No	Particulars	Rate of int. (%) 01-04-19	Ensuing Year (FY 2021-22)					
			Principal		Interest		Closing Bal.	
			Received	Repayment	Due	Paid	Principal	Interest
<b>A</b>								
1	State Govt.(WCL)	13.00%	-	-	-	-	120.00	327.81
2	St.Govt (OPGC Adj.)	10.50%	-	-	-	-	42.54	88.36
3	NTPC (Govt.Bonds)	8.50%	-	-	-	-	818.81	663.57
	<b>Sub-total</b>		-	-	-	-	<b>981.35</b>	<b>1,079.75</b>
<b>B</b>	<b>Availed During FY 2009-10</b>							
4	Union Bank STL- V	9.50%	-	-	8.10	8.10	99.99	-
	<b>Sub-total</b>		-	-	<b>8.10</b>	<b>8.10</b>	<b>99.99</b>	<b>-</b>
<b>C</b>	<b>Availed During FY 2010-11</b>							
5	IOB I - 200 2010-11	8.50%	-	8.83	0.14	0.14	0.05	-
	<b>Sub-total</b>		-	<b>8.83</b>	<b>0.14</b>	<b>0.14</b>	<b>0.05</b>	<b>-</b>
<b>D</b>	<b>Availed During FY 2011-12</b>							
6	Union Bank - SOD	8.50%	-	-	-	-	-	-
7	Bond PF/2012-13 (140 cr)	10.82%	-	-	-	-	0.88	0.01
	<b>Sub-total</b>		-	-	-	-	<b>0.88</b>	<b>0.01</b>
<b>E</b>	<b>Availed During FY 2012-13</b>							
8	Real Growth PPB_2012-50cr	10.40%	-	-	-	-	-	-
	<b>Sub-total</b>		-	-	-	-	-	-
<b>F</b>	<b>Availed During FY 2013-14</b>							
9	GRIDCO Bond_2013-127.50cr	8.79%	-	-	-	-	127.50	-
10	Odisha Gramya	8.65%	-	13.07	0.29	0.29	0.05	-

Sl No	Particulars	Rate of int. (%) 01-04-19	Ensuing Year (FY 2021-22)					
			Principal		Interest		Closing Bal.	
			Received	Repayment	Due	Paid	Principal	Interest
	Bank_II_136cr							
11	Bank of India III_100 cr	8.70%	-	9.82	0.23	0.23	- 0.86	-
	<b>Sub-total</b>		-	<b>22.89</b>	<b>0.53</b>	<b>0.53</b>	<b>126.70</b>	-
<b>G</b>	<b>Availed During FY 2014-15</b>							
12	Bank of India IV_300 cr	8.70%	-	60.00	4.72	4.72	25.01	-
13	OHPC Loan_619 cr	8.00%	-				577.98	-
	<b>Sub-total</b>		-	<b>60.00</b>	<b>4.72</b>	<b>4.72</b>	<b>602.99</b>	-
<b>H</b>	<b>Availed During FY 2015-16</b>							
14	Canara V-100_2015-16	8.40%	-	11.62	0.30	0.30	- 0.26	-
15	OMC TL-I II & III 1500cr_2012-16	8.20%	-	240.94	37.70	37.70	- 377.17	-
16	Bank of India V_500 cr	8.70%	-	62.52	23.70	23.70	253.97	-
17	Andhra IV - 200cr	8.65%	-	-	-	-	0.01	-
	<b>Sub-total</b>		-	<b>315.08</b>	<b>61.71</b>	<b>61.71</b>	<b>-123.45</b>	-
<b>I</b>	<b>Availed During FY 2016-17</b>							
18	Union Bank- VIII_300_2016-17	8.45%		60.00	4.63	4.63	30.00	-
19	Union Bank- IX_500_2016-17	8.65%		100.00	20.98	20.98	199.98	-
20	Canara Bank_VI_200 cr 2016-17	8.30%		40.20	7.24	7.24	75.23	-
21	Uco_Bank_300 Cr_2016-17	8.45%		60.00	11.98	11.98	109.35	-
22	Andhra_V - 200cr_2016-17	8.65%		40.00	9.71	9.71	95.17	-
23	Odisha GB_III_25cr	8.65%		2.70	1.55	1.55	18.04	-
	<b>Sub-total</b>		-	<b>302.90</b>	<b>56.09</b>	<b>56.09</b>	<b>527.78</b>	-
<b>J</b>	<b>Availed During FY 2017-18</b>							
24	IOB_II - 300_2017-18	8.65%		50.04	13.23	13.23	145.80	-
25	Odisha Gramya Bank_IV_40 CR	8.20%		8.04	2.30	2.30	24.81	-
26	Andhra Bank_VI_100CR	8.65%		20.00	4.20	4.20	48.18	-
27	Canara Bank_VII_200 CR	8.55%		40.20	11.55	11.55	126.10	-
28	Allahabad Bank_V-150 CR	8.65%		30.00	7.58	7.58	74.95	-
	<b>Sub-total</b>		-	<b>148.28</b>	<b>38.86</b>	<b>38.86</b>	<b>419.83</b>	-
<b>K</b>	<b>Availed During FY 2018-19</b>							
29	Bank of India_VI_300 cr	8.50%	-	78.24	16.83	16.83	176.07	-
30	Bank of India TL-VII			15.00	24.50	24.50	285.00	
31	Bank of India TL-VIII			-	8.20	8.20	100.00	
32	Odisha Gramya Bank_V_35 CR	8.70%		7.08	2.29	2.29	24.97	0.01
33	Canara Bank_VIII_200 CR	8.55%		40.00	8.95	8.95	99.97	-
34	Canara Bank_IX_200 CR	8.55%		40.00	8.95	8.95	99.96	-

Sl No	Particulars	Rate of int. (%) 01-04-19	Ensuing Year (FY 2021-22)					
			Principal		Interest		Closing Bal.	
			Received	Repayment	Due	Paid	Principal	Interest
35	Canara - X			26.67	14.32	14.32	173.29	
36	Canara - XI			10.00	16.63	16.63	189.96	
37	Andhra Bank VII 200CR	8.75%		40.00	9.98	9.98	99.95	-
38	Andhra Bank - VIII			30.00	21.15	21.15	270.00	
39	Andhra Bank - IX			20.00	33.06	33.06	379.98	
	<b>Sub-total</b>		-	<b>306.99</b>	<b>164.87</b>	<b>164.87</b>	<b>1,899.14</b>	<b>0.01</b>
	<b>TOTAL (A+B+..+L)</b>		-	<b>1,164.97</b>	<b>335.01</b>	<b>335.01</b>	<b>4,535.26</b>	<b>1,079.77</b>
<b>L</b>	<b>Add: Financial Charges</b>	0.50%	-	-	<b>16.88</b>	<b>16.88</b>	-	-
<b>M</b>	<b>Add: Rebate to Customer</b>		-	-	-	-	-	-
<b>N</b>	<b>Add: Proposed Loan for FY 20-21(Apr-Mar)</b>	7.50%	-	-	208.00	208.00	2,600.00	-
<b>O</b>	<b>Add: Proposed Loan for FY 21-22(Apr-Mar)</b>	7.50%	-	-	-	-	-	-
<b>P</b>	<b>Grand Total (A to O)</b>		-	<b>1,164.97</b>	<b>559.90</b>	<b>559.90</b>	<b>7,135.26</b>	<b>1,079.77</b>
	Govt Guarantee Loan		-	<b>822.36</b>	<b>171.34</b>	<b>171.34</b>	<b>1,854.01</b>	<b>0.01</b>
	Secured		-	822.36	171.34	171.34	5,852.24	0.01
	Unsecured		-	342.61	388.55	388.55	1,283.02	1,079.76
	<b>Total</b>		-	<b>1,164.97</b>	<b>559.90</b>	<b>559.90</b>	<b>7,135.26</b>	<b>1,079.77</b>

337. 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.

338. 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.

339. GRIDCO has furnished the outstanding amounts due from DISCOMs which is shown in the table as below:

**Table-64**

<b>Particulars</b>	<b>TPWODL</b>	<b>NESCO</b>	<b>TPSODL</b>	<b>Sub-Total</b>	<b>TPCODL</b>	<b>TOTAL</b>
BSP Bills as on 31.03.2020	685.69	580.95	608.21	1874.85	847.25	2722.10
Year-end Adj.Bills-2007-08 to FY 2010-11	137.67	99.16	134.15	370.98	271.79	642.77
BSP of FY 2020-21 ( Bills served for April'20 to Sept'2020)	1131.00	757.20	344.63	2232.83	1204.76	3437.59
<b>Sub Total</b>	<b>1954.36</b>	<b>1437.31</b>	<b>1086.99</b>	<b>4478.66</b>	<b>2323.80</b>	<b>6802.46</b>
Less: Payment received including rebate during 01.04.2020 to 13.11.2020	1255.20	741.58	328.23	2325.01	1169.16	3494.17
<b>BSP outstanding up to Nov'2020</b>	<b>699.16</b>	<b>695.73</b>	<b>758.76</b>	<b>2153.65</b>	<b>1154.64</b>	<b>3308.29</b>

340. As seen from the above table that the outstanding dues from four DISCOMs is Rs. 3308.29 crore as on 30.11.2020 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.

341. In view of the above analysis the interest approved for FY 2021-22 is given in the following table:

**Table -65**

**(Rs. Cr.)**

<b>Total interest proposed for FY 2021-22</b>	<b>559.90</b>
Less disallowed:	
(i) Interest on loan during the FY 2016-17	56.09
(ii) Interest on loan during the FY 2017-18	38.86
(iii) Interest on loan for the FY 2018-19	164.87
(iv) Interest on proposed Loan for FY 2020-21	208.00
(v) Financial Charges	16.88
<b>Total interest disallowed</b>	<b>484.70</b>
<b>Total Interest allowed for FY 2021-22</b>	<b>75.20</b>

342. The Commission accordingly allows Rs. 75.20 crore towards interest and financial charges for FY 2021-22.

### Special Appropriation of Repayment of Principal

343. GRIDCO has submitted that it has outstanding loan balance of Rs 6,564.19 Cr as on 31st March 2020 with repayment liability of Rs 1164.97 Cr in FY 2021-22 as shown in the table below. Due to non-cost reflective BSP, disallowance of carrying cost on Regulatory assets and huge receivables, the loan liability has increased over the year. GRIDCO proposed to first meet such loan liability from margin from sale of surplus power as directed by the Commission in its previous orders. As the trading margin will be very low due to present market condition, GRIDCO requested to create a Separate Mechanism to meet Net Repayment liability post adjustment of Margin.

**Table-66**

<b>Particulars</b>	<b>Loan Repayment</b>	<b>Interest Dues</b>
State Govt. Loan	120.00	416.18
NTPC-GoO Special Bonds (Rs.1102.87 Crore)	818.81	663.57
Sub-Total (A) (Proposed to be deferred)	<b>938.81</b>	<b>1079.75</b>
Bank Loans& Inter Corporate Loan (OMC)	<b>1164.97</b>	-
OHPC Securitized Dues	-	-
Sub-Total (B)	<b>1164.97</b>	-
Grand Total (A+B)	<b>2103.78</b>	<b>1079.75</b>

344. GRIDCO has estimated a trading margin of Rs. 41.71 Crore from sale of surplus power after deducting the variable cost of purchase of such power, which is insufficient to meet the repayment liability of Rs 1164.97 Crore in FY 2021-22. Therefore, GRIDCO has proposed to deduct margin earned from sale of surplus power (sale price minus variable charges) from the repayment liability for the year and allow the balance repayment amount Rs.1123.26 Crore (Rs 1164.97- Rs. 41.71). GRIDCO has not included this amount in its calculation of ARR for the FY 2021-22. However, GRIDCO has prayed the Commission to allow the repayment liability in the following manner:
- i. Allow as a part of the annual revenue requirement,
  - ii. Allow a regulatory surcharge recovery as a percentage of bulk supply tariff, or
  - iii. Allow as a regulatory asset with an amortisation in a defined period of 3 to 5 years, as the Commission deems fit.

345. 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.”*

346. The Commission for the FY 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21 has taken the same stand and did not consider such amounts as a pass through under the head special appropriation in the revenue requirement. The Commission had directed GRIDCO to collect the BSP arrear from the DISCOM Utilities, proactively.
347. However the Commission considers that the market fluctuations are likely to swing to the advantage of GRIDCO. The Commission has estimated the energy availability of 34584.39 MU to GRIDCO from different sources during FY 2021-22 and the State requirement has been estimated at 28791.96 MU, leaving a surplus availability of 5792.43 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 sources towards meeting its loan repayment liability and past losses. Further, the Commission directs that GRIDCO should continue to procure surplus power from CGPs and IPPs of the State and market the surplus power in order to reduce the accumulated loss.
348. As submitted by GRIDCO in the last quarter of the current financial year the average price of trading comes around Rs.3.43 per kWh. Considering the above price we direct that GRIDCO shall supply its surplus power to DISCOMs at average BSP of the State i.e. 296.29 paise per kWh. DISCOMs shall endeavour to sell this power to industries owning CGPs and having a CD with DISCOMs for the energy drawn over 80% of load factor without overdrawal penalty @ Rs.3.50 per kVAh. Further, any industry having CGP without CD availing emergency power only can also get this benefit for incremental units above emergency drawal as stated above. OPTCL shall be entitled to get its normal transmission charge of 28 paise per unit for this transaction. The balance of revenue after deducting average BSP of the State and transmission charge shall be kept by the respective DISCOM as their margin. To operationalise this scheme the industry shall enter into a tripartite agreement with DISCOMs and GRIDCO. DISCOMs shall coordinate with the consumer and GRIDCO accordingly. The Commission may at any time getting feedback from the DISCOM and GRIDCO regarding success of the scheme revisit the above scheme.

#### **Return on Equity**

349. GRIDCO has proposed an amount of Rs. 92.27 crore towards Return on Equity (RoE) for FY 2021-22 considering the return @16% on the equity base of Rs. 576.71 Crore.

350. The Commission observed that in past years Return on Equity is not being allowed in the ARR of GRIDCO. The Commission has explained the reasons for this at Para-425 to 427 of its ARR and BSP order for the FY 2009-10 dated 20.03.2009 passed in Case No. 62/2008, which is depicted below:

*“425. At the time of vesting of the transmission and distribution business with GRIDCO by the State Govt. on 01.04.1996, the Equity Share Capital was Rs.327.00 crore. During the subsequent years upto FY 2004-05, there were additional infusions of equity capital of Rs.165.98 crore by the State Govt. raising the total equity of GRIDCO to Rs.492.98 crore. At the time of de-merger of GRIDCO effective from 01.04.2005, the equity share capital of OPTCL was stated at Rs.60 crore, leaving the balance equity share capital with GRIDCO. The equity share capital issued to Govt. of Orissa was both in consideration of cash and other than cash. Therefore, the licensee claimed ROE @14% on the equity share capital of Rs.432.98 crore.*

*426. The Commission in earlier orders referred to the GoO Notification of 29.1.2003, wherein it has been stated that GRIDCO and OHPC should not be entitled to any return in equity till the sector becomes viable or FY 2005-06 whichever is earlier. Further, in partial modification of earlier notification, the Govt. of Orissa in its letter no. 5302 dtd. 6.5.2003 stated the following “GRIDCO and OHPC shall not be entitled to any Return on Equity (ROE) except in respect of the new projects commissioned after 01.04.2006 till the sector becomes viable or end of 2005-06 whichever is earlier.” The Commission would like to clarify that correspondence has been made with Govt. of Orissa to clarify the status of the notification dtd. 29.1.2003, as it has great impact on Tariff. Govt.while communicating their views/comment in their letter No.1704 dtd. 17.02.2009 in response to the Commission’s letter No.2807 dtd. 31.12.2008 have stated as under:*

*“In the matter of extension of the moratorium period and other dispensation stipulated in Energy Department Notification No.1068/R&R-I-2/2002 dt.29.01.2003 upto 2011-12 it is stated that Finance Department has already concurred in the proposal of keeping in abeyance of up-valuation of assets of GRIDCO/OTCL & OHPC and freezing of RoE to GRIDCO & OHPC from the year, 2006-07 to 2010-11. The matter is going to be placed before the State Cabinet for a decision after which the same will be communicated.”*

*427. As regards infusion of capital for the new project, the Commission verified audited accounts of GRIDCO upto 2004-05. It is found that the addition of share capital shown in the balance sheet after 1996-97 includes only the grants received from DFID towards R&M expenditure and rehabilitation assistance. As per Project Memorandum signed between Govt. of India and Govt of Orissa and DFID, the above amount has been shown under share deposit account pending allotment of shares for non-receipt of approval from Govt. of Orissa.”*

351. In view of the above facts, the Commission does not allow return on equity to GRIDCO for the FY 2021-22.

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

352. During the FY 2021-22 GRIDCO expects to earn an amount of Rs.42.90 Crore (at existing approved BSP @ 7.15 P/U towards Emergency Sale of Power) from the proposed emergency sale of 60 MU to Long Term Customers like NALCO and IMFA for meeting their emergency & back-up power requirements as per the MOU signed with them. The commission approves an amount of Rs.44.52 Crore towards the miscellaneous revenue for the FY 2021-22.

### **Truing up of GRIDCO**

353. GRIDCO, in its ARR application has submitted that the Commission has approved the Truing Up amount of Rs. 3588.02 Crore till FY 2014-15 while approving the Tariff Order for FY 2017-18. Subsequently GRIDCO has filed its Truing Up application for the FY 2015-16 and FY 2016-17 for Rs.406.66 Crore and Rs.381.20 Crore respectively for approval by the Commission and the order is awaited. Further, GRIDCO has also filed the Truing Up application for the FY 2017-18 and FY 2018-19 for Rs.36.47 Crore and Rs.248.56 Crore respectively. GRIDCO has submitted that they will file the Truing-up application for FY 2019-20 shortly for an amount of Rs.1345.71 Crore. GRIDCO has indicated that the total cumulative truing up gap up to 31.03.2020 is calculated at Rs.6006.62 Crore. Further, considering the approved gap of Rs.250.60 Crore in the ARR for FY 2020-21, GRIDCO has soon the cumulative gap of Rs.6257.22 Crore up to FY 2020-21. GRIDCO has prayed the Commission to create a suitable mechanism to amortize such huge gap in the BSP order for FY 2021-22.
354. The Commission observed that GRIDCO has filed truing up application for the FY 2015-16 and 2016-17 which is pending before the Commission and GRIDCO has stated that they will file truing up application for FY 2019-20. Since, the truing up applications has been filed by GRIDCO in separate cases, the same will be dealt by the Commission separately. The Commission directs GRIDCO to file the truing up application for the FY 2019-20 at the earliest along with justification for deviation in cost of power purchase and other expenditures and also details of revenue earnings from sale of power through trading, UI and other sources of income. The said information is also to be furnished for the previous years for which GRIDCO has already filed the truing up applications. After receipt of the same the Commission will

take up all the truing up cases of GRIDCO for analogous hearing and approval thereof.

**Receivables from DISCOMs and Others**

355. GRIDCO in its filing submitted that it has outstanding dues to be received from DISCOMs towards securitized dues, NTPC Bond dues, Non-payment of BSP dues and Year End Adjustment Bills of DISCOMs. The Commission after undertaking the competitive bidding process for sale of Distribution Companies as envisaged under Section 20 of the Electricity Act, 2003 have now handed over the three utilities i.e. CESU, WESCO and SOUTHCO to separate joint venture company in which M/s. Tata Power Company Ltd. (TPCL) holds 51% of the equity share and the Govt. of Odisha through its entity GRIDCO holds 49%. The utility of CESU was vested in a new company, TPCODL on 01.06.2020 in terms of the vesting order No. 11/2020 dated 26.05.2020, WESCO was vested on 01.01.2021 in the new company TPWODL in terms of the vesting order No. 82/2020 dated 28.12.2020 and SOUTHCO was vested in the new company TPSODL on 01.01.2021 in terms of the vesting order No. 83/2020 dated 28.12.2020. The respective vesting orders for these companies' deal with the segregation of the balance sheet as on the date of vesting by transfer of assets and liabilities to the new company. Accordingly, all the outstanding dues of the GRIDCO will be dealt as per the provisions of the vesting order.
356. The summary of the ARR of GRIDCO approved for the FY 2021-22 is given below:

**Table –67  
Revenue Requirement of GRIDCO for FY 2021-22**

(Rs. in Cr.)				
	<b>Particulars</b>	<b>Approved for 2020-21</b>	<b>Proposed for 2021-22</b>	<b>Approved for 2021-22</b>
<b>A</b>	<b>Items of Expenses</b>			
	Cost of Power Purchase	8083.74	9330.34	8005.77
	Employee costs	10.28	18.80	11.42
	Repair & Maintenance	0.25	0.70	0.70
	Administrative and General Expenses	5.26	7.33	5.42
	Depreciation	1.03	1.33	1.33
	Interest Chargeable to Revenue	84.07	559.90	75.20
	Return on Equity	-	92.27	-
	<b>Total Expenses</b>	<b>8184.63</b>	<b>10010.67</b>	<b>8099.84</b>
<b>B</b>	<b>Special Appropriation</b>			
	Amortization of Regulatory Assets			
	Repayment of principal (Bank and Commercial Loans)	0	-	0

	<b>Particulars</b>	<b>Approved for 2020-21</b>	<b>Proposed for 2021-22</b>	<b>Approved for 2021-22</b>
	Pass Through of Power Purchase Dues	132.05	777.65	190.15
	<b>Total Special Appropriation</b>	<b>132.05</b>	<b>777.65</b>	<b>190.15</b>
C	<b>TOTAL (A+B)</b>	<b>8316.68</b>	<b>10788.33</b>	<b>8289.99</b>
D	Less Miscellaneous Receipt	42.30	42.90	44.52
E	Revenue earning from trading & receipt from CPSU under MOP	175.59	0	-
F	<b>Net Revenue Requirement</b>	<b>8098.79</b>	<b>10745.43</b>	<b>8245.47</b>
G	Expected Revenue from DISCOMs	<b>7848.19</b> (revised wef 01.10.2021)	<b>7846.41</b>	8257.57
H	<b>GAP (+/-)</b>	<b>-250.60</b>	<b>-2899.02</b>	<b>12.10</b>
I	Energy Sale to DISCOMs (MU)	28550.00	27315.02	27870.00
J	Bulk Supply Price (Paisa per Unit)	<b>287.70</b> (annually)	<b>393.39</b>	<b>296.29</b>

357. It is observed from above table that the Commission has estimated the net revenue requirement of GRIDCO to the tune of Rs. 8245.47 Crore after adjustment of miscellaneous receipts of Rs. 44.52 Crore and GRIDCO would recover Rs. 8257.57 Crore from the DISCOM Utilities through Bulk Supply Price during the FY 2021-22 with a surplus revenue of Rs. 12.10 Crore which will be factored in true up of GRIDCO.

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

358. 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 Agreements (BSAs) 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.

359. 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 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.

360. Until we move away from the uniform RST structure, the higher bulk pricing mechanism should give a signal to the DISCOM having higher EHT & HT concentration that improved performance at LT through higher LT sale would enable that DISCOM to get power at a lower rate. That is to say, such DISCOM should endeavour to convert lost units to billing units at LT resulting in reduction of commercial loss, which needs to be encouraged.
361. 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.

362. At this point, we are taking into consideration the extent of revenue that a distribution utility likely to earn from 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.

**Determination of Bulk Supply Price (BSP)**

363. GRIDCO has proposed average BSP @ 393.39 P/U to be levied on the DISCOMs towards their purchase of power during FY 2021-22. Now, the Commission determines the BSP 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.
364. The details of Bulk Supply Price as well as the quantum of energy approved by the Commission for each DISCOMs are presented in a table below:

**Table – 68  
Bulk Supply Price and Quantum of Energy for FY 2021-22**

<b>Name of the DISCOMs</b>	<b>Existing Bulk Supply Price i.e. approved for last 6 months of FY 2020-21 (i.e. Oct'20 to Mar'2021 (P/U)</b>	<b>Quantum of Energy for sale during FY 2021-22 (MU)</b>	<b>Total Revenue for FY 2021-22 (Rs. Crore)</b>	<b>Bulk Supply Price approved for FY 2021-22 (P/U)</b>
TPCODL	277.00	9290.00	2629.07	283.00
NESCO	316.30	5880.00	1881.60	320.00
TPWODL	322.60	8600.00	2898.20	337.00
TPSODL	197.40	4100.00	848.70	207.00
<b>Total</b>	<b>287.70</b>	<b>27870 .00</b>	<b>8257.57</b>	<b>296.29</b>

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

### **Demand Charges**

366. 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 2021-22. 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 drawal over the permitted SMD will have to be paid by DISCOMs @ 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 DISCOM might have paid the SMD charges for exceeding the permitted SMD in any month.

### **Charges for Overdrawal of Energy**

367. In its application, GRIDCO has proposed that any excess drawl of energy by a Distribution and Retail Supply Licensee 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 2021-22 (which includes transmission charges & transmission loss) on a monthly basis instead of the normal differential BSP applicable to the respective DISCOM 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.
368. GRIDCO has further submitted that presently the over drawal of energy by DISCOMs is billed at the corresponding OERC approved applicable BSP rates in terms of the judgment dated 07.05.2018 of Hon'ble APTEL passed in Appeal No. 55/2015. Therefore, GRIDCO has filed a review petition in Case No. 51/2019 before this Commission for review of ARR and BSP order of GRIDCO for the FY 2019-20, wherein, GRIDCO has prayed the Commission to address the issue of billing of over drawl energy by the DISCOMs in view of the aforesaid judgment of Hon'ble APTEL. The order of this review petition is yet to be pronounced by the Commission.

369. The Commission observed that it has already framed guidelines/regulations for intra-state ABT and in the 1<sup>st</sup> phase introduced same for transaction between GRIDCO and DISCOMs. The issue of overdrawal / underdrawal of energy would be adjusted through un-scheduled interchange mechanism. Accordingly, the schedule energy shall be billed by GRIDCO and paid by DISCOM Utilities as per the present Tariff Order of the Commission and any deviation from the scheduled energy shall be billed by SLDC and paid by DISCOMs as per the prevalent UI rate. However, the Commission further observed that being aggrieved by the order dated 05.04.2014 of this Commission in Case No. 40/2013 on the matter of settlement of dues between GRIDCO and DISCOMs in respect of payment towards over drawal energy by DISCOMs, GRIDCO had made an appeal before the Hon'ble APTEL. Hon'ble APTEL in their judgment dated 07.05.2018 in Appeal No. 55/2015 and IA No. 75/2015 have pronounced that as per the amicable settlement among GRIDCO, DISCOMs and SLDC, for the period from 17.02.2014 and onwards, in absence of any prevailing DSM Regulations for the State, the deviation energy may be settled between GRIDCO and DISCOMs at BSP rate, till any Intra-State DSM Regulation in this regard comes into effect. SLDC will stop billing to DISCOMs on account of deviation of energy henceforth till DSM Regulation is pronounced by OERC and to withdraw the DSM bills so raised since 17.02.2014.
370. In view of the above, GRIDCO in its aforesaid review petition in Case No. 51/2019 has prayed the Commission to allow it to bill the DISCOM Utilities for the deviation quantum of energy at the applicable BSP rate as per the said judgment dated 07.05.2018 of Hon'ble APTEL, till the Intra-State DSM and related Regulations comes into force in the State. The Commission observed that the Intra-State DSM Regulations will be notified by the Commission shortly. However, till implementation of DSM Regulations in the State, the quantum of over drawl energy by DISCOM Utilities shall be billed by GRIDCO at the applicable BSP rate determined by the Commission.

#### **Rebate**

371. For payment of bills through letter of credit/NEFT/RTGS 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 after two working days but within a period of 30 days 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.

#### **Delayed Payment Surcharge**

372. In case payment of bills by the Distribution Utilities is delayed beyond a period of 30 days 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**

373. 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.
374. The Bulk Supply Price in respect of GRIDCO as indicated below will become effective from **4<sup>th</sup> April, 2021** and shall continue until further orders.

**Table -69**

<b>Name of the DISCOMs</b>	<b>Paise/ Kwh</b>
TPCODL	283.00
NESCO	320.00
TPWODL	337.00
TPSODL	207.00

375. The application of GRIDCO in Case No. 72 of 2020 is disposed of accordingly.

**Sd/-**  
**(G. Mohapatra)**  
**Member**

**Sd/-**  
**(S. K. Parhi)**  
**Member**

**Sd/-**  
**(U. N. Behera)**  
**Chairperson**