

Before the  
**Odisha Electricity Regulatory Commission**  
Bhubaneswar



Application for Determination of Aggregate Revenue  
Requirement (ARR) and Bulk Supply Price (BSP) for FY  
2023-24

November 2022

**Notes:**

**In this Application:**

- **Year is defined as Financial Year 2023-24 (referred to as FY 24)**
- **All currency figures used in this Application, unless specifically stated otherwise, are in Rs Crores.**
- **All energy unit figures used in this Application, unless specifically stated otherwise, are in Million Units.**

### List of Abbreviations

AEC	Auxiliary Energy Consumption
APGENCO	Andhra Pradesh Power Generation Corporation
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
BSP	Bulk Supply Price
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGPs	Captive Generation Plants
CIMFR	Central Institute of Mining & Fuel Research
CoD	Commercial Operation Date
CPSUs	Central Public Sector Undertakings
Cr.	Crores (Indian Rupees)
CTU	Central Transmission Utility
CVPF	Calorific Value of Primary Fuel
CVSF	Calorific Value of Secondary Fuel
DISCOMs	Distribution Companies
DSM	Deviation Settlement Mechanism
DSTPS	Darlipalli Super Thermal Power Station
DVC	Damodar Valley Corporation
EA 2003	Electricity Act, 2003
ECR	Energy Charge Rate
ED	Evidential Document
EHT	Extra High Tension
EPS	Electric Power Survey
FSTPS	Farakka Super Thermal Power Station
FY	Financial Year
GCV	Gross Calorific Value
GEDCOL	Green Energy Development of Odisha Limited
GDP	Gross Domestic Product
GHR	Gross Station Heat Rate
GKEL	GMR Kamalanga Energy Limited
Gol	Government of India
GoO	Government of Odisha
GRIDCO	Grid Corporation of Odisha
GW	Giga-Watt
HEP	Hydro Electric Project
IMFA	Indian Metals & Ferro Alloys Limited
IPPs	Independent Power Producers
ISTS	Inter-State Transmission System
JITPL	Jindal India Thermal Power Limited
JNNSM	Jawaharlal Nehru National Solar Mission
KBUNL	KantiBijliUtpadan Nigam Limited

KhSTPS	Kahalgaon Super Thermal Power Station
kVA	Kilo Volt Ampere
kW	Kilo Watt
kWh	Kilo Watt Hour or Unit
LPPF	Landed Price of Primary Fuel
LTA	Long Term Agreement
MHEP	Machkund Hydro Electric Project
MoD	Merit Order Dispatch
MOC	Market Operation Charges
MNRE	Ministry of New & Renewable Energy
MPERC	Madhya Pradesh Electricity Regulatory Commission
MTC	Monthly Transmission Charges
Mus	Million Units
MVA	Mega Volt Ampere
MW	Mega Watt
NALCO	National Aluminium Company
NCLT	National Company Law Tribunal
NHPC	National Hydro Power Corporation
NTPC	National Thermal Power Corporation
NVVNL	NTPC Vidyut Vyapar Nigam Limited
OERC	Odisha Electricity Regulatory Commission
OHPC	Odisha Hydro Power Corporation
OPGC	Odisha Power Generation Corporation
OPTCL	Odisha Power Transmission Company Limited
OREDA	Odisha Renewable Energy Development Agency
OSEB	Odisha State Electricity Board
PGCIL	PowerGrid Corporation India Limited
PLF	Plant Load Factor
POSO	Power System Operation Corporation
PPAs	Power Purchase Agreements
PSA	Power Sale Agreement
P/U	Paise/Unit
Rs.	Indian Rupees
REA	Regional Energy Account
RERC	Rajasthan Electricity Regulatory Commission
RIL	Reliance Infrastructure Limited
RPO	Renewable Purchase Obligation
RPSSGP	Rooftop PV Small Solar Generation Program
RST	Retail Supply Tariff
RTS	Roof Top Solar
SDE	State Designated Entity
SECI	Solar Energy Corporation of India
SERC	State Electricity Regulatory Commission
SFC	Specific Fuel Consumption

SGEL	Shalivahana Green Energy Limited
SHEP	Small Hydro Electric Plants
SLDC	State Load Despatch Centre
SMD	Simultaneous Maximum Demand
SOC	System Operation Charges
SPO	Solar Power Obligation
The Petitioner/ Petitioner	GRIDCO
TPCODL	Tata Power Central Odisha Distribution Limited
TPNODL	Tata Power Northern Odisha Distribution Limited
TPSODL	Tata Power Southern Odisha Distribution Limited
TPWODL	Tata Power Western Odisha Distribution Limited
TSTPS	Talcher Super Thermal Power Station
TTPS	Talcher Thermal Power Station
UIHEP	Upper Indravati Hydro Electric Project
UPERC	Uttar Pradesh Electricity Regulatory Commission
VGF	Viable Gap Funding
YoY	Year on Year

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**BEFORE THE HON'BLE ODISHA ELECTRICITY REGULATORY  
COMMISSION, BHUBANESWAR**

**IN THE MATTER OF:** Application for approval of Aggregate Revenue Requirement (ARR) and determination of Bulk Supply Price (BSP) for FY 2023-24 under Section 86 (1) (a) & (b) and all other applicable provisions of the Electricity Act, 2003 read with relevant provisions of OERC (Conduct of Business) Regulations, 2004 and other related Rules and Regulations

**PETITIONER:** GRIDCO Limited  
Bhubaneswar, Odisha

The humble Petitioner above named MOST RESPECTFULLY SHEWETH:

GRIDCO Limited (hereinafter called as “GRIDCO”) is a Deemed Trading Licensee under 5th proviso to Section 14 of the Electricity Act, 2003 (hereinafter called as “the Act”). GRIDCO, a wholly State-owned Undertaking, is engaged in the business of purchase of electricity in bulk from various generators located in & outside Odisha and the State share of power from the Central Generators for supply in bulk to the four Electricity Distribution Utilities in the State of Odisha and also performs trading of surplus power through traders.

1. The Government of Odisha has also notified GRIDCO as the “State Designated Entity” for execution of Power Purchase Agreement (PPA) with the various developers generating energy from various sources including Hydro Power, Wind Power, Power from Agricultural Waste etc. along with Thermal Power vide Government of Odisha Notification No. PPD-II-2/05 (pt.) 7947, dated 17<sup>th</sup> August 2006. A copy of the said Notification is attached herewith as Evidential Document (ED-1). GRIDCO has statutory obligation to procure power and act as a bulk supplier to supply power to DISCOMs and meet the electricity demand in the State.

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2. Based on projections submitted by DISCOMs and projections for CGPs for emergency supply of power, GRIDCO shall be required to meet a demand of 36,428 MU in FY 2023-24. Intra-State transmission loss for FY 2023-24 has been considered at 3% as per the transmission loss approved for OPTCL for FY 2022-23. Thus, the energy requirement for GRIDCO for FY 2023-24 works out to be 37,554 MU.

3. In order to fulfil its statutory obligation, GRIDCO entered into various long term PPAs with various public and private sector generators to cater the peak demand of the State. PPAs were signed with NTPC plants under State allocation and PPAs with IPPs were done under State share of concessional power.

4. Based on demand projections under the 17<sup>th</sup>EPS, GRIDCO signed several PPAs to meet the anticipated energy demand of the state. As per contractual obligations,

a. GRIDCO has to pay Capacity Charge for all the tied-up generating stations based on their availability. Further, in accordance with the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010, the technical minimum for operation in respect of a Central Generating Station or Inter-State Generating Station shall be 55% of MCR loading or installed capacity of the unit of the generating station. In case the scheduled generation is below the normative, compensation charges against the same has to be paid by GRIDCO and other beneficiaries. The Hon'ble Commission is requested to allow any such compensation if paid to the generating companies as per actuals.

b. Apart from the Capacity Charges and Energy Charges, Year-end charges including reimbursement of other expenses needs to be paid to the generators.

5. The total energy available towards State share for FY 2023-24 is 38,453.07 MU, considering projections for procurement from generators based on various factors like water availability, R&M schedule, normative availability etc. of the stations with which GRIDCO has tied-up PPAs.

6. The Petitioner submits that against the State's requirement of 37,554.41 MU, there is availability of 38,453.07MU resulting in surplus of 898.66MU. The Petitioner plans to sell the surplus power which has variable cost below real time rate in the energy exchange. Given the minimum technical requirement to run a plant at 55%, if forced schedule is made by Load Despatch Centers, Petitioner will also have to source power from station which may have variable charges above the exchange rate. The Petitioner

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will try to maximize its revenue through trading of surplus power and utilize the same for repayment of past dues as per the directions of the Hon'ble Commission in the past ARR & BSP as well as True-up orders.

7. The total cost of power purchase for FY 2023-24 has been projected to be Rs. 12,593.82 Cr as detailed below:

- Fixed Charge of Rs. 4746.97 Cr.
- Energy Charge of Rs. 6830.72 Cr
- Transmission, SLDC, ERLDC Charge of Rs. 778.80 Cr
- Year End Charges of Rs. 237.33 Cr

8. All the other uncontrollable costs of the ARR like Interest cost, Employee cost, Repair & Maintenance cost, Administrative & General Expenses, Depreciation and Return on Equity have been computed based on the principle adopted by the Hon'ble Commission in their previous Orders.

9. Further, GRIDCO has faced cash deficit in the past due to non-cost reflective tariffs in BSP, disallowance of carrying cost of Regulatory Assets, receivables outstanding from DISCOMs etc. The Petitioner has met these cash deficit through working capital loans. It has total outstanding loans with principal amounting to Rs 6563.86 Cr as on 31<sup>st</sup> March 2022. The repayment liability for FY 2023-24 is Rs 1592.54 Cr. towards loans taken from Commercial Banks (except State Govt loan, NTPC bonds).

10. As directed by Hon'ble Commission in its previous tariff orders, the Petitioner plans to meet Repayment liability from sale of surplus power and is requesting Hon'ble Commission to create a mechanism separate from BSP to meet repayment liability as the margin of trading will be insufficient to meet repayment obligation.

11. The Petitioner humbly prays the Hon'ble Commission to allow proposed Net ARR & BSP of Rs. 13,839.39 Crore and 380.64 P/U respectively.

12. In addition to BSP, the Petitioner requests Hon'ble Commission to create a separate mechanism to repay loan liability under Special Appropriation of Rs 1592.54 Cr. for FY 2023-24 net of the margin earned on trading of surplus power.

**Prayer before the Hon'ble Commission:**



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13. GRIDCO humbly prays before the Hon'ble Commission to consider the ARR & BSP Application for FY 2023-24 on record and approve the ARR & BSP as proposed in the Application and kindly accept the following prayer;

- a. Admit the instant Petition
- b. Consider for allowing all the reasonable costs as proposed in the Petition and accordingly, approve the ARR and Bulk Supply Price (BSP) for FY 2023-24 and make the same effective from 1<sup>st</sup> April 2023;
- c. Approve the capacity charges as payable by GRIDCO to the generating stations for all existing and new stations to be recovered, through BSP, wherever PPA is tied up on overall long-term energy planning of the state even if energy is not fully scheduled from stations based on MoD principles and change in demand trend of the state;
- d. Allow the carrying cost on Regulatory Assets and amortization of the Regulatory assets through BSP.
- e. 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 etc. if any, be passed on to GRIDCO on account of the OERC / CERC / Tribunal / Court Orders / Impact due to any change in law etc. or the like, as surcharge during the year on quarterly basis;
- f. Approve monthly SMD and monthly quantum of energy for sale to each of the Discoms.
- g. Allow GRIDCO for recovery of charges on account of any excess drawl of energy by a Distribution and Retail Supply Licensee (DISCOM) during a month over and above the monthly approved energy quantum at actual power purchase cost incurred for excess drawl (including transmission, deviation charges, transmission loss and etc.) or at approved BSP rate for each Discom whichever is higher on a monthly basis applicable to the respective Discoms.
- h. Allow GRIDCO for recovery of Fuel and Power Purchase Price Adjustment in the tariff order and to create a mechanism on monthly basis.

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- i. Pass suitable orders related to sale of surplus power to industrial/large consumers considering recovery of cost to GRIDCO, margins for Discoms and applicable transmission charges etc. as specified in this petition.
  - j. Approve the proposed rebate mechanism as specified in this petition.
  - k. Direct the Discoms to pay GRIDCO's share of past arrear collection on monthly basis and also submit monthly MIS reports as specified in this petition
  - l. The Petitioner respectfully prays the Hon'ble Commission to allow a suitable mechanism to recover the shortfall towards erstwhile Discoms' receivable of Rs. 7128.60 Cr., as on 31.10.2022, arising out of sale of utilities of CESU, WESCO, NESCO and SOUTHCO through regulatory process preferably in the next five years.
  - m. Allow the petitioner to make additional submissions pertaining to this petition
  - n. To pass such Order which are necessary to meet the above prayers and allow GRIDCO to amend / modify the application as necessary and further submissions if any, during the course of hearing;
  - o. Condone any inadvertent omissions/ errors/ shortcomings/ delays and permit to make further submissions as may be required at a future date to support this Petition in terms of modification / clarification; and
  - p. Pass such further orders, as the Hon'ble Commission may deem fit and proper, keeping in view of the facts and circumstances of the case.

for which, GRIDCO, as is duty bound, shall ever pray.

By the Petitioner Through

(Prashant Kumar Das)

CGM(PP), GRIDCO Ltd.

**Place:** Bhubaneswar

**Date:** 30.11.2022



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## 1 Introduction

1. Odisha was the first State to undertake sector wide reforms in 1994, with the passing of the Orissa Electricity Reform Act 1995. This was followed by the unbundling of the erstwhile vertically integrated Orissa State Electricity Board (“OSEB”) into Odisha Hydro Power Corporation (“OHPC”), which were vested with the hydro generating assets of the State) and the Grid Corporation of Orissa Limited (“GRIDCO”, which were vested with the transmission and distribution functions of the erstwhile OSEB).
2. Subsequently, on 25 November 1998, the distribution business of GRIDCO was segregated and vested into four distribution companies (viz., WESCO, NESCO, CESCO and SOUTHCO), each incorporated as a separate legal entity under the Companies Act. Subsequently, these distribution companies were privatised.
3. After separation of distribution business, GRIDCO was engaged with electricity transmission, bulk supply and trading activities.
4. Keeping in view the statutory requirement of the Electricity Act 2003 for separation of trading and transmission functions into two separate entities, the State Government incorporated Orissa Power Transmission Corporation Limited (OPTCL) to take over the transmission and SLDC functions of GRIDCO in 2005. GRIDCO is currently functioning in the business of bulk purchase and bulk supply of electricity to the four distribution companies and also trading of surplus power through traders.
5. As per the provision of the Orissa Electricity Reforms Act 1995, GRIDCO at present is vested with the following residual functions:
  - a. procurement and Bulk supply of Power
  - b. undertake planning and coordination to determine the electricity requirement of the State





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may be necessary and supply the same to the four DISCOMs for onward retail sale to meet the State's power demand in greater public interest.

12. The Hon'ble Commission has extensively dealt with the various issues pertaining to the "Legal Status" of GRIDCO vide in the Aggregate Revenue Requirement (ARR) & Bulk Supply Price (BSP) Order dated 18th March 2011 for FY 2011-12 & 23rd March 2012 for FY 2012-13. Hon'ble Commission concluded that the continuance of GRIDCO is in line with the applicable Laws and essential in the overall interest of the people of Odisha and the State Power Sector in particular.

## **2 Legal framework**

13. Under the existing Bulk Supply Agreements between the DISCOMs and the GRIDCO, the DISCOMs are required to purchase power from GRIDCO at a regulated price to be determined and approved by the Hon'ble Commission.
14. The Hon'ble Commission is empowered under section 86 (1) (a) and (b) of the Electricity Act, 2003 to determine the power purchase cost for the DISCOMs. This procurement price of DISCOMs is the Bulk Supply Price at which GRIDCO supplies power in bulk to the DISCOMs.
15. It may also be noted that Sub Section 5 (k) of Section 15 of the Orissa Electricity Reform Act, 1995 requires GRIDCO to file tariff/ Annual Revenue Requirement petition in accordance with the requirements of Hon'ble Commission.
16. It is also provided in the OERC (Conduct of Business) Regulations, 2004, as amended up to May, 2011 that GRIDCO is required to submit its Aggregate Revenue Requirement (ARR)/ tariff petition before 30th November of each year for the ensuing year before the Hon'ble Commission for approval.
17. Therefore, it is a statutory requirement for GRIDCO to submit its Aggregate Revenue Requirement (ARR)/ Tariff Petition before the Hon'ble Commission for determination and approval of the procurement price of the DISCOMs.

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### 3 Business relationship with Distribution Companies

18. It may be relevant to mention that Hon'ble Commission had revoked the Retail Supply Licenses U/s 19 of the Act of the Reliance Infrastructure Ltd (RIL) managed 3 (three) Distribution Companies (WESCO, NESCO & SOUTHCO) due to poor performance vide Order Dated 04.03.2015 in Case No. 55 of 2013.
19. The management and control of these distribution companies along with all the assets, interests, liabilities and rights were vested with the Chairman, GRIDCO in his capacity as the Administrator of these three distribution companies under the supervision and control of the Principal Secretary, Department of Energy, Government of Odisha u/s 20 (d) of the Act vide Order Dated 04.03.2015 in Case No. 55 of 2013.
20. Accordingly, the administration of the said 3 Discoms was vested with the overall control of the Chairman, GRIDCO. It is submitted that the above mentioned three distribution companies (WESCO Utility, NESCO Utility & SOUTHCO Utility) had been functioning under the Chairman, GRIDCO-cum-Administrator, DISCOMs as per the stipulations issued by Hon'ble Commission from time to time.
21. It is also pertinent to mention that GRIDCO had filed a Petition before the Hon'ble Commission on 29th October 2019 for recovery of the outstanding dues (as on 4th March 2015) amounting to Rs. 4,234.09 Crore payable by the erstwhile 3 RIL managed Discoms (WESCO/NESCO & SOUTHCO) / M/s. RIL, the majority Stakeholder in the 3 Discoms to GRIDCO. The matter was registered as Case No. 63 of 2019 before the Hon'ble Commission. In this matter, Hon'ble Commission has pronounced the Order dated 27<sup>th</sup> October 2021, holding the three RIL managed DISCOMs and RIL, squarely liable for settling the above claim of the petitioner GRIDCO. Accordingly, GRIDCO has intimated the three RIL managed DISCOMs and RIL for settlement of outstanding claim of Rs. 4234.09 Cr. along with interest upto 11.11.2021. Meanwhile, RIL has challenged the above

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order of Hon'ble OERC before Hon'ble APTEL, registered as Appeal No. 314 of 2021.

22. Similarly, the License of Central Electricity Supply Company of Orissa Ltd. (the "CESCO"), the fourth Discom of the State was revoked by the Hon'ble Commission with effect from 1st April 2005 u/s 19 of the Act. An Administrator was appointed u/s 20(1)(d) of the Act vide Commission's Order dated 2nd April 2005 which was subsequently revised vide Commission's Order dated 18th April 2005. Later, a Scheme called the Central Electricity Supply Utility of Orissa (Operation and Management) Scheme, 2006 (the "Scheme") u/s 22 (1) of the Act for operation and management of the Utility wherein 'Utility' means the utility of CESCO, operated by the Chief Executive Officer & Administrator appointed vide Commission's order dated 18th April 2005. The utility of CESCO was renamed as the Central Electricity Supply Utility of Orissa (the "CESU") under this Scheme. The Scheme came into force from 8th September 2006. Since then, the term of the Scheme was periodically extended.
23. The utility of CESU was privatised with effect from 1st June 2020 and the utility was vested with TP Central Odisha Distribution Limited. As per the Act, a clean opening Balance Sheet has been given to the successor entity. All the liabilities payable by the erstwhile CESU to GRIDCO against bulk power purchase cost, except Rs. 300 Crore, has been lying in the residual utility with no mechanism to service.
24. The utility of WESCO & SOUTHCO were privatised with effect from 1st January 2021 and the utility was vested with TP Western Odisha Distribution Limited and TP Southern Odisha Distribution Limited respectively. As per the Act, a clean opening Balance Sheet has been given to the successor entity. All the liabilities payable by the erstwhile WESCO & SOUTHCO to GRIDCO against bulk power purchase cost, except Rs. 300 Crore and Rs. 200 Crore respectively, have been lying in the residual utilities with no mechanism to service.

25. The utility of NESCO was privatised with effect from 1<sup>st</sup>April 2021 and the utility was vested with TP Northern Odisha Distribution Limited. As per the Act, a clean opening Balance Sheet has been given to the successor entity. All the liabilities payable by the erstwhile NESCO to GRIDCO against bulk power purchase cost, except Rs. 250 Crore has been lying in the residual utility with no mechanism to service.

#### 4 Impact of sale of utilities of revoked licenses on GRIDCO

26. The Petitioner submits that with sale of utilities of revoked licensees under Section 20 of the Electricity Act 2003, the successor entities are assigned with clean balance sheet. GRIDCO has significant past dues to be recovered from the erstwhile utilities which are lying in the erstwhile utilities. There is a negative impact of this on the financial health of GRIDCO.

27. The outstanding from all the four distribution companies in the books of GRIDCO is Rs 7128.60 Cr. as on 31.10.2022.

**Table 1: Dues from Discoms and Unserviceable liability as on 31.10.2022 (Rs. Cr.)**

		WESCO	NESCO	SOUTHCO	CESU	Total
<b>A</b>	Bulk Supply Price (BSP)	133.70	61.17	363.04	400.89	<b>958.80</b>
<b>B</b>	Securitized dues	239.27	208.52	196.12	1,219.91	<b>1,863.81</b>
<b>C</b>	12.5% Power Bond - Rs. 400 Crore.	-	48.91	146.45	-	<b>195.36</b>
<b>D</b>	Other dues including Transfer Scheme Receivables	12.10	6.74	29.91	118.85	<b>167.60</b>
<b>E</b>	Deferred Credit	-	-	-	174.00	<b>174.00</b>
<b>F</b>	DPS BSP from 01-4-2005 to till date	1,417.23	884.99	647.31	819.49	<b>3,769.02</b>
<b>I</b>	<b>Total outstanding</b>	<b>1,802.30</b>	<b>1,210.33</b>	<b>1,382.83</b>	<b>2,733.14</b>	<b>7,128.60</b>

28. With the award of licenses to TPCODL, TPNODL, TPWODL and TPSODL, the Petitioner no longer has any mechanism at its disposal to collect such significant amount of past dues from the Discoms.

29. The Petitioner humbly submits that Hon'ble Commission should allow a mechanism for amortization of these past dues over the next 3-5 years. The Discoms have reported a regulatory surplus of Rs. 557 cr. as of end of H1 FY

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23. Further, the depreciation on assets of erstwhile utilities transferred to the new Discoms can be utilised to settle GRIDCO's dues. These indicators show that there is a margin for settling the past dues through BSP without impacting the Retail Supply Tariff ("RST").

Comment [AH(1): To be confirmed

30. In the above backdrop, GRIDCO submits its Aggregate Revenue Requirement (ARR) & Bulk Supply Price (BSP) Application for FY 2023-24 in the following paragraphs before the Hon'ble Commission for kind consideration and approval.

## 5 Procedural history

### True-Up Order for FY 2015-16 to FY 2019-20

31. The Hon'ble Commission has issued consolidated True-Up Order for the period from FY 2015-16 to FY 2019-20 on 22.10.2021 in Case No. 67/2018, Case Nos. 62/2020 and Case No.27/2021 respectively.
32. The Petitioner not being satisfied with the aforesaid Order passed by the Commission has preferred an Appeal before Hon'ble APTEL. Therefore, the Petitioner for purpose of preparation of instant Petition has considered some of the points as per the impugned Orders for better clarity of the instant Petition. However, submissions made in this Petition are without prejudice to the prayers made in the said appeal. In case Hon'ble APTEL dispose of the Appeal in favor of the Petitioner (in part or full), it is respectfully submitted that the effect of the same should be passed on to the Petitioner and the figures considered, wherever applicable, shall be subject to revision.

## 6 ARR for FY 2023-24

### 6.1 Energy Demand of DISCOMs and CGPs

33. It is submitted that GRIDCO had requested the four Discoms to submit their monthly required energy input and Simultaneous Maximum Demand (SMD) for FY 2023-24. In response to the same, the Discoms have submitted their monthly energy input requirement projection and SMD (MVA) for FY 2023-24 (**ED-2**). TPWODL has not submitted monthly SMD(MVA) for FY 2023-24. The energy projection shared by Discoms is summarized in the table below.

**Table 2 : Projection of Monthly Demand for FY 2023-24 (MU)**

Months	TPCODL	TPNODL	TPSODL	TPWODL	Total
Apr-23	1022	671	389	1236	<b>3318</b>
May-23	1053	644	410	1254	<b>3361</b>
Jun-23	1033	682	408	1111	<b>3235</b>
Jul-23	995	661	362	1150	<b>3168</b>
Aug-23	981	663	383	1131	<b>3158</b>
Sep-23	970	675	382	1175	<b>3202</b>
Oct-23	970	677	372	1142	<b>3161</b>
Nov-23	807	609	384	936	<b>2735</b>
Dec-23	742	594	369	884	<b>2589</b>
Jan-24	731	602	382	936	<b>2652</b>
Feb-24	724	576	359	933	<b>2592</b>
Mar-24	971	696	409	1111	<b>3187</b>
<b>Total</b>	<b>10999</b>	<b>7750</b>	<b>4609</b>	<b>13000</b>	<b>36358</b>

34. The historical values of the sales to the Discoms have been compared with the projected sale to Discoms for FY 2023-24 in the table below:

**Table 3 : Historical actual sales to Discoms Vs. Projection for FY 2023-24**

DISCOM	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Projected)	(Projected)
TPCODL (CESU)	8,465	8,781	8,160	8,370	8,814	10,113	10,999
TPNODL (NESCO)	5,464	5,576	5,439	4,941	5,327	6,463	7,750

DISCOM	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
	(Actual)	(Actual)	(Actual)	(Actual)	(Actual)	(Projected)	(Projected)
TPSODL (SOUTHCO)	3,488	3,654	3,504	3,616	3,942	4,401	4,609
TPWODL (WESCO)	7,163	7,455	7,512	7,619	8,967	11,122	*13,000
<b>TOTAL</b>	<b>24,580</b>	<b>25,466</b>	<b>24,615</b>	<b>24,545</b>	<b>27,050</b>	<b>32,099</b>	<b>36,358</b>
IMFA	8	8	9	16	34	50	22
NALCO	26	54	36	66	39	40	48
<b>Total including Emergency Sale</b>	<b>24,614</b>	<b>25,528</b>	<b>24,660</b>	<b>24,627</b>	<b>27,123</b>	<b>32,189</b>	<b>36,428</b>
<b>YoY Sales growth</b>	<b>5%</b>	<b>4%</b>	<b>-3%</b>	<b>0%</b>	<b>10%</b>	<b>19%</b>	<b>13%</b>

\* Includes TPA of 2500 MU as per submission of TPWODL

35. The sales to Discoms for Apr-Sep'2022 against Apr-Sep 2021 is summarized below:

**Table 4 : 6 months sales to Discoms (MU)**

Discom	Apr-Sep 2021	Apr-Sep 2022	Growth
TPCODL	4,840	5,609	16%
TPNODL	2,785	3,338	20%
TPSODL	2,019	2,279	13%
TPWODL	4,552	5,531	22%
<b>DISCOM TOTAL</b>	<b>14,196</b>	<b>16,757</b>	<b>18%</b>
IMFA	18	39	117%
NALCO	29	26	-10%
<b>Total including Emergency Sale</b>	<b>14,243</b>	<b>16,822</b>	<b>18%</b>

36. The energy sales for FY 2023-24 have been forecasted to grow at the rate of 13% over FY 2022-23 sales projections. The reasons for growth in FY 2023-24 are given below:

- a. Complete opening up of economy after the COVID pandemic has resulted in higher economic activity leading to higher energy demand from Industrial and Commercial sectors.
- b. The Industrial consumption has also increased due to the Special Tariff Scheme as approved by the Hon'ble Commission for FY 2021-22 & FY 2022-23 for consumers with captive generation plants.

37. The Petitioner requests the Hon'ble Commission to approve the projected energy requirement to the tune of 37,554 MU including transmission loss, based on demand



projections by DISCOMs and estimated sale of Emergency and backup Power to NALCO & IMFA for FY 2023-24.

## 6.2 Simultaneous Maximum Demand (SMD) of DISCOMs

38. The DISCOM wise SMD projections for FY 2023-24 are presented below:

**Table 5 : SMD for FY 2023-24 (MVA/month)**

DISCOMs	OERC approval for 2022-23	Highest SMD recorded during FY 2022-23 (Apr.'22 to Sept'22)	DISCOMs Projection of SMD for FY 2023-24	GRIDCO's Projection of SMD of DISCOMs for FY 2023-24
	MVA	MVA	MVA	MVA
TPCODL	1740	1892	2192	2004
TPNODL	1150	1155	1396	1318
TPWODL	1650	1710	1850	1948*
TPSODL	720	721	800	747

\*Projected considering 2500 MU towards TPA for FY 2023-24

39. GRIDCO's projection of SMD for FY 2023-24 is based on the additional load growth as estimated for the FY 2023-24 over FY 2022-23 for each DISCOM. The projected SMD has been derived by adding the additional SMD in terms of MVA to the maximum SMD that occurred during the period from April 22 to October 22. This projection is based on the Hon'ble Commission's approach adopted for SMD approval for FY 2022-23 for each DISCOM. The same has been detailed in the table below. The Petitioner requests the Hon'ble Commission to approve the SMD as shown in the table below.

**Table 6 : GRIDCO Projection of SMD for FY 2023-24**

DISCOMs	SMD approved by OERC for FY 2022-23 (MVA)	Proposal by DISCOMs for 2023-24 (MVA)	Maximum SMD during 04/22 to 10/22 (MVA)	Additional load growth as estimated for 2023-24 (MU)	Additional load growth converted to MVA at 0.9 pf	Maximum SMD during 04/22 to 10/22 + Additional load growth in MVA
A	B	C	D	E	$F = E * 1000 / (365 * 24) / 0.9$	$G = D + F$
<b>TPCODL</b>	1740	2192	1892	886	112	2004
<b>TPNODL</b>	1150	1396	1155	1287	163	1318
<b>TPWODL</b>	1650	1850	1710	1878	238	1948
<b>TPSODL</b>	720	800	721	208	26	747

40. In respect of meeting the maximum demand in the State at any time during the year, the Petitioner would like to highlight that it is necessary to have adequate available capacity at the respective point of time. During the course of a year, there are times when some of the plants are shut due to maintenance. Further, the availability of solar/non-solar energy may not coincide with the time of maximum demand. In such times, GRIDCO may be required to schedule power from all the thermal stations. Such instances have taken place in the past on various time periods. This shows that the thermal power stations with which GRIDCO has PPAs are quite essential to meet the maximum demand of the State at all times of the year without resorting to load shedding. The Petitioner requests the Hon'ble OERC to give due and appropriate consideration to this aspect while determining the power purchase cost.

#### **Monthly approval of Consumption and SMD**

41. The Petitioner requests the Hon'ble Commission to kindly consider that the quantum of surplus power is estimated to reduce significantly in FY 2023-24. While on annual basis, there may be surplus power, but a monthly computation shows that there will be deficit for 6 months. During such period of deficit, GRIDCO is obligated to procure power through banking or from the market in order to meet the State requirement. Invariably, such deficit occurs during peak period when the exchange price is high and thus the Petitioner is adversely impacted for the additional costs.

42. In view of the above, the Petitioner requests the Hon’ble Commission to approve monthly SMD and the monthly quantum of energy for sale to each of the Discoms. This would enable the Petitioner in optimizing the generation plan in advance. The Petitioner also requests the Hon’ble Commission to approve a special BSP to be charged to Discoms for any drawal in excess of the monthly drawal approved by the Hon’ble Commission.

### 6.3 Transmission losses

43. The Petitioner submits that the transmission loss of OPTCL was approved @ 3.00% by the Hon’ble Commission for FY 2022-23. The same has been considered by the Petitioner to project Intra State transmission losses for FY 2023-24. Petitioner would request the Hon’ble Commission to approve the losses submitted by the Petitioner herein or revised approved losses based on ARR order of OPTCL for FY 2023-24.

### 6.4 Energy Requirement by GRIDCO

44. The Petitioner submits its energy requirement based on the projected demand by DISCOMs and estimated transmission loss as given below:

**Table 7 : Energy Requirement by GRIDCO for FY 2023-24 (MU)**

Sl. No.	Particulars	Projection for FY 2023-24 (MU)
1	Energy Demand of DISCOMs and emergency sales	36,428
2	Transmission Loss @ 3% as approved for FY 2022-23	1,126
<b>3</b>	<b>Energy Required to be purchased by GRIDCO to meet the power demand of Discoms&amp; CGPs</b>	<b>37,554</b>

45. The Petitioner submits that the power procurement planning is done by GRIDCO considering the demand estimates provided by the Discoms and the BSP is also determined considering this estimated demand and the corresponding cost. GRIDCO incurs high cost when Discoms draw power in excess of the quantum approved by the Hon’ble Commission, as it has to schedule costlier power as per merit order ranking to meet the demand surge of the Discoms for both short and long durations.

Accordingly, the Petitioner respectfully submits before the Hon'ble Commission that if any of the Discoms draw power in excess of the approved demand, then GRIDCO shall be entitled to charge/recover from the Discom, the full cost of the excess power so drawn during the relevant period as ascertained by SLDCs per actual.

46. Hon'ble Commission may also kindly consider that due to higher drawl by the Discoms, the Petitioner has to pay higher tariff due to over drawl penalty under Deviation Settlement Mechanism (DSM), at price prevailing at the time of such over drawl. In such situations, GRIDCO is obligated to pay at a higher rate and suffers huge deficit due to additional costs as such costs is not adequately compensated through the approved BSP.
47. It may be reiterated that the Petitioner has faced such situation during the first quarter of FY 2022-23 in which it has incurred additional cost to the tune of Rs 283.87 Cr. and has filed a Petition before Hon'ble Commission bearing case No 54 of 2022 for recovery of such additional cost.
48. While analysing the demand and availability of power on monthly basis for Discom and Emergency Sale, it has been observed that there is shortfall in demand for certain months and there is surplus in the off-peak months. Details of the same has been provided in the table below:

	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24	Feb-24	Mar-24	Total
Discoms Sale	3,318	3,361	3,235	3,168	3,158	3,202	3,161	2,735	2,589	2,652	2,592	3,187	36,358
Emer. Sale	8.01	5.77	10.10	8.56	3.68	5.60	6.30	2.56	7.13	3.90	4.92	3.47	70.00
Discoms + Emg Sale	3,326	3,367	3,245	3,176	3,162	3,208	3,167	2,738	2,596	2,655	2,597	3,190	36,428
Input Required	3,429	3,471	3,345	3,275	3,259	3,307	3,265	2,822	2,676	2,738	2,678	3,289	37,554
Availability	3,147	3,273	3,320	2,940	3,517	3,234	3,529	3,074	3,048	3,021	3,064	3,285	38,453
Shortfall / (Surplus)	282	197	25	335	(258)	73	(263)	(252)	(372)	(283)	(387)	4	(899)

49. From the above table it may be inferred that in FY 2023-24 there are 6 months in which there is shortfall in which GRIDCO needs to buy from market to meet the State demand and during the off-peak period the market price are not much favourable for

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sale of costly power. In view of the same, the Hon'ble Commission is requested to kindly allow a special BSP as proposed in the subsequent sections.

## **6.5 Capacity Planning and Justification for Fixed Charges**

50. Under Orissa Electricity Reforms Act 1995, GRIDCO is required to plan energy requirement for the State to meet power demand. GRIDCO had planned energy requirement in the state based on demand projections as per 17<sup>th</sup>EPS released in March 2007. As per 17<sup>th</sup>EPS, demand of the state was estimated to grow to 10074 MW by FY 2021-22. Considering the above estimation, the Petitioner had signed PPAs with NTPC, OPGC and IPPs to the tune of 3232 MW. The Prices in the exchange were also attractive above Rs 7/kWh during 2007-08 with estimation of surplus power, if any, in future could have been sold at attractive prices after meeting the State demand. To meet the deficit power from the exchange would have been a proposition of costly power procurement for the state requirement.
51. With fall in GDP growth in the country, energy demand did not grow as envisaged resulting in some surplus capacity across almost all the states. With falling prices in the exchange, margin of surplus power also diminished. To reduce surplus power, the Petitioner took proactive steps and deallocated capacity from high cost NTPC Barh-II, Nabinagar, FSTPS –I &II, KhSTPS-I and KBUNL plants.
52. GRIDCO had committed PPAs to meet the demand projections. Once the capacity has been tied up and PPAs have been signed, GRIDCO is contractually obligated to service the Fixed Capacity Charges based on Availability of the stations and not based on Energy Drawl. Hon'ble Commission in the previous orders had taken the same view by allowing the fixed cost of high-cost plants without approving any generation from high-cost plants. Considering the same view, various SERCs have also approved fixed cost of plants with high variable cost with low PLFs. Thus, Hon'ble Commission may kindly allow capacity charges of all the stations under various long term PPAs to keep the sector sustainable and to ensure reliable power supply arrangement for present and future demands of the state.

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53. With the demand growth post COVID recovery, the surplus power of the State is estimated to reduce significantly in FY 2023-24. On monthly basis, it is expected that there will be shortfall which will have to be met through procurement from market during deficit period. The contracted capacity from stations with which GRIDCO has PPAs will be completely utilised. The Petitioner humbly prays the Hon'ble Commission to consider this while approving the fixed charges.
  54. Section 13 of Orissa Electricity Reforms Act 1995, requires GRIDCO to plan and coordinate energy requirement in the State in coordination with Generating companies, State Government, CEA etc. It is the responsibility of GRIDCO to meet the power purchase requirement of the State.
  55. Considering the presence of the private players in four distribution companies in the State and the applicability of the uniform retail supply tariff in the State, GRIDCO has been playing a significant role in the Odisha power sector on overall planning and energy security for the state. Hence, the financial sustainability of GRIDCO needs to be ensured by the Hon'ble Commission.
  56. As a part of its function and duties, GRIDCO planned to tie up for additional generation capacity based on the 17th Electric Power Survey (EPS) Report published by the Electric Power Committee under the Central Electricity Authority on 30th March 2007.
  57. EPS Report published by the Electric Power Committee is an authentic and robust reference document for all State Government besides the Union Govt. and other stakeholders for advance planning for their growth.
  58. The projection of 17th EPS Report is given below. The electricity demand projection was based on several assumption, such as achieving higher energy consumption,

24X7 power supply, wiping of the energy deficit, GDP growth at the rate of 8% to 10%, etc.

**Table 8 : 17th EPS Demand Projections v/s Actual Demand (MW)**

Particulars (MW)	2010-11	2011-12	2016-17	2021-22
Projected Peak demand as per 17 <sup>th</sup> EPS	4,020	4,459	6,330	10,074
Actual SMD*	3,347	3,581	4,105	4,630**

\*PF assumed as 0.95.

\*\*Maximum SMD of FY 2021-22 (Apr '21 to Sep '21)

59. Accordingly, based on 17th Electric Power Survey Report, planning for capacity addition was done by the State Government and GRIDCO to meet its future growth in demand.
60. In order to meet the growing demand of power, the capacity planning has to be done well ahead of time for timely addition of capacity into the energy mix to optimise cost.
61. The power plants cannot be set up overnight to mitigate shortfall in availability of power. Hon'ble Commission may kindly appreciate that thermal power plants take 5-7 years for its commissioning, which would become difficult to meet demand within a short period.
62. GRIDCO entered into various long term Power Purchase Agreements (PPAs) with various Public sector (ISGS stations) and Private sector generators (such as IPPs) to cater the peak demand of the State. PPAs were signed with NTPC and PPAs with IPPs were executed as follows:

**Table 9 : PPAs executed post 2007 which are already commissioned and supplying power during FY 2022-23**

Sl. No.	Name of the Generator	GRIDCO Share (MW)	GRIDCO Normative Entitlement (MU)	Date of PPA executed
1	TSTPS-II	200	1,396	20.01.2007

Sl. No.	Name of the Generator	GRIDCO Share (MW)	GRIDCO Normative Entitlement (MU)	Date of PPA executed
2	FSTPS-III	86	599	27.12.2010
3	Darlipali-I	800	5,585	27.12.2010
4	OPGC Stage II*	990	6911	04.01.2011 & 24.01.2019
5	GMR	262.5	1,832	04.01.2011
6	JITPL	144	1,008	05.01.2011
7	Vedanta	720	5,010	19.12.2012
	<b>Total</b>	<b>3202.5</b>	<b>22,341</b>	

\* GRIDCO's share from OPGC-II shall be 1320 MW i.e.9215 MU w.e.f. 01.04.2023 as per normative entitlement based on PPA

63. During the past period, it was very important to make long term power tie ups for ensuring energy security to consumers of the State. The average power purchase rates in power exchange were Rs.7.57/unit, Rs.7.49/unit during FY 2007-08 and in FY 2008-09 respectively. Therefore, it was necessary to execute the above mentioned power purchase agreements and avoid the purchase of power from short term market at a higher rate.
64. The objective of the entire business planning is to provide reliable quality power at lower cost to the consumers of the State.
65. The Petitioner would have to buy expensive power in the absence of these PPAs. With these PPAs the Petitioner is able to comfortably meet State peak demand and maintain energy security of the State and provide competitive power to its consumers till FY 2024-25.
66. It is pertinent to mention that the gestation period of thermal and hydro plants are normally five years and, in some cases, due to various uncontrollable factors it takes more than 10 years. In order to ensure the energy security for the state in long term, the planning is required to be done well in advance. The marginal surplus in intermittent year(s) is a natural outcome if reliability and energy security is to be ensured. It is not feasible to exactly match the demand and availability on real time basis.



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67. It is also submitted that the Petitioner will have to further add peak generation capacity to meet its peak demand to avoid energy deficit situation in the State.
68. The Petitioner humbly submits that it is largely dependent on hydro stations to meet its demand requirements. The Hydro Power Stations of OHPC are Multi-Purpose Projects intended to fulfil manifold objectives such as; (i) Drinking Water, (ii) Irrigation, (iii) Flood Control and (iv) Power Generation. As per the Government of Odisha Letter No.1430 dated 19th February 2010, Power Generation comes 4th (fourth) in order of priority after fulfilling the requirement of water for the purposes of Drinking, Irrigation and Flood Control. Therefore, generation of hydropower is not directly related to the grid demand but is dependent upon other factors like requirement of water for Drinking, Irrigation and Flood Control. Generation of power from other hydro stations is usually dependent on uncontrollable factors like annual rainfall, reservoir levels etc. Considering these factors, the generation profile of hydro stations may be considered to be volatile. GRIDCO must maintain some surplus dispatchable capacity (thermal) to meet the peak demand. This is required to ensure reliability of supply of power to meet the peak energy requirements of the Discoms.
69. It is humbly reiterated that Capacity Charge is based on capacity commitments and not on the basis of energy drawn. It has been explained above that GRIDCO had committed PPAs with CPSUs and IPPs in order to meet the demand projections. Once the capacity has been tied up and PPAs have been signed, GRIDCO is contractually obligated to service the Capacity Charges based on Availability of the stations. It may also be noted that the Capacity charges are required to be paid even if it is not allowed by the Hon'ble Commission. Therefore, the Capacity Charges which is payable by GRIDCO to generating stations based on Availability of the tied-up capacities must be entirely recovered from DISCOMs through BSP.

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70. The Petitioner further submits that GoI has set a target to achieve 500 GW Renewable energy installed capacity by 2030. To achieve these targets, GoI has mandated Bulk suppliers and Discoms to achieve yearly Renewable energy targets.
71. Notwithstanding anything mentioned above, the Petitioner is consistently making efforts to reduce its surplus capacity and provide relief to the consumers of the fixed cost inspite of being bound by various legal covenants to purchase power from the entitled sources:
- a. The share of Odisha of ~340 MW in Farakka-I and II as well as Kahalgaon-I stations of NTPC has been allocated to Gujarat w.e.f 04.09.2021 for a period of 5 years except the share of bundled power which continues to be tied with GRIDCO.
  - b. GRIDCO has been relieved from procuring the committed 166 MW of costly power from the NTPC Barh-II Station through de-allocation of State share with the initiative of the Govt. of Odisha and re allocation of the same in favour of the State of Bihar w.e.f. 19<sup>th</sup> February 2019.
  - c. Persistent efforts by the State Government and GRIDCO resulted in deallocation of Odisha share of 155 MW of costly thermal power from Nabi Nagar Thermal Power Station of NTPC and re-allocation of the same in favour of Uttar Pradesh w.e.f. 7<sup>th</sup> January 2016.
  - d. GRIDCO's share from Unit-I of Barh-I has already been deallocated w.e.f. 30.03.2022. GRIDCO is also in discussion and follow up actions are made with GoO and GoI to further deallocate its share of Unit-II of Barh-I.
  - e. GRIDCO's share from KBUNL has been deallocated for 5 years
72. The Petitioner is always committed to manage state's energy requirements with optimal cost of purchasing power from the approved sources, while providing energy security in the State.

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73. The Petitioner would further like to highlight that most of NTPC's plants across the country have achieved availability of more than 85%. This shows that utilities have to pay fixed charges for these plants. Since PPAs with NTPC are covered under the tripartite agreement, there is no possibility of defaulting on payments to NTPC. The other SERC's have allowed the fixed charges for NTPC stations in the ARR.
74. The Petitioner humbly submits 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.
75. Considering the above facts, it is humbly submitted that since capacity planning being long-term in nature and is a statutory obligation on GRIDCO, Hon'ble Commission is requested not to disallow fixed charge under various long term PPAs to keep the sector sustainable. The Petitioner humbly request Hon'ble Commission to approve the fixed charges as payable by GRIDCO to the generating stations for all existing and new stations to be recovered from Discoms through BSP.

## **6.6 Power Availability and Cost of generating stations**

### **6.6.1 State hydro sources**

76. Odisha Hydro Power Corporation (OHPC), a wholly owned Undertaking of the Government of Odisha, owns & operates six Hydro Power Stations namely, Hirkud, Chiplima, Rengali, Upper Kolab, Balimela and Upper Indravati Hydro Electric Project (UIHEP). These Hydro Power Stations are Multi-Purpose Projects intended to fulfil manifold objectives such as; (i) Drinking Water, (ii) Irrigation, (iii) Flood Control and (iv) Power Generation. As per the Government of Odisha Letter No.1430 dated 19.02.2010 (ED-3), Power Generation comes 4th (fourth) in order of priority after fulfilling the requirement of water for the purposes of Drinking, Irrigation and Flood Control. Therefore, generation of hydropower is not directly related to the grid

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demand but is dependent upon other factors like requirement of water for Drinking, Irrigation and Flood Control.

77. In addition to the above six Nos. of Hydro Electric Power Stations, Machhkund Hydro Electric Project is a Joint Scheme of the Government of Andhra Pradesh and the Government of Odisha as per the Inter-State Supplementary Agreement signed in the year 1978 between both the State Governments.
78. Annual Rainfall is a natural phenomenon and has a direct bearing on the Reservoir levels of Hydro Power Plants and affects the quantum of hydro power generation in any given year.
79. As per the directives of the Hon'ble Commission vide Order dated 20th March 2010 relating to the ARR of OHPC for FY 2010-11, Hydro Generating Units of Burla and Chiplima are taken as separate Hydro Stations / Entities with effect from 1st April 2010. The Design Energy of Hiraakud and Chiplima as approved by the Hon'ble Commission in OHPC Order dated 24.03.2022 are 684 MU and 490 MU, respectively for FY 2022-23. Considering 5 MW power supply from Hiraakud Hydro Electric Project (HHEP) to Chhattisgarh State Electricity Board (CSEB), 16.60 MU of energy is deducted from the supply of power from Hiraakud Power Station (HPS) to Chhattisgarh State.
80. For the instant ARR & BSP Petition, the Petitioner has considered generation from OHPC plants as per the generation plan submitted by OHPC vide its letter dated 21.10.2022 (ED-4). Further it is submitted that the drawal shall be considered based on the approval as per the ARR order of OHPC for FY 2023-24 of the Hon'ble Commission.
81. Details of projected drawal of energy from the OHPC Stations for the FY 2023-24 has been provided in the Table below for kind approval of the Hon'ble Commission:

**Table 10 : Power purchase projections of State Hydro stations (MUs)**

Power House	Design Energy (Including loss)	GRIDCO Share	Actual Drawal during FY 2021-22 (After Loss)	OERC Approval for FY 2022-23 (After Loss)	Actual Drawl during 1st Six Months (April'22 to Sept22)	Generation Quantum submitted by OHPC for FY 2023-24 (Including Loss of 1%)	GRIDCO Projection for FY 2023-24 (Including Loss of 1%)
	(MU)	(%)	(MU)				
HHEP*	684.00	*100	684.08	3660.22	576.05	*688	*688
CHEP	490.00	100	263.24		191.62	348	348
Rengali	525.00	100	837.91		424.10	757	757
Upper Kolab	832.00	100	440.01		196.59	708	708
Balimela	1183.00	100	1001.96		657.28	1188	1188
<b>Sub-Total</b>	<b>3714.00</b>	<b>100</b>	<b>3227.21</b>	<b>3660.22</b>	<b>2045.64</b>	<b>3689</b>	<b>3689</b>
Upper Indravati	1962.00	100	1124.80	1942.38	649.33	1950	1950
<b>Sub-Total</b>	<b>5676.00</b>		<b>4352.01</b>	<b>5602.60</b>	<b>2694.97</b>	<b>5639</b>	<b>5639</b>
Machkund	525.00	50	315.24	259.88	128.84	260	260
<b>Total</b>	<b>6201.00</b>		<b>4667.25</b>	<b>5862.48</b>	<b>2823.81</b>	<b>5899</b>	<b>5899</b>

Note: \*There is 5 MW allocation from Hirakud HPS i.e. 16.60 MU in favour of CSEB

#### OHPC Stations – Power Procurement Cost

82. The Petitioner submits that it has projected the power purchase cost of various OHPC stations based on the Tariff approved for OHPC by the Hon'ble Commission for FY 2022-23 vide Order dated 24.03.2022.
83. The Petitioner submits that SLDC charges have been forecasted based on the avg. available capacity of OHPC Power Stations as intimated by OHPC for FY2023-24 vide its letter dtd.02.11.2022, enclosed as **ED-14**, the Hon'ble Commission's order for SOC & MOC Charges for FY-2022-23 which could be subject to change based on ARR order of OHPC for FY 2023-24 approved by Hon'ble Commission.
84. It is submitted that as per the Odisha Gazette Notification dated 01.10.2010 and amendment made in Rule-23-A(f) of Odisha Irrigation Rules, the licence fees for

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drawal or allocation of water shall be enhanced @ 10% per annum w.e.f. 1st day of April. Thus, water cess has been calculated to be Rs 0.0176 per unit.

85. Electricity duty has been considered at the rate of 55 paisa per unit of auxiliary consumption of the respective stations.

**Machhkund– Power procurement cost**

86. The Petitioner submits that as per the original Inter-State Agreement, 1945 signed between the two States, Machhkund Hydro Electric Project (MHEP) is a joint scheme of Government of Andhra Pradesh and Government of Odisha with 70% and 30% share respectively with option of Government of Odisha to draw an additional 20% power.
87. On 23rd October 2020, an inter-state agreement was signed between Govt. of Odisha / OHPC and Govt. of Andhra Pradesh / APGENCO for acquiring additional 20% share of the Joint Scheme by OHPC from APGENCO on payment of Rs 27.42 Crores towards present depreciated cost of the Project. The revised agreement is attached as **ED-11**. Accordingly, GRIDCO is availing State’s share of power to the tune of 50% in the project.
88. The Petitioner submits that the Power purchase cost of Machhkund for FY 2023-24 is computed by applying an annual escalation factor of 5.72% on 50% of the total O&M Expenses of Rs. 27.197Cr as reflected in the audited accounts of FY 2021-22. This amounts to Rs. 30.40 Crs which is the share of Govt. of Odisha / OHPC for FY 2023-24 payable to State of Andhra Pradesh / APGENCO. The fixed cost has been considered to be Rs. 30.40 cr. considering drawal of 50% share of saleable design energy of Machhkundi.e. 259.88 MU. The Petitioner requests the Hon’ble Commission to approve the same. Auditor’s Certificate and Final Bill for share of O&M expenditure is attached as ED-15.

**Table 11: Power purchase cost of Machhkund for FY 2023-24**

Particulars	Unit	2023-24
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Particulars	Unit	2023-24
Present Installed Capacity of MHEP (Jt.) Scheme (MW)	MW	120
(50%) Odisha Share as per revised Agreement dated 23.10.2020 (MW)	MW	60
Design Energy of MHEP for Generation (MU)	MU	525
Normative Auxiliary Energy Consumption (AUX) (%)	%	1%
Normative Auxiliary Energy Consumption (AUX) (MU)	MU	5.25
Saleable Design Energy for sharing between Andhra Pradesh & Odisha (MU)	MU	519.75
(50%) Saleable Design Energy Share of Odisha (MU)	MU	259.88
Drawal of Total Share of Odisha Energy by GRIDCO (MU)	<b>MU</b>	<b>259.88</b>
O&M Escalation factor @ 5.72 % for two years over the O&M Bill of MHEP for FY 2021-22.	-	1.118
Total Audited Cost of O&M Bill of MHEP (Jt.) for the FY 2021-22	Rs. Cr.	54.40
50% O&M Expenditure share (Orissa share of Actual O&M Expenditure for 2021-22)	Rs. Cr.	27.19
O&M Expenditure for FY 2023-24 applying the escalation factor	Rs. Cr.	30.40

89. Accordingly, the power purchase cost from OHPC plants is summarized below:

**Table 12: Projected Power purchase cost of OHPC Stations and Machhkund Station for FY 2023-24**

Name of the Power Stations	GRIDCO Projection for FY 2023-24 (After Loss)	Annual Fixed Cost approved for FY 2022-23	Total Fixed Charge for FY 2023-24	Total Variable Charge for FY 2023-24	ED On Aux. Consumption	Water Cess Paid /payable to Govt.	SLDC Charges (SOC & MOC)	Total Projected Cost for FY 2023-24
	(MU)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)
HHEP	664.52	77.46	38.73	38.73	0.37	1.21	0.22	79.26
CHEP	344.52	40.76	20.38	20.38	0.19	0.61	0.05	41.61
Rengali	749.43	78.43	39.22	39.22	0.42	1.33	0.20	80.38
Upper Kolab	700.92	61.45	30.73	30.73	0.39	1.25	0.22	63.31
Balimela	1,176.12	77.59	38.80	38.80	0.65	2.09	0.35	80.68
<b>Sub-Total</b>	<b>3635.51</b>	<b>335.69</b>	<b>167.85</b>	<b>167.85</b>	<b>2.02</b>	<b>6.49</b>	<b>1.04</b>	<b>345.24</b>
Upper Indravati	1930.50	165.62	82.81	82.81	1.07	3.43	0.40	170.52
<b>Total</b>	<b>5566.01</b>	<b>501.31</b>	<b>250.66</b>	<b>250.66</b>	<b>3.09</b>	<b>9.92</b>	<b>1.44</b>	<b>515.77</b>
Machhkund	259.88	28.82	30.40	-	-	-	-	30.40
<b>Total</b>	<b>5825.89</b>	<b>530.13</b>	<b>281.05</b>	<b>250.66</b>	<b>3.09</b>	<b>9.92</b>	<b>1.44</b>	<b>546.16</b>

90. The Hon'ble Commission may kindly consider the approved power purchase cost for OHPC stations including reimbursement and all other allowable costs for FY 2023-24 while approving power purchase cost for the Petitioner.

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### 6.6.2 Odisha Power Generation Corporation Limited (OPGC)

91. Odisha Power Generation Corporation (OPGC) owns IB Thermal Power Station at Banharpalli in Dist. Jharsuguda with an installed capacity of 2x210 MW (Unit I & II) for Stage-I from which GRIDCO is entitled to draw 100% power and expansion project Stage-II (Unit-III & IV) of OPGC having installed capacity of 2x660 MW i.e.1320 MWwith GRIDCO share of 75% till FY 2022-23 and 100% thereafter. A Supplementary PPA was executed between OPGC and GRIDCO on 24<sup>th</sup> January 2019 filed as Case No. 67 of 2019 before Hon'ble Commission for statutory approval and the Hon'ble Commission has accorded in principle approval to the Supplementary PPA dated 24.01.2019 vide order dated 22.06.2021.
92. In compliance to the request of GRIDCO, OPGC has submitted the Generation plan of Unit I&II for Financial Year 2023-24 vide email dated 07.10.2022 (**ED-5**).As per the said Generation Plan, Net Drawal from OPGC Stage-I during FY 2023-24 is estimated to be 2731.66 MU at a budgeted PLF of 81.80%. The Generator has mentioned that there shall be planned outage due to Minor Annual over Hauling (AOH) for 25 days during January 2024.
93. The Petitioner has observed that the PLF for OPGC Stage-I has operated 78.61% for FY 2021-22. Accordingly, same PLF has been considered for calculation of projected energy made available to GRIDCO for FY 2023-24 which calculates to be 2509.73 MU against 2731.66 MU as submitted by the generator. The Hon'ble Commission is requested to kindly consider 2509.73 MU for FY 2023-24 to be made available from OPGC Stage-I plant as per the actual PLF for FY 2021-22.
94. For Stage-II, Unit III & IV, OPGC has shared generation plan for FY 2023-24 by its mail dated 07.10.2022. In the same plan the gross generation has projected to be 9914.33 MU. The generator has projected the budgeted PLF to be 85.50% for FY 2023-24 and accordingly calculated the normative Ex-Bus export to be 9294.69 MU.



Accordingly, the Petitioner has considered 9294.69 MU to be made available by the generator for FY 2023-24. In view of the approval of Supplementary PPA dated 24.01.2019 of OPGC Stage II vide order dated 22.06.2021, GRIDCO humbly prays before the Hon'ble Commission to approve 9294.69 MU of power to be procured by GRIDCO from OPGC Stage II during FY 2023-24.

**Table 13 : Projected Power purchase quantum from OPGC stations (MU)**

Station	Installed Capacity	Aux Consumption	PLF	Energy Available to GRIDCO
Unit	(MW)	(%)	(%)	(MU)
Unit I & II	420	9.50	78.61	2509.73
Unit III & IV	1320	6.25	85.5	9294.69

#### **OPGC Stations – Power Procurement Cost**

95. OPGC in its generation plan has projected the Annual Fixed Charges to be Rs. 291.07 Cr. and the energy charge has been projected to be 161.09 P/U for Stage-I. The Petitioner submits that Annual Fixed Charge (AFC) and Energy Charge Rate (ECR) of OPGC Stage-I (Unit I&II) has been considered as per the generation plan.
96. For Stage-II, OPGC in its generation plan has projected the Annual Fixed Charges to be Rs. 2256.42Cr. and the energy charge to be 136.93 P/U. The Hon'ble Commission in Order dated 24.03.2022 while determining BSP for GRIDCO has approved a tariff of 330 P/U for Stage-II (Unit III&IV) on provisional basis. The Petition regarding determination of AFC and ECR for FY 2023-24 for OPGC Stage-II listed as Case No. 96 of 2021 is pending for finalisation. In view of the standing Order of the Hon'ble Commission a tariff rate of 330 P/U has been considered for calculation of power purchase cost for OPGC Stage-II. While calculating the power purchase cost Fixed cost has been considered as 160 P/U and the remaining amount i.e. 170 P/U has been considered as ECR. The relevant extract from the Order dated 24.03.2022 (Para 284) has been reproduced below for ready reference.

*“Therefore, in order to avoid such situation in next year, the Commission would like to enhance the provisional tariff to 330 P/U in respect of the drawal of power from the expansion Units-III & IV of OPGC during FY 2022-*

23. Accordingly, the cost of power procurement by GRIDCO from the OPGC Units-III&IV during FY 2022-23 has been estimated at Rs.1604.47 Crore towards purchase of the approved quantum of 4862.04 MU at the provisional tariff of 330 P/U...  
The provisional amount of Rs.327.80Crore has been arrived at by considering the fixed cost of 160 P/U provisionally for the non-drawal quantum of 2048.78 MU... "[Emphasis Supplied]

97. It is submitted that the yearend charges comprises of electricity duty, water charges/cess, SOC & MOC and DSM charges. The Electricity Duty has been calculated by considering auxiliary consumption @ 9.50% for Stage-I and 6.25% for Stage-II. Rest of the year-end charges has been projected by prorating the actual year end charges as admitted by GRIDCO during the 1<sup>st</sup> half of the FY 2022-23 i.e. from April to September, 2022. The detailed break up of the year end charges incurred till September 2022 are provided below:

**Table 14 : Year End Charges for OPGC stations paid by GRIDCO Apr-Sep'22**

Sl. No.	OPGC Stage-I(Apr-Sep'22)		OPGC Stage-II (Apr-Sep'22)	
	Particulars	Amount (Rs.)	Particulars	Amount (Rs.)
1	Electricity Duty	5,92,83,316	Electricity Duty	120,291,012
2	SOC & MOC charges	17,82,606	DSM Charges	21,044,052
3	Water Charges	4,91,82,234	SOC & MOC charges	4,201,860
4	ERPC charges for 2022-23	16,00,000	Annual Electrical Inspection Charges 2021-22	9,325
5	Annual Inspection Fees for 2021-22	16,86,230	Tax & Cess on Land for FY 2021-22	2,607,357
6	OERC ARR Tariff Filing Fees for 2022-23	21,00,000		
7	<b>Total</b>	<b>11,56,34,386</b>	<b>Total</b>	<b>14,81,53,606</b>

98. Without prejudice to the AFC and Energy Charge Rate (ECR) adopted by the Petitioner for calculation of Power Purchase Cost from OPGC Stage-I & Stage-II the Hon'ble Commission is requested to kindly consider the power purchase cost and

quantum as per their respective ARR and Tariff Orders to be issued by OERC for OPGC Stage-I and II for FY 2023-24.

99. It is further humbly submitted that in case of OPGC Stage II, Hon'ble Commission has already reserved the final tariff order in the MYT application for block period 2019-24 in Case No. 96 of 2021. Therefore, the tariff of OPGC Stage II to be allowed by Hon'ble Commission for FY:2023-24 may be adopted/considered while approving the ARR of GRIDCO for FY:2023-24. Accordingly, the differential tariff implication /financial implication upto March,2023 towards power purchase cost (capacity charge, energy charge and other statutory charge) may kindly be considered while approving the ARR of GRIDCO for FY2023-24.
100. In view of the aforesaid submissions, total Power Purchase Cost from OPGC is summarized below:

**Table 15: Projected Power Purchase Cost from OPGC plants for FY 2023-24**

Name of the Power Stations	Energy (MU)	Annual Fixed Charge (Rs. Cr.)	Variable Charge (Rs. Cr.)	Year End charge (Rs Cr.)	Total (Rs. Cr.)
OPGC Unit-I&II	2,509.73	291.07	404.29	25.76	721.12
OPGC Unit-III&IV	9,294.69	1,487.15	1,580.10	39.65	3,106.90
<b>TOTAL</b>	<b>11,804.42</b>	<b>1,778.22</b>	<b>1,984.39</b>	<b>65.41</b>	<b>3,828.02</b>

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

101. The Petitioner respectfully submits that with commissioning and full entitlement of OPGC Unit # 3 & 4, NTPC-Darlipalli (1600 MW), Renewable capacity addition and Barh-I there would not be any power requirement from CGP sources during the FY 2023-24 on regular basis. However, procurement of power from CGPs and Co-Generation Plants may be resorted to as per the Order dated 09.04.2019 of the Hon'ble OERC in Case No.62 of 2017. GRIDCO may resort to source power from CGPs provided the economics of power procurement works out in favour of GRIDCO and also depending on the power supply and demand situation of the State and also in exigency/force majeure conditions justifying such procurement. CGP power is not a firm source of power since the CGPs are essentially meant for the

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captive consumption and hence, GRIDCO cannot propose procurement of a definite quantum of power from the CGPs. Further it is 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 Hon'ble Commission in its order dated 24.03.2022 has observed that the installed capacity of CGP in Odisha is more than total installed generation capacity of Odisha including share from central sector generating stations which is a matter of concern and GRIDCO has no role to play in this matter. The relevant extract from the Order is reproduced below for reference:

*“The Commission observed that the installed capacity of CGP in Odisha is more than total installed generation capacity of Odisha including share from central sector generating stations. This is a matter of concern and the Commission would like to bring to the notice of the objector(s) that establishment of CGP is a de-licensed activity. It can be established by the industry depending upon their business model, quantum of power requirement and availability/requirement of reliable power supply. GRIDCO has no role to play in this matter.”*

102. As directed by Hon'ble Commission in Tariff order for FY 2022-23, GRIDCO will try to procure power from captive sources based on requirement and MoD principles.

#### 6.6.4 Renewable Energy Sources

103. It is submitted that the Hon'ble OERC has mandated GRIDCO to meet the Renewable Energy (both solar and non-Solar) Purchase Obligation (RPO) for the years from 2011-12 to 2015-16 in Para 3(I) of the Hon'ble Commission's Order dated 30.09.2010 in Case No. 59 of 2010, which was revised for the years from FY 2015-16 to FY 2019-20 vide Clause 4.2 of the Odisha Gazette Notification dated 10.09.2015 (**ED-6**).

104. Hon'ble OERC has notified the OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2021 with an increased RPO target from 13.25 % in FY 2021-22 to 18 % by FY 2024-25 of the total consumption of

electricity from all sources excluding the consumption met from hydro (State & Central). Hence for FY 2023-24, GRIDCO has considered to purchase renewable energy @ 16 % RPO (consisting of 8.75 % Solar target, 0.66 % HPO & 6.59 % Non-Solar target) of the total projected energy requirement in the State for sale through the DISCOM Utilities for 36,358 MU and Emergency & Back-up Power Sale of 70 MU to Long term Customers like NALCO & IMFA. The relevant paragraph along with the Table from the afore-said Gazette Notification dated 17.01.2022 is reproduced below:

*“Every Obligated Entity shall at least purchase source wise electricity from Renewable sources to the percentage of its total consumption of electricity from all sources excluding the consumption met from hydro sources of power (State & Central), as indicated in the table below:*

**Table 16 :Minimum quantum of electricity to be procured from Renewable Sources by Obligated Entity as percentage of total Consumption in kWh**

FY	RPO Percentage (%)				Total RPO (%)
	Solar	Non-Solar			
		HPO	Other Non-solar RPO	Total Non-solar RPO	
2021-22	7.25	0.18	5.82	6.00	13.25
2022-23	8.00	0.35	6.15	6.50	14.50
2023-24	8.75	0.66	6.59	7.25	16.00
2024-25	9.75	1.08	7.17	8.25	18.00

105. Recently, the RPO trajectory for period 2022-23 to 2029-30 has been notified by the Ministry of Power vide Order dated 22.07.2022. The Petitioner submits the proposed procurement of Solar & Non-Solar energy by GRIDCO for FY 2023-24 as indicated below:

**Table 17 : Proposed Procurement of Renewable Energy during FY 2023-24**

Particulars	RPO Target (On Proposed Sale of 36,428to DISCOMs & NALCO, IMFA)	Renewable Energy proposed by GRIDCO for FY 2023-24
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	Percentage (%)	Quantum (MU)	Quantum (MU)
Solar Energy	8.75	3187.45	2160.00
Non-Solar Energy(HPO & Other Non-solar)	7.25	2641.03	1623.78
<b>Total</b>	<b>16.00</b>	<b>5828.48</b>	<b>3783.78</b>

### Solar Energy

106. The Petitioner submits that it is estimated to procure around 2160 MU of Solar energy during FY 2023-24 from the following stations:

- 8 Nos. of Solar PV Projects of 1 MW each commissioned in the State under 'Rooftop PV and Small Solar Power Generation Programme (RPSSGP) guidelines of MNRE, Government of India (13 MU);
- 20 MW Solar capacity as per the Power Sale Agreement (PSA) executed with NTPC Vidyut Vyapar Nigam Limited (NVVNL) on 12th January 2011 under 'New Projects Scheme' in Phase-1 of Jawaharlal Nehru National Solar Mission (JNNSM) where Solar capacity bundled with equal capacity of thermal capacity from the unallocated quota of the NTPC Coal Based Stations is available to GRIDCO (34 MU), and;
- 10 MW Solar capacity from NTPC as per the PPA executed with them on 26.04.2011 to procure Solar power from each of the 5 MW Dadri Solar PV project at U.P. & 5 MW Faridabad Solar PV Project at Haryana (17 MU);
- 7 MU will be made available to GRIDCO from the 5 MW Solar PV Project developed by M/s Alex Green Energy Ltd. under OREDA State Scheme at Patnagarh, Bolangir District;
- 42 MU will be made available to GRIDCO from the 25 MW SPV Project developed by M/s. ACME Odisha Solar Power Private Ltd. at Bolangir District under OREDA State Scheme, Phase-2;
- 70 MW Solar Capacity is allocated to GRIDCO through SECI under Viable Gap Funding (VGF) Scheme under JNNSM Phase-II. Around 108 MU will be made available to GRIDCO during FY 2023-24.

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- From the 270 MW Solar power allocated to GRIDCO through SECI VGF Scheme under JNNSM Phase-II, Batch – IV, around 401 MU power is expected to be available to GRIDCO during FY 2023-24 as per the PSA executed with SECI Ltd.;
  - 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, it is expected to get around 112 MU Solar Energy during the ensuing FY 2023-24.
  - Around 635 MU from the 300 MW Solar Power being procured through SECI under ISTS-connected Solar power Projects Scheme is expected to be available during the FY 2023-24.
  - From the 200 MW Solar power allocated to GRIDCO through SECI under ISTS-connected Solar power Projects Scheme, around 409 MU power is expected to be available during FY 2023-24.
  - 12 MU solar power is expected to be made available to GRIDCO from the upcoming 8 MW Solar PV Project developed by GEDCOL in 5 nos. of location (3 nos. of OPTCL sub-stations, at Mukhiguda Powerhouse & GEDCOL Manamunda Solar Project premises) in the un-utilized surplus land.
  - Out of the total 8 MW of solar capacity, 3 MW has already been commissioned in the State and exporting power to the system with 2 MW at Manmunda on dated 12.04.2022 and 1 MW of solar capacity at Mukhiguda, OHPC P.H on dated 11.11.2022. The balance 5 MW is expected to be commissioned by January 2023.
  - From the 500 MW Solar Project through SECI under ISTS-connected Manufacturing Linked Scheme, around 363 MU power is expected to be available during FY 2023-24, as the project is scheduled to be commissioned during November 2023.
  - Under MNRE Scheme of “100 % Solarisation of Konark temple and Town” GRIDCO has executed PPA with M/s Konark Suryanagri Pvt. Ltd. on dated 19.10.2022 towards procurement of 10 MW solar power. Around 7 MU for five months is expected to be available to GRIDCO

107. Based on the above assumptions, GRIDCO proposes to procure around 2160 MU of Solar power during FY 2023-24 as summarised in the Table below:

**Table 18 : Proposed Drawl of Solar Power during FY 2023-24**

Sl. No.	Solar RE Sources	Energy Proposed for FY 2023-24 (MU)
1.	8 Nos. of Solar PV projects of 1 MW each under RPSSGP	13.00
2.	20 MW from NVVN through 'New Projects scheme' under JNNSM, Phase-1	34.00
3.	10 MW through NTPC from 5 MW Solar PV project at Dadri & Faridabad	17.00
4.	5 MW from M/s Alex Green Energy Ltd. through OREDA State Scheme	7.00
5.	25 MW from M/s. ACME Odisha Solar Power Private Limited	42.00
6.	70MW through Solar Energy Corporation of India (SECI) under JNNSM, Phase –II, Batch-I	108.00
7.	270MW through Solar Energy Corporation of India (SECI) VGF Scheme under JNNSM, Phase –II, Batch-IV	401.00
9.	75 MW from M/s Aditya Birla Renewables Ltd. procured through GRIDCO e-bidding process	112.00
10.	300 MW Solar power through SECI under ISTS-Connected Solar Power projects scheme	635.00
11.	200 MW Solar power through SECI under ISTS-Connected Solar Power projects scheme	409.00
12.	8 MW from GEDCOL implemented in un-utilized surplus land	12.00
13	500 MW through SECI under manufacturing linked Scheme for 4 months	363.00
14	MNRE Scheme of 100 % Solarisation of Konark Temple and Town for 5 months	7.00
	<b>Total</b>	<b>2160.00</b>

108. It is respectfully submitted that GRIDCO is trying its best to explore the possibilities to procure more Solar Power for the State in order to increase the share of renewable energy in the overall energy basket of the State.
109. It is submitted that, GRIDCO plans to procure 2160 MU of Solar energy against the Solar Power Obligation (SPO) of 3187.45 MU @ 8.75 % of the projected State Energy Consumption of 36,428 MU for FY 2023-24. The approved Solar power



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Rates by the Hon'ble Commission for FY 2022-23 have also been considered for the existing Solar projects. For the power from 5 MW Faridabad SPV Project (8.50 MU @ 935 P/U for Rs.7.9475 Crore), Power from 5 MW Dadri SPV Project has been considered (8.50 MU @1294 P/U for an amount of Rs.10.99 Crore).

110. Apart from this, GRIDCO also proposes to procure 13 MU from 8 Nos. of 1 MW SPV Projects @ 628 P/U under RPSSGP Scheme, 34 MU @1065 P/U through NVVN Ltd. under the New Project Scheme, 7 MU Solar Power @ 700 P/U from M/s Alex Green Energy Pvt. Ltd. and 42 MU of Solar Power @728 P/U from M/s ACME Odisha Solar Power Pvt. Ltd. under OREDA State Scheme, I & II respectively. Also 108 MU of Solar Power through Solar Energy Corporation of India Ltd. (SECI) under VGF Scheme, Phase-II, Batch-1 @ 550 P/U at a cost of Rs.59.40 Crore is proposed to be procured. Besides, 401 MU of Solar Power has been taken through SECI under VGF Scheme Phase-IV @ 450 P/U at a cost of Rs.180.45 Crore.
111. Similarly, 112 MU of Solar Power @ 306 P/U including the Safe Guard Duty (SGD) impact from 3 nos. of SPV projects of M/s Aditya Birla Renewables Ltd. under GRIDCO e- bidding scheme in conformity to MoP, GoI Resolution dated 03.08.2017 at Boudh (Rs. 3.06/ kWh), Bargarh (Rs. 3.06/ kwh) & Bolangir (Rs. 2.99/ kWh) and 635 MU & 409 MU of Solar Power @ 260 P/U and @ 265 P/U respectively being procured through SECI under ISTS- connected Solar power projects Tranche-I & III scheme have been proposed.
112. The 8 MW upcoming solar PV projects being implemented by GEDCOL in 5 nos. of different locations (3 nos. of OPTCL sub-stations viz. Baripada, Jayanagar & New Bolangir, OHPC Mukhiguda Power House & GEDCOL Manamunda Solar plant premises) in the un-utilized available surplus land, for which PPA has been executed with GEDCOL on 01.09.2020. Till date, 3 MW has already been commissioned in the State with 2 MW solar capacity at Manmunda and 1 MW solar capacity at OHPC Mukhiguda Power House. The balance 5 MW is expected to be commissioned by January 2023. Around **12 MU** energy export is expected during FY 2023–24. The

mutual agreed tariff between GEDCOL & GRIDCO is Rs. 2.84 / kWh, which is also approved by Hon'ble OERC vide Order dated 20.07.2021 in Case No. 15/ 2021 while approving the PPA dated 01.09.2020.

113. Also, as per the PSA dated 22.07.2021 with SECI towards procurement of 500 MW Solar Power under ISTS-connected Solar Tranche-1 under Manufacturing Linked Scheme of MNRE, around 363 MU @ 261 P/U is expected to be procured during FY 2023-24.
114. Similarly, under MNRE Scheme for 100 % Solarisation of Konark Temple and Town, GRIDCO has executed PPA dated 19.10.2022 with M/s Konark SuryanagriPvt. Ltd. towards procurement of 10 MW solar power, which is expected to be available by October 2023. Around 7 MU @ 277 P/U will be procured by GRIDCO during FY 2023-24 with total cost of Rs.1.94 Crores.
115. Accordingly, the estimated procurement of 2160 MU of Solar Power during FY 2023-24 will be made at around Rs 746.50 Crore at an Average Proposed Rate of 345.60 P/U.
116. The details of projected procurement and cost of Solar Power by GRIDCO for FY 2023-24 is given in the Table below:

**Table 19: Proposed Quantum&Power Purchase Cost from Solar Power Plants during FY 2023-24**

Sl. No.	Solar RE Sources	Quantum	OERC Approved Rate for FY 22-23	Proposed Rate for FY 23-24	Estimated Power Purchase Cost for FY 23-24
		(MU)	(P/U)	(P/U)	(Rs. Cr.)
1	8 Nos. of Solar PV projects of 1MW each under RPSSGP*	13	628	628	8.16
2	20 MW through NVVN under 'New Projects scheme' under	34	1065	1065	36.21

Sl. No.	Solar RE Sources	Quantum	OERC Approved Rate for FY 22-23	Proposed Rate for FY 23-24	Estimated Power Purchase Cost for FY 23-24
		(MU)	(P/U)	(P/U)	(Rs. Cr.)
	JNNSM, Ph-1				
3	10 MW through NTPC from 5 MW Solar PV projects at Dadri & Faridabad	17	1294 & 935	8.50 MU @1294 P/U & 8.50 MU @935 P/U	18.95
4	5 MW from M/s Alex Green Energy Ltd. through OREDA State scheme	7	700	700	4.90
5	25 MW from ACME Odisha Solar Power Private Ltd.	42	728	728	30.58
6	70 MW through Solar Energy Corporation of India (SECI) under JNNSM, Phase –II, Batch-I	108	550	550	59.40
7	270 MW through SECI under JNNSM, Phase –II, Batch-IV	401	450	450	180.45
8	75 MW from M/s. Aditya Birla Renewables Ltd. under GRIDCO e-bidding.	112	306	306	34.27
9	300 MW through SECI under ISTS – Connected Solar Power Projects Scheme	635	260	260	165.1
10	200 MW through SECI under ISTS – Connected Solar Power Projects Scheme	409	265	265	108.39
11	8 MW from GEDCOL implemented in un-utilized surplus land	12	284	284	3.41
12	500 MW through SECI under manufacturing linked Scheme	363	.....	261	94.74
13	MNRE Scheme of 100 % Solarisation of Konark Temple and Town	7	.....	277	1.94
	<b>Total</b>	<b>2160</b>		<b>345.60</b>	<b>746.50</b>

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## Non-Solar Energy

### *Small / Mini Hydro Electric Projects*

117. It is submitted that currently, GRIDCO is procuring 109.15 MW of power from the Small/Mini Hydro Electric Projects commissioned in the State.
118. During FY 2022-23, 09 MW Bargarh Head Regulator SHEP by M/s Kakatiya Industries Pvt. Ltd. achieved COD for Unit-1 on 30.04.2022 & Unit-2 on 12.05.2022 and exporting the power to GRIDCO.
119. Considering energy procurement of 377.27 MU during FY 2021-22 from Small / Mini Hydro Projects, drawal of 242.43 MU during the first six months of FY 2022-23 and the present availability of Water, GRIDCO proposes to draw around 483.35 MU of Renewable Energy from Meenakshi, Samal, Lower Baitarani, Saptadhara, Bargarh Head Regulator SHEP and OPGC Mini Hydrel Project during FY 2023-24
120. Hon'ble Commission vide Odisha Electricity Regulatory Commission (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2021 dated 17.01.2022, allowed generation from SHEPs commissioned on and after 08.03.2019 can qualify towards HPO. Accordingly, generation from 24 MW Lower Baitarani SHEP by M/s BPPPL, 18 MW Saptadhara SHEP by M/s APPPL and 09 MW Bargarh Head Regulator SHEP by M/s Kakatiya Industries Pvt. Ltd can be considered towards HPO compliance.

**Table 20 : Proposed Drawl from the SHE Projects by FY 2023- 24**

Sl. No.	Name of the SHEPs	Installed Capacity	Energy drawal during FY 2021-22	Energy drawal during Apr-Sep' 22	Proposed Energy procurement for FY 2023-24
		MW	MU	MU	MU
1	Meenaskhi Small Hydro through PTC	37	159.26	96.43	200.00
2	SAMAL Small Hydro through PTC	20	98.66	49.93	90.00

Sl. No.	Name of the SHEPs	Installed Capacity		Energy drawal during FY 2021-22	Energy drawal during Apr-Sep' 22	Proposed Energy procurement for FY 2023-24
		MW	MU	MU	MU	MU
3	OPGC MHP	1.15	0.25	0.25	-----	0.35
4	Lower Baitarani SHEP by M/s BPPPL	24	112.10	112.10	56.22	100
5	Saptadhara SHEP by M/s APPPL	18	7.01	7.01	34.37	57
6	Bargarh Head Regulator SHEP by M/s Kakatiya Industries Pvt. Ltd.	09	-	-	5.49	36
	<b>Total</b>	<b>109.15</b>	<b>377.27</b>	<b>377.27</b>	<b>242.43</b>	<b>483.35</b>

121. The details of the power procurement cost for the SHEPs are provided below:
- Meenakshi SHEP:** Procurement of 200 MU from M/s. Meenakshi Power Pvt. Limited (M/s. MPPL) has been planned at a rate of 368 P/U including PTC Trading Margin of 04 P/U. For the proposed procurement of 200 MU, the Cost of power calculates to be Rs. 73.60 Crore.
  - Samal SHEP:** Procurement of 90 MU from 20 MW Samal Barrage SHEP by M/s. OPCL at a rate of 371 Paise per Unit including PTC Trading Margin of 4 Paise per Unit (367 P/U+4 P/U) has been planned. The Cost of power from M/s. OPCL calculates to be Rs.33.39 Crore.
  - Lower Baitarani SHEP:**100 MU of energy from 24 MW Lower Baitarani SHEP by M/s. Baitarani Power Projects Pvt. Ltd. at a tariff of 571 P/kWh has been planned for procurement. Accordingly, it is proposed that, the cost of procurement power from M/s. Baitarani Power Projects Pvt. Ltd. has been calculated to be Rs.57.10 Crore. It is submitted that, the tariff of 571/kWh is provisional till the determination of tariff by Hon'ble Commission as per direction of Hon'ble APTEL vide Order dated 17.10.2022 in Appeal No. 73/2022 and 392/2022.
  - Saptadhara SHEP:**57 MU Energy from Saptadhara SHEP of M/s Sri Avantika Power Projects Pvt. Ltd. at a tariff of 506 P/kWh as approved by Hon'ble

Commission vide Order dated 07.05.2022 in Case No. 100/2021 has been planned for procurement. The Cost of power from M/s. SAPPPL is proposed as Rs. 28.83 Crore.

- e. **Bargarh Head Regulator SHEP:** Procurement of 36 MU energy from Bargarh Head Regulator SHEP of M/s Kakatiya Industries Pvt. Ltd. at a rate of 506 P/kWh as per the PPA dated 02.12.2015 has been planned. The cost of power from M/s. KIPL has been calculated to be Rs.18.22 Crore.
- f. **Biribati&Kendupatna OPGC MHPs:** As per the order dated 05.01.2019 of Hon'ble OERC in case No. 35/ 2018, the tariff for procurement of power from 2 nos. of Mini Hydel Projects (Biribati&Kendupatna MHP) has been fixed at Rs. 3.91 /kWh. Taking into account the past generation data, 0.35 MU of energy input has been considered for FY 2023 -24 @ 391 P/kWh, with a total power purchase cost of Rs. 0.14 Crore.

122. Hon'ble Commission may kindly approve Rs 211.28 Cr towards purchase of 483.35 MU from different SHEPs at an average price of 437.12 P/U.

***Biomass Energy***

123. It is submitted that during the 1<sup>st</sup> six months of generation during FY 2022-23, M/s. Shalivahana Green Energy Ltd. (SGEL) has exported only 17.54 MU (April 2022 to September 2022). Keeping in view the export data of earlier years, it is proposed to draw around 80 MU of energy from the Biomass Power Plant of M/s. SGEL during FY 2023-24.
124. The Petitioner submits that M/s. Shalivahan Green Energy Ltd. is injecting its total generation to the State Grid since its CoD from December 2011. Considering, 80 MU of energy input for FY 2023-24 power purchase cost has been calculated @ 760 P/kWh, which corresponds to Rs. 60.80 Crore.

**Table 21 : Proposed Procurement of Biomass Energy for FY 2023-24 (MU)**

Sl. No.	Name of the Bio-Mass Plant	Proposed Energy procurement (MU)	Proposed procurement cost (Rs. Cr.)
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1.	M/s. Shalivahan Green Energy Ltd.	80.00	60.80
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### Wind Projects

125. GRIDCO has executed Power Sale Agreement (PSA) with PTC India Ltd. on dated 20.07.2017 to avail 50 MW “Wind Power” through “ISTS Connected Wind Power Projects Scheme” of MNRE, Govt. of India. It is submitted that 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, out of which 346 Paise per kWh will be to the account of the Wind Energy Developer and 7 Paise per kWh is the Trading Margin to M/s. PTC India Ltd.
126. GRIDCO has signed Power Sale Agreement with SECI on dated 24.11.2017 for availing 100 MW Wind power under the “ISTS Connected Wind Power Projects Scheme, Tranche-II” of MNRE, Govt. of India at the applicable tariff of 272 Paise per kWh, including SECI Trading margin of 7 Paise per kWh.
127. 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, Tranche-III” of MNRE, Govt. of India. The applicable tariff for Wind power in Tranche-III is 251 Paise per kWh, including SECI Trading margin of 7 Paise per kWh.
128. 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, Tranche-IV” of MNRE, Govt. of India. The applicable tariff for Wind power in Tranche-IV is 258 Paise per kWh, including SECI Trading margin of 7 Paise per kWh.
129. 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, Tranche-VI” of MNRE, Govt. of India. The applicable tariff for Wind power in Tranche-VI is 289 Paise per kWh, including SECI Trading margin of 7 Paise per kWh.

130. MoP, GoI has waived off the ISTS Charges for entire lifetime of all the above wind power projects being procured towards meeting non-solar RPO targets through ISTS-connectivity.
131. The total 5 nos. of Power Sale Agreements executed with PTC India Limited (one No.) & SECI (4 nos.) to procure total 350 MW Wind power towards fulfilling the non-solar RPO as detailed below:

**Table 22 : PSA with PTC India & SECI**

Sl. No.	MNRE ISTS – connected Wind Project Scheme	Contract ed Capacity (MW)	Capacity Commissioned (MW)	Applicable Tariff (Rs / kWh)	Date of PSA	Proposed MU for FY 2023-24
1	Tranche – I	50	50	3.53	20.07.2017	157.68
2	Tranche – II	100	100	2.72	24.11.2017	303.98
3	Tranche – III	50	37.5	2.51	23.03.2018	124.26
4	Tranche – IV	100	84	2.58	15.06.2018	316.72
5	Tranche – VI	50	50	2.89	22.08.2019	157.79

132. At present GRIDCO is availing total 321.5 MW of Wind power i.e., 50MW under Tranche-I, 100MW under Tranche-II, 37.5 MW under Tranche-III, 84 MW under Tranche-IV and 50 MW under Tranche-VI respectively.
133. Considering energy procurement of **906.97 MU** of wind power during FY 2021-22, drawl of **595.42 MU** during the first six months of FY 2022-23 (April 2022–September 2022), GRIDCO proposes to draw around **1060.43 MU** of Wind power from PTC & SECI, from the contracted 350 MW Wind Capacity in FY 2023-24.
134. The Petitioner humbly submits that 337.50 MW Wind power is expected to be made available to GRIDCO during FY 2023-24, 50 MW under Tranche-I through M/s PTC India Ltd. @353 P/U, 100 MW @272 P/U under Tranche-II, 37.50 MW @ 251 P/U under Tranche-III, 100 MW @ 258 P/U under Tranche-IV and 50 MW @ 289 P/U under Tranche-VI all through SECI ISTS-connected Wind Power Project Schemes.



In view of this, GRIDCO is hopeful to procure around 1060 MU of Wind Energy @ 279.93 P/U for an amount of Rs. 296.85 Crore from the above Projects, as detailed below:

**Table 23 : Proposed Power Procurement Cost of Wind Energy for FY 2023-24**

Sl No.	Scheme Name	Proposed Energy (MU)	Rate (P/kWh)	Estimated cost (Rs. Crore)
1	MNRE ISTS-Connected Wind Power Scheme through PTC, Tranche-I	157.68	353	55.66
2	MNRE ISTS-Connected Wind Power Scheme through SECI, Tranche -II	303.98	272	82.69
3	MNRE ISTS-Connected Wind Power Scheme through SECI, Tranche -III	124.26	251	31.19
4	MNRE ISTS-Connected Wind Power Scheme through SECI, Tranche -IV	316.72	258	81.71
5	MNRE ISTS-Connected Wind Power Scheme through SECI, Tranche -VI	157.79	289	45.60
<b>Total Wind Energy</b>		<b>1060.43</b>	<b>279.93</b>	<b>296.86</b>

**Summary of power availability and power procurement cost from renewable sources**

135. The Petitioner submits that the power availability and power purchase cost from renewable energy for FY 2023-24 is summarized as below and would request Hon'ble Commission to approve the same:

**Table 24 : Proposed Power Procurement Cost of Non-Solar Energy for FY 2023-24**

Project Name	Capacity (MW)	Rate (Rs./kWh)	Proposed Units (MU)	Total Amount (Crore)
Meenakshi Small Hydro through PTC	37	3.68	200.00	73.6
SAMAL Small Hydro through PTC	20	3.71	90.00	33.39
OPGC MHP	1.15	3.91	0.35	0.14
<b>HPO</b>				
Lower Baitarani SHEP by M/s BPPPL	24	5.71	100.00	57.1
Saptadhara SHEP by M/s APPPL	18	5.06	57.00	28.84
Bargarh Head Regulator SHEP by M/s Kakatiya Industries Pvt. Ltd.	9	5.06	36.00	18.21
<b>Total SHEP*</b>	<b>109.15</b>	<b>4.37</b>	<b>483.35</b>	<b>211.28</b>
Shalivahana Green Energy Ltd	20	7.6	80.00	60.8

Project Name	Capacity (MW)	Rate (Rs./kWh)	Proposed Units (MU)	Total Amount (Crore)
<b>Total Biomass</b>	<b>20</b>	<b>7.6</b>	<b>80.00</b>	<b>60.8</b>
Wind through PTC, Tranche-I	50	3.53	158	55.7
Wind through SECI, Tranche-II	100	2.72	304	82.7
Wind through SECI, Tranche-III	37.5	2.51	124	31.2
Wind through SECI, Tranche-IV	100	2.58	317	81.7
Wind through SECI, Tranche-VI	50	2.89	158	45.6
<b>Total Wind</b>	<b>337.5</b>	<b>2.80</b>	<b>1060.43</b>	<b>296.86</b>
<b>Total Non-Solar</b>	<b>466.65</b>	<b>3.50</b>	<b>1623.78</b>	<b>568.93</b>

**Table 25 : Proposed Procurement & Cost of Renewable Energy for FY 2023-24**

Sl. No.	Renewable Energy Sources	Energy Proposed for FY 2023-24	Proposed Rate	Estimated Total Cost
		MU	P/U	Rs. Cr.
A.	Non-Solar	1623.78	350.38	568.93
B.	Solar	2160.00	345.60	746.49
<b>C.</b>	<b>Total</b>	<b>3783.78</b>	<b>347.65</b>	<b>1315.43</b>

#### 6.6.5 Central Hydro stations

##### Chukha HEP- Bhutan

136. GRIDCO has a share of 15.19% from ER allocation of 270 MW for Chukha Hydro Electric Plant. GRIDCO proposes to draw 267.68 MU during FY 2023-24 considering the last 6 years' average drawali.e. from FY 2016-17 to FY 2021-22 and Central Transmission Loss of 3.33%. The Petitioner submits that detailed calculation of power generation from Chukha is as below:

**Table 26: Proposed Drawl from Chukha HEP for FY 2023-24**

Particulars	Drawal (MU)
FY 2016-17	312.17
FY 2017-18	263.90
FY 2018-19	223.86
FY 2019-20	269.90
FY 2020-21	315.27
FY 2021-22	276.3

Particulars	Drawal (MU)
Average drawal for the last 6 years	276.90
<b>Proposed drawl after deducting Central Transmission Loss @ 3.33%</b>	<b>267.68</b>

137. The Petitioner submits that it has considered 240.16 P/U (including Trading Margin @4 P/U) for the energy to be availed from Chukha HEP based on the Office Memorandum of the Ministry of External Affairs, Government of India. Copies of the necessary Office Memorandum of Ministry of External Affairs, Govt. of India Dated 08.03.2018 along with the PTC letter No. C/PTC/Chukha/7388 dtd.13.03.2018 to this effect respectively, are enclosed as ED-17.
138. Considering Central Transmission Loss @ 3.33% the effective power purchase cost from Chukha Hydro Station for projected drawal of 267.68 MU works out to Rs.66.50 Crore@ 248.43 P/U for FY 2023-24 as shown in the table below:

**Table 27: Proposed Power Purchase Quantum & Cost for Chukha HEP during FY 2023-24**

Particulars	Unit	Amount
Proposed Energy Drawal	MU	267.68
Energy Charge including PTC INDIA charge P/U	P/U	240.16
Energy Charge including CTU Loss of 3.33%	P/U	248.43
Total Rate	P/U	248.43
<b>Power Purchase Cost</b>	Rs. Crore	<b>66.50</b>

#### Tala HEP- Bhutan

139. It is submitted that GRIDCO has a share of 4.25% from installed capacity of 1020 MW. GRIDCO proposes to draw 122.20 MU during FY 2023-24 considering the last 6 years' average drawal i.e. from FY 2016-17 to FY 2021-22 and Central Transmission Loss of 3.33%. The detailed calculation of power drawl from Tala is as below:

**Table 28: Proposed Drawal from Tala HEP for FY 2023-24**

Financial Year	Drawal (MU)
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FY 2016-17	140.57
FY 2017-18	122.81
FY 2018-19	107.96
FY 2019-20	125.71
FY 2020-21	144.14
FY 2021-22	117.25
Average drawl for the last 6 years	126.41
<b>Proposal after deducting Central Transmission Loss @ 3.33%</b>	<b>122.20</b>

140. It is submitted that it has considered the power purchase rate of 227 P/U (including Trading Margin @4 P/U) for drawl of power from Tala HEP based on the PTC letter No. C/PTC/Tala/14169 dated 11<sup>th</sup> November 2021, enclosed as ED-18.
141. Considering Central Sector Transmission Loss @ 3.33 %, the effective power purchase cost from Tala HEP for 122.20 MU @ 234.82 P/U comes to Rs.28.69 Crore for the ensuing year. The detailed calculation is provided in the table below:

**Table 29: Proposed Power Purchase & Cost from Tala HEP during FY 2023-24**

Particulars	Unit	Amount
Proposed Energy Drawl	MU	122.20
Energy Charge including PTC INDIA charge P/U	P/U	227.00
Energy Charge including CTU Loss of 3.33%	P/U	234.82
Total Rate	P/U	<b>234.82</b>
<b>Power Purchase Cost</b>	Rs. Crore	<b>28.69</b>

#### **Mangdechhu HEP- Bhutan**

142. It is submitted that GRIDCO has a share of 10.97% equivalent to share of 79.01 MW. GRIDCO proposes to draw 313 MU during FY 2023-24 considering the last 2 years' average drawal i.e. for FY 2020-21 and FY 2021-22 and Central Transmission Loss of 3.33%. The detailed calculation of power to be available by GRIDCO from Mangdechhu HEP has been provided below:

**Table 30: Proposed Drawal from Mangdechhu HEP for FY 2023-24**

Financial Year	Drawal (MU)
FY 2020-21	350.06
FY 2021-22	297.59
Average drawal for 2 years	323.83
<b>Proposal after deducting Central Transmission Loss @ 3.33%</b>	<b>313.04</b>

143. It is submitted that 419 P/U rate has been considered for power to be availed from MangdecchhuHEP. 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<sup>rd</sup> April 2019 & the Power Sale Agreement executed between PTC & GRIDCO dtd. 30 August 2019 are enclosed herewith asED-19.
144. Considering Central Sector Transmission Loss @ 3.33%, the effective power purchase cost from Mangdechu HEP for 313.04 MU @ 433.43 P/U works out to be Rs.135.68 Crorefor FY 2023-24. The same is shown in the Table below:

**Table 31 : Proposed Power Purchase & Cost from Mangdechu HEP in FY 2023-24**

Particulars	Unit	Amount
Proposed Energy Drawl	MU	313.04
Energy Charge including PTC INDIA charge P/U	P/U	419.00
Energy Charge including CTU Loss of 3.33%	P/U	433.43
Total Rate	P/U	433.43
<b>Power Purchase Cost</b>	Rs. Crore	<b>135.68</b>

#### **Teesta – V- NHPC**

145. It is submitted that the Annual Design Energy of Teesta-V HEP (Installed Capacity: 510 MW) situated in Sikkim is 2572.67 MU. After factoring for 12% free energy to the Home State, Sikkim & 1.20% towards Auxiliary Consumption, the Annual Saleable Energy of the project is estimated as 2236.78 MU. Considering the share of GRIDCO as 23.39 % of the saleable energy, GRIDCO proposes to draw 505.76 MU during FY 2023-24 considering Central Transmission Loss of 3.33 %. The detailed calculation for the energy to be availed has been provided in the table below:

**Table 32: Proposed Drawal from Teesta HEP for FY 2023-24**

Particulars	MU
Design Energy	2572.67
Annual saleable Energy available considering 1.20% Auxiliary energy consumption and 12% free energy for home State	2236.78
GRIDCO Share (%)	23.39%
Availability	523.18
<b>Proposal drawl after deducting Central Transmission Loss @ 3.33%</b>	<b>505.76</b>

146. It is submitted that CERC has notified CERC Tariff Regulations 2019 which came in force from 01.04. 2019 for the control period 2019-24. Pursuant to these Regulations NHPC has filed tariff applications with CERC for its central hydro plants.
147. It is submitted that the Petitioner has relied on submission of NHPC in its tariff petition filed with CERC to arrive at fixed cost for FY 2023-24. Thus, the Petitioner request Hon'ble Commission to approve power purchase cost of Teesta-V based on petition filed by NHPC with CERC, subject to revision considering the tariff determined as per final order of CERC. It is further submitted that relying on actual data of NHPC bills would not have been appropriate methodology considering the tariff set for previous control period as the matter of determination of tariff is still sub-judice.
148. The AFC of Teesta-V station as proposed in the Petition is to the tune of Rs. 437.98Crore. With GRIDCO's share of 23.39% (including State share of 20.59% and Free power @ 12% of Sikkim), procurement of energy from Teesta-V Station is expected to be around 505.76 MU at a cost of Rs. 102.44 Crore (50% considered as fixed cost- Rs. 51.22 crore and rest 50% considered as variable cost - Rs. 51.22 crore) during FY 2023-24.
149. Thus, the Hon'ble Commission is requested to kindly approve the power purchase cost of Teesta HEP, based on Petition filed by NHPC before Hon'ble CERC listed as Petition No. 298/GT/2020 subject to pronouncement of Order in this regard by Hon'bleCERC.

**Table 33: Power purchase cost of Teesta V**

Name of the Power Stations	Energy (MU)	Fixed charges (Rs. Cr.)	Variable charges (Rs. Cr.)	Year End charges (Rs Cr.)	Total Cost (Rs. Cr.)	Unit Rate Projected (p/u)
Teesta V	505.76	51.22	51.22	-	102.44	202.55

150. The summary of estimated power purchase cost from Chukha, Tala, Mangdechhu and Teesta-V has been provided in the table below. The Hon'ble Commission is requested to kindly allow the same.

**Table 34: Summary of Central station power purchase cost for FY 2023-24**

Plant Name	Energy (MU)	Rate P/U	Total projected energy cost (Rs Cr)
Chukha	267.68	248.43	66.50
Tala	122.20	234.82	28.69
Mangdechhu	313.04	433.43	135.68
Teesta-V	505.76	202.55	102.44
<b>Total</b>	<b>1208.68</b>	<b>275.76</b>	<b>333.32</b>

#### 6.6.6 Central Generating Stations

151. It is submitted that the Hon'ble Central Electricity Regulatory Commission (hereinafter called as the "CERC") vide Notification dated 07.03.2019 has notified the CERC (Terms & Conditions of Tariff) Regulations, 2019 effective from 01.04.2019 to 31.03.2024. As per the notification, the Norms of Operation for Normative Annual Plant Availability Factor (NAPAF) for Thermal Generating Station has been mentioned to be 85%.

152. In the instant Petition, the energy drawl for FY 2023-24 from Central Thermal Generating Stations has been estimated by considering the relevant allocated share of GRIDCO from the respective station, normative Plant Load Factor of 85% for the existing as well as upcoming units including Barh-I. Auxiliary Consumption has been considered as per the CERC (Terms and Conditions of Tariff) Regulations, 2019 and all India Transmission Loss has been considered as per the CERC (ISTS Charges and Losses), Regulation 2020 implemented with effect from 01.11.2020

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153. It is submitted that estimation of energy drawl has been arrived at by deducting the average transmission loss from the Net Energy available from the respective station. The average Transmission Loss, which has been derived with month wise transmission losses, are given in the table below:

**Table 35: Six Month Average Transmission Loss (%)**

Month	Transmission Loss (%)
Apr-22	3.22
May-22	3.35
Jun-22	3.33
Jul-22	3.45
Aug-22	3.44
Sep-22	3.20
<b>Average Loss (%)</b>	<b>3.33</b>

The detail calculation of month wise transmission loss from April'22 to Sept'22 are submitted in the **ED-8**.

154. Further, the present % of share allocation from NTPC Stations in favour of State of Odisha as derived from the Regional Energy Account (REA) of Eastern Regional Power Committee (ERPC) for the month of September 2022 is enclosed as **ED** for reference.

**Talcher Super Thermal Power Station (TSTPS) - Stage-I:**

155. It is submitted that the life of the Talcher-I has expired on 30.06.2022. However, as the power is coming under the merit order drawal for the State, the expected increase in demand-supply growth of the State in post pandemic period and industrial growth in near future, GRIDCO is considering availing power from TSTPS-I during FY 2023-24. In view of GRIDCO's share of 32.34% (including Dadri, Faridabad, NVVN Thermal Power) from TSTPS Stage-I (1000 MW), Auxiliary Consumption of 7.05%, as per the CERC Tariff Regulations, 2019 in force for the period 2019-24, proposed Plant Load Factor of 85.00% and the Central Transmission Loss of 3.33%, the energy



available to GRIDCO from TSTPS Stage-I for FY 2023-24 is assessed as 2164.05 MU as indicated below:

**Table 36 : Projected availability from TSTPS-I for FY 2023-24**

Installed Capacity (MW)	State/GRIDCO's Share (%)	Auxiliary Consumption (%)	PLF (%)	Net availability (MU) before Loss	Transmission Loss (%)	Net availability (MU) after Loss
1000	32.34	7.05	85.00	2238.56	3.33	2164.05

156. However, considering the drawl pattern of first six months of FY 2022-23 it has been estimated that the entire quantum of energy could not be availed by GRIDCO. The last 6 months drawl pattern of GRIDCO has been provided in the table below:

**Table 37: Six Month Average drawl from TSTPS-I (MU) for FY 22-23**

April-22	May-22	June-22	July-22	Aug-22	Sept-22	Avg
207.39	184.14	187.59	216.24	128.36	97.44	170.19

157. Accordingly, the drawl for FY 2023-24 has been estimated considering the average of first six months drawl for FY 2022-23, which works out to be 2042.32 MU before CTU loss. Considering CTU loss of 3.33% the net energy available to GRIDCO has been projected to be 1974.31 MU for FY 2023-24.

**Talcher Super Thermal Power Station (TSTPS) - Stage-II:**

158. Considering GRIDCO's share of 200 MW of power from TSTPS Stage-II (10% of Installed Capacity of 2,000 MW), Auxiliary Consumption of 6.25% as per the CERC Tariff Regulations, 2019 in force for the period 2019-24, Plant Load Factor of 85.00% and the Central Transmission Loss of 3.33%, the energy available to GRIDCO from TSTPS Stage-II for FY 2023-24 has been estimated at 1349.65 MU as detailed in the Table below:

**Table 38 : Projected availability from TSTPS-II for FY 2023-24**

Installed Capacity (MW)	State/GRIDCO's Share (%)	Auxiliary Consumption (%)	PLF (%)	Net availability (MU) before Loss	Transmission Loss (%)	Net availability (MU) after Loss
2000	10.00	6.25	85.00	1396.13	3.33	1349.65

159. However, considering the drawl pattern of first six months of FY 2022-23 it has been estimated that the entire quantum of energy could not be availed by GRIDCO. The last 6 months drawl pattern of GRIDCO has been provided in the table below:

**Table 39: Six Month Average drawl from TSTPS-II (MU) for FY 22-23**

April-22	May-22	June-22	July-22	Aug-22	Sept-22	Avg
130.91	135.52	134.32	135.41	134.27	130.50	133.49

160. Accordingly, the drawl for FY 2023-24 has been estimated pro-rating the average of first six months drawl for FY 2022-23, which works out to be 1601.86 MU before CTU loss. Considering CTU loss of 3.33% the net energy available to GRIDCO has been projected to be 1548.52 MU for FY 2023-24.

**Farakka Super Thermal Power Station (FSTPS-I&II):**

161. GRIDCO had an allocation of 227 MW considering **GRIDCO's Share allocation of 14.18%** (including Dadri, Faridabad & NVVN bundled thermal Power) from FSTPS-I&II (Installed Capacity: 1600 MW). The plant completed its life period of 25 years on 30.06.2021. Meanwhile, MoP/GoI vide Notification Dtd. 22.03.2021 came up with an Order enabling the Discoms to either continue or exit from the PPA i.e beyond 25 years or a period specified in the PPA and allow flexibility to the generators to sell power in any mode after State/Discom exit from the PPA.
162. The request for relinquishment of such power is only after the approval of the State Commission who would ensure the adequacy of the power to be tied up with the DISCOMs to meet the demand of the electricity for all the consumers under such DISCOMs. As per Clause 2(VI) of the Regulation, States may also relinquish the

entire unallocated power from CGSs (except some specific allocations e.g power which has been bundled with solar etc.). GRIDCO had filed an application before OERC for relinquishment of Power from FSTPS-I & II (218 MW) and to retain 8.86 MW of bundled thermal power as per clause 2 (VI) of the regulation. Hon'ble OERC vide order dtd. 29.10.2021 approved for relinquishment of GRIDCO's share of 218 MW power from FSTPS-I & II. However, Hon'ble Commission further directed GRIDCO to estimate solar RPO for future years and if required GRIDCO may also relinquish 8.86 MW bundled thermal power. As per directive of Hon'ble Commission GRIDCO is estimating the RPO obligation, as the same has not yet been finalised, GRIDCO has considered the bundled power in the present petition. Considering an allocation of 0.55% of bundled thermal power from FSTPS-I & II, Auxiliary Consumption @ 6.78%, as per the CERC Tariff Regulations, 2019 in force and Central Transmission Loss of 3.33%, the Projected Energy Availability to GRIDCO from FSTPS-I & II is estimated as 59.05 MU for FY 2023-24. The Projection is given in the Table below:

**Table 40 : Projected availability from Farakka STPS-I & II for FY 2023-24**

Installed Capacity (MW)	State/ GRIDCO's Share (%)	Auxiliary Consumption (%)	PLF (%)	Net availability (MU) before Loss	Transmission Loss (%)	Net availability (MU) after Loss
1600	0.55	6.78	85.00	61.08	3.33	59.05

163. However, considering the drawl pattern of first six months of FY 2022-23 it has been estimated that the entire quantum of energy could not be availed by GRIDCO. The last 6 months drawl pattern of GRIDCO has been provided in the table below:

**Table 41: Six Month Average drawl from FSTPS-I & II (MU) for FY 22-23**

April-22	May-22	June-22	July-22	Aug-22	Sept-22	Avg
3.89	4.04	4.78	4.87	4.35	3.78	4.28

164. Accordingly, the drawl for FY 2023-24 has been estimated pro-rating the average of first six months drawl for FY 2022-23, which works out to be 51.41 MU before CTU

loss. Considering CTU loss of 3.33% the net energy available to GRIDCO has been projected to be 49.70 MU for FY 2023-24.

**Farakka Super Thermal Power Station (FSTPS-III):**

165. It is humbly submitted that considering GRIDCO’s share from FSTPS-III of 17.15% (as per the Regional Energy Accounting-REA) (including Dadri, Faridabad & NVVNL Thermal Power), Auxiliary Consumption @6.25%, as per the CERC Tariff Regulations, 2019, proposed PLF of 85.00% and Central Transmission Loss of 3.33%, the Projected Energy Availability to GRIDCO from FSTPS-III is estimated as 578.66 MU for FY 2023-24. Table showing estimation is given below:

**Table 42 : Projected availability from Farakka STPS-III for FY 2023-24**

Installed Capacity (MW)	State/ GRIDCO's Share (%)	Auxiliary Consumption (%)	PLF (%)	Net availability (MU) before Loss	Transmission Loss (%)	Net availability (MU) after Loss
500	17.15	6.25	85.00	598.58	3.33	578.66

166. However, considering the drawl pattern of first six months of FY 2022-23 it has been estimated that the entire quantum of energy could not be availed by GRIDCO. The last 6 months drawl pattern of GRIDCO has been provided in the table below:

**Table 43: Six Month Average drawl from FSTPS-III (MU) for FY 22-23**

April-22	May-22	June-22	July-22	Aug-22	Sept-22	Avg
57.06	52.37	28.70	-	9.09	19.18	27.73

167. Accordingly, the drawl for FY 2023-24 has been estimated pro-rating the average of first six months drawl for FY 2022-23, which works out to be 332.80 MU before CTU loss. Considering CTU loss of 3.33% the net energy available to GRIDCO has been projected to be 321.72 MU for FY 2023-24.

**Kahalgaon Super Thermal Power Station-Stage-I (KhSTPS-I):**

168. GRIDCO had an allocation of 132MW considering GRIDCO’s Share allocation of 15.77% (including Dadri, Faridabad & NVVN Thermal Power) from Kahalgaon-I (Installed Capacity: 840 MW). The plant completed its life period of 25 years on

30.07.2021. Meanwhile, MoP/GoI vide Notification Dtd 22.03.2021 came up with an order enabling the Discoms to either continue or exit from the PPA i.e beyond 25 years or a period specified in the PPA and allow flexibility to the generators to sell power in any mode after State/Discom exit from the PPA.

169. The request for relinquishment of such power is considered only after the approval of the State Commission who would ensure the adequacy of the power to be tied up with the DISCOMS to meet the demand of the electricity for all the consumers under such DISCOMS. As per clause 2(VI) of the Regulation, States may also relinquish the entire unallocated power from CGSs (except some specific allocations e.g power which has been bundled with solar etc.).
170. GRIDCO had filed an application before OERC for relinquishment of Power from Kahagaon-I (128 MW) and to retain 4.5 MW of bundled thermal power which includes approx. 5MW bundled thermal from Kahalgaon-I as per clause 2 (VI) of the regulation. Hon’ble OERC vide order dtd 29.10.2021 approved for relinquishment of GRIDCO share of 128 MW power from Kahalgaon-I.
171. Hon’ble Commission further directed GRIDCO to estimate solar RPO for future years and if required, GRIDCO may also relinquish 4.5 MW bundled thermal power. As per directive of Hon’ble Commission, GRIDCO is estimating the RPO obligation, as the same has not yet been finalised. GRIDCO has considered the bundled power for meeting the RPO target in the present petition. Considering an allocation of 0.54% of bundled thermal from Kahalgaon-I, Auxiliary Consumption @9.00%, as per the CERC Tariff Regulations, 2019 in force, normative PLF of 85.00% and Central Transmission Loss of 3.33%, the Projected Energy Availability to GRIDCO from KHSTPS-I is estimated as 29.49 MU for FY 2023-24. The Projection is given in the Table below:

**Table 44 : Projected availability from KhSTPS-I for FY 2023-24**

Installed Capacity (MW)	State/GRIDCO's Share	Auxiliary Consumption	PLF (%)	Net availability (MU)	Transmission Loss (%)	Net availability (MU) after
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	(%)	(%)		before Loss		Loss
840	0.54	9.00	85.00	30.51	3.33	29.49

172. However, considering the drawl pattern of first six months of FY 2022-23 it has been estimated that the entire quantum of energy could not be availed by GRIDCO. The last 6 months drawl pattern of GRIDCO has been provided in the table below:

**Table 45: Six Month Average drawl from KhSTPS-I (MU) for FY 22-23**

April-22	May-22	June-22	July-22	Aug-22	Sept-22	Avg
2.80	2.35	2.06	2.27	2.01	1.42	2.15

173. Accordingly, the drawl for FY 2023-24 has been estimated pro-rating the average of first six months drawl for FY 2022-23, which works out to be 25.83 MU before CTU loss. Considering CTU loss of 3.33% the net energy available to GRIDCO has been projected to be 24.97 MU for FY 2023-24.

**Kahalgaon Super Thermal Power Station-Stage-II (KhSTPS-II):**

174. Considering Odisha share allocation of 2.62 % (including Dadri Thermal Power) from KhSTPS-II (Installed Capacity: 1500 MW), Auxiliary Consumption of 6.25% as per the CERC Tariff Regulations, 2019 in force for the period 2019-24, normative PLF of 85.00% and Central Transmission Loss of 3.33%, the Availability to GRIDCO from KHSTPS-II is estimated as 265.27 MU for FY 2022-23.

**Table 46 : Projected availability from KhSTPS-II for FY 2023-24**

Installed Capacity (MW)	State/ GRIDCO's Share (%)	Auxiliary Consumption (%)	PLF (%)	Net availability (MU) before Loss	Transmission Loss (%)	Net availability (MU) after Loss
1500	2.62	6.25	85.00	274.40	3.33	265.27

175. However, considering the drawl pattern of first six months of FY 2022-23 it has been estimated that the entire quantum of energy could not be availed by GRIDCO. The last 6 months drawl pattern of GRIDCO has been provided in the table below:

**Table 47: Six Month Average drawl from KhSTPS-II (MU) for FY 22-23**

April-22	May-22	June-22	July-22	Aug-22	Sept-22	Avg
4.94	23.54	21.58	19.76	19.84	16.40	17.68

176. Accordingly, the drawl for FY 2023-24 has been estimated pro-rating the average of first six months drawl for FY 2022-23, which works out to be 212.11 MU before CTU loss. Considering CTU loss of 3.33% the net energy available to GRIDCO has been projected to be 205.05 MU for FY 2023-24.

**Darlipali Super Thermal Power Station-I (1600 MW)**

177. It is submitted that the second unit of Darlipali STPS-I was put into commercial operation on 01.09.2021. Considering the normative plant load factor of 85.00%, Odisha share allocation of 58.82 % (including un-allocated quota of 8.82%) from DSTPS-I (Installed Capacity: 1600 MW), Auxiliary Consumption of 6.25% as per the CERC Tariff Regulations, 2019 in force for the period 2019-24, and Central Transmission Loss of 3.33%, the Availability to GRIDCO from DSTPS-I is estimated to be 6350.93 MU for FY 2022-23. A detailed table for total energy estimation is given below:

**Table 48 : Projected availability from DSTPS-I for FY 2023-24**

Installed Capacity (MW)	State/ GRIDCO's Share (%)	Auxiliary Consumption (%)	PLF (%)	Net availability (MU) before Loss	Transmission Loss (%)	Net availability (MU) after Loss
1600	58.82	6.25	85.00	6569.61	3.33	6350.93

178. However, considering the drawl pattern of first six months of FY 2022-23 it has been estimated that the entire quantum of energy could not be availed by GRIDCO. The last 6 months drawl pattern of GRIDCO has been provided in the table below:

**Table 49: Six Month Average drawl from DSTPS-I (MU) for FY 22-23**

April-22	May-22	June-22	July-22	Aug-22	Sept-22	Avg
532.98	299.64	454.80	540.74	504.43	514.05	474.44

179. Accordingly, the drawl for FY 2023-24 has been estimated pro-rating the average of first six months drawl for FY 2022-23, which works out to be 5693.29 MU before

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CTU loss. Considering CTU loss of 3.33% the net energy available to GRIDCO has been projected to be 5503.70 MU for FY 2023-24.

**Barh Super Thermal Power Station –I (Barh-I) (1980 MW):**

180. It is submitted before the Hon'ble Commission that one Unit of Barh-I (660 MW) has been put into commercial operation on 12.11.2021. As per CEA Thermal Broad Status Report dated October 2021, the second unit of Barh-I is expected to have trial run in December-2022.
181. Hon'ble OERC vide order dtd 01.11.2021 has dis-approved the PPA executed between NTPC and GRIDCO towards purchase of Power from Barh-I STPS and directed GRIDCO to approach MoP again through State Government for immediate de-allocation of Barh STPS-I from Odisha. This is to bring to the kind notice of Hon'ble Commission that, GRIDCO is aggressively taking up the matter with DoE, GoO. Govt. of Odisha has already taken up the matter with Ministry of Power, Govt. of India for de-allocation of Odisha share of power at the earliest. In this regard recent correspondences made with MoP, GoI are attached as **ED-9** along with this application for kind reference. Also, the matter of de-allocation of Barh-I has been discussed with MoP/GoI under the Chairmanship of Secretary (Power) on 01.11.2021 ED-9 wherein it was decided till the time of re-allocation, original beneficiary is liable to pay fixed charges. Accordingly, GRIDCO has the obligation to make payment of capacity charges as per the prevailing CERC Regulation in force, even in the absence of any drawl of power from the station.
182. Now, MoP/GoI vide order Dtd 12.11.2021 directed CPSE GENCOs and IPPs to regulate supplies to DISCOMs defaulting in payments immediately after 30 days of their due date i.e. about two and half months from presentation of the bill. At the same time, the DISCOM would not have any recourse to alternate power arrangements from any other source including Power Exchange during the time of regulation. Further, MoP/GoI vide notification Dtd 09.11.2021 issued a revised procedure for scheduling of power to Distribution Company in the event of non-maintenance of LC in accordance with Electricity (Late Payment Surcharge) Rules



2021. As per the revised procedure, Distribution company shall be liable to be debarred from procurement through Power Exchange(s) or STOA in case of outstanding dues more than seven months overdue.

183. Accordingly, GRIDCO prays before Hon'ble Commission to allow the Petitioner to draw power as and when required for the State on Merit order basis. There is also every possibility, considering the existing practice, the system operator may schedule power from Barh-I under technical minimum to GRIDCO. GRIDCO has estimated the drawl of power at normative PLF of 85.00%. Hence, considering the share of GRIDCO as 21.11%, Auxiliary Consumption @ 6.25%, as per the CERC Tariff Regulations, 2019 in force, normative PLF of 85.00% and Central Transmission Loss of 3.33%, the Projected Energy Availability to GRIDCO from existing unit of Barh-I is estimated as 940.20 MU for FY 2023-24. A detailed table for total energy estimation for existing unit and as well as for upcoming Units are given below:

**Table 50 : Projected availability from Barh-I for FY 2023-24**

Installed Capacity (MW)	State/GRIDCO's Share (%)	Auxiliary Consumption (%)	PLF (%)	Net availability (MU) before Loss	Transmission Loss (%)	Net availability (MU) after Loss
660	21.11	6.25	85.00	972.58	3.33	940.20

**North Karanpura STPS (1980MW):**

184. North Karanpura Thermal Power Station is an under-construction thermal power plant of NTPC with a combined capacity of 1980 MW (3x660 MW). MoP, GoI allocated 396 MW of power from North Karanpura STPS. **(ED-10)**.
185. The plant achieved financial closure in Jan-2014. The original COD of Unit-1, 2 and 3 was Jun-2018, Dec-2018 and Jun-2019 respectively. As per the revised schedule provided in CEA Thermal Broad Status Report dated October 2021, Unit-1, 2 and 3 are expected to be commissioned in Mar-2022, Mar-2023 and Sep-2023 respectively. Due to delays in execution of the project, there is uncertainty with regards to the commencement of supply from this plant.

186. GRIDCO had executed PPA with NTPC on 11.08.2006 for purchase of power from North Karanpura STPS situated in Jharkhand. MoP/GoI vide letter Dtd 07.09.2015 allocated 396 MW of power from North Karanpura STPS.

**Fixed Cost of Central Thermal Stations:**

187. It is submitted that the Capacity Charge (Fixed Cost) of respective NTPC Stations are being claimed as per the relevant Tariff Order / Regulations approved by the CERC as applicable from time to time.

188. Further, the tariff for Barh-I has been considered on the basis of Petition filed by NTPC with Hon’ble CERC.

189. As stated earlier, North Karanpura has not been considered as there is uncertainty on its operationalization date and also the PPA is under approval with OERC. Once there is clarity on the COD and once the PPA is approved, the petitioner shall approach the Hon’ble Commission to include the allotted capacity and its associated power purchase cost in the ARR.

190. The apportionment of Capacity Charge has been made as per the share of GRIDCO. Considering the Central Transmission Loss (CTL), the Projected Fixed Cost applicable to GRIDCO for its share of energy drawal from Barh-I works out to Rs. 261.62 Crore (which includes one existing unit of Barh-I). The calculation is shown in table below:

Comment [SS(2)]: To be confirmed

**Table 51 : Projected total cost for Barh-I for FY 2023-24**

Name of the Generating Station	Energy Projection for FY 2023-24 (MU)	PAFM (%)	GRIDCO's Share of Fixed cost (as per PAFM) of the Station (Rs. Crore)	GRIDCO's share of Year End Charges (Rs. Crore)	Variable Charges (P/U)	Variable cost for the projected quantum (Rs. Crore)	GRIDCO's Total Projected Cost (Rs. Crore)
			1	2		3	(1+2+3)
Barh STPS-I (2*660M)	972.58	85.00	261.62	0.57	255.00	248.01	510.21

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**Energy Charge Rate (ECR) of Central Thermal (NTPC-ER) Stations:**

191. As per the new CERC Tariff Regulations, for the tariff block period 2019-24, the Energy Charges of CGS Stations shall now include Charges towards both Primary as well as Secondary Fuel Oil (SFO) & shall be payable by every Beneficiary for the total energy scheduled to be supplied to each of such Beneficiaries during the Calendar month on ex-Power Plant basis.
192. Accordingly, NTPC is claiming the Monthly Energy Charges every month as per the ECR worked out from the landed price and GCV of Coal & Oil for the respective month, considering the operational parameters laid down in CERC Tariff Regulation, 2019. At present, all the Energy Charges Rates have been claimed by NTPC as per Tariff Regulation 2019-24. Keeping in view the present trend of Energy Charges billed by NTPC, GRIDCO has projected the Variable Cost as per the actual Energy Charge Rate (ECR) claimed by NTPC for September 2022:

**Table 52: Proposed Variable Charges of NTPC Stations**

Sl. No.	Name of the Generating Station	ECR (Sep-22) (Rs./kWh) before CTU loss	Variable Cost (Rs. Cr.)
1	Farakka STPS-I & II	4.39	22.57
2	Farakka STPS-III	4.31	143.44
3	Kahalgaoon STPS-I	4.02	10.38
4	Kahalgaoon STPS-II	3.81	80.82
5	Talcher STPS-I	2.25	460.34
6	Talcher STPS-II	2.24	359.30
7	Darlipalli STPS-I	1.04	592.10
8	Barh-I	2.55 (Prov.)	248.01

**Year-end Adjustment Charges of Central Sector Generating Stations:**

193. The Year-end Adjustment (YEA) Charges are required to be projected without considering the FPA (Fuel Price Adjustment) which is now a part of the ECR (Energy Charge Rate). In fact, the cost of Secondary Fuel Oil (SFO) is already included in the

ECR. The total Year-end Adjustment Charges (YEA) for FY 2023-24 for existing Central Generating Stations are the actual Year End Charges for 2021-22. The yearend Charges for FSTPS-I & II and KHTPS-I are prorated for FY 2023-24 taking the actual value for FY 2021-22. Year End Charges include RLDC Charges, ED on APC, and Ash Transportation Cost.

194. NTPC filed before Hon'ble CERC for recovery of Additional Expenditure incurred on account of Ash Transportation Charges in view of MOEF&CC Notification dated 03.11.2009 & Notification dated 25.01.2016 on a recurring basis. CERC vide order dtd 28.10.2022 in exercise of the regulatory power under section 79(1)(a) of the Act, hold that the additional expenditure incurred by the Petitioner towards fly ash transportation cost for the period 2019-24, is admissible as additional O&M expenses, as the same is in terms of the MOEF&CC notifications dated 25.1.2016 and 31.12.2021. In this regard, CERC order dtd 28.10.2022 is attached as **ED-** for reference. Accordingly, ash transportation cost has been estimated considering cost incurred for FY 2021-22. The details of year end charges payable for FY 2023-24 are given in the table below:

**Table 53: Projected Year End Charges for FY 2023-24**

Sl. No.	Name of the Generating Station	RLDC Charges (Rs. Cr.)	ED (Rs. Cr.)	Ash Transportation Charge (Rs. Cr.)	Total (Rs. Cr.)
1	Farakka STPS-I & II	0.02		9.44	9.46
2	Farakka STPS-III	0.06		11.11	11.17
3	Kahalgaon STPS-I	0.00		4.33	4.33
4	Kahalgaon STPS-II	0.02		2.74	2.76
5	Talcher STPS-I	0.24	8.52	20.27	29.03
6	Talcher STPS-II	0.13	5.87	13.71	19.71
7	Darlipalli STPS-I	0.70	20.88	47.54	69.11
8	Barh-I	0.03		0.54	0.57

195. Summary of proposed power procurement cost from Central Generating Stations are summarized below.

**Table 54: Projected Power Procurement Cost from CGS for FY 2023-24**

Sl. No.	Name of the Generating Station	Fixed Charge	Variable Charge	Year End Charge	Total
		Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.
1	Farakka STPS-I & II	5.77	22.57	9.46	37.81
2	Farakka STPS-III	98.61	143.44	11.17	253.22
3	Kahalgaon STPS-I	3.26	10.38	4.33	17.96
4	Kahalgaon STPS-II	26.53	80.82	2.76	110.10
5	Talcher STPS-I	213.08	460.34	29.03	702.45
6	Talcher STPS-II	130.36	359.30	19.71	509.37
7	Darlipalli STPS-I	1,314.32	592.10	69.11	1,975.53
8	Barh-I	261.62	248.01	0.57	510.21
	<b>Total</b>	<b>2,053.55</b>	<b>1916.95</b>	<b>146.15</b>	<b>4116.65</b>

196. The Petitioner requests the Hon'ble Commission to approve the fixed cost and variable cost along with yearend charges as submitted by the Petitioner. Based on the justification given in the earlier section of the petition, the fixed charges for all the tied up PPAs is requested to be allowed by the Hon'ble Commission.

197. The Petitioner submits that irrespective of the drawl by GRIDCO from the Central Generating Stations, it is mandatory to pay the Fixed Charge of a Central Generating Station as per the allocated share according to the Plant Availability Factor. In case of Normative Plant Availability of 85%, GRIDCO is bound to pay the full Fixed Cost as per its Share Allocation from the respective Station. Hon'ble Commission in its previous Orders had explicitly approved fixed cost from these stations in spite of nil or some power procurement from these stations. Quote from previous tariff order for FY 2019-20 is below:

*"Para- 252: No energy is considered for State drawal. Full fixed cost is allowed"*

198. The Petitioner thus request Hon'ble Commission to approve fixed cost of all NTPC ER Stations for FY 2023-24 in line with its previous years' orders before FY 2020-21.

#### 6.6.7 Independent Power Producers (IPPs)

199. The Petitioner submits that it is entitled to avail power from four Independent Power Plants (IPPs) in the state namely M/s. Vedanta Ltd, M/s. GKEL, M/s. NBVL and M/s. JITPL. Summary of PPAs with IPPs is presented below:

**Table 55 : Summary of PPA with IPPs**

Sl. No.	Name of IPP	Location of the project	Installed capacity (MW)	Odisha share Ex-Bus (MW)	Odisha share Ex-Bus Normative (MU)	Date of Commercial Operation
1.	M/s. Vedanta Ltd	Burkhamunda, Jharsuguda	Unit #2: 600 MW  Unit #1,3&4: 3x600 MW converted to CGP w.e.f. 1 <sup>st</sup> April 2015	25% (@ full cost) + 7%/5% (@ variable cost) of Total Energy Sent Out from the plant or injection from Unit#2 whichever is higher. (*)	5010	# 1: 30-03-2011 # 2: 10-11-2010 # 3: 19-08-2011 # 4: 26-04-2012
2.	M/s. GMR Kamalanga Energy Ltd., Bengaluru	Kamalanga, Dhenkanal	3x350 (1,050)	246 MW (from STU connected Unit#3(350 MW)	1832	# 1: 30.04.2013 # 2: 12.11.2013 # 3: 25.03.2014
3.	M/s. Jindal Thermal Power Ltd	Derang, Angul	2X600	144(**)	1008	# 1: 19-04-2015 # 2: 12-02-2015
4.	M/s. NBVL	Kharagprasad, Dhenkanal	1X60	6.55 (***)	44.14	30.11.2015
	<b>TOTAL</b>		<b>2910</b>		<b>7923.14</b>	

**Note:**

\* From Vedanta Ltd, State entitlement is as per Para 35 of OERC order 27-01-2016 in Case No.21 of 2015 i.e. 25% +7%/5% of total energy sent out from the power station or total ex-bus generation from Unit-II whichever is higher

\*\* State Entitlement from JITPL is 12% based on non-allocation of coal blocks within the State. As JITPL is having linkage coal supply against Unit #1(600MW) only for 72MW of generation as per FSA, thus 12% from #1 have been shown.

\*\*\* State Entitlement from NBVL is 12% based on non-allocation of coal blocks within the State. Availability in MU has been worked out considering normative PLF% and Auxiliary Energy Consumption.

200. It is pertinent to mention that actual supply of power from IPPs is varying from the State's entitlement. Due to this reason, there have been substantial difference in units

supplied from IPPs approved by the Hon'ble Commission and the actual supply as given below:

**Table 56 : Actual vs Approved Power Purchase from IPPs (MU)**

IPPs	FY 2018-19		FY 2019-20		FY 2020-21		FY 2021-22		Actual
	OERC	ACTUAL	OERC	ACTUAL	OERC	ACTUAL	OERC	ACTUAL	(Avg.)
M/s. Vedanta Ltd.	5039.45	978.11	5,039.45	747.84	3,053.00	2,806.01	3003.48	2,101.19	1658.29
M/s GMR KEL	1842.19	1702.44	2167.28	1814.75	2167.28	1769.88	1844.00	1960.32	1811.85
M/s JITPL	1007.89	261.14	1010.57	11.95	1010.57	0	0	0	68.27
M/s. NBVL	-	-	-	-	-	-	-	3.83	-
M/s. Ind Barath Energy (Utkal) Ltd.	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>7889.53</b>	<b>2865.67</b>	<b>8217.30</b>	<b>2574.54</b>	<b>6230.85</b>	<b>4575.89</b>	<b>4847.48</b>	<b>4,102.52</b>	<b>3528.70</b>

201. From above Table, it is evident that, there is a significant gap between the Hon'ble Commission's approval/projection of power and the actual quantum of power exported in favour of GRIDCO, thus adversely affecting the Petitioner.
202. Such gap in availability vis-à-vis actual quantum of power supplied by the IPPs impacts the Bulk Supply Price (BSP) and during real time operation, the Petitioner is dependent on high-cost power sources to meet/cater State demand. The Petitioner would therefore request Hon'ble Commission to approve energy availability from IPPs based on realistic levels and direct the IPPs to comply/adhere to the subsisting contracts to supply contracted capacity of power to the Petitioner without fail.
203. In this context, the Petitioner submits that it had requested the IPPs to submit their generation plan and tentative tariff proposal for FY 2023-24 vide letters dated 12.09.2022. In response, except M/s. JITPL, other three IPPs have furnished their tentative generation plan to GRIDCO. Copies of the said Generation Plans of GKEL dated 03.11.2022, and M/s Naba Bharat Ventures Limited dated 27.09.2022 and Vedanta Ltd. dated 15.11.2022 are attached herewith.

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

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204. Hon'ble Commission vide Order dated 05.10.2021 in Case No. 34 of 2018 changed the status of State dedicated IPP Unit #2(600 MW) of M/s. Vedanta Ltd reversing their earlier order dated 27.01.2016 in Case No.21 of 2015.

205. GRIDCO filed review petition before Hon'ble OERC registered as Case No. 129 of 2021 for review of Order dated 05.10.2021 in Case No.34 of 2018. Hon'ble Commission vide Order dated 28.10.2022 has been pleased to allow the review petition of GRIDCO directing Case No. 34 of 2018 to be reheard. As a result of this order the rights and liabilities of both the parties stand relegated to the situation that existed prior to the date of order i.e. 05.10.2021. Relevant extract of the said Order is furnished below:

*“20 In view of the above, the application for review is allowed directing the Case No.34 of 2018 to be re-heard. Both the sides are hereby given opportunity of re-hearing with reference to their pleadings/written submissions already filed in the said case. No new pleading or written submissions shall be filed by either side without leave of the Commission. In view of this order, the rights and liabilities of both the sides stand relegated to the stage that prevailed prior to the order dated 05.10.2021 passed in Case No.34 of 2018. Both the sides be noticed fixing Case No.34 of 2018 to 20.12.2022 for re-hearing.”*

206. In view of the above, the entitlement of State's share of power as per OERC order dated 27.01.2016 in Case No. 21 of 2015 is 25%+7%/5% of total energy sent out from the power station or total ex-bus generation from Unit-II whichever is higher.

207. Since commercial operation of the Unit#2(600MW) in FY:2010-11, Hon'ble Commission has approved the quantum towards State's share of entitlement in GRIDCO's ARR orders for the respective financial years as per the existing PPA and order dated 27.01.2016 in Case No. 21 of 2015. The Table below summarizes the quantum approved by Hon'ble Commission vis-a-vis the actual power supply made by M/s Vedanta Ltd to GRIDCO from the State dedicated Unit#2 (600MW):



**Table 57 : Quantum approved by Hon'ble Commission vis-a-vis the actual power supply made by M/s Vedanta Ltd.**

FY	Approval of State Demand by Commission (MU)	Quantum of Power available from Vedanta-IPP as approved by OERC (MU)	% Share of Vedanta Power availability	Actual Quantum of power supplied to GRIDCO (MU)	% Share of Vedanta Power actually supplied to GRIDCO against approved quantum	Approved power purchase rate by Commission (P/U)
21-22	28791.96	3003.48	10.43	2101.19	69.96	251.99
20-21	29018.76	3053.00	10.52	2806.01	91.91	251.29
19-20	28731.03	5039.45	17.54	747.84	14.84	243.26
18-19	26803.81	5039.45	18.80	978.11	19.41	260.96
17-18	26051.63	5039.45	19.34	1061.52	21.06	237.78
16-17	25492.87	5039.45	19.77	3216.84	63.83	223.10
15-16	25776.23	4199.54	16.29	3414.16	81.30	212.09
14-15	25495.71	4199.54	16.47	3093.07	73.65	207.32
13-14	24058.42	3132.90	13.02	2849.67	90.96	275.00
12-13	24096.98	2612.57	10.84	3027.27	115.87	275.00
11-12	23489.18	3357.12	14.29	1964.55	58.52	275.00
10-11	21003.75	646.23	3.08	468.50	72.50	243.45
<b>AVG.</b>	<b>25734.19</b>	<b>3696.85</b>	<b>14.37</b>	<b>2144.06</b>	<b>58.00</b>	<b>246.35</b>

208. From the above Table, it is evident that average quantum of power availability from the IPP Unit of Vedanta was about 14% of total power demand of the State as approved by the Commission. However, actual supply of power by Vedanta-IPP to GRIDCO in the respective financial years was only 58% of availability of power from IPP Unit as approved by Hon'ble Commission. It is humbly mentioned here that, in earlier years, the Hon'ble Commission had approved availability of full normative entitlement/State share of power from Vedanta's IPP Unit till date which has resulted into lower BSP because of lower cost of procurement from the said IPP Unit which is in operation since last 12 years. The cost of power is low on account of recovery of capital cost through Annual Fixed Charges comprising of depreciation, interest on loan, Return on Equity etc and Linkage Coal available under long term Fuel Supply Agreement with MCL based on long term PPA with GRIDCO (25 years

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validity). Hon'ble Commission has time and again directed GRIDCO in its ARR orders to avail full entitlement of power from the said IPP. Accordingly, GRIDCO always endeavours to avail the full entitlement of power from the State dedicated IPP Unit of Vedanta since its commercial operation in 2010.

209. Vedanta vide letter dated 15.11.2022 has intimated that on the basis of allocation of linkage coal under FSA and considering the coal grade (~3000~3400 kCal/kg) supplied by MCL it shall be able to supply net power in the range of 300~340 MW in FY 2023-24.
210. The total supply to be availed from Vedanta has been estimated considering 320 MW at 85% PLF for FY 2023-24 which works out to be 2803.20MU from Unit #2 (600 MW) i.e., IPP Unit. The entitlement of State's share of power as per OERC Order dated 27.01.2016 in Case No. 21 of 2015 for the State at normative generation (i.e., 85% PLF and 6.55% Auxiliary Energy Consumption) works out to be 5010 MU of power.
211. Therefore, there shall be shortfall to the tune of 2206.80 MU (approx.) of power from IPP of Vedanta during FY 2023-24. In order to avoid over projection of power availability, the Petitioner has taken generation projection as explained above. Further, Hon'ble Commission is requested to direct Vedanta to supply full entitlement of power to the State as per the terms of existing PPA and the subsequent Order in Case No. 21 of 2015 dated 27.01.2016. **It is humbly submitted that Vedanta may also be directed to avail good quality of linkage coal under the FSA for Unit #2(600 MW) . It is to mention here that, Vedanta is getting credit/debit notes under the FSA based on the grade of GCV of linkage coal . Therefore, Vedanta may not be allowed to take plea of lower GCV of linkage coal to supply power lower than the entitlement under the subsisting PPA and Hon'ble Commission's order.**
212. In case of non-supply of power from Vedanta, power will have to be scheduled from the costlier stations as per merit order.

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213. As per the instant application, the average rate of power from M/s Vedanta Ltd. is projected at 286.27 Paise/ kWh, which is well within the merit order for procurement of power to meet the State requirement.
214. Considering the State share of entitlement as approved by Hon'ble Commission as well as subsisting PPA in force, the Petitioner prays before the Commission for approving the projected quantum of 2803.20 MU of power from M/s Vedanta Ltd during the FY 2023-24 for State requirement in order to optimize the power procurement cost so as to have lower BSP for the State consumers.
215. Hon'ble Commission in its Order dated 26.02.2018 and 29.06.2018 disposed of the MYT Petition filed by Vedanta Ltd for the period FY 2010-11 to FY 2013-14 vide Case No. 38 of 2016 and for FY: 2014-19 vide Case No.95 of 2013 respectively. Vedanta has filed MYT application for the period 2019-24 vide Case No. 20 of 2020 and the matter is sub judice before Hon'ble Commission. Hon'ble Commission in the ARR Order of GRIDCO for FY 2022-23 has fixed a provisional average tariff of 279.05 Paise/kWh (i.e., Fixed Charge: 95.67 P/kWh + ECR: 179.52 P/kWh+ ED: 3.86 P/kWh) towards procurement of power by GRIDCO from the said IPP.
216. Hon'ble Commission vide Gazette Notification dated 26.08.2020 has notified OERC (Terms and Conditions) of Determination of Tariff Regulations, 2020. As per Regulation 3(ff) GCV of Coal has to be considered on "As Received" basis for the purpose of determination of Energy Charge Rate (ECR). However, considering the "As Billed" GCV data provided by Vedanta in Form -15 format along with energy bills for the month of April, 2022 to September, 2022 the "As Received" GCV has been derived and based on this GCV the average ECR works out to be 186.59 Paise /Unit as shown in table below. Therefore, GRIDCO proposes ECR of 186.59 Paise/Unit for procurement of power from Vedanta during FY 2023-24.

**Table 58: Energy Charge Rate (ECR) of Vedanta IPP from April-22 to Sept-22**

Month	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
LPPF (Rs. /kg)	2.402	2.313	2.301	2.315	2.241	2.264
CVPF (kCal /kg)	3363	3328	3329	3335	3265	3278
GHR (kCal /kwh)	2375	2375	2375	2375	2375	2375
SFC (ml/kWh)	1	1	1	1	1	1
CVSF (kCal/ml)	9.85	9.85	9.85	9.85	9.85	9.85
LPSFi (Rs. /Lit.)	0.093665	0.101609	0.103987	0.109577	0.092092	0.093490
AUX (%)	6.55	6.55	6.55	6.55	6.55	6.55
ECR (P/U)	190.792	186.775	186.065	187.411	183.570	184.806
<b>Average (P/U)</b>						<b>186.59</b>

217. The Petitioner submits that it has estimated Year End charges for FY 2023-24 by considering Electricity Duty @55 Paise/kWh on total projected drawl of 2803.20 MU amounting to Rs.10.81 Crores (approx.) and SOC and MOC charges amounting to Rs. 0.51 Crores. Thus, the total projected Year End Charges works out to be Rs. 11.32 Crores payable to Vedanta for FY 2023-24.

**Table 59: Power purchase cost of Vedanta IPP for FY 2023-24**

Name of the Power Stations	Energy (MU)	Fixed Charges (Rs. Cr.)	Energy Charges (Rs. Cr.)	Year End Charges (Rs Cr.)	Total Projected Cost (Rs. Cr.)	Unit Rate (including reimbursement charges) (P/U)
Vedanta	2803.20	268.18	522.98	11.32	802.48	286.27

***GMR Kamalanga Energy Ltd.***

218. GRIDCO vide letter dated 12.09.2022, requested GKEL to furnish their Generation Plan for FY 2023-24. GKEL vide its letter dated 03.11.2022 submitted its generation plan and tariff to be considered for FY 2023-24.
219. In the generation plan, GKEL has considered generation of 1907 MU towards State entitlement which shows that PLF is 88%. But fixed charges have been considered at normative availability of 85%. Above normative availability of 85%, the incentive claimed by GKEL will be duly reproduced in the truing up for FY 2023-24.
220. The Petitioner submits that CERC vide its order dated 29.06.2018 in Petition No.61/GT/2016 had passed the final Order for the control period 2014-19 in respect

of procurement of contracted capacity of 262.5MW of power by GRIDCO from GKEL. It is to mention here that, GKEL has filed MYT application for determination of tariff for the period 2019-24 vide Petition No. 407/GT/2020 and Petition No. 300/MP/2018 for installation of emission control system (i.e., FGD). Both the petitions are sub judice before Hon'ble CERC. The Annual Fixed Charges (AFC) fixed by CERC in Petition No. 61/GT/2016 in respect of GKEL for the control period 2014-19 in the said order is produced below and the Petitioner has considered the Annual Fixed Charges (AFC) of FY:2018-19 as AFC for FY 2023-24.

**Table 60 : Fixed Charge for GMR for FY 2023-24 (Rs Cr.)**

Item	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	1,228.89	1,255.99	1,272.95	1,280.79	1,258.96
GRIDCO's Share of AFC (25%)	307.22	314.00	318.24	320.20	314.74

221. It is submitted that, as per the Order dated 20.12.2019 of Hon'ble APTEL in Appeal No. 135/2018 & 54/2018, the firm and tapering linkage assured/supplied to the petitioner has to be apportioned on pro rata basis among all the beneficiaries of GKEL. The said Order of APTEL has been challenged by GRIDCO before Hon'ble Supreme Court of India on dated 13.10.2020 vide Civil Appeal No 3429 of 2020. Therefore, in order to comply with the Order of APTEL the petitioner has provisionally accepted the Order of APTEL under protest. Based on the said Order of APTEL the Petitioner is now paying the Energy Charge to GKEL. Accordingly, the average of actual monthly Energy Charge Rate (ECR) for the period April-22 to Sept-22 based on use of Linkage, SHAKTI and other sources coal by GKEL, has been worked out to be **198.31 Paise/kWh** and the same has been considered as Energy Charge Rate for FY 2023-24.

**Table 61 : Power purchase cost of GMR IPP for FY 2023-24**

Name of the Power Station	Energy (MU)	Annual Fixed charges (Rs. Cr)	Energy Charges Rs. Cr.)	Total Projected Cost (Rs. Cr.)	Total Unit Rate (P/U)
GMR	1906.90	314.74	378.17	692.91	363.37

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***M/s. NBVL***

222. GRIDCO vide letter dated 12.09.2022, requested NBVL to furnish their Generation Plan for FY 2023-24. NBVL vide its letter dated 27.09.2022 submitted its generation plan and tariff to be considered for FY 2023-24.
223. In the generation plan submitted, M/s. NBVL has considered generation of 39.94 MU towards State entitlement. The Petitioner plans to procure the entire entitled power available from M/s. NBVL.
224. Considering the tariff at which power procured from M/s. NBVL in the first six months of FY 2022-23, a single part tariff of Rs. 1.995 per unit has been considered for projecting the power purchase cost for FY 2023-24. The power purchase cost has been calculated to be Rs. 7.97 Crores.

**Table 62 : Power purchase cost of NBVL IPP for FY 2023-24**

Name of the Power Stations	Energy (MU)	AEC at 11% (MU)	Net Generation (MU)	Odisha Share (12%) (MU)	Total Cost (Rs. Cr.)
NBVL	373.96	41.13	332.83	39.94	7.97

***Jindal India Thermal Power Ltd.***

225. It is submitted that JITPL has not supplied power to GRIDCO from May-2019 to March 2022 under the shelter of interim Order dated 16.05.2019 of Hon'ble High Court of Odisha. JITPL has started supplying power to GRIDCO after interim Order dated 29.04.2022 of Hon'ble High Court of Odisha. The Hon'ble High Court of Odisha has fixed a provisional flat tariff of JITPL at Rs. 3.36/ kWh, on the further condition of payment of 50% of the transmission cost of the demand raised by the CTU subject to the cap of Rs.5(Five) Crore payable by GRIDCO.
226. GRIDCO vide letter dated 12.09.2022 requested JITPL to furnish their Generation Plan for FY 2023-24. In absence of any response by JITPL, the average supply for three months (July 2022 to September 2022) of FY2022-23 has been considered and pro-rated to derive the estimated quantum of power i.e., 512.10 MU to be supplied by

JITPL. Three months during which 60 MW power was supplied consistently was averaged out to estimate the monthly average supply from JITPL. There shall be a shortfall of 495.90 MU considering the State entitled to receive 1008 MU from JITPL.

227. Considering the tariff provided by the Hon'ble High Court of Odisha in the interim Order dated 29.04.2022, the power purchase cost for 512.10 MU power from JITPL has been calculated to be Rs. 172.07 Crores. However, this projection of availing power from JITPL is subject to continuation/extension of interim order dated 29.04.2022 of Hon'ble Orissa High Court in WPC No. 18150 of 2018, which has been extended upto 25.01.2023.

228. The summary of power generation projections from IPPs is as follows:

**Table 63 : Power availability from IPPs for FY 2023-24**

IPP	Energy Availability (MU)	Total Cost (Rs. Cr.)
Vedanta Limited	2803.20	802.48
GMR Kamalanga Energy Ltd.	1906.90	692.91
JITPL	512.10	172.07
NBVL	39.94	7.97
<b>Total IPP</b>	<b>5262.14</b>	<b>1675.43</b>

229. It is humbly submitted that the actual drawl of power from the IPPs during the period Apr-Sept, 2022 are as follows:

**Table 64 : Actual Power Procurement from IPPs during Apr-Sept 2022 (MU)**

Month	Vedanta	GKEL	JITPL	NBVNL
Apr-22	201.82	169.31	3.02	4.37
May-22	334.02	176.62	55.35	4.22
Jun-22	301.39	163.89	34.49	4.32
Jul-22	220.86	173.66	43.10	3.89
Aug-22	202.05	106.82	43.11	0.89
Sep-22	211.53	159.95	41.82	1.93
<b>Total</b>	<b>1471.67</b>	<b>950.24</b>	<b>220.88</b>	<b>19.62</b>

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230. It may be noted that, the actual power supplied is less than the state entitlement. It is submitted before Hon'ble OERC to issue appropriate directions to the IPPs for supply of the full State's Share of power to GRIDCO during the FY 2023-24.

#### 6.6.8 Power Banking

231. Apart from availability of energy from various entitled sources, GRIDCO also sources power through need-based power banking arrangement with different Generators / Utilities for mutual benefit. Under the arrangement, the surplus energy of a Utility is banked with the Utility having power deficit. The arrangement is a cashless transaction which helps a lot to a cash-deficit Utility like GRIDCO. The process benefits the Deficit Utility to meet its power requirement through Power Banking Arrangement without any cash outgo and when the Utility becomes surplus in power, it returns the power along with some additional quantum towards premium as agreed mutually.

232. It is submitted that with coming up of new stations, there may be requirement to procure for some peak months like April, May, June etc. under Power Banking Arrangement during FY 2023-24.

233. However, the above assumption does not preclude procurement or supply of Power through Power Banking under exigency / force majeure conditions during outage of the approved stations or to meet peak demand.

#### 6.6.9 Inter State Transmission System (ISTS) Charges

234. Inter-State Transmission Charges Bills raised by CTUIL / PGCIL are being determined by applying the norms and principles as laid down by the Hon'ble CERC from time to time. Draft CERC (Sharing of Inter-State Charges and Losses) (First Amendment) Regulations, 2022 has been notified by CERC on 11.06.2022. The Sharing Regulations, 2020 published vide notification dated: 04.05.2020 was made effective from 01.11.2020. According to the aforesaid Sharing Regulations 2020, the Inter State Transmission System charges are divided into four components :



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**A. National Component (NC)**

**A1: NC-RE**

National Component-Renewable Energy shall comprise of the YTC (Yearly Transmission Charges) for transmission systems developed for renewable energy projects as identified by the Central Transmission Utility.

**A2: NC-HVDC**

National Component-HVDC shall comprise of the following:

- (a) 100% of YTC for “back-to-back HVDC” transmission system;
- (b) 100% of Yearly Transmission Charges for +/- 800KV BNC-Agra HVDC Transmissin System (Biswanath-Chariali/ Alipurdwar to Agra);
- (c) YTC of Mundra–Mohindergarh 2500 MW HVDC transmission system corresponding to 1005 MW capacity; and
- (d) 30% of YTC for all other HVDC transmission systems except above.

**B. Regional Component (RC)**

**B1: RC-HVDC**

Regional Component of HVDC System comprising of 70% of YTC of HVDC transmission systems planned to supply power to the concerned region, except covered under A2. Since no HVDC system has been planned for ER, the RC-HVDC component is zero for all the constituents of ER including Odisha.

**B2: RC-AC**

RC-AC comprises of YTC of static compensators (STATCOMs), static VAR compensators (SVCs), bus reactors, spare transformers, spare reactors etc. as identified by CTU (Central Transmission Utility) for providing stability, reliability and resilience in the grid.

**C. Transformer Component (TC)**

Transformer Component for a State shall comprise of YTC for inter-connecting transformers (ICTs) planned for drawal of power by the concerned State.

**D. AC system component (ACC)**

**D1: AC-UBC**

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All India Base Case is prepared by the Implementing Agency (IA) corresponding to the peak block. Percentage usage of each transmission line shall be computed by dividing the power flow on each transmission line by its SIL (Surge Impedance Loading). Average cost of each conductor configuration per circuit kilometer is determined as per the methodology specified in the Regulations. Using Average cost and percentage usage, AC-UBC component is determined. Transmission charges at each drawal node and each injection node is calculated as per Hybrid Methodology (AP-MP), using WEB-NET-USE software developed by IIT Mumbai.

**D2: AC-BC**

The YTC under AC-BC shall be the balance YTC for AC System Component after apportioning the charges for AC-UBC. Transmission charges under AC-BC shall be shared by all drawee DICs and injecting DICs with untied LTA in proportion to their quantum of Long Term Access plus Medium Term Open Access and untied LTA respectively.

235. All the components and sub-components of the ISTS Charges for the Billing Months April 2022 to November 2022 are shown in the technical format TRT-12. The format has been modified to accommodate the components and sub-components as prescribed in the Sharing Regulations, 2020. The total ISTS Charges include Bill #1, Bill #2, Bill #3 raised by CTUIL and Non-PoC Bills raised by PGCIL. The amount of ISTS Charges for the Billing Months April 2022 to November 2022 is Rs. 466.94 Crore, as shown in the TRT-12 format.
236. As per the CERC (Connectivity and General Network Access to Inter-State Transmission System) Regulations, 2022, notified by CERC on 07.06.2022, the Deemed GNA of Odisha is 2157 MW. But as calculated by GRIDCO, it includes 295 MW of STOA drawal by embedded entities other than GRIDCO. Presently the LTA of GRIDCO is 1764.77 MW as on November 2022. GRIDCO has intimated the fact to CTUIL and asked for bifurcation of Deemed GNA. Excluding STOA drawal the GNA of GRIDCO shall be 1863 MW. Considering Unit #1 of Barh (LTA=130.62

MW), the GNA of Odisha for F.Y. 2023-24 can be estimated as 1993.62 MW. Based on this estimated GNA, the ISTS Charges of Odisha for ARR calculation of Odisha for F.Y. 2023-24 is estimated as 775 Crore. Since ISTS Charges more or less remains same, no escalation is taken into account. The energy drawl by GRIDCO from Central Sector Generators has been calculated on estimated GNA basis and it is estimated as 17,464 MU.

237. As per Regulation 10 of Sharing Regulations 2020, the Transmission Loss for ISTS shall be calculated on All India average basis for each week. The Average Loss computed to be 3.33% considering for the first six months FY 2022-23. Accordingly, the per unit ISTS Charge before Loss and after Loss comes out to be 44.36 P/U and 45.89 P/U respectively. As the Per Unit ISTS charges depend upon the quantum of Central Sector drawal, if the scheduling of power will be less, the average per unit ISTS charges will increase. The Proposed estimation of ISTS charge for FY 2023-24 has been calculated below:

**Table 65 : Transmission charges for FY 2023-24 (Rs Cr.)**

Particulars	Amount
Net amount payable by GRIDCO towards Transmission Charges (Rs. Cr)	775
Energy Drawal by GRIDCO (MU)	17,464
ISTS Charge (P/U)	<b>44.36</b>
Average All India Central Sector Transmission Loss (%)	<b>3.33%</b>
ISTS Charge including loss (P/U)	<b>45.89</b>

238. Since the calculations are made on all India basis & with limited data available, it is extremely difficult to project the exact amount of ISTS Charges / exact quantity of GNA under the Draft CERC (Sharing of Inter-State Transmission Charges and Losses) (First Amendment) Regulations, 2022 which has been notified by CERC on 11.06.2022. Therefore, certain assumptions are taken to arrive at the projections for FY 2023-24 which are mentioned at TRT- 12.

#### 6.6.10 POSOCO Fees and Charges

239. The Petitioner submits 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 following users as indicated below:

- a. Distribution Licensees & Buyers
- b. Generating Stations & Sellers
- c. Transmission Licensees

240. The Petitioner has forecasted POSOCO charges for FY 2023-24 by prorating actual expenses for Apr-Oct 2022 (shown in the table 2). Thus, the Petitioner proposes Rs 2.81 Cr. as expenses for POSOCO charges for FY 2023-24.

**Table 66 : ERLDC Fees and Charges of POSOCO for FY 2022-23**

Sl.No.	Month	RLDC Charges (in Rs.)
1	Apr-22	22,27,469
2	May-22	23,21,203
3	Jun-22	23,10,518
4	Jul-22	23,10,506
5	Aug-22	22,18,674
6	Sep-22	27,64,865
7	Oct-22	22,18,674
8	Nov-22	21,98,069
	<b>Total</b>	<b>Rs. 1,85,69,978</b>

**Table 67 : Projected ERLDC Fees and Charges of POSOCO for FY 2023-24**

Particulars	Amount
Net amount payable by GRIDCO towards POSOCO Charges (Cr.)	2.81
Energy drawl by GRIDCO before Central Sector Loss(MU)	17,464
ERLDC Fees and Charges (P/U)	0.16

#### 6.6.11 Additional Power Purchase Cost

241. Details of OPGC Year End Charges for FY 2022-23 up to September 2022 has been provided below:

**Table 68 : Details of Year End charges for OPGC Stage-I for H1 FY 2022-23**

Year End Charges for FY 2022-23(Apr-Sep'22) for OPGC Stage-I (2 X210MW)			
S. No.	Item	Amount Claimed by OPGC (Rs.)	Amount Paid by GRIDCO (Rs.)
1	Electricity Duty	5,92,83,316	5,92,83,317
2	SOC & MOC charges	17,82,606	17,82,606
3	Water Charges	4,91,82,234	4,91,82,234
4	ERPC charges for 2022-23	16,00,000	16,00,000
5	Annual Inspection Fees for 2021-22	16,86,230	16,86,230
6	OERC ARR Tariff Filing Fees for 2022-23	21,00,000	21,00,000
	<b>Total</b>	<b>11,56,34,386</b>	<b>11,56,34,387</b>

**Table 69 : Additional cost claimed for OPGC Stage-I**

Additional cost claimed by OPGC for Stage-I			
Item	Amount Claimed by OPGC (Rs. In Cr.)	Amount Paid (Rs. In Cr.)	Remarks
Claim of Secondary Fuel Oil Cost by OPGC for Stage-I	188.28	76.11	Adhoc payment has been made by GRIDCO to OPGC on 29.12.2021 towards claim of Secondary Fuel Oil cost for OPGC Stage-I for the period FY 2016-17 to FY 2020-21 through Fuel price Adjustment bills. Without prejudice to stand of GRIDCO in Appeal No.189 of 2020, it is submitted that the balance FPA amount towards coal cost have not been paid by GRIDCO due to non-submission of credit/debit notes, Third party GCV Sampling Reports and GCV of coal "as Received" basis.
Annual Fuel Price Adjustment for FY	47.55	0.00	Bill for an amount of Rs. 47,54,80,887/- raised by OPGC

Additional cost claimed by OPGC for Stage-I			
Item	Amount Claimed by OPGC (Rs. In Cr.)	Amount Paid (Rs. In Cr.)	Remarks
2021-22			vide letter dated 17.05.2022 but not paid by GRIDCO due to non-receipt of credit/debit notes, Third party GCV Sampling Reports and GCV of coal as received basis
Half Yearly Fuel Price Adjustment for FY 2022-23	18.56		Bill for an amount of Rs. 18,56,06,532/- raised by OPGC vide letter dated 17.10.2022 but not paid by GRIDCO due to non-receipt of credit/debit notes, Third party GCV Sampling Reports and GCV of coal as received basis
<b>TOTAL</b>	<b>254.39</b>	<b>76.11</b>	

**Table 70 : Year End Charges for FY 2022-23(Apr-Sep'22) for OPGC Stage-II**

Year End Charges for FY 2022-23(Apr-Sep'22) for OPGC Stage-II (2 X660MW)			
S. No.	Item	Amount Claimed by OPGC (Rs.)	Amount Paid by GRIDCO (Rs.)
1	Electricity Duty	120,405,590	120,291,012
2	DSM Charges	21,044,052	21,044,052
3	SOC & MOC charges	4,201,860	4,201,860
4	Annual Electrical Inspection Charges 2021-22	9,325	9,325
5	Tax & Cess on Land for FY 2021-22	2,607,357	2,607,357
	<b>Total</b>	<b>14,82,68,184</b>	<b>14,81,53,606</b>

242. The Hon'ble Commission is requested to kindly allow the Petitioner the above-mentioned amount of Rs. 11.56 Cr. and Rs. 76.11 Cr. for OPGC Stage-I and Rs. 14.82 Cr. for Stage-II to be recovered through BSP to be approved by the Hon'ble Commission for FY 2023-24.

**Additional Cost with respect to NTPC Stations**

243. An amount of Rs 872.74 Crs has been claimed as additional power purchase cost in the ARR of GRIDCO for FY 2023-24 with respect to NTPC stations. The aforesaid amount has arisen due to following reasons:

- i. **Differential ARR cost for Apr'22 to Sept'22:**In the ARR for FY 2022-23, Hon'ble Commission didn't allow any energy for FSTPS-I & II, FSTPS-III, KHTPS-I & KHTPS-II. However, GRIDCO has drawn 311.08MU from the aforesaid stations. Also, GRIDCO had drawn 4979.81 MU from the approved sources such as TSTPS-I, TSTPS-II, DSTPS-I against the approved drawl of 4120.74 MU for the period Apr'22 to Sept'22. Further, the Commercial operation of Barh-I had occurred on 11<sup>th</sup> Nov'21 (ED). MoP/GoI vide notification dtd 12<sup>th</sup> Mar'22 allocated GRIDCO share of power to Gujarat upto 30<sup>th</sup> June'22 (ED) and thereafter for a period of 5 years to Gujarat i.e up to 30.06.2027 vide Notification Dtd 01.07.2022 (ED). A small quantum of power of 3.54 MU had been scheduled to GRIDCO during April'22 owing to the unallocated share from the station thereafter which the unallocated share has been withdrawn by ERPC on 10.04.2022 (ED). Accordingly, GRIDCO had drawn a total of 4983.35 MU against the approved drawl of 4120.74 MU for the period Apr'22 to Sept'22 by Hon'ble OERC. The aforesaid excess drawl has been made by GRIDCO owing to the exigency situation of the State due to unexpected rise in demand of the State in Post COVIDscenario, due to the outage of the approved source like Darlipali for a long period of time, high market rate in the power exchanges etc. It is observed that Hon'ble OERC had allowed only Fixed cost for FSTPS-I&II, FSTPS-III, KHSTPS-I, KHSTPS-II and did not allow any variable charge as well as other charges in the ARR of FY 2022-23. Accordingly, GRIDCO made actual payment of Rs 1552.12 Crores against approved cost of Rs 1204.01 Crores by Hon'ble OERC for the period from Apr'22 to Sept'22.

Sl. No.	Description	Amount (Rs. Cr.)
1	Actual Cost incurred during Apr'22 to Sep'22	1,528.74
2	Actual Cost incurred for the past period billed during Apr'22 to Sep'22	23.39

3	Total Actual Cost incurred by GRIDCO during Apr'22 to Sep'22	1,552.12
4	Approved Cost as per ARR Order of GRIDCO for Apr'22 to Sep'22	1,204.01
	<b>Differential Amount to be Pass-through</b>	<b>348.11</b>

(Actual cost relevant bills for the period Apr'22 to Sept'22 of all the NTPC stations are enclosed as **ED** for reference).

In view of above, the total amount claimed by GRIDCO for the aforesaid period of Apr'22 to Sept'22 amounting to Rs 348.11 Cr. may be allowed.

- ii. **Payment made by GRIDCO to KBUNL as per one time settlement reached between GRIDCO & KBUNL on 21.05.2022:** A Petition was filed by GRIDCO before Hon'ble OERC bearing case no 27 of 2018 for approval of the PPA executed between GRIDCO and M/s. Kanti Bijlee Utpadan Nigam Ltd. (in short KBUNL). Hon'ble OERC vide Order Dtd 04.10.2021 disapproved the PPA executed between the parties and directed GRIDCO to take steps for de-allocation of State share from M/s. KBUNL in co-ordination with the State Government. (Relevant Portion attached as ED.) During a meeting between Secretary Power, MoP/ GoI, Govt. of Odisha and others held on 01.11.2021, regarding the matter of outstanding dues of KBUNL, MoP/GoI clarified that till the re-allocation made, original Beneficiary is liable to pay fixed charges. It was presented by Govt. of Odisha that, the State is willing to liquidate the outstanding dues and requested NTPC (being the parent company of KBUNL) to extend some waiver of dues, interest/ rebate etc. (Annexure-7). Further, during a meeting between Chief Secretary, Govt. of Odisha and CMD - NTPC, held on 01.12.2021, it was suggested by NTPC that, decision on settlement of disputed amount of KBUNL could be taken up after reallocation of Odisha share to otherwilling beneficiary.(ED). MoP/ GoI vide Notification Dated 28.03.2022 re-allocated the State share of Power from KBUNL to Tamil Nadu for a period of 5 years w.e.f 30.03.2022. (ED). KBUNL has also filed a Petition bearing No. 116/MP/2019 before Hon'ble CERC seeking for a direction to the Beneficiaries towards recovery of Capacity Charges for their allocated capacities. In the above background, an out of court settlement talk was held between KBUNL and GRIDCO and an amount of Rs 295 Crs have been reached as one time settlement amount



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between the parties as per MoM Dtd 22.05.2022 without reopening any further claims/ counter claims by KBUNL/ GRIDCO. (ED).

The year wise fixed cost, variable cost and other cost claimed by KBUNL from FY2016-17 to FY 2022-23 (Apr'22) amounts to Rs 415.43 Crs which includes Principal amount of Rs 309.08 Crs and LPSC of Rs 106.35 Crs. Beside complete waiver of LPSC, KBUNL offered relaxation towards principal amount by Rs 14.08 Crs. As per MoM dated 21.05.2022, first 50% of the settled amount to be paid by GRIDCO by 30th June'22 and the rest 50% amount to be paid by GRIDCO in six equal interest free monthly instalments latest by 30th of every month starting from July'22. However, all the amount including penal interest if any shall be paid latest by 31.03.2023. It is pertinent to mention here that, GRIDCO is making payment as per the MoM 21.05.2022 and by January'2023 all the settled amount shall be paid. In view of such onetime settlement reached between both the parties, an amount of Rs 295 Cr. is requested to be allowed by Hon'ble OERC.

- iii. **Ash Transportation Charges Claimed by NTPC as per CERC Order dated 28.10.2022:** NTPC filed before Hon'ble CERC for recovery of Additional Expenditure incurred on account of Ash Transportation Charges in view of MOEF&CC Notification dated 03.11.2009 & Notification dated 25.01.2016 on a recurring basis. CERC vide order dtd 28.10.2022 in exercise of the regulatory power under section 79(1)(a) of the Act, hold that the additional expenditure incurred by the Petitioner towards fly ash transportation cost for the period 2019-24, is admissible as additional O&M expenses, as the same is in terms of the MOEF&CC notifications dated 25.1.2016 and 31.12.2021. In this regard, CERC order dtd 28.10.2022 is attached as **ED-** for reference. The total fly ash transportation expenditure allowed to the Petitioner (NTPC) generating station wise for the period 2019-22 shall be recovered from the beneficiaries of the respective generating stations in 6 (six) equal monthly instalments. As per para 43 of the aforesaid order, the Petitioner is entitled for recovery of fly ash transportation charges, under change in law, as additional O&M expenses CERC permits the provisional billing at 90% of the fly ash transportation charges incurred by the Petitioner, in respect of its generating stations,

for the balance period (i.e. 2022-24), on a monthly basis, based on self -certification, and the beneficiaries shall pay the same accordingly.

As per Para 47, CERC permits the recovery of these charges, along with carrying cost, at the rate of interest as specified, in terms of Regulation 10 (7) of the 2019 Tariff Regulations. NTPC vide invoice on dated.05.11.2022 has raised claim towards Ash Transportation Charges along with interest charges in respect of TSTPS-I &II, KHSTPS-I&II, FSTPS-I,II&III, TTPS and DSTPS-I during the month of October - 2022 amounting to Rs. 229.63 Cr (Principal Rs. 193.69 Cr. + interest Rs. 35.94 Cr.) based on Order of CERC dated. 28.10.2022 in Case No 205/MP/2021.(Bills are enclosed as Annexure-12)

Name of the Station	Ash Transportation Charges (Rs.)	Interest Charges (Rs.)	Total Claim of NTPC (Rs.)
FSTPS-I & II	42,74,07,095	10,95,00,223	53,69,07,318
FSTPS-III	22,90,82,229	4,60,59,447	27,51,41,676
KSTPS-I	7,80,14,124	1,25,74,840	9,05,88,964
KSTPS-II	3,76,74,032	53,69,447	4,30,43,479
TSTPS-I	39,83,06,636	7,73,63,517	47,56,70,153
TSTPS-II	28,32,05,484	5,35,35,638	33,67,41,122
DSTPS-I	47,53,60,011	5,36,04,981	52,89,64,992
BARH-I	54,30,263	6,12,355	60,42,618
TTPS	25,00,000	7,35,197	32,35,197
<b>TOTAL</b>	<b>1,93,69,79,874</b>	<b>35,93,55,645</b>	<b>2,29,63,35,519</b>

Though GRIDCO is in process of appealing the matter before higher court of Law, however, in the absence of any stay order for the aforesaid claim made by NTPC, GRIDCO has to make payment under protest in order to avoid stringent action by MoP/GoI in case of non-payment of the dues to the generators.

In view of above, an amount of Rs 229.63 Cr. may be allowed as additional power purchase cost by Hon'ble OERC.

244. In a nutshell following claims are made on account of additional power purchase cost by GRIDCO for NTPC Stations.

Sl. No.	Description	Amount (Rs. Cr.)
1	Differential Amount of the cost incurred during Apr'22 to Sep'22	<b>348.11</b>
2	Payment made/to be made by GRIDCO to KBUNL as per one time settlement reached between GRIDCO & KBUNL on 21.05.2022	295.00
3	Ash Transportation Charges to be made by GRIDCO as per CERC Order dated.28.10.2022	229.63
	<b>Total Pass-through Claim of GRIDCO</b>	<b>872.74</b>

245. **Additional Payment towards payment of STU Charges / Scheduling Charges towards Solar Power procurement from the outside States:** Towards procurement of 75 MW solar power (15 MW from Rajasthan under NVVN under Bundling Scheme, 5 MW from NTPC Dadri SPV Project, 5 MW from NTPC Faridabad SPV Project, 10 MW from Rajasthan and 40 MW from Gujarat through SECI under VGF Scheme Batch-I) through STU connected solar projects. GRIDCO is bearing the cost of STU transmission charges of the respective states & RLDC charges / scheduling charges towards procurement of solar power from the above-mentioned States, on reimbursement basis as per the charges specified by the respective State Electricity Regulatory Commissions for each financial year. For FY 2021-22, the applicable STU charges of Rajasthan through NVVN was @ Rs. 150.08/-kW/Month and SLDC charges was @ Rs.1.5109/kW/Month & for Gujarat it was @ Rs.4252.37/-MW/Day, whereas under the specified Scheme of SECI projects under VGF Scheme, Batch-I, Rajasthan STU charges applicable for GRIDCO was @ Rs.75.04/-kW/Month. During FY 2021-22, GRIDCO has paid total amount of Rs.10,15,96,245/-, on reimbursement basis towards STU charges / Scheduling charges as demanded by the utilities to GRIDCO, the details of which is attached herewith at **Annexure-1**. For 5 MW Dadri & Faridabad SPV projects, the said charges are the part of energy invoice whereas for SECI & NVVN solar projects, it is claimed through separate invoices to GRIDCO. The same may be considered in total in favour of GRIDCO as additional power purchase cost.

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246. **Additional Payment towards payment on Safeguard Duty Claims of M/s Azure Power Pvt. Ltd. under Change in Law event:** GRIDCO executed the PSA with SECI on dated 21.08.2018 towards purchase of 300 MW Solar Power Project under MNRE ISTS-connected Solar Project Scheme Tranche-I and availing the entire power since 09.02.2021. In reference to the CERC order dated 03.02.2020 in Petition No.51/MP/2019 (**Annexure-2**) with regard to Safeguard Duty claims submitted by M/s Azure Power Forty Three Pvt. Ltd., the SPD, for the 300 MW solar project, SECI has reconciled the SGD Claims of total Rs.101,61,78,110/- for provisional payment, based on the submissions of the documents by the SPD/SECI as per the principles laid down by CERC in its order dated 20.08.2021 in Petition No.536/MP/2020 (**Annexure-3**). As directed by the Central Commission in the order dated 20.08.2021, the methodology for payment of the SGD claims shall be on annuity basis and the discount rate of annuity payments shall be 10.41 % for a tenure of 13 years. The calculation for the monthly annuity amount along with the letter of SECI is at (**Annexure-4**). The liability of SECI / GRIDCO for “Monthly Annuity Payments” starts from 60<sup>th</sup> day from the date of orders in respective petitions or from the date of submission of claims by the SPD, whichever is later, any delay in the release of payment will attract late payment surcharge as per the CERC Order. In the ARR of GRIDCO for FY 2022-23, the Hon’ble Commission has approved GRIDCO’s proposal of Rs.11.66 Crores under payment towards Safeguard Duty claims of M/s Azure Power Pvt. Ltd. under Change in Law provision for FY 2021-22. During FY 2022-23, GRIDCO has already paid an amount of Rs.9,24,14,056/- towards SGD claims up to November’2022. The monthly annuity payment against the SGD claim is Rs.1,15,51,757/-.
247. **Additional Cost incurred towards refund of excess rebate availed by GRIDCO towards procurement of 1 MW solar power from M/s Raajratna Energy Holdings Pvt. Ltd. as per OERC Order dated 18.10.2022 in Case No.20/2022:** M/s Raajratna Energy Holdings Pvt. Ltd. (REHPL) vide Case No.20/2022 has registered an application in the matter of wrongful deduction of rebate in the monthly

energy bills of M/s REHPL for supply of power from its 1 MW SPV plant in contravention of Order dated 29.10.2021 passed by the Hon'ble Commission in Case No.32/2021. The Hon'ble Commission vide its Order dated 18.10.2022 passed in Case No.20/2022 directed GRIDCO to make refund of the amount deducted towards excess rebate to the Petitioner for the permissible period of three years downward along with simple interest of 6% per annum within a period of two months from the date of the order. Failing which the Petitioner shall be at liberty to realise the amount under due recourse of law. The copy of the said Order is attached herewith as Annexure-5 for reference. In view of the above said OERC Order, the final amount to be refunded to the Petitioner along with the interest rate of 6 % for the years is Rs.7,23,203/- . The details of the calculation is attached herewith as Annexure-6 for reference.

<b>MONTHWISE STU CHARGES PAID BY GRIDCO FOR FY-2021-22</b>						
<b>Month</b>	<b>NVNL bundled Power (in Rs.)</b>	<b>NTPC DADRI (in Rs.)</b>	<b>NTPC FARIDABAD (in Rs.)</b>	<b>SECI (Rajasthan) in Rs.</b>	<b>SECI (Gujarat) in Rs.</b>	<b>Total (in Rs.)</b>
Apr-21	2492250	2144	0	830750	5102844	8427988
May-21	2492250	2101	70	830750	5272939	8598110
Jun-21	2554755	2816	1366	951694	5102844	8613475
Jul-21	2855081	2807	1366	830750	5272939	8962943
Aug-21	2492250	12021	1366	830750	5272939	8609326
Sep-21	2554755	7393	0	830750	5102844	8495742
Oct-21	2492250	2678	0	830750	5272939	8598617
Nov-21	2492250	2643	1366	830750	5102844	8429853
Dec-21	2319191	2607	4098	795727	5272939	8394562
Jan-22	2251200	2553	1359	750400	5272939	8278451
Feb-22	2267657	2474	1359	761371	4762654	7795515
Mar-22	2319191	2447	1359	795727	5272939	8391663
<b>TOTAL</b>	<b>29583080</b>	<b>44684</b>	<b>13709</b>	<b>9870169</b>	<b>62084603</b>	<b>101596245</b>

248. **Additional power purchase cost respect of TEESTA-V power station of NHPC:**  
NHPC had filed a petition before CERC for recovery of wage revision of its employees and deputed employees of Kendriya Vidyalaya and Indian Reserve Battalion (IRBN) in Teesta-V Power Station during 01.01.2016 to 31.03.2019 which was registered as Petition No.231/MP/2019. Hon'ble CERC vide its Order

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dtd.10.11.2022 had approved the wage revision impact amounting to Rs.43.27 Crs. in respect of Teesta-V Power Station. In the said order CERC has directed the beneficiaries to pay Rs.43.27 CRs in proportion to their share allocation in twelve equal monthly instalments starting from Nov'2022. GRIDCO has a share allocation of 20.59% from Teesta-V Power Station. NHPC on 18.11.2022 have raised invoices to GRIDCO in line with CERC Order dtd.10.11.2022 amounting to Rs.10,12,40,328. In view of above, GRIDCO prays before the Hon'ble Commission to kindly allow this amount in the GRIDCO's ARR for FY 2023-24. The CERC Order and Invoices raised by NHPC are enclosed as Annexures for kind reference.

249. **Reimbursement of Water Charge and SLDC Charge in respect of 20 MW Samal Barrage SHEP of M/s OPCL for the FY 2021-22 paid in FY 2022-23:** It is submitted that, as per the Hon'ble Commission's Order dated 19.05.2011 in Case No. 17/2011, GRIDCO has reimbursed Rs 15,89,956/- to M/s OPCL towards Water Charges and SLDC Charges for the FY 2021-22 in respect of 20 MW Samal Barrage SHEP. The same may please be allowed.
250. **Reimbursement of SLDC Charges in respect of 24 MW Lower Baitarani SHEP of M/s BPPPL for the period of November-2021 to March-2022:** As per the terms of the PPA dated 18.12.2015, GRIDCO has reimbursed Rs. 93,566/- to M/s BPPPL towards SLDC charges for the period of November-2021 to March-2022 in respect of 24 MW Lower Baitarani SHEP. The same may please be allowed.
251. **Procurement of power from 650 kW Biribati MHP and 500 kW Kendupatana MHP of OPGC during the FY 2019-20:** OERC vide Order dated 05.01.2019 in Case No. 35/2018 has approved a tariff of Rs. 3.91/kWh for supply of power from 650 kW Biribati MHP and 500 kW Kendupatana MHP. Further Hon'ble Commission vide Order dated 12.08.2021 in Case No. 25/2021 directed GRIDCO to pay the dues of Biribati MHP and Kendupatana MHP prior to 01.01.2020 (i.e. from FY 2007-08 to 31.03.2020) and same shall be passed in the ARR of GRIDCO. Accordingly as per the invoice raised by OPGC, GRIDCO has paid the dues for the FY 2007-08 to FY

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2018-19 and claimed the same in the ARR of FY 2022-23. For the FY 2019-20, OPGC vide invoice dated 14.02.2022 claimed **Rs. 2,02,131/-** for supply of 51,696 kWh energy from Biribati MHP and vide invoice dated 16.12.2021 it has claimed **Rs. 4,70,576/-** for supply of 1,20,352 kWh energy from Kendupatana MHP. GRIDCO has already paid the claimed amount to OPGC and same may be allowed.

252. **Differential Claim of M/s Sri Avanatika Power Projects Pvt. Ltd. (SAPPPL) in respect of 18 MW Saptadhara SHEP due to revision of Tariff as per Hon'ble Commission's Order dated 07.05.2022 in Case No. 100/2021:** M/s SAPPPL has declared the COD of 03 Units of 18 MW (3x6 MW) SaptadharaSHEP , Unit-2 on 06.10.2021, Unit-3 on 13.10.2021 and Unit-1 on 03.11.2021. GRIDCO had paid at a tariff of Rs. 4.26/kWh (2nd Control Period Generic Tariff for SHEPs determined by OERC) provisionally till the approval of a tariff by Hon'ble Commission. Hon'ble OERC vide Order dated 07.05.2022 in Case No. 100/2021 has approved a tariff of Rs. 5.06/kWh towards procurement of power from 18 MW Saptadhara SHEP applicable from the date of COD. Due to the revision of tariff, M/s SAPPPL has claimed Rs. 54,11,025/- as the differential amount for supply of 67,63,781 kWh energy supplied from COD to April-2022. The same has been paid to M/s SAPPPL in compliance to the direction of Hon'ble Commission and may please be allowed.
253. **Applicability of tariff of Rs. 5.71/kWh with effect from COD 24 MW Lower Baitarani SHEP as per the judgement of Hon'ble APTEL vide Order dated 17.10.2022 and 21.10.2022 in Appeal Nos. 73/2022 and 392/2022:** Hon'ble Commission Vide Order dated 15.01.2022 in Case No. 88/2020 has approved a tariff of Rs. 5.71/kWh applicable with effect from 01.02.2022 towards supply of power from 24 MW Lower Baitarani SHEP. GRIDCO has paid a tariff of Rs. 5.07/kWh to M/s BPPPL for supply of power from its 24 MW SHEP with effect from COD of the SHEP i.e. 20.08.2020 for Unit 1 & 2 and 29.08.2020 for Unit 3 till 31.01.2022. Hon'ble APTEL vide Order dated 17.10.2022 and revised Order dated 21.10.2022 in Appeal Nos. 73/2022 and 392/2022 has directed, the tariff of Rs. 5.71/kWh to be Provisionally applicable with effect from the COD of 24 MW Lower Baitarani SHEP

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till the determination of a tariff by Hon'ble Commission afresh. M/s BPPPL vide invoice dated 27.10.2022 has claimed Rs. 9,51,13,016/- for the revision of tariff applicable with effect from COD to 31.01.2022. After verification, GRIDCO has released Rs. 9,50,78,235/- in compliance of the Hon'ble APTEL's Judgement and same may please be considered.

254. **Estimated generation more than the ARR approval for FY 2022-23 under Non-Solar RE Category**

With the generation figure for the 1st Six month of FY 2022-23, it is estimated, the generation from some of generators under Non-Solar category shall be more than the ARR approval for FY 2022-23.

- i. **24 MW Lower Baitarani SHEP of M/s BPPPL:** In the first six month of FY 2022-23, GRIDCO has procured 56.22 MU energy from 24 MW Lower Baitarani SHEP and it is estimated during FY 2022-23, GRIDCO shall receive 90.46 MU against approval of 85 MU @ Rs.5.71/kWh. GRIDCO has to incur **Rs. 3.12** Crore for the additional generation expected during FY 2022-23 and the same may be approved.
- ii. **20 MW Samal Barrage SHEP by M/s OPCL:** In the first six month of FY 2022-23, GRIDCO has procured 49.93 MU energy from 20 MW SamalBarrage SHEP and it is estimated GRIDCO shall receive 98.52 MU during FY 2022-23 against approval of 80 MU @ Rs.3.71/kWh. GRIDCO has to incur **Rs. 6.87** Crore for the additional generation expected during FY 2022-23 and the same may be approved.
- iii. **ISTS-Connected Wind Power under Tranche-I from PTC:** During the first six month of FY 2022-23, GRIDCO has procured 90.04 MU energy from the Wind Project of M/s Ostro Kutch Wind Pvt. Ltd. through PTC under ISTS-Connected Wind Power Projects Scheme Tranche-I. It is estimated, GRIDCO shall receive 149.37 MU during FY 2022-23 against approval of 141.91 MU @ Rs.3.53/kWh. GRIDCO has to incur **Rs. 2.63** Crore for the additional generation expected during FY 2022-23 and the same may be approved.



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- iv. **ISTS-Connected Wind Power under Tranche-II from SECI:** During the first six month of FY 2022-23, GRIDCO has procured 180.41 MU energy from the Wind Project of M/s Green Infra Wind Energy Ltd. through SECI under ISTS-Connected Wind Power Projects Scheme Tranche-II. It is estimated, GRIDCO shall receive 285.98 MU during FY 2022-23 against approval of 273.57MU @ Rs.2.72/kWh. GRIDCO has to incur **Rs. 3.38Crore** for the additional generation expected during FY 2022-23 and the same may be approved.
- v. **ISTS-Connected Wind Power under Tranche-VI from SECI:** During the first six month of FY 2022-23, GRIDCO has procured 112.97 MU energy from the Wind Project of M/s Adani Wind Energy Kutchh Three Ltd. through SECI under ISTS-Connected Wind Power Projects Scheme Tranche-VI. It is estimated, GRIDCO shall receive 175.64 MU during FY 2022-23 against approval of 126.23 MU @ Rs.2.89/kWh. GRIDCO has to incur **Rs. 14.28Crore** for the additional generation expected during FY 2022-23 and the same may be approved.
- vi. **Revision in Tariff and Estimated generation more than the ARR approval for FY 2022-23 in respect of 09 MW Bargarh Head Regulator SHEP:** M/s Kakatiya Industries Pvt. Ltd. (KIPL) has declared COD of 02 units of 09 MW (2x4.5 MW) Bargarh Head Regulator SHEP on, Unit – 1 on 30.04.2022 and Unit-2 on 12.05.2022. Hon'ble Commission in the ARR of FY 2022-23 of GRIDCO has approved for procurement of 11 MU energy @ Rs. 4.26/kWh from 09 MW Bargarh Head Regulator SHEP. However, as per the terms of the PPA between GRIDCO and M/s KIPL dated 02.12.2015, GRIDCO is paying @ Rs. 5.06/kWh provisionally. Further it is estimated, GRIDCO shall receive 26.13 MU from the 09 MW SHEP during FY 2022-23. In this way, GRIDCO shall incur additional amount of Rs. 8.54 Crore during FY 2022-23 towards procurement of power from 09 MW Bargarh Head Regulator SHEP and the same please be approved for recovery in BSP for FY 2023-24.

255. A summary of the additional power purchase cost claimed by the Petitioner is provided below:

<b>Generators</b>	<b>Amount (Rs. Cr.)</b>
<b>OPGC</b>	
OPGC-I & II for FY 2022-23(Apr-Sep'22)	11.56
OPGC-III & IV for FY 2022-23(Apr-Sep'22)	14.82
OPGC-I & II for FY 2023-24	76.11
<b>NTPC</b>	
Differential Amount to be Pass-through for Apr'22 to Sep'22	348.11
Payment made by GRIDCO to KBUNL as per one time settlement reached between GRIDCO & KBUNL on 21.05.2022	295.00
Ash Transportation Charges Claimed by NTPC as per CERC Order dated 28.10.2022	229.63
<b>Renewable</b>	
Solar	37.96
Non-Solar	49.10
<b>Central Hydro</b>	
Teesta-V	10.12
<b>Total</b>	<b>1657.10</b>

### 6.6.12 Summary of the Projected Power Purchase Cost for FY 2023-24

Name of Generator	FY 2023-24							
	Energy billed by Generator	CTU Tr. Loss borne by GRIDCO	Net Energy available to GRIDCO	Fixed Cost	Variable Cost	Yr. End Adjustment	Any other Charge	Total Cost
<b>MUST RUN PLANTS</b>	<b>MU</b>	<b>MU</b>	<b>MU</b>	<b>Rs. Cr.</b>	<b>Rs. Cr.</b>	<b>Rs. Cr.</b>	<b>Rs. Cr.</b>	<b>Rs. Cr.</b>
State Hydro	5,825.89	-	5,825.89	281.05	250.66	14.46	-	546.16
Small Hydro	483.35	-	483.35	-	211.28	-	-	211.28
State Solar	606.00	-	606.00	-	275.41	-	-	275.41
Biomass	80.00	-	80.00	-	60.80	-	-	60.80
Central Solar	1,554.00	-	1,554.00	-	471.08	-	-	471.08
Central Wind	1,060.43	-	1,060.43	-	296.86	-	-	296.86
Central Hydro	1,250.32	41.64	1,208.68	51.22	282.10	-	-	333.32
<b>Total Renewable</b>	<b>10,859.98</b>	<b>41.64</b>	<b>10,818.34</b>	<b>332.27</b>	<b>1,848.18</b>	<b>14.46</b>	<b>-</b>	<b>2,194.91</b>
<b>Quantum to be fetched from MoD Plants</b>			<b>26,736.06</b>					
<b>PLANTS ELIGIBLE FOR MOD</b>								
DSTPS-I	5,693.29	189.59	5,503.70	1,314.32	592.10	69.11	-	1,975.53
OPGC(UNIT 1 & 2)	2,509.73	-	2,509.73	291.07	404.29	25.76	-	721.12
OPGC(UNIT 3 & 4)	9,294.69	-	9,294.69	1,487.15	1,580.10	39.65	-	3,106.90
Vedanta (IPP)	2,803.20	-	2,803.20	268.18	522.98	11.32	-	802.48
GMR (IPP)	1,906.90	-	1,906.90	314.74	378.17	-	-	692.91
NBVL-IPP	39.94	-	39.94	-	7.97	-	-	7.97
TSTPS-II	1,601.86	53.34	1,548.52	130.36	359.30	19.71	-	509.37
TSTPS-I	2,042.32	68.01	1,974.31	213.08	460.34	29.03	-	702.45
BARH	972.58	32.39	940.20	261.62	248.01	0.57	-	510.21
JITPL (IPP)	214.87	-	214.87	-	72.20			72.20

Name of Generator	FY 2023-24							
	Energy billed by Generator	CTU Tr. Loss borne by GRIDCO	Net Energy available to GRIDCO	Fixed Cost	Variable Cost	Yr. End Adjustment	Any other Charge	Total Cost
<b>MoD applied for Discom Sale</b>	<b>27,079.39</b>	<b>343.32</b>	<b>26,736.06</b>	<b>4,280.53</b>	<b>4,625.46</b>	<b>195.15</b>	<b>-</b>	<b>9,101.14</b>
<b>Total Discom&amp; Emergency Sale</b>			37,554.41					
<b>Trading of Power</b>								
JITPL (IPP)	297.23	-	297.23	-	99.87	-	-	99.87
KHSTPS-II	212.11	7.06	205.05	26.53	80.82	2.76	-	110.10
KHSTPS-I	25.83	0.86	24.97	3.26	10.38	4.33	-	17.96
FSTPS III	332.80	11.08	321.72	98.61	143.44	11.17	-	253.22
FSTPS-I&II	51.41	1.71	49.70	5.77	22.57	9.46	-	37.81
<b>Total</b>	<b>919.39</b>	<b>20.72</b>	<b>898.67</b>	<b>134.17</b>	<b>357.08</b>	<b>27.72</b>	<b>-</b>	<b>518.96</b>
<b>Total Power Purchase</b>	<b>38,858.75</b>	<b>405.68</b>	<b>38,453.07</b>	<b>4,746.97</b>	<b>6,830.72</b>	<b>237.33</b>	<b>-</b>	<b>11,815.02</b>
PGCIL Transmission Charges	-	-	-	774.71	-	-	-	774.71
ERLDC Charges	-	-	-	2.81	-	-	-	2.81
SLDC Charges	-	-	-	1.28	-	-	-	1.28
<b>Total</b>	<b>38,858.75</b>	<b>405.68</b>	<b>38,453.07</b>	<b>5,525.77</b>	<b>6,830.72</b>	<b>237.33</b>	<b>-</b>	<b>12,593.82</b>

## 6.7 Gross Fixed Assets

256. The Petitioner has submitted details of Gross Fixed Assets as per the audited accounts for FY 2021-22 along with expected additions in the current FY 2022-23 and in the ensuing FY 2023-24. The table below provides the summary:

**Table 71 : Projected Gross Fixed Asset for FY 2023-24 (Rs. Cr.)**

SI No	Particulars	FY 2021-22 (Audited) Closing Balance	FY 2022-23 Additions during the year	FY 2022-23 Closing Balance	FY 2023-24 Addition during the year	FY 2023-24 Closing balance
1	Plant and Machinery (Air Cond. )	0.43	0.02	0.46	0.03	0.49
2	Computers	4.90	0.20	5.10	0.20	5.30
3	Office Automation – ERP	-	-	-	7.00	7.00
4	Vehicles	0.47	-	0.47	-	0.47
5	Office Equipment	0.26	0.02	0.28	0.10	0.38
6	Furniture, Fixture	0.39	0.02	0.42	0.10	0.52
7	<b>Total</b>	<b>6.46</b>	<b>0.27</b>	<b>6.72</b>	<b>7.43</b>	<b>14.15</b>

Note: There is no deletion of assets during any of the year

257. The Petitioner is implementing Enterprise Resource Planning (ERP) software as part of office automation initiatives for which the planned expenditure amounts to Rs 7 Cr in FY 2023-24. This will help in improving the various processes for efficient management of bulk supply functions such as power procurement and accounting thereof.
258. Petitioner requests Hon'ble Commission to approve the additions to GFA in the ARR & BSP for FY 2023-24.

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## 6.8 Interest on Loan

259. The Petitioner submits that total interest and finance charges for FY 2023-24 is estimated to be Rs. 543.46 crore based on existing loan liabilities along with the proposed working capital loan to be availed during FY 2022-23 & FY 2023-24.
260. The Petitioner submits that the Hon'ble Commission, in its tariff order for FY 2022-23, approved interest of Rs 39.53 crore against Rs 623.69 crore claimed by the Petitioner. Such huge disallowance by the Hon'ble Commission is putting severe financial strain on the Petitioner. Excerpts of Hon'ble Commission order is presented below:

***OERC order for FY 2022-23 ARR OF GRIDCO***

*“361. 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 the dues from the DISCOMs, has landed GRIDCO in a situation of borrowing from banks. The Commission in the tariff order for FY 2017-18 had 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 DISCOMs.*

*362. The Commission observed that GRIDCO instead of collecting its dues from the erstwhile DISCOMs availed loan from the commercial institutions and the Commission had taken a view not to allow interest on loan availed by GRIDCO after FY 2015-16. The Commission is continuing with the same approach and accordingly not inclined to allow any interest on loan availed by GRIDCO after FY 2015-16.”*

261. The Petitioner submits that the reasons to borrow working capital loans are predominantly due to non-cost reflective BSP, non-allowance of carrying cost on

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regulatory assets, huge outstanding receivables from Discoms, mandate to supply power to Discoms as “State Designated entity”.

262. The Petitioner submits that historically, the Hon’ble Commission has not allowed full ARR as claimed by the Petitioner, compelling the Petitioner to meet the revenue gap through funding from external sources i.e. working capital loans. Summary of disallowances is presented below.

**Table 72 :ARR Disallowance by OERC (Rs Cr.)**

Year	ARR proposed	ARR Approved	Disallowance
FY 2015-16	9319.80	7049.94	(2,269.86)
FY 2016-17	9235.09	6660.52	(2,574.57)
FY 2017-18	10293.13	6962.97	(3,330.16)
FY 2018-19	9382.98	7374.66	(2,008.32)
FY 2019-20	9134.19	7702.90	(1,431.29)
FY 2020-21	11243.71	8274.98	(2,969.33)
FY 2021-22	10745.43	8245.47	(2499.96)
FY 2022-23	10945.36	9235.11	(1710.25)

263. It is also humbly submitted to the Hon’ble Commission that the Petitioner has borrowed working capital loan to avail rebate from generators and also reduce its late payment surcharge which has high interest penalty. The benefit of rebate on power purchase cost and lower LPS is passed on to end consumers. On the other side, the cost of raising the fund to earn the rebate or save the late payment surcharge is not considered by the Hon’ble Commission in the ARR. It will be a double jeopardy on GRIDCO. The Petitioner requests the Hon’ble Commission to consider such benefits and approve interest on loans availed by the Petitioner.
264. The Petitioner submits that default in timely payment of dues by Discoms in the past period has exaggerated the cash deficit situation.
265. The Petitioner further submits that Hon’ble Commission has neither allowed carrying cost on Regulatory assets approved by Hon’ble Commission and subsequent True Up gap as per audited accounts nor the actual interest cost incurred by GRIDCO. The

above disallowances have compelled the Petitioner to resort to debt for the years which resulted in financing costs as well as repayment obligations. The Petitioner submits that non-allowance of carrying cost has resulted in huge financial strain on the company.

266. The Petitioner humbly submits that due to above mentioned uncontrollable factors, it has to borrow funds from external sources and also requests the Hon'ble Commission to allow interest cost to further avail rebates and limit the late payment surcharge on power purchase cost resulting to cost optimization in the ensuing financial year.
267. Considering the above factors, the Petitioner requests Hon'ble Commission to approve Interest cost on the loan liabilities for timely servicing of its debt obligations as follows:

**Table 73 :Interest projections for FY 2023-24**

Sr.	Particulars	Interest Rs. Cr.)
1	GRIDCO Bond 2013-127.50cr	1.98
2	OHPC Loan 619 cr	46.42
3	Bank of India V 500 cr	13.75
4	Union Bank- IX 500 2016-17	5.8
5	Uco Bank 300 Cr 2016-17	2.37
6	Andhra V - 200cr 2016-17	3.55
7	Odisha GB III 25cr	1.1
8	IOB II - 300 2017-18	6.67
9	Odisha Gramya Bank IV 40 CR	1.06
10	Andhra Bank VI 100CR	1.78
11	Allahabad Bank V-150 CR	2.67
12	Bank of India VI 300 cr	5.66
13	Odisha Gramya Bank V 35 CR	1.22
14	Andhra Bank VII 200CR	3.96
15	Andhra Bank VIII 300CR	15.94
16	Andhra Bank IX 400CR	23.32
17	Bank of India VII 300 cr	16.3
18	Bank of India VIII 100 cr	5.7
19	Union Bank of India X 500 CR	36.05
20	Allahabad Bank - VI 500CR	35.2
21	Bank of India IX 500 CR	32.38
22	Punjab National Bank 600 CR	42.5
23	Bank of Baroda TL-1	1.77



24	Bank of Baroda TL-2	4.25
25	Bank of Baroda TL-3	3.54
26	Bank of Baroda TL-4	3.54
27	Bank of Baroda TL-5	10.35
28	Bank of Baroda TL-6	12.43
29	Bank of Baroda TL-7	33.83
30	REC ST Loan	0.59
31	Soft Loan from GoO	25
32	Add: Proposed Loan for FY 22-23(Jan-Mar)	40
33	Add: Proposed Loan for FY 23-24(Aprl-Mar)	64
	<b>Total</b>	<b>504.68</b>
35	Add: Financial Charges (Inc Interest on SOD)	7
36	Add: Guarantee Commission	31.78
	<b>Total</b>	<b>543.46</b>

## 6.9 OHPC Securitised dues

268. The proposal of OHPC to securitise the outstanding power purchase dues of Rs 619 crore as on 31.03.2013 was approved by BOD of GRIDCO in its 155th meeting held on 25.09.2014 (ED- ). Accordingly, the Loan Agreement was signed on 23.02.2015 (ED- ). As per the Loan Agreement the tenure of the loan was 10 years including moratorium period of 3 years and the Rate of Interest was @8% p.a payable monthly. Accordingly, GRIDCO had paid all its interest dues in time from 01.04.2014 to 31.03.2017. GRIDCO had also paid its interest dues partly during FY2017-18 & FY 2018-19.
269. Hon'ble OERC has disallowed the claim of interest amounting to Rs.99.04 crore on securitisation dues of OHPC Ltd. while approving ARR of GRIDCO for the FY2015-16 vide para 290 on the ground that; (a) OHPC has not shown the interest income as receivable in their ARR and (b) The proposal by GRIDCO for securitisation of OHPC outstanding dues had not been submitted to the Commission for approval at any time.
270. In line with the above observations of Hon'ble OERC, the interest on OHPC Securitised dues for the subsequent years were also disallowed by the Hon'ble OERC in the respective ARR & BSP Orders.

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271. As such, GRIDCO stopped paying monthly interest from 01.04.2017. However, principal amount of Rs.41.02 crore has been repaid by GRIDCO during FY2017-18 & 2018-19. Further, Board of Directors, GRIDCO in its 177th meeting held on 14.11.2018 had approved for conversion of interest bearing securitised dues to Zero Coupon Bonds (ED- ). Also, GRIDCO vide its letter dated 13.05.2020 has requested DoE to advise OHPC to convert the interest bearing securitised dues to zero interest bearing loan (ED- ).
272. While addressing the issues and challenges faced by State Power Sector in the meeting held on 27.07.2020 under the chairmanship of Chief Secretary, Govt. of Odisha; it was decided that DoE shall obtain necessary orders from Govt. to defer the payment to OHPC Ltd. Further, OHPC shall also reduce the rate of interest and make it at par with OMC Ltd (ED- ). Subsequently, a meeting was convened on 28th September'2021 at Govt. level, wherein some broad agreements have been arrived at for settlement of securitised dues of OHPC Ltd. DoE, Govt. of Odisha vide its letter dated 26.10.2021 has communicated the same to GRIDCO with a request to move a proposal to OHPC for placing the same in their Board for approval (ED- ). The BoDs of GRIDCO in their 199th meeting held on 10.11.2021 has noted the broad agreements arrived at Govt. level for settlement of outstanding dues of OHPC and approved the proposal for requesting OHPC to charge interest on outstanding amount at SBI FD rate besides other points as decided therein (ED- ).
273. In response to GRIDCO's letter, OHPC vide its letter dated 12.01.2022 (ED- ) declined the request of GRIDCO for charging interest at SBI FD and also furnished a fresh proposal for settlement of interest (current as well as arrear) which were not in line with decisions taken at Govt. level. In response to OHPC's letter, GRIDCO again requested OHPC vide its letter dated 19.01.2022 (ED- ) to consider GRIDCO's request for charging of interest at SBI FD rate and other agreements as agreed upon. Further, GRIDCO had requested OHPC for onetime settlement of outstanding interest up to 31.03.2021 for Rs.152.93 crore paying a lump sum of Rs.100crore vide letter dated 15.03.2022 (ED- ).

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274. OHPC in its letter dated 25.08.2022 communicated that the Board of OHPC has not accepted the proposal of GRIDCO and proposed to have a meeting to settle the issues. Accordingly, a meeting was held between GRIDCO and OHPC on 28.10.2022 wherein it was deliberated that unless and until the interest cost is not passed on by Hon'ble OERC in the ARR of GRIDCO it may not be possible to pay interest on Securitised Dues.

275. In view of above, it is requested to allow the interest cost on OHPC Securitised Dues payable up to 31.03.2024 amounting to Rs.264.25 crore as detailed below:

**A: Additional Finance Cost payable up-to FY 2022-23**

➤ Outstanding Interest dues up to 31.03.2021 :	Rs.152.93 crore
➤ Outstanding Interest dues for FY 2021-22 :	Rs. 25.13 crore
➤ Outstanding Interest dues for FY 2022-23 :	<u>Rs. 39.77 crore</u>
<b>SUB-TOTAL</b>	<b>Rs. 217.83 crore</b>

<b>B: Claim for FY 2023-24</b>	<b>: Rs. 46.42 crore</b>
<b>Total</b>	<b>: Rs.264.25 crore</b>

276. The Hon'ble Commission is requested to kindly allow the Interest dues of Rs. 46.42 Crore against OHPC Securitise Dues for the FY 2023-24 in the ARR for FY 2023-24 **under Interest & Finance Charges as discussed above.** Further, Hon'ble Commission may also consider to allow the interest dues up to FY 2022-23 to the tune of Rs. 217.83 crore after settlement of the same in the subsequent ARR & BSP Order.

## **6.10 Employee Cost**

277. The Hon'ble Commission may kindly consider that the guidelines issued by Finance Dept., Govt. of Odisha vide Circular dated 19.10.2022 (ED- ) for preparation of Budget Estimate for FY 2023-24 has been followed for projection of Employee Cost and other A&G expenses for the ensuing FY 2023-24.

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278. The Petitioner humbly submits that it proposes Rs.23.52 Crore towards Employees Cost in its ARR & BSP Application for FY 2023-24 as per the details furnished in OERC Form “F-9”.

279. The Petitioner prays the Hon’ble Commission for the approval and allowance of the same in the ARR & BSP order for FY 2023-24.

#### **6.11 Repair & Maintenance (R&M)**

280. The Petitioner submits that it has proposed R&M cost for FY 2023-24 to the tune of Rs. 0.81 Crore. The detailed cost is provided in OERC Format F-10. The Petitioner request the Hon’ble Commission to approve the same.

#### **6.12 Administrative and General Expenses (A&G Expenses)**

281. The Petitioner proposes Rs. 13.07 Crore towards A&G Expenses for approval by the Hon’ble Commission in the ARR & BSP for FY 2023-24. The details are annexed in OERC approved Format “F-11”. It is submitted that there is increase in legal expenses in the recent years due to payment of legal fees paid to legal practitioners for appearing in various case matters before Hon’ble OERC, APTEL, CERC, High Court, Supreme Court of India for protecting the business interest of GRIDCO. Accordingly, Hon’ble Commission is requested to approve the projected A&G expenses to the tune of Rs.13.07 crore.

#### **6.13 Depreciation**

282. The Petitioner proposes Rs. 1.31 Crore towards the depreciation on fixed assets including vehicle, furniture and office equipment etc.) for approval in the ARR & BSP for FY 2023-24. Depreciation is calculated based on rates approved by Hon’ble Commission.

283. The detailed calculation of depreciation is annexed in OERC Form “F-13”.

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## 6.14 Return on Equity

284. The Hon'ble Commission may kindly note that Govt of Odisha vide its Notification No 2584 dated 28.03.2022 (ED- ) has converted outstanding loan and bond payable to GoO including interest upto 31.12.2021 amounting to Rs 2039.69 crores to equity. Further, GRIDCO has allotted equity share capital of Rs 174.82 crore in favour of GoO as consideration in lieu of equity investment in TP-DISCOMs (ED- ). Considering above, GRIDCO's total paid-up share capital as on 31.03.2022 stands at Rs 2791.22 crore.
285. The Petitioner submits that it has been acknowledging and obliging the repeated observations of the Hon'ble Commission in all the previous ARR & Tariff Orders with regard to non-admittance of the Return on Equity (RoE). 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. This was later extended up to FY 2010-11. The relevant excerpt from the BSP order of FY 2022-23 is reproduced below:

### ***OERC Order for FY 2022-23***

*"425. 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 148 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*

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*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."*

286. The Petitioner humbly submits that the circumstances that formed the basis of not allowing Return on Equity to GRIDCO no longer exist. The Hon'ble Commission has successfully completed the vesting of utilities under Section 20(1)(a) of the Electricity Act 2003. The basic intent of undertaking the vesting of utilities was to achieve a turnaround of the distribution sector. TPCODL, TPWODL, TPNODL, TPSODL are operating as per the framework defined under the vesting orders of the Hon'ble Commission. The targets related to AT&C loss reduction, past arrear collection etc. are specified in the vesting order and performance monitoring is done by the Hon'ble Commission. The Petitioner submits that TPCODL, TPNODL, TPSODL and TPWODL combined have **a regulatory liability of Rs. 464 cr. as of end of H1 FY**

23. This shows the improvement in sector viability which was the main reason for disallowing return on equity to GRIDCO in the past.

287. The Hon'ble Commission is requested to allow return on equity (@16% pre-tax) to GRIDCO considering the improvement of the sector as envisaged from the performance of the sector as well as the requirement of maintaining Reserves & Surplus as available to the Petitioner so as to face any eventualities out of its own funds while discharging the function as the 'State Designated Entity'.

#### 6.15 Other Income/ Miscellaneous Receipts

288. The Petitioner submits that it expects to earn an amount of Rs. 51.94 Crore during FY 2023-24 (at approved BSP of 7.42Rs./kWh for FY 2022-23) towards emergency sale of power of 70 MU to long term customers including NALCO (48 MU) and IMFA (22 MU) for meeting their emergency & back-up power requirements as per the MOU signed with them.

**Table 74 : Historical Revenue from Emergency sales (Rs Cr.)**

Particulars	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23 (6M A)	2023-24 ARR (P)
Revenue from Emergency sales	19.56	29.71	63.66*	5.97	54.18	47.97	51.94

\* Includes Revenue of Rs 32 Cr pertaining to FY 2009 to 2019

#### 6.16 Receivables from erstwhile Discomutilities

##### Securitized Dues

289. The details of the securitized dues payable by the distribution utilities to GRIDCO are given below for kind perusal of the Hon'ble Commission. The Petitioner respectfully prays the Hon'ble Commission to issue appropriate directions to the Distribution Companies to pay such dues to GRIDCO in order to make payment to Lending Institutions for availing loans during the past periods.

**Table 75 : Outstanding securitized dues payable by Discoms to GRIDCO (Rs Cr.)**

Particulars	Unpaid as on 30-11-2022
WESCO	239.27
NESCO	208.52
SOUTHCO	196.12
CESU	1219.91
<b>Total</b>	<b>1863.81</b>

#### **Bond Dues of Rs 400 Cr.**

290. The Petitioner submits that apart from securitized dues, the erstwhile Distribution Companies have failed to honour the OERC Order dated 29th March 2012 read with corrigendum order dated 30th March 2012 against the bond dues of Rs.308.45 Crore.
291. In the said Order, Hon'ble OERC had directed the erstwhile RIL managed Discoms to pay Rs.50 Crore by the end of April 2012 and at least @Rs.10 Crore per month w.e.f. May, 2012 so that the entire amount shall be cleared by the end of FY 2012-13 or else the Order would stand non-est.
292. As submitted in F-19 format, amount receivable towards Bond Dues as on the date of vesting stands at Rs 195.36 crore which comprises Rs 146.45 crore receivable from SOUTHCO Utility and Rs 48.91 crore receivable from NESCO Utility.

#### **BSP Dues**

293. The outstanding BSP dues receivable from erstwhile DISCOMs as on 31<sup>st</sup> October'2022 after adjustment of receivable converted to equity and amount recovered by TP-DISCOMs as submitted in F-19 format stands at Rs 958.80 crore as detailed below:

**Table 76 :Outstanding BSP Dues relating to erstwhile Discoms (Rs Cr.)**

Sl No	Particulars	WESCO	NESCO	SOUTHCO	CESU	TOTAL
a)	BSP dues as on vesting date	345.30	310.62	488.47	649.23	<b>1793.62</b>
b)	Less amount settled by TP-DISCOMs till 31.10.2022	211.60	249.45	125.43	248.34	<b>834.82</b>



Sl No	Particulars	WESCO	NESCO	SOUTHCO	CESU	TOTAL
	Balance receivable	133.70	61.17	363.04	400.89	<b>958.80</b>

**Total dues receivable from erstwhile Discoms:**

294. Total dues receivable from the erstwhile Discoms as on 31.10.2022 as submitted in F-19 format are as follows:

**Table 77 : Dues receivable from erstwhile Discoms (Rs Cr.)**

Particulars	WESCO	NESCO	SOUTHCO	CESU	TOTAL
BSP dues	133.70	61.17	363.04	400.89	<b>958.80</b>
Securitized dues	180.55	121.31	167.60	693.50	<b>1162.96</b>
NTPC Bond	-	48.91	146.45	-	<b>195.36</b>
Deferred Credit	-	-	-	174.00	<b>174.00</b>
Trf. Scheme receivable	12.10	6.74	29.91	118.85	<b>167.60</b>
<b>Sub Total</b>	<b>326.35</b>	<b>238.13</b>	<b>707.00</b>	<b>1387.24</b>	<b>2658.72</b>
DPS on Securitized dues	58.72	87.20	28.52	526.41	<b>700.85</b>
DPS on BSP dues	1417.23	884.99	647.31	819.49	<b>3769.02</b>
<b>Total incl. DPS</b>	<b>1802.30</b>	<b>1210.33</b>	<b>1382.83</b>	<b>2733.14</b>	<b>7128.60</b>

295. With the vesting of licences there is uncertainty in realisation of past dues from DISCOMs. Prior to vesting of licenses, GRIDCO had escrow mechanism for recovery of dues. Post the vesting of licenses, the past dues of GRIDCO have been retained in the erstwhile utilities which are non-functional and do not have any revenue stream to repay GRIDCO's past dues. Thus, at present GRIDCO does not have any mechanism at its disposal to recover the dues from DISCOMs. This will negatively impact the capabilities of GRIDCO to meet the debt service obligations for the short term / working capital loans.
296. Hon'ble Commission may kindly consider that GRIDCO has total outstanding term loans to the tune of Rs. 6563.86 crore as on 31st March 2022, for meeting the working capital gap in the past years. Accordingly, the Commission is requested to kindly frame suitable mechanism for redemption of the above liabilities.
297. Hon'ble Commission has stipulated in the vesting order for partial recovery of past arrears for settlement of outstanding to GRIDCO. The Hon'ble commission is

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requested to kindly frame a suitable mechanism for servicing of the above liabilities of the erstwhile DISCOMs so as to enable GRIDCO to meet its debt obligations as there is no revenue stream for the erstwhile utilities on cessation of their operations due to vesting of the utilities with the TPCL managed DISCOMs.

298. With the sale of licenses, there is uncertainty in realisation of past dues from DISCOMs. Prior to sale of licenses, GRIDCO had escrow mechanism for recovery of dues. Post the sale of licenses, the past dues of GRIDCO have been retained in the erstwhile utilities which are non-functional and do not have any revenue stream to repay GRIDCO's past dues. Thus, at present, the Petitioner does not have any mechanism at its disposal to recover the dues from Discoms. This will negatively impact the capabilities of GRIDCO to meet the debt service obligation for the short term/ working capital loans availed during the past years.
299. In view of the above submissions, Hon'ble Commission is requested for approving suitable mechanism be put in place for principal and interest repayment of term loans availed to bridge the working capital gap arising due to concerns on non-realization of BSP dues from Discoms in the past period.

#### **6.17 Special appropriation for loan repayment liabilities**

300. The Petitioner submits that it has outstanding loan balance of Rs. 6563.86 crore as on 31st Mar 2022, as submitted in F-2 format, with repayment liability of Rs 1592.54 crore due in FY 2023-24. Due to non-cost reflective BSP, disallowance of Carrying cost on Regulatory assets and huge receivables from erstwhile Discoms, the loan liability of the Petitioner has increased over the years. The Petitioner proposes to first meet such loan liability from Margin from Sale of surplus power as directed by Hon'ble Commission in its previous tariff orders. As the trading revenue will be insufficient, the Petitioner requests the Hon'ble Commission to create a Separate Mechanism to meet Net Repayment liability post adjustment of Margin enabling the Petitioner to make timely discharge of financial obligations.

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301. The Petitioner humbly submits that it was compelled to raise loans in the past for the following reasons:
- a. Non cost reflective BSP in the past years resulting in huge revenue gaps on year-on-year basis
  - b. Non amortisation of regulatory assets by the Hon'ble Commission through feasible mechanism of amortisation.
  - c. Hon'ble Commission has directed to amortize the regulatory assets against the revenue from sale of surplus power. It is pertinent to mention that the revenue from sale of surplus power is inadequate to amortize its regulatory assets and moreover such revenue was duly considered in the respective financial year without leaving any gap for further amortization.
  - d. No carrying cost allowed by the Hon'ble Commission on the unamortised regulatory assets / Revenue Gaps
  - e. **Outstanding from the erstwhile Distribution Companies against the bulk supply tariff;** In the past, distribution companies were not able to clear their dues towards loans, securitized dues, and BSP dues etc, compelling GRIDCO to avail loans to meet its working capital needs in order to maintain its status as the 'State Designated Entity' in maintaining steady power supply in the state.
  - f. Loans raised to avail rebate on timely payment for power purchase and reduce late payment surcharge, the benefits were being passed on to consumers.
  - g. Non implementation of financial restructuring schemes like the Financial Restructuring Plan (FY 2013) and Ujjwal Discom Assurance Yojana (FY 2015) for the non-distribution companies like GRIDCO or private Discoms in Odisha to restructure financial cost, which was available in other states for restructuring of liabilities failing to make the sector viable as per the policy initiatives of Government of India. In the above schemes, the liabilities were taken over by Govt whereas in Odisha it remained with GRIDCO.

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302. The Petitioner has been struggling on account of cash deficit scenario due to the reasons mentioned above. However, it is quite pertinent to submit that despite such adverse situations, GRIDCO has ensured that there is no interruption in power supply on account of non-payment of power purchase dues. For this, it has to raise loan to meet its cash flow deficit and clear the power purchase dues over the period.

303. It is submitted that the Hon'ble Commission has not allowed repayment of principal to the tune of Rs. 1,380.21 Crore in the ARR & BSP for FY 2022-23. In Para 369 of ARR & BSP order for FY 2022-23, the Commission stated the following:

*“369. However, the Commission considers that the market fluctuations are likely to swing to the advantage of GRIDCO. GRIDCO has estimated the energy availability of 36391.31 MU from different sources during FY 2022-23 and the State requirement has been estimated at 29354.67 MU, leaving a surplus availability of 7036.64 MU. GRIDCO has also projected to earn revenue of Rs.2033.59 Crore from the sale of such surplus power. However, as estimated by the Commission, the surplus power available to GRIDCO is 2981.71 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 losses.”*

304. At Para 329 to 331 of the ARR & BSP Order for FY 2020-21, Hon'ble Commission mentioned that proposed repayment of loan principal amounting to Rs.1,164.97 Crore during FY 2020-21 may be met through the following options:

- a. “Power Sector Development Fund” to be created out of the revenue earned from surplus power trading,
- b. Revenue earned through sale of low-cost hydro power over and above design energy of OHPC by way of better management of hydrology at various OHPC Hydro Stations,
- c. Earnings from UI/ DSM Charges and

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d. Budgetary Support from Government of Odisha.

Hon'ble Commission in the said Order also noted that

*“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”*

305. It is humbly submitted that the abovementioned sources to meet the loan repayment obligation is not feasible or beyond the control (uncontrollable factor) of the GRIDCO for the reasons as discussed below:
- a. State Govt. has not made any budgetary provision for the differential amount to pay to Banks/Financial Institutions through GRIDCO.
  - b. UI mechanism is a mechanism for adjustment of over-drawals and under-drawals linked to frequency of the grid. It is a balancing mechanism rather than a revenue earning mechanism. Any amount received by the Petitioner for under-drawal of electricity can never be sufficient for bridging the revenue gap/ repayment of loans.
  - c. The prices on the exchange are highly uncertain. The margins that the Petitioner can earn on the sale of power through exchange can never be sufficient to meet the repayment liability.
  - d. It may also be noted that Hon'ble Commission has also directed the Petitioner to use the revenue from sale of surplus power to amortise the regulatory assets created in the past.
  - e. It is also humbly submitted before the Hon'ble Commission that margins from sale of surplus power is not feasible yardstick to measure amount available to pay for loans. The Hon'ble Commission has also directed to utilize margin from sale of surplus power towards Special appropriation,

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Amortization of regulatory assets. The margin from such surplus is not enough to meet such huge liability towards such deficiencies.

- f. The Hon'ble Commission may kindly consider that the revenue ear-marked for repayment obligations as per the above directives, have been duly factored in the total revenue for the respective financial years.
306. In its previous tariff orders, the Hon'ble Commission had deducted the income from surplus trading power from the estimated annual revenue requirement. On the other hand, the Hon'ble Commission in its previous tariff orders has considered income from surplus power trading as part of "Power Sector Development Fund" to meet repayment liabilities. The Hon'ble Commission is humbly requested to consider a uniform long-term approach for a regulatory certainty.
307. The Petitioner would request Hon'ble Commission to keep Revenue from trading separate from Power Sector Development Fund to be utilised for repayment of loan liabilities and create a separate mechanism for payment of remaining repayment liabilities. It is also requested that if the margins from sale of power is not positive then the same ought to be allowed to be recovered in the Annual Revenue Requirement.
308. With high Average Cost of Supply-Average Revenue Realized (ACS-ARR) gap for Distribution utilities, GoI introduced schemes like Financial Restructuring Plan in FY 2013 and Ujjwal Discom Assurance Yojana in FY 2015 to refinance/ restructure/ reduce high interest cost loans of Discoms. With power purchase consisting of ~80% of total cost, Discoms had taken loans to finance their increasing power purchase cost. GRIDCO being a Bulk supplier is engaged in procurement of power and supplying it to Discoms. GRIDCO had also taken working capital loans to meet its increasing power purchase cost but it was not eligible for such GoI schemes to restructure its high interest cost loans resulting in high interest cost. Hon'ble

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Commission may also kindly consider while allowing the interest cost and special appropriation amount.

309. There is also uncertainty in realisation of past dues from DISCOMs upon the recent privatization of Discoms. Prior to sale of licenses, GRIDCO had escrow mechanism for recovery of dues. Post the sale of licenses, the past dues of GRIDCO have been retained in the erstwhile utilities which are non-functional and do not have any revenue stream to repay GRIDCO's past dues. Thus, at present, the Petitioner does not have any mechanism at its disposal to recover the dues from Discoms. This will negatively impact the capabilities of GRIDCO to meet the debt service obligation for the short term/ working capital loans. Hon'ble Commission is requested to frame suitable mechanisms for settlement of outstanding of erstwhile DISCOMs.
310. The Petitioner requests the Hon'ble Commission to approve special Appropriation of Rs 1,592.54 Cr as these repayments are binding on GRIDCO. There is no mechanism for recovery of past dues given the order of the Hon'ble Commission in Case no. 27 of 2021 related to consolidated true up for FY 2015-16 to 2019-20. Any default in repayment will severely impact credit rating of GRIDCO.

**Table 78 : Special Appropriation by GRIDCO (Rs Cr.)**

Particulars	Loan Repayment Dues
Bank Loans	1477.34
STL from REC	83.33
8.79% GRIDCO Power Bond	31.87
<b>Total</b>	<b>1592.54</b>

311. The Petitioner submits that against demand of 36,428 MU, it has availability of 37,554MU resulting in surplus energy of 899 MU. The Petitioner plans to sell the surplus power in the short term market / bank etc. The quantum of surplus has reduced significantly due to increase in state demand. Thus, the revenue from trading will be insufficient to recover the entire cost of surplus power as the Petitioner can only be able to sell the surplus power when the real time market price exceeds the

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variable charges of the costly station considered for trading after meeting the state demand on real time basis.

312. Considering the insufficient trading margin to meet huge repayment liability in FY 2023-24, the Petitioner further proposes 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 in the following manner:
- a. allow as a part of the annual revenue requirement,
  - b. Allow a regulatory surcharge recovery as a percentage of bulk supply tariff, or
  - c. Allow as a regulatory asset with an amortisation in a defined period of 3 to 5 years, as the Hon'ble Commission deems fit as submitted in detail in the next chapter.
313. It is pertinent to note that the above proposal is based on the premise that the Hon'ble Commission will be allowing the entire fixed charges forming part of the power purchase cost for the NTPC generating stations for which the fixed charges are not allowed in the last tariff order.
314. The Petitioner requests that the following mechanisms may be approved by the Hon'ble Commission for settlement of past dues of GRIDCO:
- a. The vesting orders for TPCODL, TPNODL, TPWODL and TPSODL stated that the depreciation on assets of erstwhile utilities transferred to the successor entities shall be utilised to meet the additional serviceable liabilities. From the orders of the Hon'ble Commission regarding finalization of opening balance sheet of TPCODL and TPWODL, it is evident that these entities do not have to service any additional serviceable liabilities. Therefore, the depreciation on assets transferred to all the four new Discoms may be utilised for payment of past dues of GRIDCO.



- b. The Discoms have reported a regulatory liability of Rs. 464 crore in H1 FY 2022-23. This amount may be utilised to settle GRIDCO's dues.

#### 6.18 Aggregate Revenue Requirement for FY 2023-24

315. The Petitioner submits that based on the above submissions it has forecasted Net ARR of Rs. 14,193.71Cr. The Summary of ARR is as below

**Table 79 : Aggregate Revenue Requirement for FY 2023-24 (Rs Cr.)**

Particulars	Amount
Power purchase cost	13,309.16
Interest cost	543.46
Employee cost	23.52
Repair & Maintenance	0.81
Administrative and General Expenses	13.07
Depreciation	1.31
Return on Equity	354.32
<b>ARR</b>	14,245.65
Less: Revenue from Emergency sales	51.94
<b>Net ARR</b>	14,193.71
Units to be sold to Discoms Utilities (MU)	36,358
Revenue from Discoms at existing BSP of respective Discoms	11,513.63
Deficit Revenue at existing BSP of respective Discoms	2,680.08

316. Revenue of Rs. 11,513.63 Crore is estimated to be earned by GRIDCO from sale of proposed energy of 36,358 MU to distribution companies during FY 2023-24 against the proposed Net ARR of Rs. 14,193.71 Crore at the existing BSP for FY 2022-23. It shall result in revenue deficit of Rs. 2680.08 Crore. In order to make up the entire Revenue Deficit, from increase in BSP there is possibility of tariff shock for the consumers. In order to avoid the same, the Petitioner prays before the Hon'ble Commission to suggest the State Govt. for waiver of Return on Equity for FY 2023-24.

**Comment [AH(3)]:** Who will request ?

317. In addition to BSP, the Petitioner also requests the Hon'ble Commission to create a separate mechanism as proposed above to repay loan liability under Special Appropriation of Rs 1592.54 Cr. for FY 2023-24.

## 7 BSP Proposal for FY 2023-24

318. The Petitioner submits that, with present Bulk Supply Price structure, it cannot meet its current costs as shown above. In order to meet this deficit, GRIDCO humbly submits the present ARR & BSP Application for FY 2023-24 before Hon'ble Commission praying for upward revision of Bulk Supply Price to be effected from 1st April, 2023. The proposal is mentioned under the next paragraph "Design of Bulk Supply Price to meet the proposed Aggregate Revenue Requirement for FY 2023-24".

### **Design of Bulk Supply Price to meet the proposed Aggregate Revenue Requirement for FY 2023-24**

319. GRIDCO proposes to recover the net revenue requirement of Rs. 13,839.39 Crore (Rs. 14,193.71 Cr. – Rs. 354.32 Cr.) through BSP of 380.64 P/U only as detailed in the table given below:

**Table 80 : Proposed BSP for FY 2023-24**

Sl. No.	COMPONENTS	Proposed ARR & BSP for FY 2023-24
A	Net ARR to be recovered through BSP (Rs Cr.)	13839.39
B	Units to be sold to Discoms Utilities (MU)	36,358
C	Proposed Average BSP to recover the Net Total Aggregate Revenue i.e. (ENERGY CHARGE ONLY) (P/U) [A*1000/B]	380.64

320. As per the audited accounts for FY 2021-22 the TP Discoms have Regulatory Surplus of Rs. 1224 crore (i.e. Rs. 55 crore for FY 20-21, Rs. 705 Crore for FY 2021-22 and Rs. 464 Crore for H1-FY 22-23). The Petitioner submits that such surplus amount be allowed to GRIDCO through suitable upward revision to BSP without any impact on RST for the consumers of the State.

**Comment [SS(4)]:** To be revisited

### **Demand Charge for excess SMD**

321. The Petitioner submits that it signs PPA based on the SMD projections of Discoms. There are seasonal variations in SMD which the Petitioner needs to account for when planning for power procurement. In the event of higher actual SMD, the Petitioner is

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obligated to procure power from the market. Invariably, such additional drawal by Discoms is during peak hours when the market price is high. Hence the Petitioner is required to procure costly power. GRIDCO proposes that the demand charges may be levied @ Rs.250/KVA/Month from distribution companies on the excess SMD based on the following conditions:

- a. When the actual SMDs of Discoms in a month exceeds the permitted monthly SMDs (105% of the approved SMD), the distribution companies will be billed by GRIDCO @ Rs.250/kVA/Month for the excess SMD.
- b. Such charges shall not be adjusted at the end of the year even if the actual annual SMD remains within the permitted annual SMD i.e. 105% of the approved Annual SMD.

**Fuel price adjustment and recovery of full power purchase cost beyond approved drawal by Discoms**

322. The Petitioner submits that Fuel Price Adjustment (FPA) mechanism needs to ensure timely recovery of changes on account of fuel cost which is an uncontrollable expense. Certain states such as Maharashtra, allow monthly adjustment of tariff to account for FPA. Ex-post facto approval is provided on quarterly basis by MERC. Some other States determine the fuel price adjustment on quarterly basis. In Gujarat, FPA upto 10 paise/unit is allowed to be levied without any prior approval of GERC.
323. The Petitioner requests the Hon'ble Commission to deal with the matter of FPA in the tariff order for each year as per the practices followed in other States. Moreover, the Hon'ble Commission may also provide for a mechanism for monthly or quarterly determination of FPA component which can be recovered through tariff which is also a practice followed in other States.
324. In this regard, it may be noted that the draft OERC Retail Tariff Regulations, 2022 has been published in which there is provision of pass through of monthly power purchase cost under Fuel and Power Purchase Cost Adjustment Surcharge (FPPAS). However, till the time such mechanism has been put into practice the Petitioner

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humbly prays before the Hon'ble Commission to kindly formulate a mechanism for monthly or quarterly determination of FPA component.

#### **Over Draw Charges**

325. GRIDCO submits that it presently bills the distribution companies at 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 Hon'ble Commission (OERC) is pronounced and implemented in the State of Odisha.
326. GRIDCO proposes that any excess drawl of energy by a Distribution and Retail Supply Licensee (DISCOM Utilities) during a month over and above the monthly approved energy quantum shall be paid at approved BSP rate for each Discom or actual power purchase cost incurred for excess drawl whichever is higher (including transmission, deviation charges and transmission loss) on a monthly basis applicable to the respective Discoms.

#### **Revision in Rebate Policy**

327. At present, GRIDCO is raising the BSP bill for a particular calendar month during the 1st week of the subsequent month. The DISCOMs are also expected to raise bill on different category of consumers (except SBM consumers) by end of first week of the calendar month. Further, the due date for payment of retail supply bill by different category of consumers is presently kept at seven days and rebate is allowed for payment made by the consumer within three working days. As such, it is expected that DISCOMs are collecting the revenue from different category of consumers by end of the month of billing itself.
328. In view of above, the BSP bill of GRIDCO needs to be settled by the end of the month of billing itself. As such, due date of bill may be kept at 25 days from the date of presentation of bill.
329. In respect of maximum rebate to be allowed to DISCOMs, it is to state that the maximum rebate needs to be in line with the maximum rebate allowed to GRIDCO by the Generators under prevailing CERC / OERC Terms & Conditions of Tariff

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Regulations. Currently, Hon'ble CERC allows maximum rebate of 1.50% for making payment to the generators and transmission licensee within a period of 5 days. The rebate policy must be consistent with the rebate mechanism between GRIDCO and generators (including NTPC and NHPC stations).

330. In view of above, the following graded rebate is proposed for payment of BSP dues:

Graded Rebate:

- a. For crediting the BSP bill of the DISCOM to GRIDCO's designated current bank account through Letter of Credit on presentation or through NEFT/RTGS within a period of five (5) working days, a rebate of 1.5 % shall be allowed.
- b. Where the amount is credited on any day after five (5) working days and within a period of twenty five (25) days of presentation of bill, a rebate of 1.00% shall be allowed.
- c. The DISCOMs may pay their BSP dues in staggered manner under different rebate option, but for eligibility of rebate, total current BSP dues needs to be settled by the DISCOM within 25th day of presentation of BSP bill.

**Special concessional tariff under Regulation 139 of OERC Distribution (Conditions of Supply) Code, 2019**

331. The Hon'ble Commission vide its Order dated 23.05.2022 has accorded approval to the interim arrangement agreed between GRIDCO and DISCOMs for sale of surplus power to the interested industries having CGP with CD of more than 20 MW at a fixed price of Rs.4.75/kVAh (beyond 80% LF) through a Tripartite Agreement among GRIDCO, DISCOMs and the Consumer.

332. The Petitioner proposes to continue the same arrangement with a revised tariff of Rs. 5.25/kVAh(beyond 70% LF) for FY 2023-24.

**Commitment Charges for new and additional Load**

333. The Petitioner submits that, during the course of a year, the Discoms approach the Petitioner with applications of new and additional load from industries / institutions.

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The Petitioner accordingly plans for additional power procurement depending on the expected date of load addition. However, it has been observed that the requested load is either not availed or there is a delay in availing the load by the industries. The Petitioner which plans in advance for such additional load, has to bear the fixed charges corresponding to the additional capacity contracted to honour the requested load.

334. This situation leads to additional burden of fixed charges on the Petitioner which ultimately puts burden on consumers of the State. However, the industries / institutions do not face any penalty for not availing or delaying load. In view of the same, the Petitioner requests the Hon'ble Commission to impose commitment charges @ Rs.250/KVA/Month on industries which apply for new or additional load. Such commitment charges may be in form of a lump-sum deposit with the respective Discoms which the Petitioner shall be allowed to forfeit from the Discom if the consumer does not avail the load as per the commitment.

#### **Disparity in recovery of Fixed Charge and Variable Charge between Discoms and GRIDCO**

335. The Petitioner submits that it has to recover the ARR through a BSP which is 100% variable charge whereas the Petitioner makes payment to the generators and transmission utilities in terms of fixed as well as variable component. The Discoms, on the other hand, have a revenue which has both fixed and variable component but makes payment to the Petitioner at the BSP which is variable in nature.
336. Such disparity in recovery vs cost not only hinders long term planning of energy requirement but also affects the financial sustainability during substantial fall in demand.
337. It is important for the Bulk Supplier to recover its expenses in the ratio of variability of its cost to ensure financial sustainability. In view of this, the Petitioner requests the Hon'ble Commission to allow part of the ARR of the Petitioner to be recovered as fixed charge from the fixed charges recovered by the Discoms from its consumers.

#### **Duty and Taxes**

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338. The Electricity Duty levied by the Government of Odisha and any other Statutory levy/ Duty/ Tax/ Cess / Toll etc. imposed under any law from time to time shall be charged over and above the Bulk Supply Price.

## **8 Tariff Philosophy**

1. The Petitioner in Tariff Petition for FY 2023-24 has proposed to recover Net ARR of Rs.13,839.39 Cr through Energy Charges (variable charges) only i.e. 100% of its Revenue as per the present BSP mechanism approved by Hon'ble Commission. On the expenses side 52% of its Power Purchase cost is Variable in nature whereas the recovery mechanism is 100% through variable charges.
2. Such disparity in recovery vs cost not only hinders in long term planning of energy requirement but also affects the financial sustainability during substantial fall in demand.
3. With the recent privatization of four DISCOMs, the role of a bulk supplier also increases with power purchase cost accounting for 75-80% of total cost of the Discoms. It is important that for the Bulk Supplier to recover its expenses in the ratio of variability of its cost and ensure financial sustainability. The Petitioner submits that they can make a presentation on the proposal for segregating Bulk Supply tariff into fixed and variable charges with the recent privatization of four DISCOMs. The petitioner, being functioning as the "State Designated Entity" is well committed to extend quality power to consumers of the state through DISCOMs. The petitioner needs to recover the total cost following the merit order principle for optimizing its cost with obligations to pay the capacity charges of the generating stations, ensuing Financial sustainability.

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## 9 Prayers

111. In view of the submissions made in the aforementioned paragraphs, GRIDCO humbly prays before the Hon'ble Commission to consider the ARR & BSP Application for FY 2023-24 on record and approve the ARR & BSP as proposed in the Application and kindly accept the following prayer;
- a. Consider allowing all the reasonable costs including uncontrollable costs and RoE as proposed in the petition above and accordingly, approve the ARR and Bulk Supply Price (BSP) for FY 2023-24 and make the same effective from 1st April 2023;
  - b. Approve the fixed charges as payable by GRIDCO to the generating stations for all existing and new stations to be recovered, through BSP, wherever PPA is tied up on overall long term energy planning of the state even if energy is not fully scheduled in few period of the year from stations based on MoD principles and change in demand trend of the state;
  - c. Allow the carrying cost on Regulatory Assets and amortisation of the Regulatory assets in 2023-24
  - d. The Petitioner respectfully prays the Hon'ble Commission to allow a suitable mechanism to recover the shortfall towards Discoms' receivable of Rs. 7128.60 Cr., arising out of sale of utilities of CESU, WESCO, NESCO and SOUTHCO through regulatory process preferably in the next five years.
  - e. 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 etc. if any, be passed on to GRIDCO on account of the OERC / CERC / Tribunal / Court Orders / Impact due to any change in law etc. or the like, as surcharge during the year on quarterly basis;
  - f. Allow recovery of the full cost of the plant with the next highest tariff in the merit order from the Discom(s) if any Discom(s) draw power in excess of the projected demand based on which BSP is determined.



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- g. To allow Fuel Price Adjustment in the tariff order and to create a mechanism for monthly/quarterly fuel price adjustment.
  - h. Pass suitable orders related to sale of surplus power to industrial/large consumers considering recovery of cost to GRIDCO, margins for Discoms and applicable transmission charges etc. as specified in this petition.
  - i. Approve the proposed rebate mechanism as specified in this petition.
  - j. Direct the Discoms to pay GRIDCO's share of past arrear collection on monthly basis and also submit monthly MIS reports as specified in this petition
  - k. Allow the petitioner to make additional submissions pertaining to this petition
  - l. To pass such Order which are necessary to meet the above prayers and allow GRIDCO to amend / modify the application as necessary and further submissions if any, during the course of hearing;
  - m. Condone any inadvertent omissions/ errors/ shortcomings/ delays and permit to make further submissions as may be required at a future date to support this Petition in terms of modification / clarification; and
  - n. Pass such further orders, as the Hon'ble Commission may deem fit and proper, keeping in view of the facts and circumstances of the case.

for which, GRIDCO, as is duty bound, shall ever pray.

**BY THE APPLICANT THROUGH**

**Bhubaneswar**

**Chief General Manager (PP)**

**November 30, 2021**

**GRIDCO Limited**