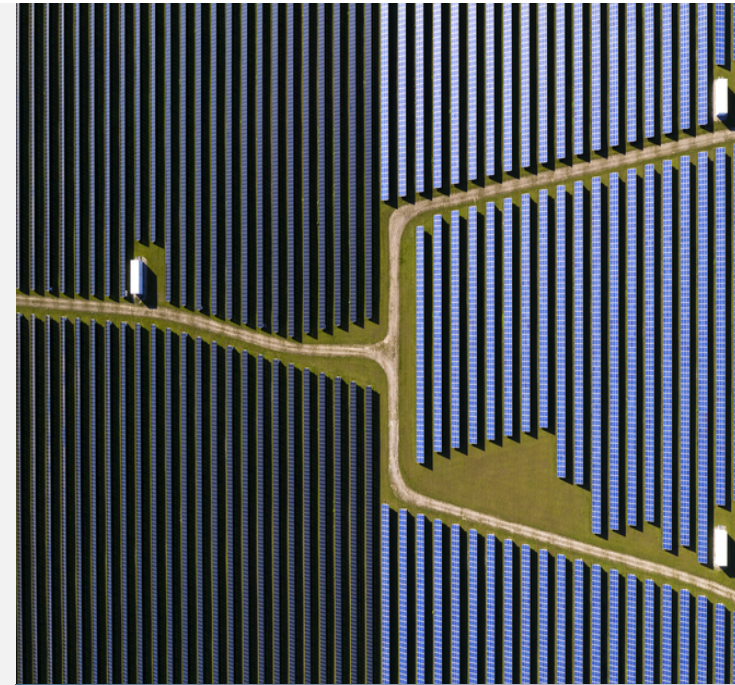




ARR & BSP Application of GRIDCO for FY 2023-24

(Case No. 78 of 2022)

Date: 15.02.2023 Time: 11:00 AM



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GRIDCO at a Glance

GRIDCO was created as per Section 13 (1) of the Orissa Electricity Reform Act, 1995

GRIDCO is a **Deemed Trading Licensee** under 5th proviso to Section 14 of the Electricity Act

GoO vide notification dated 17.08.2006 has notified GRIDCO as the “**State Designated Entity**” for execution of PPA

Hon’ble Commission vide **Section 86 (1) (a)** determines the ARR of GRIDCO

Many other States viz. Bihar, UP, MP, Haryana and Gujarat follow single buyer model for bulk procurement of electricity through state owned entity like Odisha

As per **Government of Odisha’s Transfer Notification No 6892 dated 9.6.2005**, GRIDCO is a bulk supplier in the State of Orissa which has been upheld by APTEL Order dated 21.12.2012 in Appeal No.188 of 2010:

Hon’ble APTEL Judgment in Appeal No.106 of 2010 has admitted that:

*“Admittedly, the Appellant is a trading licensee under the Electricity Act, 2003. It is also **responsible for bulk supply power** to the distribution licensees and the Power Purchase Agreements of the erstwhile Orissa State Electricity Board have been vested with the Appellant. GRIDCO is also responsible for short-term arrangements for procurement of power to meet the requirements of the distribution licensee.”*

Key Functions of GRIDCO

Chapter-V of the Orissa Electricity Reform Act, 1995 stipulates the functions of GRIDCO as follows (excluding Electricity Transmission & Distribution functions):

Procurement and Bulk Supply of Electricity

Determine the electricity requirements of the State in coordination with Generating companies, State Government, Contiguous States, the Commission and the Central Electricity Authority (CEA)

The above entails the following responsibilities:

Ensure Energy Security of the State

Preparation of Long-term power procurement plan for the State

Capacity Planning and Power Procurement with Cost Optimisation

Planning and executing for meeting the RPO targets for the State

Demand Projection for FY 2023-24

Particulars	In MUs			
	2021-22 (Actual)	2022-23 (Approved)	2022-23 (Projected)	2023-24 (Projected)
TPCODL	8,814	9,790	10,113	10,999
TPNODL	5,327	6,020	6,463	7,750
TPSODL	3,942	4,390	4,401	4,609
TPWODL	8,967	9,300	11,122	13,000
Total DISCOMs	27,050	29,500	32,099	36,358
TPFA	34		50	22
TPLCO	39	60	40	48
Total including Emergency Sale	27,123	29,560	32,189	36,428
Intra-State Trmn. Loss		914 (@3%)	996 (@3%)	1,127 (@3%)
Purchase Required		30,474	33,185	37,555

Requirement to DISCOMs till January 2023: 26,837.78 Mus (provisional)

As per Clause 3.10 of the Odisha Grid Code, 2015 stipulates that the primary responsibility of load forecasting within its area rests with the DISCOMs. GRIDCO estimates the demand by aggregating the projections submitted by the DISCOMs.

Assumptions:

- Projected demand from DISCOMs has been estimated to increase by 19% in FY 2022-23 over FY 2021-22 due to opening up of economy after the COVID pandemic which has been further expected to increase by 13% in FY 2023-24
- Growth in sales of TPCODL, TPNODL, TPSODL, TPWODL have been projected to increase by 9%, 20%, 5%, 17% respectively for FY 2023-24 over FY 2022-23
- Intra-State Transmission Loss is considered @ 3% for FY 2023-24 as approved by Hon'ble OERC for FY 2022-23

MD Projection for FY 2023-24

DISCOMs	FY 2021-22 (Actual)		FY 2022-23 (Estimated)		DISCOM Projection FY 23-24		GRIDCO Projection FY 2023-	
	(MU)	(MVA)	(MU)	(MVA)#	(MU)	(MVA)	(MU)	(MVA)
TPCODL	8,814	1,572	10,113 (15%)	1,895 (21%)	10,999 (9%)	2,192 (16%)	10,999 (9%)	2,004 (6)
TPNODL	5,327	938	6,463 (21%)	1,155 (23%)	7,750 (20%)	1,396 (21%)	7,750 (20%)	1,318 (14)
TPSODL	3,942	650	4,401 (12%)	722 (11%)	4,609 (5%)	800 (11%)	4,609 (5%)	747 (3)
TPWODL	8,966	1,528	11,122 (24%)	1,794 (17%)	*13,000 (17%)	1,850 (3%)	*13,000 (17%)	1,948 (9)
Total	27,049		32,099 (19%)		36,428 (13%)		36,428 (13%)	

*Includes TPA of 2,500 MU as per submission of TPWODL

Actual up to January 2023

Highlights

Against projected SMD, GRIDCO has tied up capacity of ~4,147 MW thermal, ~2363 MW hydro & ~1,465 MW RE.

To meet the peak demand in the past during the entire year, all thermal stations had to be scheduled. Availability of and Hydro sources may not coincide with the peak period. Hence, power from all thermal power stations are essential

GRIDCO to meet state peak demand at all times of the year.

Key Considerations for Projection of Power Purchase Cost

General Approach:

Renewables are considered as “Must Run” plants

GRIDCO strictly follows the MoD principles for Power Procurement for State consumption

Assumptions / Methodology followed for Projection:

State Hydro: Generation Plan of OHPC

State Thermal (OPGC): Actual PLF of FY 2021-22 considered for Stage-I, Generation Plan for Stage-II

Central Hydro: Last 6 years’ average

Central Thermal: Last 6 months’ average drawl

M/s. Vedanta Ltd.: Generation Plan shared with GRIDCO

M/s. GKEL: Generation Plan shared with GRIDCO

M/s. NBVL: Generation Plan shared with GRIDCO

Projected Power Purchase Cost for FY 2023-24

Name of Generator	Net Energy available to GRIDCO	Fixed Cost	Variable Cost	Yr. End Adjustment	Total Cost
	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.
JUST RUN RE SOURCES					
Large Hydro	5,825.89	281.05	250.66	14.46	546.17
Small Hydro	483.35	-	211.28	-	211.28
Large Solar	606.00	-	275.41	-	275.41
Biomass	80.00	-	60.80	-	60.80
Central Solar	1,554.00	-	471.08	-	471.08
Central Wind	1,060.43	-	296.86	-	296.86
Central Hydro	1,208.68	51.22	282.10	-	333.32
OTHER PLANTS					
STPS-I	5,503.70	1,314.32	592.10	69.11	1,975.53
PGC(UNIT 1 & 2)	2,509.73	291.07	404.29	25.76	721.12
PGC(UNIT 3 & 4)	9,294.69	1,487.15	1,580.10	39.65	3,106.90
Madanta (IPP)	2,803.20	268.18	522.98	11.32	802.58
MR (IPP)	1,906.90	314.74	378.17	-	692.91
AVL-IPP	39.94	-	7.97	-	7.97
STPS-II	1,548.52	130.36	359.30	19.71	509.37
STPS-I	1,974.31	213.08	460.34	29.03	702.45
SRH	940.20	261.62	248.01	0.57	510.20
STPL (IPP)	512.10	0.00	172.07	0	172.07

Projected Power Purchase Cost for FY 2023-24

Name of Generator	Net Energy available to GRIDCO	Fixed Cost	Variable Cost	Yr. End Adjustment	Total Cost
	MU	Rs. Cr.	Rs. Cr.	Rs. Cr.	Rs. Cr.
ISTPS-II	205.05	26.53	80.82	2.76	110.11
ISTPS-I	24.97	3.26	10.38	4.33	17.97
TPS III	321.72	98.61	143.44	11.17	253.22
TPS-I&II	49.70	5.77	22.57	9.46	37.80
OTHER CHARGES					
CIL Transmission Charges	-	774.71	-	-	774.71
LDC Charges	-	2.81	-	-	2.81
DC Charges	-	1.28	-	-	1.28
GRAND TOTAL	38,453.07	5,525.77	6,830.72	237.33	12,593.82

Fixed Cost is 46% of the total power purchase cost projected for FY 2023-24

Additional Power Purchase Cost

No.	Amount	Remarks
1	Rs. 11.56 Cr.	Year-end Charges paid for OPGC Stage-I for the period Apr-22 to Sep-22
2	Rs. 76.11 Cr.	Adhoc payment made to OPGC towards claim of Secondary Fuel Oil cost for OPGC Stage-I
3	Rs. 14.82 Cr.	Year-end Charges paid for OPGC Stage-II for period Apr-22 to Sep-22
4	Rs. 348.11 Cr.	Additional Power Purchase cost due to difference in AFC and additional drawl to meet State demand (FSTPS-I & II, FSTPS-III, KHTPS-I & KHTPS-II and TSTPS-I, TSTPS-II, DSTPS-I)
5	Rs. 295.00 Cr.	Payment made by GRIDCO to KBUNL towards arrear charges
6	Rs. 229.63 Cr.	Ash Transportation Charges Claimed by NTPC as per CERC Order dated 28.10.2022
7	Rs. 37.96 Cr.	<ul style="list-style-type: none">Re-imburement of STU transmission charges and RLDC / scheduling chargesRe-imburement towards Safeguard Duty claims as per CERC Order dated 20.08.2021Refund of excess rebate availed by GRIDCO as per OERC Order dated 18.10.2022
8	Rs. 49.10 Cr.	Additional power purchase cost from Non-solar sources
9	Rs. 10.12 Cr.	Impact of wage revision for Teesta-V as per CERC Order dated 10.11.2022
	Total: Rs. 1072.41 Cr.	

able Commission is requested to allow the additional power purchase cost which is uncontrollable in nature recovered through BSP in ensuing year

Finance Cost

Total Interest & Finance Charges for FY 2023-24 estimated : Rs. 543.46 Cr.

GRIDCO had availed loans in the past for ensuring timely payment to GENCOs and provide uninterrupted power supply to the State consumers

GRIDCO is obligated to service the finance costs on loans even though the same were disallowed by Hon'ble OERC.

Hon'ble Commission has not been allowing Interest on the said loans or the carrying cost of the Regulatory Assets

Repayment of Principal Loan or amortization of Regulatory Assets are not allowed by the Hon'ble Commission (Annual

Payment Obligation (Principal + Interest) is ~ Rs. 2,136 Crores.

Arrear Collection by the DISCOMs shall be insufficient to meet the Loan Repayment Obligation.

Non-consideration of Finance Costs will further adversely impact GRIDCO's financials and cashflow.

Hon'ble Commission is requested to kindly allow total financing cost or carrying cost on Regulatory Asset for servicing the outstanding loan liabilities

Proposed ARR for FY 2023-24

Sl.	Particulars	Proposed for FY 22-23	Approved for FY 22-23	Estimated for FY 22-23	Proposed for FY 23-24
1	Power purchase cost	9431.04	9071.93	*12,055.00	12,236.00
2	Additional Power Purchase cost	816.9	147.46		1,072.00
3	Interest cost	623.69	39.53		495.00
4	Employee cost	15.09	13.25		15.00
5	Repair & Maintenance	0.85	0.85		0.00
6	Administrative and General Expenses	7.5	5.59		11.50
7	Depreciation	1.02	1.02		1.00
8	Return on Equity	92.27	0	0	354.00
9	ARR	10,988.36	9,279.63	12,576.50	14,245.00
10	Less: Revenue from Emergency sales	43	44.52	61.50	51.00
	Less: Return on Equity				354.00
11	Net ARR	10,945.36	9,235.11	12,515.00	13,839.00
12(a)	Revenue from Discoms at existing BSP and TPA	8431.24	9213.95	10,857.00	11,513.00
12(b)	Revenue from Trading & Other Sales			1,156.00	
13	Deficit Revenue at existing BSP of respective Discoms	2,514.12	21.16	502.00	2,325.00

Power purchase cost for FY 2022-23 doesn't include the impact of OPGC tariff revision Order issued by Hon'ble OERC

The Petitioner shall request the State Govt. for waiver of Return on Equity (RoE) for FY 2023-24.

Additional power purchase cost after filing of Petition on 30.11.2022 is estimated to be Rs. 996 Cr. The same has been submitted before the Hon'ble Commission for admission in the ARR for FY 2023-24

Considerations in ARR FY 2023-24

Trading Margin

GRIDCO undertakes trading of surplus power after meeting the State demand and earns revenue which is utilised to reduce the end-tariff for the consumers

GRIDCO supplies power at cost without any profit margin to ensure low-cost power for State consumers

Inadvertent Power

Injection of inadvertent power is detrimental for stability of the State Grid and State has to do a balancing act to accommodate this power. This may attract a penalty on GRIDCO under CERC DSM Regulations.

As per the Hon'ble APTEL judgement dated 08.05.2017 any inadvertent power injected to the system to be treated as free power.

Power Procurement from CGP

CGPs are not firm sources of power as they are essentially meant for the captive consumption

The option of sourcing power from CGPs inside the State is explored to meet the contingency, deficit and force majeure conditions in a cost-effective manner

Energy submissions

Demand Charges for Excess SMD:

When the actual SMDs of Discoms in a month exceeds the permitted monthly SMDs (105% of the approved SMD), the DISCOMs shall be billed by GRIDCO @ Rs.250/kVA/Month for the excess SMD.

Such charges shall not be adjusted at the end of the year even if the actual SMD remains within the permitted SMD i.e. 105% of the approved SMD.

Change in Rebate Policy:

Proposal: Payment of BSP bill by DISCOM within a period of 5 working days: 1.50% and after 5 working days and within 25 days : 1.00% or allow GRIDCO to recover Rs. 70.59 Cr. differential rebate to be allowed as pass through in the AF in case 2% rebate continues.

Rationale: 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 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.

Over-drawl Charges:

Any excess drawl of energy by a DISCOM during a month over and above the monthly approved energy quantum shall be charged at actual power purchase cost incurred for excess drawl (including transmission, deviation charges, transmission loss and etc.) in case it is higher than the approved BSP

Key submissions

Special Concessional Tariff for Industrial Consumers:

The Hon'ble Commission in Order dated 23.05.2022 approved an 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.

Same arrangement is proposed to continue with a revised tariff of Rs. 5.25/kVAh (beyond 70% LF) for FY 2023-24

Commitment Charges for New and Additional Load from Consumers:

Commitment charges @ Rs.250/ KVA/ Month on Industries is proposed to be levied for new or additional load.

Such commitment charges may be in the form of a lump-sum deposit with the respective Discoms which GRIDCO shall be allowed to forfeit from the DISCOM if the consumer does not avail the load as per the commitment.

Equity in recovery of Fixed Charge and Variable Charge:

GRIDCO may be allowed to recover its expenses from DISCOMs under two-part tariff mechanism in the ratio of Fixed and Variable Charge to be incurred during the ensuing year.

Suitable mechanism may be devised for refraining the DISCOMs from frequent under-drawl and over-drawl which t DISCOMs may apply on their power intensive consumers on back-to-back arrangement

Capacity Planning – 24 x 7 Power Supply

GRIDCO had planned future capacity addition based on 17th EPS issued by CEA in March, 2007

GRIDCO signed Long Term PPAs with NTPC Stations & IPPs to meet such rising demand

The main objective of Capacity Planning is to meet State's Power demand at all times at least cost.

GRIDCO de-allocated capacity from high cost Plants like, NTPC Barh-II (166MW) & Nabinagar (155 MW)

FSTPS-I & II (218 MW) & KhSTPS-I (128MW)

State would have faced power deficit in absence of PPA with NTPC North Karanpura & Barh-I plants

GRIDCO is obligated to pay Capacity Charge as per plant availability & not as per actual drawal

Long term Capacity planning is made keeping in view the future demand growth and RPO targets

Hon'ble Commission may consider allowing full Fixed/ Capacity charges for PPAs contracted

Odisha Renewable Energy Policy-2022- GRIDCO as Nodal Agency

Odisha Renewable Energy Policy, 2022 : Notified on 30.11.2022

GRIDCO Limited - designated as the Nodal Agency as per Para 25.2 of the Policy

Envisions RE capacity addition of ~10 GW in Odisha by 2030

Major Activities of GRIDCO as Nodal Agency:

- *Assessment of RE resource potential,*
- *Creation of a RE project pipeline,*
- *Preparation of PFR/DPR, Operational Guidelines and Bid Processing,*
- *Project Facilitation and Monitoring etc.*

GRIDCO is also notified as aggregator to procure RE and supply to obligated entities

Govt of Odisha shall provide funds to GRIDCO to carry out above responsibilities.

Hon'ble Commission is requested to issue necessary Orders and Regulations to facilitate implementation of Policy-2022 as envisaged in Para 25.9 of the said Policy

RPO Compliance for FY 2022-23 (Up to Nov'22)

Category	Renewable Power Procurement	RPO Target by OERC in %	RPO Target by OERC in MU	Capacity (MW)	RPO Target met		Compliance (%)
					in (MU)	in (%)	
Non-Solar							
(a)	HPO	0.35	60.36	51	60.36	0.35	100
(b)	Small Hydro Projects	6.15	1060.65	58.15	282.20	5.68	92.29
(c)	Biomass			20	32.65		
(d)	Wind			321.50	664.04		
(e)	Other Non-Solar (i+ii+iii)			399.65	978.89		
(f)	Total Non-Solar (a) + (b)	6.50	1121.01	450.65	1039.25	6.03	92.71
Solar							
(g)	Ground Mounted Solar	8.00	1379.71	986	1263.96	7.49	93.63
(h)	Roof Top Solar			25	27.82		
(i)	Total Solar (iv + v)			1011	1291.78		
Total RPO Compliance (c) + (d)		14.50	2500.72	1461.65	2331.03	13.52	93.21

Nov 2022 93.21% of the RPO compliance was achieved

ayer before the Hon'ble Commission

To **approve ARR** submitted for FY 2023-24

To approve **monthly SMD and monthly quantum of energy** for sale to each of the Discoms

To allow recovery of the **Fixed/Capacity charges** of all generating stations.

To allow the **carrying cost on Regulatory Assets and amortisation** of the same.

To **approve surcharge to meet loan repayment obligation** through Special appropriation.

To **allow recovery of the additional cost due to over-drawal of energy**, at actual power purchase cost

or at approved BSP rate for each Discom whichever is higher on a monthly basis

To **consider the regulatory surplus of DISCOMs for absorbing higher BSP**

To make suitable modification in the rebate mechanism



Thank You