



**AGGREGATE REVENUE REQUIREMENT (ARR)
APPLICATION FOR
FY 2022-23
(Case No.107/2021)**

19 Feb 2022



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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 Power Purchase Agreements.

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

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

GRIDCO AT A GLANCE

Key Functions of GRIDCO

Ensures **Energy Security** of the State.

Enables centralized and bulk procurement of power.

Responsible for making long term power procurement planning for the State.

Enables differential bulk supply tariff to maintain uniform Retail Supply Tariff.

Supplies power at-cost without any profit margin to ensure low-cost power for consumers of Odisha.

Responsible for meeting the **RPO and HPO** targets for the State

Energy Demand Projections for FY 2022-23

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

Estimation of Energy demand by DISCOMs

Particulars	2020-21 (Actual) (MU)	OERC Approved 2021-22 (MU)	2021-22 (Estimated) (MU)	2022-23 (Estimated) (MU)
TPWODL	8,370	9,290	8,978	9,271
TPNODL	4,941	5,880	5,524	5,973
TPCODL	3,615	4,100	3,906	4,170
TPWODL	7,619	8,600	8,600	9,000
TOTAL of DISCOMS	24,545	27,870	27,008	28,414
Emergency Sale	82.02	60	60	60
Total including Emergency Sale	24,627	27,930	27,068	28,474
Intra-State Trans. Loss	-	862(@3%)	837@3%	880.64(@ 3%)

- Demand from DISCOMs is estimated to increase by 5% for FY 2022-23 over FY 2021-22.
- TPCODL, TPNODL, TPSCODL, TPWODL have projected energy requirement increase of 3%, 8%, 7%, 5% respectively for FY 2022-23 over FY 2021-22.
- Intra-State Transmission Loss is considered @ 3% for FY 2022-23 as approved by Hon'ble OERC for FY 2021-22.

Energy Demand Projections : Demand is projected to increase by 5%

	2020-21 (Actual)		2021-22 (Estimated)		2022-23 (Projected)	
	MU	SMD	MU	SMD	MU	SMD
TPCODL	8,370	1,532	8,978 (7%)	1,662 (8%)	9,271 (3%)	1,723 (4%)
TPNODL	4,941	908	5,524 (12%)	1,050 (16%)	5,973 (8%)	1,150 (10%)
TPSODL	3,616	600	3,906 (8%)	626 (4%)	4,170 (7%)	720 (15%)
TPWODL	7,619	1,423	8,600 (13%)	1,524 (7%)	9,000 (5%)	1,650 (8%)
TOTAL	24,546	4,463	27,008 (10%)	4,862 (9%)	28,414 (5%)	5,243 (8%)

Highlights

Modest growth rate is projected for both Energy Sale (MU) and SMD in FY 23 as compared to FY 22.

Against projected SMD of 5,243 MW, GRIDCO has tied up capacity of ~4200 MW thermal, ~2000 MW hydro & ~1400 MW RE to meet the peak demand in the past at all times of the year, all thermal stations had to be scheduled. Availability of RE sources may not coincide with the peak period. Hence, power from all thermal power stations are essential for GRIDCO to meet state peak demand at all times of the year.

Projected Power Purchase Cost for 2022-23

Station Name	Energy Available	FC	VC	Year End charges	Total Cost	Per unit (P/U)
	(MU)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	
al State Hydro	5416.03	250.85	279.67	12.70	543.21	100.30
GC - 1 & 2	2597.99	260.76	397.00	67.15	724.91	279.03
GC - 3 & 4	6919.90	1200.60	939.03	30.56	2170.19	313.62
al State Thermal	9517.89	1461.36	1336.03	97.71	2895.10	304.17
ewables	3312.22	-	1167.64	-	1167.64	352.52
R Energy Ltd.	1670.00	286.84	278.52	6.12	571.49	342.21
anta Ltd.	2628.70	251.22	488.70	10.56	750.48	285.50
al IPP	4298.70	538.06	767.22	16.68	1321.97	307.53
al State Availability	22,544.84	2,250.27	3,550.54	127.09	5,927.9	262.94

Projected Power Purchase Cost for 2022-23

Station Name	Energy Available	FC	VC	Year End charges	Total Cost	Per unit
	(MU)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(Rs. Cr.)	(P/U)
STPS-III	503.27	99.83	149.99	5.82	255.64	507.9
STPS Stg.-II	266.97	25.71	63.43	0.53	89.66	335.8
STPS Stg.-I	2175.82	213.88	412.49	25.77	652.13	299.7
STPS Stg.-II	1317.38	124.33	248.15	18.07	390.55	296.4
Chilipali Unit I & II	6356.29	1322.39	638.21	9.81	1970.41	307.9
STPS-I & II (Bundled solar)	39.34	5.19	11.94	0.81	17.94	456.0
STPS -III (Bundled solar)	27.67	3.26	6.93	0.21	10.40	375.8
Chilipali STPS-I (Unit-2: 2*660MW)	1937.73	521.25	494.12	0.00	1015.37	524.0
Total Central Thermal	12,624.47	2,315.83	2,035.41	61.02	4,402.12	348.7
Chilipali	267.00		66.27		66.27	248.2
Chilipali	126.00		29.56		29.56	234.6
Chilipali	506.00	51.95	51.95		103.90	205.3
Chilipali	323.00		139.88		139.88	433.0
Total Central Hydro	1222.00	51.95	287.66	0.00	339.61	277.9
Total Central Sector	13,846.47	2,367.78	2,323.07	61.02	4,741.71	342.4
Total Availability	36,391.31	4,618.05	5,873.62	188.10	10,669.61	293.1
CIL Charges		792.35			792.35	
FC & MOC Charges		2.67			2.67	
AND Total	36,391.31	5,413.07	5,873.62	188.10	11,464.63	315.0

Projected Cost is 48% of Total Cost

Power Procurement : Key Considerations

General Approach to Power Procurement Plan for FY 2022-23:

1. Hydro Plants are considered as per Generation Plan of OHPC
2. Renewables are considered as “**Must Run**” plants
3. GRIDCO strictly follows the **MoD principles** for Power Procurement for State consumption

PPs

GRIDCO is entitled to procure power from 5 IPPs.

- Power from **M/s. Vedanta Ltd.** and **M/s. GMR Ltd.** has been considered for the year as per average annual supply.
- **M/s. Ind-Barath Utkal Energy Ltd** has become NPA and has been taken to NCLT for resolution process
- GRIDCO is planning to avail power from **M/s. NBVL** (07 MW) subject to merit order.
- **JITPL** has challenged the MOU with GoO and PPA with GRIDCO before the Hon’ble High Court. Based on Interim Stay JITPL is not supplying power to the State.

Fixed charges of Generating Stations

- PPAs are executed by GRIDCO based on allocation of State share of power by MoP, GoI and with the State GENCOs.
- GRIDCO is obligated to pay fixed charges irrespective of drawl as per applicable Regulations. SERCs of various States allow the Capacity Charges of the high cost Generating Stations through whom DISCOM/ State execute long term contracts, even if there is less drawal due to fall in demand.

Pass Through Power Purchase Cost

Particulars	Amount (Rs Cr.)	Remarks
PPC (All Stations)	580.71	(i) Rs. 479.58 crore towards power cost of disallowed stations FSTPS –I,II & I KhSTPS –II of FY 2021-22 due to forced scheduling. (ii) Rs.160.29 crore towards addl. Cost for drawal from DSTPS-II exceeding t approved energy for FY 2021-22 (Apr'21 to Sept'21). (iii) Rs. 5.39 crore towards revision bills of TTPS (April'21 to Sept'21) (iv) (-) Rs. 64.55 crore of TSTPS –I &II, towards less cost of energy for FY 2021-22 (Apr'21 to Sept'21).
M/s. GKEL	114.11	2 nd & 3 rd instalments of Rs. 114.11 Cr.(each instalment Rs. 57.11 cr) as per OERC Order dated 22.03.2018 in case No. 76 of 2017 towards arrear payment
Charges (Year End Charges of M/s. Azanta & M/s. GKEL)	41.56	Reimbursement of ED, Water Cess, SOC & MOC charges and DSM charges amounting to Rs 41.56 Cr. (FY 2014-15 to 2020-21)
STU charges of other states for RE power, payment of GST and safeguard duty due to change in law	66.96	STU Charges towards procurement RE power from outside the State, Payment of GST compensation, payment on safeguard duty claims of M/s Azure power
Central Hydro (OPCL Biribati & Dupatna) arrear charges	1.52	As per OERC direction of Case No. 17/2021 & 25/2021 OPGC raised bills.
Central Hydro (Teesta)	11.56	Teesta-v deferred Tax Liability FY 2020-21
Central Hydro (Tala)	0.48	Revised rate of 227 P/U Tala power w.e.f 01.12.2021 based on the PTC letter dated 11.11.2021
Total	816.90	

Details of proposed ARR for FY 2022-23

Particulars	Amount (Rs. Cr.)
Power Purchase Cost	11,464.63
Less: Revenue from trading of surplus power	2,033.59
Power Purchase Cost for regulated power	9,431.04
Losses Through Power Purchase Cost	816.90
Interest Cost	623.69
Employee Cost	15.09
Repair & Maintenance + Administrative & General Expenses	8.35
Depreciation	1.02
Energy	92.27
ARR	10,988.36
Less: Revenue from Emergency Sales	43.00
Net Revenue Requirement	10,945.36

ARR : Key Considerations

Trading Margin for GRIDCO

- GRIDCO undertakes trading of surplus power 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 consumers of Odisha.

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**.

Rebate Proposal For Timely Payment

Payment of BSP bill by DISCOM within a period of 5 working days : 1.5%

Payment of BSP bill after 5 working days and within a period of 25 days : 1%

Rationale

GRIDCO is raising BSP bills for a particular calendar month by the end of 1st week of the subsequent month. DISCOMs raise bills on different category of consumers (except SBM) by end of first week of the subsequent month.

Rebate date for LT consumers – 7 days ; HT & EHT – 3 days

DISCOMs are collecting the revenue from different category of consumers by end of the month of billing itself.

Since the BSP of GRIDCO needs to be settled by the end of the month of billing itself.

The rebate mechanism for DISCOMs is proposed to align it with the rebate allowed to GRIDCO by DISCOMs.

Capacity Planning

timely capacity planning, GRIDCO has been able to cater to energy requirement of the State

GRIDCO had planned future capacity addition based on 17th EPS (Electric Power Survey) issued by CEA in March, 2007

State demand was estimated to grow to 10,074 MW by FY 2021-22. Accordingly, GRIDCO signed Long Term PPAs with NTPC Stations & IPPs to meet such rising demand

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

GRIDCO's has been able to de-allocate capacity from high cost Plants like, NTPC Barh-II (166MW), Nabinagar (155 MW), FSTPS-I& II (218 MW) & KhSTPS-I (128MW)

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

GRIDCO is obligated to pay FC as per plant availability & not as per actual drawals

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 by GRIDCO

Recovery of Fixed Cost

Hon'ble OERC has allowed Fixed Cost of all NTPC Stations up to FY 2019-20 in the ARR.

Hon'ble Commission has disallowed FC of NTPC FSTPS-I,II & III and KhSTPS-I&II stations during FY 2020-21 and FY 2021-22.

In Tariff order for FY 2021-22, Hon'ble OERC disallowed fixed cost of NTPC stations of **Rs. 183 Crore**

In Tariff order for FY 2020-21, Hon'ble OERC disallowed fixed cost of NTPC stations of **Rs. 348 Crore**

Hon'ble OERC in previous orders had allowed full Fixed cost recovery from these stations

Various SERCs in other states have allowed full FC for all stations even for stations with <30% PLF

Hon'ble APTEL in the matter of DVC vs. JSERC, regarding disallowance of power purchase cost, held that FC needed to be paid even if power is not scheduled

State Commission to consider entire FC of power purchase as determined by the Central Commission to provide its different Orders from the generating stations of CPSUs & other IPPs for meeting power obligations of the Appellant."

Hon'ble Commission may kindly consider to approve full fixed cost of capacity contracted by GRID

Fixed Costs allowed by SERCs

State	Plant Name	Capacity (MW)	PLF %	Energy Purchase (MU)	Fixed Charges Amount (INR Cr)
Uttar Pradesh	IPP Bajaj Energy (BEPL Khambhakhhera)	90	9%	77.99	123.24
Uttar Pradesh	IPP Bajaj Energy (BEPL Barkhera)	90	11%	86.74	121.95
Uttar Pradesh	IPP Bajaj Energy (BEPL Maqsoodapur)	90	12%	94.88	122.39
Madhya Pradesh	NTPC (Solapur STPS, Unit 1)	311.98	4%	-	180.82
Madhya Pradesh	IPP (Jaypee Bina Power)	350	18%	-	504.75
Madhya Pradesh	Satpura Phase III	420	34%	1,264.34	407.73
Rajasthan	State Owned (KaTPP 2)	600	44%	2,346.14	635.00
Rajasthan	CTPP Unit 5	660	51%	2,981.45	725.00

Finance Cost

Total Interest & Finance Charges for FY 2022-23 estimated	:	Rs. 623.69 Crores
Interest on State Government Loans	:	Deferred

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

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

Hon'ble Commission has not been allowing Interest on Working Capital Loans

Post vesting of DISCOMs, there is a Payment Security Mechanism for collection of current BSP bills but **PSM available** for collection of past dues.

The total Payment Obligation (Principal + Interest) for FY 2022-23 is around **Rs. 2000 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.

Performance of DISCOMs (up to Q3 of FY 2021-22)

Particulars	Rs.				
	TPCODL	TPNODL	TPWODL	TPSODL	TOTAL
Total Revenue (A)	3,195.71	2,083.81	3,647.76	1,287.69	10,214.97
Total Expenses (B)	3,106.35	1,927.38	3,201.09	1,195.21	9,430.03
Profit before Regulatory Referrals (A-B)	89.36	156.43	446.67	92.48	784.94
Regulatory surplus to be adjusted in future tariff	-61.44	-99.43	-412.20	-30.40	-603.47
Net Profit (before Tax)	27.92	57.00	34.47	62.08	181.47

At the time of filing of ARRs, the Regulatory Surplus was **Rs. 454.97 Crores** as of end of H1 FY 22.

The Regulatory Surplus of DISCOMs rose to **Rs. 603 Crores** as on 31st December 2021. This is expected to increase in the remaining three months of the FY 22.

GRIDCO's cumulative loss (audited) till FY 2021 is **Rs. 7,446 Crores**.

There is scope for the DISCOMs to absorb higher BSP without any change in the RST.

Prayers before Hon'ble Commission

To approve ARR of Rs.10,945.36 Crore for FY 2022-23.

To approve the Fixed/Capacity charges of all existing and new stations.

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

To frame suitable mechanism for settlement of DISCOMs' old receivable Rs.7,788.30Cr. as on 31.03.2021.

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

To allow recovery of the additional cost/s due to over-drawal of energy, FPA/ F etc. or on quarterly basis.

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

Thank you