

ARR AND TARIFF ANALYSIS OF ODISHA POWER GENERATION CORPORATION LIMITED (OPGC UNIT 1 & 2) FOR FY: 2024-25

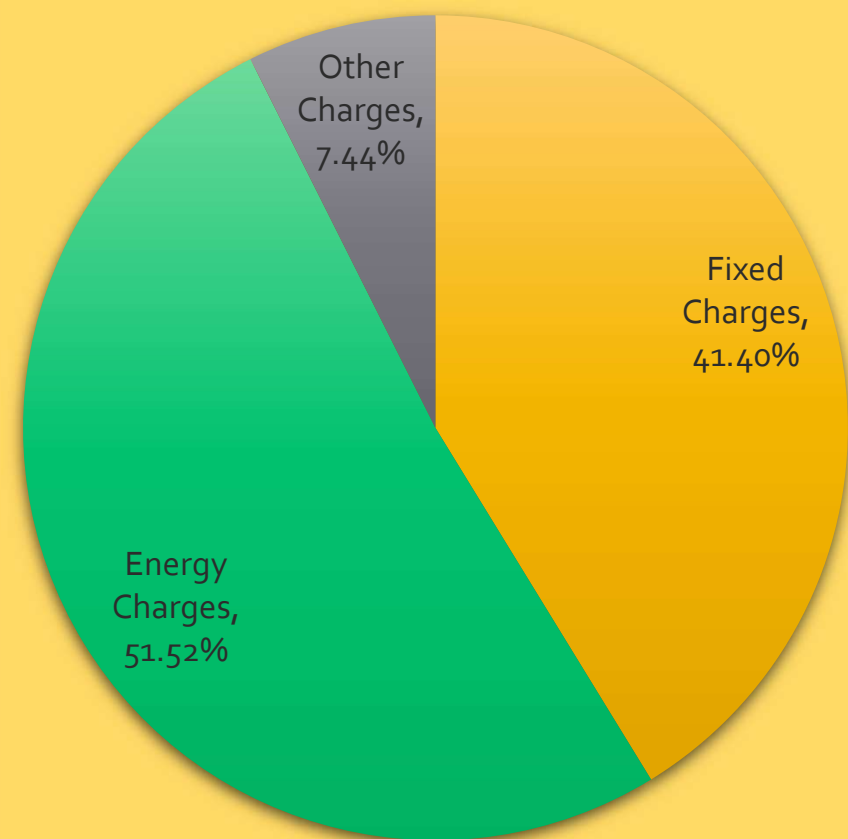
World Institute of Sustainable Energy, Pune (Consumer Counsel)

BACKGROUND

- Hon'ble OERC, vide its Order dated March 21, 2016 approved the Generation Tariff for **FY 2016-17** (Case No. 53/2015). OPGC filed Appeal No. 126 of 2016 before the **Hon'ble Appellate Tribunal for Electricity (APTEL)** and also filed Civil Appeal No. 9485 of 2017 before the **Hon'ble Supreme Court**. The Hon'ble Supreme Court (dated April 19, 2018) set aside the Tariff Order for FY 2016-17 and remanded the matter.
- The Commission in Case No **33 of 2018**, on March 28, 2019, issued order for re-determination of Tariff for FY 2016-17, FY 2017-18 and FY 2018-19 considering the original project cost as per the approved Amended PPA. In line with the approach adopted in Petitions in Case No. 33 of 2018 and Case No. 54 of 2018, OPGC had filed Petitions for approval of Generation Tariff. Subsequently, tariff orders were issued by the Commission **for the FY 2019-20 to FY 2023-24**.
- Hon'ble OERC in **Case No 43 of 2017** (dated 28 Oct 2020) issued order on calculation of GCV to be considered on "as delivered basis" in the tariff. OPGC filed Appeal No 189 of 2020 before APTEL against the same order. In its Order dated 15.09.2023, the Hon'ble APTEL has instructed for inclusion of this Appeal in the "List of Finals" to be taken up in its due course for further proceedings.
- In Case No. **54 of 2018**, OPGC filed petition for approval of additional capitalisation for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19. The Commission vide order dated May 21, 2021 (54 of 2018) disallowed actual additional capitalization for FY 2015-16 to FY 2017-18 and proposed additional capital expenditure for FY 2018-19. OPGC has filed an Appeal before APTEL on November 15, 2021, registered as Appeal No 335/2021.
- In **Case No 66 of 2021**, the Commission has approved R&M works and installation of FGD and FGC. OPGC submitted that OPGC has initiated the work after receiving concurrence from the Board of Directors.
- Further, in **Case No 99 of 2021**, the Commission has approved the construction of a new ash pond.

ANNUAL REVENUE REQUIREMENT PROPOSED FOR FY 2024-25

Particulars	Proposed cost (Rs. Crore)
O & M Expenses	222.15
Depreciation	0.00
Interest on Term Loans	0.00
Interest on Working Capital	16.10
Return on Equity	72.00
Fixed charges	310.25
Energy Charge	170.80 P/U*
Other Charges	56.28



■ Fixed Charges ■ Energy Charges ■ Other Charges

*Considering energy charge of Rs 389.51 Cr at normative generation

Analysis of Generation tariff for FY 2024-25

ADDITIONAL CAPITALIZATION

- In the present Petition, OPGC has not claimed actual additional capitalisation for past period and has not projected additional capitalisation for FY 2023-24 and FY 2024-25.
- Based on the outcome of the Appeal filed in APTEL against the Hon'ble Commission's order in Case No. 54 of 2018, OPGC will approach the Hon'ble Commission for approval of actual additional capitalisation for FY 2015-16 to FY 2022-23 and projected additional capitalisation for FY 2023-24 and FY 2024-25 through a separate petition.
- No impact of additional capitalisation is claimed in the present petition of FY 2024-25 and hence, the tariff should be based on original project cost only.

DEBT-EQUITY RATIO, ROE AND INTEREST

- Original capital cost of the Project is Rs. 1060 Crore as per the Amended PPA signed between OPGC and GRIDCO. While approving the Amended PPA vide Order dated April 27, 2015, Hon'ble OERC has approved the loan of Rs. 610 Crore and equity of Rs. 450 Crore, i.e. approved ratio was 57.5 : 42.5. In the Tariff Order for FY 2023-24 also, the Commission considered the same amount. Hence, OPGC has considered actual debt : equity ratio, as approved in Amended PPA, for the purpose of determining tariff applicable for FY 2024-25.
- Return on equity is calculated as given below:

Particulars	Units	Original capital cost (Rs. Crore)
Equity corresponding to original project cost	Rs. Crore	450.00
Rate of Return on Equity	%	16.00%
Return on Equity	Rs. Crore	72.00

- OPGC submitted that Clause 8.0 (7) and (11) of Schedule II of the Amended PPA provides the loan amount of Rs. 610 Crore and interest on loan as per actual. Since the loan amount of Rs. 610 Crore has been fully repaid by financial year ending March 31, 2012, OPGC has not claimed any interest on loan capital for FY 2024-25.

INTEREST ON WORKING CAPITAL

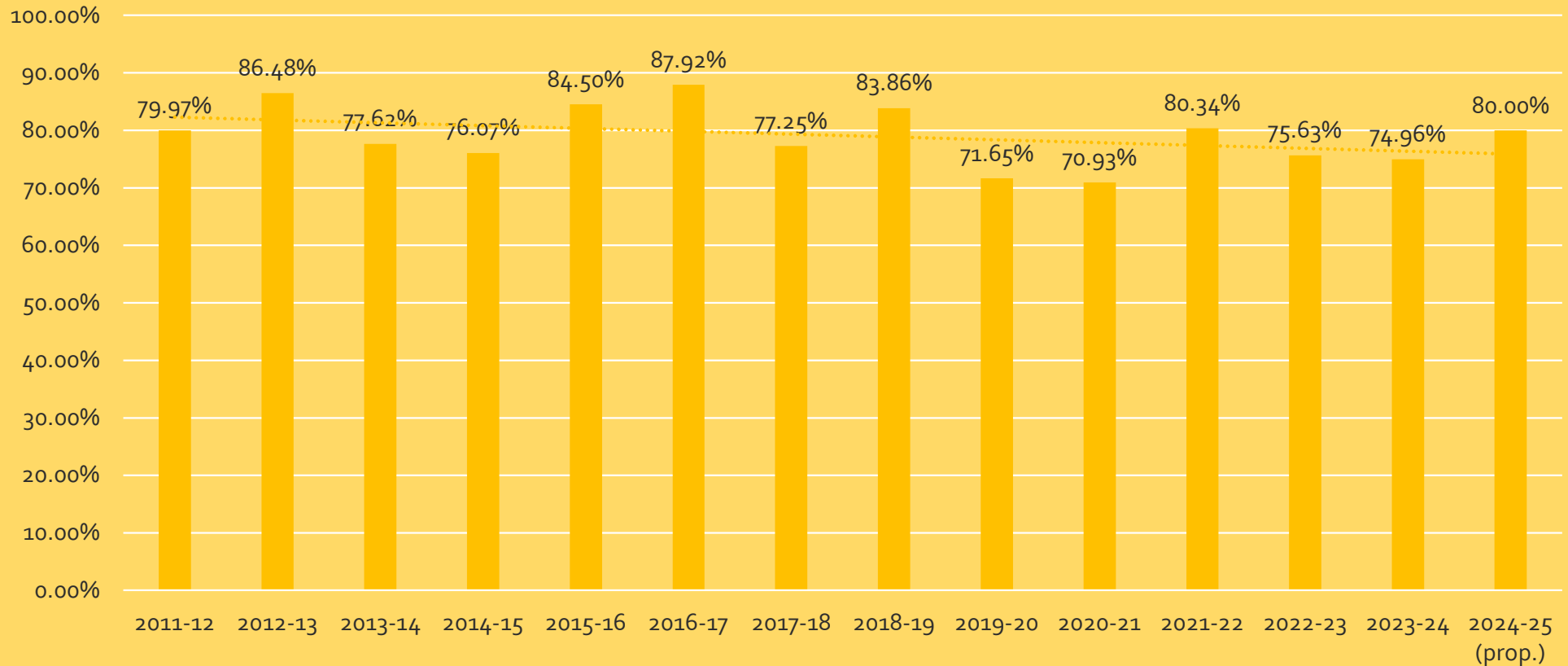
Sl. No.	Particulars	Norms considered	FY 2024-25
			Proposed cost (Rs Cr)
1	Coal Cost	1.5 months	41.91
2	Oil Cost	2 months	9.03
3	O & M expenses	1 month	18.51
4	Receivables	2 months	116.63
5	Working capital Loan Requirement		186.09
6	Rate of Interest		8.65%
7	Interest on Working Capital		16.10

- As OPGC has started availing working capital from external sources, the actual interest rate for the Working Capital facility availed by OPGC in FY 23-24 is 8.65%. For FY 2024-25, the interest on Working Capital is considered as Rs. 16.10 crore (@ 8.65% rate of interest as per FY 2023-24). Interest rate on working capital in FY 24-25 is increased in comparison to FY 23-24. The same may be reviewed.
- Working capital components on approved values should be considered.

O&M EXPENSES

- As per Clause 3.0 (d) and (e) of Schedule II of the Amended PPA provides that O&M expenses for first year of operation at the rate of 2.5% of the capital cost which shall be escalated by 8% each year from April 1, 1996.
- O&M Expenses of Rs.**222.15** Crore for FY 2024- 25 has been proposed considering the annual escalation factor of 8% as per the methodology prescribed in Amended PPA.
- As per clause 3 (d) & (e) of Schedule-II of the amended PPA, O&M expenses can be approved by the Commission after prudence check.

PLANT LOAD FACTOR



FY 2023-24 (till Nov' 23): 74.96%

- As per Clause 3.0 (g) of Schedule II of the Amended PPA, the PLF applicable for computation of incentive shall be 80.00%.
- As per the generation plan submitted to GRIDCO, the ex-bus generation projected for FY 2024-25 is 2,668.31 MU which corresponds to PLF of 80.14%
- Average PLF (2011-12 to 2022-23) : 79.53%. The average PLF of last four years (FY 2020-21 to 2023-24) was lower than average PLF (from FY 2011-12 to 2023-24).

SHR, SECONDARY FUEL OIL AND AUXILIARY CONSUMPTION

	Station Heat Rate (kcal/kWh)	Specific oil consumption (ml/kWh)	Auxiliary consumption
Proposed in ARR	2500	3.5 (LDO – 0.35 and HFO -3.15)	9.50%
General norms in Regulations	2450 (below 500 MW)	1.0	Natural draft – 8.5% Induced draft – 9% (below 500 MW)
Approved in last year order as per PPA	2500	3.50	9.50%

GCV AND PRICE OF COAL

Year	GCV (kCal/kg) Proposed	GCV (kCal/kg) Approved	Price (Rs / MT) Proposed	Price (Rs / MT) Approved
2016-17	2,828.92	2,716.00	1,232.56	1,186.62
2017-18	2629.10	3400.00	1645.04	1,539.00
2018-19	2,685.41	3100.00	1368.91	1491.00
2019-20	2972.00	3100.00	1600.13	1532.00
2020-21	3077.00	3100.00	1603.68	1552.00
2021-22	2740.93	3101	1542.30	1573.00
2022-23	2772.64	3101	1614.52	1614.52
2023-24	2865.76	3101	1622.39	1622.39
2024-25 (Proposed)	3084.00		1664.76	

- **GCV:** in FY 2023-24 order, approved GCV was 3101 kCal/kg and proposed was 2865.76 kCal/kg.
- Para 72(b) of FY 23-24: *“The Commission, vide its Order dated 28.10.2020 in Case No. 43/2017, has provided the basis for calculation of GCV of coal as delivered to the power station (total moisture basis)..... However, OPGC has taken a plea at para 3.40 of their tariff application that the order of the Commission in this regard in Case No. 43/2017 dated 28.10.2020 has been challenged before Hon’ble APTEL in Appeal No. 189/2020. Therefore, in the absence of above details, the Commission has decided to consider the base GCV of Grade-14 (G-14) coal, i.e. 3101 kcal/kg similar to last year order..”*
- The present MCL declared grade’s GCV (G-12) can be considered, post Nov 2023. OPGC submitted the indicative landed price of coal considering the applicable base price and other charges as Rs 1664.76 / MT.

PRICE OF SECONDARY OIL

Month	Secondary Fuel Oil procured and consumed	Quantum of oil procured (kL)	Weighted average price oil procured (Rs./kL)	Quantum of oil consumed (kL)	Weighted average price oil for the month (Rs./kL)
Apr-23	LDO	149.59	77,925.23	42.21	85,998.54
May-23	LDO	0.00	0.00	33.07	85,998.54
Jun-23	LDO	0.00	0.00	138.76	85,998.54
Jul-23	LDO	149.69	73,665.43	77.81	83,204.03
Aug-23	LDO	0.00	0.00	57.63	83,204.03
Sept-23	LDO	149.85	90,126.43	134.20	84,740.70
Oct-23	LDO	134.795	91,743.03	31.537	86,137.75
Nov-23	LDO	0.00	0.00	108.377	86,137.75

- Note: There is no arrangement for use of HFO in OPGC 1&2. However, in the Petition, the mix of HFO and LDO has been taken in the ratio of 90:10 as per mutual agreement between OPGC and GRIDCO in the PPA.

YEAR END CHARGES FOR FY 2024-25

- Rs.0.55/kWh towards electricity duty for FY 2023-24 was approved by Commission in accordance with PPA norms, i.e. 9% of auxiliary Consumption at nominal PLF of 80%. OPGC proposed duty to be paid as per generation plan and auxiliary consumption of 9%.
- Based on the proposal of OPGC, the Commission provisionally approved the amount of Rs. 9.22 Crore towards water cess and water charges for FY 2023-24 and directed OPGC to produce proper justification of payment of such charges along with relevant documents while claiming reimbursement from GRIDCO.
- Income tax : The Commission has not considered any income tax for FY 2023-24. However, directed that Income tax shall be reimbursed by GRIDCO on actual basis as per the applicable provisions in PPA.
- Ash transportation: the issue should be dealt with as per case no 99/2023 [for U#1 to 4 (FY 16-17 to FY 22-23)]
- SOC and MOC for SLDC can be allowed as per Commission's approved order.

Sr. No.	Particulars	FY 2024-25 (Proposed)	FY 2023-24 (Approved)
1	Electricity Duty	14.83	14.57
2	Water Cess and Water Charges	9.81	9.22
3	Energy Compensation Charges	-	0.00
4	Tax and Cess on land	1.33	0.25
5	SOC and MOC for SLDC	0.39	0.39
6	ERPC Charges	0.16	0.16
7	Annual inspection fees	0.26	0.16
8	Income Tax	24.22	00.00
9	Recovery of ARR & Tariff Petition Fee	0.30	0.30
10	Contribution towards Water Conservation Fund	-	0.00
11	Ash transportation & Utilisation Expenses	5.00	-
	Total (Rs Crore)	56.28	25.05

YEAR END CHARGES APPROVED AND PAID

S. No.	Particulars	FY 2022-23 (Rs Cr)			FY 2023-24 (till No 23) (Rs Cr)		
		Approved in the Tariff Order	Actual incurred	Reimbursed by GRIDCO	Approved in the Tariff Order	Actual incurred	Reimbursed by GRIDCO
1	Electricity Duty	14.42	18.88	13.39	14.57	12.44	8.90
2	Water Cess and Water Charges	8.58	9.81	9.76	9.22	7.00	6.94
3	Energy Compensation Charges	0.71			0.00	0.00	0.00
4	Tax and Cess on land	0.05	1.33	0.25	0.25	0.25	0.25
5	SOC and MOC for SLDC	0.36	0.36	0.36	0.39	0.26	0.26
6	ERPC Charges	0.16	0.16	0.16	0.16	0.16	0.16
7	Income Tax	0.00			0.00	0.00	0.00
8	Recovery of ARR & Tariff Petition Fee & Publication Fee	0.30	0.21	0.21	0.30	0.22	0.22
9	Annual Inspection Charges		0.15	0.17	0.16		
10	Water Conservation Fund	6.13			0.00	0.00	0.00
	Total	30.71	30.89	24.29	25.05	20.32	16.73

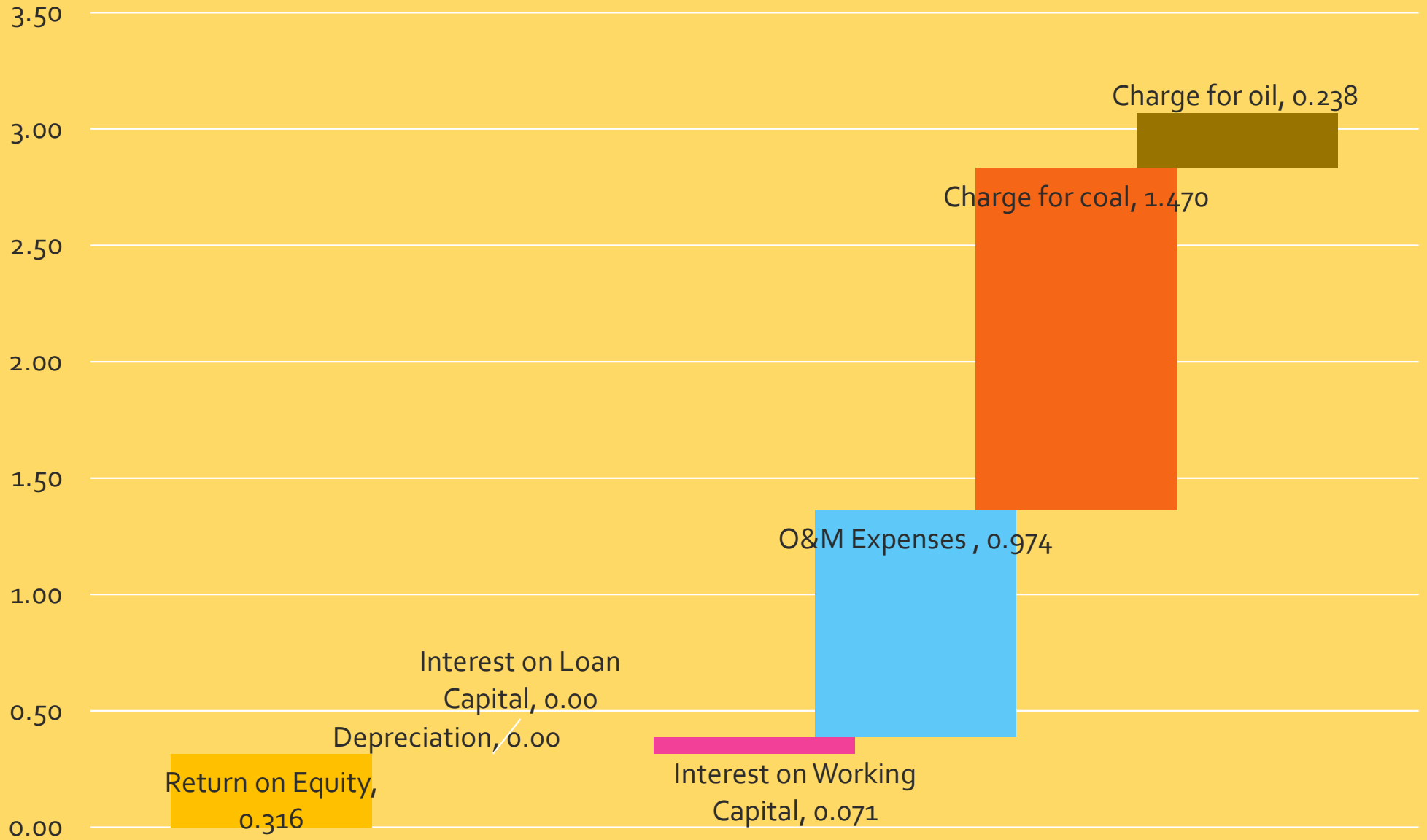
GENERATION TARIFF PROPOSED FOR FY 2024-25

Sl. No	Particulars	Proposed cost (Rs Cr)	Tariff (Rs/kWh)*
1.	Return on Equity	72.00	0.316
2.	Depreciation		
3.	Interest on Loan Capital		
4.	Interest on Working Capital	16.10	0.071
5.	O&M Expenses	222.15	0.974
A	Total Annual Fixed Cost	310.25	1.360
B	Energy Charges	389.51	1.708
A+B	Tariff for Sale of Power	699.76	3.068
C	Year End Charges	56.28	0.247
A+B+C	Total Tariff for Sale of Power	756.04	3.315

*Based on normative generation @68.49%

PROPOSED GENERATION TARIFF FOR FY 2024-25

(RS / KWH)



Excluding year-end charges

GENERATION TARIFF PROPOSED FOR FY 2024-25

Sl. No	Particulars	Proposed for FY 24-25 (Rs. Cr)	Approved for FY 23-24 (Rs. Cr)
1.	Return on Equity	72.00	72.00
2.	Depreciation	-	-
3.	Interest on Loan Capital	-	-
4.	Interest on Working Capital	16.10	14.26
5.	O&M Expenses	222.15	205.69
A	Total Annual Fixed Cost (Rs Cr)	310.25	291.95
B	Energy Charges (Rs / kWh)	1.7080	1.6716
C	Year End Charges (Rs Cr)	56.28	25.05

Thank You