

Summary of ARR & BSP Filings

Submitted by

OPGC

For

FY 2018-19

Summary of OPGC ARR & BSP Filings for FY 2018-19

GENERATION TARIFF PROPOSAL OF OPGC FOR THE FY 2018-19

1. Odisha Power Generation Corporation Limited (herein after referred as “OPGC”) is a company incorporated under the Companies Act, 1956 and having its registered office at Zone-A, 7th floor, Fortune Towers, Chandrasekharpur, Bhubaneswar, Odisha-751023. GRIDCO Limited (“GRIDCO”) had entered into Bulk Power Supply Agreement (“PPA”) with OPGC dated August 13, 1996, for purchase of power from its Generating Units 1 & 2, having capacity of 420 MW (210 MW x 2) of IB Thermal Power Station. OPGC, GRIDCO and Government of Odisha signed a Tripartite Agreement dated October 18, 1998 providing certain further amendments to existing PPA and other provisions including those concerning the establishment of Units 3 & 4 of IB Thermal Power Station by OPGC. Further, Escrow and Security Agreement dated November 30, 1998 was entered between OPGC, GRIDCO and Union Bank of India.
2. Subsequently, certain disputes had arisen between the parties on issues arising from the terms of the PPA, Tripartite Agreement and other agreements between the Parties. In order to resolve these disputes, Government of Odisha constituted a Task Force vide Resolution No. 3895 dated May 7, 2007 for resolving disputes regarding tariff and other related matters. Government of Odisha, based on the recommendations of Task Force, issued Notification No. 7216 dated June 21, 2008 for resolving all such disputes on terms and conditions contained therein in regard to Unit 1 & 2 and also in regard to setting up of Unit 3 & 4, as overall settlement of all such disputes. After that, OPGC and GRIDCO agreed to amend existing PPA and Tripartite agreement based on Government of Odisha Notification dated June 21, 2008. Accordingly, an agreement was signed on September 6, 2012 as Supplemental to the Tripartite agreement executed on October 18, 1998. Subsequently, OPGC and GRIDCO signed an amendment to existing PPA on December 19, 2012 by amending certain clauses related to Plant Load Factor, Revision in tariff, etc.
3. Hon’ble OERC vide its Order dated April 27, 2015 approved the Amended PPA and directed OPGC to file an application for determination of Generation Tariff, as per approved Amended PPA, for rest of the control period starting from FY 2016-17 onwards since tariff for FY 2014-15 and FY 2015-16 has already been approved by Hon’ble OERC in ARR of GRIDCO. The Commission, vide its Order dated March 21, 2016 determined the Generation Tariff of Units 1 & 2 of IB Thermal Power Station for FY 2016-17, in accordance with the terms and conditions of OERC Generation Tariff Regulations, 2014.
4. Aggrieved by the said Order, OPGC filed Appeal No. 126 of 2016 before the Hon’ble Appellate Tribunal for Electricity (“APTEL”) against the Tariff Order for FY 2016-17. Hon’ble APTEL vide its Judgment dated April 6, 2017 in the stated Appeal upheld the Commission’s Tariff Order for FY 2016-17. Aggrieved by the Judgment of Hon’ble APTEL, OPGC filed Civil Appeal No. 9485 of 2017 before the Hon’ble Supreme Court, which has been admitted by the Hon’ble Supreme Court and is pending Adjudication. The present Petition is being filed without

prejudice to OPGC's rights under law and its contentions taken in Civil Appeal No. 9485 of 2017 before the Hon'ble Supreme Court in respect of the applicability of the terms and conditions of tariff set out in the Amended PPA for the determination of OPGC's tariff.

5. Regulation 2.7 of OERC Generation Tariff Regulations, 2014 requires OPGC to file an application for determination of tariff by November 30th of every year and Regulation 2.13 of the OERC Generation Tariff Regulations, 2014 requires OPGC to file an application each year for truing up of the previous year with respect to capital expenditure including additional capital expenditure incurred up to last day of the previous year.
6. In light of the above, the instant Petition for truing up of FY 2016-17 and determination of Generation Tariff for FY 2018-19 is being filed under Sections 62 and 86 of the Electricity Act, 2003 ("the Act") read with the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014 and OERC (Conduct of Business) Regulations, 2004.

Truing up for FY 2016-17

7. OPGC has filed the truing up of FY 2016-17 in accordance with the Regulation 2.13 of the OERC Generation Tariff Regulations, 2014 as detailed in the following paragraphs.

Capital cost and additional capitalization

8. The Commission in its Tariff Order for FY 2016-17 had approved the opening capital cost of OPGC Ltd. as Rs.1060 Crore. Further, the Commission, in the tariff order, has mentioned that in case any expenditure is incurred during FY 2015-16 satisfying the conditions of the Regulations, the same shall be considered in subsequent years by the Commission. In accordance with the Commission's observation, OPGC claimed the additional capitalization for FY 2015-16 and FY 2016-17 in accordance with Regulation 3.4 of the OERC Generation Tariff Regulations, 2014 under this Petition.
9. The total actual additional capitalisation incurred for FY 2015-16 was Rs. 18.13 Crore. Out of the same, the additional capitalisation of **Rs. 17.82 Crore** is claimed in FY 2015-16 for arriving at the opening GFA for FY 2016-17 along with approved capital cost of Rs. 1060 Crore. Accordingly, the opening GFA for FY 2016-17 has been claimed as Rs. 1077.82 Crore.
10. The total actual additional capitalisation incurred for FY 2016-17 was Rs. 23.62 Crore and out of the same, the additional capitalisation claimed for truing up of FY 2016-17 is **Rs. 22.04 Crore**. Hence, the closing GFA for FY 2016-17 has been claimed as Rs. 1099.86 Crore.

Debt-equity Ratio

11. The additional capitalisation in FY 2015-16 and FY 2016-17 was funded by the internal resources of OPGC. However, in accordance with the Regulation 3.8, the debt-equity ratio of the additional capitalisation in FY 2015-16 and FY 2016-17

has been considered as 70:30. The debt-equity claimed for truing up for FY 2016-17 is shown in the Table below.

Table 1: Debt-Equity for FY 2016-17 (Rs. Crore)

Particulars	FY 2016-17			
	Debt		Equity	
	Approved in Tariff Order	Claimed for Truing up	Approved in Tariff Order	Claimed for Truing up
Gross amount pertaining to opening capital cost	610.00	610.00	450.00	450.00
Outstanding balance as on April 1, 2016 pertaining to opening capital cost	0.00	0.00	450.00	450.00
Opening balance (gross) carried forward from previous year	0.00	12.47	0.00	455.35
Addition during FY 2016-17	0.00	15.43	0.00	6.61
Closing balance (gross)	0.00	27.90	450.00	461.96

Return on equity

12. In accordance with Regulations 4.5 and 4.6 of the OERC Generation Tariff Regulations, 2014, RoE base shall be computed in rupee terms, on the equity base and RoE shall be computed @ 16% of the Equity Capital. Accordingly, the RoE for FY 2016-17 has been claimed considering the opening equity of Rs. 455.35 Crore and the equity portion of the additional capitalization on half yearly basis. Hence, **Rs.73.38 Crore** has been claimed as ROE against Rs 72 Crore approved in the tariff order.

Interest on loan capital

13. According to gross loan capital of Rs. 610 Crore, there is no outstanding loan balance. For the normative loan pertaining to the additional capitalisation, the loan repayment for the year has been considered as equal to depreciation and accordance with Regulation 4.13, the interest rate has been considered as 10.71% which is the actual weighted average rate of interest of the generating company as a whole (on the ongoing loan draw down for OPGC Units 3 &4 being availed from PFC and REC). The interest on loan of **Rs. 1.82 Crore** has been claimed on the normative average loan for the year by applying the rate of interest. Additionally, **Rs. 9.77 Crore** paid to Government of Odisha as guarantee fees has been claimed by OPGC.

Depreciation

14. The OERC Generation Tariff Regulations, 2014 specifies the rates of depreciation for each asset class. If the depreciation rates as per the OERC Generation Tariff Regulations, 2014 is applied for computing the depreciation, OPGC will not be able recover the entire depreciable value of the assets capitalised from FY 2015-16 onwards by the end of the term of the PPA (FY 2025-26). Hence, OPGC

requested to allow the recovery of depreciable value of the assets capitalized from FY 2015-16 onwards, by equally spreading the same during each year from the year of capitalisation, and up to FY 2025-26. The depreciation claimed was **Rs. 3.44 Crore** for FY 2016-17 as true up.

Interest on working capital

15. The working capital requirement for FY 2016-17 has been computed in accordance with Regulation 4.24(a) of the OERC Generation Tariff Regulations, 2014. The rate of interest on working capital has been considered in accordance with Regulation 4.26 of the OERC Generation Tariff Regulations, 2014. The interest on working capital for true up of FY 2016-17 is given in the table below. The interest on working capital has been claimed as **Rs. 13.58 Crore** in true up against Rs. 13.13 Crore approved by the Commission.

Table 2: Interest on working capital for FY 2016-17 (Rs. Crore)

Particulars	Norms	FY 2016-17		
		Approved in Tariff Order	Claimed for Trueing up	Rationale for trueing up claim
Cost of Coal	1 Month	27.78	27.78	<i>As approved in the Tariff Order</i>
Cost of Secondary Fuel Oil	1 Month	0.87	0.87	<i>As approved in the Tariff Order</i>
O&M expenses	1 Month	9.63	10.14	<i>Normative O&M expenses as approved in the Tariff Order plus water charges</i>
Maintenance spares	20% of O&M	23.10	24.34	<i>Normative O&M expenses as approved in the Tariff Order plus water charges</i>
Receivables	1 Month	45.37	47.29	<i>Based on the trueing up claim of AFC</i>
Total Working Capital Requirements		106.75	110.43	
Interest rate		12.30%	12.30%	<i>SBI Base Rate + 300 basis points</i>
Interest on working capital		13.13	13.58	

Operation and maintenance (O&M) expenses

16. The O&M expenses of **Rs. 115.50 Crore** as approved by the Commission, has been considered for trueing up of FY 2016-17.

Annual fixed cost

17. Based on the above, the AFC claimed for truing up of FY 2016-17 is given in the table below. OPGC requested the Commission to allow the recovery towards under-recovery of AFC to the extent of **Rs. 16.87 Crore** along with carrying cost.

Table 3: AFC for FY 2016-17 (Rs. Crore)

Particulars	FY 2016-17	
	Approved in Tariff Order	Claimed for Truing up
Return on Equity	72.00	73.38
Interest on loan capital	0.00	11.59
Depreciation	0.00	3.44
Interest on working capital	13.13	13.58
O&M expenses	115.50	115.50
Total AFC	200.63	217.50
Under recovery		16.87

Total impact of truing up

18. Along with under-recovery of AFC, OPGC submitted several other claims in the true up application also. The same is given in the table below.

Table 4: Total impact of truing up for FY 2016-17 (Rs. Crore)

Particulars	FY 2016-17
Under-recovery of AFC	16.87
Impact of Revised Auxiliary Consumption on Energy Charge	2.47
Difference in Incentive entitlement and Incentive billed during FY 2016-17 on account of additional 0.5% Auxiliary consumption	0.78
Under-recovery of ED	2.07
Under-recovery of income tax	1.76
Total	23.95

Recovery of impact of truing up

19. In accordance with the Judgment of the Hon'ble APTEL dated 8 April, 2015 in Appeal No 160 of 2012, OPGC requested to approve the truing up for FY 2016-17 along with carrying cost considering the rate of interest on working capital for the respective years. The total impact of truing up claimed by OPGC for FY 2016-17 is **Rs. 29.38 Crore**, the details are given below.

Table 5: Truing up for FY 2016-17 including carrying cost (Rs. Crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Opening Gap/(Surplus)	0.00	23.95	23.95
Gap/(Surplus) addition during the year	23.95	0.00	0.00
Closing Gap/(Surplus)	23.95	23.95	23.95
Cumulative Gap/(Surplus)			23.95
Rate of Interest	12.30%	11.00%	10.95%
Carrying cost on opening balance	0.00	2.64	1.32
Carrying cost on Addition	1.47	0.00	0.00
Total carrying cost	1.47	2.64	1.32
Cumulative carrying cost			5.43
Total Gap/(Surplus) including carrying cost			29.38

Generation Tariff for FY 2018-19

20. OPGC proposed the Generation Tariff for FY 2018-19 in accordance with the OERC Generation Tariff Regulations, 2014. In accordance with Regulation 4.3 of the OERC Generation Tariff Regulations, 2014, the Annual Fixed Cost (AFC) of a generating station comprises of the following components:

- Return on Equity;
- Interest on loan capital;
- Depreciation;
- Interest on working capital;
- Operation and maintenance expenses.

Capital Cost and additional capitalization

21. OPGC has considered the closing capital cost for FY 2016-17 as opening capital cost for FY 2017-18 and proposed **Rs. 50.37 Crore** as additional capitalization for FY 2017-18. The additional capitalisation is proposed for Construction of Ash Pond C and Ash Pond C HDPE Lining. Similar **Rs. 55.99 Crore** has been estimated as additional capitalization for FY 2018-19 for modification of Electro Static Precipitator (ESP) to meet the prescribed emission standard.
22. The additional capitalisation proposed is towards the additional works some of which are towards compliance to the Change in Law and other works have

become necessary for efficient and successful operation of the generating station. OPGC requested the Commission to approve the additional capitalisation claimed for FY 2017-18 and FY 2018-19 under the provisions of Regulation 3.4 (b) and (d) of the OERC Generation Tariff Regulations, 2014. The details of additional capitalization are given below.

Table 6: Capital cost for FY 2018-19 (Rs. Crore)

Particulars	FY 2017-18	FY 2018-19
	Revised proposed	Claimed for Tariff
Opening capital cost	1099.86	1150.23
Additional capitalisation	50.37	55.99
Closing capital cost	1150.23	1206.22

Debt – Equity Ratio

23. OPGC considered the debt-equity ratio as 70:30 for additional capitalization. The closing balances of gross loan and equity claimed for truing up of FY 2016-17 have been considered as the opening balances for FY 2017-18. The closing balances of gross loan and equity of FY 2017-18, after considering additional capitalization during FY 2017-18, have been considered as the opening balances for FY 2018-19. The total debt-equity claimed by OPGC for FY 2018-19 is shown in the table below.

Table 7: Debt-Equity for FY 2018-19 (Rs. Crore)

Particulars	FY 2017-18		FY 2018-19	
	Debt	Equity	Debt	Equity
	Revised proposed		Claimed for Tariff	
Gross amount pertaining to opening approved capital cost	610.00	450.00	610.00	450.00
Outstanding balance as on April 1 pertaining to opening approved capital cost	0.00	450.00	0.00	450.00
Opening balance (gross) carried forward from previous year	27.90	461.96	63.16	477.37
Addition during the year	35.26	15.31	39.19	16.80
Closing balance (gross)	63.16	477.07	102.35	493.87

Return on Equity

24. In accordance with Regulations 4.5 and 4.6 of the OERC Generation Tariff Regulations, 2014, RoE shall be computed in rupee terms, on the equity base and RoE shall be computed @ 16% of the Equity Capital. Accordingly, OPGC claimed **Rs. 77.67 Crore** as RoE for FY 2018-19.

Interest on Loan Capital

25. The normative loan outstanding as on April 1, 2018 has been worked out by deducting the cumulative repayment up to March 31, 2018 from the gross normative loan. The normative loan pertaining to the additional capitalisation has been considered as loan addition during the year. The loan repayment for the year has been considered as equal to depreciation for the year. In accordance with Regulation 4.13 of the OERC Generation Tariff Regulations, 2014 the rate of interest has been considered as 10.55% which is the weighted average rate of interest of the generating company as a whole (on the ongoing loan draw down for OPGC Units 3 &4 being availed from PFC and REC). The interest on loan claimed by OPGC for FY 2018-19 is **Rs. 6.54 Crore**. The details are given below.

Table 8: Interest on loan for FY 2018-19 (Rs. Crore)

Particulars	FY 2018-19
Gross loan	673.16
Cumulative repayment up to previous year	623.48
Outstanding balance	49.78
Addition during the year	39.19
Repayment during the year	14.78
Closing balance	74.20
Average balance	61.99
Interest rate	10.55%
Interest	6.54

Depreciation

26. OPGC requested the Commission to allow the recovery of depreciable value of the assets capitalised from FY 2015-16 onwards, by equal spread during each year, from the year of capitalisation, up to FY 2025-26 (end of the term of PPA). The depreciation claimed by OPGC for FY 2018-19 is **Rs. 14.78 Crore**.

Interest on Working Capital

27. The working capital requirement for FY 2018-19 has been computed in accordance with Regulation 4.24(a) of the OERC Generation Tariff Regulations, 2014. Further, in addition to the normative O&M expenses in accordance with Regulation 4.28(a), the water charges in accordance with the Regulation 4.28(e) has been considered for arriving at the working capital requirement. The rate of interest on working capital has been considered in accordance with Regulation 4.26 of the OERC Generation Tariff Regulations, 2014. OPGC has considered the prevalent MCLR of 7.95% (One Year Tenure) plus 300 basis points as Interest Rate for computing Interest on Working Capital.
28. OPGC claimed interest on working capital as **Rs. 13.87 Crore** for FY 2018-19. The details are given below.

Table 9: Computation of interest on working capital for FY 2018-19 (Rs. Crore)

Particulars	Norms	Amount
Cost of Coal	1 Month	32.41
Cost of Secondary Fuel Oil	1 Month	1.08
O&M expenses	1 Month	11.42
Maintenance spares	20% of O&M	27.42
Receivables	1 Month	54.32
Total Working Capital Requirements		126.66
Interest rate		10.95%
Interest on working capital		13.87

O&M Expenses

29. Regulation 4.28(a) of the OERC Generation Tariff Regulations, 2014 specifies the normative O&M expenses of Rs. 30.51 lakh/MW for Unit sizes of 210 MW. In addition to the normative O&M expenses, Regulation 4.28(b) of the OERC Generation Tariff Regulations, 2014, specifies special compensation allowance for O&M @ Rs. 0.65 lakh/MW for the projects that have completed 20 years of useful life. Accordingly, the O&M expenses claimed by OPGC for FY 2018-19 is **Rs. 130.87 Crore.**

Summary of Annual Fixed Cost

30. OPGC proposed Annual Fixed Cost of Rs. 243.73 Crore for FY 2018-19. The details are given in the table 10 below.

Table 10: Annual Fixed Cost of OPGC for FY 2018-19 (Rs. Crore)

Particulars	Amount
Return on Equity	77.67
Interest on loan capital	6.54
Depreciation	14.78
Interest on working capital	13.87
O&M expenses	130.87
Total AFC	243.73

Norms of Operation

31. The norms of operation proposed for FY 2018-19 by OPGC in accordance with the OERC Generation Tariff Regulations, 2014 is given in table 11 below.

Table 11: Operational Performance Parameters for FY 2018-19

Particulars	FY 2018-19
Normative Annual Plant Availability Factor	85%
Normative Annual Plant Load Factor	85%
Gross Station Heat Rate	2450
Secondary fuel oil consumption	1.00
Auxiliary consumption	9.00%

Fuel Prices

32. The price of coal and the price & calorific value of secondary fuel oil have been considered by OPGC based on the actuals for the preceding 3 months of August, 2017 to October, 2017 in accordance with the Regulation 4.25. However, as regards the GCV of coal, OPGC has considered the weighted average GCV of coal for last one year i.e., from November 2016 to October 2017 to smoothen the impact of seasonal variations. The weighted average GCV for last one year works out to 2685.41 kCal/kg as against weighted average GCV of 2520 kCal/kg for last 3 months.
33. Further, OPGC requested to consider determination of energy charges factoring 'as fired' GCV in accordance with Regulation 4.33 of the OERC Generation Tariff Regulations, 2014, and as submitted above. The current OERC Generation Tariff Regulations, 2014 envisage payment of ECR on the basis of 'as fired' GCV. OGC also stated that no generating company, subject to cost-plus tariff determination under Section 62 of the Act, in the country, whether regulated by the CERC or by appropriate state commissions, receives an ECR computed on the basis of GCV as billed by the coal company. Such considered determination of energy charge shall avoid under estimation of working capital/ cash flow requirement for operation of the power plant.
34. Accordingly, the price of coal and oil has been considered as Rs. 1368.91/MT and Rs. 41390/Kl respectively.

Energy charges

35. OPGC computed Energy Charge for FY 2018-19 as per norms of operation, GCV and prices of the fuel proposed. The details are given in table 12 below.

Table 12: Computation of Energy Charge for 2018-19

Particulars	Units	Value
Gross Generation	MU	3127.32
Auxiliary Consumption	%	9.00%

Particulars	Units	Value
Generation after Aux. Cons.	MU	2845.86
Gross Station Heat Rate	kcal/kWh	2450.00
GCV of Coal	kcal/kg	2685.41
GCV of Oil	kcal/ltr.	10000
Specific coal consumption	kg/kWh	0.97
Specific oil consumption	ml/kWh	1.00
Price of Coal	Rs./MT	1368.91
Price of secondary fuel oil	Rs./kL	41390
Variable Charge for Coal	Rs./kWh	1.37
Variable Charge for Oil	Rs./kWh	0.05
Energy Charge Rate	Rs./kWh	1.41

Reimbursement of Other Charges

36. OPGC proposed for reimbursement of the different charges and expenses which comprise of Electricity duty, water cess and charges, tax and cess on land, SOC and MOC paid to SLDC, EPRC charges, Income tax and recovery of ARR and tariff petition fees and publication expenses. The details are given in table 13 below.

Table 13: Other Charges for 2018-19 (Rs. Crore)

S. No.	Particulars	Amount
1	Electricity Duty	15.48
2	Water Cess and Water Charges	6.21
3	Tax and Cess on Land	0.18
4	SOC and MOC for SLDC	0.33
5	ERPC Charges	0.16
6	Income Tax	39.73
7	Recovery of ARR & Tariff Petition Fees & publication expenses	0.30
	Total	62.39

37. OPGC requested to provisionally approve the other charges of **Rs. 62.39 Crore**. OPGC further requested to direct GRIDCO Ltd. to reimburse the other charges on actual basis during the year.
38. OPGC also requested to allow incentives, if OPGC achieves excess schedule generation (kWh) over energy generation as per NAPLF @ 85% as specified in Regulations 6.9 and 6.10 of the OERC Generation Tariff Regulations, 2014.
39. OPGC requested to approve the recovery of upward or downward variation in Capacity Charge, Energy Charge, Incentive and Other Charges at the end of the

FY 2018-19 in accordance with the Regulations 6.3 of OERC Generation Tariff Regulations, 2014.

Summary of Generation Tariff for FY 2018-19

40. The summary of Generation Tariff proposed by OPGC for FY 2018-19 is given in table 14 below.

Table 14: Generation Tariff for 2018-19

Sr. No.	Particulars	FY 2018-19	
		Rs. Crore	Rs./kWh
1.	Annual Fixed Cost	243.73	0.86
2.	Energy Charges	401.92	1.41
3.	Tariff for Sale of Power	645.66	2.27

Prayer

41. OPGC has prayed to the Commission to approve the following for FY 2018-19.
- Approve the truing up of FY 2016-17 including carrying cost;
 - Approve Annual Fixed Charges for FY 2018-19;
 - Approve the recovery of Energy Charge, for FY 2018-19, as per Regulation 4.32, 4.33 & 4.34 of OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014;
 - Approve the other charges to be reimbursed by GRIDCO Ltd. as claimed in the Petition;
 - Direct GRIDCO Ltd. to reimburse the other charges on actual basis during the year;
 - Approve the recovery of any year-end adjustments;
 - Allow the recovery of Impact of Review Order for FY 2017-18 in Case No. 35/2017.