

***Summary of Generation Tariff
Application***

Submitted by

OPGC

For

FY 2017-18

SUMMARY OF GENERATION TARIFF PROPOSAL OF OPGC FOR THE FY 2017-18

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. With the execution of this agreement, the Parties have agreed that all pending differences have been settled and OPGC shall withdraw Special Leave Petition pending before Hon’ble Supreme Court. Further, Hon’ble Supreme Court vide its Order dated February 14, 2013 has dismissed Appeals as withdrawn by OPGC and in the said order Hon’ble Supreme Court has directed OPGC to file the Amended PPA before Hon’ble OERC and the Hon’ble OERC shall consider the same appropriately in accordance with law. 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.
4. OPGC submitted that, in compliance to the above directions of the Hon’ble OERC, OPGC had filed the petition for approval of Generation Tariff for FY 2016-17 under Section 62 and 86 of the Act basing on approved amended PPA and related provision of OERC (Terms and Conditions of Generation Tariff) Regulations, 2014 and OERC (Conduct of Business) Regulations, 2004, as amended time to time. Further OPGC submitted that, OERC vide its order dated 21.3.2016 disposed off the case No.53/2015 approving the Generation Tariff of Unit-I & II of Ib Thermal Power Station for FY 2016-17. By challenging the above order dated 21.03.2016 of the Commission, OPGC has filed an appeal No 126 of 2016 before the Hon’ble APTEL. The appeal is pending adjudication. OPGC submitted that the

instant Petition is being filed without prejudice to OPGC's rights under law and contentions taken in Appeal No. 126 of 2016 before the APTEL. It is further submitted that the instant Petition is subject to the outcome of Appeal No. 126 of 2016 before the APTEL.

5. This instant petition has been filed by OPGC for determination of Generation Tariff for FY 2017-18 of IB Thermal Power Station of OPGC Ltd., having installed capacity of 420 MW (2 x 210 MW- Unit 1 & 2), located at Banharpalli in District Jharsuguda. OPGC submitted that the instant Petition has been filed based on the provisions of approved bulk power supply agreement and its supplemental, approved tripartite agreement and its supplemental and Escrow and Securitization Arrangement, which was approved by the Hon'ble OERC.

Generation Tariff for FY 2017-18

This section explains in detail the computation of Annual Fixed Cost, Energy Charge and Year End Charges as per the terms and conditions of the Amended PPA.

Computation of Annual Fixed Cost

6. As per Clause 3.0 of Schedule II of the Amended PPA, the Annual Fixed Cost of OPGC shall consist of the following components:
 - a. Return on Equity;
 - b. Interest on loan Capital;
 - c. Depreciation;
 - d. Interest on Working Capital;
 - e. Operation and Maintenance Expenses.

Capital Cost

7. OPGC has considered the capital cost of Rs. 1060 Crore for the purpose of computation of tariff for FY 2017-18. The Amended PPA signed between OPGC and GRIDCO has considered the same Capital Cost and while approving Amended PPA in Order dated April 27, 2015, Hon'ble OERC has approved the capital cost of project.
8. It is submitted that Clause 10 of the Amended PPA and Clause 10 of Schedule II of the Amended PPA inter alia provide that all impositions by statutory authorities on OPGC necessitating the upgradation or installation of new equipment in order to comply with norms for environmental protection are to be billed by OPGC and paid by GRIDCO. Although bills for reimbursement for the actual expenditure incurred in the previous years has been raised, such expenditure has not been reimbursed to OPGC. Moreover, tariff computed in the amended PPA has not included the impact of such expenditure towards environmental protection equipment installation. In light of the above, the OPGC has claimed Rs. 66.41 Crore as expenditures towards environmental protection equipment installation during FY 2017-18 for reimbursement on actual basis in order to comply with the directions of state control board. The details of expenditure to comply with the pollution control board directives are given in table – 1 below.

Table – 1: Schemes for environment protection equipment installation

(Rs. Crore)

S. No.	Scheme	Actual expenditure incurred					Projected expenditure		Total
		FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	
1	Ambient air monitoring system	0.41	0.39	-	-	1.13	-	-	1.92
2	Effluent Monitoring System	-	-	-	-	0.12	-	-	0.12
3	ESP upgradation	-	-	12.69	-	21.56	6.00	-	40.25
4	Zero Effluent Discharge	-	-	-	-	-	0.15	-	0.15
5	HDPE lining in Ash Pond C	-	-	-	-	-	17.52	-	17.52
6	Dry Fog Dust suppression system	-	-	-	-	0.28	1.60	1.12	3.00
7	Dry fly ash handling system	-	3.45	-	-	-	-	-	3.45
	Total	0.41	3.84	12.69	0.00	23.08	25.27	1.12	66.41

9. OPGC also incurred capital expenditure in order to maintain the efficient operation of the project. Given the age of the project and in order to ensure consistent generation levels, OPGC has incurred costs as mentioned in table – 2 below.

Table – 2: Expenditure towards schemes essential for continuous operation of the station

(Rs. Crore)

S. No.	Scheme	Actual expenditure incurred			Projected expenditure	Total
		FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	
1	Raising of height of Ash Pond-A from RL 202 m to 205 m	3.15	1.55	0.25		4.95
2	Raising of height of Ash Pond-A from RL 205 m to 208 m			2.61	1.08	3.69
3	Construction of Ash Pond C				17.72	17.72
4	Modification of Pressure Reducing and Distributed System (PRDS)		0.21	3.53		3.74
	Total	3.15	1.76	6.39	18.80	30.10

OPGC humbly request the Commission to allow reimbursement of Rs. 30.10 Crore towards costs incurred for maintaining consistent operation level.

Debt – Equity Ratio

10. OPGC submitted the project cost of Rs. 1060 Crore as approved in Amended PPA including equity of Rs. 450 Crore and Loan of Rs. 610 Crore.

Return on Equity

11. According to the Clause 8.0 (10) of Schedule II of PPA, Return on Equity at the rate of 16% has been considered. OPGC proposed Rs. 72 crore as Return on equity.

Depreciation

12. Considering the depreciation charges computed as per the provisions of the Amended PPA, the assets of Generating Stations are fully depreciated by the financial year ending March 31, 2009. Therefore, OPGC has not claimed any depreciation.

Interest on Loan Capital

13. Considering the actual repayment made against the outstanding loan, OPGC submitted that loan amount of Rs. 610 Crore has been fully repaid by financial year ending March 31, 2012 and so, OPGC submitted no claim towards the Interest on Loan Capital for FY 2017-18.

Interest on Working Capital

14. According to the Clause 3.0 (f) of Schedule II of the Amended PPA, the components of working capital are coal cost for 1.5 months, oil cost for 2 months, O&M expenses for 1 month and receivables for 2 months. OPGC has been meeting its working capital requirement through internal accruals.
15. In order to compute interest on working capital OPGC is relying on interest rate charged by Union Bank of India. The details of working capital requirement and the interest on it is provided in table – 3 below.

Table – 3: Computation of interest on working capital for FY 2017-18

(Rs. Crore)

Sr. No.	Particulars	FY 2017-18
1.	Cost of Coal for one and half months	48.58
2.	Cost of Secondary Fuel Oil for two month	4.36
3.	O&M Expenses for one month	10.80
4.	Receivables equivalent to two month	106.93
5.	Total Working Capital Requirement	170.68
6.	Interest Rate %	14.75%
7.	Interest on Working Capital	25.17

OGPC humbly requests the OERC to approve interest on working capital as Rs. 25.17 Crore for FY 2017-18.

O&M Expenses

16. OPGC submitted that Clause 3.0 (d) and (e) of Schedule II of the Amended PPA provides that O&M expenses for first year of operation would be 2.5% of the capital cost (Rs.1030 crore for O & M expenses as per amendment PPA) and shall be escalated by 8% each year from April 1, 1996. Accordingly, OPGC submitted O&M Expenses as Rs. 129.62 Crore for FY 2017-18.

Summary of Annual Fixed Cost

17. OPGC proposed Annual Fixed Cost of Rs. 226.80 Crore for FY 2017-18. The details are given in the table –4 below.

Table –4: Annual Fixed Cost of OPGC for FY 2017-18

(Rs. Crore)

Sr. No.	Particulars	Amount
1.	Return on Equity	72.00
2.	Depreciation	0.00
3.	Interest on Loan Capital	0.00
4.	Interest on Working Capital	25.17
5.	O&M Expenses	129.62
6.	Total Annual Fixed Cost	226.80

Operational Performance Parameters

18. The operation performance considered for tariff by OPGC is given in table – 5 below.

Table – 5: Operational Performance Parameters for FY 2017-18

Sr. No.	Particulars	Unit	Values	Remarks
1.	Plant Load Factor	%	83.06%	Considering annual overhauling schedule for unit 1 for 21 days and capital overhauling for unit 2 for 35 days
2.	Gross Generation	MU	3055.94	Estimated considering above PLF
3.	Auxiliary Consumption	%	9.50%	As per the provisions of the approved amended PPA
4.	Net Generation	MU	2765.63	Estimated considering above PLF and auxiliary consumption
5.	Station Heat Rate	kcal/kWh	2500	As per the provisions of the approved amended PPA
6.	Specific Fuel Consumption	ml/kWh	3.50	As per the provisions of the approved amended PPA

Fuel Cost

19. As per Clause 7.0 of Schedule II of the existing PPA, Gross Calorific Value and Price of Coal and Oil shall be considered as delivered to the Power Station. For computation of the landed cost of fuel, OPGC has relied on the provisions of the Amended PPA. OPGC has considered the latest available actual weighted average price of Coal and Oil (for October 2016).

20. Average ash content of coal supplied during FY 2015-16 was 41.71% and 43.20% during April to October, 2016. OPGC has been following up with Mahanandi Coal Fields Limited (MCL) for supply of beneficiated coal with ash content not exceeding 34%. It is understood that the MCL's washaries are not likely to come up during FY 2017-18. Hence OPGC has not considered beneficiated coal in FY 2017-18. To compute landed price of coal OPGC has considered price of coal as billed by MCL.
21. The prices of Coal and Oil have been escalated by escalation factor of 7% (Actual growth in price from April to October, 2016) to arrive at Price of coal and Oil as on April 1, 2017. The price of Oil has been proposed as weighted average price of FO and LDO in ratio of 90:10. Further, OPGC has considered weighted average Gross Calorific Value of Coal for the period from November 2015 to October 2016 (12 months).
22. Accordingly, the price of coal and oil has been considered to be Rs. 1645.04/MT and Rs. 29649.64/Kl respectively as on April 1, 2017.

Energy charges

23. OPGC has computed Energy Charge for FY 2017-18 as per Clause 7.0 of Schedule II of the Amended PPA. The details are given in table –6 below.

Table–6: Computation of Energy Charge for 2017-18

Particulars	Unit	FY 2017-18
Auxiliary Consumption	%	9.50%
Gross Station Heat Rate	kCal/kWh	2500
GCV of Coal	kCal/kg	2629.10
GCV of Oil	kCal/kg	10000.00
Specific Coal Consumption	kg /kWh	0.94
Specific Oil Consumption	ml/kWh	3.50
Price of Coal	Rs. / MT	1645.04
Price of Secondary Oil	Rs. / MT	29649.64
Variable Charge for Coal	Rs./kWh	1.704
Variable Charge for Oil	Rs./kWh	0.115
Energy Charge	Rs./kWh	1.819

Reimbursement of Other Charges

24. As per provisions of amended PPA, OPGC proposes to reimburse the different charges and expenses which comprise of Incentive, Electricity duty reimbursement, rent and cess, SOC and MOC paid to SLDC, Establishment fund to EPRC, Water tax and Cess, Electricity Inspection fees, Ash Utilisation Expenses, Income tax and Fuel Adjustment Charges. The details are given in table–7 below.

Table-7: Other Charges for 2017-18**(Rs. Crore)**

Sr. No.	Particulars	FY 2017-18
1.	Electricity Duty	8.25
2.	Water Cess and Water Charges	6.35
3.	Tax and Cess on land	0.22
4.	Electricity Inspection Fees	0.17
5.	SOC and MOC for SLDC	0.35
6.	ERPC Charges	0.16
7.	Income Tax	38.11
8.	Ash Utilisation expenses	5.17
9.	Recovery of Tariff Petition Fee	0.21
10.	Total	58.98

25. As per amended PPA OPGC is entitled to recover such additional charges from GRIDCO such as Boiler Inspection Fee, Factory Licence Fee, Stamping Fee of Water Flow Meter, Calibration Fee for Energy meter, Stamping Fee for test weight and in motion weigh bridge, Registration Fee for new fire tender, Coal Storage Licence Fee, Read Tax and Fitness Fee, VHF Licence Fee, etc. OPGC submits that these charges will be recovered during the year as and when it is incurred. OPGC humbly request the Hon'ble OERC to approve the recovery of these charges as and when it is incurred during FY 2017-18.

Summary of Generation Tariff for FY 2017-18

26. The summary of Generation Tariff proposed by OPGC for FY 2017-18 is given in table -8 below.

Table-8: Generation Tariff for 2017-18

Sr. No.	Particulars	FY 2017-18	
		Rs. Crore	Rs./kWh
1.	Annual Fixed Cost	226.80	0.820
2.	Energy Charges	503.05	1.819
3.	Tariff for Sale of Power	729.85	2.639

Prayer

26. OPGC has prayed to the Commission to approve the following for FY 2017-18.
- The tariff including annual fixed cost and variable charges, for supplying the power to GRIDCO Ltd. for FY 2017-18 as per the provisions of the Amended PPA executed between OPGC Ltd. and GRIDCO Ltd.
 - The other charges to be paid by GRIDCO Ltd. as per the provisions of Amended PPA signed between OPGC Ltd. and GRIDCO Ltd.
 - Reimbursement of costs towards schemes for environment protection equipment installation incurred by OPGC Ltd. and its recovery through tariff of FY 2017-18 in accordance with clause 10 of the amended PPA and clause 10.0 of schedule II of the Amended PPA, executed between OPGC Ltd and GRIDCO Ltd.
 - The costs incurred for the purpose of compliance with statutory requirements and other costs to maintain the efficient operation of the project.
 - Recovery of upward and downward variation in fuel prices and calorific value including fuel mix through Fuel Price Adjustment as per the provisions of Amended PPA between OPGC Ltd. and GRIDCO Ltd.
