

***Summary of ARR & BSP Filings***

Submitted by

***OPGC***

For

***FY 2016 - 17***

## **Summary of OPGC ARR & BSP Filings for FY 2016-17**

### **GENERATION TARIFF PROPOSAL OF OPGC FOR THE FY 2016-17**

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, 7<sup>th</sup> 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 OERC and the 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 OERC in ARR of GRIDCO.
4. In compliance to the above directions of the OERC, OPGC has filed an application for Approval of Generation Tariff for FY 2016-17 under Section 62 and 86 of the Electricity Act, 2003 (“the Act”), Amended PPA and related provision of OERC (Terms and Conditions of Generation Tariff) Regulations,

2014 and OERC (Conduct of Business) Regulations, 2004, as amended from time to time. Since, OPGC is filing application of tariff for the first time, it has sought time extension for filing of application for Generation Tariff for FY 2016-17 vide letter dated November 28, 2015, which has been granted by OERC vide its letter dated December 1, 2015.

5. This petition has been filed by OPGC for determination of Generation Tariff for 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 present Petition has been filed primarily based on the provisions of approved Amended PPA and other agreements like PPA, Tripartite and Escrow and Securitization Arrangement, which was approved by the OERC. Further, wherever there is no provision or lack of clarity in the agreement, in such cases the related provisions of OERC Generation Tariff Regulations, 2014 have been considered.

#### **Generation Tariff for FY 2016-17**

6. The Amended PPA and Regulation 4.1 of OERC Generation Tariff Regulations, 2014 specify that tariff for supply of electricity from thermal generating station shall comprise of two parts viz., Capacity Charges (for recovery of Annual Fixed Cost) and Energy charge.

#### **Computation of Annual Fixed Cost**

7. 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 and additional capitalisation**

8. OPGC has considered the capital cost of Rs. 1060 Crore for the purpose of computation of tariff for FY 2016-17. 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, OERC has principally admitted the capital cost of project.
9. Regulation 2.4 of OERC Generation Tariff Regulations, 2014 provides for the additional capitalisation after cutoff date on account of any change in law and for efficient and successful operation of the generating station. OPGC has undertaken total capitalisation of Rs. 4.95 Crore in FY 2014-15 and Rs. 7.79 Crore in FY 2015-16 including capitalisation for statutory compliance and efficiency improvement. Further, OPGC has proposed capitalisation of Rs. 82.91 Crore for FY 2016-17. All together OPGC has proposed additional capitalisation of Rs.95.65 Crore on account of statutory compliance and efficiency improvement

(additional capitalisation towards environmental stipulations – Rs. 63.84 crore and additional capitalisation towards efficiency improvement – Rs. 31.81 crore), separately, as part of Year end expenses, for reimbursement on actual basis.

**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 2016-17.

**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. As per the Regulations, the Interest on Working Capital is allowed on normative basis. OPGC has considered the rate of interest as per OERC Generation Tariff Regulations, 2014 as SBI Base Rate plus 300 basis points and claimed Rs. 16.56 crore as interest on working capital.

**O&M Expenses**

15. 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 considered at Rs.1030 crores and shall be escalated by 8% each year from April 1, 1996. Accordingly, OPGC submitted O&M Expenses as Rs. 120.02 Crore for FY 2016-17.

**Summary of Annual Fixed Cost**

16. OPGC proposed Annual Fixed Cost of Rs. 208.58 Crore for FY 2016-17. The details are given in the table below.

**Table 1**  
**Annual Fixed Cost of OPGC for FY 2016-17 (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	16.56
5.	O&M Expenses	120.02
6.	<b>Total Annual Fixed Cost</b>	<b>208.58</b>

**Operational Performance Parameters**

17. The operation performance considered for tariff by OPGC is given in the table below.

**Table 2**  
**Operational Performance Parameters for FY 2016-17**

Sr. No.	Particulars	Unit	Values	Remarks
1.	Plant Load Factor	%	81.46%	Weighted average PLF for last five years from FY 2011-12 to FY 2015-16 (upto Nov 2015)
2.	Gross Generation	MU	2996.97	
3.	Auxiliary Consumption	%	9.50%	As per the provisions of the approved PPA
4.	Net Generation	MU	2712.25	
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**

18. 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 and Regulation 4.34 of OERC Generation Tariff Regulations, 2014. OPGC has considered the latest available actual weighted average price of Coal and Oil (for September 2015) as computed on the basis of opening stock and purchase during the month. The transportation of coal from loading point located at mine to unloading point at the station for the span of about 11 km is handled by OPGC by rail transport. Hence, only fuel cost of Rs. 4.17 /MT pertaining to operation of Merry-Go-Round system (MGR) has been considered over and above the coal cost. OPGC has considered the loss in quantity of coal of 0.38% based on weighted average from FY 2011-12 to FY 2014-15, excluding FY 2013-14.
19. After considering the impact of fuel cost of MGR and loss in coal quantity, the weighted average price of coal has been considered as Rs. 1160.20/MT. These

prices of Coal and Oil have been escalated by escalation factor of 6% (Actual growth in price from September 2014 to March 2015) to arrive at Price of coal and Oil as on April 1, 2016. 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 October 2014 to September 2015 (12 months). For tariff computation for FY 2016-17, OPGC has considered GCV and price of coal & oil as mentioned in table -3 below:-

**Table 3**

**Price and Gross Calorific Value of Coal and Oil**

Sl. No.	Source of Coal	Projected as on April 1, 2016
1	Price of Coal (Rs. /MT)	1232.56
2	Price of Secondary Oil (Rs./kL)	37100.90
3	Gross Calorific Value of Coal (kCal/kg)	2828.92
4	Gross Calorific value of Secondary Oil (kCal/kg)	10000.00

**Energy charges**

20. As per Clause 7.0 of Schedule II of the Amended PPA, OPGC has proposed to approve Energy Charge of Rs.1.330/Kwh for FY 2016-17 as given in the table-4 below.

**Table 4**

**Computation of Energy Charge for 2016-17**

Particulars	Unit	Values
GCV of Coal	kCal/kg	2828.92
GCV of Oil	kCal/kg	10000.00
Specific Coal Consumption	kg /kWh	0.87
Specific Oil Consumption	ml/kWh	3.50
Price of Coal	Rs. / MT	1232.56
Price of Secondary Oil	Rs. / kL	37100.90
Variable Charge for Coal	Rs./kWh	1.187
Variable Charge for Oil	Rs./kWh	0.143
Energy Charge	Rs./kWh	1.330

**Year End Charges**

21. Apart from the Annual Fixed Cost and Energy Charges, OPGC proposed the Year end charges of Rs.101.80 crore and reimbursement of additional capitalization of Rs.95.65 crore as per the provisions of the Amended PPA, which comprises 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, Fuel Adjustment Charges etc. The details are given in the table-5 below.

**Table 5**  
**Year End Charges for 2016-17 (Rs. Crore)**

Sr. No.	Particulars	Values
1.	Incentive	1.62
2.	Electricity Duty	8.09
3.	Water Cess and Water Charges	7.09
4.	Tax and Cess on land	0.22
5.	Electricity Inspection Fees	0.17
6.	SOC and MOC for SLDC	0.38
7.	ERPC Charges	0.16
8.	Income Tax	37.07
9.	Ash Utilisation expenses	3.50
10.	Fuel Price Adjustment Charges	43.29
11.	Recovery of ARR and Tariff Petition Fees	0.21
12.	<b>Sub-total of Year End Charges</b>	<b>101.80</b>
13.	Reimbursement of Additional Capitalisation	95.65
14.	<b>Grand Total</b>	<b>197.45</b>

**Summary of Generation Tariff for FY 2016-17**

22. The summary of Generation Tariff proposed by OPGC for FY 2016-17 is given in table-6 below.

**Table 6**  
**Generation Tariff proposed by OPGC for 2016-17 (2712.25 MU)**

Sr. No.	Particulars	FY 2016-17	
		Rs. Crore	Rs./kWh
1.	Annual Fixed Cost	208.58	0.769
2.	Energy Charges	360.79	1.330
3.	<b>Tariff for Sale of Power</b>	<b>569.37</b>	<b>2.099</b>
4.	Year End Charges excluding additional capitalization	101.80	0.375
5.	Reimbursement of Additional Capitalisation	95.65	0.353
6.	<b>Total Tariff for Sale of Power</b>	<b>766.81</b>	<b>2.827</b>

**Prayer**

23. OPGC has prayed the Commission to approve the following for FY 2016-17.
- Approve the tariff, including annual fixed cost and variable charges, for supplying the power to GRIDCO Ltd. for FY 2016-17.
  - Approve the Year-end charges to be paid by GRIDCO Ltd. as per the provisions of Amended PPA signed between OPGC Ltd. and GRIDCO Ltd.
  - Approve Additional Capitalisation incurred by OPGC Ltd. during FY 2014-15 and FY 2015-16 and projected for FY 2016-17 and its recovery through tariff of FY 2016-17.
  - Approve the 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.

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