
BEFORE THE HON'BLE DELHI ELECTRICITY REGULATORY COMMISSION

Petition No. : of 2019

IN THE MATTER OF	Filing of Petition under section 62 (2) of the Electricity Act, 2003 for truing up of expenses for FY 2018-19 of IPGCL Station.
AND	
IN THE MATTER OF	Indraprastha Power Generation Company Limited Regd. Office "Himadri", Rajghat Power House Complex, New Delhi - 110002 PETITIONER

THE APPLICANT ABOVE NAMED RESPECTFULLY SUBMITS

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Chapter 1 : Background

This Chapter deals with the background of this Petition.

1.1 Introduction

1. “Indraprastha Power Generation Company Limited” (IPGCL) is a Government Company engaged in the business of Power Generation and is wholly owned by the Government of National Capital Territory of Delhi and operates Indraprastha Gas Turbine Power Station (GTPS) with a total capacity of 270 MW. It consists of six gas turbines of 30 MW each, using NG/RLNG as fuel and three Waste Heat Recovery Steam Turbines of de-rated capacity of 30 MW each. The gas Turbines of the station were set up in the year 1985-86 to meet the peak load demand of Delhi. The station was retrofitted with Steam Turbines in the year 1996.
2. The Electricity Act, 2003 was notified on 10th June, 2003 repealing the Indian Electricity Act-1910, the Electricity (Supply) Act, 1948 and the E.R.C. Act, 1998. Among the tariff related provisions, the State Electricity Regulatory Commission (SERC) has to be guided by National Electricity Policy, National Tariff Policy and Central Electricity Regulatory Commission (CERC). As per Section 86 (1)(a) of the Electricity Act, the State Commission shall discharge the function of determining the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail as the case may be within the state. The generation, transmission and distribution tariff have to be determined separately.
3. As per section 61 of the Electricity Act, 2003 the appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff and as per section 62 of the Electricity Act, 2003 the appropriate Commission shall determine the tariff in accordance with the provisions of this act for supply of electricity by a generating company to a distribution licensee and the appropriate Commission may require a generating company to furnish separate details as may be specified in respect of generation for determination of tariff.

4. Delhi Electricity Regulatory Commission (hereinafter referred to as 'DERC' or the 'Commission') was constituted by the GoNCTD on 03.03.1999 and it became operational from 10.12.1999. Accordingly, the State Commission (hereinafter referred as 'DERC') determines the tariff of power station GTPS which supply power within the Delhi states only.

5. The Petitioner is filing true up petition in accordance with the clause 13, 140, 142, 145 & 146 of DERC (terms and conditions of determination of Tariff regulation), 2017. The clause 13 as regards to file true up petition reads as under:-

"13. The utility shall file a petition for True up of ARR for previous years and determination of tariff in such form and in such manner as specified Regulations along with relevant formats of Generating entity, as the case may be, duly supported with detailed computations."

Further, as per clause 140 & 142 the capacity charge, energy charge, incentive is to be recovered as per achieved operational norms as specified in clause 6, 7, 8 & 9 of DERC Business Plan Regulation, 2017.

6. Accordingly, petitioner is filing the present submissions in line with DERC (terms and conditions of tariff regulation), 2017 & DERC Business Plan Regulation, 2017.

7. The existing power purchase agreement for power supply from the plant to Delhi Distribution Company will be expiring by March 2021. Since GTPS plant has several features like Reliable Supply to VVIP areas, work as Starting station for Grid revival in case of Black outs or total grid failure, capable to operate in Synchronous Condenser Mode with minimum retrofit, Availability of cheap domestic gas, Green Power due to less carbon foot print and it is a part of Islanding Scheme of Delhi State. Therefore in order to further utilize above inherent unique features of the plant, it has been decided by all stakeholders in a meeting held on 07.03.2019 under the chairmanship of secretary power GNCTD in presence of representative of State Commission and Central Electricity Authority to explore possibilities for future utilization

of plant capabilities for safe and reliable operation of State Grid. As per decision of the meeting timelines has been decided for further inputs from IPGCL and DTL. Accordingly, IPGCL has obtained the offer from M/s BHEL for life extension retrofits and retrofits for synchronous mode operation of GTPS plant. The Proposal obtained from M/s BHEL has been further forwarded to all stakeholders including State Commission vide IPGCL letter dated 25.11.2019.

8. IPGCL is filing the present petition in line with the provisions of above regulations for truing up of expenses for FY 2018-19 and requesting Hon'ble Commission to invoke its power of relaxation wherever required in the petition.

Chapter 2 : Submissions

This Chapter lays down the modality of making submissions to the Hon'ble Commission in support of the Prayers made out as under.

2.1 Brief of Submissions

9. IPGCL proposes to make submissions to the Hon'ble Commission in support of this Petition as under:
 - * Operational Parameters for the GTPS
 - * Financial Parameters for GTPS
 - * Capital Expenditure for GTPS
 - * Prayer
10. The present petition is filed as per DERC Regulations, 2017 for truing up of tariff for FY 2018-19. The petitioner requests the Hon'ble Commission to give due considerations to the following facts while evaluating the present tariff petition.
11. It is to further submit that the turbines of the station are more than 32 years old. The guaranteed heat rate at site conditions at 31.5°C is approximately 3188 Kcal/Kwh. Further, after taken correction factor of 5.70% on the guaranteed heat rate as recommended by the CEA, the corrected heat rate for simple cycle mode works out to 3370 kCal/kWh.
12. It is submitted that Operation and Maintenance expenses on Gas Turbine repair is cyclic in nature as type of maintenance required in Gas Turbines depends upon no. of hours of use in given time period.
13. Further, it is to submit that the heat rate achieved by the station is higher than the normative heat rate as allowed by the commission. The reason of higher Heat rate is on account of erratic scheduling by SLDC due to frequent change of demands by DISCOMs. Thus, the station may be allowed heat rate as per actual, as there is a direct loss on account of recovery of lesser fuel cost when operated in open cycle mode. Therefore, IPGCL

request Hon'ble Commission to relax the norms of SHR in Open Cycle mode and combined cycle mode respectively.

14. It is to further submit that earlier aggrieved by order of State Commission in petition no. 15 & 26 of 2017 and 05 of 2018, petitioner filed review petition no. 59 of 2017 and 41 of 2018. In the petition petitioner requested Hon'ble Commission to review its decision as regards APC computation, Capacity declaration, Calculation of RoCE and other issues. The State Commission vide its order dated 17.10.2019 and 23.10.2019 disposed off Review petition no. 41 of 2018 and 59 of 2017. In the order the State Commission has address the grievances of the petitioner which has impact in true up of FY 18-19. Accordingly, Hon'ble Commission is requested to consider applicability of said order while truing up for FY 18-19. State Commission has not considered the grievances of Petitioner in arriving RoCE.

15. It is to further submit that the State Commission trued up the tariff for FY 17-18 vide tariff order dated 31.07.2019. However, aggrieved by certain decisions of the State commission contrary to DERC tariff regulation, 2017 and Business plan Regulation, 2017 in impugned order including calculation of RoCE, Petitioner has filed an APPEAL no. 392 of 2019 before Appellate tribunal of Electricity. There are similar issues for FY 18-19, therefore, Petitioner is filing present true up petition without prejudice to its submission in existing case on above matter.

Chapter 3 : Norms for Operation

Petitioner has taken into consideration the actual performance parameters in arriving the financial values for true up for FY 2018-19.

3.1 Station Heat Rate

16. The Hon'ble Commission has approved the station heat rate of 2450 kCal/kWh in combined cycle mode and 3125 kCal/kWh in open cycle mode of operation in DERC Business Plan Regulation, 2017. However, the actual heat rate achieved by the station is on higher side due to frequent start/stops and partial operation of the units.

17. The Station heat rate achieved by the station for FY 2018-19 is shown here as under:-

Table 3-1: Station Heat Rate (kCal/kWh)

Description	UoM	FY 18-19
SHR (CC)	kCal/kWh	2549
SHR (OC)	kCal/kWh	3429

18. Further, the Central Electricity Regulatory Commission in its latest tariff regulation for FY 2019-24 has fixed a heat rate of 2600 kCal/kWh in combined cycle mode and 3578 kCal/kWh in open cycle mode for similar Assam gas station of NEEPCO. Hence, IPGCL request Hon'ble Commission to relax the norms of SHR and allowed as shown in table 1 above.

3.2 Availability

19. DERC has fixed the norm of 85 % availability factor for the period FY 2018-19 for full fixed cost recovery. Since Gas turbines of IPGTPS are more than 30 years old and could not achieve 85% availability factor during the previous period, hence, the availability achieved for GTPS during FY 2018-19 is shown as under:-

Table 3-2: Availability (%) for GTPS

Description	UoM	FY 18-19
Plant Availability as certified by SLDC	(%)	81.29

3.3 Auxiliary Power Consumption (APC)

20. DERC in its tariff regulation 2017 has fixed the APC norm of 2.0 % in combined cycle mode and 0.5% in open cycle mode for Gas Turbine /Combined Cycle generating stations. However, the actual APC achieved by the station during FY 2018-19 is shown here as under:-

Table 3-3: Auxiliary Power Consumption

Description	UoM	FY 18-19
Auxiliary Consumption	(%)	3.76

3.4 Plant Load Factor

21. The Gas turbine power station has low PLF as compared to availability in FY 2018-19. This lower PLF has resulted into high station heat rate and Auxiliary Power Consumption of the station. The table shows the comparison of availability and PLF of the Station as under:

Table 3-4: Comparison of Availability & PLF for GTPS

Year	Availability (%)	PLF (%)
2018-19	81.29	25.35

22. From the above table it is reiterated that Normative PLF i.e 85% could be achieved only when the scheduled generation of the plant is @ normative NAPAF i.e. 85% or in the cases of continuous running of full module without frequent starts/stops and backing down. It is therefore request state commission to direct State Load Dispatch Centre for full scheduling as per availability in the interest of state grid.

3.5 Gross Generation and Net Generation

23. On the basis of PLF and Auxiliary Power Consumption, Gross and Net Generation of the Station for FY 18-19 is shown here as under:-

Table 3-5: Gross and Net Generation

Sr.No.	Description	UoM	FY 18-19	Remarks
A	Plant Capacity	MW	270	
B	PLF	%	25.35	Table 3-4
C	Gross Generation	MU	599.569	$A*B*365*24/1000/100$
D	Aux. Cons.	%	3.76	Table 3-3
E	Aux. Cons.	MU	22.564	$E = C * D$
F	Net Gen.	MU	577.005	$F = C - E$

Chapter 4 : Energy Charge Rate and Fuel Cost

This Chapter deals with the fuel sources of GTPS and its consumption throughout the year along with the fuel cost arrived for the year FY 2018-19.

4.1 Fuel Consumption

24. GT Station of IPGCL runs on the Natural Gas being supplied by GAIL and Liquid Fuel supplied by IOCL. Earlier the total (APM+PMT+LNG) allocation for GTPS was 1.44 MMSCMD which was sufficient to run six gas turbines. This allocation was reduced to 1.32 MMSCMD during the FY 2006-07. Out of the total allocation of 1.32 MMSCMD, the contracted quantity of R-LNG is 0.60 MMSCMD and balance i.e. 0.72 MMSCMD comes from APM (0.59 MMSCMD) and PMT (0.13 MMSCMD) and these quantities are further subject to daily cuts in the range of 25-30% depending on the availability. In view of non availability of sufficient gas, Hon'ble Commission has approved the conversion of two Gas Turbines on dual fuel system in FY 2008-09. MoP&NG has further allocated 0.23 MMSCMD non-APM ONGC gases whose supply has been commenced from mid October, 2011.

25. Based upon the allocation, the consumption of APM, PMT, R-LNG and NAPM gas for FY 2018-19 is shown as under:

Table 4-1: Total Gas Consumption of GTPS

Description	UoM	FY 18-19
APM Gas	MMSCM	65.9482
PMT Gas	MMSCM	4.9208
NAPM Gas	MMSCM	42.3402
R-LNG Gas	MMSCM	49.4506
SPOT Gas	MMSCM	0.0393
Total Gas	MMSCM	162.6991

26. The Petitioner has an agreement with GAIL for supply of 0.6 MMSCMD R-LNG. As per the agreement with GAIL, the contracted quantity is subject to Take or Pay clause. Accordingly, the Petitioner is to bear the cost of this

contracted quantity even if there is no off take of supply. Petitioner is also using spot R-LNG, subject to amount of power schedule and requirement of RLNG to meet the shortage of gas. Hence, GTPS has sufficient gas to run the GT's on base load.

4.2 Energy Charge Rate and Fuel Cost

27. The Commission has specified the formula for computation of energy charge rate in Tariff Regulations, 2017 as follows:

"103. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

(b) For gas and liquid fuel based stations $ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$

Where, AUX = Normative auxiliary energy consumption in percentage;

CVPF = (b) Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for lignite, gas and liquid fuel based stations;

ECR = Energy charge rate, in Rupees per kWh sent out;

GHR = Gross station heat rate, in kCal per kWh;

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month."

28. The details of total gas consumption, rate per SCM and total cost of the gas for FY 2018-19 as per actual is depicted in the following table:

Table 4-2: Energy Charge Rate and Fuel Cost

Particulars	Unit	FY 18-19
Total Gas Cons.	MMSCM	162.699
Average Gas Price	Rs./ SCM	18.366
Weighted Average GCV	kCal/ SCM	9392.203
Total Gas Cost	Rs. Crores	298.81
Net Generation	MU	577.005
Variable Cost - CC	Rs./kWh	5.179

Chapter 5 : Estimation of Fixed Cost

5.1 Parameters for Fixed Cost

29. As per DERC (Terms and conditions for determination of tariff) Regulation 2017 and Business Plan regulation 2017, the annual fixed cost (AFC) of a Generating Entity shall consist of the following components as specified in these Regulations:

- (a) Return on Capital Employed;
- (b) Depreciation; and
- (c) Operation and Maintenance expenses;
- (d) Fixed Auxiliary Consumption Expenses.

5.2 Operation and Maintenance Expenses

30. Hon'ble Commission has specified Normative Operation and Maintenance expenses in DERC Business Plan Regulation, 2017 for the control period from FY 2017-18 to FY 2019-20 shown as under:

Table 5-1:O&M Expenses (Rs. Lakh/ MW)

Station	2017-18	2018-19	2019-20
GTPS	29.66	31.32	33.08

As per Clause 140 of DERC tariff regulation, 2017 O&M charges are to be recovered on normative basis as per achieved availability. Accordingly, the normative O&M as provided in DERC Business Plan Regulation, 2017 has been considered for true up.

31. Petitioner may like to further submit that pay and perks of employees of the petitioner Company is determined in line with Central Pay Commission Recommendations. In case of Petitioner Company the same has been partially implemented on recommendation of wage revision committee. Accordingly, Petitioner has paid Interim relief to the employees of IPGCL for the years starting from FY 17-18 to till date. The Expenditure for FY 18-19 is Rs 12.03 Cr. Further, the final payment along with the arrears will be paid to the

employees after the order of implementation of wage revision committee report. Accordingly State Commission is requested to consider Rs 12.03 Cr as additional expenditure on account of Employees cost to be allowed additionally.

32. Hon'ble Commission in its Business Plan Regulation, 2017 has specified as under:-

"Impact of any statutory Pay revision on employee's cost as may be applicable on case to case basis shall be considered separately, based on actual payment made by the Generation Entity and shall be allowed by the Commission".

Accordingly, the O &M expenses for FY 2018-19 are calculated as under:

Table 5-2:O & M Expenses

S.No.	Particulars	UoM	FY 18-19 (Allowed)	FY 18-19 (Normative)
A	Base O&M expenses	Rs Cr.	84.56	84.56
B	Impact of Adhoc payment as IR due to Pay Revision	Rs Cr.	-	12.03
C	Total O&M Expenses	Rs Cr.	84.56	96.59

5.3 Capital Expenditure

33. Hon'ble Commission has approved the Opening Gross Fixed Asset of Rs. 425.14 Cr in the beginning of FY 2018-19 in its tariff order dated 28.03.2018. Further, GTPS has made certain capital additions in FY 2018-19 for an amount of Rs 4.69 Cr. These are the capital spares purchased for the maintenance of plant and are included in the fixed assets in the books of the company as per IND-AS requirement. The Details are attached as per **Annexure 'A'**.
34. Accordingly, Hon'ble Commission is requested to allow the expenditure of Rs 4.69 Cr towards capital expenditure incurred in FY 2018-19 for GTPS station. Accordingly, the GFA of GTPS from FY 2018-19 is calculated as under:-

Table 5-3: Capital Expenditure

S.No.	Particulars	Unit	FY 2018-19
A	Opening GFA	Rs in Cr.	425.14
B	Addition	Rs in Cr.	4.69
C	Deletion	Rs in Cr.	3.77
D	Closing GFA	Rs in Cr.	426.06
E	Average GFA	Rs in Cr.	425.60

5.4 Depreciation

35. Since cumulative depreciation has reached 70% of the total depreciation, the petitioner has spread the remaining depreciable value over the remaining life

of the asset. The depreciation allowed by Hon'ble Commission till FY 2017-18 is Rs 349.78 Cr. Accordingly, depreciation calculated for FY 2018-19 is calculated as under:-

Table 5-4: Details of Depreciation

S.No.	Particulars	Unit	FY 18-19	Remarks
A	Average GFA	Rs in Cr.	425.60	Table 5-3
B	Opening Accumulated Depreciation	Rs in Cr.	349.78	As per DERC tariff order dt 31.07.2019
C	Balance Depreciation	Rs in Cr.	33.26	C = 90% of A - B
D	Balance useful life opening	Years	3	
E	Current Year Depreciation	Rs in Cr.	11.09	E = C/D
F	Closing Accumulated Depreciation	Rs in Cr.	360.87	B + E
G	Average Accumulated Depreciation	Rs in Cr.	355.32	(B + F)/2
H	Average Net Fixed Asset	Rs in Cr.	70.28	A - G

5.5 Working Capital

36. Petitioner has calculated the Interest on Working Capital as per DERC Tariff Regulations, 2017 which reads as under:

“(2) Open-cycle Gas Turbine/Combined Cycle thermal generating stations as follows:

(a) Fuel Cost for 30 days corresponding to the NAPAF duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

(b) Liquid fuel stock for 15 days

(c) Maintenance spares @ 30% of Operation and Maintenance expenses specified in this Regulation;

(d) Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and

(e) Operation and maintenance expenses for one month.

37. Earlier, State Commission in Tariff order dated 28.03.2018 has taken fuel cost for the month of Nov-17, Dec-17 and Jan-18 in arriving working capital for FY 18-19. However, as per DERC tariff regulation 2017, the same should be taken for the month of Jan-18, Feb-18 and Mar-18. Accordingly, Petitioner has taken fuel cost for working capital by taking average of three months from Jan-18 to March-18 as per DERC tariff Regulation 2017 for FY 2018-19 which reads as under:

“107. Landed Fuel Cost for Tariff Determination: The landed fuel cost of primary fuel and secondary fuel for tariff determination shall be based on actual weighted moving average cost of respective fuel before the start of the tariff period for existing and new generating stations”.

38. Further, the weighted average landed price of gas for the period is 12.576 Rs/SCM and weighted average GCV is 9326.751 kCal/SCM. The detailed calculation is attached and placed as **Annexure ‘B’**. Thus, Fuel Cost arrived @ Normative parameters is Rs 664.15 Cr. Accordingly, working capital for FY 18-19 is calculated as under:

Table 5-5: Requirement of Working Capital

S.No.	Particulars	Unit	FY 18-19	Remarks
A	Fuel expenses for 1 month	Rs Cr	55.35	Para 37& 38
B	Liquid Fuel for 1/2 month	Rs Cr	30.52	DERC tariff order dated 28.03.2018
C	Maintenance spares @ 30% of O&M	Rs Cr	25.37	Para 37& 38
D	O&M expenses for 1 month	Rs Cr	7.05	Para 37& 38
E	Annual Fixed Cost for the year	Rs Cr	133.43	Para 37& 38
F	Fuel Cost for the year	Rs Cr	664.15	Para 37& 38
G	Receivables equivalent to 2 months of capacity and energy charge	Rs Cr	132.93	$G = (E+F)/6$
H	Total Working Capital	Rs Cr	251.21	$H = A+B+C+D+G$

39. In view of above, Petitioner has revised requirement of working capital on normative basis for FY 18-19 and request Hon'ble Commission to true up the working capital for FY 18-19 as per table 5-5 above.

5.6 Requirement of Loan and Equity

40. Since accumulated depreciation has reached over and above 70% of Gross Fixed asset, the remaining value is treated as 100% equity. Accordingly, petitioner has determined the requirement of Loan and Equity as follows:-

Table 5-6: Requirement of Loan & Equity

S.No.	Particulars	Unit	FY 2018-19	Remarks
A	Average Net Fixed Asset	Rs in Cr.	70.28	Table 5-4
B	Average Equity	Rs in Cr.	70.28	Para 40
C	Average CAPEX Loan	Rs in Cr.	0.00	Para 40
D	Working Capital Loan	Rs in Cr.	251.21	Table 5-5
E	Average Loan Requirement	Rs in Cr.	251.21	C + D
F	Average RRB	Rs in Cr.	321.49	B + E

41. In this regard it is to submit that as against not treating the balance GFA as equity, in absence of any outstanding loan (all Capital Loans are already paid), rather dividing it in the ratio 30:70 of equity and loan, Petitioner has filed an appeal no. 392 of 2019 in APTEL for adjudication of disputes in treating GFA in absence of any existing loan as above. Therefore Petitioner is filing present true up petition without prejudice to its submission in existing case on above matter.

5.7 Return on Capital Employed

42. Commission has specified the methodology for allowing Return on Capital Employed in Tariff Regulations, 2017 as follows:

“65. Return on Capital Employed shall be used to provide a return to the Utility, and shall cover all financing costs except expenses for availing the loans, without providing separate allowances for interest on loans and interest on working capital.

66. The Regulated Rate Base (RRB) shall be used to calculate the total capital employed which shall include the Original Cost of Fixed Assets (OCFA) and Working Capital. Capital work in progress (CWIP) shall not form part of the RRB. Accumulated Depreciation, Consumer Contribution, Capital Subsidies / Grants shall be deducted in arriving at the RRB.

67. The RRB shall be determined for each year of the Control Period at the beginning of the Control Period based on the approved capital investment plan with corresponding capitalisation schedule and normative working capital.”

43. Return on Capital Employed (RoCE) for the year “i” shall be computed in the following manner:

$$\text{RoCE} = \text{WACC}_i * \text{RRB}_i$$

44. The WACC for each year of the Control Period shall be computed at the start of the Control Period in the following manner:

$$\text{WACC} = [D/(D+E)] * r_d + [E/(D+E)] * r_e$$

Where, D is the amount of Debt derived as per these Regulations;

E is the amount of Equity derived as per these Regulations;

45. Further, Commission has specified Margin for Rate of Interest on loan in Business Plan Regulations, 2017 as follows:

“5. MARGIN FOR RATE OF INTEREST ON LOAN

(1) Margin for rate of interest in terms of Regulation 4(2) of the DERC (Terms and Conditions for Determination of Tariff) Regulations, 2017 for the Generating Entity shall be allowed over and above 1 (one) year Marginal Cost of Fund based Lending Rate (MCLR) of SBI for computation of rate of interest on loan”

<i>Table 1: Margin for Rate of Interest on Loan (%)</i>				
<i>Sr. No.</i>	<i>Generating Station</i>	<i>2017-18</i>	<i>2018-19</i>	<i>2019-20</i>
<i>1</i>	<i>Gas Turbine Power Station</i>	<i>2.34%</i>	<i>2.11%</i>	<i>2.01%</i>

46. To calculate the return on capital employed petitioner has considered the rate of interest on loan by considering the Bank Rate as Marginal Cost of Fund based Lending Rate (MCLR) of SBI as notified by the State Bank of India and margin as approved in Business Plan Regulations, 2017. Accordingly rate of interest on loan for FY 18-19 has been calculated at 10.26% on the basis of SBI MCLR of 8.15% as on 1st April, 2018 plus margin of 2.11% for FY 2018-19.

47. Petitioner has considered the base rate of return on equity at 14%. Since petitioner has not paid any income tax in FY 18-19, the grossed up rate of return on equity has been taken at 14.00% for FY 2018-19. However, Hon'ble Commission is requested to allow recovery of actual tax to be paid arising out of true up of expenditure for FY 18-19. Accordingly, Petitioner may be allowed to recover the same directly with the beneficiaries.

48. Accordingly, Petitioner has computed Weighted Average Cost of Capital (WACC) and Return on Capital Employed (RoCE) as follows:

Table 5-7: WACC and RoCE

S.No.	Particulars	Unit	FY 18-19	Remarks
A	Average RRB	Rs in Cr.	321.49	Table 5-6

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B	Average Loan Requirement for Capital Investment	Rs in Cr.	0.00	Table 5-6
C	Loan for Working Capital Requirement	Rs in Cr.	251.21	Table 5-6
D	Total Loan	Rs in Cr.	251.21	D = B+C
E	Average Equity	Rs in Cr.	70.28	Table 5-6
F	Cost of Debt, Rd	%	10.26	Para 46
G	Return on Equity, Re	%	14.00	Para 47
H	WACC	%	11.08	As per DERC Regulation, 2017
I	RoCE	Rs in Cr.	35.61	I = A * H

5.8 Fixed Auxiliary Consumption Expenses

49. Commission has allowed Fixed Auxiliary Consumption (0.5%) @ Normative PLF. Accordingly, Petitioner has calculated Fixed Auxiliary Consumption Expenses for FY 2018-19 is as follows:

Table 5-8: Fixed Auxiliary Consumption Expenses

S.No.	Particulars	Unit	FY 18-19	Remarks
A	Plant Capacity	MW	270	
B	Normative PLF	%	85	
C	Gross Generation	MU	2010.42	$C = A*B*365*24/1000/100$
D	Fixed Auxiliary Consumption	%	0.5	As Per BPR 2017
E	Fixed Auxiliary Consumption	MU	10.05	$E = C*D$
F	Energy Charge Rate	Rs/kWh	5.179	Table 4-2
G	Fixed Auxiliary Consumption	Rs Cr	5.21	$G = E*F/10$

50. As regards to estimation of sent out energy on normative APC, Petitioner had filed review petition no. 59 of 2017 and 41 of 2018 to resolve the issue of arriving sent out energy. Accordingly the State commission vide its order dated 23.10.2019 and 17.10.2019 has ordered to calculate ex-bus sent out energy on normative APC of 2.5% rather than 2% (excluding 0.5% of fixed APC). However, petitioner has arrived ECR on actual auxiliary consumption basis.

5.9 Summary of Fixed Cost

51. The DERC tariff regulation 2017 has following provisions regarding fixed cost which reads as under:-

“99. The annual fixed cost (AFC) of a Generating Entity shall consist of the following components as specified in these Regulations: Return on Capital Employed; Depreciation; and Operation and Maintenance expenses.”

Accordingly, the Annual Fixed Cost for FY 2018-19 is calculated as under:-

Table 5-9: Annual Fixed Cost

S.No.	Particulars	Unit	FY 18-19	Remarks
A	Return on Capital Employed	Rs Cr	35.61	Table 5-7
B	Depreciation	Rs Cr	11.09	Table 5-4
C	Operation and Maintenance Expenses	Rs Cr	96.59	Table 5-2
D	Fixed Auxiliary Consumption	Rs Cr	5.21	Table 5-8
E	Annual Fixed Cost	Rs Cr	148.49	E = A+B+C+D
F	Net Generation	MU	577.005	Table 3-5
G	Fixed Cost Per Unit	Rs/ kWh	2.573	G = E/F*10

52. On the basis of above submissions, IPGCL request Hon'ble Commission to true-up the total fixed cost for FY 2018-19 as per the above details.

Chapter 6 : Prayer

6.1 Prayer

Petitioner respectfully prays to the Hon'ble Commission;

- ❖ To admit this petition.
- ❖ To true up the tariff for FY 2018-19.
- ❖ To approve the operational and financial parameters as proposed for FY 2018-19.
- ❖ To grant any other relief as Hon'ble Commission may consider appropriate.
- ❖ The petitioner craves leave of the Hon'ble Commission to allow further submissions, addition and alteration to this Petition as may be necessary from time to time.
- ❖ Pass any other order as Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

(SURENDER MOHAN VERMA)

DIRECTOR (TECH.)

Indraprastha Power Generation Company Limited

PETITIONER

Details of Capital Additions as per books of GTPS for FY 18-19

Asset Code	Date of Cap	Asset Description	PO/Doc No	Amount
C00130501016	05-04-2018	INSULATION F/ RETAINING RING,GEN,ALSTOM	4010004146	23,01,000.00
C00170103231	14-12-2018	WATER PUMP,SFT DRIVEN,302A1543P003,GT,GE	4010004381	11,40,720.00
C00170103284	30-04-2018	HARDWARE KIT,CPLG BOLT,286A6860G001,GT	4010004085	20,31,891.29
C00170103285	27-07-2018	RATCHET MOTOR,225A9643P001,GT,GE,PB6461B	4010004282	11,80,471.00
C00170103356	05-12-2018	STARTER MOTOR,354A1674P001,GT,GE,PG6461B	4030000457	12,29,878.99
C00170103738	22-05-2018	VEE.BALL,3R575746912,GT,BLV	4010004046	48,25,333.09
C00170103772	22-05-2018	ACTUATOR ASSEMBLY,FS477,GT,BLV	4010004046	78,52,389.21
C00170103783	11-05-2018	SHROUD, 2ND STAGE,(CUSTOMIZED),GT,GE,FR6	4010004311	15,25,327.00
C00305155003	28-03-2019	DRIVE SHAFT,PUMP,BHEL,CW10	4010004510	7,63,460.00
C00305155004	28-03-2019	INT SHAFT,PUMP,BHEL,CW10	4010004510	5,32,180.00
C00305171034	09-11-2018	BEARING,THR,314,PUMP,KSB,CHTC4/8	4010004326	19,09,887.12
C00592101017	05-09-2018	IO PACK,DISCRETE,IS220PDIOH1A,GE,MK6e	4010004042	29,20,500.00
C00592101035	26-12-2018	PDM,JPDC,IS2020JPDCG01,PNL,GE,MK6e	4010004422	5,66,400.00
C00592101044	26-12-2018	TERM BOARD,IS200TBAIH1C,PNL,GE,MK6e	4010004422	12,27,200.00
C00592103010	12-07-2018	PULSE GENERATOR CARD,L54E60000311,DVR	4010004298	19,23,400.00
CS0592123004	23-06-2018	CARD PQ,L54E1427AGG2,AVR,ALSTOM	4010004270	32,04,880.00
CS0592123007	23-06-2018	CARD ISO.COM,L54E1411AGG2,AVR,ALSTOM	4010004270	15,02,140.00
C00592123022	23-06-2018	POWER SPLY CARD A115.1,L54E1459AGG2,AVR	4010004270	10,63,180.00
C00597015019	21-11-2018	FLOW NOZZLE ASSY,SS 304,6IN,TRANSMITTER	4010004423	8,41,310.19
C00597015020	21-11-2018	FLOW NOZZLE ASSY,SS 304,4IN,TRANSMITTER	4010004423	7,28,650.01
C00601701033	18-09-2018	MOD,PROCESSOR,70PR05,DDC	4010004165	5,10,549.77
C00653501014	30-04-2018	BATTERY BANK,LEAD ACID,63,125V,1200AH	4010004153	18,38,080.00

Tariff Petition for True-up of Expenses of IPGCL-GTPS for FY 2018-19

C00671301001	22-11-2018	SF6CB,800A,6.6KV,3P,40KA,3PH,110VDC	4010004337	5,53,136.80
C00671303003	03-10-2018	SF6CB,2000A,72.5KV,EDF.SK.1.1,ABB	4030000463	10,02,194.06
C00671305001	19-06-2018	SF6CB,2500A,11KV,40KA,HPA12/2540C,ABB	4010004226	12,65,316.00
C00671501003	04-10-2018	RELAY,DIFF PROT,1/5A,AREVA,MICOM P633	4010004316	6,88,654.00
C00770511004	29-10-2018	VALVE,CHECK,NRFV,ASTL,200MM,BHEL,S36	4010004301	5,47,342.87
C00770911016	29-10-2018	VALVE,GLOBE,VENT SILENCER,100MM,BHEL,S33	4010004301	11,91,304.13
		Total		4,68,66,775.53

Annexure 'B'

Working Capital Requirement of GTPS for FY 18-19

Month	Particular	UoM	Domestic	Imported	Total	Net	LPPF
Jan-18	QTY	(000)SCM	9016.94	2574.46	11591.40	31857.57	12.576
	Amt.	(Rs in Cr)	8.93	7.53	16.46	40.064	
	GCV	kCal/SCM	9340.36		9340.36	9326.751	
Feb-18	QTY	(000)SCM	7667.81	785.68	8453.50		
	Amt.	(Rs in Cr)	7.849	2.437	10.286		
	GCV	kCal/SCM	9354.15		9354.15		
Mar-18	QTY	(000)SCM	11110.09	702.59	11812.676		
	Amt.	(Rs in Cr)	11.252	2.066	13.318		
	GCV	kCal/SCM	9293.79		9293.79		

S.No.	Particulars	UoM	FY 18-19	Remarks
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Tariff Petition for True-up of Expenses of IPGCL-GTPS for FY 2018-19

A	Capacity	MW	270	
B	Gross Gen.	MU	2010.42	@ 85% PLF
C	Aux. Cons.	%	2	DERC BPR, 2017
D	Aux. Cons.	MU	40.21	$D = B * C$
E	Net Gen.	MU	1970.21	$E = B - D$
F	Wt. AVG. LPPF	Rs/SCM	12.576	Jan, Feb, March 2018
G	Wt. Avg. GCV	kCal/SCM	9326.751	
H	Heat Rate	kCal/kWh	2450	DERC BPR, 2017
I	ECR	Rs/kWh	3.371	
J	Fuel Cost	Rs Cr	664.15	$J = E * I / 10$