

**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 Plant PPS-I.**

**AND**

**IN THE MATTER OF      Pragati Power Corporation Limited**

Regd. Office "Himadri", Rajghat Power House Complex,

New Delhi - 110002

**PETITIONER**

THE APPLICANT ABOVE NAMED RESPECTFULLY SUBMITS

## **Table of Contents**

|   |           |
|---|-----------|
| <b>Chapter 1 : Background .....</b>                       | <b>6</b>  |
| 1.1 Introduction .....                                    | 6         |
| <b>Chapter 2 : Submissions .....</b>                      | <b>8</b>  |
| 2.1 Brief of Submissions .....                            | 8         |
| <b>Chapter 3 : Norms for Operation .....</b>              | <b>10</b> |
| 3.1 Station Heat Rate .....                               | 10        |
| 3.2 Availability .....                                    | 11        |
| 3.3 Auxiliary Power Consumption (APC) .....               | 11        |
| 3.4 Plant Load Factor .....                               | 11        |
| <b>Chapter 4 : Energy Charge Rate and Fuel Cost .....</b> | <b>13</b> |
| 4.1 Fuel Consumption.....                                 | 13        |
| 4.2 Energy Charge Rate and Fuel Cost .....                | 14        |
| <b>Chapter 5 : Estimation of Fixed Cost .....</b>         | <b>15</b> |
| 5.1 Parameters for Fixed Cost.....                        | 15        |
| 5.2 Operation and Maintenance Expenses .....              | 15        |
| 5.3 Capital Expenditure .....                             | 19        |
| 5.4 Depreciation .....                                    | 21        |
| 5.5 Working Capital .....                                 | 22        |
| 5.6 Requirement of Loan and Equity .....                  | 24        |
| 5.7 Return on Capital Employed .....                      | 25        |
| 5.8 Fixed Auxiliary Consumption Expenses .....            | 28        |
| 5.9 Summary of Fixed Cost .....                           | 29        |
| <b>Chapter 6 : Prayer.....</b>                            | <b>30</b> |
| 6.1 Prayer .....  | 30        |

**List of Tables**

|   |    |
|---|----|
| Table 3-1: Station Heat Rate (kCal/kWh) .....         | 10 |
| Table 3-2: Availability (%).....                      | 11 |
| Table 3-3: Auxiliary Power Consumption.....           | 11 |
| Table 3-4: Comparison of Availability & PLF .....     | 11 |
| Table 3-5: Gross and Net Generation.....              | 12 |
| Table 4-1: Total Gas Consumption .....                | 13 |
| Table 4-2: Energy Charge Rate and Fuel Cost .....     | 14 |
| Table 5-1: O&M Expenses (Rs. Lakh/ MW).....           | 15 |
| Table 5-2: O & M Expenses .....                       | 16 |
| Table 5-3: Carrying cost on the deferred amount ..... | 17 |
| Table 5-4: Additional R&M for FY 2014-15 .....        | 18 |
| Table 5-5: Capex Schemes for FY 18-19 .....           | 19 |
| Table 5-6: Capital Expenditure .....                  | 20 |
| Table 5-7: Details of Depreciation.....               | 21 |
| Table 5-8: Requirement of Working Capital .....       | 23 |
| Table 5-9: Requirement of Loan & Equity .....         | 24 |
| Table 5-10: WACC and RoCE .....                       | 26 |
| Table 5-11: Fixed Auxiliary Consumption Expenses..... | 28 |
| Table 5-12: Annual Fixed Cost .....                   | 29 |

## **Chapter 1 : Background**

This Chapter deals with the background of this Petition.

### **1.1 Introduction**

1. “Pragati Power Corporation Ltd.” (PPCL) is a Generating Company engaged in the business of Power generation as per Companies Act, 1956 and is wholly owned by the Government of National Capital Territory of Delhi, which operates the Pragati Power Station-I with a total capacity of 330 MW and Pragati Power Station-III with a total capacity of 1371.2 MW CCGT plant at Bawana in Delhi. The tariff determination of PPS-III Bawana is determined by Hon’ble Central Electricity regulatory commission (CERC).
2. PPS-I was commissioned in the year 2002-03 in combined cycle to meet the peak load demand of Delhi and complete its useful life by FY 2028. It consists of two gas turbines of 104 MW each, using NG/RLNG as fuel and one STG (Steam Turbines of 122 MW).
3. 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. 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.
4. 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. Provided that the terms and conditions for determination of tariff under the Electricity (Supply) Act, 1948, the Electricity Regulatory Commission Act, 1998 and the enactments specified in the Schedule as they stood immediately before the appointed date, shall continue to apply for a period of one year or until the terms and conditions for tariff are specified under this section, whichever is earlier.”

5. Delhi Electricity Regulatory Commission (hereinafter referred to as 'DERC' or the 'Commission') was constituted by the GNCTD on 03.03.1999 and it became operational from 10.12.1999. Accordingly, the State Commission (hereinafter referred as 'DERC') determines the tariff of Pragati Power Station-I which supply power within the Delhi states only.

6. 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.

7. PPS-I 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**

8. PPS-I proposes to make submissions to the Hon'ble Commission in support of this Petition as under:  
Operational Parameters for Pragati Power Station-I  
Financial Parameters for Pragati Power Station-I  
Capital Expenditure for Pragati Power Station-I  
Prayer
9. 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 running hours of the machine. The gas turbine components are subject to high temperature and high velocity of flue gases which needs periodic inspection at regular interval and replacement of worn out parts on the completion of recommended life, beyond which repair is at high risk level. Hence, the expenditure on account of DLN burner/AGPI of the machine is allowed additionally on year to year basis.
10. Further, in addition to above, increase in employee's cost due to revision in pay, Sewage Water Charges (STP) due to use of sewage water has been allowed additionally over and above to normative O&M. The state Commission has been continuously allowing the above expenditure on actual basis. It is therefore requested to allow above expenditure as additional to normative O&M for FY 18-19 also.
11. Further, it is to submit that 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. The reason of higher Heat rate is on account of erratic scheduling by SLDC due to frequent change of demands by DISCOMs. Therefore, PPS-I request the Commission to relax the norms of SHR.

12. The Petitioner has filed review petition no. 60 of 2017 and 42 of 2018 against DERC Tariff order dated 31.08.2017 and 28.03.2018 respectively. Accordingly, State Commission in its order dated 17.10.2019 and 23.10.2019 had allowed certain aspects of ARR for FY 17-18. Accordingly, Petitioner requested Hon'ble Commission to consider and allow recovery of the same along with true-up order for FY 18-19.
13. 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, Petitioner has filed an APPEAL no. 393 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**

14. The Hon'ble Commission has approved the station heat rate of 2000 kCal/kWh in combined cycle mode and 2900 kCal/kWh in open cycle mode of operation in DERC Business Plan Regulation, 2017. However, Heat Rate achieved by the station in open cycle mode is on higher side due to frequent start/stops and partial operation of the units. PPS-I always endeavor to run in combined cycle mode but it also runs on open cycle mode as requisitioned by SLDC.

15. The actual heat rate achieved by PPS-I for FY 2018-19 is shown as under:-

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

| <b>Description</b> | <b>UoM</b> | <b>FY 18-19</b> |
|--------------------|------------|-----------------|
| <b>SHR (CC )</b>   | kCal/kWh   | 1989            |
| <b>SHR (OC)</b>    | kCal/kWh   | 3105            |

16. Further, Central Electricity Regulatory Commission in its latest tariff regulation for FY 2019-24 has fixed a heat rate of 2050 kCal/kWh in combined cycle mode and 3010 kCal/kWh in open cycle mode for similar Kawas GPS gas based station of NTPC which consists of same class of gas turbines as of PPS-I. Hence, PPCL request Hon'ble Commission to relax the norms of SHR and allow the heat rate as shown above.

### **3.2 Availability**

17. DERC has fixed the norm of 85 % availability factor for the period FY 2018-19 for full fixed cost recovery. The actual Availability of the station for FY 2018-19 is shown as under:-

**Table 3-2: Availability (%)**

| Description                                | UoM | FY 18-19 |
|--|-----|----------|
| Plant Availability<br>as certified by SLDC | (%) | 88.36    |

### **3.3 Auxiliary Power Consumption (APC)**

18. 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 | (%) | 2.39     |

### **3.4 Plant Load Factor**

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

**Table 3-4: Comparison of Availability & PLF**

| Year    | Availability (%) | PLF (%) |
|---------|------------------|---------|
| 2018-19 | 88.36            | 52.43   |

20. 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

## **Tariff Petition for True-up of Expenses of PPS-I for FY 2018-19**

NAPAF i.e. 85% or in the cases of continuous running of full module without frequent starts/stops and backing down. It is therefore, requested to 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**

21. On the basis of PLF and Auxiliary Power Consumption, Gross and Net Generation of PPS-I for FY 2018-19 is shown here as under:-

**Table 3-5: Gross and Net Generation**

| <b>Sr.No.</b> | <b>Description</b>      | <b>UoM</b> | <b>FY 18-19</b> | <b>Remarks</b>       |
|---------------|-------------------------|------------|-----------------|----------------------|
| <b>A</b>      | <b>Plant Capacity</b>   | MW         | 330             |                      |
| <b>B</b>      | <b>PLF</b>              | %          | 52.43           | Table 3-4            |
| <b>C</b>      | <b>Gross Generation</b> | MU         | 1515.585        | $=A*B*365*24/100000$ |
| <b>D</b>      | <b>Aux. Cons.</b>       | %          | 2.39            | Table 3-3            |
| <b>E</b>      | <b>Aux. Cons.</b>       | MU         | 36.16           | $E = C * D$          |
| <b>F</b>      | <b>Net Gen.</b>         | MU         | 1479.42         | $F = C - E$          |

## **Chapter 4 : Energy Charge Rate and Fuel Cost**

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

### **4.1 Fuel Consumption**

22. Pragati Power Station-I has a long-term existing agreement with Gas Authority of India Limited (GAIL) for supply of Gas. Earlier, PPS-I was having an allocation of 1.75 MMSCMD of APM Gas. This gas was sufficient to run both the Gas Turbines on base load. Due to depleting gas reserves of ONGC, GAIL has been imposing cuts on its supply on day to day basis. The present gas allocation on day to day basis is between 0.19 MMSCMD to 0.25 MMSCMD of APM gas and 0.28 MMSCMD of PMT gas (0.02 MMSCMD). To meet the short fall in the gas supply, fall back agreement has been signed with GAIL for supply of spot R-LNG gas on take and pay basis. MoP&NG has allocated 0.02 MMSCMD non-APM ONGC gas whose supply has been commenced from mid October, 2011. Thus, PPS-I has sufficient gas to run both the GT's on base load.
23. 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**

| <b>Description</b> | <b>UoM</b>   | <b>FY 18-19</b> |
|--------------------|--------------|-----------------|
| APM Gas            | MMSCM        | 121.963         |
| PMT Gas            | MMSCM        | 16.039          |
| NAPM Gas           | MMSCM        | 28.453          |
| R-LNG Gas          | MMSCM        | 154.526         |
| <b>Total Gas</b>   | <b>MMSCM</b> | <b>320.981</b>  |

## **4.2 Energy Charge Rate and Fuel Cost**

24. 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, 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*

*AUX =Normative auxiliary energy consumption in percentage;*

*CVPF = Weighted Average Gross calorific value of primary fuel as received.*

25. 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**

| <b>Particulars</b>        | <b>Unit</b> | <b>FY 18-19</b> |
|---------------------------|-------------|-----------------|
| Total Gas Cons.           | MMSCM       | 320.981         |
| Average Gas Price         | Rs./ SCM    | 22.756          |
| Weighted Average GCV      | kCal/ SCM   | 9392.919        |
| Total Gas Cost            | Rs. Crore   | 730.42          |
| Net Generation            | MU          | 1479.42         |
| <b>Variable Cost - CC</b> | Rs./kWh     | <b>4.937</b>    |

## **Chapter 5 : Estimation of Fixed Cost**

### **5.1 Parameters for Fixed Cost**

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

### **5.2 Operation and Maintenance Expenses**

27. 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)**

| <b>Station</b> | <b>2017-18</b> | <b>2018-19</b> | <b>2019-20</b> |
|----------------|----------------|----------------|----------------|
| <b>PPS-I</b>   | 17.69          | 18.68          | 19.73          |

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.

28. 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 PPCL for the years starting from FY 17-18 to till date. The Expenditure for FY 18-19 is Rs 16.22 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 16.22 Cr as additional expenditure on account of Employees cost to be allowed additionally.

29. Further, PPCL has installed DLN burner at PPS-I to control the Nox level. The repair and maintenance expenditure on account of DLN/AGPI of the machine is cyclic in nature; has been varied on year to year basis based on the running hours of the machine for smooth operations of the plant. All the inspections and overhauling of the machines are as per the manufactures recommendation. The commission has allowed Rs 16.12 Cr as additional R&M for FY 2018-19.

30. Pragati Power Station-I is sourcing plant water requirement from the treated effluent water from sewage treatment plants and has to incur more cost to get raw water, as compared to other similar stations. The actual expenditure on this account includes expenditure on operation, electricity, Chemicals etc.

31. Further, Petitioner had spent an amount of Rs 1.10 Cr in FY 18-19 towards DLN burner and Rs 3.98 Cr for Sewage water uses. Hence it is requested Hon'ble Commission to allow the same for FY 18-19 as allowed previously in the tariff order of PPS-I.

32. Accordingly, the O &M expenses for FY 2018-19 is shown below:-

**Table 5-2: O & M Expenses**

| S.No. | Particulars                                       | UoM           | FY 18-19<br>(Allowed) | FY 18-19 (Actual/<br>Normative) |
|-------|---|---------------|-----------------------|---------------------------------|
| A     | Base O&M expenses                                 | Rs Cr.        | 61.64                 | 61.64                           |
| B     | Carryover of DLN from FY 15-16 as additional R&M  | Rs Cr.        | 16.12                 | 16.12                           |
| C     | DLN Burner for the period                         | Rs Cr.        | -                     | 1.10                            |
| D     | STP   | Rs Cr.        | 3.35                  | 3.98                            |
| E     | Impact of Adhoc payment as IR due to Pay Revision | Rs Cr.        | -                     | 16.22                           |
| F     | <b>Total O&amp;M Expenses</b>                     | <b>Rs Cr.</b> | <b>81.11</b>          | <b>99.06</b>                    |

33. Earlier, Petitioner has incurred an amount of Rs 65.55 Cr as additional expenditure towards DLN burner in FY 15-16. The State Commission allowed

the above expenditure. However, recovery of the same was split in four subsequent years to be recovered in FY 15-16 to FY 18-19 @ rate of Rs 16.12 Cr every year. This recovery has been considered by state commission in subsequent years without any carrying cost; therefore, aggrieved by above decision of State Commission, the petitioner filed review petition no. 60 of 2017 and 42 of 2018. Accordingly, the State Commission vide its order dated 17.10.2019 and 23.10.2019 has allowed carrying cost additionally to be recovered in subsequent tariff order. The Copy of the order is attached herewith and marked as **Annexure 'A'**. The relevant content of the order dated 17.10.2019 and 23.10.2019 is reproduced as under:-

*“3.1.2 The Commission has allowed the said expenses over a period of 4 years i.e. FY 2015-16 to FY 2018-19, and the expenditure appears to be cyclic in nature. As the expenditure has been incurred by the petitioner upfront, therefore carrying cost on the residual value of the expenditure may be considered in the subsequent Tariff order.”*

34. Accordingly, carrying cost on balance allowed expenditure on DLN burner will be as per following detail:-

**Table 5-3: Carrying cost on the deferred amount**

| <b>Sr. No.</b> | <b>Particulars</b>   | <b>FY 15-16</b> | <b>FY 16-17</b> | <b>FY 17-18</b> | <b>FY 18-19</b> | <b>Remarks</b>                               |
|----------------|----------------------|-----------------|-----------------|-----------------|-----------------|--|
| A              | Opening Balance      | 64.48           | 48.36           | 36.87           | 23.71           | Amount to be recovered in the Financial year |
| B              | Payment received     | 16.12           | 16.12           | 16.12           | 16.12           | Para 33                                      |
| C              | Carrying cost rate   | 0               | 11.5%           | 10.26 %         | 10.26 %         | Allowed as per DERC                          |
| D              | Carrying cost amount | 0               | 4.63            | 2.96            | 1.61            | $D = (A - B/2) * C$                          |
| E              | Closing Balance      | 48.36           | 36.87           | 23.71           | 9.20            | $E = A - B + D$                              |

Accordingly, Petitioner has calculated carrying cost of Rs 9.20 Cr upto FY 18-19 as above. However, Hon'ble Commission is requested to allow the recovery of carrying cost up to date of bills allowed to be raised for recovery.

35. Further, State Commission in its order dated 17.10.2019 has allowed recovery of unrecovered expenditure on account of DLN burner and STP in FY 14-15. However vide order dated 17.10.2019 the state commission in Review Petition no. 60 of 2017 has allowed above withheld expenditure of FY 2014-15. The relevant extract of the order related to above expenditure is reproduced here as under:-

*“3.2.3 The Petitioner in its true up petition for FY 2014-15 had not submitted its claim on account of DLN and STP and no purchase orders pertaining to DLN and STP for FY 2014-15 were submitted during the course of prudence check. The details of expenditure including Purchase Orders pertaining to DLN and STP for FY 2014-15 and payment details thereof has since been submitted by the Petitioner. The same have been examined and it is observed that the expenses towards DLN and STP for the FY 2014-15 are in order and may be allowed. The impact shall be given in the subsequent Tariff Order.”*

36. In view of above, the details of expenditure on DLN burner and STP for FY 14-15 as allowed by State Commission vide above order dated 17.10.2019 is as under:-

**Table 5-4: Additional R&M for FY 2014-15**

| S.No. | Particulars  | UoM              | FY 14-15     | Remarks  |
|-------|--|------------------|--------------|--|
| A     | DLN  | Rs in Cr.        | 19.00        | Para 3.2.3 of order dated 17.10.2019 in RP. No. 60 of 2017 |
| B     | STP  | Rs in Cr.        | 4.07         |  |
| C     | <b>Total amount (excluding carrying cost starting from FY 15-16)</b> | <b>Rs in Cr.</b> | <b>23.07</b> | <b>C = A + B</b>   |

Accordingly, Petitioner requests the State Commission to allow the amount of Rs 23.07 Cr along with applicable carrying cost in true up order for FY 18-19.

### **5.3 Capital Expenditure**

37. Hon'ble Commission has approved the Opening Gross Fixed Asset of Rs. 1050.38 Cr in the beginning of FY 2018-19 in its tariff order dated 28.03.2018. Further, PPS-I has made certain capital additions in FY 2018-19 for an amount of Rs 10.41 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 'B'**.
38. Petitioner may like to further submit that earlier Petitioner has submitted details of proposed Capex Schemes in its true up petition no. 06 of 2018 for FY 16-17 and ARR for FY 18-19. The Para 5.1 table 17 of the tariff petition had details of Capital expenditure schemes for FY 18-19, FY 19-20 and FY 20-21. Further Petitioner has requested expenditure of Rs 3.13 Cr to be met on account of Up-gradation of STG process controller, vibration system of GT1, GT2 and STG and Refurbishment of Cooling tower cells and structure. The State Commission in subsequent tariff order dated 28.03.2018 in above petition has allowed Rs 2.00 Cr as additional partial expenditure on above heads in Para 4.24 table No. 38. The details of the CAPEX schemes implemented in FY 2018-19 are here as under:-

**Table 5-5: Capex Schemes for FY 18-19**

| <b>S. No.</b> | <b>Item/ Scheme</b>                              | <b>Amount (Rs. In Lac)</b>    | <b>Remarks</b>  |
|---------------|--|-------------------------------|---|
| 1.            | Up-gradation of processors of STG Control system | 87.26<br>(73.95 lacs + taxes) | The Scheme was implemented and the payment has been done. |
|               | <b>Total</b>                                     | <b>87.26</b>                  |   |

**Tariff Petition for True-up of Expenses of PPS-I for FY 2018-19**

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39. Accordingly, Hon'ble Commission is requested to allow the expenditure of Rs 11.29 Cr towards Capital Expenditure incurred for PPS-I in FY 2018-19. Accordingly, the GFA of PPS-I from FY 2018-19 is calculated as under:-

**Table 5-6: Capital Expenditure**

| S.No. | Particulars | Unit      | FY 2018-19 |
|-------|-------------|-----------|------------|
| A     | Opening GFA | Rs in Cr. | 1050.38    |
| B     | Addition    | Rs in Cr. | 11.29      |
| C     | Deletion    | Rs in Cr. | 2.75       |
| D     | Closing GFA | Rs in Cr. | 1058.92    |
| E     | Average GFA | Rs in Cr. | 1054.65    |

## **5.4 Depreciation**

40. 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, in accordance with the DERC Tariff Regulation, 2017. The total accumulated depreciation allowed by the Hon'ble Commission till FY 2017-18 is Rs 809.02 Cr. Accordingly, depreciation calculated for FY 2018-19 is calculated as under:-

**Table 5-7: Details of Depreciation**

| <b>S.No.</b> | <b>Particulars</b>               | <b>Unit</b> | <b>FY 18-19</b> | <b>Remarks</b>                         |
|--------------|----------------------------------|-------------|-----------------|--|
| A            | Average GFA                      | Rs in Cr.   | 1054.65         | Table 5-6                              |
| B            | Opening Accumulated Depreciation | Rs in Cr.   | 809.02          | As per DERC tariff order dt 31.07.2019 |
| C            | Balance Depreciation             | Rs in Cr.   | 140.17          | $C = 90\% \text{ of } A - B$           |
| D            | Balance useful life              | Years       | 10              |  |
| E            | Current Year Depreciation        | Rs in Cr.   | 14.02           | $E = C/D$                              |
| F            | Closing Accumulated Depreciation | Rs in Cr.   | 823.04          | $F = B + E$                            |
| G            | Average Accumulated Depreciation | Rs in Cr.   | 816.03          | $G = (B + F)/2$                        |
| H            | Average Net Fixed Asset          | Rs in Cr.   | 238.62          | $H = A - G$                            |

## **5.5 Working Capital**

41. 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.*

42. 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”.*

43. Further, the weighted average landed price of gas for the period is 20.487 Rs/SCM and weighted average GCV is 9329.581 kCal/SCM. The detailed calculation is attached and placed as **Annexure 'C'**. Thus, Fuel Cost arrived @ Normative parameters is Rs 1079.15 Cr. Accordingly, working capital for FY 18-19 is consider as under:

**Table 5-8: Requirement of Working Capital**

| S.No. | Particulars  | Unit  | FY 18-19 | Remarks         |
|-------|--|-------|----------|-----------------|
| A     | Fuel expenses for 1 month  | Rs Cr | 89.93    | Para 42 & 43    |
| B     | Liquid Fuel for 1/2 month  | Rs Cr | 0.00     | Para 42 & 43    |
| C     | Maintenance spares @ 30% of O&M                                  | Rs Cr | 24.33    | Para 42 & 43    |
| D     | O&M expenses for 1 month   | Rs Cr | 6.76     | Para 42 & 43    |
| E     | Annual Fixed Cost for the year                                   | Rs Cr | 167.86   | Para 42 & 43    |
| F     | Fuel Cost for the year   | Rs Cr | 1079.15  | Para 42 & 43    |
| G     | Receivables equivalent to 2 months of capacity and energy charge | Rs Cr | 207.84   | $G = (E+F)/6$   |
| H     | Total Working Capital  | Rs Cr | 328.86   | $H = A+B+C+D+G$ |

44. 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 5-8 above.

## **5.6 Requirement of Loan and Equity**

45. 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 5-9: Requirement of Loan & Equity**

| <b>S.No.</b> | <b>Particulars</b>      | <b>Unit</b> | <b>FY 2018-19</b> | <b>Remarks</b> |
|--------------|-------------------------|-------------|-------------------|----------------|
| A            | Average Net Fixed Asset | Rs in Cr.   | 238.62            | Table 5-7      |
| B            | Average Equity          | Rs in Cr.   | 238.62            | Para 45        |
| C            | Average CAPEX Loan      | Rs in Cr.   | 0.00              | Para 45        |
| D            | Working Capital Loan    | Rs in Cr.   | 328.86            | Table 5-8      |
| E            | Total Loan Requirement  | Rs in Cr.   | 328.86            | E = C + D      |
| F            | Average RRB             | Rs in Cr.   | 567.48            | F = B + E      |

46. 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. 393 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

47. 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.”*

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

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

Where,

WACC<sub>i</sub> is the Weighted Average Cost of Capital for each year of the Control Period;

RRB<sub>i</sub> – Average Regulated Rate Base for the i<sup>th</sup> year of the Control Period.

49. 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;

50. 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"*

| <b>Table 1: Margin for Rate of Interest on Loan (%)</b> |                           |                |                |                |
|---|---------------------------|----------------|----------------|----------------|
| <b>Sr. No.</b>  | <b>Generating Station</b> | <b>2017-18</b> | <b>2018-19</b> | <b>2019-20</b> |
| 1   | Pragati Power Station     | 2.98%          | 2.98%          | 2.98%          |

51. In this regard it is to submit that 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 11.13% on the basis of SBI MCLR of 8.15% as on 1st April, 2018 plus margin of 2.98% for FY 2018-19.

52. Petitioner has considered the base rate of return on equity at 14% and the same has been grossed up with rate of income tax at 22.15%. Accordingly grossed up rate of return on equity has been computed at 17.98% for FY 2018-19.

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

**Table 5-10: WACC and RoCE**

| <b>S.No.</b> | <b>Particulars</b> | <b>Unit</b> | <b>FY 18-19</b> | <b>Remarks</b> |
|--------------|--------------------|-------------|-----------------|----------------|
|--------------|--------------------|-------------|-----------------|----------------|

**Tariff Petition for True-up of Expenses of PPS-I for FY 2018-19**

|   |                                      |           |        |                                       |
|---|--------------------------------------|-----------|--------|---------------------------------------|
| A | Average RRB                          | Rs in Cr. | 567.48 | Table 5-9                             |
| B | Average Capex loan                   | Rs in Cr. | 0.00   | Table 5-9                             |
| C | Loan for Working Capital Requirement | Rs in Cr. | 328.86 | Table 5-9                             |
| D | Total Loan                           | Rs in Cr. | 328.86 | D = B+C                               |
| E | Average Equity                       | Rs in Cr. | 238.62 | Table 5-9                             |
| F | Cost of Debt, Rd                     | %         | 11.13  | Para 50                               |
| G | Return on Equity, Re                 | %         | 17.98  | Para 51                               |
| H | WACC                                 | %         | 14.01  | As per<br>DERC<br>Regulation,<br>2017 |
| I | RoCE                                 | Rs in Cr. | 79.51  | I = A * H                             |

## **5.8 Fixed Auxiliary Consumption Expenses**

54. 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 5-11: Fixed Auxiliary Consumption Expenses**

| S.No. | Particulars                 | Unit   | FY 18-19 | Remarks                   |
|-------|-----------------------------|--------|----------|---------------------------|
| A     | Plant Capacity              | MW     | 330      |                           |
| B     | Normative PLF               | %      | 85       |                           |
| C     | Gross Generation            | MU     | 2457.18  | $C = A*B*365*24/1000/100$ |
| D     | Fixed Auxiliary Consumption | %      | 0.5      | As Per BPR 2017           |
| E     | Fixed Auxiliary Consumption | MU     | 12.29    | $E = C*D$                 |
| F     | Energy Charge Rate          | Rs/kWh | 4.937    | Table 4-2                 |
| G     | Fixed Auxiliary Consumption | Rs Cr  | 6.07     | $G = E*F/10$              |

55. As regards to estimation of sent out energy on normative APC, Petitioner had filed review petition no. 60 of 2017 and 42 of 2018 to resolve the issue of arriving sent out energy. Accordingly the State commission vide its order dated 17.10.2019 and 23.10.2019 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**

56. 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 5-12: Annual Fixed Cost**

| <b>S.No.</b> | <b>Particulars</b>                 | <b>Unit</b> | <b>FY 18-19</b> | <b>Remarks</b> |
|--------------|------------------------------------|-------------|-----------------|----------------|
| A            | Return on Capital Employed         | Rs Cr       | 79.51           | Table 5-10     |
| B            | Depreciation                       | Rs Cr       | 14.02           | Table 5-7      |
| C            | Operation and Maintenance Expenses | Rs Cr       | 99.06           | Table 5-2      |
| D            | Fixed Auxiliary Consumption        | Rs Cr       | 6.07            | Table 5-11     |
| E            | Annual Fixed Cost                  | Rs Cr       | 198.65          | E = A+B+C+D    |
| F            | Net Generation                     | MU          | 1479.42         | Table 3-5      |
| G            | Fixed Cost Per Unit                | Rs/ kWh     | 1.343           | G = E/F*10     |

57. On the basis of above submissions, the Hon'ble Commission is requested to true-up the total fixed cost for FY 2018-19 as per the above submission.

## **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.)**

**Pragati Power Corporation Limited**

**PETITIONER**