

#### TARIFF ORDER

True-up for the FY 2021-22, Aggregate Revenue Requirement (ARR) for FY 2024-25 and Determination of Generation Tariff for FY 2024-25

#### Petition No. 114/2023

For

Puducherry Power Corporation Limited (PPCL)

10th June, 2024

#### JOINT ELECTRICITY REGULATORY COMMISSION

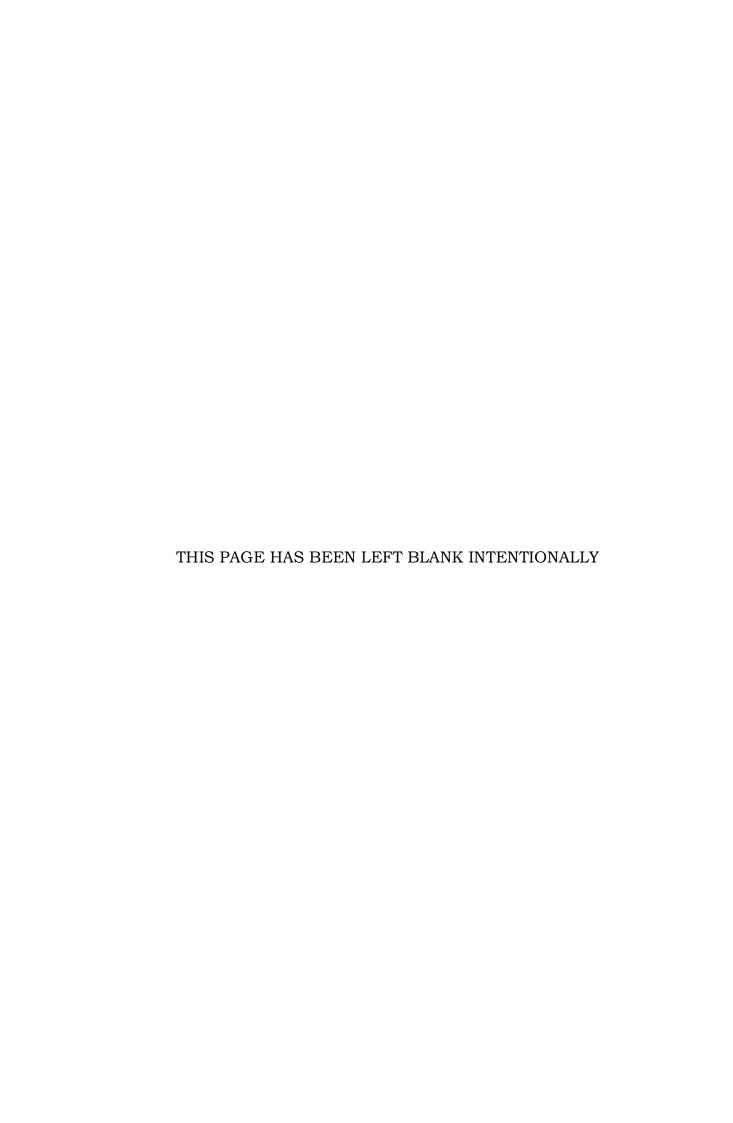
For the State of Goa and Union Territories,

3<sup>rd</sup> and 4<sup>th</sup> Floor, Plot No. 55-56, Sector -18, Udyog Vihar-Phase IV Gurugram, (122015) Haryana

Telephone: +91(124) 4684705, Telefax: +91(124) 4684706,

Website: www.jercuts.gov.in,

E-mail: secy.jercuts@gov.in



#### **Table of Contents**

Chapter	1: Introduction	9
1.1.	About Joint Electricity Regulatory Commission (JERC)	9
1.2.	About Puducherry Power Corporation Limited (PPCL)	9
1.3.	Regulations Governing Tariff of PPCL	10
1.4.	Filing and Admission of the Present Petition	11
1.5.	Interaction with the Petitioner	11
1.6.	Notice for Public Hearing	12
1.7.	Public Hearing	12
1.8.	Adherence to the Model Code of Conduct	12
_	2: Stakeholder's Comments, Response of the Petitioner and the Commissi	
2.1.	Regulatory Process	
	3: True-up for the FY 2021-22	
3.1.	Applicable Regulations for True-up	
3.2.	Annual Fixed Cost (AFC) for True-up of FY 2021-22	
3.3.	Operational Parameters	
3.3.1		
3.3.2		
3.3.3	,	
3.4.	Annual Fixed Cost (AFC) for True-Up of FY 2021-22	
	Capital Cost for FY 2021-22	
3.4.2	•	
3.4.3		
3.4.4	1 3	
3.4.5	, ,	
	Interest on Working Capital	
3.4.7	, , ,	
3.4.8		
3.4.9	, ,	
3.4.1		
3.4.1		
3.5.	Variable Charge/ Energy Charge approved for the True-up of FY 2021-22	
_	4: True-up for the FY 2022-23	
4.1.	Applicable Regulations for True-up	
4.2.	Approach for Truing-up of the FY 2022-23	
_	5: Determination of Annual Fixed Cost (AFC) for the FY 2024-25	
5.1.	Background	38

5.2.	Operational Parameters	39
5.2.1	Normative Annual Plant Availability Factor (NAPAF)	39
5.2.2	Auxiliary Power Consumption (APC)	39
5.2.3	Gross Station Heat Rate (GSHR)	40
5.3.	Variable Cost Parameters for Working Capital	41
5.3.1	Data for Calculation of Parameters (GCV and the price of gas)	41
5.3.2	Weighted Average Gross Calorific Value (GCV) of Gas	43
5.3.3	Weighted Average Price of Gas	44
5.3.4	Energy (Variable) Charges for Working Capital requirement	46
5.4.	Annual Fixed Cost (AFC) approved for the FY 2024-25	46
5.4.1	Capital Cost and capital expenditure for FY 2024-25	46
5.4.2	Depreciation	47
5.4.3	Interest on Loan	49
5.4.4	Return on Equity	50
5.4.5	Operation and Maintenance (O&M) Expenses	51
5.4.6	Interest on Working Capital	53
5.4.7	Annual Fixed Cost (AFC) approved for the FY 2024-25	55
5.5.	Energy/ Variable Charge (Net)	56
Chapter 6	: Annual Fixed Cost (AFC) and other charges for the FY 2024-25	58
Chapter 7	: Directives	59
7.1.	Directives issued in previous order	59
7.1.1	Filing of the True-up Petitions for FY 2022-23	59
7.1.2	Details of Plant Availability Factor (PAF)	59
Annexure	s	61
Annexure	s- 1: List of Stakeholders	61

#### **List of Tables**

Table 1: Details of the PPCL Gas Power Station	. 10
Table 2: List of the interaction with the Petitioner	. 11
Table 3: Details of Public Notices published by the Petitioner	. 12
Table 4: Details of Public Notices published by the Commission	. 12
Table 5: Approved capital cost for FY 2021-22	
Table 6: Depreciation approved by the Commission for True-up of FY 2021-22 (In Rs. Cr)	22
Table 7: Interest Charges approved by the Commission for True-up of FY 2021-22 (In Rs.	Cr)
Table 8: Return on Equity approved by the Commission for True-up of FY 2021-22 (In Rs.	Cr)
Table 9: O&M expenses approved by the Commission for True-up of FY 2021-22 (In Rs Cr	
Table 10 Computation of cost of Gas	
Table 11: Interest on working capital approved by the Commission for True-up of FY 2021	
(In Rs Cr)	
Table 12: Revised Annual Fixed Cost approved by the Commission for True-up of FY 2021	-22
(In Rs. Cr)	
Table 13: Differential monthly capacity charges approved by the Commission for True-up	
FY 2021-22 (in Rs. Cr)	
Table 14: Computation of carrying cost on differential AFC for FY 2021-22 (In Rs. Cr)	. 32
Table 15 Approved GCV for FY 2021-22	. 33
Table 16 Approved Weighted Average Price of Gas (LGP) for FY 2021-22	. 34
Table 17: Details submitted by Petitioner for computation of weighted average GCV and pa	rice
of gas	
Table 18: Computation of weighted average GCV of gas	. 44
Table 19: Computation of weighted average price of gas	. 44
Table 20: Variable Charges for Working Capital	. 46
Table 21: Capital Cost approved by the Commission for the FY 2024-25 (Rs. Cr)	. 47
Table 22: Depreciation approved by the Commission for the FY 2024-25 (In Rs. Cr)	.48
Table 23 Interest on loan approved by the Commission for FY 2024-25 (in Rs Crore)	. 49
Table 24: Return on Equity approved by the Commission for the FY 2024-25 (In Rs. Cr)	.51
Table 25: O&M Norms for Small gas turbine power generating stations as per CERC Ta	ariff
Regulations 2014 (in Rs. Lakh/MW)	. 52
Table 26 O&M Norms after considering escalation rate of 6.80 % (in Rs. Lakh/MW)	. 52
Table 27: O&M Expenses approved by the Commission for the FY 2024-25 (In Rs. Cr)	. 53
Table 28:Computation of Cost of Gas for 1 month approved by the Commission for FY 20 25	
Table 29: Interest on working capital approved by the Commission for the FY 2024-25 (In	
Cr)	
Table 30: Annual Fixed Cost approved by the Commission for the FY 2024-25 (In Rs. Cr)	
Table 31 List of Stakeholders	

#### **List of Abbreviations**

Abbreviation	Full Form		
Act	Electricity Act, 2003		
APC	Auxiliary Power Consumption		
CERC	Central Electricity Regulatory Commission		
CGS	Central Generating Station		
Commission/JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories		
EDP	Electricity Department, Puducherry		
FC	Fixed charge		
FY	Financial Year		
GFA	Gross Fixed Assets		
GCV	Gross Calorific Value		
MU Million Unit			
MW Mega Watt			
MYT	Multi-Year Tariff		
NAPAF	Normative Annual Plant Availability Factor		
O&M	Operation and Maintenance Expenses		
PAFM	Plant Availability Factor during the month		
PLF	Plant Load Factor		
PPA	A Power Purchase Agreement		
PPCL	Puducherry Power Corporation Limited		
RoE	Return on Equity		
SHR	Station Heat Rate		

# Before the Joint Electricity Regulatory Commission For the State of Goa and Union Territories, Gurugram

#### **CORAM**

Shri Alok Tandon, Chairperson Smt. Jyoti Prasad, Member (Law) Petition No. 114/2023 Dated: 10<sup>th</sup> June, 2024

#### In the matter of

Approval of the True-up for FY 2021-22, Aggregate Revenue Requirement (ARR) for FY 2024-25 and Determination of Generation Tariff for FY 2024-25

#### And in the matter of

Puducherry Power Corporation Limited (PPCL) ...... Petitioner

#### **ORDER**

- 1. This Order is passed in respect to the Petition filed by Puducherry Power Corporation Limited (hereinafter referred to as "PPCL" or "the Petitioner") for Approval for the True-up for FY 2021-22, Aggregate Revenue Requirement for FY 2024-25 and Determination of Generation Tariff for FY 2024-25 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC").
- 2. The Commission scrutinised the said Petition and generally found it in order. The Commission admitted the Petition on 13.12.2023. The Commission, thereafter, requisitioned further information/clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the informations submitted. Further, suggestions / comments/ views and objections were invited from the Stakeholders and Electricity Consumers present in the public hearing were heard.

- 3. The Commission has not considered true -up of FY 2022-23 as discussed in detail in chapter 4 of this order.
- 4. The attached documents giving detailed reasons, grounds and conditions are the Integral part of this Order. The approved generation tariff for FY 2024-25 shall come into force from 16.06.2024
- 5. The Commission approves the following for PPCL Gas Power Station at Karaikal:
  - a) Annual Fixed Cost (AFC) at Rs. 32.62 Cr for the true- up of FY 2021-22.
  - b) Annual Fixed Cost (AFC) at Rs. 39.23 Cr for for the ARR of FY 2024-25.
  - c) Normative Annual Plant Availability Factor (NAPAF) for the purpose of the calculation of Incentive and the formula for computation of energy charge (net) to be billed per month shall be considered as per the prevalent CERC Tariff Regulations.
  - d) In addition to the charges approved above, the Commission will review the recovery of expenses pertaining to the regulatory compliance (fees paid to the Commission towards filing of Tariff Petition for the Control Period and related publication expenses) during the time of truing up of FY 2024-25.

Ordered accordingly.

Sd/-

(Jyoti Prasad) (Alok Tandon)

Member (Law) Chairperson

Place: Gurugram, Haryana

Date: 10th June, 2024

**Certified Copy** 

(S.D. Sharma) Secretary (I/c), JERC

#### **Chapter 1: Introduction**

#### 1.1. About Joint Electricity Regulatory Commission (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted the Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R dated 2nd May 2005. Later with the joining of the State of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" (hereinafter referred to as "JERC" or "the Commission") vide notification no. 23/52/2003-R&R (Vol. II) dated 30th May, 2008.

JERC is a autonomous body responsible for regulation of the Power Sector in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry, consisting of generation, transmission, distribution, trading and use of electricity etc. Its primary objective includes taking measures conducive to the development of the electricity industry, promoting competition therein, protecting the interests of consumers and ensuring supply of electricity to all areas.

#### 1.2. About Puducherry Power Corporation Limited (PPCL)

Puducherry Power Corporation Limited (hereafter referred to as 'PPCL' or 'Petitioner'), an undertaking of Government of Puducherry, is a Government Company within the meaning of Companies Act, 1956, as amended from time to time. Further, it is a "Generating Company", as defined under sub-section 28 of section 2 of the Electricity Act, 2003.

PPCL was incorporated on 30th March 1993, with the objective of generating 32.5 MW of Electricity (22.9 MW from gas turbine and 9.6 MW from Steam turbine) at Karaikal which is one of the outlying regions of the Union Territory of Puducherry.

The details of Plant capacity, commercial & operation data etc. are given in the following table:

Table 1: Details of the PPCL Gas Power Station

S. No.	Subject	Particulars
1	Capacity	32.5 MW
1.1	- Gas Turbine	22.9 MW
1.2	- Steam Turbine	9.6 MW
2	Date of Commercial Operation	3 <sup>rd</sup> January 2000
3	Type of Fuel	Natural gas
4	Type of Cooling System	Induced draft cooling tower
5	Gas Supplier	GAIL (India) Ltd.

The required gas of 1.91 lakhs cubic meter per day is obtained from the gas wells at Narimanam in the Cauvery basin under an agreement with GAIL (India) Ltd. The gas power station at Karaikal was declared ready for commercial operation on 3<sup>rd</sup> January 2000 and is supplying power to Electricity Department Puducherry (PED) under a PPA signed with them on 25<sup>th</sup> February 2002. The Electricity Department of Puducherry is the sole buyer of the electricity generated by PPCL.

#### 1.3. Regulations Governing Tariff of PPCL

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi-Year Tariff) Regulations, 2018 on 10<sup>th</sup> August 2018. These Regulations are applicable for the 2<sup>nd</sup> MYT Control Period comprising of three financial years from FY 2019-20 to FY 2021-22. Further, the Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi-Year Tariff) Regulations, 2021 (hereinafter referred to as "MYT Regulations 2021") on 22.03.2021. These Regulations are applicable for the 3<sup>rd</sup> MYT Control Period comprising of three financial years from FY 2022-23 to FY 2024-25 to all the generation companies, transmission licensees and distribution licensees under jurisdiction of the Commission.

#### 1.4. Filing and Admission of the Present Petition

The present Petition was filed by the Petitioner on 23.11.2023 and admitted by the Commission on 13.12.2023 and marked as Petition No. 114/2023.

#### 1.5. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/clarifications were asked from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioner and key data gaps, which included cost of gas, depreciation, O&M expenses, capitalization etc. The Petitioner submitted its response on the issues through various letters/emails.

The Commission conducted a Technical Validation session (TVS) with the Petitioner, during which the discrepancies in the Petition were conveyed and additional information required by the Commission was sought. Subsequently, the Petitioner submitted replies to the issues raised in these sessions and provided documentary evidence to substantiate its claims regarding various submissions. The following table provides the list of interactions with the Petitioner along with the dates:

Table 2: List of the interaction with the Petitioner

Sr. No.	Subject	Date
1.	Issue of First Deficiency Note	24.01.2024
2.	Public hearing	14.02.2024 and
٦.	T done nearing	15.02.2024
3.	Issue of Second Deficiency Note	23.02.2024
4.	Technical Validation Session	08.03.2024
5.	TVS Queries raised to the Petitioner	18.03.2024
6.	Replies received from Petitioner	01.02.2024, 09.02.2024,
	· · · · · · · · · · · · · · · · · · ·	26.03.2024

#### 1.6. Notice for Public Hearing

Public notices were published by the Petitioner for inviting suggestions/ comments from stakeholders on the Tariff Petition as per details given below:

Table 3: Details of Public Notices published by the Petitioner

Sr. No.	Date	Name of News Paper	Language	Place of Circulation
1.		New Indian Express	English	Puducherry, Karaikal,
1.		New Indian Express	Diignoii	Mahe & Yanam
2.	12.01.2024	The Hindu	Fralish	Visakhapatnam,
۷.	12.01.2024	The finiau	The Hindu English	
3		The Daily Thanthi	Tamil	Puducherry
4.		Dinakaran	Tamil	Puducherry

The Commission also published Public Notices in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearings conducted by the Commission.

Table 4: Details of Public Notices published by the Commission

Sr. No.	Date	Name of Newspaper	Place of Circulation
1.	12.02.2024	Standard Post	Puducherry
2.	and	Deccan Chronicle	Tamil Nadu
3.	12.02.2024	Thanthi	Puducherry
4.		Dinakaran	Puducherry

#### 1.7. Public Hearing

The Public Hearing was held on 14<sup>th</sup> February, 2024 at PMMS Hall, No.81, Laporte Street, Puducherry-605001, and on 15<sup>th</sup> February 2024 at National Mahal (opp. To old LIC office), No. 274, Bharthiyar road, Karaikal- 609602 to discuss the issues, if any, related to the Petition filed by the Petitioner.

#### 1.8. Adherence to the Model Code of Conduct

The Commission has noted that in view of the General Elections 2024, the Model Code of Conduct (MCC) was imposed by the Election Commission of India. The MCC was effective from 16.03.2024 to 04.06.2024.

Therefore, in view of enforcement of Model Code of Conduct, the Commission decided to issue the tariff order once the Model Code of Conduct is over.

## Chapter 2: Stakeholder's Comments, Response of the Petitioner and the Commission's view

#### 2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the public, to upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting comments/objections from the stakeholders and the public at large as per the provisions of the JERC MYT Regulations, 2018 and JERC MYT Regulations, 2021. The Public Hearing was held on 14th February, 2024 at PMMS Hall, No.81, Laporte Street, Puducherry-605001, and on 15th February 2024 at National Mahal (opp. to old LIC office), No. 274, Bharthiyar road, Karaikal- 609602 to invite public comments, if any, related to the Petition filed by the Petitioner. The Commission has not received any comments from the stakeholders/public on the Petition filed by PPCL. The name of the Stakeholders/Public who attended the Public Hearings is provided in Annexure-I of this order.

#### Chapter 3: True-up for the FY 2021-22

#### 3.1. Applicable Regulations for True-up

True-up for FY 2021-22 is being carried out as per the provisions of Regulation 11 of the JERC (Generation, Transmission and Distribution Multi-Year Tariff) Regulations, 2018. The said Regulation specifies as under:

### "(11) Annual Performance Review, Truing-up and tariff determination during the Control Period

- 11.1 The Generating Company, Transmission Licensee and Distribution Licensee shall be subject to annual performance review and truing up of expenses and revenue during the Control Period in accordance with these Regulations.
- 11.2 The Generating Company, Transmission Licensee and Distribution Licensee shall file an application for the annual performance review of the current year, truing up of the previous Year or the Year for which the audited accounts are available and determination of tariff for the ensuing Year on or before 30th November of each Year, in formats specified by the Commission from time to time:

Provided that the Generating Company, Transmission Licensee or Distribution Licensee, as the case may be, shall submit to the Commission information in such form as may be specified by the Commission, together with the audited accounts, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges.

- 11.3 The scope of the annual performance review, truing up and tariff determination shall be a comparison of the performance of the Generating Company, Transmission Licensee or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges and shall comprise of the following:
- a) **True-up:** a comparison of the audited performance of the Applicant for the Financial Year for which the true up is being carried out with the approved

forecast for such previous Financial Year, subject to the prudence check;

- b) **Annual Performance Review:** a comparison of the revised performance targets of the Applicant for the current Financial Year with the approved forecast in the Tariff Order corresponding to the Control Period for the current Financial Year subject to prudence check;
- c) **Tariff determination** for the ensuing Year of the Control Period based on the revised forecast of the Aggregate Revenue Requirement for the Year;
- d) Review of compliance with directives issued by the Commission from time to time;
- e) Other relevant details, if any.
- 11.4 Upon completion of the exercise, the Commission shall attribute any variations or expected variations in performance for variables specified under Regulation 12 below, to factors within the control of the Applicant (controllable factors) or to factors beyond the control of the Applicant (uncontrollable factors): Provided that any variations or expected variations in performance, for variables other than those specified under Regulation 12 below shall be attributed entirely to controllable factors:
- 11.5 Upon completion of the exercise, the Commission shall pass an order recording:
- a) Components of approved cost pertaining to the uncontrollable factors, which were not recovered during the previous Year, to be passed through in tariff as per Regulation 13 of these Regulations:

Provided that, for a Generating Company, the above exercise shall be in accordance with prevalent CERC Tariff Regulations.

b) Approved aggregate gain or loss to the Transmission Licensee or Distribution Licensee on account of controllable factors, and the amount of such gains or such losses that may be shared in accordance with Regulation 14 of these Regulations:

Provided that, for a Generating Company, the above exercise shall be in accordance with prevalent CERC Tariff Regulations.

c) Carrying cost shall be allowed for a Generating Company, Transmission Licensee or Distribution Licensee on the amount of revenue gap for the period from the date on which such gap has become due, i.e., from the end of the Year

for which true-up has been done, till the end of the Year in which it is addressed, on the basis of actual rate of loan taken by the Licensee to fund the deficit in revenue:

Provided that carrying cost on the amount of revenue gap shall be allowed subject to prudence check and submission of documentary evidence for having incurred the carrying cost in the years prior to the year in which the revenue gap is addressed:

Provided also that if no loan has been taken to fund revenue deficit, the Commission shall allow Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points;

Provided further that in case of revenue surplus, the Commission shall charge the Licensee a Carrying Cost from the date on which such surplus has become due, i.e., from the end of the Year for which true-up has been done, till the end of the Year in which it is addressed on simple interest basis at one(1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points.

d) Revision of estimates and tariff for the ensuing Financial Year."

As a part of the True-up exercise, the Commission has considered the relevant provisions given under the MYT Regulations, 2018 and reviewed the variations between approved and actuals of income and expenditure for FY 2021-22 (as per the audited accounts submitted by the Petitioner) and has approved necessary adjustments after due prudence check in cases where variations are for reasonable and justifiable reasons.

As per Regulation 21.1 of the MYT Regulations, 2018, the Capital Cost for a Generating Company shall be determined by the Commission, guided by the relevant provisions of the prevalent CERC Tariff Regulations governing generation of electricity, subject to prudence check. The Commission, for the purpose of the True-up for FY 2021-22, has considered the CERC Tariff Regulations for the FY 2019-24 issued by CERC vide notification no. L-

1/236/2018/CERC dated 7th March 2019 (hereinafter referred to as CERC Tariff Regulations 2019).

#### 3.2. Annual Fixed Cost (AFC) for True-up of FY 2021-22

The Commission has referred the following provision given in MYT Regulations, 2018, regarding components of tariff.

- "37. Components of Tariff
- 37.1 The Aggregate Revenue Requirement for a Generation Company shall comprise of the following components:
- a) Return on Equity;
- b) Interest and finance charges on Loan;
- c) Depreciation;
- d) Interest on Working Capital;
- e) Operation and maintenance expenses;

....."

Considering the above provisions, the following components are taken as part of the fixed charge for PPCL for FY 2021-22:

- i. Depreciation
- ii. Interest on Loan
- iii. Interest on Working Capital
- iv. O&M Expenses
- v. Return on Equity

The components of the fixed charge mentioned above are discussed in the following paragraphs. The Commission has arrived at the revised Annual Fixed Cost (AFC) for the year and accordingly approved the differential charge to be claimed/ refunded by PPCL as part of the True-up exercise for FY 2021-22.

#### 3.3. Operational Parameters

#### 3.3.1. Normative Annual Plant Availability Factor (NAPAF)

#### **Petitioner's Submission:**

The Petitioner has considered a Normative Plant Availability Factor (NAPAF) of 85%, considering the Hon'ble APTEL judgment dated 21<sup>st</sup> November 2012 and the previous Orders of the Commission.

#### Commission's Analysis:

The Commission noted the following provisions regarding norms of operation under MYT Regulations, 2018.

#### "38 Norms of Operation

38.1 The norms of operation for a Generating Station including Normative annual plant availability factor (NAPAF), Normative Annual Plant Load Factor (NAPLF), Gross Station heat Rate, Auxiliary Consumption etc. shall be in accordance with the prevalent CERC Tariff Regulations governing generation of electricity."

Further, as per the Regulation 49 A (a) of the CERC Tariff Regulations 2019, the normative annual plant availability factor would be as follows:

"49 The norms of operation as given hereunder shall apply to thermal generating stations:

#### (A) Normative Annual Plant Availability Factor (NAPAF)

(a) For all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) - 85%.........."

Considering above provisions, the Commission has therefore approved NAPAF of 85% for FY 2021-22.

#### 3.3.2. Auxiliary Power Consumption (APC)

#### Petitioner's Submission:

The Petitioner has considered actual auxiliary power consumption of 5.41% for FY 2021-22.

#### Commission's Analysis:

The Commission in its MYT Order dated 7<sup>th</sup> April, 2021 had approved auxiliary power consumption of 5%. The issue relating to auxiliary power consumption was settled by the Hon'ble APTEL in its judgment dated 21<sup>st</sup> November 2012 in Appeal No. 41/2012 in the matter of Puducherry Power Corporation Limited vs. Joint Electricity Regulatory Commission and Electricity Department, Govt. of Puducherry wherein the Hon'ble APTEL had upheld the auxiliary consumption fixed by the Commission adhering prevailing relevant CERC Regulations.

In accordance with the same, the Commission has decided to retain the auxiliary power consumption norm at 5% of gross generation for FY 2021-22.

#### 3.3.3. Gross Station Heat Rate (GSHR)

#### **Petitioner's Submission:**

The Petitioner has considered the gross station heat rate of 2646 kcal/kWh for FY 2021-22.

#### Commission's Analysis:

The Commission had approved GSHR of 2646 kcal/kWh in its MYT Tariff Order dated 7th April, 2021. This was based on the analysis done by the Commission in the earlier Tariff Order, dated 25th April 2014, after detailed analysis of historical data of the heat rate for 12 years and the CERC Order dated 07th June 2012 on NEEPCO's Petition for revising the GSHR of Assam and Agartala gas power projects (analogous to the PPCL plant). The Commission had also gone through the 'performance guarantee report' of the PPCL gas power station for the guaranteed heat rate of 2,291 kcal/kWh (based on the NCV of the gas). The gross design heat rate for net station design heat rate of 2,291 kcal/kWh works out to 2,520 (2,291\*1.1) kcal/kWh, considering a conversion factor of 1.1, i.e. GCV = 110% of NCV. Further, applying the degradation factor of 5% as per the CERC Tariff Regulations, 2014, the normative GSHR comes to 2,520 \* 1.05 = 2,646 kcal/kWh.

Accordingly, the Commission approves the Gross Station Heat Rate of 2646 kcal/kWh.

#### 3.4. Annual Fixed Cost (AFC) for True-Up of FY 2021-22

#### 3.4.1 Capital Cost for FY 2021-22

#### **Petitioner's Submission:**

The Petitioner has considered the Capital Cost based on the approved capital cost of Rs. 164.44 Cr with no additional capitalization during the year of FY 2021-22.

#### Commission's Analysis:

The Commission has not considered any additional capitalization for FY 2021-22 as submitted by the Petitioner. Accordingly, the Commission has reviewed the closing capital cost of FY 2020-21 as Rs. 164.44 Cr and approved the capital cost of Rs. 164.44 Cr for FY 2021-22 after truing up as below:

Table 5: Approved capital cost for FY 2021-22

S. No	Particulars	Approved in MYT  Tariff Order  (07.04.2021)	Petitioner's Submission	Now Approved by Commission
1	Opening capital cost	170.76	164.44	164.44
2	Additional Capitalization	0.00	0.00	0.00
3	Closing Capital Cost	170.76	164.44	164.44
4	Average Capital Cost	170.76	164.44	164.44

#### 3.4.2 Depreciation

#### **Petitioner's Submission:**

The Petitioner has computed depreciation on the capital cost of Rs. 164.44 Cr. The Petitioner has excluded the cost of freehold land of Rs. 7.93 Cr for depreciation purpose. The cumulative depreciation of the assets has been capped at 90% of the capital cost. The cumulative depreciation recovered up to previous year is considered as Rs. 131.88 Cr. Accordingly the Petitioner has submitted the depreciation for the year as Rs. 2.24 Cr under true-up.

#### Commission's Analysis:

The Commission has considered the average capital cost of Rs. 164.44 Cr inclusive of freehold land cost with nil capitalization for calculation of depreciation for FY 2021-22. The cost of the freehold land of Rs. 7.93 Cr has been excluded for depreciation purpose. The cumulative depreciation recovered up to FY 2020-21 is Rs. 131.88 Cr (which includes cumulative depreciation of Rs. 129.64 Cr up-to 2019-20 and Rs. 2.24 Cr as depreciation approved for the year of truing up of 2020-21). Further, Regulations 37.2 of the JERC (MYT) Regulations, 2018 specifies that the treatment of each of the components of tariff shall be in accordance with the prevalent CERC Tariff Regulations governing generation of electricity. Hence, the Commission referred Regulation 33(1) of the CERC Tariff Regulation 2019, which specifies that:

"33 (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units..."

As the plant has already completed 21<sup>st</sup> years from the date of commercial operation and FY 2021-22 was its 22<sup>nd</sup> year of operation, the remaining depreciable value of the asset has been spread over the next 4 years of the useful life, as per the CERC Tariff Regulations 2019.

The cumulative depreciable value of the asset has been capped at 90% of the capital cost of the asset as per the CERC Tariff Regulations 2019. The calculation to approve the depreciation amount is as shown in the following table:

Table 6: Depreciation approved by the Commission for True-up of FY 2021-22 (In Rs. Cr)

S. No.	Particulars	Approved in Tariff Order for FY 2021-22 (07.04.2021)	Petitioner's Submission	Approved by Commission for FY 2021-22
1	Average Capital Cost during the year	170.76	164.44	164.44
2	Cost of Freehold (FH) Land	7.93	7.93	7.93
3	Capital cost excluding FH  Land	162.83	156.51	156.51
4	Cap on cumulative depreciation (90% of S. No. 3)	146.55	140.86	140.86
5	Cumulative Depreciation up to the previous year	133.40	131.88	131.88
6	Balance depreciation to be recovered	13.15	8.98	8.98
7	Balance useful Life (years)	4.00	4.00	4.00
8	Depreciation for the year	3.29	2.24	2.24

Therefore, the Commission approves depreciation of Rs. 2.24 Cr for the FY 2021-22.

#### 3.4.3 Interest on Loan

#### **Petitioner's Submission**

The Petitioner has claimed NIL interest payment for the True-up of FY 2021-22.

#### Commission's Analysis

On the basis of the average capital cost of Rs. 164.44 Cr for FY 2021-22, the gross normative loan is Rs. 115.11 Cr (70% of the approved average capital cost of Rs. 164.44 Cr).

The Regulation 32 (3) of the CERC Tariff Regulations 2019 specifies that:

"32 (3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding

year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up-to the date of de-capitalization of such asset."

It is seen that the cumulative depreciation recovered so far is higher than the gross normative loan amount, and accordingly there is no loan outstanding for the year. As there is no outstanding loan amount, no amount towards interest charges for the year are approved.

The computation of the interest charges is as shown in the following table:

Table 7: Interest Charges approved by the Commission for True-up of FY 2021-22 (In Rs. Cr)

S. No	Particulars	Approved in Tariff Order for FY 2021-22 (07.04.2021)	Petitioner's Submission	Approved by Commission for FY 2021-22
1	Average capital cost for the year	170.76	164.44	164.44
2	Normative loan at 70% of average capital cost	119.53	115.11	115.11
3	Cumulative repayment up to the previous year	119.53	115.11	115.11
4	Average net loan outstanding	0.00	0.00	0.00
5	Rate of interest (%)	-	-	-
6	Interest on Normative Loan	0.00	0.00	0.00

The Commission, therefore, approves the interest charges on normative loan as NIL for the FY 2021-22.

#### 3.4.4 Return on Equity

#### **Petitioner's Submission**

The Petitioner has submitted the pre-tax rate of ROE as 21.868% (base rate of return of 15.5% grossed-up by the corporate tax rate of 29.12%). Considering a normative equity capital of 30% of average capital cost of Rs. 164.44 Cr, the Petitioner has claimed a Return on Equity of Rs. 10.79 Cr

(equity amount of Rs 49.33 Cr multiplied by 21.868%) for FY 2021-22.

#### Commission's Analysis

As per CERC Tariff Regulations 2019, the normative equity be capped at 30% of the average capital cost. Further, Regulation 30(2) of the CERC Tariff Regulations 2019 specifies the following:

**"30(2)** Return on equity shall be computed at the base rate of **15.50%** for thermal generating station, transmission system including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage..."

With respect to grossing up of allowed rate of return on equity with the effective tax rate, Regulation 31(1) of the CERC Regulations 2019, specifies that:

"31 (1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate."

The Commission observes that the Petitioner has paid tax for FY 2021-22 as per corporate tax rate. The Petitioner in its reply to data gap, provided the detailed tax calculation for FY 2021-22 and it has been observed that the Petitioner has paid the tax as per corporate tax rate. As per the CERC Tariff Regulations 2019, the effective tax rate must be calculated considering the actual tax paid on its actual gross income. The effective rate is derived as 29.12% (corporate tax rate of 25%, surcharge of 12% and health & education cess of 4%). Therefore, the pre-tax rate of return on equity for FY 2021-22 is 21.868% (15.50% grossed-up with the effective tax rate of 29.12%).

Considering equity amount as 30% of average capital cost for the year, the Commission has computed the return on equity for PPCL as below:

Table 8: Return on Equity approved by the Commission for True-up of FY 2021-22 (In Rs. Cr)

S. No	Particulars	Approved in Tariff Order for FY 2021-22 (07.04.2021)	Petitioner's Submission	Approved by Commission for FY 2021-22
1	Equity capital	51.23	49.33	49.33
2	Rate of return on equity (%)	15.50%	15.50%	15.50%
3	Effective rate of corporate tax (%)	29.12%	29.12%	29.12%
4	Effective rate of return on equity (%)	21.868%	21.868%	21.868%
5	Return on Equity	11.20	10.79	10.79

Therefore, the Commission approves return on equity of Rs. 10.79 Cr for the FY 2021-22.

#### 3.4.5 Operation and Maintenance (O&M) Expenses

#### **Petitioner's Submission**

The Petitioner has claimed O&M expenses of Rs. 17.56 Cr as per Regulations of 29 of the CERC Tariff Regulation 2014. Further, the Petitioner has claimed additional cost incurring towards implementation of 7<sup>th</sup> CPC ranging from Rs. 75 Lakhs to Rs. 1 Crore approximately average per year, as this is the additional burden to the corporation considering the Operation & Maintenance Expenses as per provision.

#### Commission's Analysis

The Commission approves the O&M expenses based on normative value as per the CERC Tariff Regulations 2019 which is applicable for the period from FY 2019-20 to FY 2023-24. The Commission had considered the O&M expenses as Rs. 53.00 Lakh/ MW. for FY 2021-22 in previous tariff order

dated 07.04.2021 following CERC Tariff Regulations 2019. As regards to allowance of the additional cost incurring towards implementation of 7<sup>th</sup> CPC, the Commission has referred the Statement of Reasons of approving Normative O&M expenses in CERC Tariff Regulations 2019 and has found that CERC while approving such normative O&M expenses in its Tariff Regulations 2019 has already factored in the impact of 7<sup>th</sup> CPC. Accordingly, the Commission does not find prudent to allow Petitioner's claim of additional cost towards implementation of 7<sup>th</sup> CPC.

The Commission worked out the normative O&M expenses for the 32.5 MW gas plant of PPCL as Rs. 17.23 Cr. Cr (53\*32.5/100 = 17.23). Hence, the O&M expenses of Rs 17.23 Crore are approved for true-up of FY 2021-22. The details are given below:

Table 9: O&M expenses approved by the Commission for True-up of FY 2021-22 (In Rs Cr)

S. No	Particulars	Approved in Tariff Order for FY 2021-22 (07.04.2021)	Petitioner's Submission	Approved by Commission for FY 2021-22
1	Norms for O&M expenses (Rs lakh/MW)	53.00	53.00	53.00
2	O&M expenses as per CERC norms	17.23	17.56	17.23
3	Additional one-time O&M expenses	0.00	0.00	0.00
4	Total O&M expenses	17.23	17.56	17.23

Therefore, the Commission approves the normative O&M expenses of Rs. 17.23 Cr for the FY 2021-22.

#### 3.4.6 Interest on Working Capital

#### **Petitioner's Submission**

The Petitioner has claimed interest on Working Capital as Rs. 2.91 Cr., considering the rate of interest as 12.05%.

#### Commission's Analysis

As per Regulation 34 (b) of the CERC Tariff Regulations 2019, the working capital for a gas turbine generating station shall have the following components:

- i. Fuel cost of 30 days (gas) at NAPAF
- ii. Maintenance spares at 30% of O&M expenses
- iii. Receivables equivalent to 45 days of capacity and energy charge based on the NAPAF
- iv. *O&M expenses for one month*

The applicable rate of interest shall be decided as per Regulation 34 (3) of the CERC Tariff Regulations 2019, which is given below:

"34 (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later: Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24".

The bank rate has been defined in the CERC Tariff Regulation 2019 as follows: "3 (7) 'Bank Rate' means the one-year marginal cost of lending rate (MCLR) of the state Bank of India issued from time to time plus 350 basis points;"

Accordingly, the Commission has considered the 1-year MCLR rate of 7.00% (as on 1<sup>st</sup> April 2021) and arrived at the interest rate of 10.50% (7.00% + 3.50%) for computation of the interest on working capital for FY 2021-22.

To derive the fuel cost, the energy charges considered while working out the working capital are based on the average GCV of gas and the landed cost of gas for the period from April 2021 to March 2022. Further, normative generation at a NAPAF of 85% is considered for calculation of the cost of gas

for the purpose of calculating the working capital requirement. The computation of the interest charges is as follows:

Table 10 Computation of cost of Gas

S. No.	Particulars		MOU	Computation
1	Weighted Average GCV of Gas (As computed in section 4.4)	A	kcal/scm	10823.44
2	PLF	В		85%
3	Capacity	С	MW	32.50
4	Generation	D= (365*24*C*1000* B/10^6)	MU	250.13
5	SHR	E	kcal/kWh	2646.00
6	Sp. gas consumption	F=E/A	scm/kWh	0.24
7	Weighted Average Price of Gas (As computed in section 4.4)	G	Rs./1000 scm	9744.66
8	Cost of gas (1 month)	H=D*10^6*F*(G/10^3)/12	Rs Cr	4.81

Table 11: Interest on working capital approved by the Commission for True-up of FY 2021-22 (In Rs Cr)

S. No	Particulars	Approved in Tariff Order for FY 2021-22 (07.04.2021)	Petitioner's Submission	Approved by Commission for FY 2021-22
1	Fuel cost: Cost of gas (one month)	5.34	4.98	4.81
2	Maintenance spares (30% of O&M)	5.17	5.27	5.17
3	Receivables (two months)	12.33	12.47	11.13
4	O&M expenses (one month)	1.44	1.46	1.44
5	Total Working Capital	24.28	24.18	22.54
6	Rate of Interest (%)	12.05%	12.05%	10.50%
7	Interest on Working Capital	2.93	2.91	2.37

Therefore, the Commission approves interest on Working Capital of Rs. 2.37 Cr for the FY 2021-22.

### 3.4.7 Revised Annual Fixed Cost (AFC) approved in the True-up of FY 2021-22

The revised AFC approved by the Commission vis-à-vis that submitted by the Petitioner for FY 2021-22 under true-up is as follows:

Table 12: Revised Annual Fixed Cost approved by the Commission for True-up of FY 2021-22 (In Rs. Cr)

S. No	Particulars	Approved in Tariff Order for FY 2021-22 (07.04.2021)	Petitioner's Submission	Approved by Commission for FY 2021-22
1	Depreciation	3.29	2.24	2.24
2	Interest on Loan	0.00	0.00	0.00
3	Return on Equity	11.20	10.79	10.79
4	Operation and Maintenance Expenses	17.23	17.56	17.23
5	Interest on working capital	2.93	2.91	2.37
6	Annual Fixed Cost	34.64	33.51	32.62

The Commission in the Tariff Order for FY 2021-22, dated 7<sup>th</sup> April 2021, had approved AFC of Rs. 34.64 Cr for FY 2021-22. The AFC has now been trued up to Rs. 32.62 Cr for FY 2021-22, based on the True-up exercise carried out by the Commission.

#### 3.4.8 Differential Annual Fixed Cost

As per the Petitioner, there is no Load Despatch Centre (LDC) operational in the region of Puducherry and hence in the absence of LDC, no scheduling is done by the Puducherry Electricity Department (PED). Hence, the gas power plant runs for all the times of its availability and the total generation of such gas generating plant is fed into the grid of EDP. The Commission has considered actual plant availability factor (PAF) same as actual plant load factor (PLF) in the absence of load despatch center.

The Commission has re-calculated the annual fixed charges for FY 2021-22 in the table given below based on the formula in the CERC Tariff Regulations 2019. The formula takes into account the actual availability vis-à-vis the normative availability as table below:

Table 13: Differential monthly capacity charges approved by the Commission for True-up of FY 2021-22 (in Rs. Cr)

Month	PLF during month	Cumulative PLF (=Cumulative PAF)	NAPAF	Capacity charges Approved for PPCL in Order (AFC Approved Rs. 34.64 Cr)	Capacity charges billed by PPCL to PED (As per Actuals Submitted by Petitioner)	Capacity charges entitled at AFC approved in True-up order (AFC Approved Rs 32.62 Cr)
Apr-21	87.18%	87.18%	85.00%	2.89	2.89	2.72
May-21	88.29%	87.74%	85.00%	2.89	2.89	2.72
Jun-21	89.38%	88.28%	85.00%	2.89	2.89	2.72
Jul-21	86.45%	87.81%	85.00%	2.89	2.89	2.72
Aug-21	90.51%	88.36%	85.00%	2.89	2.89	2.72
Sep-21	90.61%	88.73%	85.00%	2.89	2.89	2.72
Oct-21	90.16%	88.94%	85.00%	2.89	2.89	2.72
Nov-21	87.80%	88.80%	85.00%	2.89	2.89	2.72
Dec-21	90.16%	88.95%	85.00%	2.89	2.89	2.72
Jan-22	88.43%	88.90%	85.00%	2.89	2.89	2.72
Feb-22	88.11%	88.83%	85.00%	2.89	2.89	2.72
Mar-22	80.85%	87.76%	85.00%	2.89	1.43	2.70
	T	otal		34.64	33.18	32.62

The Petitioner billed the Capacity Charges at Rs. 33.18 Cr to PED and the Commission has approved the capacity charges as Rs 32.62 Cr; hence the

Commission has considered a surplus of Rs. (0.56) Cr Rs. 32.62 Cr less Rs. 33.18 Cr) in FY 2021-22.

#### 3.4.9 Carrying Cost on Differential Annual Fixed Cost (AFC)

Regulation 11.5(c) of the MYT Regulations 2018 states that:

"c) Carrying cost shall be allowed for a Generating Company, Transmission Licensee or Distribution Licensee on the amount of revenue gap for the period from the date on which such gap has become due, i.e., from the end of the Year for which true-up has been done, till the end of the Year in which it is addressed, on the basis of actual rate of loan taken by the Licensee to fund the deficit in revenue:

Provided that carrying cost on the amount of revenue gap shall be allowed subject to prudence check and submission of documentary evidence for having incurred the carrying cost in the years prior to the year in which the revenue gap is addressed:

Provided also that if no loan has been taken to fund revenue deficit, the Commission shall allow Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points;

Provided further that in case of revenue surplus, the Commission shall charge the Licensee a Carrying Cost from the date on which such surplus has become due, i.e., from the end of the Year for which true-up has been done, till the end of the Year in which it is addressed on simple interest basis at one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points."

The Commission is of the opinion that true-up for FY 2021-22 should have been carried out along with the Generation Tariff order for FY 2023-24. However, owing to unavailability of audited accounts, the Petitioner did not file the Petition for True-up for FY 2021-22 along with the petition for Tariff for FY 2023-24. The Commission received the true-up Petition for FY 2021-

22 along with generation Tariff Petition for FY 2024-25. Due to this one-year delay, the Commission decides that carrying cost of one year will not be applicable. Considering the provisions given in MYT Regulations, 2018, the carrying cost for FY 2021-22 will be applicable from FY 2022-23 (i.e. after completion of FY 2021-22) to FY 2024-25 (the present tariff order year in which the carrying cost is passed on). Had the Petitioner filed its true-up petition in time along with petition for tariff for FY 2023-24, it would have been eligible for a carrying cost of two years i.e. for FY 2022-23 & FY 2023-24. Hence, as mentioned earlier, no carrying cost is approved for FY 2024-25. Considering the above, total claim allowed to the Petitioner (including carrying cost) in the table below.

The computation of carrying cost is shown in the following table:

Table 14: Computation of carrying cost on differential AFC for FY 2021-22 (In Rs. Cr)

Particulars	Formulae	Amount
(Surplus) amount after true-up for FY 2021- 22	A	(0.56)
Impact of carrying cost to be considered for	В	2 years (FY 22-23 and FY 23- 24)
SBI MCLR + 100 basis point as on 1.4.2022	С	8.00%
SBI MCLR + 100 basis point as on 1.4.2024	D	9.50%
Carrying cost for FY 2022-23	E = A*C	(0.045)
Carrying cost for FY 2024-25	F = A*D	(0.053)
Total carrying cost to be passed on in ARR of FY 2024-25	G = E + F	(0.10)
Total (surplus) including carrying cost to be passed on in ARR of FY 2024-25	H= A + G	(0.66)

The carrying cost has been allowed for 9 months as the differential AFC has been allowed to be recovered by Dec'24.

Accordingly, the Commission approves carrying cost of Rs. (0.10) Cr.

Therefore, the Commission approves a net surplus of Rs. (0.66) Cr inclusive of carrying cost as part of the True-up exercise for the FY 2021-22 and allows the Petitioner to refund the same to PED during the FY 2024-25 in six equal

monthly installments starting within three months from the date of issue of the tariff order.

#### 3.4.10 Weighted Average Gross Calorific Value (GCV) of Gas

#### **Petitioner's Submission**

The Petitioner has submitted a GCV of gas as 10823.64 kcal/Cu.m for FY 2021-22 based on their fuel bill.

#### Commission's Analysis

As per the reply of first data gap, the Petitioner has submitted their fuel bills for FY 2021-22. The Commission has checked the fuel bills for whole year and considers the weighted average Gross Calorific Value (GCV) for FY 2021-22 as per details given below.

Table 15 Approved GCV for FY 2021-22

Months	Volume (Cu.m)	GCV (kcal/Cu.m)
Apr-21	49,58,829	10858.37
May-21	51,82,689	10880.54
Jun-21	50,83,819	10839.90
Jul-21	51,17,010	10840.87
Aug-21	52,71,427	10852.49
Sep-21	51,07,718	10888.75
Oct-21	53,09,230	10888.75
Nov-21	50,65,233	10835.87
Dec-21	52,18,862	10721.03
Jan-22	52,41,833	10719.70
Feb-22	47,59,685	10775.75
Mar-22	50,08,902	10779.29
Average		10823.44

Accordingly, the Commission considers the Gross Calorific Value of gas as 10823.44 kcal/Cu.m.

#### 3.4.11 Weighted Average Price of Gas (LGP)

#### **Petitioner's Submission**

The Petitioner has considered the average price of gas at Rs. 9744.65 per 1000 Cu.m, based on their actual bills.

#### Commission's Analysis

As per the reply of first data gap, the Petitioner has submitted their fuel bills for FY 2021-22. The Commission has reviewed the fuel bills for whole year and considers the Weighted Average Price of Gas (LGP) for FY 2021-22 as per details given below.

Table 16 Approved Weighted Average Price of Gas (LGP) for FY 2021-22

Months	Fuel Bill (Rs.)	Volume (Cu.m)	LGP (Rs./Cu.m)
Apr-21	3,77,96,461	49,58,829	7.62
May-21	4,03,60,715	51,82,689	7.79
Jun-21	3,89,03,871	50,83,819	7.65
Jul-21	3,92,53,313	51,17,010	7.67
Aug-21	4,09,33,501	52,71,427	7.77
Sep-21	3,96,35,791	51,07,718	7.76
Oct-21	6,23,54,957	53,09,230	11.75
Nov-21	6,01,85,241	50,65,233	11.88
Dec-21	6,10,43,118	52,18,862	11.70
Jan-22	6,19,47,570	52,41,833	11.82
Feb-22	5,59,16,984	47,59,685	11.75
Mar-22	5,92,61,574	50,08,902	11.83
Average			9.74

Accordingly, the Commission considers the Weighted Average Price of Gas (LGP) as Rs. 9744.65 per 1000 Cu.m. for FY 2021-22.

### 3.5. Variable Charge/ Energy Charge approved for the True-up of FY 2021-22

As per the Regulation 43 (2) of CERC Tariff Regulation 2019,

"43 (2) (b) 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:

 $ECR = SHR \times LPPF \times 100 / \{(CVPF) \times (100 - AUX)\}$ "

The formula for the energy charge (per unit basis) accounts for the actual gas cost, the actual gross calorific value of the gas, normative auxiliary consumption and normative gross station heat rate (normative parameters approved by the Commission for FY 2021-22). The Petitioner has been billing the variable charge/ energy charge for FY 2021-22 based on this formula.

The Commission, as part of the prudence check during the Truing-up exercise, has verified the bills that have been raised to the beneficiary (the respondent), i.e. PED, for FY 2021-22. The Commission has found the power sales bills in order and as per the parameters approved by the Commission.

#### Chapter 4: True-up for the FY 2022-23

#### 4.1. Applicable Regulations for True-up

The True-up for the FY 2022-23 has to be carried out in accordance with Regulation 12 of the JERC (Generation, Transmission and Distribution Multi-Year Tariff) Regulations, 2021 stated as follows:

### "12 Annual Performance Review, Truing-up and tariff determination during the Control Period

12.1 The Generating Company, Transmission Licensee and Distribution Licensee shall be subject to annual performance review and truing up of expenses and revenue during the Control Period in accordance with these Regulations.

12.2The Generating Company, Transmission Licensee and Distribution Licensee shall file an application for the annual performance review of the current year, truing up of the previous Year or the Year for which the audited accounts are available and determination of tariff for the ensuing Year on or before 30th November of each Year, in formats specified by the Commission from time to time:

Provided that the Generating Company, Transmission Licensee or Distribution Licensee, as the case may be, shall submit to the Commission information in such form as may be specified by the Commission, together with the audited accounts, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges.

12.3 .....

12.4 .....

12.5 ....."

#### 4.2. Approach for Truing-up of the FY 2022-23

As per the above-mentioned provisions given in the JERC MYT Regulations, 2021, the true-up can be conducted if audited accounts be made available for the 'Truing Up' exercise of the appropriate year. However, the Petitioner has

failed to submit audited accounts for the FY 2022-23. The Petitioner has submitted Unaudited Accounts for FY 2022-23. The Petitioner maintained the same stand during the Technical Validation Session (TVS), submitted that the audited accounts for the FY 2022-23 could not be furnished due to pending adoption of accounts.

Accordingly, the Commission is not carrying out the Truing Up exercise for FY 2022-23 in the current Order. Any parameter considered for the determination of ARR and revenue gap/surplus in the subsequent chapters will be considered as per the Commission's True-up Order for the FY 2021-22 as a part of the current Order. Further, the Commission directs the Petitioner to submit the audited accounts for FY 2022-23 along with Petition for determination of ARR for the FY 2025-26, or earlier.

# Chapter 5: Determination of Annual Fixed Cost (AFC) for the FY 2024-25

# 5.1. Background

In this Chapter, the Commission has determined the Annual Fixed Cost (AFC) and the normative variable cost parameters for the FY 2024-25.

The Commission notes that the determination of the Aggregate Revenue Requirement for a Generation Company, shall be as per the provision of Regulation 38 of MYT Regulations, 2021. The same is reproduced below:

- "38 Components of Tariff
- 38.1 The Aggregate Revenue Requirement for a Generation Company shall comprise of the following components:
- a) Return on Equity;
- b) Interest and finance charges on Loan;
- c) Depreciation;
- d) Interest on Working Capital;
- e) Operation and maintenance expenses;
- f) Income tax.
- 38.2 The treatment of each of the above components shall be in accordance with the prevalent CERC Tariff Regulations governing generation of electricity.
- 38.3 The recovery of Aggregate Revenue Requirement and fuel cost for a Generation Company shall be in accordance with the prevalent CERC Tariff Regulations governing generation of electricity"

The Commission, for the purpose of calculation of AFC for the FY 2024-25, has considered the CERC Tariff Regulations for the period FY 2019-24 issued by CERC vide notification no. L-1/236/2018/CERC dated 7th March 2019 (hereinafter referred to as CERC Tariff Regulations 2019). As the same is in draft stage, the Commission has considered the latest available CERC Regulations (i.e. CERC Tariff Regulations 2019), for finalization of AFC for FY 2024-25.

## 5.2. Operational Parameters

## 5.2.1 Normative Annual Plant Availability Factor (NAPAF)

#### **Petitioner's Submission**

The Petitioner has considered a Normative Annual Plant Availability Factor (NAPAF) of 85% for the FY 2024-25, in line with the previous Orders issued by the Commission.

# Commission's Analysis

The Commission had approved NAPAF of 85% for each of the years from FY 2013-14 to FY 2019-20 as per the Tariff Orders of the respective years, in compliance with the judgment of Hon'ble APTEL in Appeal No. 41/2012 on 21st November 2012. The Commission has also perused the CERC Tariff Regulations 2019 and maintained the NAPAF to be 85% as per Regulation 49 (A) (a) of CERC tariff Regulations, 2019 in its Business Plan order dated 31/03/2022 for FY 2022-23 to FY 2024-25 period (Case No 60/2021).

The Commission will revisit the same at the time of the True-up of FY 2024-25. The Petitioner is directed to maintain the details of backing down of the power plant as may be required by PED, actual shutdown schedules and other uncontrollable factors affecting the operations of the plant and submit the same for review of the Commission along with the filing of the True-up Petition of the respective years.

Therefore, the Commission approves NAPAF at 85% for the FY 2024-25.

## 5.2.2 Auxiliary Power Consumption (APC)

## **Petitioner's Submission**

With regard to auxiliary power consumption, the Petitioner seek to invoke the power of the Commission to deviate from the Tariff Regulations, 2019 considering the peculiar facts of the case and for reasons beyond the control of the Petitioner. The Auxiliary Power Consumption (APC) considered by the Petitioner, as per actual based on the period from 01.04.2020 to 31.03.2021, which is 5.5 %; because, the power station has electric Gas Booster Compressor pumps due to which APC is higher. The Petitioner has submitted that APC for PPCL as per schedule guarantees of combined cycle power plant

was 1600 kW which is 5%. So that 5% APC cannot be sudden reduced to 3.30%. Accordingly, the Petitioner has prayed for APC of 5.00% for the FY 2024-25.

## Commission's Analysis

The norms mentioned in the Regulation 49 (E) (c) of the CERC Tariff Regulations 2019 for gas turbine generating stations is as given below:

"(c) For Gas Turbine / Combined Cycle generating stations:

i. Combined Cycle: 2.75%

ii. Open Cycle: 1.00%

Provided that where the gas based generating station is using electric motor driven Gas Booster Compressor, the Auxiliary Energy Consumption in case of Combine Cycle mode shall be 3.30% (including impact of air-cooled condensers for Steam Turbine Generators) ..." (Emphasis Added)

The CERC Tariff Regulations 2019 explicitly specify APC of 3.30% for combined cycle generating stations using electric motor driven Gas Booster Compressor as quoted above.

Accordingly, the Commission approves the same APC at 3.30% for FY 2024-25. The same shall be reviewed at the time of truing-up and latest CERC Tariff Regulations.

## 5.2.3 Gross Station Heat Rate (GSHR)

#### **Petitioner's Submission**

The Petitioner has sought GSHR of 2,646 kcal/kWh for the FY 2024-25.

# Commission's Analysis

The Commission had dealt with the issue of fixing the GSHR in the earlier Tariff Order, dated 25th April 2014, after elaborately analyzing the past actuals of the heat rate for 12 years and the CERC Order dated 7th June 2012 on NEEPCO's Petition for revising the GSHR of Assam and Agartala gas power projects (analogous to the PPCL plant). The Commission had also gone

through the Performance Guarantee Report of the PPCL gas power station for the guaranteed heat rate of 2,291 kcal/kWh (on the basis of the NCV of the gas), and accordingly approved GSHR at 2,646 kcal/kWh for FY 2014-15. A similar principle had been applied for approving the GSHR at 2,646 kcal/kWh for the last Control Period.

On similar lines and considering the Performance Guarantee Report of PPCL gas power station for the guaranteed heat rate of 2,291 kcal/kWh (on the basis of the NCV of the gas), the Commission approves the GSHR at 2,646 kcal/kWh for the FY 2024-25.

## 5.3. Variable Cost Parameters for Working Capital

The Commission has prescribed a formula, in line with the CERC Tariff Regulations 2019, for calculating the monthly energy (variable) charge for billing purpose. Further, in the following paragraphs, variable charges have been computed using the same formula to work out the cost of gas (one month) and receivables for 45 days (energy charge component), which are used for calculation of the working capital requirement. The same shall be revisited based on the prevalent CERC Tariff Regulations at the time of True-up of FY 2024-25.

The details of the weighted average Gross Calorific Value (GCV) and the price of gas, as submitted by the Petitioner and the Commission's analysis, are discussed in subsequent paragraphs.

## 5.3.1 Data for Calculation of Parameters (GCV and the price of gas)

#### **Petitioner's Submission**

The Petitioner has considered a GCV of gas as 10888.75 kcal/Cu.m for FY 2024-25 based on data from June'23 to December'23. Further, the Petitioner considered the data from June'23 to December'23 for computation of the average cost of gas. The details are provided below:

Table 17: Details submitted by Petitioner for computation of weighted average GCV and price of gas

S. No.	Particulars	Unit	Jun'23	July'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23
1	Quantity of gas supplied by GAIL	Cu.m	5279398	5274382	5211611	5137806	4877839	2491589	5147546
2	Adjustment (+/-) in quantity supplied made by GAIL	Cu.m	0	0	0	0	0	0	0
3	Gas supplied by GAIL (1+2)	Cu.m	5279398	5274382	5211611	5137806	4877839	2491589	5147546
4	Normative Transit & Handling Losses	Cu.m	0	0	0	0	0	0	0
5	Net Gas Supplied (3-4)	Cu.m	5279398	5274382	5211611	5137806	4877839	2491589	5147546
6	Amount charged by the Gas Company	Rs.	153699781	153319018	151226772	149903388	142602748	92482473	151313531
7	Adjustment(+/-) in amount charged made by Gas Company	Rs.	0	0	0	0	0	0	0
8	Total amount charged (6+7)	Rs.	153699781	153319018	151226772	149903388	142602748	92482473	151313531
9	Transportation charges by rail / ship / road transport	Rs.	0	0	0	0	0	0	0
10	Adjustment (+/-) in amount charged made by Railways/Transport Company	Rs.	0	0	0	0	0	0	0
11	Demurrage Charges, if any	Rs.	0	0	0	0	0	0	0
12	Cost of diesel in transporting gas through other system, if applicable	Rs.	0	0	0	0	0	0	0
13	Total Transportation Charges (9+/-10- 11+12)	Rs.	0	0	0	0	0	0	0
14	Total amount Charged for fuel supplied including Transportation (8+13)	Rs.	153699781	153319018	151226772	149903388	142602748	92482473	151313531
15	Weighted Average GCV of Gas as fired	kcal/ Cu.m	10881.14	10877.63	10868.03	10850.86	10841.58	10893.27	10871.40

S. No.	Particulars	Unit	Jun'23	July'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23
16	Weighted Average rate of Fuel/1000 Cu.m	Rs./ 1000 Cu.m	29113.13	29068.62	29017.28	29176.54	29235.00	29950.00	29395.00

# Commission's Analysis

The Regulation 34 (2) of CERC Tariff Regulations 2019, stated the following for calculation of the working capital requirement:

"The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:"

The Commission has considered the latest data available for determining the calorific value and price of gas for working capital. In its reply to data gap, the Petitioner has submitted invoices raised by GAIL for the period from June 23 to December 23. The Commission has considered the data for Oct 23 to Dec 23 adhering CERC Tariff Regulations 2019. The data for the same has been tabulated and found in order as given by the Petitioner as shown table no. 16.

# 5.3.2 Weighted Average Gross Calorific Value (GCV) of Gas

#### **Petitioner's Submission**

The Petitioner has considered a weighted average GCV of 10,885.75 kcal/cu.m based on average GCV for the period from Jun'23 to Dec'23.

## Commission's Analysis

The Commission has considered the GCV of gas from October 2023 to December 2023 adhering CERC Tariff Regulations 2019 to compute the weighted average GCV of gas (weighted by the quantity of gas procured in respective months) for computation of working capital. The details are given below.

Table 18: Computation of weighted average GCV of gas

Sr. No.	Particulars	Unit	Oct 23	Nov 23	Dec 23
1	Net gas supplied by GAIL	Cu.m	4877839	2491589	5147546
2	Weighted average GCV of gas as fired	kcal/Cu.m	10841.58	10893.27	10871.40
3	Weighted average GCV of gas (3 Months)	kcal/Cu.m		10864.13	

Accordingly, the Commission considers the Gross Calorific Value of gas as 10864.13 kcal/Cu.m for the purpose of computation of the fuel cost for the Working Capital requirement for the FY 2024-25.

## 5.3.3 Weighted Average Price of Gas

#### **Petitioner's Submission**

The Petitioner has considered the cost of gas from Jun23 to Sep'23 for computation of average cost of gas. This has been considered to arrive at the fuel cost for computing the requirement of working capital. The Petitioner has considered the average price of gas at Rs. 29119 per 1000 Cu.m, based on the data from months of June-23 to Dec-23.

## Commission's Analysis

The Commission has considered fuel bills for the period from October 23 to December-23 for computation of landed cost of the fuel. The details are provided below.

Table 19: Computation of weighted average price of gas

Sr. No.	Particulars	Unit	Oct 23	Nov 23	Dec 23
1	Quantity of gas supplied by GAIL	Cu.m	4877839	2491589	5147546

Sr. No.	Particulars	Unit	Oct 23	Nov 23	Dec 23
2	Weighted average rate of fuel	Rs./ 1000 cu.m	29235.00	29950.00	29395.00
3	Weighted average price of gas	Rs./ 1000 cu.m		29443.12	2

Accordingly, the Commission considers the weighted average cost of gas at Rs. 29443.12 per 1000 Cu.m for the purpose of computation of fuel cost for working capital requirement for the FY 2024-25.

Further, the Commission has analyzed the historical value of cost of gas and enquired the Petitioner to submit about the higher value of gas price.



## 5.3.4 Energy (Variable) Charges for Working Capital requirement

Based on the performance and cost parameters as approved in the earlier paragraphs, the fuel cost of PPCL gas station at 85% NAPAF is worked out, as given in the following table:

Table 20: Variable Charges for Working Capital

S. No.	Particular	Unit	Approved Value
1	Station Heat Rate (A)	kcal/kWh	2646.00
2	Gross Calorific Value of Gas (B)	kcal/ Cu.m	10864.13
3	Price of gas (C)	Rs./Cu.m	29.44
4	Fuel Cost /Gross units (D = $A*(C/B)$ )	Rs./kWh	7.17
5	Fuel Cost/Net units (E = D/ (1-APC@ 3.30%)	Rs./kWh	7.41

# 5.4. Annual Fixed Cost (AFC) approved for the FY 2024-25

The following components have been considered as part of the fixed charge for the FY 2024-25 as per Regulation 38.1 of the JERC (Generation, Transmission & Distribution Multi Year Tariff) Regulations, 2021:

- 1. Depreciation
- 2. Interest on Loan
- 3. Interest on Working Capital
- 4. O&M Expenses
- 5. Return on Equity

The submission of the Petitioner and approval of the Commission for each component are discussed in detail in the subsequent sections.

## 5.4.1 Capital Cost and capital expenditure for FY 2024-25

## **Petitioner's Submission**

The Petitioner has considered a capital cost of Rs. 164.44 Cr as opening capital cost with no proposed additional capitalization during the year.

## Commission's Analysis

The Commission has approved closing capital cost as Rs. 164.44 Cr in previous tariff order dated 31.03.2022. Further, the Commission has not considered any amount towards additional capitalization for FY 2024-25 as proposed by the Petitioner. The detailed computation is shown in the table:

Table 21: Capital Cost approved by the Commission for the FY 2024-25 (Rs. Cr)

S. No	Particulars	Approved by Commission in MYT Tariff Order 31.03.2022	Petitioner's Submission	Now Approved by Commission
1	Opening capital cost	164.44	164.44	164.44
2	Additional Capitalization	0.00	0.00	0.00
3	Closing Capital Cost	164.44	164.44	164.44
4	Average Capital Cost	164.44	164.44	164.44

The Commission approves the capital cost of Rs. 164.44 Cr for the FY 2024-25.

## 5.4.2 Depreciation

#### **Petitioner's Submission**

The Petitioner has projected the depreciation charge for the FY 2024-25 at Rs. 2.24 Cr. The Petitioner has restricted the cumulative depreciation of the assets at 90% of the capitalized value of the asset. The rate of depreciation has been considered as per CERC Tariff Regulations 2019. The Petitioner also submitted that the station is over 24 years old, and the Petitioner has calculated depreciation, accordingly, based on the same methodology as adopted for the previous years.

## Commission's Analysis

The Commission has considered average capital cost of Rs. 164.44 Cr. inclusive of freehold land of Rs. 7.93 Cr for FY 2024-25. The cost of the freehold land of Rs. 7.93 Cr. has been excluded for depreciation purpose.

The cumulative depreciation to be recovered up to FY 2023-24 is Rs. 138.61 Cr. It is noted that the plant is in its 25th year of commercial operation during FY 2024-25. The remaining depreciable value (upto 90% of the capital cost) of the asset has been spread over the balance useful life of the asset, i.e. one year for FY 2024-25, in line with the following provision of Regulation 33 (5) of the CERC Tariff Regulations 2019:

"Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets."

The depreciable value of the asset (excluding land valued at Rs. 7.93 Cr) has been capped at 90% of the capital cost of the asset, and accordingly the depreciation for the FY 2024-25 is approved as shown in the following table:

Table 22: Depreciation approved by the Commission for the FY 2024-25 (In Rs. Cr)

S. No.	Particulars	Approved by Commission in MYT Tariff Order 31.03.2022	Petitioner's Submission	Now Approved by Commission
1	Average capital cost	164.44	164.44	164.44
2	Cost of freehold (FH) land	7.93	7.93	7.93
3	Capital cost excluding FH Land	156.51	156.51	156.51
4	Cap on cumulative depreciation	140.86	140.86	140.86
5	Cumulative depreciation up-to the previous year	138.62	138.62	138.61
6	Balance depreciation to be recovered	2.24	2.24	2.24
7	Balance useful Life (years)	1.00	1.00	1.00
8	Depreciation for the year (6/7)	2.24	2.24	2.24

The Commission approves the depreciation at Rs. 2.24 Cr for the FY 2024-25.

#### 5.4.3 Interest on Loan

## **Petitioner's Submission**

The Petitioner has claimed NIL for FY 2024-25 towards interest on loan.

# Commission's Analysis

It is observed that the cumulative depreciation recovered for FY 2024-25 is Rs. 138.61 Cr. The gross normative average loan for FY 2024-25 is Rs. 115.11 Cr based on the approved average capital cost. The Interest on loan for FY 2024-25 is as given below:

Table 23 Interest on loan approved by the Commission for FY 2024-25 (in Rs Crore)

Sr. No	Particulars	Approved by Commission in MYT Tariff Order 31.03.2022	Petitioner's Submission	Now Approved by Commission
1	Average capital cost for the year	164.44	164.44	164.44
2	Normative loan at 70% of average capital cost	115.11	115.11	115.11
3	Cumulative repayment up to the previous year	115.11	115.11	115.11
4	Average net loan outstanding	0.00	0.00	0.00
5	Rate of interest (%)	-	-	
6	Interest on Normative Loan	0.00	0.00	0.00

Hence, the Commission approves NIL amount towards interest charges on normative loan for the FY 2024-25. However, the same shall be revisited as per prevailing CERC Regulations during the time of True- up, if there is any claim towards interest on loan.

## 5.4.4 Return on Equity

#### **Petitioner's Submission**

The Petitioner submitted that, since the entire capital cost for PPCL has been financed through its own funds, the equity has been considered at the normative level of 30% and the balance 70% has been considered as normative loan for calculation of Interest on Loan component. The return on Equity has been calculated @ 20.713% (base rate of return of 15.5% grossed up by the effective corporate tax rate of 25.17%) as per CERC Tariff Regulations 2019. Accordingly, the Petitioner has claimed a return on equity of Rs. 10.22 Cr for the FY 2024-25.

# Commission's Analysis

The CERC Tariff Regulations 2019 specifies that normative equity be capped at 30% of the capital cost. Further, Regulation 30 (2) of the CERC Tariff Regulations 2019 specifies that the rate of return on equity shall be at 15.50% for thermal stations.

In respect of grossing up of allowed rate of return on equity with the effective tax rate, Regulation 31 (1) of the CERC Regulations 2019 specifies the following:

"The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be."

Accordingly, the Commission for the purpose of computation of Return on Equity has considered 30% of the average capital cost as equity and the rate of return on equity at 15.50% as per CERC Tariff Regulations 2019.

The Commission has considered the effective tax rate based on the prevailing corporate tax rates as per details submitted by the Petitioner. Accordingly, the Commission has considered an effective tax rate of 25.17% (corporate tax rate of 22%, surcharge of 10% and health & education cess of 4%) and the grossed-

up rate of return on equity as 20.713% for the FY 2024-25. The detailed computation is shown in the following table

Table 24: Return on Equity approved by the Commission for the FY 2024-25 (In Rs. Cr)

S. No	Particulars	Approved by Commission in Tariff Order 31.03.2022	Petitioner's Submission	Now Approved by Commission
1	Equity Capital	49.33	49.33	49.33
2	Rate of Return on Equity (%)	15.50%	15.50%	15.50%
3	Effective Rate of Corporate Tax (%)	29.12%	25.17%	25.17%
4	Effective Rate of Return on Equity (%)	21.868%	20.713%	20.713%
5	Return on Equity	10.79	10.22	10.22

The Commission approves a return on equity of Rs. 10.22 Cr for the FY 2024-25. However, the same shall be revisited during the time of True-up.

# 5.4.5 Operation and Maintenance (O&M) Expenses

#### **Petitioner's Submission**

The Petitioner has escalated at the rate of 6.80% per annum for the FY 2020-21 (as per norms in CERC Tariff Regulations 2014). Accordingly, the Petitioner has computed Rs. 20.98 Cr towards O&M expenses for the FY 2024-25.

#### Commission's Analysis

The Commission has examined the O&M expenses claimed by the Petitioner. However, the Commission observes that PPCL is nearing the end of its useful life (i.e. by FY 2024-25 and it does not reap the benefits of economies of scale, as its plant capacity is relatively less i.e. 32.5 MW. In light of the above, the Commission has opted to continue with the norms of CERC Tariff Regulations 2014.

The Commission observes that, CERC Tariff Regulations 2019 specifies O&M norms of Rs. 36.21 lakh/MW, Rs. 37.48 lakh/MW, Rs. 38.80 lakh/MW, Rs.

40.16 lakh/MW and Rs. 41.57 lakh/MW for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23, and FY 2023-24 respectively for small gas turbine power generating station. The Commission has already allowed relaxation in O&M expenses norms for 2nd MYT Control Period in Order dated 20 May 2019. Considering Regulation 29(1)(c) of the CERC Tariff Regulations 2014, the O&M expenses for small gas turbine power generating plants for FY 2014-15 to FY 2019-20 was examined and the Commission derived the escalation rate of O&M expenses as 6.80%. On the basis of the escalation rate, the Commission derived the O&M expenses for 3<sup>rd</sup> control period. The approval of the Commission in this regard are shown in the following tables.

Table 25: O&M Norms for Small gas turbine power generating stations as per CERC Tariff Regulations 2014 (in Rs. Lakh/MW)

FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	CAGR
33.43	35.70	38.13	40.73	43.50	6.80%

O&M norms for FY 2024-25 after considering the escalation rate of 6.80% is shown in the Table below:

Table 26 O&M Norms after considering escalation rate of 6.80 % (in Rs. Lakh/MW)

FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
46.46	49.62	53.00	56.60	60.45	64.57

In response to the Commission's specific query with regards to the applicability of the 7th Pay Commission, the Petitioner has submitted that the 7th CPC is applicable to the Petitioner from 1.4.2019 and the Petitioner is paying the 7th CPC w.e.f. July 2020 which is an additional expenditure over and above the normative O&M expenses. As mentioned in previous chapter under para 3.3.8, the Commission has found that CERC while approving normative expenses in its Tariff Regulations 2019 has already factored in the impact of 7th CPC. Hence, the Commission approves NIL amount towards 7th CPC for the FY 2024-25. The same shall be revisited at the time of true-up of

respective year based on actuals.

Accordingly, the O&M expenses for PPCL (32.5 MW) gas plant have been worked out for the FY 2024-25 as shown in the following table:

Table 27: O&M Expenses approved by the Commission for the FY 2024-25 (In Rs. Cr)

S. No.	Particulars	Approved by Commission in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Derived O&M Norms (Rs. Lakh/MW)	64.57	64.57	64.57
2	O&M expenses	20.98	20.98	20.98
3	Additional O&M Expenses	0.00	0.00	0.00
4	Total O&M Expenses	20.98	20.98	20.98

The Commission approves Rs. 20.98 Cr towards O&M expenses for the FY 2024-25.

## 5.4.6 Interest on Working Capital

#### **Petitioner's Submission**

The Petitioner has claimed interest on working capital of Rs. 5.16 Cr for FY 2024-25.

## Commission's Analysis

The Commission has considered CERC Tariff Regulations 2019 for the computation of interest on working capital. As per Regulation 34 (b) of the CERC Tariff Regulations 2019, the working capital for a gas turbine generating station shall have the following components:

- i. Fuel cost of one month (Gas) at NAPAF
- ii. Maintenance spares at 30% of O&M expenses including water charges and security expense.
- iii. Receivables equivalent to 45 days of capacity and energy charge

based on

the NAPAF

iv. O&M expenses, including water charges and security expenses, for one month.

The applicable rate of interest for computation of interest on working capital as per Regulation 34 (3) of the CERC Tariff Regulations, 2019 is:

"Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later"

The Bank Rate has been defined in the CERC Tariff Regulations, 2019 as follows:

"Bank Rate means one-year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points"

Accordingly, the Commission has considered the latest available year as on 01.04.2023 SBI one-year MCLR of 8.50% and arrived at the bank rate of 12.00% (8.50% + 3.50%) for computation of the IOWC for the FY 2024-25. The relevant interest rate as on 1st April of the respective year shall be considered based on the prevalent CERC Tariff Regulations during the True-up of the respective year.

The energy charges considered while calculating working capital are based on average actual fuel consumption and payments made in June-23 to December-23. Energy charges for working capital purposes have been worked out corresponding to generation at NAPAF of 85%.

The Commission has considered the working capital and interest thereon, as per the Regulations mentioned above at an interest rate of 12.00% per annum. The detailed computation is shown in the following table:

Table 28:Computation of Cost of Gas for 1 month approved by the Commission for FY 2024-25

S. No.	Particulars		MOU	Computation
1	Weighted Average GCV of Gas (As computed in section 4.4)	A	kcal/scm	10,864.13
2	PLF	В		85%
3	Capacity	С	MW	32.50
4	Generation	D= (365*24*C*1000* B/10^6)	MU	242.00
5	SHR	Е	kcal/kWh	2,646
6	Sp. gas consumption	F=E/A	scm/kWh	0.243
7	Weighted Average Price of Gas (As computed in section 4.4)	G	Rs./1000 scm	29443.12
8	Cost of gas (1 month)	H=D*10^6*F*(G/10^3)/12	Rs Cr	14.26

Table 29: Interest on working capital approved by the Commission for the FY 2024-25 (In Rs. Cr)

S. No	Particulars	Approved by Commission in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Cost of gas (one month)	5.77	14.60	14.26
2	Maintenance spares (30% of O&M)	6.30	6.29	6.29
3	Receivables (45 days)	13.20	26.55	25.92
4	O&M expenses (one month)	1.75	1.75	1.75
5	Total Working Capital	27.02	49.19	48.23
6	Rate of Interest (%)	10.50%	10.50%	12.00%
7	Interest on Working Capital	2.84	5.16	5.79

The Commission approves Interest on Working Capital of Rs. 5.79 Cr for the FY 2024-25. However, the same shall be revisited during the True-up.

# 5.4.7 Annual Fixed Cost (AFC) approved for the FY 2024-25

The Commission based on the analysis of the AFC parameters in the above paragraphs approves the Annual Fixed Cost for the FY 2024-25 as shown in

the following table:

Table 30: Annual Fixed Cost approved by the Commission for the FY 2024-25 (In Rs. Cr)

S. No	Particulars	Approved by Commission in MYT Order	Petitioner's Submission	Approved by
1	Depreciation	2.24	2.24	2.24
2	Interest on Loan	0.00	0.00	0.00
3	Return on Equity	10.79	10.22	10.22
4	Operation and Maintenance Expenses	20.98	20.98	20.98
5	Interest on Working Capital	2.84	5.16	5.79
6	Annual Fixed Cost	36.84	38.60	39.23

The Commission approves Annual Fixed Cost of Rs. 39.23 Cr for the FY 2024-25. However, the same shall be revisited during the time of True-up.

# 5.5. Energy/ Variable Charge (Net)

The Commission approves the computation of energy charge for FY 2024-25 based on the following formula specified in the CERC Tariff Regulations 2019:

# ECR= GSHR X LPPF X 100/{(CVPF) X (100 - AUX)}

Where,

**ECR**= Energy Charge Rate, in Rs. per kWh, sent out up-to three decimal places **GSHR**= Normative Gross Station Heat Rate in kcal/kWh

**LPPF**= Weighted average landed price of gas in Rs. /Cu.m, during the calendar month.

**CVPF**= Weighted average Gross Calorific Value of gas, in kcal per Cu.m

**AUX**= Normative Auxiliary Power Consumption in percentage

As the energy charges shall be computed and billed based on the above formula, there will be no need for any adjustment in True-up on this account.

Based on the parameters above, an illustrative example is as shown below: Assuming,

**GSHR** = Normative Gross Station Heat Rate i.e. Rs. 2646 kcal/kWh for FY 2024-25

**LPPF** = Rs. 29.44/Cu.m

**CVPF** = 10,864.13 kcal/Cu.m

**AUX** = Normative Auxiliary Power Consumption, at 3.30 % for FY 2024-25

ECR = 2646 X 29.44X 100/ ((10864.13 X (100-3.30)) = Rs. 7.416/kWh

So, it can be observed from the above illustration that the energy charge works out to be Rs. 7.455/kWh based on approved normative parameters.

The actual billing every month shall be based on the formula prescribed in the prevalent CERC Tariff Regulations based on actual values for gross calorific value and price of gas and normative values of gross station heat rate and auxiliary power consumption.

# Chapter 6: Annual Fixed Cost (AFC) and other charges for the FY 2024-25

In view of the workings in the previous sections, the Commission approves the following:

- a) Annual Fixed Cost (AFC) at Rs. 39.23 Cr for FY 2024-25 after adjustment due to surplus of true-up of FY 2021-22.
- b) Normative Annual Plant Load Factor (NAPLF) for the purpose of the calculation of Incentive and the formula for computation of energy charge (net) to be billed per month shall be considered as per the prevalent CERC Tariff Regulations.
- c) In addition to the charges approved above, the Commission will review the recovery of expenses pertaining to regulatory compliance (fees paid to the Commission towards filing of Tariff Petition for the Control Period and related publication expenses) in the time of truing up of FY 2024-25.

## **Chapter 7: Directives**

The Commission directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to take appropriate action under Section 142 of the Electricity Act 2003 and various other provisions of the Act, and Regulations framed by JERC.

# 7.1. Directives issued in previous order

# 7.1.1 Filing of the True-up Petitions for FY 2022-23

## Commission's Directives in previous Tariff Order:

The Commission directs the Petitioner to complete the filing of the True-up Petition up to FY 2022-23 by 30th November 2023.

#### **Petitioner's Submission:**

The financial statement of the Corporation for the Financial year 2022-23 is yet to be placed before the board for approval, awaiting for adoption of accounts for the year 2021-22 by the shareholders in the adjourned AGM, after which it would be submitted to the statutory auditors for their audit and report. As the provisional True up petition for the FY 2022-23 was submitted along with the Tariff petition for the year FY 2024-25, the True-up petition for the FY 2022-23 would be submitted immediately after audit of the Accounts for the year FY 2022-23 would be completed by the Statutory Auditors.

#### Commission's Directives in current Tariff Order:

The Commission directs the Petitioner to complete the audit of FY 2022-23 by the Statutory Auditor and submit the True-up Petition accordingly.

## 7.1.2 Details of Plant Availability Factor (PAF)

## Commission's Directives in previous Tariff Order:

The Petitioner is directed to maintain the details of backing down of the power plant as may be required by PED, actual shutdown schedules and other uncontrollable factors affecting the operations of the plant and submit the

same for

review of the Commission along with the filing of the True-up of the respective years.

#### **Petitioner's Submission:**

There was no backing down by PED for FY 2021-22 & FY 2022-23. Backing down was there for FY 2023-24 and proof of the same will be provided during true up of FY 2023-24.

#### Commission's Directives in current Tariff Order:

The Petitioner shall submit the details of backing down with detailed reasons while submitting the True-up Petition for FY 2022-23 and for FY 2023-24.

## **Annexures**

# Annexures- 1: List of Stakeholders

**Table 31 List of Stakeholders** 

Lis	st of Stakeholders present during Public Hearing at Puducherry on 14.02.2024
1	Shri.Joseph Rosario (CII Chairman)
2	Shri.Suburayan
3	Shri. Bala Krishnan
4	Shri. Bala@ Balasubramaniyan
5	Shri. Mathew
6	Shri. Sundarasrinivasn
7	Shri.Vaiyapurimanikadan (Ex.MLA)
8	Shri. Ravi
9	Shri. Narayanan
10	Shri. Perumal (CITU)
11	Shri.A.M.Salim(CITA)
12	Shri.R.Gopal (Sivagami Nagar, Viilanur)
13	Shri.R.J.Shanmugam
14	Sri. Shanmugam (AAP)
I	List of Stakeholders present during Public Hearing at Karaikal on 15.02.2024
1.	Shri.J.Mohammed bilal
2.	Shri.Senthilkumar Gandhi
3.	Shri.P.G.Somu
4.	Shri.Omalingam
5.	Shri.Kalaiselvan
6.	Shri.Kriishnamurthy
7.	Shri.Rohini.G Balamurugan
8.	Shri.M.Yunuskhan
9.	Shri.J.Leninraj
10.	Shri.Bhairvan,Karaikal Indistries Forum
11.	Shri.Anoop
12.	Shri.Kannan

\*\*\*\*\*