SUGEN
MEGA POWER PROJECT
Off National Highway No.48,
Tal. : Kamrej,
Dist. : Surat - 394155 India
Phone : +91 - 2621 - 261000
Fax : +91 - 2621 - 261151

TPL-SUGEN/FINANCE/2024-25/107
06th Nov 2024

To
The Secretary
Central Electricity Regulatory Commission
7th Floor, Tower B, World Trade Centre,
Nauroji Nagar,
New Delhi – 110 029.

Sub. : Petition under section 62 and 79 (1) (b) of the Electricity Act, 2003 read with CERC Terms and Conditions of Tariff, Regulation 2024 for Tariff of UNOSUGEN 382.5 MW Power Plant (SUGEN 40) from 01st April 2024 to 31st March 2029

Dear Sir,

Please find enclosed herewith original Petition for determination of Tariff for the period 01st April 2024 to 31st March, 2029 for UNOSUGEN 382.5 MW Power Plant. We wish to inform you that simultaneously we are serving the copies to all the Respondents by Courier/Speed Post.

Please note that as required we have already uploaded soft copies of Petition both in PDF and Doc format. In this reference we have enclosed herewith the acknowledgement slip acknowledging the filing of online Petition on CERC e-filing portal.

In terms of CERC (Payment of fees) Regulations, 2012 we have paid an amount of Rs. 16,83,000 (Rupees Sixteen Lakhs Eighty Three Thousand Only) on 25th April, 2024 for application fees covering the FY 2024-25. The copy of proof of such documents is also enclosed herewith for your kind perusal.

Kindly acknowledge the receipt of the same and request you to accept the petition.

Thanking you,

Yours faithfully,
For **Torrent Power Limited**
(Unit: UNOSUGEN 382.5 MW Power Plant)

Naresh K Joshi
Vice President
Encl.: as above

TORRENT POWER LIMITED

Cc:

1. Torrent Power Limited,
   [Unit: Ahmedabad Distribution]
   The Executive Director
   Naranpura Zonal Office,
   Sola Road, Naranpura,
   Ahmedabad – 380 001

2. Torrent Power Limited,
   [Unit: Surat Distribution]
   The Executive Director
   Torrent House, Station Road,
   Surat – 395 003

Fee Acknowledgement

Counterfoil (Office Copy)

		Transaction Id.:	6a5a8821b01a62e63bf1
		Payment Gateway ID:	19729554020
		Status:	success
Received From :	Torrent Power Limited (TPL)		
The Sum of Rs. :	1683000		
Fee Type:	Annual Fees for Determination of Tariff Generating Station(GT)	**Dated :**	30 Apr 2024 12:57
Fee Mode:	NB		
Fee Period:	2024-25		
Petitioner/ Organisation Name:	Torrent Power Limited (TPL)		

30 Apr 2024 15:22

THE CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

PETITION NO: .....

IN THE MATTER OF: Petition under Section 62 and 79 (1) (b) of the Electricity Act, 2003 read with Regulation 9(2) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 and Central Electricity Regulatory Commission (Procedure of making of application and other related matters) Regulations 2004 for determination of generation Tariff of UNOSUGEN 382.5 MW Power Plant (SUGEN 40), for the period 1st April 2024 to 31st March 2029 (hereinafter referred to as **'Tariff Period'**)

INDEX

1621

BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

PETITION NO: .....

IN THE MATTER OF:

Petition under Section 62 and 79 (1) (b) of the Electricity Act, 2003 read with Regulation 9(2) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 and Central Electricity Regulatory Commission (Procedure of making of application and other related matters) Regulations 2004 for determination of generation Tariff of UNOSUGEN 382.5 MW Power Plant (SUGEN 40), for the period 1st April 2024 to 31st March 2029 (hereinafter referred to as '**Tariff Period**')

NOTARY
CHANDRAKANT M. GUPTA
SURAT DISTRICT (GUJ.)
REG. NO. 18330
EXPIRE DATE 09/02/2025
GOVT. OF INDIA

AND IN THE MATTER OF:

Petitioner:

Torrent Power Limited,
[Unit UNOSUGEN 382.5 MW POWER PLANT]
Off National Highway No. 48
Akhakhol, Kamrej, Surat-394155

Respondents:

1. Torrent Power Limited,
[Unit: Ahmedabad Distribution]
The Executive Director
Naranpura Zonal Office,
Sola Road, Naranpura,
Ahmedabad – 380 001

TORRENT POWER LIMITED

2. Torrent Power Limited,
[Unit: Surat Distribution]
The Executive Director
Torrent House, Station Road,
Surat – 395 003

1621

IN-GJ86115765394231W

INDIA NON JUDICIAL

Government of Gujarat

Certificate of Stamp Duty

सत्यमेव जयते

Register Sr. No.: 1621/2024
Date: 06 NOV 2024
My Commission Expires on 9th February 2025

Certificate No.	:	**IN-GJ86115765394231W**
Certificate Issued Date	:	21-Oct-2024 04:16 PM
Account Reference	:	IMPACC (AC)/ gj13341011/ OLPAD/ GJ-SU
Unique Doc. Reference	:	SUBIN-GJGJ13341011873560305276O8W
Purchased by	:	TORRENT POWER LIMITED
Description of Document	:	Article 4 Affidavit
Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	TORRENT POWER LIMITED
Second Party	:	Central Electricity Regulatory Commission
Stamp Duty Paid By	:	TORRENT POWER LIMITED
Stamp Duty Amount(Rs.)	:	300 (Three Hundred only)

NOTARY
CHANDRAKANT M. GUPTA
SURAT DISTRICT (GUJ.)
REG. NO. 8330
EXPIRE DATE 09/02/2025
GOVT. OF INDIA

CHANDRAKANT M. GUPTA
ACC
PARIYA, SURAT

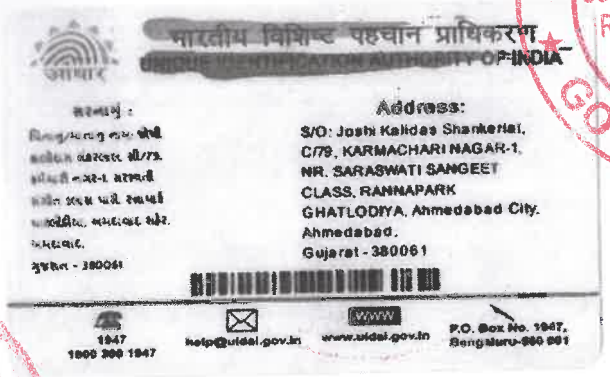
IN-GJ86115765394231W

HF 0021355028

Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate
3. In case of any discrepancy please inform the Competent Authority.

भारत सरकार
GOVERNMENT OF INDIA

જોષી નરેશ કાલીદાસ
Joshi Naresh Kalidas
જન્મ તારીખ/ DOB: 14/08/1967
પુરુષ / MALE
2601 8523 1889



भारतीय विशिष्ट पहचान प्राधिकरण
UNIQUE IDENTIFICATION AUTHORITY OF INDIA

Address:
S/O: Joshi Kalidas Shankerlal,
C/79, KARMACHARI NAGAR-1,
NR. SARASWATI SANGEET
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GHATLODIYA, Ahmedabad City,
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Gujarat - 380061

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P.O. Box No. 1947,
Bengaluru-560 001

NOTARY
CHANDRAKANT
M. GUPTA
SURAT DISTRICT (GUJ.)
REG. NO. 8330
EXPIRE DATE
09/02/2025
GOVT. OF INDIA

NOTARY
CHANDRAKANT
GUPTA
DISTRICT (GUJ.)
REG. NO. 183[illegible]
EXPIRE DATE
09/02/2025
GOVT. OF INDIA

TORRENT POWER LIMITED

Affidavit verifying the Submission:

I, Shri Naresh K Joshi, son of Shri Kalidas Joshi, aged about 57 years, working in Torrent Power Limited having office at "Samanvay", 600, Tapovan, Ambavadi, Ahmedabad, Gujarat – 380015, do solemnly affirm and say that: -

1. I am working as Vice President with Torrent Power Limited, the Petitioner Company in above matter and am duly Authorized to make this Affidavit

2. That the facts stated in the accompanying submission are based on record and files of the Petitioner Company and they are true and correct to my knowledge, information and belief and I believe the same to be true.

NOTARY CHANDRAKANT M. GUPTA DISTRICT (GUJ.) NO. 18330 RE DATE /02/2025 OF INDIA

TORRENT POWER LIMITED

DEPONENT

Place : Surat
Date: 06th November, 2024

Register Sr. No. 1621/2024
Date: 06 NOV 2024
My Commission Expires on 9th February 2025

NOTARY CHANDRAKANT M. GUPTA SURAT DISTRICT (GUJ.) REG. NO. 18330 EXPIRE DATE 09/02/2025 GOVT. OF INDIA

BEFORE ME

CHANDRAKANT M. GUPTA
NOTARY
SURAT DISTRICT (GUJ.)
GOVT. OF INDIA

VERIFICATION

I, solemnly affirm at Surat on this 06th November, 2024 that the contents of clause 1 and 2 of the above affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.

TORRENT POWER LIMITED

DEPONENT

BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

PETITION NO: ----------

IN THE MATTER OF: Petition under Section 62 and 79 (1) (b) of the Electricity Act, 2003 read with Regulation 9(2) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 and Central Electricity Regulatory Commission (Procedure of making of application and other related matters) Regulations 2004 for determination of generation Tariff of UNOSUGEN 382.5 MW Power Plant (SUGEN 40), for the period 1st April 2024 to 31st March 2029 (hereinafter referred to as '**Tariff Period**')

AND

IN THE MATTER OF:

Petitioner : Torrent Power Limited,
[Unit UNOSUGEN 382.5 MW POWER PLANT]
Off National Highway No. 48,
Akhakhol, Kamrej, Surat-394155

Respondents :

1. Torrent Power Limited,
[Unit: Ahmedabad Distribution]
The Executive Director
Naranpura Zonal Office,
Sola Road, Naranpura,
Ahmedabad – 380 001

2. Torrent Power Limited,
[Unit: Surat Distribution]
The Executive Director
Torrent House, Station Road,
Surat – 395 003

The Petitioner files this Petition for determination of electricity supplied from the generating station for the Tariff period 2024-29 in terms of provisions of CERC (Terms & Conditions of Tariff), Regulations, 2024.

THE PETITIONER MOST RESPECTFULLY SUBMITS THAT:

List of Tables

CHAPTER 1: Historical Perspective

1. The Hon'ble Commission has notified the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2024 (hereinafter called "**Tariff Regulations 2024"**) which has come into force from 1st April 2024.

2. Torrent Power Limited, (Hereinafter called the 'Petitioner') is submitting this Petition for determination of generation Tariff of Unosugen 382.5 MW Power Plant (hereinafter called **"Unosugen Plant"** or **"Generating Station"**) for the period 1st April 2024 to 31st March 2029 (**"Tariff Period"**) as per provisions under Regulation 9(2) of Tariff Regulations, 2024.

3. Torrent Power Limited (hereinafter called "TPL") the Petitioner Company is a Public Limited Company within the meaning of the Companies Act, 2013 carrying on the business of generation, transmission and distribution of electricity (in the cities of Ahmedabad, Gandhinagar, Surat, Dahej SEZ, Dholera SIR & DD/DNH in Gujarat, Bhiwandi, Shil, Mumbra & Kalwa (SMK) area in Maharashtra and Agra in Uttar Pradesh) and manufacturing and supply of power cables. Further it is a "Generating Company" as defined under Section 2(28) of the Electricity Act 2003. The present thermal based generation capacity of TPL is around 3,092 MW including 2,730 MW of Gas based and 362 MW of Coal based plants. Further, the present renewable generation capacity, including under construction projects, of TPL is more than 3,500 MW.

4. TPL is having various Generating Stations as above and SUGEN 1147.5 Mega Power Plant is one of such Generating Stations located near Surat in the State of Gujarat (hereinafter called "SUGEN Plant"). The SUGEN Plant is Inter State Generating Station having installed capacity of 1147.5 MW (comprising 3 Units of 382.5 MW each) and the tariff of the SUGEN Plant is being determined by the Hon`ble Commission.

5. Subsequently, as a brown field expansion, TPL has added one more identical unit of equal size and capacity as expansion to the existing SUGEN Plant. Such expansion unit, stated as "UNOSUGEN 382.5 MW Power Plant" under the Tariff Order 401/GT/2014 dated 18th August 2016 issued by Hon'ble Commission for the tariff period 01st April, 2014 to 31st March, 2019, is also called as "Generating Station" or "SUGEN 40 Plant".

6. The commercial operation date (hereinafter called **"COD"**) of the SUGEN 40 Plant is 04.04.2013.

7. The True-up of the Tariff of Unosugen Plant covering the period from COD to 31st March 2014 was approved by the Hon'ble Commission under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter called **"Tariff Regulations 2009"**) vide Tariff Order dated 30th October 2015 in Petition No. 121/GT/2014 (hereinafter called the **"Tariff Order for 2009-14"**).

8. The True-up Tariff Order of UnoSugen Plant covering the period from 1st April 2014 to 31st March 2019 was approved by the Hon'ble Commission under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter called **"Tariff Regulations 2014"**) vide Tariff Order dated 20th July 2020 in Petition No. 272/GT/2019 (hereinafter called the **"Tariff Order for 2014-19"**).

9. Further, the Tariff for the period from 01st April 2019 to 31st March 2024 was approved by the Hon'ble Commissioner under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter called **"Tariff Regulations 2019"**) vide Tariff Order dated 20th August 2020 in the Petition No. 268/GT/2019 (hereinafter called the **"Tariff Order for 2019-24"**).

10. The capital cost allowed by the Commission for the period 01st April 2019 to 31st March 2024 vide Tariff Order for 2019-24 under para 12 is as below:

Table 1 : Statement of approved Project Capital Cost as per para 12 of Tariff Order for 2019-24

Rs. in lakhs

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	180146.83	180267.37	180267.37	180267.37	180267.37
Add : Additional Capital Expenditure	120.54	-	-	-	-
Closing Capital Cost	**180267.37**	**180267.37**	**180267.37**	**180267.37**	**180267.37**
Average Capital Cost	180207.10	180267.37	180267.37	180267.37	180267.37

11. Regulation 9(2) of the under Tariff Regulations, 2024 mandates the existing generating station to file application for determination of tariff for the period 1st April 2024 to 31st March 2029 based on estimated additional capital expenditure for the respective years of the tariff period 2024-29, which is extracted as below:-

"9(2) In case of an existing generating station or unit thereof, or transmission system or element thereof, the application shall be made by the generating company or the transmission licensee, as the case may be, by 30.11.2024 , based on admitted capital cost including additional capital expenditure already admitted and incurred up to 31.3.2024 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2024-29 along with the true up petition for the period 2019-24 in accordance with the CERC (Terms and Conditions of Tariff) Regulations, 2019"

12. In terms of the above Regulation 9(2) of the under Tariff Regulations, 2024, this Petition is filed for the determination of tariff for Unosugen 382.5 MW Power Plant for the period from 01st April 2024 to 31st March 2029 along with estimated capital expenditure. It is submitted that the during 2024-29, the generating station has completed 11 years of useful life, the certain capital expenditure can kick in as per the recommendation of OEM. The petitioner has estimated additional capital expenditure limited to these aspects to ensure reasonability of cost and none of the claim is below Rs 20 lakh. All the expenses related to minor expenditure will be met by the Torrent Power Ltd from the Operation & Maintenance expenses as mandated by the Commission in the Tariff Regulations, 2024.

13. It is submitted that the application for Truing up of tariff for the period 1st April 2019 to 31st March 2024 based on actual additional capital expenditure is filed separately, along with this application.

CHAPTER 2: Capital Cost

1. Regulatory framework for Opening Capital Cost

1.1. Regulation 19 (1) of Tariff Regulations, 2024 provide that

> ***"19. Capital Cost:*** *(1) The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects."*

Further, Regulation 19 (3) of Tariff Regulations, 2019 provide that

> *"(3) The Capital cost of an existing project shall include the following:*
>
> *(a) Capital cost admitted by the Commission prior to 1.4.2024 duly trued up by excluding liability, if any, as on 1.4.2024;"*

2. Determination of Capital Cost as on 1st April 2024

2.1. It is submitted that the Hon'ble Commission has determined the capital cost for the period 1st April 2019 to 31st March 2024 vide Tariff Order dated 20th August 2020 in Petition No. 268/GT/2019. Further, the Torrent Power Ltd. has also filed the Truing up Petition for the period 01st April 2019 to 31st March 2024 based on actual additional capital expenditure. Therefore, the opening capital cost as on 1st April 2024 has been considered based on the actual additional expenditure claimed in the true up petition. This may undergo change in case of variation of approved additional capital expenditure by the Commission from claimed additional capital expenditure. The statement of actual capital cost for the period 01st April 2019 to 31st March 2024 as submitted in the true up petition is as under:-.

Table 2 : Statement of Project Capital Cost as on 1st April 2024

Rs. in lakhs

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	1,80,146.83	1,80,146.83	1,80,146.83	1,80,164.03	1,80,164.03
Add : Additional Capital Expenditure	-	-	17.20	-	-
Closing Capital Cost	**1,80,146.83**	**1,80,146.83**	**1,80,164.03**	**1,80,164.03**	**1,80,164.03**
Average Capital Cost	1,80,146.83	1,80,146.83	1,80,155.43	1,80,164.03	1,80,164.03

3. **Projected Additional Capital Expenditure during FY 2024-25 to FY 2028-29:**

3.1. During the period 2024-29, the additional Capital expenditure has been projected in accordance with the provisions of Tariff Regulations, 2024. Details of the additional capital expenditure are given in Table 3 below:-

Table 3 : Statement of Projected Add Cap during the period 2024-29

Rs. In lacs

Sr. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	Total
1	**Replacement of Assets on accounts of Obsolescence of Technology [Regulation 25(2)(c)]**						
	Gross Capital Expenditure	-	-	3,725.00	-	-	3,725.00
	Less : Corresponding decapitalisation under Reg. 26(3)	-	-	1,117.50	-	-	1,117.50
	Net Capital Expenditure	**-**	**-**	**2,607.50**	**-**	**-**	**2,607.50**
2	**Additional Capitalization for higher security and safety [Regulation 26(1)(d)]**						
	Gross Capital Expenditure	**2,500.00**	**-**	**-**	**-**	**-**	**2,500.00**
3	**Additional Capitalization for Efficient Operation [Regulation 26(1)(i)]**						
	Gross Capital Expenditure	**630.00**	**-**	**-**	**-**	**-**	**630.00**
4	**Total Additional Capex**	**3,130.00**	**-**	**3,725.00**	**-**	**-**	**6,855.00**
	Less : Corresponding decapitalisation under Reg. 26(3)	-	-	1,117.50	-	-	1,117.50
	Net Additional Capitalization (1 to 3)	**3,130.00**	**-**	**2,607.50**	**-**	**-**	**5,737.50**

4. Replacement of Assets on account of Obsolescence of Technology [Regulation 25(2)(c)]

4.1. It is submitted that the generating station has completed its useful life of 11 years based on the prevailing technology at the time of development of project. Some of the assets have undergone change due to new technology and hence, the earlier technology got obsolescence due to non use by the user. The Commission, vide Regulation 25(2)(c) of Tariff Regulations, 2024, envisaged the replacement of assets deployed under the original scope on account of obsolescence of technology. Regulation 25(2)(c) of the Tariff Regulations, 2024 provides that –.

"25. Additional Capitalization within the original scope and after the cut-off date:

(1)...

(2) In case of replacement of assets deployed under the original scope of the existing project after the cut-off date, the additional capitalization may be admitted by the

Commission after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a)...

(b)...

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology;"

4.2. It is submitted that the Torrent Power Ltd. has considered replacement of some of the assets as per **Table 3A** on account of the of obsolescence of technology which are squarely covered within the ambit of Regulation 25(2)(c) of Tariff Regulations, 2024. The item wise detailed technical justification for decision of replacement of assets is submitted in the petition. The statement of estimated additional capital expenditure on account of replacement of Assets on accounts of Obsolescence of Technology is as under:-

Table 3A : Statement showing Add Cap on account of replacement of Assets on accounts of Obsolescence of Technology during the period 2024-29 [Regulation 25(2)(c)]

Rs. In lacs

Sr. No.	Particulars	2024-25	2025-26	2026-27	2027-28	2028-29	Total
A	Switchyard & Plant Relay Upgradation	-	-	25.00	-	-	25.00
	Less : Corresponding decapitalisation under Reg. 26(3)	-	-	7.50	-	-	7.50
	Net Capital Expenditure	**-**	**-**	**17.50**	**-**	**-**	**17.50**
B	DCS & SEE-SFC System Upgrade	-	-	3,700.00	-	-	3,700.00
	Less : Corresponding decapitalisation under Reg. 26(3)	-	-	1,110.00	-	-	1,110.00
	Net Capital Expenditure	**-**	**-**	**2,590.00**	**-**	**-**	**2,590.00**
-	Total Capital Expenditure	-	-	3,725.00	-	-	3,725.00
	Less : Corresponding decapitalisation under Reg. 26(3)	-	-	1,117.50	-	-	1,117.50
	Net total Capital Expenditure (A+B)	**-**	**-**	**2,607.50**	**-**	**-**	**2,607.50**

A. <u>Switchyard & Plant Relay upgradation</u>

Technical Justification

<u>OEM Support no longer available</u>

4.3. It is submitted that OEM, Siemens AG, has communicated that the SIPROTEC 4 products, relay models, and all other associated saleable replacement materials of relays, which are

installed and in use at Unosugen since 2012 (≈12 years), will no longer be manufactured after September, 2024 under product cancellation policy and only TYPICAL repair services will be extended for 10 years and recommended to switch over to the successive/substitute product. Copy of OEM letter dated May 20, 2022 is attached herewith **Annexure 1.** Relevant para of OEM letter is extracted below:-

> *"During the phase-out period these products are still available until the date of product cancellation i.e. 30th Sept, 2024.*
> *However, these products should not be used for new substation projects during this phase Typically, repair service is provided for a 10 years period after the date of phase-out announcement.*
> ...
> *Please **initiate a switch over** to the successive/substitute product at a suitable occasion"*

4.4. This presents a significant challenge as it exposes our infrastructure to potential risks associated with the unavailability of crucial spare parts, firmware updates, cyber security compliance and technical support.

Security risk to connected networks

4.5. It is submitted that Unosugen has 47 nos. of relays of SIPROTECH 4 types which were commissioned during project phase. As per OEM, these relays cannot be upgraded further to the latest version of SIPROTECH 5 series which supports the latest Cyber security measures. Moreover, these relays are connected to the SCADA, RTU to SLDC/RLDC and beneficiary network and expose to the network security risks.

Compliance to CEA Guidelines, 2021

4.6. The existing relays, SIPROTEC 4, were installed in 2012. Subsequently, Central Electricity Authority has introduced CEA (Cyber Security in Power Plants) Guidelines 2021 (attached herewith as **Annexure 2**). Relevant provision is quoted below :

> *"1.5 In the current Indian scenario though many cyber security directives and guidelines exists, but none of them are power sector specific. Ministry of Power has directed CEA to prepare Regulation on Cyber Security in Power Sector. And as an interim measures CEA has been directed to issue Guideline on Cyber Security in Power Sector, under the provision of Regulation 10 on Cyber Security in the*

"Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019".

1.6 The Guidelines on Cyber Security, in the form of Articles written below, requires mandatory Compliance by all Responsible Entities. The Guidelines shall come into effect from the date of issue by Central Electricity Authority, New Delhi."

4.7. It is submitted that the existing relays installed during 2012 were not complying with the guideline issued by the CEA (Cyber Security in Power Plants) Guidelines 2021 (herein after called "CEA Policy"). Since the guidelines issued by the CEA subsequent to installation of the relays, it is covered under the definition of Change in Law under Regulation 3(12) and Regulation 25(2)(b) of the Tariff Regulations, 2024.

25.

(1)...

(2) In case of replacement of assets deployed under the original scope of the existing project after the cut-off date, the additional capitalization may be admitted by the Commission after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a)...

(b) The replacement of the asset or equipment is necessary on account of a change in law or Force Majeure conditions;

..."

4.8. It is submitted that the technical requirement as per CEA Policy mandated under clause 2.4.1(a) i.e. 2.4.1 - Control Systems for System Operation and Operation Management. (a) - Grid Control and Management Systems and clause 2.4.3 (e) i.e. 2.4.3 - Secondary, Automation and Tele control technologies (e) - protection devices are new requirements which impact the configuration of the relays. Relevant para is extracted below:-

"2.4.1 Control Systems for System Operation and Operation Management

(a) Grid Control and Management System" and

"2.4.3 Secondary, Automation and Tele control technologies

(e) Protection Devices"

4.9. In view of the recommendation by OEM, existing relays are no longer be manufactured after September, 2024 and to comply with cyber security protocols relevant to protections systems under clause 2.4.1 (a) and 2.4.3 (e) as above of CEA Policy, the Torrent Power Ltd decided to replace the existing relays which is covered under the Regulations 25(2)(b) and 25(2)(c) of the Tariff Regulations, 2024.

Cost Estimate

4.10. Petitioner has received budgetary offer from OEM (Ref. Mail Communication Dated 17.08.2024) which is attached as **Annexure 3**. Based on which petitioner has estimated total cost of Rs. 25 Lacs for partial replacement (around 10 %) of total switchyard and plant relays. Petitioner plans to replace during the tariff period as per below table:-

Table 3A(a) Statement of Projected Add Cap during the period 2024-29 with Switchyard & Plant Relay replacement with upgradation

(Rs. in Lacs)

Head of works/ Equipment	2024-25	2025-26	2026-27	2027-28	2028-29
Switchyard & Plant Relay upgradation	-	-	25.00	-	-
Less : Corresponding decapitalisation under Reg. 26(3)	-	-	7.50	-	-
Net Capital Expenditure	**-**	**-**	**17.50**	**-**	**-**

Potential Consequences on failure:

4.11. It is submitted that the failure of relay function will compromise Protection against faults like short circuits, overloads, and overvoltage in generating station and switchyard. If these relays fail, the protection mechanisms may not function correctly, leading to equipment damage and potential safety hazards. In general, it will lead to partial or complete interruption of power evacuation from the generating station

Precedence cases of Similar order

4.12. It is submitted that the Hon'ble Commission had allowed Additional Capital Expenditure towards upgradation of relays on the ground of Obsolescence of Technology in similar cases as discussed below:-

a) Hon'ble Commission, vide **Petition No. 109/GT/2020 dated 11th January, 2022**, had allowed replacement of Relay in Petition No. 109/GT/2020 dated 11th January 2022, of OTPC Limited (Refer para 23 to 28 of Petition, Copy of para attached herewith as **Annexure 4**). Relevant para is extracted below:-

"MiCOM P437 (30 series) relays having become obsolete due to technology, the replacement of such relays have become necessary to improve the reliability and efficiency of the generating station. In view of this, the additional capital expenditure claimed by the Petitioner is ***allowed*** *under Regulation 25(2)(c) of the 2019 Tariff Regulations."*

b) Hon'ble Commission, vide **Petition No. 443/GT/2020 dated 15th September, 2023**, had allowed upgradation of Bus bar protection with numerical relay and replacement of GRP Relay with numerical relay in Petition No. 443/GT/2020 dated 15th September 2023 of NTPC Limited – Rajiv Gandhi Combined Cycle Power Project (RGCCPP), Kayamkulam (359.58 MW) (Refer para 13 to 17 of Petition, Copy of para attached herewith as **Annexure 5**)

B. DCS & SEE-SFC System Upgrade

Technical Justification

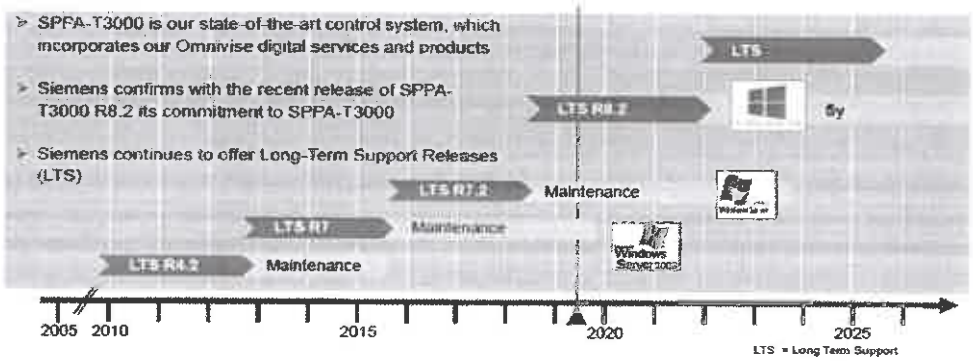
OEM Support no longer available

4.13. The Petitioner submits that Unosugen was originally equipped with SPPA-T3000 V7.2 DCS system and THYRIPOL® SIMOREG with Power Section & SINAMICS GL150 based Start-up Frequency Convertor (SFC)/Static Excitation (SEE) system provided by Siemens AG as its OEM in 2012.

4.14. Since the control system products follow a defined product lifecycle model, the same has now became obsolete and due to technological advancement, the control system needs to be replaced by newer technology as it becomes available.

4.15. In this matter, the OEM (Siemens Ltd) vide their letter dated 17th Aug 2023, informed petitioner about its obsolescence and limited support for these control systems. (Letter enclosed herewith vide **Annexure 6**). The OEM has stated that the resources capable of supporting the older control systems become limited as the product ends its lifecycle and this can have the undesired breakdown and effect of extending the downtime of the plant further. The OEM has recommended upgrading to the latest SPPA T3000 DCS and Thyripol 6RV80 (SFC/SEE) for Unosugen plant for reliable operation of the plant.

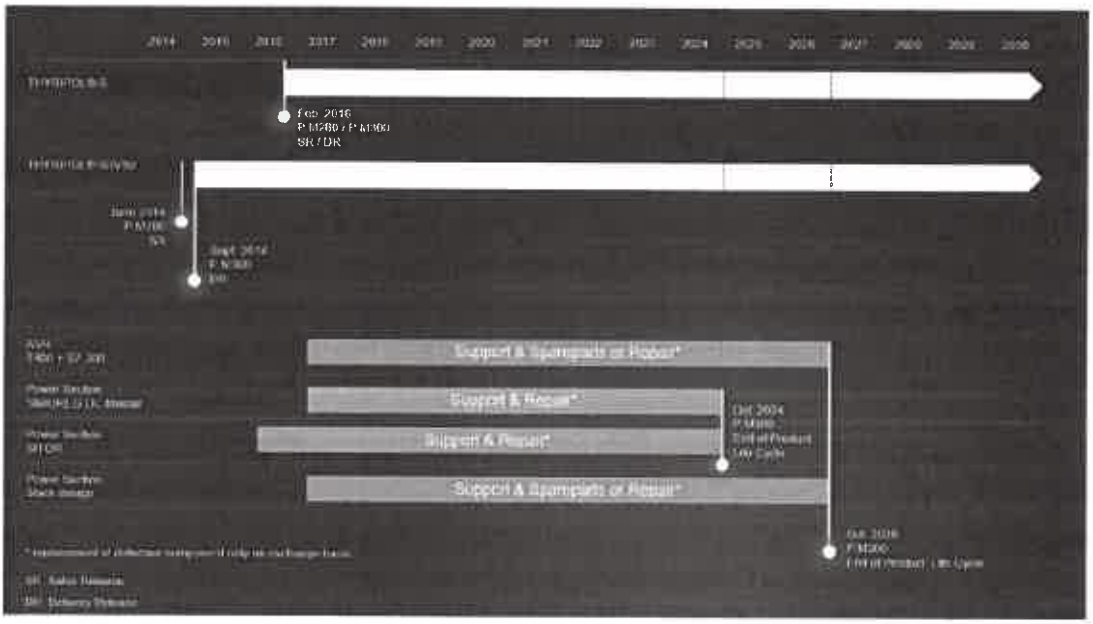
4.16. Unosugen DCS is Siemens T3000 system V7.2 running on Servers/ Clients having obsolete Window Server 2003/2008, Window 7, and Window XP Operating System (OS) for Application Server, WinTS Server, TDY Server, Thin Clients, Argus System. T3000 System V7.2 & its component lifecycle status is given below



4.17. Simens DCS SPPA T3000- V7.2 and SFC/SEE system's automation part consisting of various obsolete control sub-systems like S7-417 CPUs, Schlosser protection system, CS3000 controller, WinTS and Argus System. etc. Spares for these control systems are not available for procurement from OEM.

- THYRIPOL® SIMOREG with Power Section & SINAMICS GL150 based Start-up Frequency Convertor (SFC)/Static Excitation (SEE) system has also definite product life cycle as mentioned in the brochure provided by Siemens AG as its OEM which is attached under **Annexure 7**

"SIMOREG-Design (6RA70) - The system has been phased out at the end of calendar year 2016 followed by technical support including repair service until October 2024"



4.18. Being an obsolete/ discontinued product, technical support for this control system is also not available from OEM. Failure of these automation components can lead to redundancy loss or non-availability of critical plant operating control system like Gas Turbine Governor Control and Safety Protections System (Failsafe), Plant Open/ Close Loop Controls, SFC/SEE Controls etc. Response time for OEM support is more in case of unknown and random faults in the discontinued/obsolete control system. Issues faced in past in this control system led to redundancy loss of critical plant control systems, failsafe control system and in one such case, resulted in unit tripping.

- The Unosugen DCS V7.2 is obsolete, and its maintenance support also ended in Jan 2023. This DCS has the latest patches updated under V7.2 (few specifically developed by Siemens for multiunit requirement with Sugen upgraded DCS) and Siemens is not developing/ releasing any further updates. This pose to increased threat of cyber security.
- Obsolete OS compatible IT hardware not available for purchase in the market. IT Hardware failure will make it difficult to restore the system, in case of non-available IT spares.
- Spare IT hardware is available for Application Server and Thin client
- WinTS (Turbine diagnostic system, in use by Siemens LTSA for analysis & support) hardware has failed & presently it is non-operational.

Table 3A(b) The lifecycle status of various components of T3000 DCS installed at UnoSugen

Sr.	Component	MLFB / Part	Lifecycle Status
1	Application Server	FT Server 4500, Make - Stratus	Discontinued 30-April-2018
2	TDY Server	Primary TX200 /S5, Make - Fujitsu	Discontinued 15-Feb-2019
3	Thin Client	HP Z400, Make - HP	Discontinued 15-Oct 2017
4	WinTS Server	Primary TX150 /S5, Make - Fujitsu	Discontinued 14-July-2018
5	FM458	6DD1607-0AA2	Cancellation 1-Oct-2022
6	AddFEM -SOE	6DL3100-8AC03	Cancellation 1-Oct-2019
7	CPU – S7-417-4H	6ES7417-4HT14-0AB0	Discontinued 1-Oct-2022
8	CS3000 - Redundant	6DU1161-4SR10-1CB1	Discontinued 1-Oct-2019
9	CS3000 - non-redundant	6DU1161-4SR10-1AB1	Discontinued 1-Oct-2019
10	SPPA T3000 V7.2 HMI		Discontinued 31-Jan 2023

4.19. It is submitted that the above constraints present a significant challenge as it exposes our infrastructure to potential risks associated with the unavailability of crucial spare parts, firmware updates, cyber security compliance and technical support.

Attempt for alternative solutions

4.20. To navigate through the phase of discontinuation, Petitioner has explored various options like exploring used / refurbished spares from local/global market which are available without any warranty / performance guarantee and service support from OEM keeping system available till proposed upgrade in 2026-27 during unit outage as an interim measure. However, maintaining this arrangement for the long term is not sustainable

4.21. Further, availability of such components will not ensure guarantee in restoration of system in case of total failure of server/client computer.

- For example, the petitioner has attempted to replace the failed Application Server FT4500 hardware from the global market with the service support of OEM M/s. STARTUS. Unfortunately, the OEM has expressed their inability to extend service support for procured refurbished application server FT4500 including already installed failed Application Server.
- Moreover, Petitioner has also attempted to repair server and client computers, however, it was not successful and WinTS, Argus & TDY server could not be restored even after multiple attempts of hardware repair and support from OEM

Compliance to CEA Guidelines, 2021

4.22. It is submitted that CEA has issued guidelines under the provision of Regulation 10 on Cyber Security in the "Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019" herein after called "CEA Policy". As per clauses 2.4.1 (b) and 2.4.3 (applicable for Power plant control system) of CEA (Cyber Security in Power Plants) Guidelines 2021, components of Power Plant Control System shall keep updated with latest software and hardware to avoid any cyber-attack /malicious activities.

4.23. It is submitted that the upgradation of DCS system is necessary to comply with the guideline issued by the CEA (Cyber Security in Power Plants) Guidelines 2021. Since the guidelines issued by the CEA subsequent to installation of the relays, it is covered under the definition of Change in Law under Regulation 3(12) and Regulation 25(2(b) of the Tariff Regulations, 2024

25.

(1)...

(2) In case of replacement of assets deployed under the original scope of the existing project after the cut-off date, the additional capitalization may be admitted by the Commission after

making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a)...

(b) The replacement of the asset or equipment is necessary on account of a change in law or Force Majeure conditions;

..."

4.24. It is submitted that the technical requirement mandated under 2.4.1 (b) and 2.4.3 (applicable for Power plant control system) of CEA (Cyber Security in Power Plants) Guidelines 2021 are additional requirements which impact the configuration of the DCS system and necessitates its upgradation

Additional benefits for operation of the generating station due to upgradation of DC System

4.25. It is submitted that apart from the grounds mentioned above, there are other additional benefits to the operation of the generating station due to upgradation of Siemens, OEM of DCS system. It offers below mentioned benefits due to upgrading from Siemens T3000 V7.2 to V9.2:

- **Improved Performance**: V9.2 provides enhanced system performance, ensuring reliable operations
- **Advanced Cybersecurity**: The latest version includes updated cybersecurity features to protect against modern threats, ensuring the safety and integrity of data
- **Enhanced User Interface**: V9.2 offers a more intuitive and user-friendly interface, making it easier for operators to manage and control the system
- **Scalability and Flexibility**: The new version is designed to be more flexible and scalable, allowing it to adapt to changing market demands and integrate with new technologies
- **Futureproofing**: Upgrading ensures compatibility with future updates and innovations, keeping your system up to date with the latest advancements without major hardware upgrades
- **Integrated Engineering**: Features like function diagrams, plant displays, and integrated engineering tools streamline the engineering process
- **Comprehensive Diagnostics and Maintenance**: Dynamic function diagrams, parameter changes, and force functions aid in diagnostics and maintenance
- **Virtualization and Simulation**: Support for virtual reality applications and simulators helps optimize operator performance without risk

Cost estimates

4.26. It is submitted that estimated cost to upgrade existing Power plant control system - SPPA T3000 V7.2 DCS to latest SPPA T3000 LTS 9.2 DCS latest release 9.2 with DCS & SEE-SFC controller upgrading based on the budgetary offer from OEM (Ref. Mail Communication Dated 14.09.2024 & 23.10.2024) which are attached as **Annexure 8**. The statement of estimated cost of the projected additional capitalization towards the upgradation of SPPA-T3000 & SFC/SEE Controller Upgrade is given as under :-

Table 3A(c) : Statement of Projected Add Cap during the period 2024-29 with SPPA-T3000 & SFC/SEE Controller Upgrade

Rs. in Lacs

Head of works/ Equipment	2024-25	2025-26	2026-27	2027-28	2028-29
SPPA-T3000 & SFC/SEE Controller Upgrade			3,700.00		
Less: Corresponding decapitalisation under Reg. 26(3)			1,110.00		
Net Capital Expenditure			**2,590.00**		

Potential Consequences on failure:

4.27. Petitioner informed Honorable commission that UnoSugen is facing many critical issues related to DCS System such as –

- Failed Win-TS System Hardware resulting in stoppage of OEM Remote support and critical data acquisition for analysis
- Failed TDY System Hardware resulting in stoppage of thermodynamic performance analysis and monitoring of the systems including critical fatigue monitoring of high temperature components which are currently exposed to incremental stress on account of changed operational scenario of cyclic operations
- GT Controller FM458 hanging resulting in inhibiting Gas Turbine Combustion Tuning based on change of Natural Gas Quality and Ambient Conditions including real time monitoring of engineering parameters.

Precedence cases of Similar order

4.28. It is submitted that the Hon'ble Commission had allowed Additional Capital Expenditure towards upgradation of DCS systems on the ground of Obsolescence of Technology in similar cases as discussed below:-

a) Hon'ble Commission, vide **Petition No. 442/GT/2020 dated 29th March, 2023**, had allowed upgradation of DCS System in Petition No. 442/GT/2020 dated 29th March

2023 of NTPC Limited – Kahalgaon Super Thermal Power Station, Stage-II (Refer para 39 to 42 of Petition, Copy of para attached herewith as **Annexure 9**)

5. Additional Capitalization for higher security and safety [Regulation 26(1)(d)]

400KV GIS Bay Spares

5.1. Unosugen 400kV GIS was installed in 2012 as part of the Unosugen project independent to Sugen with 4 nos. of bays, viz. (a) 400kV, 80Mvar Bus Reactor; (b) 400kV Bay for Unosugen; (c) 400kV Bay for 400kV Sugen Unosugen Line and (d) 400kV Bay for 400kV Unosugen Pirana Line

Technical Specifications

5.2. The design of Unosugen GIS is unique with a single bus of 400KV, in place of conventional two-bus systems which are throughout in India. Technical Specifications of GIS is 8DQ1 type SF6 Metal-enclosed gas-insulated switchgear 400 kV, 40kA, manufactured in France in 2011 (Sr. No. 3002360110-C01), supplied by Siemens Ltd. GIS major inspection requires a life of 25 years. As part of the project, during the warranty and subsequent unit RSD phase, GIS experienced two nos. of failures due to internal issues, which led to Unosugen non-availability. The recommendations from past failures such as providing PSD in line bays, all bays inspection, and annual SF6 gas quality monitoring is implemented. Moreover, consumables as required for short maintenance activities were also procured.

5.3. Unosugen 400kV GIS is added with an additional bay to add one more ICT (400/220KV, 315 MVA) to supply power to 220KV Sugen Switchyard with increased demand and loading from TPL Surat and GETCO Kim. The additional bay provided by Siemens Ltd is connected to the existing 400KV GIS of Unosugen. Moreover, Unosugen has been under regular operation with PPA active since May/June 2019. This addition makes GIS availability very critical concerning the availability and reliability of Unosugen Unit 382.5 MW and TPL D Surat and GETCO Kim Power Supply (in view of ICT-4).

Technical Failure and Recommendations of OEM

5.4. The 8DQ1 GIS design underwent several improvements, and the current GIS design supplied at Unosugen is phased out, as per the discussion with Siemens. The spares and consumables required for Unosugen GIS need to be procured from Siemens France and require a long lead time of delivery of over 12 months.

5.5. Based on the criticality of Single Bus 400KV GIS of Unosugen as explained above and two failures occurred

- First on 12th Dec 2013 in the 400kV UNOSUGEN-SUGEN line CT compartment which was finally restored on 28th Dec 2013, taking **17 days of non-availability** with issue of CT corona disc failure, which was attended under warranty by Siemens. Detailed report and recommendations from OEM Siemens are attached under **Annexure 10**
- Second incident of failure of 400kV UNOSUGEN PIRANA Line on 30th May 2018 in the CB compartment, temporary restoration was completed by cannibalizing the circuit breaker for 80MVar reactor bay on 20th July 2018, taking **52 days of non-availability** with the issue of CB compartment failure. Moreover, the 80MVar Reactor was finally made available on 14th Nov 2019, taking reactor bay non-availability of approximately 16 months, which required arranging spares and expert service from OEM Siemens France, supported by Siemens India. Detailed report and recommendations from OEM Siemens are attached under **Annexure 11**

5.6. Petitioner informed that the failures encountered in the same type of GIS installed at BALCO, Korba where they have faced the failure and planned to replace complete GIS and from GIS worldwide are considered (refer to Annexure 2, 4th CEGRE Survey extracts which is attached under **Annexure 12**). The focus is on maintaining mandatory spares for one phase of GIS out of three phases.

5.7. Despite ongoing condition monitoring efforts, the risk of UNOSUGEN non-availability persists due to inherent design/engineering problems. To address this issue, a proposal for spare procurement is prepared as below -

- Based on the past two incidents the spare parts from Siemens France have been reviewed, and only necessary consumables for one complete bay have been procured and stored for contingency purposes considering Unosugen can operate at times.
- As of now, UNOSUGEN is operational and recommended spare parts from OEM Siemens France have been reviewed to assess the core components. The expected cost of spares for 400kV GIS is Rs. 2500 Lacs (Including GST), based on offers received from Siemens, France which is annexed under **Annexure 13**.

Compliance to CEA Guidelines, 2020

5.8. Petitioner has evaluated CEA Advisory on Spare Parts Management in Thermal Power Plants dated 07-02-2020 and CEA Guidelines for availability of spares ad inventories for Power Transmission System (Transmission Lines & Substation/Switchyard) Assets published in July 2020 and propose for additional capitalization for higher security and safety of plant as advised by CEA to procure GIS spares.

5.9. CEA Advisory on Spare Parts Management in Thermal Power Plants dated 07th Feb, 2020 clause no. 8.4 (A), relevant para attached under **Annexure 14** and CEA Guidelines for availability of spares and inventories for Power Transmission System (Transmission Lines & Substation/Switchyard) Assets dated Jul 2020, Annexure B (2) of which, indicating the list of GIS spares, recommended to be maintained for 400kV GIS Substation, attached under **Annexure 15**.

5.10. Hon'ble Commission in its Regulations envisages the additional capitalisation arising from need for higher security and safety of the plant. Regulation 26(1)(d) provides that –

"26. Additional Capitalization beyond the original scope

(1) The capital expenditure, in respect of the existing generating station or the transmission system, including the communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

(a) ...

(d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;"

5.11. Accordingly, the Torrent Power Ltd has considered for additional capitalization beyond original scope as per Table 3C on account of need for higher security and safety of the plant under Regulation 26(1)(d) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2024 which has become necessary as per CEA Guidelines for availability of spares ad inventories for Power Transmission System (Transmission Lines & Substation/Switchyard) Assets published in July 2020.

Cost estimates

5.12. Petitioner has received budgetary offer from OEM Siemens for Critical spares for 400kV GIS 8DQ1 (Ref. Dated 24.11.2024) which is attached as per para 5.7 above. The statement of additional capital expenditure towards Critical spares for 400kV GIS is given as below:-

Table 3B: Statement showing Add Cap on account of need for higher security and safety of the plant during the period 2024-29 [Regulation 26(1)(d)]

					Rs in Lacs
Head of works/ Equipment	**2024-25**	**2025-26**	**2026-27**	**2027-28**	**2028-29**
400kV GIS Spares	2500.00				
Gross Capital Expenditure	**2500.00**				

6. Additional Capitalization for Efficient Operation [Regulation 26(1)(i)]

A. Roof Top Solar PV Modules

Reduction of auxiliary consumption

6.1. It is obligation of the TPL-Unosugen that the plant be used optimally so that benefit accrued from optimum utilization will be made available to the consumers. It is submitted that the TPL-Unosugen has utilized available space at the plant site, available rooftops in different building and constructions site. The cost of the building construction and available land has already been capitalized and the consumers have already paid for it.

6.2. Further, the electrification of the plant site consumes electricity generated from the TPL-Unosugen. Consequently, the available electricity for the consumers will be reduced since part of the electricity is being consumed within the plant site. In this consideration, the TPL-Unosugen has considered installation of Solar PV Modules for the purpose of catering the part of electrification requirement at plan and reduce auxiliary consumption. Thus, the net electricity available to the consumers will be more and ultimately, the benefit will be pass on to the consumers. Further, the Tariff Regulations, 2024 also allows the sharing of reduction of Auxiliary Power Consumption. Accordingly, the benefits of reduction in Auxiliary Power Consumption will be shared with beneficiaries as per the provision of the Tariff Regulations, 2024.

6.3. The petitioner, for the purpose of electrification of plant site, optimum utilization of available infrastructure and reduction of Auxiliary Power Consumption, decided to install installation of Roof Top Solar (RTS) at TPL-UNOSUGEN. OEM has provided with Techno-commercial proposal (Ref. SEL/EPC/2023-24/YG/500/UNOSUGEN//R10 Dated 17.02.2024) attached under **Annexure 16**.

The Commission's decision in 2019-24 Tariff order

6.4. It is submitted that the Hon'ble Commission, vide **order dated 13th July 2020 in Petition No. 270/GT/2019 in case of Torrent Power Limited**, had allowed Additional Capital Expenditure towards solar roof top on the ground of Efficient Operation. Para 23 of Petition is extracted below:-

"23. As regards the claim for additional capitalisation of Rs.35 lakh towards installation of 'Solar Power Roof Top System', the Petitioner has submitted as follows:

"Solar Power Roof Top System for Rs.35 lacs which has resulted into reduction of auxiliary consumption and benefits to beneficiaries in terms of sharing of ECR gain"

It is pertinent to mention that the energy generated from Solar Power Roof Top System installed at the generating station would meet some of the auxiliary energy requirements of the generating station and to that extent, the ex-bus energy available to the beneficiaries would increase. Considering the resolve of the Central Government to promote renewable energy and in terms of Regulation 8(6) of the 2014 Tariff Regulations which provide for sharing of gains in respect of variation of Auxiliary Energy consumption (by way of lower ECR because of lower auxiliary consumption in comparison to normative auxiliary consumption), ***we allow the additional capital expenditure of Rs.35 lakh incurred by the Petitioner towards the installation of Solar Power Roof Top System."***

A copy of relevant para of the order is attached herewith as **Annexure 17.**

6.5. The above said expenditure was provided in Tariff Regulation, 2014. The similar regulation also exists in the existing regulatory framework. Regulation 26(1)(i) provides that –

"26. Additional Capitalisation beyond the original scope

(1) The capital expenditure, in respect of the existing generating station or the transmission system, including the communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

(a)...

(b)...

...

(i) Any additional capital expenditure which has become necessary for efficient operation of generating station or transmission system as the case may be, including the works required towards projects acquired through NCLT process. The claim shall be substantiated with the technical justification and cost benefit analysis."

6.6. In view of the above and approval of the Commission in past order, it is submitted that the consideration of solar roof top would help in reducing the auxiliary and increase efficiency of the generating station and the benefit of it will be pass through to the consumer. Considering these, it is humbly submitted to the Hon'ble commission to allow Additional Capital Expenditure under Regulations 26(1) (i) of Tariff Regulations 2024, to install solar rooftop on the non use space available within the premises of the generating station.

Cost Estimates

6.7. The cost of solar roof top PV is estimated based on the prevailing cost and the Techno-commercial proposal of OEM mentioned under para 6.3. In view of the above, it is humbly submits the Hon'ble Commission to allow additional capital expenditure under Regulations 26(1) (i) of Tariff Regulations 2024, to install roof top solar PV modules:-

Table 3C: Additional Capitalization for Efficient Operation [Regulation 26(1)(i)]

Rs. in Lakhs

Head of works/ Equipment	2024-25	2025-26	2026-27	2027-28	2028-29
Solar PV Modules	630.00	-	-	-	-
Gross Capital Expenditure	**630.00**	**-**	**-**	**-**	**-**

7. Discharge of Capital Liability [Regulation 25(1)(f)]

7.1. Discharge of Capital liability during FY 2024-25 to FY 2028-29 under Regulation 25(1)(f) of the Tariff Regulations, 2024

Table 4: Year wise Undischarged liability during the period FY 2024-25 to FY 2028-29

Rs. in lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Opening Undischarged liability	103.34	-	-	-	-
Closing Undischarged liability	-	-	-	-	-
Discharged	**103.34**	**-**	**-**	**-**	**-**

8. On consideration of (i) Addition and (ii) Deletion as stated above, year wise, Additional Capital expenditure during the period 01.04.2024 to 31.03.2029 is summarised as below -

Table 5 : Statement of Add Cap

Rs. in lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Projected additional capital expenditure	3,130.00	-	3,725.00	-	-
Less: Decapitalisation	-	-	(1,117.50)	-	-
Additional capital expenditure (Table 3)	**3,130.00**	**-**	**2,607.50**	**-**	**-**
Add: Net Addition due to discharge of liability (Table 4)	103.34	-	-	-	-
Net Additional capital Expenditure	**3,233.34**	**-**	**2,607.50**	**-**	**-**

9. Based on the above, the Petitioner submits the capital cost during the period 01st April 2024 to 31st March 2029 as below:

Table 6: Projected Capital Cost (PCC) and Add Cap for the period 2024-29

Rs. in lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Opening Capital Cost	1,80,164.03	1,83,397.37	1,83,397.37	1,86,004.87	1,86,004.87
Add: Additional Capital Expenditure (Table 5)	3,233.34	-	2,607.50	-	-
Closing Capital Cost	**1,83,397.37**	**1,83,397.37**	**1,86,004.87**	**1,86,004.87**	**1,86,004.87**
Average Capital Cost	**1,81,780.70**	**1,83,397.37**	**1,84,701.12**	**1,86,004.87**	**1,86,004.87**

CHAPTER 3: Debt-Equity Ratio

1. Regulation 18 (3) of Tariff Regulations, 2024 provide that

"18. Debt-Equity Ratio: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

i. *where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
ii. *the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
iii. *any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*

Explanation-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or the approval of the competent authority in other cases regarding the infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In the case of the generating station and the transmission system, including the communication system declared under commercial operation prior to 1.4.2024, the debt-equity ratio allowed by the Commission for the determination of tariff for the period ending 31.3.2024 shall be considered:

Provided that in the case of a generating station or a transmission system, including a communication system which has completed its useful life as on 1.4.2024 or is completing its useful life during the 2024-29 tariff period, if the equity actually deployed is more than

30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

...

(4)...

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2024 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation."

2. The Hon'ble Commission vide para 14 of its Tariff Order for 2019-24 dated 20th August 2020 in the Petition no. 268/GT/2019 has considered debt-equity ratio of 70:30 for the purpose of determination of Tariff for the period 1st April 2019 to 31.03.2024. The same is also reproduce as below:

"14. The gross loan and equity amounting to Rs.126829.33 lakh and Rs.53317.50 lakh, respectively as on 31.3.2019 was considered in order dated 20.7.2020 in Petition No. 272/GT/2019. The proportionate equity as a percentage of admitted capital cost as on 31.3.2019 is 29.60%. Accordingly, the gross loan and equity amounting to Rs.126829.33 lakh and Rs.53317.50 lakh has been considered as gross loan and equity as on 1.4.2019. Further, the additional capital expenditure approved above has been allocated in debt-equity ratio of 70:30."

3. It is submitted that the generating station has yet to complete its useful life. The debt:equity ratio of opening capital cost and additional capital expenditure during the tariff period 2024-29 has been considered in accordance with the Regulation 18 of the Tariff Regulations, 2024. Accordingly, the debt-equity ratio considered for determination of tariff for the period 01.04.2024 to 31.03.2029 is as under:-

Table 7: Debt:Equity Ratio for Tariff Period 2019-24 (Truing-up) Vs. Tariff Period 2024-29

Sr No	Tariff Period 2019-24 (Truing-up)			Tariff Period 2024-29		
	As on 1.4.2019	Add Cap	Closing as on 31.3.2024	Opening as on 1.4.2024	Add Cap	Closing as on 31.3.2029
Debt	1,26,829.33	12.04	1,26,841.37	1,26,841.37	4,088.59	1,30,929.96
(%)	70.40%	70.00%	70.40%	70.40%	70.00%	70.39%
Equity	53,317.50	5.16	53,322.66	53,322.66	1,752.25	55,074.91
(%)	29.60%	30.00%	29.60%	29.60%	30.00%	29.61%
Total	**1,80,146.83**	**17.20**	**1,80,164.03**	**1,80,164.03**	**5,840.84**	**1,86,004.87**

CHAPTER 4: Operating Norms & Energy Charge Rate

1. **Operating Norms**

The Operational Norms of the Generating Station as per 70(A)(a), 70(C)(c) and 70(E)(c) of Tariff Regulation 2024 are as below:-

Table 8: Normative Operating Parameters for the Generating Station

Description	Unit	Normative parameters	Applicable Regulation
Target NAPAF for recovery of fixed charges	%	85	70(A)(a)
Gross Station Heat Rate (Combined Cycle)	kCal / kWh	1853.88	70(C)(c)
Auxiliary Energy Consumption (Combined Cycle)	%	2.75	70(E)(c)

2. **Monthly Energy Charge**

Energy Charge on month to month basis will be billed by the Petition as per Regulation 64(1) of Tariff Regulation 2024 which is extracted below:

"The energy charge shall cover the primary and secondary fuel cost and limestone consumption cost (where applicable) and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on an ex-power plant basis, at the energy charge rate of the month (with fuel and limestone price adjustment). The total Energy charge payable to the generating company for a month shall be:

Energy Charges = (Energy charge rate in Rs./kWh) x {Scheduled energy (ex bus) for the month in kWh}"

3. It is respectfully submits that on consideration of actual Fuel Cost for the period April 2023 to March 2024 as applicable to FY 2024-25 to FY 2028-29 of tariff period and applicable operating parameters prescribed under Tariff Regulations 2024, the base Energy Charge Rate (ECR) in Rupees per KWH on ex bus bar basis is as per Annexure I to the Tariff Petition.

CHAPTER 5: Annual Fixed Charge

1. Determination of Annual Fixed Cost

The Annual Fixed Cost are an aggregate of cost estimates on following items:

a. Return on Equity
b. Interest on Loan
c. Depreciation
d. Interest on Working Capital
e. Operation and Maintenance (O&M) Expenses

2. Return on Equity

a. As per Regulations 31 of Tariff Regulations 2024, ROE shall be grossed up with the effective tax rate of the respective financial year.

b. Accordingly ROE as allowed has been grossed up with MAT rate, as applicable to respective year as shown hereunder, as generating company will remain under MAT during the tariff period 01.04.2024 to 31.03.2029.

Table 9: MAT rate calculation

Depreciation	2024-25	2025-26	2026-27	2027-28	2028-29
Base Rate (%)	15	15	15	15	15
Surcharge (%)	12	12	12	12	12
Edu Cess (%)	4	4	4	4	4
	17.472	**17.472**	**17.472**	**17.472**	**17.472**

c. The ROE has been worked out as below for the tariff period on account of the Add Cap and de-capitalization of assets as stated in Chapter 2 of this petition.

Table 10: Statement of ROE

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Normative Equity - Opening	53,322.66	54,292.66	54,292.66	55,074.91	55,074.91
Net Addition of Equity due to Add. Capital Expenditure	970.00	-	782.25	-	-
Normative Equity - Closing	54,292.66	54,292.66	55,074.91	55,074.91	55,074.91
Average Normative Equity	53,807.66	54,292.66	54,683.79	55,074.91	55,074.91

Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Effective Tax Rate for respective years	17.47%	17.47%	17.47%	17.47%	17.47%
Rate of Return on Equity (Pre-Tax)	18.78%	18.78%	18.78%	18.78%	18.78%
Return on Equity (Pre Tax-annualized)	**10,106.15**	**10,197.25**	**10,270.71**	**10,344.17**	**10,344.17**

3. Interest on Loans

a. Clause 32 of Tariff Regulation 2024 provides as under

i. The normative loan outstanding as on 01.04.2024 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31st March 2024 from the gross normative loan.

ii. The repayment of each year shall be equal to the depreciation allowed for the corresponding year/period.

iii. The rate of interest on loan shall be the weighted average Rate of interest (ROI) calculated on the basis of actual loan portfolio after providing appropriate accounting adjustment for the interest capitalized.

iv. *The interest on loan is calculated on the normative average loan for respective year by applying the weighted average rate of interest, which calculation is based on application of ROI on actual loan portfolio of each lender.*

b. As per the agreements with Banks and Financial Institution, the applicable ROI and weighted average RoI have been calculated under Tariff Form-13 under **Annexure I.**

c. The weighted average Interest Rate considered for the period 1st April, 2024 to 31st March 2029 is based on prevailing Interest Rate as on date and summarised as below:-

Table 11 : Weighted average Interest (ROI) on actual loan

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
WROI (%)	8.85%	8.85%	8.85%	8.85%	8.85%

d. Depreciation amount for respective financial year has been considered as the annual repayment of normative loan for the year. In case of de-capitalization of assets, the repayment has been adjusted by taking into account cumulative repayment on a pro-rata basis and the adjustment has not exceeded cumulative depreciation recovered upto date of de-capitalization of such asset.

e. Based on the above, the calculations of Interest on normative loans are as under:

Table 12: Interest on Loan

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Gross Normative Loan	1,26,841.36	1,29,104.70	1,29,104.70	1,30,929.95	1,30,929.95
Cumulative Repayment	98,487.06	1,07,781.51	1,17,158.61	1,20,457.64	1,24,721.66
Net Normative Loan - Opening	28,354.30	21,323.19	11,946.08	10,472.31	6,208.28
Addition due to Additional capital expenditure (Net off De-Cap)	2,263.34	-	1,825.25	-	-
Repayment of loan during the year	9,294.45	9,377.11	4,085.97	4,264.02	4,264.02
Less: Repayment Adjustment on account of de-capitalisation	-	-	(786.94)	-	-
Net Repayment of Loan during the year	9,294.45	9,377.11	3,299.03	4,264.02	4,264.02
Net Loan Closing	**21,323.19**	**11,946.08**	**10,472.31**	**6,208.28**	**1,944.26**
Average Loan	**24,838.75**	**16,634.64**	**11,209.20**	**8,340.29**	**4,076.27**
Weighted Average Rate of Interest on Loan	8.85%	8.85%	8.85%	8.85%	8.85%
Interest on Loan	**2,198.23**	**1,472.17**	**992.01**	**738.12**	**360.75**

4. Depreciation

a. Regulation 33 of Tariff Regulation 2024 provides that the value base for the purpose of computation of Depreciation shall be computed from COD of the Generating Station on taking into consideration the depreciation of individual units.

b. Depreciation on cost of assets has been calculated based on straight line method and at the rates prescribed under Appendix I of Tariff Regulation 2024.

c. The UNOSUGEN Plant, being an existing Plant, the balance depreciation value as on 01.04.2024 is worked out by deducting the cumulative depreciation as admitted by the Commission.

d. Further, Regulation 33(5) provides 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.

e. Accordingly, remaining depreciable value as on 31st March 2026, after a period of 12 years from the effective date of commercial operation of the station, have been spread over the balance useful life of the assets.

f. In case of de-capitalization of asset, the cumulative depreciation has been adjusted by considering the depreciation recovered in tariff by de-capitalization of asset during the useful service.

g. As Plant is completing 12 years of operation from the date of commercial operation, effective from Apr 26, the remaining depreciable value as on 31st March of each year, as the case may be, shall be spread over the balance useful life of the assets with necessary adjustment on account of de-capitalization of assets during the tariff period

h. The applicable calculation for depreciation for the Tariff Period is as under.

Table 13: Calculation of Depreciation

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Average Capital Cost	1,81,780.70	1,83,397.37	1,84,701.12	1,86,004.87	1,86,004.87
Freehold land included above	-	-	-	-	-
Value of IT equipment & software incl. above	1.37	1.37	1.37	1.37	1.37
Depreciable Value	1,81,779.33	1,83,396.00	1,84,699.75	1,86,003.50	1,86,003.50
Depreciable value @ 90% + IT	1,63,602.77	1,65,057.77	1,66,231.15	1,67,404.52	1,67,404.52
Remaining useful life at the beginning of the year-**a**	14.01	13.01	12.01	11.01	10.01
Balance depreciable value – **b**	65,115.71	57,276.26	49,072.53	46,946.88	42,682.86
Depreciation rate- **c**	5.113%	5.113%	2.212%	2.292%	2.292%
Depreciation – **b*c** (for 2024-26) **& b/a** (for 2026-27 onwards)	9,294.45	9,377.11	4,085.97	4,264.02	4,264.02
Cumulative Depreciation at the end	1,07,781.51	1,17,158.61	1,21,244.59	1,24,721.66	1,28,985.69

Less : Cumulative depreciation adjustment on account of de-capitalisation	-	-	786.94	-	-
Net Cumulative Depreciation	**1,07,781.51**	**1,17,158.61**	**1,20,457.64**	**1,24,721.66**	**1,28,985.69**

5. Operation & Maintenance (O&M) Expenses

a. Regulation 36 (1) (3) of Tariff Regulation 2024 provide the following O&M expenses norms for this Generating Station.

Table 14: Operation and Maintenance Cost [Regulation 36(1)(3)]

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
O & M Exps. (Rs. In Lakh / MW)	32.08	33.77	35.54	37.40	39.37
Installed Capacity (MW)	382.50	382.50	382.50	382.50	382.50
O & M Expenses (Rs. In lakhs)	**12,270.60**	**12,917.03**	**13,594.05**	**14,305.50**	**15,059.03**

b. The value of water charges claimed is in terms of Regulation 36 (1) (6) of Tariff Regulation 2024 and the same is based on the expected water consumption of the Generating Station on normative basis. The necessary details of the type of Plant, type of cooling water system etc in this regard are provided in Form 2 of Appendix I of Tariff Filing Forms. Further, the calculation has been shown under Form 19 of Appendix I of Tariff Filing Forms.

c. For generating 1 MWh of Electricity with all three units in operation, around 1 M^3 of water is required. Rate / M^3 for the FY 2023-24 was Rs. 39.11 / M^3 and considering annual escalation of 3% in terms of Notification No. NWRWSKD/RWR/e-file/13/2022/9468/Section P (Water Planning)-annexed under **Annexure 18**, year-wise value has been derived which is tabulated as below -

Table 15: Estimated Water Charges (Regulation 36 (1) (6))

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Water Charges	1,147.21	1,181.67	1,216.99	1,256.88	1,291.04

d. Based on the above, the total estimated O&M expenses (including water & security charges) considered for the Tariff is as below:

Table 16: Operation and Maintenance Charges, Water Charges & Security Expense

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
O & M Charges	12,270.60	12,917.03	13,594.05	14,305.50	15,059.03
Water Charges	1,147.21	1,181.67	1,216.99	1,256.88	1,291.04
Security Expenses	-	-	-	-	-
Total	**13,417.81**	**14,098.70**	**14,811.04**	**15,562.38**	**16,350.07**

6. Interest on Working Capital

a. Regulation 34(c) of Tariff Regulation 2024 provides that the interest on working capital shall be worked out as per the norms in the CERC Tariff Regulations 2024. The following are considered for determining the base for working capital in a year:

i. **Fuel cost:** Fuel Cost is based on fuel for 15 days corresponding to the normative annual plant availability factor (NAPAF), duly taking into account mode of operation of the generating station on gas fuel. A table showing the fuel cost for 15 days corresponding to NAPAF for each year of the Tariff Period is as below:-

Table 17: Fuel Cost for 15 days corresponding to Normative Annual Plant Availability Factor (NAPAF)

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Fuel Cost (15 days)	7,697.63	7,697.63	7,697.63	7,697.63	7,697.63

The above fuel cost is derived in terms of Provisions of Regulation 34 (c) (i) and Regulation 34 (2) of Tariff Regulation 2024. The fuel cost is based on landed cost of fuel on GCV basis for Apr 2023 to March 2024. Certificate from Auditor for the period FY 2023-24 in this regard is attached under **Annexure 19.**

ii. **Liquid fuel Stock:**

Regulation 34(b) (ii) allows Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor. Hence, the subject provision provides for Liquid NG stock of gas based power plants for 15 days in IoWC.

Based on proportion of liquid fuel in fuel mix of FY 2023-24, Petitioner provides hereunder a table showing the liquid stock of 15 days has been derived for each year of the Tariff Period is as below:-

Table 18: Liquid Fuel Cost for 15 days corresponding to Normative Annual Plant Availability Factor (NAPAF)

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Liquid Fuel for 15 days	7,697.63	7,697.63	7,697.63	7,697.63	7,697.63
Proportion of liquid fuel used as compared to total fuel cost	59.31%	59.31%	59.31%	59.31%	59.31%
Liquid Fuel Cost considered for working capital	**4,565.08**	**4,565.08**	**4,565.08**	**4,565.08**	**4,565.08**

b. **Maintenance spares:** The computation is based on @ 30% of operation and maintenance expenses including water charges and security expenses which is provided under Regulation 34 (c) (iii) of Tariff Regulation 2024. A statement showing the amounts regarding maintenance spares for each year of the Tariff Period is as below:-

Table 19: Maintenance Spares [30% of Operation and Maintenance Expense]

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Maintenance Spares	4,025.34	4,229.61	4,443.31	4,668.71	4,905.02

c. **Receivables:** In line with Regulations 34 (c) (iv) of Tariff Regulation 2024, receivables amount is equivalent to 45 days of capacity charge and energy charges calculated on NAPAF.

- The receivable amount represent for 45 days of (i) variable charges and (ii) fixed charges for sale of electricity and the same is calculated at NAPAF @ 85%. Finally the, receivable are worked out on the basis of 45 days of (i) variable charges and (ii) fixed charges, the synopsis is as below:

Table 20: Receivables component of working capital

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Variable Charges (45 days)	23,094.21	23,094.21	23,094.21	23,094.21	23,094.21
Fixed Charges (45 days)	4,984.44	5,004.41	4,384.68	4,470.25	4,538.52
Total Receivables	**28,078.65**	**28,098.62**	**27,478.89**	**27,564.46**	**27,632.73**

d. **O&M Expenses:** In terms of Regulations 34 (c) (v) of Tariff Regulation 2024, Operation and maintenance expenses for one month is considered for the purpose of computation of Working Capital during the Tariff Period

Table 21: Operation and Maintenance Expenses for One Month for working capital

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
O & M Expenses	1,118.15	1,174.89	1,234.25	1,296.87	1,362.51

e. Regulation 34 (3) provides that the Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2024 or as on 1st April of the year during the tariff period 2024-29 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.

f. The Bank Rate of 11.90%, as shown below, has been considered for purpose of computation of interest on working capital in line with Regulation 34 (3) of Tariff Regulations 2024.

Table 22 : Bank Rate as on 1st April, 2024

Particulars	RoI
SBI MCLR as on 1st April 2024	8.65%
Plus 325 basis point	3.25%
Rate of Interest for Working Capital	**11.90%**

g. Based on the above, the Interest on Working capital for Tariff Period is as under:-

Table 23: Interest on Working Capital (IoWC)

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Cost of Fuel - 15 days	7,697.63	7,697.63	7,697.63	7,697.63	7,697.63
Liquid fuel stock - 15 days	4,565.08	4,565.08	4,565.08	4,565.08	4,565.08
Maintenance Spares @ 30% of O & M expenses	4,025.34	4,229.61	4,443.31	4,668.71	4,905.02
Receivables - 45 days	28,078.65	28,098.62	27,478.89	27,564.46	27,632.73
O & M expenses (1 month)	1,118.15	1,174.89	1,234.25	1,296.87	1,362.51
Total Working Capital	**45,484.85**	**45,765.83**	**45,419.16**	**45,792.75**	**46,162.96**
Rate of Interest	11.90%	11.90%	11.90%	11.90%	11.90%
Interest on Working Capital	**5,412.70**	**5,446.13**	**5,404.88**	**5,449.34**	**5,493.39**

7. Annual Fixed Cost

a. The summary of the Annual Fixed Cost for the financial years from 2024-25 to 2028-29 in respect of the Generating Station stands as under:-

Table 24: Summary of estimated Annual Fixed Cost (AFC)

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Depreciation	9,294.45	9,377.11	4,085.97	4,264.02	4,264.02
Interest on Loan	2,198.23	1,472.17	992.01	738.12	360.75
Return on Equity	10,106.15	10,197.25	10,270.71	10,344.17	10,344.17
Interest on Working Capital	5,412.70	5,446.13	5,404.88	5,449.34	5,493.39
O & M Expenses	13,417.81	14,098.70	14,811.04	15,562.38	16,350.07
Total	**40,429.34**	**40,591.35**	**35,564.62**	**36,358.02**	**36,812.40**

All figures are on annualized basis.

All figures under each of head/total column has been rounded off to two decimal.

CHAPTER 6: Summary

1. Torrent Power Limited, Unosugen 382.5 MW Mega Power Plant (Petitioner) is filing the Petition along with duly filled in Tariff filing forms as per Annexure I (Part I) to Tariff Regulation 2024 for determination of Tariff for Tariff period 2024-29.

2. The Tariff for the Generating Station had been determined by the Hon'ble Commission vide Tariff Order dated 20th August 2020 to Petition No. 268/GT/2019 for the period 1st April 2019 to 31st March 2024 and a True up Petition for revision of Annual Fixed Cost has being also submitted to Hon'ble Commission.

3. **Project Capital Cost**

   a. The final value of the Project Capital Cost for the period 1st April 2024 to 31st March 2029 is as below:

Table 25: Project Capital Cost for the period 1st April 2024 to 31st March 2029

Rs in Lakhs

Particulars	2024-25	2025-26	2026-27	2027-28	2028-29
Opening Capital Cost	1,80,164.03	1,83,397.37	1,83,397.37	1,86,004.87	1,86,004.87
Additional Capital Expenditure	3,233.34	-	2,607.50	-	-
Closing Capital Cost	**1,83,397.37**	**1,83,397.37**	**1,86,004.87**	**1,86,004.87**	**1,86,004.87**

4. The ROE is considered at 18.782% for Tariff Period, considering the base rate of 15.50% and MAT of 17.472%. However, if the MAT rate of 17.472% is changed in terms of provisions of Finance Act, the ROE may undergo change leading to change in Annual Fixed Charge. Such change in ROE may be allowed to be billed to the beneficiaries directly without approaching the Hon'ble Commission.

5. The Tariff Forms are based on the normative operative parameters as per Tariff Regulation 2024.

6. The Petitioner is submitting details in Annexure I and operating norms for determination of Tariff for the Tariff Period 2024-29. The Petitioner humbly submits that duly filled in forms in Annexure I (Part 1) are submitted in terms of CERC (Terms & Conditions of Tariff) Regulations 2024.

7. The Petitioner respectfully submits that the Base Energy Charge Rate (ECR) in Rupees per KWh is calculated on ex bus bar basis and is based on the normative operating parameters prescribed under Tariff Regulations 2024 and on consideration of the actual Fuel Cost for the period April 2023 to March 2024 which is part of Annexure I to the Tariff Petition.

8. The Petitioner also submits that the complete application has been posted at its website ***www. torrentpower.com***.

CHAPTER 7: Prayer

The present Petition is submitted to the Hon`ble Commission for determination of Tariff for Tariff Period 2024-29. In view of the facts and circumstances as aforesaid, the Petitioner prays to the Hon`ble Commission that it may be pleased to:

1. Approve the additional capital expenditure of Rs 103.34 lakhs in FY 24-25 towards discharge of liability under Regulation 25(1)(f) of the Tariff Regulations, 2024.
2. Approve the net additional capital expenditure of total Rs. 5,737.50 lakhs as per Table 3 under Regulation 25 (2) (c), 26 (1) (d) and 26 (1) (i) of Tariff Regulations, 2024.
3. Determine and approve recovery of unrecovered depreciation on assets which are on account of replacement of assets before useful life of the plant due to obsolescence of technology.
4. Determine and approve the Tariff for UNOSUGEN Plant for Tariff Period (FY 2024-29) as per Tariff Filing Forms in Annexure I for the sale of power to the beneficiaries.
5. Allow the petitioner to bill and adjust impact of change in ROE due to change in MAT from time to time from the beneficiaries directly without approaching Hon'ble Commission.
6. Allow the petitioner to bill and adjust impact of interest on loan due to change in interest rate or change of base rate as the case may be from time to time from the beneficiaries.
7. Approve recovery of filing fees of this petition from the beneficiaries.
8. Approve the recovery of charges for publication of notices from the beneficiaries.
9. Allow any other relief and/or pass any other order as Hon'ble Commission may deem fit and appropriate under the circumstances of the case.
10. Allow additions/ alterations/ changes/ modifications to the Petition at a future date and condone any inadvertent omissions/ errors.
11. Pass such order as this Hon'ble Commission deems fit and appropriate in the facts and circumstances of the case in the interest of justice.

Place: Surat

Date: 06th November 2024

Petitioner