CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

<u>Petition No. 268/GT/2019</u>

Coram:
Shri P.K. Pujari, Chairperson
Shri I.S. Jha, Member

Date of Order: 20th August, 2020

In the matter of

Approval of tariff of UNOSUGEN Power Plant (382.5 MW) for the period 2019-24

And

In the matter of

Torrent Power Limited
'Samanvay', 600, Tapovan, Ambavadi,
Ahmedabad, Gujarat – 380 015 …..**Petitioner**

Vs

1.Torrent Power Limited
Unit: Ahmedabad Distribution
Sola Road, Naranpura,
Ahmedabad- 380001

2. Torrent Power Limited
Unit: Surat Distribution,
Torrent house, Station Road,
Surat- 395003 ……**Respondents**

Parties present:

Ms. Swapna Seshadri, Advocate, TPL
Ms. Deepa Chawan, Advocate, TPL
Shri Damodar Solanki, Advocate, TPL
Shri Naresh Joshi, TPL
Shri Vihar Patel, TPL
Shri Lalit Vashisth, TPL

ORDER

This petition has been filed by the Petitioner, Torrent Power Limited for approval of tariff of UNOSUGEN Power Plant (382.5 MW) (hereinafter referred to as 'the project/ generating station') for the period from 1.4.2019 to 31.3.2024 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short 'the 2019 Tariff Regulations').

2. The Petitioner is a public limited company carrying on the business of generation, transmission and distribution of power in the States of Gujarat, Maharashtra and Uttar Pradesh. The thermal based generation capacity of the Petitioner Company is 3152 MW (2730 MW of gas based and 422 MW of coal based plants) and SUGEN is one such power plant located near Surat in the State of Gujarat. The SUGEN combined cycle power plant, having an installed capacity of 1147.5 MW, comprises of 3 units of 382.5 MW each and has been awarded Mega Power Project status by the Ministry of Power, Government of India vide its letter dated 29.7.2010. Subsequently, the Petitioner added another unit, named UNOSUGEN (SUGEN 40) identical to the earlier three units of 382.5 MW capacity, as brownfield expansion to the existing SUGEN plant. The date of commercial operation of the generating station is 4.4.2013. The main fuel of the generating station is a mix of domestic natural gas and Re-gasified Liquefied Natural Gas (R-LNG).

3. The Commission vide its order dated 30.10.2015 in Petition No. 121/GT/2014 had determined the tariff of the generating station for the period 2009-14 based on the capital cost of Rs.173442.58 lakh as on 31.3.2014. Thereafter, Petition No.

401/GT/2014 was filed by the Petitioner for approval of tariff for the period 2014-19 and the Commission, after considering the capital cost of Rs.173443.85 lakh (on cash basis and after excluding the un-discharged liabilities of Rs.6295.34 lakh as on 1.4.2014) by order dated 18.8.2016 had determined the tariff of the generating station for the said period. Subsequently, the Commission by its order dated 20.7.2020 in Petition No. 272/GT/2019, had revised the tariff of the generating station based on truing-up exercise for the period 2014-19. Accordingly, the capital cost and the annual fixed charges determined by the Commission in the said order dated 20.7.2020 are as under:

Capital Cost

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	173442.58	176448.67	179987.89	179990.92	180032.51
Add: Additional capital expenditure	3006.09	3539.22	3.03	41.59	114.32
Closing Capital Cost	176448.67	179987.89	179990.92	180032.51	180146.83*
Average Capital Cost	174945.62	178218.28	179989.40	180011.71	180089.67

**Balance un-discharged liabilities corresponding to admitted capital cost as on 31.3.2019 is Rs 271.02 lakh*

Annual fixed charges

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	8654.50	8823.89	8861.56	8862.11	8865.08
Interest on Loan	11224.09	11228.04	9634.40	6589.81	6820.35
Return on Equity	10220.81	10392.21	10496.91	10498.23	10531.08
Interest on Working Capital	4599.52	4680.28	4684.12	4673.22	4743.51
O&M Expenses	10155.38	11038.33	11604.34	12382.91	13227.60
Total	**44854.31**	**46162.74**	**45281.32**	**43006.27**	**44187.63**

Tariff for 2019-24 period

4. The Petitioner has filed this petition and has claimed the capital cost and the annual fixed charges for the period 2019-24 as under:

Capital Cost

(₹ in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	180226.92	180354.48	180354.48	180354.48	180354.48
Add: Additional Capital Expenditure	7.02	0.00	0.00	0.00	0.00
Less: De-capitalization during the year/period	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year/period	120.54	0.00	0.00	0.00	0.00
Closing Capital Cost	**180354.48**	**180354.48**	**180354.48**	**180354.48**	**180354.48**
Average Capital Cost	180290.70	180354.48	180354.48	180354.48	180354.48

Annual fixed charges

(₹ in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	9189.42	9192.67	9192.67	9192.67	9192.67
Interest on Loan	6156.77	5324.45	4487.92	3651.38	2814.85
Return on Equity	10686.55	10690.33	10690.33	10690.33	10690.33
Interest on Working Capital	5473.02	5489.26	5504.94	5521.88	5538.66
O&M Expenses *(including water charges & security expenses)*	10889.84	11324.51	11781.14	12258.07	12759.71
Total	**42395.60**	**42021.21**	**41656.99**	**41314.33**	**40996.22**

6. The Commission after hearing the matter on 31.10.2019 reserved its order in the petition after directing the Petitioner to submit certain additional information vide its Record of Proceedings. However, the Record of Proceedings were modified based on the letter dated 5.11.2019 of User Welfare Association (UWA), the Objector, and the parties were directed to complete pleadings in the matter. In compliance of the said directions, UWA filed its objections on 13.12.2019 and the Petitioner filed its response to the same on 20.12.2019. Thereafter, the petition was heard on 27.2.2020 and the Commission after directing the Petitioner to file certain additional information, reserved its order in the matter. In compliance with the said directions, the Petitioner has filed the additional information on 16.3.2020. The Objector, UWA has filed its objections on 31.3.2020 and the Petitioner has filed its response to the said objections on 3.4.2020.

7. The Objector, UWA has mainly raised the issue of 'maintainability' of the petition on the ground that the Commission does not have 'jurisdiction' to determine the tariff of this generating station. The Objector, UWA has submitted that this Commission has no jurisdiction in the matter as generating station of the Petitioner is not an inter-State generating station and that no PPA has been approved by the State Electricity Regulatory Commission. In response, the Petitioner has clarified that UNOSUGEN (SUGEN 40) is a brownfield expansion project of the existing SUGEN Mega Power Project (SUGEN 10-30) which is an inter-State generating station. It has also stated that this Commission has been determining the tariff of both i.e. SUGEN 10-30 and SUGEN 40 (UNOSUGEN) since the assets being used are common to both. The learned counsel for the Petitioner during the hearing of this petition has clarified that the generating station is a brownfield expansion project of the existing SUGEN plant (SUGEN 10-30) and hence this Commission has the jurisdiction to determine the tariff of the generating station. It is noticed that the issue of jurisdiction raised by UWA had already been dealt with by the Commission in its order dated 20.7.2020 in Petition No. 272/GT/2019, while revising the tariff of the generating station for 2014-19 based on truing-up as under:

> *"8. The matter has been examined. The Commission in paragraph 2 of its order dated 18.8.2016 in Petition No. 401/GT/2014 while approving the tariff of this generating station for the period from 1.4.2014 upto 31.3.2019 had observed as under:*
>
> > *"The petitioner has set up the generating station at the premises where the SUGEN power plant (1147.5 MW) of the petitioner is located….*
>
> *9. Thus, in the order dated 18.8.2016 itself, the Commission has taken note of the fact that this generating station has been set up on the same land where the SUGEN plant (SUGEN 10-30) exists and is the expansion project of the existing SUGEN plant. Being a brownfield expansion project of the existing SUGEN plant and sharing common assets, the termination of the PPA executed by the Petitioner with MPPMCL through PTC does not reduce the character of the generating station to an intra-State generating station. It is pertinent to mention that similar issue were raised by some of the parties, including the objector UWA,*

before the Gujarat Electricity Regulatory Commission in Petition No. 1322/2013 filed by the Petitioner seeking adoption of the tariff determined by this Commission in respect of this generating station for sourcing of 278 MW power at regulated tariff on long term basis for its Ahmedabad, Gandhinagar and Surat license areas. GERC by its order dated 19.6.2019 has held as under:

"16.4.3 As regards the land records, we observed that the ownership of the land is in the name of Torrent Power Limited. It is also observed that after setting up three units of SUGEN project the Petitioner has set up UNOSUGEN project on the surplus land and no additional land was acquired for setting up UNOSUGEN plant.

16.4.4. The Petitioner also submitted a layout plan of UNOSUGEN and SUGEN which had been submitted to the concerned government authorities prior to energization of the generating unit/plant. Both the plants have following common facilities:
Xxx

Further, Gujarat Pollution Control Board while allowing UNOSUGEN plant has also mentioned in its "Consent to Establish (NOC)" letter No. GPCB/CCA-SRT-1076/GPCB ID 32601/64048 dated 26th November, 2010 that it is expansion of the SUGEN plant

16.4.8. In view of the above, it is concluded that UNOSUGEN project is set up on the same land where SUGEN project exists UNOSUGEN is the expansion of the existing SUGEN plant….."

10. In the light of the above, we hold that this Commission has the jurisdiction to determine the tariff of the generating station, which is a brownfield expansion project of the existing SUGEN plant in terms of Section 79(1)(b) of the 2003 Act. The petition filed by the Petitioner before this Commission for truing-up of tariff in terms of the 2014 Tariff Regulations is, therefore, maintainable. Accordingly, we proceed to true-up the tariff of the generating station for the period 2014-19 based on the submission of the parties and the documents available on record."

This Petition is therefore maintainable. Accordingly, we proceed to determine the tariff of the generating station for the period 2019-24 as stated in the subsequent paragraphs.

Capital Cost

8. Clause (3) of Regulation 19 of the 2019 Regulations provides as under:

"The Capital cost of an existing project shall include the following:

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries."

9. The annual fixed charges claimed by the Petitioner is based on opening capital cost of Rs.180226.92 lakh as on 1.4.2019, as against the closing capital cost of Rs.180146.83 lakh (as on 31.3.2019) approved by the Commission vide order dated 20.7.2020. The Petitioner has also furnished the value of capital cost and the liabilities as on 1.4.2019 as per books in Form-L. These details of liabilities and capital cost have been reconciled with the information available with the Commission as under:

(₹ in lakh)

	As per Form-L	**As per records of Commission**	**Difference**
Capital cost as on 1.4.2019 as per books	186483.57	186483.57	0.00
Liabilities included in the above	120.54	271.02	(-) 150.48

10. It is observed from the above that there is no variation in the capital cost. However, there is gap of (-) Rs.150.48 lakh pertaining to liabilities as per Form-L and the records available with Commission. This variation is on account of non-consideration of un-discharged liabilities of Rs.112.76 lakh in Form-L pertaining to project liabilities booked with SUGEN plant of the Petitioner and the balance liability of Rs.37.72 lakh corresponding to the additional capital expenditure during 2017-18. After considering this reconciliation, there is no variation pertaining to liabilities as per Form-L and the records available with Commission. Further, the entire liability of Rs.271.02 lakh

corresponds to the approved capital cost of Rs.180146.83 lakh (on cash basis) as on 31.3.2019. Accordingly, the capital cost as on 1.4.2019, after removal of un-discharged liabilities works out to ₹180146.83 lakh, on cash basis.

Additional Capital Expenditure

11. It is observed that the Petitioner has claimed projected additional capital expenditure of Rs. 120.54 lakh towards discharge of liabilities and Rs.7.02 lakh towards capital work in Progress, which includes office equipment cost & software cost for the year 2019-20. No additional capital expenditure has been claimed by the Petitioner for the period from 2020-21 to 2023-24. It is noticed that the Petitioner has not furnished any justification for the additional capital expenditure towards Capital Work in Progress claimed during 2019-20 and has also not indicated the relevant provision of the regulation under which the said expenditure has been claimed. In view of this, the projected additional capital expenditure of Rs. 7.02 lakh claimed for the year 2019-20 has not been allowed. The Petitioner is however granted liberty to claim the said expenditure at the time of truing-up of tariff, subject to the Petitioner furnishing detailed justification along with the provision of the regulation under which the expenditure has been claimed. As regards discharge of liabilities, it is observed that, out of the balance un-discharged liabilities of Rs.271.02 lakh as on 1.4.2019, the Petitioner has claimed discharge of liabilities for Rs.120.54 during 2019-20, on projected basis. This has been allowed in terms of Regulation 25(1)(f) of the 2019 Tariff Regulations. Accordingly, the additional capital expenditure allowed for the purpose of tariff for 2019-24 period is summarised as under:

(₹ in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Additional Capital Expenditure	0.00	0.00	0.00	0.00	0.00
Less: De-capitalization	0.00	0.00	0.00	0.00	0.00
Add: Discharges of liabilities *(against allowed assets / works)*	120.54	0.00	0.00	0.00	0.00
Net additional capital expenditure allowed	**120.54**	**0.00**	**0.00**	**0.00**	**0.00**

12. Based on the above, the capital cost approved for the purpose of tariff for the 2019-24 period is as under:

(₹ in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	180146.83	180267.37	180267.37	180267.37	180267.37
Add: Admitted additional capital expenditure	120.54	0.00	0.00	0.00	0.00
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

Debt–Equity Ratio

13. Regulation 18 of the 2019 Tariff Regulations provides as under:

"(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 approval of the competent authority

in other cases regarding 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 case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 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.

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.

Return on Equity

15. Regulation 30 of the 2019 Tariff Regulations provides as under:

"(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, 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:

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

(i) In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

(ii) in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

(iii) in case of a thermal generating station, with effect from 1.4.2020:

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.

16. Regulation 31 of the 2019 Tariff Regulations provides as under:

***Tax on Return on Equity**:*

(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.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

Illustration-

(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:
Rate of return on equity = 15.50/(1-0.2155) = 19.758%

(ii) In case of a generating company or the transmission licensee paying normal corporate tax including surcharge and cess:

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
(b) Estimated Advance Tax for the year on above is Rs 240 crore;
(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
(d) Rate of return on equity = 15.50/ (1-0.24) = 20.395%.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers, as the case may be, on year to year basis.

17. The Petitioner has claimed tariff considering 19.758% (i.e. base rate of 15.50% and MAT rate of 21.549%) as the rate of Return on Equity (ROE) for the period from 1.4.2019 to 31.3.2024. However, the MAT rate as applicable for 2019-20 is 17.472% (MAT Rate of 15% + Surcharge of 12% + HEC of 4%) and the same has been considered for the period from 1.4.2019 to 31.3.2024. Accordingly, considering the base rate of ROE of 15.5% and MAT rate of 17.472%, the rate of ROE considered for the

period 1.4.2019 to 31.3.2024 works out to 18.782%. This is subject to truing-up. Accordingly, ROE has been worked out as under:

(₹ in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Notional Equity- Opening	53317.50	53353.66	53353.66	53353.66	53353.66
Addition of Equity due to additional capital expenditure	36.16	0.00	0.00	0.00	0.00
Normative Equity - Closing	53353.66	53353.66	53353.66	53353.66	53353.66
Average Normative Equity	53335.58	53353.66	53353.66	53353.66	53353.66
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for respective years	17.472%	17.472%	17.472%	17.472%	17.472%
Rate of Return on Equity (Pre Tax)	18.782%	18.782%	18.782%	18.782%	18.782%
Return on Equity (Pre Tax)-(annualized)	**10017.49**	**10020.89**	**10020.89**	**10020.89**	**10020.89**

Interest on loan

18. Regulation 32 of the 2019 Tariff Regulations provides as under:

"32. Interest on loan capital:

(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.

(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 upto the date of de-capitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

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

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

19. Interest on loan has been worked out as mentioned below:

i) As stated above, the gross normative loan amounting to Rs.126829.33 lakh has been considered as on 1.4.2019.

ii) Cumulative repayment amounting to Rs.52470.48 lakh as on 31.3.2019 as considered in order dated 20.7.2020 has been considered as on 1.4.2019.

iii) Accordingly, the net normative opening loan as on 1.4.2019 works out to Rs.74358.85 lakh.

iv) Addition to normative loan on account of the additional capital expenditure approved above has been considered.

v) Depreciation allowed has been considered as repayment of normative loan during the respective year of the period 2019-24.

vi) The Petitioner has claimed interest on loan by applying the weighted average rate of interest of 9.10% for the period 2019-24. This has been considered for the purpose of tariff.

20. Necessary calculations for Interest on loan are as under:

(Rs. in lakh)

	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Gross opening loan	126829.33	126913.71	126913.71	126913.71	126913.71
Cumulative repayment of loan upto previous year / period	52470.48	61666.92	70866.45	80065.97	89265.49
Net Loan Opening	74358.85	65246.78	56047.26	46847.74	37648.21
Addition due to additional capital expenditure	84.38	0.00	0.00	0.00	0.00
Repayment of loan during the year	9196.45	9199.52	9199.52	9199.52	9199.52
Less: Repayment adjustment on account of de-capitalization	0.00	0.00	0.00	0.00	0.00
Net Repayment of loan during the year	9196.45	9199.52	9199.52	9199.52	9199.52
Net Loan Closing	65246.78	56047.26	46847.74	37648.21	28448.69
Average Loan	69802.82	60647.02	51447.50	42247.98	33048.45

Weighted Average Rate of Interest on Loan	9.1000%	9.1000%	9.1000%	9.1000%	9.1000%
Interest on Loan	**6352.06**	**5518.88**	**4681.72**	**3844.57**	**3007.41**

Depreciation

21. Regulation 33 of the 2019 Tariff Regulations provides as under:

"(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:

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of a transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:

Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or the extended life.

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the generating station and transmission system:

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.

(6) *In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.*

(7) *The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.*

(8) *In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services."*

22. Accordingly, the cumulative depreciation amounting to Rs.52470.48 lakh as on 31.3.2019 as considered in Commission's order dated 20.7.2020 in Petition No. 272/GT/2019 has been retained for the purpose of tariff. Further, the value of freehold land included in the average capital cost is 'nil'. Accordingly, the balance depreciable value (before providing depreciation) for the year 2019-20 works out to ₹109716.05 lakh. Since as on 1.4.2019, the used life of the station (i.e. 5.99 years) is less than 12 years from the Effective Station COD of 31.7.2009, the depreciation shall be calculated applying weighted average rate of depreciation for the tariff period 2019-24. The Petitioner has claimed depreciation considering the Weighted Average Rate of Depreciation (WAROD) of 5.097% for the period 2019-24. However, considering the asset-wise break- up of the gross block as on 1.4.2019 as submitted in Form-11 along with rates of depreciation as specified in Appendix-I to the 2019 Tariff Regulations, the WAROD works out to 5.1033%. This has been considered for the purpose of tariff for the period 2019-24. Necessary calculations in support of depreciation are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Average Capital Cost	180207.10	180267.37	180267.37	180267.37	180267.37
Freehold land included above	0.00	0.00	0.00	0.00	0.00
Value of IT equipment & Software included above	1.37	1.37	1.37	1.37	1.37
Depreciable value @ 90%	162186.53	162240.77	162240.77	162240.77	162240.77
Remaining useful life at the beginning of the year	19.01	18.01	17.01	16.01	15.01
Balance depreciable value	109716.05	100573.85	91374.32	82174.80	72975.28
Depreciation (annualized)	**9196.45**	**9199.52**	**9199.52**	**9199.52**	**9199.52**
Cumulative depreciation at the end	61666.92	70866.45	80065.97	89265.49	98465.01
Less: Cumulative depreciation adjustment on account of de-capitalization	0.00	0.00	0.00	0.00	0.00
Net Cumulative depreciation at the end of the year	**61666.92**	**70866.45**	**80065.97**	**89265.491**	**98465.013**

Operation and Maintenance Expenses

23. Regulation 35(1)(3) of 2019 Tariff Regulations provides for the O&M expense norms for Open Cycle Gas Turbine/ Combined Cycle generating stations. Accordingly, the O&M expense norms applicable for this generating station of the Petitioner is as under:

(Rs in lakh/MW)

2019-20	2020-21	2021-22	2022-23	2023-24
26.34	27.27	28.23	29.22	30.24

24. The O&M expenses claimed by the Petitioner in terms of the above Regulation is as under:

(Rs in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
10075.05	10430.78	10797.98	11176.65	11566.80

25. The annual O&M expenses claimed by the Petitioner are in order and hence

allowed.

Water Charges

26. Regulation 35(1)(6) of the 2019 Tariff Regulations provides as under:

"(6) The Water Charges, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately after prudence check:

Provided that water charges shall be allowed based on water consumption depending upon type of plant and type of cooling water system, subject to prudence check. The details regarding the same shall be furnished along with the petition;

Provided further that the generating station shall submit the assessment of the security requirement and estimated expenses;

Provided also that the generating station shall submit the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance as per Regulation 17 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 or Special Allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization."

27. The Petitioner in Form-19 of the petition has claimed water charges as follows:

Sl. No.		**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
(a)	Normative water consumption @ of 85% PLF (M^3)	2855898	2848095	2848095	2848095	2855898
(b)	Rate (as per Govt. notification) (Rs. /M^3)	28.53	31.38	34.52	37.97	41.77
(c)	Water Charges *(Rs in lakh)* **(c)=(a)x(b)/10^5**	814.79	893.73	983.16	1081.42	1192.91

28. It is observed that the normative consumption of water has been calculated by the Petitioner by considering specific water consumption of 1 M^3 per MWh of the electricity produced. As such, the same translates to 2855898 M^3 (382.5x8784x0.85×1) and 2848095 M^3 (382.5x8760x0.85×1) for leap year and non-leap year respectively for the plant capacity of 382.5 MW and with 85% normative availability. It is observed from the MoEF&CC notification dated 28.6.2018, that the norm for specific water

consumption is specified as 3.5 M^3/MWh for thermal power stations. However, the Petitioner has considered water consumption of 1 M^3/MWh i.e. less than one-third of the above said MoEF&CC norm. Accordingly, the normative consumption of water as calculated by the Petitioner is allowed.

29. As regards the rate of water charges claimed by the Petitioner in terms of the State Govt. notification, it is observed that the actual water charge rate of Rs.25.94/ M^3 paid by the Petitioner to the State Government agency during the year 2018-19 has been escalated @10% per annum. The same has been verified from the details of the actual water expenses incurred by the Petitioner for the tariff period 2014-19. The Petitioner, in compliance with the directions of the Commission, had, vide affidavit dated 14.11.2019 furnished the audited details of the actual water charges in respect of this generating station for the 2014-19 tariff period in Petition No. 272/GT/2019 as under:

(Rs.in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
-	190.63	18.41	9.03	8.40

30. The actual annual water charges incurred as above is based on the rate in Rs./M^3 charged by the State Government agency and the actual water (M^3) used for the generating station during the year, which further depends upon the PLF of the generating station. It is observed from the audited details of the water charges as furnished by the Petitioner that the rate of Water charge (Rs./M^3) had increased from Rs.17.72/M^3 in 2014-15 to Rs.25.94/M^3 in 2018-19, thereby representing an annual increase of 10%. The water consumed by the generating station during the year 2018-19 was 32387 M^3, which indicates that the PLF of the generating station was low as compared to the normative PLF of 85%.

31. From the above deliberations, it can be concluded that the projected water charges claimed by the Petitioner, based on the specific water consumption of 1 M^3/MWh, the normative availability of 85% and the escalation of rate of water charges for 2018-19 by 10% per annum is in order. Accordingly, the claim for water charges is provisionally allowed as under:

(Rs.in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
814.79	893.73	983.16	1081.42	1192.91

32. The Water charges allowed as above is subject to truing-up in terms of Regulation 13 of the 2019 Tariff Regulations, based on the actual water consumption and the actual water charges paid by the Petitioner to the State Government agency.

Security Expenses

33. The Petitioner has not claimed any Security Expenses for the period 2019-24, in terms of Regulation 35 (1) (6) of 2019 Tariff Regulations. The Petitioner is, however, granted liberty to claim the Security Expenses, if any, incurred along with relevant details including the audited statement of the actual security expenses incurred for this generating station, at the time of truing-up of tariff.

34. Based on the above discussion, the total O&M expenses, including water charges allowed for the purpose of tariff is as under:

(Rs in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses allowed	10075.05	10430.78	10797.98	11176.65	11566.80
Water Expenses allowed	814.79	893.73	983.16	1081.42	1192.91
Total O&M expenses allowed	**10889.84**	**11324.51**	**11781.14**	**12258.07**	**12759.71**

Operational Norms

35. The following norms of operation have been considered by the Petitioner:

Normative Annual Plant Availability Factor (NAPAF) (%)	85
Gross Station Heat Rate for Combined cycle (GSHR) (kcal/kWh)	1853.88
Auxiliary Power Consumption (Combined cycle) %	2.75

The operational norms considered by the Petitioner are in line with Regulation 49 of the 2019 Tariff Regulations and hence allowed.

Interest on Working Capital

36. Regulation 34 (1) (b) of 2019 Tariff Regulations provides the following norms for Interest on working capital for Open-cycle Gas Turbine/Combined Cycle thermal generating stations:

"(i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;

(ii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;

(iii) Maintenance spares @ 30% of operation and maintenance expenses including water charges and security expenses;

(iv) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and

(v) Operation and maintenance expenses, including water charges and security expenses, for one month.

37. Clauses (2), (3) and (4) of Regulation 34 of the 2019 Tariff Regulations provides as under:

"(2) 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:

Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) and gross calorific value of the fuel as per actual weighted average for three months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined.

(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.

(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency."

Fuel Components in working capital

(a) Fuel cost

38. The Petitioner has submitted that the fuel cost for 30 days corresponding to the NAPAF of 85% is Rs.12010.55 lakh for each year of the 2014-19 period. The Petitioner has also submitted that domestic fuel was not allocated to the generating station and the station was not in operation during the period from October 2018 to December 2018. It has submitted that in the absence of allocation of domestic fuel, there is no data for landed cost of fuel for the period from October 2018 to December 2018. Therefore, the Petitioner has submitted that it has considered the actual landed cost of imported LNG procured and consumed at its SUGEN plant for Rs. 697.47 per MMBTU.

39. As stated, the generating station is a brownfield expansion project of the existing SUGEN plant (SUGEN 10-30). From the fuel details furnished by the Petitioner in Petition No. 259/GT/2019 (pertaining to approval of tariff of SUGEN plant for 2019-24),

it is observed that the Petitioner had arranged imported LNG since domestic gas was not available as per its requirement. The Petitioner's SUGEN generating station has consumed three kinds of fuel during the period from October 2018 to December 2018 namely (i) domestic gas, (ii) imported gas supplied by the IOCL and (iii) imported LNG arranged by the Petitioner along with storage capacity and regasification facility with M/s Petronet. The cheapest amongst the three is domestic gas, but its availability in energy terms was to the tune of only 4% during the said three months. The imported gas procured by the Petitioner from IOCL is the costliest i.e. @ Rs.962.71/MMBTU (exclusive of transportation cost) and its consumption was to the tune of 28% in energy terms. The cheapest among the three kinds of fuel, after including the re-gasification cost is the imported LNG procured by Petitioner, with consumption being 68% in energy terms, with a cost of Rs.697.47/MMBTU (i.e. Rs.670.36/MMBTU purchase cost *plus* Rs.27.11/MMBTU transportation cost through pipeline). In consideration of the above and in absence of any procurement/ consumption of fuel during the period from October 2018 to December 2018 by this generating station, we allow the imported LNG rate of Rs. 697.47/MMBTU procured for SUGEN plant by the Petitioner based on the fuel procured at SUGEN plant, for calculation of the fuel component in interest on working capital for this generating station. Accordingly, based on the normative operating parameters of Station Heat Rate and the weighted average rate of fuel of Rs. 697.47 per MMBTU, the fuel cost for 30 days (corresponding to NAPAF of 85%) as claimed by the Petitioner for Rs 12010.55 lakh for each year of the 2014-19 period is allowed for the computation of working capital.

(b) Liquid Fuel Stock

40. The Petitioner has submitted that Regulation 34(b)(ii) of the 2019 Tariff Regulations allows liquid fuel stock for 15 days corresponding to NAPAF. Accordingly, the liquid fuel stock (imported LNG stock of 15 days) corresponding to NAPAF, as claimed by the Petitioner is Rs. 6005.27 lakh for each year of the 2019-24 period. Considering the fact that the Petitioner has opted for the cheapest fuel (imported LNG) at Rs.697.47/MMBTU (as stated in the para 39 above), the cost of liquid fuel for 15 days, as claimed by the Petitioner, based on the normative operational parameters is allowed (after correction of minor rounding off errors) for the computation of interest on working capital.

(c) Maintenance spares

41. The cost of maintenance spares as claimed by the Petitioner is as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
3266.95	3397.35	3534.34	3677.42	3827.91

42. The cost of maintenance spares claimed by the Petitioner as above is in order and is, therefore, allowed for the computation of working capital.

(d) Receivables

43. The receivable component of working capital, comprising of capacity charges and energy charges (for 45 days) as claimed by the Petitioner is as under:

Rs in lakh

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable (energy) Charges	18016.42	18016.42	18016.42	18016.42	18016.42
Fixed Charges	5212.57	5180.70	5135.79	5093.55	5040.52
	23228.99	**23197.12**	**23152.21**	**23109.97**	**23056.94**

44. Receivables have been worked out on the basis of 45 days of fixed charges and energy charges as shown below:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable (energy) Charges	18016.42	18016.42	18016.42	18016.42	18016.42
Fixed Charges	5154.32	5076.60	5031.49	4989.03	4936.07
Total	**23170.74**	**23093.03**	**23047.91**	**23005.45**	**22952.49**

(e) O&M Expenses (one month)

45. The O&M expenses (for one month) claimed by the Petitioner is as under:

(Rs in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
907.49	943.71	981.76	1021.51	1063.31

The claim of the Petitioner is in order and, therefore, allowed.

(f) Rate of Interest on working capital

46. In line with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital shall be considered as 12.05% (i.e. 1 (one) year SBI MCLR of 8.55% as on 01.04.2019 + 350 bps) for the 2019-24 period. Further, the aforesaid rate of interest is subject to truing up based on 1 (one) year SBI MCLR as on 1st April of the respective financial years. The tariff of this generating station is being determined in the year 2020-21 and one year SBI MCLR as on 1.4.2020 (i.e. 7.75%) is available. Hence, in order to safeguard against additional interest burden due to excess/under recovery or tariff, we deem it prudent to consider the rate of interest on working capital for the period from 1.4.2020 to 31.3.2024 as 11.25% (i.e. 1 year SBI MCLR of 7.75% as on 1.4.2020 + 350 bps). Accordingly, the interest on working capital has been considered as 12.05% for 2019-20 and 11.25% for the period from 2020-21 to 2023-24. Accordingly, interest on working capital is computed as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of fuel (30 days)	12010.55	12010.55	12010.55	12010.55	12010.55
Liquid fuel stock (15 days)	6005.28	6005.28	6005.28	6005.28	6005.28
Maintenance Spares @ 30% of O&M expenses	3266.95	3397.35	3534.34	3677.42	3827.91
Receivables (45 days)	23170.74	23093.03	23047.91	23005.45	22952.49
O&M expenses (one month)	907.49	943.71	981.76	1021.51	1063.31
Total Working Capital	**45361.01**	**45449.91**	**45579.84**	**45720.20**	**45859.54**
Rate of Interest	12.05%	11.25%	11.25%	11.25%	11.25%
Interest on Working Capital	**5466.00**	**5113.12**	**5127.73**	**5143.52**	**5159.20**

Annual Fixed Charges

47. Accordingly, the annual fixed charges approved for the generating station for the period 2019-24 is summarized as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	9196.45	9199.52	9199.52	9199.52	9199.52
Interest on Loan	6352.06	5518.88	4681.72	3844.57	3007.41
Return on Equity	10017.49	10020.89	10020.89	10020.89	10020.89
Interest on Working Capital	5466.00	5113.12	5127.73	5143.52	5159.20
O&M Expenses	10889.84	11324.51	11781.14	12258.07	12759.71
Total	**41921.83**	**41176.91**	**40811.00**	**40466.57**	**40146.73**

Note: (1) All figures are on annualised basis. (2) All figures under each head have been rounded. The figure in total column in each year is also rounded. As such the sum of individual items may not be equal to the arithmetic total of the column.

48. The annual fixed charges determined as above are subject to truing-up in terms of Regulation 13 of the 2019 Tariff Regulations.

Energy Charge Rate (ECR)

49. The Petitioner has claimed ECR of Rs.5.276/kWh based on the operational norms and the weighted average rate and GCV of fuel i.e. Rs.697.47/MMBTU considered for the three months of October, 2018 to December, 2018. ECR has been calculated in three decimal places as Rs.5.276/kWh and allowed as follows:

Landed Price of Gas (Rs./MMBTU) as considered in para 39 above	697.47
Landed Price of Gas (Rs./kCal)	0.002768
Normative Gross Station Heat Rate (kCal/kWh)	1853.88
Normative Auxiliary Energy Consumption	2.75%
Energy Charge Rate (Rs. per kWh)	5.276

Filing Fee and Publication Expenses

50. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

51. Petition No. 268/GT/2019 is disposed of in terms of the above.

Sd/-	*Sd/-*
(I.S.Jha)	**(P.K.Pujari)**
Member	**Chairperson**