

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 236/GT/2020

Coram:

**Shri P.K. Pujari, Chairperson
Shri I.S. Jha, Member
Shri Pravas Kumar Singh, Member**

Date of Order: 10th March, 2022

In the matter of

Petition for determination of generation tariff of 1200 MW Dgen Mega Power Project of Torrent Power Limited for the 2019-24 tariff period.

AND

In the matter of

Torrent Power Limited,
Torrent House, Off Ashram Road,
Near Income Tax Circle,
Ahmedabad- 380009

.....Petitioner

Vs

1. Torrent Power Limited,
Dahej Distribution, Plot No. Z/21,
Dahej SEZ Limited

2. Torrent Power Limited,
(Unit: Ahmedabad Distribution)
Electricity House, Lal Darwaja,
Ahmedabad- 380009

3. PTC India Limited,
2nd Floor, NBCC Tower, Bhikaji Cama Place,
New Delhi- 110066

.....Respondents

Parties Present:

Ms. Deepa Chawan, Advocate, TPL
Ms. Reshmarani Nathani, Advocate, TPL
Ms. Ruchi Patil, Advocate, TPL
Shri Chetan Bundela, TPL
Shri Naresh Joshi, TPL
Shri Jignesh Langalia, TPL
Shri Vihar Patel, TPL
Shri Parth Desai, TPL
Shri Ravi Kishore, Advocate, PTC



ORDER

The petition has been filed by Torrent Power Limited for determination of tariff of Dgen Mega Power Project (1200 MW) ('in short 'the generating station') for the 2019-24 tariff period, in accordance with the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2019 (hereinafter referred to as 'the 2019 Tariff Regulations').

Background

2. The Commission vide its order dated 31.3.2017 in Petition No.281/GT/2015 had determined the annual fixed charges for the generating station for the 2014-19 tariff period. Thereafter, by order dated 8.3.2022 in Petition No. 278/GT/2020, the tariff of the generating station for the 2014-19 tariff period was trued-up in terms of Regulation 8 of the 2014 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges approved by order dated 8.3.2022 in Petition No.278/GT/2020 is as under:

Capital Cost allowed

(Rs. in lakh)

	2014-15			2015-16	2016-17	2017-18	2018-19
	7.9.2014 to 11.9.2014	12.9.2014 to 12.11.2014	13.11.2014 to 31.3.2015				
Opening Capital Cost	275429.55	380863.68	507469.76	518929.01	526053.90	533245.72	533092.07
Add: Additional Capital Expenditure	0.00	0.00	11459.25	7124.89	7191.82	(-) 153.65	(-) 37.70
Closing Capital Cost	275429.55	380863.68	518929.01	526053.90	533245.72	533092.07	533054.37

Annual Fixed Charges allowed



(Rs. in lakh)

	2014-15			2015-16	2016-17	2017-18	2018-19
	7.9.2014 to 11.9.2014	12.9.2014 to 12.11.2014	13.11.2014 to 31.3.2015				
Depreciation	13995.15	19483.00	26346.73	26842.54	27174.51	27376.88	27370.87
Interest on Loan	24449.96	33618.31	44565.07	41777.82	35704.73	24968.39	22906.56
Return on Equity	16203.52	22406.21	30191.52	30887.08	31310.25	31518.28	31597.38
Interest on Working Capital	11116.96	12404.01	13800.09	13954.12	13982.17	13933.76	14088.80
O&M Expenses	10623.09	21246.17	31869.26	34161.96	36361.37	38853.19	41496.85
Total	76388.67	109157.70	146772.66	147623.53	144533.02	136650.50	137460.45

3. The Petitioner has filed the present petition for approval of tariff of the generating station for the 2019-24 tariff period in accordance with the 2019 Tariff Regulations. The capital cost and the annual fixed charges claimed in the present petition are as under:

Capital Cost claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Capital Cost	568982.27	569191.19	569191.19	569191.19	569191.19
Add: Addition during the year	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year	208.92	0.00	0.00	0.00	0.00
Closing Capital Cost	569191.19	569191.19	569191.19	569191.19	569191.19
Average Capital Cost	569086.73	569191.19	569191.19	569191.19	569191.19

Annual Fixed Charges claimed

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	28983.88	28989.21	28989.21	28989.21	28989.21
Interest on Loan	23297.65	20666.53	18028.51	15390.50	12752.48
Return on Equity	32065.76	32071.65	32071.65	32071.65	32071.65
Interest on Working Capital	17221.53	17279.32	17335.81	17396.32	17456.53
O&M Expenses *	37015.18	38493.16	40046.76	41665.28	43368.25
Total	138584.00	137499.86	136471.94	135512.95	134638.10

* inclusive of water charges, security expenses and O&M expenses towards DGEN-Navsari Transmission Line

Capital cost

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

“(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 modernization 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.”*

5. The Petitioner has claimed opening capital cost of Rs.568982.27 lakh as on 1.4.2019. The Commission vide its order dated 8.3.2022 in Petition No. 278/GT/2020 had approved the closing capital cost of Rs.533054.37 lakh as on 31.3.2019. Accordingly, in terms of Regulation 19(3)(a) of the 2019 Tariff Regulations, the closing capital cost of Rs.533054.37 lakh has been considered as the opening capital cost, as on 1.4.2019, for the purpose of tariff.

Additional Capital Expenditure

6. The Petitioner, in the present petition, has not claimed any additional capital expenditure for the 2019-24 tariff period. In view of this, no additional capital expenditure has been considered in this order for the 2019-24 tariff period. The Petitioner has, however, claimed discharges of the undischarged liability amounting to Rs.208.92 lakh in 2019-20. Since un-discharged liabilities corresponding to the capital cost allowed as on 31.3.2019 has been considered as 'nil' in order dated 8.3.2022 in Petition No. 278/GT/2020, no discharges have been considered for the purpose of tariff, in the 2019-24 tariff period.



Capital cost allowed for the 2019-24 tariff period

7. Based on the above, the capital cost allowed for the 2019-24 tariff period is as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening capital cost	533054.37	533054.37	533054.37	533054.37	533054.37
Add: Addition during the year	0.00	0.00	0.00	0.00	0.00
Less: Decapitalization during the year	0.00	0.00	0.00	0.00	0.00
Add: Discharges during the year	0.00	0.00	0.00	0.00	0.00
Closing capital cost	533054.37	533054.37	533054.37	533054.37	533054.37

Debt–Equity ratio

8. 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 modernization expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

9. The gross normative loan and normative equity amounting to Rs.373138.06 lakh and Rs.159916.31 lakh, respectively, as on 31.3.2019, was considered in order dated 8.3.2022 in Petition No. 278/GT/2020. Accordingly, in terms of Regulation 18 of the 2019 Tariff Regulations, the gross normative loan and normative equity amounting to Rs.373138.06 lakh and Rs.159916.31 lakh, has been considered as on 1.4.2019.

Capital Cost	As on 1.4.2019 (Rs in lakh)	(%)	Additional capital expenditure from 1.4.2019 to 31.3.2024	(%)	As on 31.3.2024 (Rs in lakh)	(%)
Debt	373138.06	70.00%	0.00	0.00	373138.06	70.00%
Equity	159916.31	30.00%	0.00	0.00	159916.31	30.00%
Total	533054.37	100.00%	0.00	0.00	533054.37	100.00%

Return on Equity

10. 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.

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

“31. 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.”

12. The Petitioner has considered the rate of ROE as 18.782% (i.e. base rate of 15.50% and MAT rate of 17.472%) for the 2019-24 tariff period and the same has been considered for the purpose of tariff. This is subject to truing up. Accordingly, ROE has been worked out as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Normative Equity- Opening	159916.31	159916.31	159916.31	159916.31	159916.31
Addition of equity due to additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Normative Equity – Closing	159916.31	159916.31	159916.31	159916.31	159916.31
Average Normative Equity	159916.31	159916.31	159916.31	159916.31	159916.31
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)	30035.48	30035.48	30035.48	30035.48	30035.48

Interest on loan

13. Regulation 32 of the 2019 Tariff Regulations provide 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.”

14. Interest on loan has been worked out as under:

(i) Gross normative loan amounting to Rs.373138.06 lakh has been considered as on 1.4.2019;

(ii) Cumulative repayment amounting to Rs.122282.02 lakh as on 31.3.2019 as considered in order dated 8.3.2022 in Petition No. 278/GT/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.250856.03 lakh;

(iv) Depreciation allowed has been considered as repayment of normative loan during the respective year of the 2019-24 tariff period; and

(v) The Petitioner has claimed interest on loan by applying the weighted average rate of interest (WAROI) of 9.10% for the 2019-24 tariff period and the same has been considered for the purpose of tariff.

15. Necessary calculation for interest on loan is shown below:

(Rs. in lakh)

Sl. No.		2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	373138.06	373138.06	373138.06	373138.06	373138.06
B	Cumulative Repayment	122282.02	149651.78	177021.54	204391.30	231761.05
C	Net Loan - Opening (A-B)	250856.03	223486.27	196116.52	168746.76	141377.00
D	Addition due to additional capital expenditure	0.00	0.00	0.00	0.00	0.00
E	Repayment of loan during the	27369.76	27369.76	27369.76	27369.76	27369.76



	year (=Depreciation allowed)					
F	Net Loan Closing (C+D-E)	223486.27	196116.52	168746.76	141377.00	114007.24
G	Average Loan [(C+F)/2]	237171.15	209801.40	182431.64	155061.88	127692.12
H	Weighted Average Rate of Interest	9.1000%	9.1000%	9.1000%	9.1000%	9.1000%
I	Interest on Loan (G x H)	21582.57	19091.93	16601.28	14110.63	11619.98

Depreciation

16. Regulation 33 of the 2019 Tariff Regulations provides that:

“33. Depreciation:

(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 up to 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.”*

17. Accordingly, the cumulative depreciation amounting to Rs.122282.02 lakh, as on 31.3.2019, as considered in order dated 8.3.2022 in Petition No. 278/GT/2020 has been retained for the purpose of tariff. Further, the value of freehold land and IT equipment, including software, included in the average capital cost, has been adjusted while calculating depreciable value for the purpose of tariff. Accordingly, the balance depreciable value (before providing depreciation) for the year 2019-20, works out to Rs.356845.46 lakh. Since as on 1.4.2019, the used life of the generating station (i.e. 4.50 years) is less than 12 years from the Effective Station COD of 1.10.2014, depreciation shall be calculated by applying weighted average rate of depreciation (WAROD) for the 2019-24 tariff period. The Petitioner has claimed depreciation considering WAROD of 5.0995% for the 2019-24 tariff period. However, considering the asset-wise break up of 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, WAROD works out to 5.1345%, the same has been considered, subject to truing-up, for the purpose of tariff for the 2019-24 tariff period. Necessary calculations in support of depreciation are as under:



(Rs. in lakh)

Sl. No.		2019-20	2020-21	2021-22	2022-23	2023-24
A	Average Capital Cost	533054.37	533054.37	533054.37	533054.37	533054.37
B	Freehold land included above	719.67	719.67	719.67	719.67	719.67
C	Value of IT equipment & Software included above	262.59	262.59	262.59	262.59	262.59
D	Depreciable value @ 90% [(A-B-C) x 90% + C]	479127.49	479127.49	479127.49	479127.49	479127.49
E	Weighted Average Rate of Depreciation	5.1345%	5.1345%	5.1345%	5.1345%	5.1345%
F	Remaining useful life at the beginning of the year	20.50	19.50	18.50	17.50	16.50
G	Remaining depreciable value (D – Previous year's I)	356845.46	329475.70	302105.95	274736.19	247366.43
H	Depreciation (annualized) (A x E)	27369.76	27369.76	27369.76	27369.76	27369.76
I	Cumulative depreciation at the end (Previous year's I + H)	149651.78	177021.54	204391.30	231761.05	259130.81

Operational Norms

18. The following operational norms have been considered by the Petitioner in Form-3 of the petition:

Normative Annual Plant Availability Factor (NAPAF) (%)	85
Heat Rate (kcal/kwh)	1831.63
Auxiliary Power Consumption (%)	2.75

19. As the operational norms considered by the Petitioner are in line with the provisions of Regulation 49 of the 2019 Tariff Regulations, the same are allowed.

O&M Expenses

20. Regulation 35(1)(3) of the 2019 Tariff Regulations provides the normative O&M expenses as under:



(Rs. in lakh/ MW)

Year	Gas Turbine/Combined Cycle generating stations other than small gas turbine power generating stations	Small gas turbine Power generating stations	Agartala GPS	Advance F Class Machines
2019-20	17.58	36.21	42.85	26.34
2020-21	18.20	37.48	44.35	27.27
2021-22	18.84	38.80	45.91	28.23
2022-23	19.50	40.16	47.52	29.22
2023-24	20.19	41.57	49.19	30.24

21. The Petitioner has claimed total O&M expenses for 'Advance F Class Machines' as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
O & M expenses claimed under Regulation 35 (1) (3)	31608.00	32724.00	33876.00	35064.00	36288.00
Water charges under Regulation 35(1)(6)	5127.62	5472.10	5854.83	6264.97	6721.95
Security Expenses under Regulation 35(1)(6)	118.35	130.18	143.20	157.52	173.27
O&M expenses with reference to dedicated Dgen-Navsari Transmission line under Regulation 35 (3)	161.21	166.88	172.74	178.79	185.03
Total O&M Expenses claimed (Form-1)	37015.18	38493.16	40046.76	41665.28	43368.25

22. The normative O&M expenses claimed by the Petitioner under Regulation 35(1)(3) of the 2019 Tariff Regulations, as above, is in order and is, therefore, allowed.

Water Charges

23. Regulation 35(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;

XXXX.”

24. The projected water charges claimed by the Petitioner are as under:



<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
5127.62	5472.10	5854.83	6264.97	6721.95

25. In terms of the Regulation 35(1)(6) of the 2019 Tariff Regulations, the details in respect of water charges, such as type of cooling water system, water consumption, rate of water charges, as applicable for the 2019-24 tariff period is required to be furnished by the Petitioner. The Petitioner in Form-19 has furnished the details of water charges as under:

Year	Quantity allocated (MLD)	Normative consumption at 85% PLF	Rate specified (as per Govt. notification or agreement)	Amount claimed (<i>Rs.in lakh</i>)
2019-20	33.6	10572422	48.50	5127.62
2020-21	33.6	10543536	51.90	5472.10
2021-22	33.6	10543536	55.53	5854.83
2022-23	33.6	10543536	59.42	6264.97
2023-24	33.6	10572422	63.58	6721.95

26. It is observed that the Petitioner has claimed projected water charges for the 2019-24 tariff period based on the allocated quantity of water and not on the basis of actual water consumed during the 2014-19 tariff period. We observe from the submissions of Petitioner in Petition No. 278/GT/2020 that Gujarat Industrial Development Corporation (GIDC) has raised water bills based on actual consumption of water for the 2014-19 tariff period. In view of this, the projected water charges claimed by the Petitioner for the 2019-24 tariff period has not been considered on the basis of allocated quantity. It is observed that the Petitioner has furnished invoice for only one month for each year of the 2014-19 period for water charges claimed by GIDC. Based on the invoice submitted by the Petitioner, we had, in order dated 8.3.2022 in Petition No. 278/GT/2020 allowed per month water charges for the 2014-19 period as under:

<i>(Rs.in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
9.26	129.96	13.37	33.19	24.85



27. The monthly average of water charges allowed for the 2014-19 tariff period as above, works out to Rs. 42.13 lakh. Based on the monthly average water charges of Rs.42.13 lakh as worked out, the projected water charges of Rs.505.56 lakh (Rs.42.13 lakh x 12) is allowed for each year of the 2019-24 tariff period, as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
505.56	505.56	505.56	505.56	505.56

28. The water charges allowed as above are subject to revision, based on the actual water charges paid by Petitioner. The Petitioner is, therefore, directed to furnish the actual water charges paid to GIDC, along with auditor certificate at the time of truing up of tariff, including any other relevant information/ justification in support of its claim.

Security Expenses

29. The first proviso to Regulation 35(6) of the 2019 Tariff Regulations provide as under:

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

30. The Security Expenses claimed by the Petitioner are as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
118.35	130.18	143.20	157.52	173.27

31. The Petitioner has submitted that the security expenses claimed is based on the actual expenses incurred for 2018-19 along with escalation of 10% escalation considered in each year of the 2019-24 tariff period. The Petitioner has, however, not furnished the basis for considering the escalation rate of 10% for each year. Considering the fact that security expenses for the generating station is essential, we allow the claim of the Petitioner, with an escalation rate of 4.77% (as considered while framing the 2019 Tariff Regulations) on the security expenses claimed for



2019-20 i.e. Rs.118.35 lakh. In view of the above, the following security expenses are allowed for the 2019-24 tariff period.

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
118.35	124.00	129.91	136.11	142.60

32. The Petitioner is directed to furnish the actual security expenses incurred for the 2019-24 tariff period along with auditor certificate, at the time of truing up of tariff.

Capital spares

33. The Petitioner has not claimed any capital spares during the 2019-24 tariff period in terms of the last proviso to Regulation 35(6) of the 2019 Tariff Regulations. Hence, the same has not been considered in this order. The claim of the Petitioner, if any, at the time of truing up of tariff, shall be considered on merits, after prudence check.

O&M expenses for dedicated DGen-Navsari Transmission line

34. The Petitioner has claimed O&M expenses for dedicated DGen-Navsari Transmission line as under.

Rate per Unit	Item	2019-20	2020-21	2021-22	2022-23	2023-24
400kV gas insulated sub-station (Rs. lakh per bay)	2 Number of Bays	32.15	33.28	34.45	35.66	36.91
Double Circuit (Twin & Triple Conductor) (Rs. lakh per km)	110 km	0.881	0.912	0.944	0.977	1.011

(Rs. in lakh)

Amount	Item	2019-20	2020-21	2021-22	2022-23	2023-24
400kV gas insulated substation	2 Number of Bays	64.30	66.56	68.90	71.32	73.82
Double Circuit (Twin & Triple Conductor)	110 km	96.91	100.32	103.84	107.47	111.21
Total		161.21	166.88	172.74	178.79	185.03

35. Since the O&M expenses claimed for the dedicated DGen-Navsari Transmission line is in accordance with Regulation 35(3) of the 2019 Tariff Regulations, the same are allowed.



Total O&M Expenses allowed

36. Accordingly, the summary of the total O&M expenses claimed by the Petitioner and allowed for the 2019-24 tariff period are as under:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses claimed (a)	31608.00	32724.00	33876.00	35064.00	36288.00
Normative O&M expenses allowed (b)	31608.00	32724.00	33876.00	35064.00	36288.00
Water charges as claimed (c)	5127.62	5472.10	5854.83	6264.97	6721.95
Water charges as allowed (d)	505.56	505.56	505.56	505.56	505.56
Security Expenses claimed (e)	118.35	130.18	143.20	157.52	173.27
Security Expenses allowed (f)	118.35	124.00	129.91	136.11	142.60
Normative O&M expenses claimed for Transmission line under Regulation 35(3) (g)	161.21	166.88	172.74	178.79	185.03
O&M allowed for Transmission line under Regulation 35 (3) (h)	161.21	166.88	172.74	178.79	185.03
Total O&M expenses claimed (a+c+e+g)	37015.18	38493.16	40046.77	41665.28	43368.25
Total O&M expenses allowed (b+d+f+h)	32393.12	33520.44	34684.21	35884.46	37121.19

Interest on Working capital

37. Regulation 34(1)(b) of the 2019 Tariff Regulations provides as under:

“34 Interest on Working Capital:

(1) The working capital shall cover:

(a) xxxx

(b) 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.



Fuel component and Energy Charges in working capital

38. The Petitioner in Form-O of the petition has claimed cost for fuel component in working capital as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working capital as Fuel (gas) cost for 30 days	37227.92	37227.92	37227.92	37227.92	37227.92
Liquid Fuel Stock for 15 days	18613.96	18613.96	18613.96	18613.96	18613.96

39. The Petitioner is required to furnish the details of fuel procured during the month of October 2018, November 2018, and December 2018 as per format provided in Form-15 of the 2019 Tariff Regulations. In this regard, the Petitioner has submitted the following:

“The above fuel cost is derived in terms of Provisions of Regulation 34 (b) (i) and Regulation 34 (2) of Tariff Regulation 2019. Further, the Petitioner submits that the domestic fuel is not allocated to the Dgen plant and the plant was not in operation during the period October 2018 to December 2018 in the absence of allocation of domestic fuel and therefore there is no landed cost of fuel for the period October 2018 to December 2018. So the Petitioner has considered landed fuel cost in line with the actual landed cost of LNG procured by Petitioner company at its Sugan plant at Rs. 697.47 per MMBTU.”

40. It is evident from the above submissions that the Petitioner has not procured any fuel during the month of October 2018, November 2018, and December 2018 for the generating station. The Petitioner has, however, considered the landed fuel cost in line with the actual landed cost of LNG, procured by Petitioner for its SUGEN plant for Rs.697.47 per MMBTU.

41. Based on the normative operating parameters of Station Heat Rate and the Weighted Average Rate of fuel for Rs.697.47/MMBTU, the fuel cost for 30 days (corresponding to NAPAF of 85%) as claimed by the Petitioner is Rs.37227.92 lakh for each year of the 2019-24 tariff period. The same is allowed for computation of working capital.



Cost of Liquid fuel stock

42. The Petitioner in Form-O of the petition has claimed the cost for fuel component (liquid fuel stock) for 15 days in working capital as under:

<i>(Rs. in lakh)</i>				
2019-20	2020-21	2021-22	2022-23	2023-24
18613.96	18613.96	18613.96	18613.96	18613.96

43. The Petitioner has claimed LNG as the liquid fuel and has claimed interest on working capital corresponding to 15 days liquid fuel stock. The Petitioner has submitted that due to issues of availability of domestic gas, the Petitioner had to arrange fuel from alternate sources i.e. direct import of LNG or procurement of LNG from marketing companies like GAIL, IOCL and BPCL etc. Further, considering additional tax implication on purchase of LNG from marketing companies, in terms of VAT/CST in the State of Gujarat @15% vis-a-vis benefits of custom duty exemption on direct import, the Petitioner decided to directly import LNG to meet power off-take requirement of the beneficiaries. Accordingly, the Petitioner has booked re-gasification and storage capacity with Petronet LNG limited (PLL) Dahej Terminal for the capacity for 20 years starting from 1.4.2017. The Petitioner has submitted the same in its annual report for the year 2015-16.

44. 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.18613.96 lakh for each year of the 2019-24 tariff period. Considering the fact that the Petitioner has opted for cheapest fuel (imported LNG) at Rs 697.47/MMBTU, as stated above, the cost of liquid fuel for 15 days, as claimed by the Petitioner, based on the normative Plant Availability parameters, is allowed for computation of interest of working capital.



Energy/ Variable Charges

45. The Petitioner has claimed Energy Charge Rate (ECR) of 5.213 Rs/kWh, based on the operational norms and weighted average rate and GCV of fuel for Rs.697.47/MMBTU, considered for the three months of October 2018, November 2018 and December 2018. ECR has been worked out in three decimal places as Rs.5.213/kWh and allowed as follows:

Landed Price of Gas (Rs.MMBTU) as considered in para 41 above	697.47
Landed Price of Gas (Rs/kCal)	0.002768
Normative Gross Station Heat Rate (kCal/kWh)	1831.63
Normative Auxiliary Energy Consumption (%)	2.75
Energy Charge Rate (Rs/kWh)	5.213

Energy Charges for 45 days

46. Energy charges for 45 days on the basis of weighted average GCV and weighted average cost for the purpose of interest on working capital has been worked out as follows:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
55847.18	55847.18	55847.18	55847.18	55847.18

Maintenance spares

47. The maintenance spares claimed by the Petitioner are as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
11104.55	11547.95	12014.03	12499.58	13010.47

48. Regulation 34(1)(b)(iii) of the 2019 Tariff Regulations provides for maintenance spares @30% of the O&M expenses, including water charges and security expenses. Accordingly, maintenance spares is worked out and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
9717.94	10056.13	10405.26	10765.34	11136.36

O&M Expenses (1 month)

49. The O&M expenses for 1 month claimed by the Petitioner are as under:



(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
3084.60	3207.76	3337.23	3472.11	3614.02

50. Regulation 34(1)(b)(v) of the 2019 Tariff Regulations provides for 1 month of the O&M expenses, including water charges and security expenses. Accordingly, O&M expenses (1 month) has been worked out and allowed as under:

(Rs. in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
2699.43	2793.37	2890.35	2990.37	3093.43

51. The difference between the O&M expenses (1 month) and maintenance spares claimed by the Petitioner as against those allowed as above is due to fact that the water charges and security expenses allowed in these components are lesser than those claimed by Petitioner.

Receivables

52. Receivables have been worked out on the basis of 45 days of fixed and energy charges (duly taking into account the mode of operation of station on gas fuel and liquid fuel) as shown below:

(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges - for 45 days	55847.18	55847.18	55847.18	55847.18	55847.18
Fixed Charges - for 45 days	15766.68	15506.22	15215.14	15060.00	14868.33
Total	71613.86	71353.40	71062.32	70907.18	70715.51

Rate of Interest on working capital

53. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital considered, for the tariff period 2019-24 is 12.05% (i.e. 1 year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points). As the tariff of the generating station for the tariff period 2019-24 is being determined during the year 2021-22, the SBI MCLR as on 1.4.2020 (7.75%) and as on 1.4.2021 (7.00%) is also available which is lower in comparison of the same, as on 1.4.2019 (8.55%). Since the rate of interest on working capital is subject to revision at the time of truing-up of



tariff, based on the bank rate as on 1st April of each financial year, we find it prudent to allow the rate of interest as on 1.4.2020 and 1.4.2021, for the subsequent financial years. Accordingly, the rate of interest for the year 2019-20 is 12.05%, for the year 2020-21 is 11.25% and for the subsequent years the rate of interest of 10.50% has been considered (i.e., 1-year SBI MCLR of 7.75% as on 1.4.2020 + 350 basis points and 1 year SBI MCLR of 7.00% as on 1.4.2021 + 350 basis points).

54. Accordingly, Interest on working capital, has been worked out and allowed as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of fuel – 30 days	37227.92	37227.92	37227.92	37227.92	37227.92
Liquid fuel stock – 15 days	18613.96	18613.96	18613.96	18613.96	18613.96
Maintenance Spares @ 30% of O&M expenses	9717.94	10056.13	10405.26	10765.34	11136.36
Receivables – 45 days	71613.86	71353.40	71062.32	70907.18	70715.51
O&M expenses – One month	2699.43	2793.37	2890.35	2990.37	3093.43
Total Working Capital	139873.10	140044.78	140199.82	140504.77	140787.18
Rate of Interest	12.05%	11.25%	10.50%	10.50%	10.50%
Interest on Working Capital	16854.71	15755.04	14720.98	14753.00	14782.65

Annual Fixed Charges

55. Based on the above discussion, the annual fixed charges allowed for the 2019-24 tariff period is summarized as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	27369.76	27369.76	27369.76	27369.76	27369.76
Interest on Loan	21582.57	19091.93	16601.28	14110.63	11619.98
Return on Equity	30035.48	30035.48	30035.48	30035.48	30035.48
Interest on Working Capital	16854.71	15755.04	14720.98	14753.00	14782.65
O&M Expenses	32393.12	33520.44	34684.21	35884.46	37121.19
Total	128235.64	125772.64	123411.71	122153.33	120929.06

Note: (1) All figures are on annualized 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.

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



57. The Petitioner, on a month to month basis, shall compute and claim Energy Charges from the beneficiaries based on the formulae given under the 2019 Tariff Regulations.

Application Filing Fees and Publication Expenses

58. The Petitioner has also sought reimbursement of fees paid by it for the 2019-24 tariff period for filing the tariff petition and the publication expenses incurred for the same. 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

59. Annexure-I shall form part of the order.

60. Petition No. 236/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(I.S.Jha)
Member

Sd/-
(P.K.Pujari)
Chairperson



**Calculation of Weighted Average
Rate of Depreciation***(Rs. in lakh)*

Name of assets	Depreciation Rate	2019-24	
		Gross Block as on 1.4.2019	Depreciation Amount
Freehold Land	0.00%	719.67	0.00
Leasehold Land	3.34%	10643.04	355.48
Building & Civil Engineering Works			
Building & Civil Engineering Works	3.34%	45930.15	1534.07
Temporary erection	100.00%	253.04	253.04
Plant and machinery			
Diesel Electric & Gas Plant	5.28%	440765.55	23,272.42
Transformers, Kiosk, Sub-Station Equipment & Other Fixed Apparatus (including Plant)			
Transformer including foundation	5.28%	26480.35	1396.17
Switchgear including Cable Connections	5.28%	3800.59	200.67
Lightning Arrestor - Station Type	5.28%	1559.14	82.32
Meters	5.28%	246.61	13.02
Air-conditioning Plant - Static	5.28%	3197.22	168.81
Street Light Fitting	5.28%	177.58	9.38
Furniture and fixtures	6.33%	534.30	33.82
Other Office Equipment's	6.33%	304.33	19.26
Internal Wiring	6.33%	825.43	52.25
IT Equipment (incl. software)	15.00%	298.55	44.78
Self-Propelled Vehicles	9.50%	481.49	45.74
Communication equipment	6.33%	1052.97	66.65
For Dedicated Transmission Line			
Lines	5.28%	26547.01	1401.68
Building & Civil Engineering Works	3.34%	23.21	0.78
Others not covered above	5.28%	76.49	4.04
Total		563916.70	28956.38
Weighted Average Rate of Depreciation		5.1345%	

