

Return on Equity at Normal Rate:

(Rs. in lakh)

Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Average Normative Equity	3719.81	3719.81	3719.81	3719.81	3719.81
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate	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)	698.65	698.65	698.65	698.65	698.65

(Rs. in lakh)

Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Average Normative Equity	12092.72	12081.59	12081.59	12081.59	12081.59
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate	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)	2271.25	2269.16	2269.16	2269.16	2269.16

Interest on Loan

22. 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-capitalization 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 loan shall be reflected from the date of such re-financing."



23. The actual loan of the project has already been repaid. As no additional capital expenditure has been admitted for the period 2019-24, there is no normative loan addition during the said period. Hence, the interest on loan during the period 2019-24 is “nil” for both the stages of the generating station.

Depreciation

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

“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 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.”

25. The Petitioner has submitted that the entire depreciable value has been depreciated as on 31.3.2014 in terms of order dated 10.2.2017 in Petition No. 473/GT/2014. Therefore, the Petitioner, on account of life extension plan for Stage-I of the generating station, has worked out the balance useful life of 8.23 years, as on 1.4.2019, and claimed the same. It is observed that the Commission vide its order dated 8.3.2017 in Petition No. 256/GT/2014, had granted liberty to the Petitioner to approach the Commission, with a comprehensive R&M proposal, in terms of Regulation 15 of the 2014 Tariff Regulations. However, the Petitioner has not submitted any R&M proposal for both Stages of the generating station. In view of this, and considering the fact that Stage-I of the generating station has already completed its useful life during the period 2009-14 and no additional capital expenditure is allowed for Stage-I of the generating station, we are not inclined to consider the extension of useful life of the Stage-I of the generating station, at this stage. Since the entire depreciable value for Stage-I has been depreciated as on 31.3.2014, in terms of order dated 8.3.2017 in Petition No. 256/GT/2014 and since no additional capital expenditure has been allowed for the period 2019-24, the remaining depreciable value and depreciation for the period 2019-24 is “nil”.



26. As regard Stage-II of the generating station, the entire depreciable value for stage-II of the generating station has been depreciated during the year 2019-20, and thereafter, the Petitioner, on account of life extension plan for Stage-II of the generating station, has worked out balance useful life of 13.75 years, as on 1.4.2019, and has claimed depreciation accordingly. It is observed that the Commission vide its order dated 8.3.2017 in Petition No. 256/GT/2014, had granted liberty to the Petitioner to approach the Commission with the comprehensive R&M proposal in terms of Regulation 15 of the 2014 Tariff Regulations. However, as stated, the Petitioner has not submitted any R&M proposal for both Stages of the generating station. In view of this, and considering the fact that Stage-II of the generating station has already completed its useful life during the period 2019-24 and since no additional capital expenditure has been allowed for Stage-II of the generating station, in this order, we are not inclined to consider the extension of useful life of Stage-II of the generating station, at this stage. Accordingly, the depreciation allowed for Stage-II of the generating station is as under:

(Rs. in lakh)

	Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
A	Average Capital Cost	118853.85	118853.85	118853.85	118853.85	118853.85
B	Value of freehold land included above	218.00	218.00	218.00	218.00	218.00
C	Depreciable value [(A-B) x 0.9]	106772.27	106772.27	106772.27	106772.27	106772.27
D	Remaining depreciable value at the beginning of the year (C – Cumulative depreciation at the end of the preceding period)	22.27	0.00	0.00	0.00	0.00
E	Balance useful life at the beginning of the year	0.02	0.00	0.00	0.00	0.00
F	WAROD	-	-	-	-	-
G	Depreciation during the year	22.27	0.00	0.00	0.00	0.00
H	Cumulative depreciation at the end (Cumulative depreciation at the end of the preceding period + Depreciation during the period)	106772.27	106772.27	106772.27	106772.27	106772.27



I	Less: Cumulative Depreciation reduction due to decapitalization	0.00	0.00	0.00	0.00	0.00
J	Cumulative Depreciation after adjustment due to decapitalization (at the end of the period)	106772.27	106772.27	106772.27	106772.27	106772.27

Note- Cumulative Depreciation up to 31.3.2019 is Rs.106750.00 lakh

Operation & Maintenance Expenses

27. The O&M expenses claimed by the Petitioner is as under:

(Rs. in lakh)

Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses under Regulation 35(1)(1) of the 2019 Tariff Regulations (a)	20764.80	21495.60	22245.30	23032.80	23839.20
O&M expenses under Regulation 35(1)(6) of the 2019 Tariff Regulations:					
- Water Charges	273.47	280.44	288.24	296.98	306.85
- Security Expenses	542.57	624.00	717.43	825.00	948.86
- Capital Spares consumed	0.00	0.00	0.00	0.00	0.00
Total O&M Expenses	21580.84	22400.04	23250.97	24154.78	25094.91

(Rs. in lakh)

Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses under Regulation 35(1)(1) of the 2019 Tariff Regulations (a)	27686.40	28660.80	29660.40	30710.40	31785.60
O&M expenses under Regulation 35(1)(6) of the 2019 Tariff Regulations:					
- Water Charges	364.63	373.92	384.32	395.97	409.13
- Security Expenses	723.43	832.00	956.57	1,100.00	1,265.14
- Capital Spares consumed	0.00	0.00	0.00	0.00	0.00
Total O&M Expenses	28774.46	29866.72	31001.29	32206.37	33459.87

28. As the normative O&M expenses claimed by the Petitioner, are in terms of Regulation 35(1)(1) of the 2019 Tariff Regulations, the same is allowed.

Water Charges

29. Regulation 35(1)(6) of the 2019 Tariff Regulations provides for claim towards water charges, security expenses and capital spares as under:

“35(1)(6) The Water, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately and after prudence check:

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

Xxxx'



30. The actual water charges claimed by the Petitioner in Petition No. 368/GT/2020 for the period 2014-19 and those allowed by order dated 28.2.2023 are as under:

<i>(Rs. in lakh)</i>					
Water charges (Stage-I)	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed for the period 2014-19	185.17	180.72	183.63	206.09	138.75
Allowed for the period 2014-19	140.36	141.02	140.59	118.81	83.75
Water charges (Stage-II)					
Claimed for the period 2014-19	246.89	240.97	244.83	274.78	185.00
Allowed for the period 2014-19	187.15	188.03	187.45	158.41	111.67

31. The Petitioner has claimed water charges for the period 2019-24 as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Stage-I	273.47	280.44	288.24	296.98	306.85
Stage-II	364.63	373.92	384.32	395.97	409.13

32. In terms of Regulation 35(1)(6) of the 2019 Tariff Regulations, Water charges shall be allowed separately, based on the water consumption, depending upon the type of plant, type of cooling water system etc., subject to prudence check. The Petitioner has claimed water charges consisting of pumping cost incurred by ground water control and storm water control for the year, consent fee payable to Government account, Personnel charges and Lake maintenance charges. The details of water charges as furnished by the Petitioner is as under:

Period	Water Quantity	Pumping charges (Rs. /KL)	Water Consent Fee	Personnel Charges	Lake Maintenance	Water Charges
	(KL)	(Rs. In lakh)	(Rs. In lakh)	(Rs. In lakh)	(Rs. In lakh)	(Rs. In lakh)
	1	2	4	5	6	7=2+3+4+5+6
2019-20	64034100	481.54	20.43	135.04	1.10	638.10
2020-21	64034100	481.54	20.43	151.24	1.16	654.36
2021-22	64034100	481.54	20.43	169.39	1.21	672.56
2022-23	64034100	481.54	20.43	189.72	1.27	692.95
2023-24	64034100	481.54	20.43	212.48	1.34	715.78

33. We have considered the matter. It is noticed that the Commission, vide its order dated 9.6.2022 in Petition No. 367/GT/2020 (NLC TPS-II Expansion) respectively, had disallowed the Personnel charges claimed in water charges. Aggrieved by the order dated 9.6.2022 in Petition No. 367/GT/2020, the Petitioner has filed Review Petition No.



33/RP/2022, raising several issues, including the disallowance of Personnel charges in water charges and the same is pending for consideration. In view of this, we are constrained not to allow the Personnel charges claimed in water charges, at this stage. This is however subject to the outcome of the decision in Review Petition No.33/RP/2022. As regards lake maintenance charges claimed, it is observed that the Petitioner has not furnished any justification for claiming the same. However, the Commission has provisionally considered the lake maintenance charges claimed, subject to the Petitioner furnishing detailed justification for the same, at the time of truing-up of tariff. Accordingly, water charges are allowed for the purpose of tariff, as under:

(Rs. in lakh)

Period	Water Quantity	Pumping charges (Rs. /KL)	Water Consent Fee	Personnel Charges	Lake Maintenance	Water Charges	Stage-I	Stage-II
	(KL)	(Rs. In lakh)	(Rs. In lakh)	(Rs. In lakh)	(Rs. in lakh)	(Rs. in lakh)		
	1	2	3	4	5	6=2+3+5		
2019-20	64034100	481.54	20.43		1.10	503.06	215.60	287.46
2020-21	64034100	481.54	20.43		1.16	503.12	215.62	287.50
2021-22	64034100	481.54	20.43		1.21	503.18	215.65	287.53
2022-23	64034100	481.54	20.43		1.27	503.24	215.67	287.56
2023-24	64034100	481.54	20.43		1.34	503.30	215.70	287.60

34. The water charges allowed as above, is subject to truing-up, based on actuals to be furnished by the Petitioner.

Security Expenses

35. The second proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations provides as under:

“35(1)(6) The Water, Security Expenses and Capital Spares for thermal generating stations shall be allowed separately and after prudence check:

xxxxx:

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

xxxxx.”



36. The security expenses claimed by the Petitioner for the period 2019-24 is as under:

<i>(Rs. in lakh)</i>					
	2019-20	2020-21	2021-22	2022-23	2023-24
Stage-I	542.57	624.00	717.43	825.00	948.86
Stage-II	723.43	832.00	956.57	1100.00	1265.14

37. The Petitioner has submitted that above expenses have been claimed based on the estimated expenses for the period 2019-24, and shall be subject to retrospective adjustment, based on actuals at the time of truing up of tariff.

38. We have examined the matter. Though the Petitioner has claimed projected security expenses for the period 2019-24, it has however, not furnished the assessment of security requirement, in terms of aforesaid provision of the regulations. Accordingly, the Petitioner, shall, at the time of truing-up, furnish the requisite details of the security expenses, for carrying out prudence check. However, for the present, the projected security expenses claimed for the period 2019-24, has been considered and allowed. Accordingly, the security expenses claimed and allowed, for the generating station for the period 2019-24 are as under:

<i>(Rs. in lakh)</i>					
Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed	542.57	624.00	717.43	825.00	948.86
Allowed	542.57	624.00	717.43	825.00	948.86

<i>(Rs. in lakh)</i>					
Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Claimed	723.43	832.00	956.57	1,100.00	1,265.14
Allowed	723.43	832.00	956.57	1,100.00	1,265.14

Capital Spares

39. The Petitioner has not claimed any capital spares during the period 2019-24. It has however submitted that the same shall be claimed, based on actual consumption of spares, at the time of truing up of tariff, in terms of the last proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations. In view of this, the same has not been



considered in this order. The claim of the Petitioner, if any, towards capital spares at the time of truing up of tariff, shall be considered on merits, after prudence check.

Summary

40. Accordingly, the total O&M expenses, including water charges and security expenses, as claimed by the Petitioner and those allowed to the generating station for the period 2019-24, is summarised below:

<i>(Rs. in lakh)</i>					
Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses claimed under Regulation 35(1)(1) of the 2019 Tariff Regulations (a)	20,764.80	21,495.60	22,245.30	23,032.80	23,839.20
Normative O&M expenses allowed under Regulation 35(1)(1) of the 2019 Tariff Regulations (b)	20,764.80	21,495.60	22,245.30	23,032.80	23,839.20
Water Charges claimed under Regulation 35(1)(6) of the 2019 Tariff Regulations (c)	273.47	280.44	288.24	296.98	306.85
Water Charges allowed under Regulation 35(1)(6) of the 2019 Tariff Regulations (d)	215.60	215.62	215.65	215.67	215.70
Security Expenses claimed under Regulation 35(1)(6) of the 2019 Tariff Regulations (e)	542.57	624.00	717.43	825.00	948.86
Security Expenses allowed under Regulation 35(1)(6) of the 2019 Tariff Regulations (f)	542.57	624.00	717.43	825.00	948.86
Total O&M expenses claimed under Regulation 35 of the 2019 Tariff Regulations (a + c + e)	21,580.84	22,400.04	23,250.97	24,154.78	25,094.91
Total O&M expenses allowed under Regulation 35 of the 2019 Tariff Regulations (b + d + f)	21,522.97	22,335.22	23,178.38	24,073.47	25,003.76

<i>(Rs. in lakh)</i>					
Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses claimed under Regulation 35(1)(1) of the 2019 Tariff Regulations (a)	27,686.40	28,660.80	29,660.40	30,710.40	31,785.60



Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Normative O&M expenses allowed under Regulation 35(1)(1) of the 2019 Tariff Regulations (b)	27,686.40	28,660.80	29,660.40	30,710.40	31,785.60
Water Charges claimed under Regulation 35(1)(6) of the 2019 Tariff Regulations (c)	364.63	373.92	384.32	395.97	409.13
Water Charges allowed under Regulation 35(1)(6) of the 2019 Tariff Regulations (d)	287.46	287.50	287.53	287.56	287.60
Security Expenses claimed under Regulation 35(1)(6) of the 2019 Tariff Regulations (e)	723.43	832.00	956.57	1,100.00	1,265.14
Security Expenses allowed under Regulation 35(1)(6) of the 2019 Tariff Regulations (f)	723.43	832.00	956.57	1,100.00	1,265.14
Total O&M expenses claimed under Regulation 35 of the 2019 Tariff Regulations (a + c + e)	28,774.46	29,866.72	31,001.29	32,206.37	33,459.87
Total O&M expenses allowed under Regulation 35 of the 2019 Tariff Regulations (b + d + f)	28,697.29	29,780.30	30,904.50	32,097.96	33,338.34

Operational Norms

41. The Petitioner has considered following norms of operation, for the purpose of tariff, for the period 2019-24:

Normative Annual Plant Availability Factor (NAPAF) (%)	85
Heat Rate (kCal/kwh)	2890.00
Auxiliary Power Consumption (%)	10.00
Specific Oil Consumption (ml/kwh)	1.00

Normative Annual Plant Availability Factor

42. Regulation 49(A) of the 2019 Tariff Regulations provides as under:

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

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

43. In terms of Regulation 49(A)(a) of the 2019 Tariff Regulations, the Petitioner has considered the NAPAF of 85% for the period 2019-24, and the same is allowed.



Gross Station Heat Rate (kCal/kWh)

44. Regulation 49(C)(a)(v) of 2019 Tariff Regulations provides as under:

*“TPS-I and TPS-II (Stage I & II) of NLC India Ltd:
TPS-I: 4,000 kCal/kWh
TPS-II: 2,890 kCal/kWh
TPS- I (Expansion): 2,720 kCal/kWh”*

45. In terms of Regulation 49(C)(a)(v) of the 2019 Tariff Regulations, the Petitioner has considered the Gross Station Heat Rate (GSHR) of 2890 kCal/kWh during the period 2019-24 and hence, the same is allowed.

Secondary Fuel Oil Consumption

46. Regulation 49(D)(b) of 2019 Tariff Regulations provides as under:

“(i) For Lignite-fired generating stations except TPS-I: 1.0 ml/kWh

47. In terms of Regulation 49(D)(b) of the 2019 Tariff Regulations, the Petitioner has considered secondary fuel oil consumption of 1.00 ml/kWh during the period 2019-24 tariff period and hence, the same is allowed.

Auxiliary Power Consumption

48. Regulation 49(E)(d) of 2019 Tariff Regulations provides as under:

“(d) For Lignite-fired thermal generating stations:

xxx

(iii) For TPS-I, TPS-I (Expansion) and TPS-II Stage-I&II of NLC India Ltd.:

<i>TPS-I</i>	<i>12.00%</i>
<i>TPS-II</i>	<i>10.00%</i>
<i>TPS-I (Expansion)</i>	<i>8.50%</i>

49. In terms of Regulation 49(E)(d)(iii) of the 2019 Tariff Regulations, the Petitioner has considered the auxiliary energy consumption of 10.00% during the period 2019-24 and hence, the same is allowed.

Interest on Working Capital

50. Sub-section (a) of clause (1) of Regulation 34 of the 2019 Tariff Regulations provides as under:



“34. Interest on Working Capital: (1) *The working capital shall cover:*

(a) For Coal-based/lignite-fired thermal generating stations:

(i) Cost of coal or lignite and limestone towards stock if applicable for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;

(ii) Advance payment for 30 days towards cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor;

(iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor and in case of use of more than one secondary fuel oil cost of fuel oil stock for the main secondary fuel oil;

(iv) Maintenance spares @ 20% of operation and maintenance expenses including water charges and security expenses;

(v) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and

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

(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 Order in Petition No. 410/GT/2020 Page 32 of 37 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.

(c) For Hydro generating station (including Pumped Storage Hydro Generating Station) and transmission system:

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and

(iii) Operation and maintenance expenses including security expenses for one month.

(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.”

51. Regulation 36 of 2019 Tariff Regulations relating to the input price for coal and lignite from integrated mines, provides as under:

(1) xxx

(2) xxx

(3) The generating company shall, after the Date of Commercial Operation of the integrated mines, till the input price of lignite is determined by the Commission under these regulations, fix the input price of lignite for the generating station at the last available pooled lignite price as determined by the Commission for transfer price of lignite or the estimated price available in the investment approval, whichever is lower;

Provided that the difference between the input price of lignite determined under these regulations and the input price of lignite so fixed prior to such determination, for the quantity of lignite billed, shall be adjusted in accordance with Clause (4) of this Regulation.

(4) In case of excess or short recovery of input price under Clause (2) or Clause (3) of this Regulation, the generating company shall refund the excess amount or recover the short amount, as the case may be, with simple rate of interest, equal to the bank rate prevailing as on 1st April of the respective year of the tariff period, in six equal monthly instalments.

36A. Input Price of coal or Lignite: (1) Input price of coal or lignite from integrated mine shall be computed based on the following components:

(I) Run of Mine (ROM) Cost; and

(II) Additional charges:

(III) crushing charges;

a. transportation charge within the mine up to the washery end or coal handling plant associated with the integrated mine, as the case may be;

b. handling charges at mine end;

c. washing charges; and

d. transportation charges beyond the washery end or coal handling plant, as the case may be, and up to the Loading Point:

Provided that one or more components of additional charges may be applicable on case-to-case basis, based on the scope and nature of the mining activities.

Provided further that the input price of lignite shall be computed based on Run of Mine (ROM) Cost based on the technology such as bucket excavator-conveyor belt-spreader or its combination and handling charges, if any.

Statutory Charges, as applicable, shall be allowed.



Fuel Cost and Energy Charges in working capital

52. The Petitioner has claimed following cost for fuel components:

- a) Lignite and Secondary fuel rates for October 2018, November 2018 and December 2018 were adopted in the computation of interest on working capital and energy charges in respect of the generating station for the period 1.4.2019 to 31.3.2024.
- b) The price of fuel as computed by the Petitioner is shown as under:

Base price of lignite (Rs/MT)	2085.00
Royalty @ 6%	125.00
DMF 30%	37.50
NMET @2%	2.50
GST @ 18%	29.70
Average price of Lignite (October, 2018 to December, 2018) per tonne (Rs/MT)	2279.70

(Rs. in lakh)

Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Lignite towards Stock (10 days stock corresponding to NAPAF)	3,213.89	3,213.89	3,213.89	3,213.89	3,213.89
Cost of Lignite towards Generation (30 days generation corresponding to NAPAF)	9,641.67	9,641.67	9,641.67	9,641.67	9,641.67
Cost of Secondary Fuel Oil (2 months generation corresponding to NAPAF)	349.79	348.83	348.83	348.83	349.79

(Rs. in lakh)

Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Lignite towards Stock (10 days stock corresponding to NAPAF)	4,285.19	4,285.19	4,285.19	4,285.19	4,285.19
Cost of Lignite towards Generation (30 days generation corresponding to NAPAF)	12,855.56	12,855.56	12,855.56	12,855.56	12,855.56
Cost of Secondary Fuel Oil (2 months generation corresponding to NAPAF)	466.38	465.11	465.11	465.11	466.38

Lignite Transfer Price and Energy Charges

53. The Petitioner has submitted that it has filed Petition No: 452/MP/2019 for truing-up of lignite transfer price of NLC mines for the period 2014-19. It is noticed that the Commission vide its order dated 24.3.2022 (read with corrigendum order dated



26.4.2022) in Petition No 452/MP/2019 had determined the pooled lignite transfer price, after truing up, as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Pooled price of Lignite after truing up (Rs. /Tonne)	1547.00	1689.00	1891.00	1983.00	2021.00

54. The base lignite price, as determined above, does not include Royalty charges, DMF, NMET and GST. Hence, to work out the landed price of fuel, we have considered the Royalty charges at 6%, DMF @ 30%, NMET @ 2% and GST @ 18%, in line with the Petitioner's claim.

55. Keeping in view the above aspects, the lignite transfer price is computed, considering the base lignite price, as on 2018-19, as under:

	Particulars	2018-19
A	Base Price Excl. Royalty Rs/T	2021.00
B	Royalty @ 6% on (A)	121.00
C	DMF @ 30% on (B)	36.30
D	NMET @ 2% on (B)	2.42
E	Total Royalty (B+C+D)	159.72
F	GST on Royalty on (E)	28.75
G	Transfer Price (A+E+F) (Rs. /T)	2209.47

56. Also, the Petitioner has submitted two types of secondary fuel oil i.e HFO and LDO. However, in terms of Regulation 34(1)(a)(iii) of the 2019 Tariff Regulations, the working capital shall cover the cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil. Therefore, in terms of the said regulation, we have considered the main secondary fuel oil as HFO. Further, the Petitioner has claimed the landed cost, including the cost of opening stock, which is not in terms of the 2019 Tariff Regulations and therefore, the opening stock and price, has not been considered. Also, the Petitioner has not provided the details of Form-15 for Lignite. Accordingly, the price and GCV of lignite for the years 2019-20 to 2023-24 and the secondary oil as considered by the Petitioner and allowed



for computation of lignite cost, secondary oil and 2-month energy charges in working capital is as under:

<i>(Rs. in lakh)</i>					
Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Price of Lignite (Rs. / Tonne)	2,209.47	2,209.47	2,209.47	2,209.47	2,209.47
GCV of Lignite (kCal/kg)	2,625.33	2,625.33	2,625.33	2,625.33	2,625.33
Price of Secondary fuel oil (Rs./kL)	44,860.22	44,860.22	44,860.22	44,860.22	44,860.22
GCV of secondary fuel oil (kCal/kg)	10,162.95	10,162.95	10,162.95	10,162.95	10,162.95

<i>(Rs. in lakh)</i>					
Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Price of Lignite (Rs. / Tonne)	2,209.47	2,209.47	2,209.47	2,209.47	2,209.47
GCV of Lignite (kCal/kg)	2,625.33	2,625.33	2,625.33	2,625.33	2,625.33
Price of Secondary fuel oil (Rs./kL)	44,860.22	44,860.22	44,860.22	44,860.22	44,860.22
GCV of secondary fuel oil (kCal/kg)	10,162.95	10,162.95	10,162.95	10,162.95	10,162.95

57. Accordingly, the weighted average GCV and cost for fuel components as claimed, the working capital and two months energy charges are worked out as under:

<i>(Rs. in lakh)</i>					
Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Lignite for 40 days (including stock and generation)	12459.55	12459.55	12459.55	12459.55	12459.55
Cost of secondary fuel oil for 2 months	351.69	350.73	350.73	350.73	351.69
Energy Charge for 45 days	14277.48	14277.48	14277.48	14277.48	14277.48

<i>(Rs. in lakh)</i>					
Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Lignite for 40 days (including stock and generation)	16612.73	16612.73	16612.73	16612.73	16612.73
Cost of secondary fuel oil for 2 months	468.92	467.64	467.64	467.64	468.92
Energy Charge for 45 days	19036.64	19036.64	19036.64	19036.64	19036.64

58. The Petitioner, on a month to month basis, shall compute and claim the energy charges from the beneficiaries based on formulae given under Regulation 43 of the 2019 Tariff Regulations.



Working Capital for Maintenance Spares

59. The Petitioner in Form-O has claimed the maintenance spares in the working capital as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Stage-I	4,316.17	4,480.01	4,650.19	4,830.96	5,018.98
Stage-II	5,754.89	5,973.34	6,200.26	6,441.27	6,691.97

60. Regulation 34(1)(a)(iv) of the 2019 Tariff Regulations provide for maintenance spares @ 20% of O&M expenses (including water charges and security expenses). Accordingly, maintenance spares @ 20% of the O&M expenses (including the water charges and security expenses) allowed for the period 2019-24 is as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Stage-I	4304.59	4467.04	4635.68	4814.69	5000.75
Stage-II	5739.46	5956.06	6180.90	6419.59	6667.67

Working Capital for Receivables

61. In terms of Regulation 34(1)(a)(v) of the 2019 Tariff Regulations, the receivables equivalent to 45 days of capacity charges and energy charges is worked out and allowed as under:

	<i>(Rs. in lakh)</i>				
Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges - for 45 days	14277.48	14277.48	14277.48	14277.48	14277.48
Fixed Charges - for 45 days	3272.33	3349.73	3423.73	3538.86	3648.40
Total	17549.81	17627.21	17701.21	17816.34	17925.88

	<i>(Rs. in lakh)</i>				
Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Variable Charges - for 45 days	19036.64	19036.64	19036.64	19036.64	19036.64
Fixed Charges - for 45 days	4533.08	4633.54	4732.06	4885.56	5031.15
Total	23569.72	23670.18	23768.69	23922.20	24067.79

62. As per Regulation 34(2) of the 2019 Tariff Regulations, the cost of fuel (Lignite in this case) shall be based on landed fuel cost (taking into account the normative transit and handling losses in terms of Regulation 39 of the 2019 Tariff Regulations) by the generating station and GCV of fuel, as per the actual weighted average for the third



quarter of preceding financial year. Hence, the Petitioner shall, at the time of truing up, furnish the details of quantity of lignite as per Regulation 34(2) of 2019 Tariff Regulations. The Petitioner shall not alter or modify the column/lines provided in the forms/annexures and shall submit details strictly in accordance with the said forms/annexures in terms of the 2019 Tariff Regulations.

63. The Petitioner is directed to calculate the input price of lignite as per Regulation 36 of the 2019 Tariff Regulations.

Working Capital for O&M Expenses for 1 month

64. The Petitioner in Form-O has claimed the O&M expenses for 1 month in the working capital as under:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Stage-I	1,798.40	1,866.67	1,937.58	2,012.90	2,091.24
Stage-II	2,397.87	2,488.89	2,583.44	2,683.86	2,788.32

65. Regulation 34(1)(a)(vi) of the 2019 Tariff Regulations provide for O&M expenses equivalent to 1 month of the O&M expenses (including water charges and security expenses). Accordingly, O&M expenses equivalent to 1 month of the O&M expenses (including water charges and security expenses) 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
Stage-I	1793.58	1861.27	1931.53	2006.12	2083.65
Stage-II	2391.44	2481.69	2575.38	2674.83	2778.20

66. In line with the Regulation 34(3) of the 2019 Tariff Regulations, the rate of interest on working capital is considered as 12.05% (i.e. 1 year SBI MCLR of 8.55% as on 01.04.2019 + 350 bps) for the year 2019-20, 11.25% (i.e. 1 year SBI MCLR of 7.75% as on 01.04.2020 + 350 bps) for the year 2020-21 ,10.50% (i.e. 1 year SBI MCLR of 7.00% as on 01.04.2021 + 350 bps) and 10.50% (i.e. 1 year SBI MCLR of 7.00% as on



01.04.2022 + 350 bps) for the period 2022-24. Accordingly, Interest on working capital has been computed as under:

(Rs. in lakh)					
Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Lignite towards Stock - (10 days stock corresponding to NAPAF)	3114.89	3114.89	3114.89	3114.89	3114.89
Cost of Lignite towards Generation - (30 days stock corresponding to NAPAF)	9344.66	9344.66	9344.66	9344.66	9344.66
Cost of Secondary fuel oil - (2 months stock corresponding to NAPAF)	351.69	350.73	350.73	350.73	351.69
Maintenance Spares @ 20% of O&M expenses	4304.59	4467.04	4635.68	4814.69	5000.75
Receivables - 45 days	17549.81	17627.21	17701.21	17816.34	17925.88
O&M expenses - 1 month	1793.58	1861.27	1931.53	2006.12	2083.65
Total Working Capital	36459.23	36765.80	37078.70	37447.44	37821.52
Rate of Interest	12.0500%	11.2500%	10.5000%	10.5000%	10.5000%
Interest on Working Capital	4393.34	4136.15	3893.26	3931.98	3971.26

(Rs. in lakh)					
Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of Lignite towards Stock - (10 days stock corresponding to NAPAF)	4153.18	4153.18	4153.18	4153.18	4153.18
Cost of Lignite towards Generation - (30 days stock corresponding to NAPAF)	12459.55	12459.55	12459.55	12459.55	12459.55
Cost of Secondary fuel oil - (2 months stock corresponding to NAPAF)	468.92	467.64	467.64	467.64	468.92
Maintenance Spares @ 20% of O&M expenses	5739.46	5956.06	6180.90	6419.59	6667.67
Receivables - 45 days	23569.72	23670.18	23768.69	23922.20	24067.79
O&M expenses - 1 month	2391.44	2481.69	2575.38	2674.83	2778.20
Total Working Capital	48782.27	49188.30	49605.34	50096.99	50595.30
Rate of Interest	12.0500%	11.2500%	10.5000%	10.5000%	10.5000%
Interest on Working Capital	5878.26	5533.68	5208.56	5260.18	5312.51

Special Allowance

67. Regulation 28 of the 2019 Tariff Regulation for special allowances provides as under:

“28. Special Allowance for Coal-based/Lignite fired Thermal Generating station

(1) In case of coal-based/lignite fired thermal generating stations, the generating company, instead of availing renovation and modernization (R&M) may opt to avail a ‘special allowance’ in accordance with the norms specified in this Regulation, as compensation for meeting the requirement of expenses including renovation and modernisation beyond the useful life of the generating station or a unit thereof and in such an event, upward revision of the capital cost shall not be allowed and the applicable operational norms shall not be relaxed but the Special Allowance shall be included in the annual fixed cost:



Provided that such option shall not be available for a generating station or unit thereof for which renovation and modernization has been undertaken and the expenditure has been admitted by the Commission before commencement of these regulations, or for a generating station or unit which is in a depleted condition or operating under relaxed operational and performance norms;

Provided further that special allowance shall also be available for a generating station which has availed the Special Allowance during the tariff period 2009-14 or 2014-19 as applicable from the date of completion of the useful life.

(2) The Special Allowance admissible to a generating station shall be @ Rs 9.5 lakh per MW per year for the tariff period 2019-24.

(3) In the event of a generating station availing Special Allowance, the expenditure incurred upon or utilized from Special Allowance shall be maintained separately by the generating station and details of same shall be made available to the Commission as and when directed.

(4) The Special Allowance allowed under this Regulation shall be transferred to a separate fund for utilization towards Renovation & Modernisation activities, for which detailed methodology shall be issued separately.

68. The Petitioner has claimed Special Allowance for Stage-I and Stage-II of the generating station as under:

	(Rs. in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Stage-I	5,985.00	5,985.00	5,985.00	5,985.00	5,985.00
Stage-II	7,980.00	7,980.00	7,980.00	7,980.00	7,980.00

69. Accordingly, in terms of the aforesaid regulations, Special allowance @Rs. 9.5 lakh per MW per year is allowed to the generating station as shown under:

	2019-20	2020-21	2021-22	2022-23	2023-24
Stage I	630.00	630.00	630.00	630.00	630.00
Special Allowance @ Rs. 9.5 Lakh/ MW/ Year	5,985.00	5,985.00	5,985.00	5,985.00	5,985.00
Stage-II	840.00	840.00	840.00	840.00	840.00
Special Allowance @ Rs. 9.5 Lakh/ MW/ Year	7,980.00	7,980.00	7,980.00	7,980.00	7,980.00

Annual Fixed Charges

70. Accordingly, the annual fixed charges approved for the period 2019-24 for Stage-I and Stage-II of the generating station is summarized as under:

	(Rs. in lakh)				
Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	698.65	698.65	698.65	698.65	698.65
Interest on Working Capital	4393.34	4136.15	3893.26	3931.98	3971.26



Stage-I	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	21522.97	22335.22	23178.38	24073.47	25003.76
Total annual fixed charges	26614.96	27170.03	27770.29	28704.11	29673.67
Special Allowance	5,985.00	5,985.00	5,985.00	5,985.00	5,985.00
Total annual fixed charges allowed	32,599.96	33,155.03	33,755.29	34,689.11	35,658.67

	<i>(Rs. in lakh)</i>				
Stage-II	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	22.27	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2271.25	2269.16	2269.16	2269.16	2269.16
Interest on Working Capital	5878.26	5533.68	5208.56	5260.18	5312.51
O&M Expenses	28697.29	29780.30	30904.50	32097.96	33338.34
Total annual fixed charges	36869.08	37583.14	38382.22	39627.31	40920.01
Special Allowance	7,980.00	7,980.00	7,980.00	7,980.00	7,980.00
Total annual fixed charges allowed	44,849.08	45,563.14	46,362.22	47,607.31	48,900.01

Note: All figures are on annualized basis. 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.

71. The annual fixed charges approved as above is subject to truing up in terms of Regulation 13 of the 2019 Tariff Regulations.

Application Fee and Publication expenses

72. The Petitioner has sought reimbursement of fee paid by it for filing the petition for the period 2019-24 and for 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.

73. Similarly, RLDC Fees & Charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Dispatch Centre and other related matters) Regulations, 2019, shall be recovered from the beneficiaries. In addition, the Petitioner is entitled for recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2019 Tariff Regulations.



74. Petition No. 385/GT/2020 is disposed of in terms of the above.

Sd/-
(Pravas Kumar Singh)
Member

Sd/-
(Arun Goyal)
Member

Sd/-
(I. S. Jha)
Member

