

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

25. The Petitioner has claimed interest on loan by applying the weighted average rate of interest of 9.6304%, 9.8389%, 9.8908%, 9.9060 and 9.7793% for the years from 2019-20 to 2023-24. The same has been considered for the purpose of tariff. The Petitioner, is however, directed to submit documentary evidence for the rate of interest considered in Form-13 and repayment schedule of loan, at the time of truing up of tariff. Interest on loan has been worked out as follows:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross opening loan (A)	62076.67	62076.67	62076.67	62076.67	62076.67
Cumulative repayment of loan upto previous year (B)	54526.29	56501.91	58477.54	60453.16	62076.67
Net Loan Opening (C) = (A) - (B)	7550.38	5574.76	3599.14	1623.51	0.00
Addition due to additional capital expenditure (D)	0.00	0.00	0.00	0.00	0.00
Repayment of Loan during the period (E)	1975.62	1975.62	1975.62	1623.51	0.00
Less: Repayment adjustment on a/c of de-capitalization (F)	0.00	0.00	0.00	0.00	0.00
Net Repayment of Loan during the period (G) = (E) - (F)	1975.62	1975.62	1975.62	1623.51	0.00
Net Loan Closing (H) =(C) +(D) -(G)	5574.76	3599.14	1623.51	0.00	0.00
Average Loan (I) = (C+H)/2	6562.57	4586.95	2611.33	811.76	0.00
Weighted Average Rate of Interest on loan (J)	9.6304%	9.8389%	9.8908%	9.9060%	9.7793%
<b>Interest on Loan (K) = (I)*(J)</b>	<b>632.00</b>	<b>451.31</b>	<b>258.28</b>	<b>80.41</b>	<b>0.00</b>

## **Depreciation**

26. Regulation 33 of the 2019 Tariff Regulations provides as follows:

*“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.*

*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.*

*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.*

*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.*

*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.*

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

*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.*

*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.”

27. Accordingly, cumulative depreciation amounting to Rs. 54623.67 lakh as on 31.3.2019 as considered in order dated 1.10.2022 in Petition No. 287/GT/2020 has been considered for the purpose of tariff. The balance depreciable value (before providing depreciation) for 2019-20 works out to Rs. 25189.20 lakh. Since, as on 1.4.2019, the used life of the generating station is 12.25 years, which is more than 12 years from the effective station COD of 1.1.2007, depreciation has been spread over the remaining useful life of the asset for the 2019-24 tariff period. Accordingly, depreciation has been worked out and allowed as follows:

	<i>(Rs. in lakh)</i>				
	2019-20	2020-21	2021-22	2022-23	2023-24
Average Capital Cost (A)	88680.96	88680.96	88680.96	88680.96	88680.96
Value of freehold land included in average capital cost (B)	0.00	0.00	0.00	0.00	0.00
Value of software and IT equipment included in average capital cost (C)*	0.00	0.00	0.00	0.00	0.00
Aggregated Depreciable Value (D)= (A-B-C)x90%+ (C)	79812.87	79812.87	79812.87	79812.87	79812.87
Remaining aggregate depreciable value at the beginning of the year (E) = (D) – Cumulative depreciation at the end of the preceding period, shown at (L)	25189.20	23213.58	21237.95	19262.33	17286.71
No. of completed years at the beginning of the year (F)	12.25	13.25	14.25	15.25	16.25
Balance useful life at the beginning of the year (G) = 25 - (F)	12.75	11.75	10.75	9.75	8.75
Combined Depreciation during the year/ period (H) = (E) / (G)	1975.62	1975.62	1975.62	1975.62	1975.62
<b>Combined Depreciation during the year/ period (annualized) (I) = (H)</b>	<b>1975.62</b>	<b>1975.62</b>	<b>1975.62</b>	<b>1975.62</b>	<b>1975.62</b>
Cumulative depreciation at the end of the year (before adjustment for de-capitalisation) (J) = (I) + (Cumulative Depreciation (shown at M), at the end of the previous year)	56599.29	58574.92	60550.54	62526.16	64501.79
Less: Depreciation adjustment on account of de-capitalisation (K)	0.00	0.00	0.00	0.00	0.00
<b>Cumulative depreciation at the end of the year (L)** = (J) - (K)</b>	<b>56599.29</b>	<b>58574.92</b>	<b>60550.54</b>	<b>62526.16</b>	<b>64501.79</b>

\* As per the Petitioner submissions, the details of IT Equipment will be provided at the time of truing up

\*\*The cumulative depreciation at the end of 2018-19 is Rs.54623.67 lakh.



## **O&M Expenses**

28. Regulation 35(1)(1) of the 2019 Tariff Regulations provides as follows:

*“(35)(1) Thermal Generating Station: Normative Operation and Maintenance expenses of thermal generating stations shall be as follows:*

*(1) Coal based and lignite fired (including those based on Circulating Fluidised Bed Combustion (CFBC) technology) generating stations, other than the generating stations or units referred to in clauses (2), (4) and (5) of this Regulation:*

*(in Rs lakh/MW)*

<b>Year</b>	<b>200/210/ 250 MW Series</b>	<b>300/ 330/ 350 MW Series</b>	<b>500 MW Series</b>	<b>600 MW Series</b>	<b>800 MW Series and above</b>
FY 2019-20	32.96	27.74	22.51	20.26	18.23
FY 2020-21	34.12	28.71	23.30	20.97	18.87
FY 2021-22	35.31	29.72	24.12	21.71	19.54
FY 2022-23	36.56	30.76	24.97	22.47	20.22
FY 2023-24	37.84	31.84	25.84	23.26	20.93

*Provided that where the date of commercial operation of any additional unit(s) of a generating station after first four units occurs on or after 1.4.2019, the O&M expenses of such additional unit(s) shall be admissible at 90% of the operation and maintenance expenses as specified above;*

xxx

*Provided also that operation and maintenance expenses of generating station having unit size of less than 200 MW not covered above shall be determined on case to case basis.*

29. The Petitioner has claimed normative O&M expenses in Form 3A as under:

*(Rs. in lakh)*

<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
6921.60	7165.20	7415.10	7677.60	7946.40

30. The normative O&M expenses as claimed by the Petitioner has been allowed for the purpose of tariff computation.



## Water Charges

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

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

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

*xxxxx.”*

32. The actual water charges claimed by the Petitioner and allowed by order dated 1.10.2022 in Petition No. 287/GT/2020 for the 2014-19 tariff period are as follows:

<i>(Rs. in lakh)</i>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
108.80	116.92	108.98	125.21	78.01

33. In terms of the first proviso to Regulations 35(1)(6) of the 2019 Tariff Regulations, water charges shall be allowed separately, based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check. The details furnished by the Petitioner in respect of water charges as applicable for 2018-19 are as under:

<b>Description</b>	<b>Remarks</b>
Type of Plant	Coal Based
Type of cooling water system	Closed Cycle
Consumption of Water	224885030 Cubic Feet
Rate of Water charges	Rs. 12.48 per 1000 Cubic Feet
Rate of Royalty	Rs. 6 lakhs per cusec per year
Total Water Charges	Rs. 78.01 lakhs

34. The Petitioner has claimed the water charges for the 2019-24 tariff period as follows:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
62.17	62.17	62.17	62.17	62.17

35. The Petitioner vide additional submission dated 23.6.2021 has submitted the actual water charges of Rs. 72.72 lakh incurred in 2019-20 and the same is considered.



Further, the water charges for the period 2020-24 has been allowed, after escalating the actual water charges for 2019-20 by 5%. However, the Petitioner is directed to furnish the details of actual water consumption (in cubic meters) and rate (Rs/ Cubic meter) at the time of truing up of tariff. The water charges allowed for the 2019-24 tariff period are summarized as follows:

<i>(Rs. in lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
72.72	76.36	80.17	84.18	88.39

**Security Charges**

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

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

*Xxxx*

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

*xxx”*

37. The Petitioner has claimed total security expenses of Rs. 3136.41 lakh (i.e. Rs. 514.76 lakh in 2019-20, Rs. 565.71 lakh in 2020-21, Rs. 621.70 lakh in 2021-22, Rs. 683.27 lakh in 2022-23 and Rs. 750.96 lakh in 2023-24) for the 2019-24 tariff period, in terms of the second proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations. It has, however, not furnished any justification and the assessment of security, for the expenses claimed. It is further observed that the Petitioner vide additional submission dated 24.6.2021 has submitted actual security expenses of Rs. 454.51 lakh in 2019-20 and Rs. 476.64 lakh in 2020-21. Accordingly, we have considered the actual security expenses as claimed by the Petitioner for 2019-20 and 2020-21. Thereafter, for the years 2021-22, 2022-23 and 2023-24, the Security expenses have been allowed, after



escalating the actual security expenses for 2020-21 by 5%. However, the Petitioner shall, at the time of truing up, furnish the actual security expenses incurred along with proper justification and assessment in terms of Regulation 35(1)(6) of the 2019 Tariff Regulations. Accordingly, the Security charges allowed for the 2019-24 tariff period are summarized as follows:

<i>(in Rs. lakh)</i>				
<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
454.51	476.64	500.47	525.50	551.77

### **Capital spares**

38. The Petitioner has not claimed any capital spares, on projection basis, during the 2019-24 tariff period and has submitted that the same shall be claimed at the time of truing up of tariff, in terms of the last proviso to Regulation 35(1)(6) of the 2019 Tariff Regulations, based on actual consumption of spares. The claim of the Petitioner, if any, at the time of truing-up, of tariff, shall be considered on merits, after prudence check.

39. Accordingly, the total O&M expenses, including Water charges and Security expenses, claimed and allowed for the 2019-24 tariff period is summarized below:

<i>(Rs. in lakh)</i>						
		<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
O&M Expenses (in Rs lakh) (A)	Claimed	6921.60	7165.20	7415.10	7677.60	7946.40
	<b>Allowed</b>	6921.60	7165.20	7415.10	7677.60	7946.40
Water Charges (in Rs lakh) (B)	Claimed	62.17	62.17	62.17	62.17	62.17
	<b>Allowed</b>	72.72	76.36	80.17	84.18	88.39
Security Expenses (in Rs lakh) (C)	Claimed	514.76	565.71	621.70	683.27	750.96
	<b>Allowed</b>	454.51	476.64	500.47	525.50	551.77
<b>Total O&amp;M Expenses as allowed (including Water Charges and Capital Spares Consumed) (D) = (A+B+C)</b>	Claimed	<b>7498.54</b>	<b>7793.09</b>	<b>8098.98</b>	<b>8423.04</b>	<b>8759.53</b>
	<b>Allowed</b>	<b>7448.83</b>	<b>7718.20</b>	<b>7995.75</b>	<b>8287.28</b>	<b>8586.56</b>



### **Fly Ash Transportation charges**

40. The Petitioner, in the main petition, has not claimed expenditure towards fly ash transportation. However, the Petitioner vide its affidavit dated 13.5.2021 has claimed the actual expenditure of Rs.1014 lakh and Rs.1963 lakh for 2019-20 and 2020-21 respectively. Further, the Petitioner has submitted that it has claimed the projected expenses to be incurred due to the transportation of fly ash for the 2021-22 to 2023-24 (but has not indicated projected expenses for 2021-22). The Petitioner has projected Rs. 1416.08 lakh for 2022-23 and Rs. 1429.99 lakh for 2023-24. The Petitioner has prayed to allow above fly ash transportation charges for the 2019-24 tariff period. The Petitioner has submitted that to avoid the interest payment liability of the beneficiaries, the Petitioner may be allowed to recover/ pass on the ash transportation charges after adjusting the revenue earned from sale of ash at the end of each quarter of financial year subject to true-up at the end of the period.

41. The matter has been considered. We note that the Petitioner has filed Petition No. 205/MP/2021 seeking reimbursement of fly ash transportation charges in respect of its generating stations for the period 2019-24 and the Commission vide its order dated 28.5.2022 has 'admitted' the petition and the matter, has been heard on merits and order has been reserved on 11.7.2022. Therefore, the reimbursement of charges towards fly ash transportation has not been considered in this order and shall, be governed by the decision of the Commission in Petition No. 205/MP/2021.

### **Operational Norms**

42. The operational norms considered by the Petitioner in Form-3 of the petition is as follows:





<b>Normative Annual Plant Availability Factor (NAPAF) %</b>	<b>85.00</b>
Gross Station Heat Rate (kcal/kwh)	2430.00
Auxiliary Power Consumption %	9.00
Specific Oil Consumption (ml/kwh)	0.50

**(a) Normative Annual Plant Availability Factor**

43. Regulation 49 of the 2019 Tariff Regulations provides as follows:

*(A) Normative Annual Plant Availability Factor (NAPAF)*  
*(a) For all thermal generating stations, except those covered under clauses (b), (c), (d), & (e) - 85%.*

44. The Petitioner has considered NAPAF of 85% during the 2019-24 tariff period as per Regulation 49(A)(a) of the 2019 Tariff Regulations and hence, the same is allowed.

**(b) Station Heat Rate**

45. Regulation 49(C)(a)(i) of the 2019 Tariff Regulations provides as follows:

*“(C) Gross Station Heat Rate: (a) Existing Thermal Generating Stations (i) For existing Coal-based Thermal Generating Stations, other than those covered under clauses (ii) and (iii) below:*

<b>200/210/250 MW Sets</b>	<b>500 MW Sets (Sub-critical)</b>
2430kCal/kWh	2390 kCal/kWh

46. The Petitioner has considered the Gross Station Heat Rate of 2430 kCal/ kWh as per Regulation 49(C)(a)(i) of the 2019 Tariff Regulations and therefore, same has been considered for the purpose of tariff.

**(c) Auxiliary Power Consumption:**

47. Regulation 49(E)(a)(ii) of the 2019 Tariff Regulations provides for Auxiliary Power Consumption as follows:

*“49(E) Auxiliary Energy Consumption*  
*(a) Coal-based generating stations except at (b) below:*



	<i>With Natural Draft cooling tower or without cooling tower</i>
<i>(i) 200 MW series</i>	8.5%
<i>(ii) 300 MW and above</i>	
<i>Steam driven boiler feed pumps</i>	5.75%
<i>Electrically driven boiler feed pumps</i>	8.0%

*Provided that for thermal generating stations with induced draft cooling towers and where tube type coal mill is used, the norms shall be further increased by 0.5% and 0.8% respectively:*

48. The generating station is a 210 MW plant with induced draft cooling tower. Therefore, the Auxiliary Power Consumption (APC) of 9% as claimed by the Petitioner is as per Regulation 49(E)(a)(ii) of the 2019 Tariff Regulations. Hence, the same has been allowed.

***(d) Specific Oil Consumption***

49. Regulation 49(D)(a) of the 2019 Tariff Regulations, provides for Secondary fuel oil consumption of 0.50 ml/kWh, for coal-based generating stations. As the Secondary fuel oil consumption considered by the Petitioner is as per the said regulations, the same is allowed for determination of tariff for the 2019-24 tariff period.

50. Based on the above, the operational norms considered for determination of energy charges for the generating station for the 2019-24 tariff period are as under:

Normative Annual Plant Availability Factor (NAPAF) (%)	85.00
Heat Rate (kCal/kWh)	2430.00
Auxiliary Power Consumption (%)	9.00
Specific Oil Consumption (ml/kWh)	0.50

**Interest on Working Capital**

51. Sub-section (c) of clause (1) of Regulation 34 the 2019 Tariff Regulation provides as follows:

*“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.”*

*(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 1<sup>st</sup> April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:*

*Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.*

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

### **Fuel Cost for computation of working capital**

52. The Petitioner has claimed Energy Charge Rate (ECR) of 301.166 paisa/kWh and fuel component in working capital as follows:



(Rs. in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
Cost of coal for 50 days	5810.52	5810.52	5810.52	5810.52	5810.52
Cost of Secondary fuel oil 2 months	73.05	72.85	72.85	72.85	73.05

53. The Petitioner has claimed the fuel component cost in working capital and ECR based on:

- a) Operational norms as per the 2019 Tariff Regulations.
- b) Price and “as received” GCV of coal {after reducing the same by 85 kcal/kWh in terms of Regulation 43(2)(b)} procured for the three months of October 2018, November 2018, and December 2018, and
- c) Price and GCV of secondary fuel oil for the three months of October 2018, November 2018, and December 2018.

54. It is observed that the Petitioner vide affidavit dated 24.6.2021 has submitted revised Form-15 indicating the opening stock of coal and coal received during the months of October, November and December 2018, separately. On perusal of the data furnished by the Petitioner, it is observed that the Petitioner, while computing the landed cost of fuel, has considered the opening stock of coal for the months of October 2018, November 2018 and December 2018 (closing stock of the coal for the previous months). However, in terms of the Regulation 39 of the 2019 Tariff Regulations, the computation of ECR and associated fuel components in interest on working capital, is based on the landed price and GCV of fuel, which means that the fuel received during the specified three months (October 2018, November 2018 and December 2018) is only to be considered, without opening stock. The normative cost of coal for stock of 50 days and Normative Transit and Handling loss of 0.80% has been considered for the calculation of working capital requirements Accordingly, after excluding the opening stock value, we have worked out the weighted average landed cost and weighted average GCV of coal for working out the fuel component in working capital for the months of October



2018, November 2018 and December 2018. The Fuel components in working capital are allowed as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Cost of Coal towards stock (20 days generation corresponding to NAPAF)	2317.06	2317.06	2317.06	2317.06	2317.06
Advance towards cost of Coal for generation (30 days generation corresponding to NAPAF)	3475.60	3475.60	3475.60	3475.60	3475.60
Cost of Secondary fuel oil (2 Months generation corresponding to NAPAF)	64.46	64.29	64.29	64.29	64.46

### **Energy Charge Rate (ECR)**

55. The Petitioner has claimed ECR (ex-bus) of 301.16621 Rs/kWh, based on the weighted average price, GCV of coal & oil procured and burnt for the preceding months of October 2018, November 2018 and December 2018. The Respondent, UPPCL has submitted following contentions on the claim of the Petitioner:

- i. There is significant variation in expenditure on month on month basis. There is abnormal increase in December 2018.
- ii. Further, there are no details of credit notes for grade slippages. It is not clear whether the Petitioner is accounting for grade slippages at the time of purchase, i.e. on accrual basis or accounting as and when credit notes are issued by coal supply company. Therefore, it is requested that the details of credit notes for grade slippages may be provided, since inception, along with credit notes for grade slippages currently outstanding for recovery /adjustment (as credit notes are issued by coal company at its discretion).
- iii. Further, the Petitioner may be directed to provide details of accounting treatment being followed for grade slippages and if required, direct the Petitioner to account for grade slippages on accrual basis.

56. In response, the Petitioner has submitted that the “other charges” as submitted in Form 15 consists of various charges of miscellaneous nature such as handling charges, sampling charges, track patrolling etc and these charges usually vary from month to month based on the coal receipt, presentation of vendor’s bills during the months & payments thereof. It has stated that variation is very minimal in absolute terms.



57. The submissions have been considered. The ECR, as worked out, based on the operational norms specified under the 2019 Tariff Regulations and on “as received” GCV of coal for the preceding three months i.e., October 2018 to December 2018, has been considered for allowing two months of energy charge in working capital as follows:

Description	Unit	2019-24
Capacity	MW	210.00
Gross Station Heat Rate	Kcal/kWh	2430.00
Auxiliary Energy Consumption	%	9.00
Weighted average GCV of oil	Kcal/lit	9673.00
Weighted average GCV of coal	Kcal/kg	3870.33 (3955.33-85.00)
Weighted average price of oil	Rs/KL	49336.57
Weighted average price of Coal	Rs/MT	4315.85
Rate of energy charge ex-bus	Rs/kWh	2.9990

### **Working capital for O&M Expenses**

58. O&M expenses for 1 month claimed by the Petitioner for the purpose of working capital (including water charges and security expenses) are as follows:

*(Rs. in lakh)*

2019-20	2020-21	2021-22	2022-23	2023-24
624.88	649.42	674.91	701.92	729.96

59. Regulation 34(1)(a)(vi) of the 2019 Tariff Regulations provides for for one month of O&M expenses including water charges and security expenses. Accordingly, the O&M expenses (1 month) component of working capital is allowed as follows:

*(Rs. in lakh)*

2019-20	2020-21	2021-22	2022-23	2023-24
620.74	643.18	666.31	690.61	715.55

### **Working capital for Maintenance Spares**

60. Regulation 34(1)(a)(iv) of the 2019 Tariff Regulations provides for Maintenance spares @ 20% of the O&M expenses including water charges and security expenses. Accordingly, maintenance spares have been allowed as under:

*(Rs. in lakh)*

2019-20	2020-21	2021-22	2022-23	2023-24
1489.77	1543.64	1599.15	1657.46	1717.31



61. The difference between the O&M expenses for 1 month' and Maintenance spares claimed by the Petitioner as against those allowed as above, is only on account of variation in the water charges and security expenses claimed by the Petitioner and those allowed in this order.

**Working capital for Receivables**

62. Regulation 34(1)(a)(v) of the 2019 Tariff Regulations provides for Receivables for 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor. Accordingly, the Receivable component of working capital is allowed as follows:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Fixed charge for 45 days of sale of electricity calculated on NAPAF	2077.58	2080.20	2077.38	2092.66	2115.24
Energy charge for 45 days of sale of electricity calculated on NAPAF	5261.14	5261.14	5261.14	5261.14	5261.14
<b>Total</b>	<b>7338.72</b>	<b>7341.34</b>	<b>7338.52</b>	<b>7353.80</b>	<b>7376.38</b>

63. As per Regulation 34(2) of the 2019 Tariff Regulations, the cost of coal shall be based on landed fuel cost taking into account normative transit and handling losses in terms of Regulation 39 of the 2019 Tariff Regulations and gross calorific value of fuel as per actual weighted average for the third quarter of preceding financial year. Hence, the Petitioner is directed to furnish the details of quantity of coal as per Regulation 34(2) of the 2019 Tariff Regulations, at the time of truing up of tariff. The Petitioner is also directed to submit the details strictly as provided in Forms/ Annexures attached to the 2019 Tariff Regulations.



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

**Rate of Interest on working capital**

65. In accordance with Regulation 34(3) of the 2019 Tariff Regulations, the Petitioner has claimed rate of interest on working capital as 12.05% (i.e., 1 year SBI MCLR of 8.55% as on 1.4.2019 + 350 basis points) on projection basis, for the 2019-24 tariff period. However, as the tariff of the generating station for 2019-24 tariff period is being determined, 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 to 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%, 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). Accordingly, Interest on working capital is allowed as under:

	<i>(Rs. in lakh)</i>				
	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Working Capital for Cost of Coal/Lignite for Stock (20 days generation corresponding to NAPAF) (A)	2317.06	2317.06	2317.06	2317.06	2317.06
Working Capital for Cost of Coal/Lignite (30 days generation corresponding to NAPAF) (B)	3475.60	3475.60	3475.60	3475.60	3475.60
Working capital for Cost of Oil (2 Months generation corresponding to NAPAF) (C)	64.46	64.29	64.29	64.29	64.46





	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for Maintenance Spares (20% of Annual O&M Expenses) (D)	1489.77	1543.64	1599.15	1657.46	1717.31
Working Capital for Receivables (45 Days of Sale of Electricity at NAPAF) (E)	7338.72	7341.34	7338.52	7353.80	7376.38
Working Capital for O&M expenses (1 month of O&M Expenses) (F)	620.74	643.18	666.31	690.61	715.55
<b>Total Working Capital (I) = (A+B+C+D+E+F)</b>	<b>15306.35</b>	<b>15385.11</b>	<b>15460.93</b>	<b>15558.81</b>	<b>15666.37</b>
Rate of Interest (G)	12.05%	11.25%	10.50%	10.50%	10.50%
<b>Total Interest on Working capital (H) = (I)*(G)</b>	<b>1844.42</b>	<b>1730.83</b>	<b>1623.40</b>	<b>1633.68</b>	<b>1644.97</b>

### **Annual Fixed Charges**

66. Accordingly, the annual fixed charges approved for the generating station for the 2019-24 tariff period is summarised below:

	2019-20	2020-21	2021-22	2022-23	2023-24
					<i>(Rs. in lakh)</i>
Depreciation	1975.62	1975.62	1975.62	1975.62	1975.62
Interest on Loan	632.00	451.31	258.28	80.41	0.00
Return on Equity	4996.82	4996.82	4996.82	4996.82	4996.82
Interest on Working Capital	1844.42	1730.83	1623.40	1633.68	1644.97
O&M Expenses	7448.83	7718.20	7995.75	8287.28	8586.56
<b>Total Annual Fixed Charges</b>	<b>16897.69</b>	<b>16872.77</b>	<b>16849.87</b>	<b>16973.81</b>	<b>17203.97</b>

\* 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.

### **Application Filing fees and Publication charges**

67. The Petitioner has sought reimbursement of the fees paid by it for filing of the tariff petition and for publication expenses and has submitted that the reimbursement of the same are in accordance with Regulation 70(1) of the 2019 Tariff Regulations. In terms of Regulation 70(1) of the 2019 Tariff Regulations, the Petitioner is entitled for reimbursement of the filing fees and publication expenses in connection with the filing of this petition, directly from the beneficiaries, on pro-rata basis. Accordingly, we allow



the reimbursement of the expenditure in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

68. 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 recovery of statutory taxes, levies, duties, cess etc. levied by the statutory authorities in accordance with the 2019 Tariff Regulations.

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

70. Petition No. 427/GT/2020 is disposed of in terms of the above.

**Sd/-  
(Pravas Kumar Singh)  
Member**

**Sd/-  
(Arun Goyal)  
Member**

**Sd/-  
(I. S. Jha)  
Member**

