

imposed on mining in State of Haryana by the Director, Industries & Commerce, Mines & Geology, Haryana from 28.2.2010, which led to acute scarcity of raw construction material (sand, aggregate, etc.) which had also affected the progress of civil construction work in the plant area from March 2010. Thereafter, unprecedented rains during the year 2010 had inundated the civil foundation works within the plant area and despite the petitioner's efforts to ensure the completion of civil works before the cut-off date, the contractor could not mobilize adequate resources to the site. Further, the Petitioner has submitted that even after conducting various meetings and regular follow ups, the work did not progress due to scarcity of raw materials of concrete strength of M35/ M30 required for civil works due to ban on mining activity and finally due to delay in execution of this work, the Petitioner after following the provisions of contract, cancelled the left over work under the contracts. Since the left-over works were of small value, there was inadequate response from the working agencies located in the area and in view of the poor response from the agencies, the bid dates were extended a number of times to have adequate response to have a competitive rate for award of work. As a result of the poor response of the bidders, the Petitioner had tried to contract NBCC for completion of the balance works, which however could not materialize until July, 2015. The Petitioner has also submitted that it tried to persuade the agencies working at the site and the surrounding areas and also at other projects to participate in the tendering process and after rigorous follow up the work has been awarded to other various agencies but it again came to almost stand still at site due to the Jat agitation in the month of February, 2016. Accordingly, in order to ensure their safety, workers left the place of work and moved away to different areas. As such, based on all the above reasons the Petitioner has requested the Commission to allow the capitalization of these works.



38. The matter has been considered. It is observed that the additional capitalization claimed is in respect of works within the original scope of work and the delay in completion of the same was beyond the control of the Petitioner. Hence, in exercise of the power to relax under Regulation 54 of the 2014 Tariff Regulations, we allow the additional capital expenditure claimed towards the Main Plant and Offsite Civil Works. Accordingly, we allow claimed actual additional capital expenditure of Rs. 1412.91 lakh in 2016-17, Rs. 1196.20 lakh in 2017-18 and Rs. 1292.02 lakh in 2018-19, on cash basis,

***(j) Satcom and EDP facilities***

39. The Petitioner has claimed actual additional capital expenditure of Rs. 255.70 lakh in 2016-17, Rs. 19.83 lakh in 2017-18 and Rs. 8.43 lakh in 2018-19, on cash basis, towards Satcom and EDP facilities, under Regulation 14(1)(ii) read with Regulation 54 of 2014 Tariff Regulations. It is submitted that an amount of Rs. 1400 lakh was projected against this scheme in Petition No. 266/GT/2014 and the Commission vide its order dated 9.3.2017, had granted liberty to claim the same at the time of truing up of tariff. It has also stated that the work was included in the original scope and reasons of delay in capitalization has been attributed to delay in execution of Main Plant & offsite Civil works and Township Civil works. The civil fronts could be made available only after completion of these works.

40. The Respondents BYPL and BRPL have contended that the Petitioner has failed to provide any documentary evidence to substantiate its claim for additional capitalization beyond the cut-off date. The Petitioner has clarified that the work could not be capitalized before the cut-off date, on account of the delay in the main plant and off-site civil works.

41. The matter has been considered. It is observed that the additional capitalization



claimed is in respect of works within the original scope of work and after the cut-off date, and the delay in completion of the same was due to delay in execution of Main Plant & offsite Civil works and Township Civil works, which was beyond the control of the Petitioner. In view of above and considering the fact that above delay in execution of Main Plant & offsite Civil works and Township Civil works has be condoned and the instant claim of expenditure for works towards Satcom and EDP facilities is a consequential to it, accordingly, the same is allowed.

***(k) Deposit Work of Railways***

42. The Petitioner has claimed actual additional capital expenditure of Rs. 231.91 lakh in 2017-18 towards Deposit work of Railways under Regulation 14(3)(v) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the job of Railway siding at the generating station was carried out by RITES and the job was completed and capitalized before the cut-off date. It has also submitted that the present capitalization is towards final payment after reconciliation with RITES and payment of survey and construction charges paid to RITES as per contract for the works capitalized within the cut-off date.

43. The Respondent BYPL submitted that the Petitioner has failed to provide any details/ justification for the additional capital expenditure claimed and has submitted that the work may be allowed only after prudence check. The Respondent BRPL has submitted that the electrification cost of sidings also includes the Rewari-Manharee-Hissar section of Railways, which is used by general public, and accordingly the amount could be met from the Corporate Social Responsibility (CSR) fund of the Petitioner. The Petitioner has however, reiterated its submissions, made in the Petition.

44. The matter has been considered. It is observed that the actual additional capital



expenditure claimed by the Petitioner is towards final payments made after reconciliation with RITES and also payment of Survey and Construction charges made to RITES as per contract in respect of the works capitalized within the cut-off date. In view of this, the additional capital expenditure claimed by the Petitioner, is allowed under Regulation 14(3)(v) of 2014 Tariff Regulations.

***(l) Erection and Commissioning of 02 No Transformers***

45. The Petitioner has claimed actual additional capital expenditure of Rs. 3.37 lakh in 2017-18 towards Erection and Commissioning of 02 No Transformers under Regulation 14(1)(ii) read with Regulation 54 of 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the additional capitalization for the works form part of the original scope of work and the said work got delayed due to the delay in completion of storm water pump house, which was part of the “Main Plant and offsite civil works” package. The reasons for the delay in completion of “Main Plant and Offsite Civil Works” package have been given separately.

46. The matter has been considered. It is submitted that the additional capital expenditure of Rs. 3.37 lakh in 2017-18 claimed towards the Erection and Commissioning of 02 No Transformers, got delayed due to the delay in completion of storm water pump house which formed part of “Main Plant and offsite civil works” package. Considering the fact that no proper justification/ documentary evidence as to reason for the delay of storm water pump house (which was part of “Main Plant and offsite civil works” package) which has resulted in the delay of capitalization of Erection and Commissioning of 02 No Transformers, has not been furnished, we find no reason to allow the claim of the Petitioner’s claim for additional capitalization of the expenditure after the cut-off date.

***(m) Installation of LED Lighting***



47. The Petitioner has claimed actual additional capital expenditure of Rs. 124.06 lakh in 2017-18 and Rs. 93.07 lakh in 2018-19 towards Installation of LED Lighting under Regulation 14(3)(ii) of 2014 Tariff Regulations. It has also submitted that the Hon'ble Prime Minister of India on 5.01.2015 had launched the National LED Programme with an objective to reduce energy consumption by using energy efficient lighting and in line with this objective, Unnat Jyoti by Affordable LEDs for All (UJALA) and Street Lighting National Programme is being implemented by EESL. It has also stated that subsequently, the Govt of Haryana vide its gazette notification dated 29.6.2016, has made it mandatory for all Central Govt/ State Govt/ Public Sector establishments, located in the state of Haryana, to use LED lights.

48. The Respondent TPDDL has objected to capitalization of LED installation, being in the nature of O&M expenditure. The Respondents BYPL and BRPL have submitted that the Petitioner has not submitted sufficient details, such as the energy savings from installation of LED, which could be offset, against the cost of LED. The Petitioner has clarified that it was mandated to replace all old bulbs with LED bulbs, in all its buildings including compound/ street lighting and that any directions of the Government of India are required to be implemented and amounts to "change in law".

49. The matter has been considered. It is noticed that the additional capital expenditure incurred towards installation of LED lighting is in terms of the MOP, GoI letter dated 2.8.2017, which recommends the replacement of existing old bulbs with LED bulbs, resulting in reduction of about 50% to 90% in energy consumption by lighting. In our view, the letter of the MOP, GOI, as referred to by the Petitioner, is recommendatory in nature. Also, the Govt of Haryana gazette notification dated 29.6.2016, is applicable only for new plants. In view of this, the recommendations/gazette notification, cannot be construed as a 'change in law' event



or for compliance to an existing law, for this generating station, in order to permit the additional capital expenditure claimed by the Petitioner. Moreover, the benefits of the replacement of incandescent light with the LED lighting system, accrues only to the benefit of the Petitioner. In view of these, the additional capital expenditure of Rs. 124.06 lakh in 2017-18 and Rs. 93.07 lakh in 2018-19 towards Installation of LED Lighting claimed by the Petitioner is not allowed.

**(n) Transit Camp**

50. The Petitioner has claimed actual additional capital expenditure of Rs. 8.71 lakh in 2018-19 towards Transit Camp under Regulation 14(3)(i) of the 2014 Tariff Regulations. The Petitioner has submitted that the capitalization is on account of arbitration award for the asset capitalized as on the COD of the generating station. The Respondent BPRL has submitted that since these are new claims, the same may not be allowed.

51. The matter has been considered. As the additional capital expenditure claimed by the Petitioner, is on account of arbitration award (Case No. 46/2010) of the asset, capitalized as on the COD of the generating station, we after prudence check, allow the additional capital expenditure claimed by the Petitioner, under Regulation 14(3)(i) of 2014 Tariff Regulations.

**(o) ABT system with server**

52. The Petitioner has claimed actual additional capital expenditure of Rs. 53.32 lakh on cash basis, in 2018-19 towards ABT system with server, under Regulation 14(3)(ii) of the 2014 Tariff Regulations. The Petitioner has submitted that the ABT system was installed at the generating station in 2010, which was compliant with UI Regulations notified by the Commission and thereafter, with the introduction of DSM Regulation, the OEM had refused to provide support for ABT, to make it compliant with the DSM Regulation, as the software became obsolete. The Petitioner has submitted the copy



of communication from OEM separately. The Respondent BPRL has submitted that since these are new claims, the same may not be allowed.

53. The matter has been considered. As the additional capital expenditure claimed towards ABT system with server is on account of obsolescence of software, due to new DSM Regulations, we allow the additional capital expenditure of Rs. 53.32 lakh in 2018-19 under Regulation 14(3)(ii) of the 2014 Tariff Regulations. However, the corresponding decapitalization of the old asset is considered under 'Assumed Deletions'.

**(p) Construction 3 no RCC Water tank**

54. The Petitioner has claimed actual capital expenditure of (-) Rs. 0.56 lakh in 2018-19 towards Construction 3 no RCC Water tank on account of cost adjustment corresponding to the asset capitalized in 2015-16 i.e., before the cut-off date. As the additional capital expenditure claimed is on account of cost adjustment corresponding to the asset capitalized in 2015-16 i.e., before the cutoff date, the same is allowed.

**(q) 7.5 KWP Solar Panel**

55. The Petitioner has claimed actual additional capital expenditure of Rs. 10.95 lakh in 2018-19 towards 7.5 KWP Solar panel under Regulation 14(3)(x) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that Y- Cabin is a Signaling Cabin, located at the point where coal rakes from external Rail Network are diverted into plant site. It has also stated that this cabin is crucial from rake movement point of view and because of its distance from plant, it gets power supply from local DISCOM. The Petitioner has also submitted that due to frequent interruption in power supply to the cabin, the reliability of Y-Cabin is jeopardized and in order to improve reliability of Y-Cabin, 7.5 KWp solar system has been installed at Y-Cabin. The Respondent BPRL has submitted that since these are new claims, the same may



not be allowed.

56. The matter has been considered. As submitted by the Petitioner, the additional capital expenditure claimed is in order to improve the reliability of Y-Cabin. It is, however observed, that the additional capital expenditure for 7.5 KWp Solar panel will only help the Petitioner in reducing the auxiliary power consumption and cannot be considered as modification in the fuel receiving system. In view of this, the additional capital expenditure claimed is not allowed.

**(r) Package ERV- SG Package**

57. The Petitioner has claimed actual additional capital expenditure of (-) Rs. 8.63 lakh in 2017-18 and Rs. 35.12 lakh in 2018-19, on accrual basis, towards Package ERV- SG Package, under Regulation 14(3)(v) of 2014 Tariff Regulations. As the additional capitalization is on account of reinstatement of liabilities due to Foreign Exchange Rate Variation, corresponding to the works allowed by the Commission, the claim of the Petitioner is allowed and will be considered at the time of actual discharge of the liability.

**(s) Package ERV- TG Package**

58. The Petitioner has claimed actual additional capital expenditure of Rs. 36.99 lakh in 2017-18 and Rs. 10.64 lakh in 2018-19, on accrual basis, towards Package ERV- TG Package, under Regulation 14(3)(v) of 2014 Tariff Regulations. As the additional capitalization is on account of reinstatement of liabilities due to Foreign Exchange Rate Variation, corresponding to the works allowed by the Commission, the claim of the Petitioner is allowed and will be considered at the time of actual discharge of the liability.

**Decapitalization**

59. The Petitioner has claimed the following decapitalization during the period 2014-19:





(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Decapitalization of Lighting System	0.00	0.00	0.00	(-)112.94	0.00
Decapitalization of Electrical Installations	0.00	0.00	0.00	(-)98.08	(-)76.03
Decapitalization of Spares: Part of Capital Cost	(-)1936.77*	(-)1653.99*	(-)60.13	(-)209.27	(-)603.55
Total Claimed	(-)1936.77	(-)1653.99	(-)60.13	(-)420.30	(-)679.58

\*Decapitalization allowed in order dated 9.3.2017 in Petition No. 266/GT/2014, on actual basis for spares, MBOA items and excess initial spares.

**(a) Decapitalization of Lighting System**

60. The Petitioner has claimed decapitalization of lighting system for (-) Rs. 112.94 lakh in 2017-18 under Regulation 14(4) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that the decapitalization of assets is corresponding to assets capitalized as on the COD of the generating station. As the additional capital expenditure claimed for LED lighting has not been allowed in this order, the decapitalization of the same is also not considered.

**(b) Decapitalization of Electrical Installations**

61. The Petitioner has claimed decapitalization of electrical installations for (-) Rs. 98.08 lakh in 2017-18 and (-) Rs. 76.03 lakh in 2018-19, under Regulation 14(4) of the 2014 Tariff Regulations. In justification for the same, the Petitioner has submitted that the decapitalization of assets corresponds to assets capitalized as on the COD of the generating station, the same may be allowed as part of the capital cost. Regulation 14(4) of the 2014 Tariff Regulations, provides that the original value of de-capitalized assets shall be deducted from the capital cost allowed to the generating station. Accordingly, the de-capitalization of these assets as claimed by the Petitioner is allowed.

**(c) Decapitalization of spares: Part of Capital Cost**

62. The Petitioner has claimed decapitalization of spares for (-) Rs 527.37 lakh in 2014-15 and (-) Rs 1577.32 lakh in 2015-16, decapitalization of MBOA items of (-) Rs 21.85 lakh in 2014-15 and (-) Rs 76.67 lakh in 2015-16, adjustment of excess initial



spares of (-) Rs 1387.55 lakh in 2014-15. In justification for the same, the Petitioner has submitted that in order dated 9.3.2017 in Petition No. 266/GT/2014, the Commission has allowed the same on actual basis. As the Commission had considered the said decapitalized values in order dated 9.3.2017 on actual basis, after prudence check, the same is allowed.

63. The Petitioner has claimed decapitalization of spares (part of capital cost) of (-) Rs. 60.13 lakh in 2016-17, (-) Rs. 209.27 lakh in 2017-18 and (-) Rs. 603.55 lakh in 2018-19 under Regulation 14(4) of the 2014 Tariff Regulations. In justification of the same, the Petitioner has submitted that these spares were part of capital cost and became unserviceable. In view of this, the same has been decapitalized. The summary of decapitalization considered for the purpose of tariff is as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
(-)1936.77	(-)1653.99	(-)60.13	(-)307.36	(-)679.58

**Assumed Deletions**

64. As per consistent methodology adopted by the Commission, the expenditure on replacement of assets, if found justified, is allowed for the purpose of tariff, provided that the capitalization of the said asset is followed by de-capitalization of the original value of the old asset. However, in certain cases where de-capitalization is affected in books during the following years, to the year of capitalization of new asset/COD of the generating station, the de-capitalization of the old asset for the purpose of tariff is shifted to the very same year in which the capitalization of the new asset is allowed. Such de-capitalization which is not a book entry in the year of capitalization is termed as “Assumed deletion”. Further, in the absence of the gross value of the asset being de-capitalized, the same is calculated by de-escalating the gross value of the new asset @ 5% per annum till the year of capitalization of the old asset.



65. It is observed that the Petitioner has claimed expenditure towards ABT system with server for Rs. 55.02 lakh in 2018-19 due to obsolescence. However, the Petitioner in this Petition has, not provided the de-capitalization value of the old asset/work which is being replaced. Accordingly, based on above methodology, the assumed deletion considered for this asset is considered as (-) Rs. 39.10 lakh in 2018-19.

### Un-discharged liabilities & Discharge of liabilities

66. The Petitioner has claimed discharge of liabilities, duly certified by auditor, as under:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
18916.88	5942.47	5547.76	28256.00	2663.15

67. Out of the total discharge of liabilities claimed by the Petitioner, the discharge corresponding to the disallowed assets, has not been considered for the purpose of tariff. Accordingly, the discharges of liabilities, allowed for the purpose of tariff is as under:

<i>(Rs. in lakh)</i>						
		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening un-discharged liabilities	40966.16	24512.09	51579.13	49358.94	17683.53
B	Contractor ERV up-dation	(-) 954.98	179.77	(-) 302.13	28.36	45.77
C	Addition during the period	3531.43	32961.38	3770.63	1664.26	3721.06
D	Discharges during the period	18916.88	5942.47	5547.76	27858.34	2663.10
E	Reversal of liabilities out of liabilities added during the period	113.63	131.63	140.92	5509.71	55.44
F	Closing un-discharged liabilities (A+B+C-D-E)	24512.09	51579.13	49358.94	17683.53	18731.82

### A. Reconciliation of the actual additional capital expenditure

68. The reconciliation of the actual additional capital expenditure from 2016-17 to 2018-19, with books of accounts, as submitted by the Petitioner is as follows:



(Rs in lakh)

S. No		2014-15	2015-16	2016-17	2017-18	2018-19
1	Closing Gross Block as per IGAAP Audited Balance Sheet as on 31.03.2016	885319.24	941694.76	941694.76	0.00	0.00
2	Capital spares capitalized	-	-	1735.52	0.00	0.00
3	Opening Gross Block after IND AS adjustment 01st April (row 1+2)	860654.32	885319.24	943430.29	955323.38	954945.22
4	Add: Additions as per Note-2	-	-	9374.60	5695.80	4901.06
5	Add: Additions as per Note-2 out of adjustment column	-	-	3552.76	(-5513.74)	5470.05
6	Less: Decapitalization as per Note-2 out of adjustment column	-	-	508.53	560.22	5377.08
7	<b>Total Addition as per Ind AS Balance Sheet (4 + 5 -6)</b>	<b>24664.92</b>	<b>56375.52</b>	<b>12418.83</b>	<b>(-378.16)</b>	<b>4994.03</b>
<b>IND AS Adjustments</b>						
8	Add: Vendor discounting out of assets in the year	-	--	0.00	0.00	0.00
9	Less: Unwinding expenses Capitalized	-	-	0.00	0.00	0.00
10	Less: IND AS Adj of Decapitalization out of ROW 6 (mitigating the impact of carrying cost exemption to arrive)	-	-	0.00	0.00	0.00
11	Less: Total addition in capital OH asset class (including adjustments also)	-	-	525.73	0.00	506.79
12	Add: Decapitalization of capital Overhauling during the year	-	-	0.00	0.00	0.00



S. No		2014-15	2015-16	2016-17	2017-18	2018-19
15	Less: Ind AS adj due to Inter-unit Transfer (IUT)	-	-			
<b>16</b>	<b>Subtotal IND AS ADJ (8-9-10-11+12+13)</b>	-	-	<b>(-)525.73</b>	<b>0.00</b>	<b>(-)506.79</b>
17	Closing Gross Block after IND AS adjustment (row 3+4+5-6+14)	885319.24	941694.76	955323.38	954945.22	959432.46
18	Addition as per IGAAP (row 15 - 3)	<b>24664.92</b>	<b>56375.52</b>	11893.10	(-)378.16	4487.24
19	Addition pertaining to Transmission	(-)307.76	-	0.00	0.00	0.00
20	Addition pertaining to generation			11893.10	(-)378.16	4487.24
21	Exclusions (Items not allowable/not claimed) (accrual basis)	(-)113.63	(-)131.63	480.34	(-)5065.04	(-)1962.94
22	Net Additional capital expenditure claimed (accrual basis) (row 16 - 16(a)-17)	25086.30	56507.15	11412.76	4686.87	6450.18
23	Less: Undischarged liabilities	2576.45	33141.15	3496.03	2181.61	3769.94
<b>24</b>	<b>Net Additional capital expenditure claimed (cash basis)</b>	<b>22509.85</b>	<b>23366.01</b>	<b>7916.73</b>	<b>2505.26</b>	<b>2680.24</b>
25	Liability Discharged	18916.88	5942.47	5547.76	28256.00	2663.15
<b>26</b>	<b>Total additional capitalization claimed (20+21)</b>	<b>41426.74*</b>	<b>29308.48</b>	<b>13464.49</b>	<b>30761.26</b>	<b>5343.38</b>

69. It is observed that the Petitioner has not adjusted the excess capital spares of Rs 1387.55 lakh disallowed in order dated 9.3.2017 in Petition No. 266/GT/2014, while arriving at total claimed additional capital expenditure.

## **B. Exclusions**

70. The summary of exclusions from books of accounts claimed, on accrual basis,

from 2016-17 to 2018-19, is discussed as follows:

	<i>(Rs in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Schemes not claimed	0.00	0.00	0.00	0.00	135.54
Liability Reversal	(-)113.63	(-)131.63	(-)140.92	(-)5509.71	(-)55.49
Capitalization of Capital Spares	0.00	0.00	836.06	397.37	617.79
Capitalization of MBOA	0.00	0.00	233.47	111.64	56.59
Capitalization of T&P Items	0.00	0.00	0.00	75.60	159.43
Decapitalization of MBOAs: Part of Capital Cost	0.00	0.00	(-)95.51	(-)7.38	(-)26.54
Decapitalization of Capital Spares-Not part of Capital Cost	0.00	0.00	(-)352.75	(-)132.56	(-)176.17
Inter-unit transfer of assets	0.00	0.00	0.00	0.00	(-)2674.08
Overhauling	0.00	0.00	0.00	0.00	0.00
Accounting Adjustments	0.00	0.00	0.00	0.00	0.00
<b>Total Exclusions Claimed</b>	<b>(-)113.63</b>	<b>(-)131.63</b>	<b>480.34</b>	<b>(-)5065.04</b>	<b>(-)1962.94</b>

71. The Respondent BRPL has submitted that assets which are part of the capital cost are required to be de-capitalized as Regulation 14(4) of the 2014 Tariff Regulations do not allow the retention of the asset, even when it form part of the project and when the asset is de-capitalized.

72. We examine the exclusions claimed by the Petitioner in the subsequent paragraphs.

**(a) Schemes not claimed**

73. The Petitioner submitted that it has not claimed schemes amounting to Rs. 135.54 lakh which includes works/ items such as Construction of shed, Station C&I - Delton Cables & Yogokawa, Construction of toilets and other civil works at IGSTPP, Providing and fixing aluminum composite panels (ACP) in roof slab of 4<sup>th</sup> floor of service building in plant area, Development work of courtyard and outside area of service building in plant area, Structural strengthening of distress RCC members of stacker reclaimer foundation at IGSTPP, Construction of safety/bulker manhole access platform near ash utilization weigh bridge, Construction of semi covered shed



in switch yard and Supply installation and commissioning of gas pipe line exhaust hood in the plant canteen at IGSTPP. In justification for the same, the Petitioner has submitted that the expenditure nature is in the nature of minor O&M expenses or R&M works. Accordingly, the exclusion is allowed.

**(b) Liability Reversal**

74. The Petitioner has claimed exclusion of liability reversal of (-) Rs. 113.63 lakh in 2014-15, (-) Rs. 131.63 lakh in 2015-16, (-) Rs. 140.92 lakh in 2016-17, (-) Rs. 5509.71 lakh in 2017-18 and (-) Rs. 55.49 lakh in 2018-19. In justification for same, the Petitioner has submitted that liabilities are excluded while determining capital cost for the purpose of tariff. Since tariff is allowed on cash basis, the Commission, in its various orders, had consistently allowed the exclusion of reversal of un-discharged liabilities for the purpose of tariff. Accordingly, the Petitioner's claim under this head is allowed.

**(c) Capitalisation of Capital Spares**

75. The Petitioner has claimed exclusion of capital spares of Rs. 836.06 lakh in 2016-17, Rs. 397.37 lakh in 2017-18 and 617.79 lakh in 2018-19. In justification for same, the Petitioner has submitted that capitalization of spares beyond the cut-off date is not admissible as per the 2014 Tariff Regulations and accordingly the same are kept under exclusion. Since capitalization of spares after the cut-off date of the generating station is not allowed as part of the capital cost in terms of the 2014 Tariff Regulations, the Petitioner's claim for exclusion under this head is allowed.

**(d) Capitalisation of MBOA**

76. The Petitioner has claimed exclusion of additional capital expenditure of Rs. 233.47 lakh in 2016-17, Rs. 111.64 lakh in 2017-18 and 56.59 lakh in 2018-19 pertaining to capitalization of MBOA's. In justification for the same, the Petitioner has



submitted that capitalization of MBOA's beyond the cut-off date are not allowed as per 2014 Tariff Regulations and accordingly the same are kept under exclusion. Since capitalization of MBOA's after the cut-off date of the generating station are not allowed as part of the capital cost, in terms of the 2014 Tariff Regulations, the Petitioner's claim for exclusion under this head is allowed.

**(e) Capitalization of T&P Items**

77. The Petitioner has claimed exclusion of additional capital expenditure of Rs. 75.60 lakh in 2017-18 and Rs. 159.43 lakh in 2018-19 pertaining to capitalization of T&P items. In justification for the same, the Petitioner has submitted that capitalization of these items is not allowed as per the 2014 Tariff Regulations and accordingly the same are kept under exclusion. Accordingly, the Petitioner's claim for exclusion under this head is allowed.

**(f) Decapitalization of MBOA's (forming part of capital cost)**

78. The Petitioner has claimed exclusion of de-capitalization of MBOA's, forming part of the admitted capital cost of the generating station for (-) Rs.95.51 lakh in 2016-17, (-) Rs.7.38 lakh in 2017-18 and (-) Rs.26.54 lakh in 2018-19. In justification for the same, the Petitioner has submitted that as the capitalization of expenditure against MBOA items are not being allowed, their de-capitalization has been claimed as exclusions. Regulation 14(4) of the 2014 Tariff Regulations provides that in case of de-capitalization of assets, the original cost of such asset is required to be removed from the admitted capital cost of the generating station. Accordingly, the exclusion claimed under this head is not allowed.

**(g) Decapitalization of capital spares (not part of capital cost)**

79. The Petitioner has claimed exclusion of de-capitalization of capital spares for (-) Rs.352.75 lakh in 2016-17, (-) Rs.132.56 lakh in 2017-18 and (-) Rs.176.17 lakh in 2018-19. In justification for the same, the Petitioner has submitted that these capital





spares do not form part of the capital cost and accordingly their de-capitalization has been claimed as exclusions. The Commission, in its various orders, had consistently allowed the exclusion of de-capitalization of assets not forming part of the admitted capital cost. Accordingly, the Petitioner's claim under this head is allowed.

**(h) Inter-unit transfer of assets**

80. The Petitioner has claimed exclusion of (-) Rs.2674.08 lakh in 2018-19 (transfer of LP & HP Module to Mauda & Rihand of (-) Rs 4494.78 lakh and Inter unit transfer of HP Module from Vindhyachal of Rs 1820.70 lakh) on account of inter-unit transfer of assets to/from the generating station. In justification of the same, the Petitioner has submitted that temporary inter-unit transfer of assets, is not allowed for the purpose of tariff and accordingly, the same has been kept under exclusion. It is observed that the Petitioner is the joint venture company having only one generating station and hence, the inter-unit transfer is not to be allowed under exclusions. Accordingly, the Petitioner's claim for exclusion of (-) Rs 4494.78 lakh under this head is not allowed. However, the exclusion towards Inter unit transfer of HP Module from Vindhyachal of Rs 1820.70 lakh is allowed as claimed by the Petitioner.

**(i) Accounting Adjustments**

81. The Petitioner has claimed an expenditure of Rs. 5154.92 lakh for 2015-16, Rs.525.73 lakh in 2016-17, and Rs.506.79 in 2018-19, with corresponding negative entries of same amount, as adjustment on account of accounting adjustments. As such, after adjustment, the net claim reduces to zero. Considering the fact that the accounting adjustment leading to zero expenditure is in order and does not impact the claim made by the Petitioner, the same is allowed under exclusion.

82. Accordingly, the summary of exclusions allowed/ not allowed for the 2014-19 tariff period is as follows:



(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Exclusions claimed (A)	(-)113.63	(-)131.63	480.34	(-)5065.04	(-)1962.94
Exclusions allowed (B)	(-)113.63	(-)131.63	575.85	(-)5057.66	2558.39
Exclusion not Allowed (A-B)	0.00	0.00	(-)95.51	(-)7.38	(-)4521.33

83. Based on the above discussions, the additional capital expenditure allowed for the 2014-19 tariff period is summarized as follows:

(Rs. in lakh)

Sl. No.	Head of Work /Equipment	2014-15	2015-16	2016-17	2017-18	2018-19	Total
		Allowed in Order dated 9.3.2017 in Petition No. 266/GT/2014					
<b>A</b>	<b>Additional Capitalization</b>						
1	Land	1228.61	0.00	180.72	0.00	1715.22	3124.55
2	SG & TG Package	4499.63	600.33	1113.75	74.03	42.64	6330.38
3	BOP Mechanical	2102.75	5790.49	0.00	0.00	0.00	7893.24
4	BOP Electrical	199.46	247.72	0.00	0.00	0.00	447.18
5	Civil Works	7803.70	15075.47	0.00	0.00	0.00	22879.17
6	C&I Package	88.27	51.24	0.00	0.00	0.00	139.51
7	MBOA	351.42	569.21	0.00	0.00	0.00	920.63
8	Initial spares	6784.75	2685.54	0.00	0.00	0.00	9470.29
9	Ash Related Works	0.00	0.00	662.51	35.60	7.95	706.06
10	IP Camera based Surveillance System	0.00	0.00	242.91	0.00	0.00	242.91
11	RO Plant Package	0.00	0.00	0.00	0.07	0.00	0.07
12	Makeup water civil works package	0.00	0.00	0.00	0.00	0.00	0.00
13	Fire detection and protection system, Air conditioning system and Station piping package	0.00	0.00	18.97	12.90	0.00	31.87
14	Permanent Township Civil work	0.00	0.00	4053.91	1216.91	128.07	5398.90
15	Main plant and offsite Civil Works	0.00	0.00	1412.91	1196.20	1292.02	3901.13
16	Satcom and EDP facilities	0.00	0.00	255.70	19.83	8.43	283.95
17	Deposit Work of Railways	0.00	0.00	0.00	231.91	0.00	231.91
18	Erection and Commissioning of 02 No Transformers	0.00	0.00	0.00	0.00	0.00	0.00
19	Installation of LED Lighting	0.00	0.00	0.00	0.00	0.00	0.00
20	Transit Camp	0.00	0.00	0.00	0.00	8.71	8.71
21	ABT system with server	0.00	0.00	0.00	0.00	53.32	53.32
22	7.5 KWP Solar panel	0.00	0.00	0.00	0.00	0.00	0.00
23	Construction 3 no RCC Water tank	0.00	0.00	0.00	0.00	(-)0.56	(-)0.56
	<b>Sub Total (A)</b>	<b>23058.59</b>	<b>25020.00</b>	<b>7941.37</b>	<b>2787.46</b>	<b>3255.79</b>	<b>62063.21</b>
<b>B</b>	Decapitalization	(-)1936.77*	(-)1653.99	(-)60.13	(-)307.36	(-)679.58	(-)4637.82
<b>C</b>	Assumed Deletion	0.00	0.00	0.00	0.00	(-)39.10	(-)39.10
<b>D</b>	Liability Discharge	18916.88	5942.47	5547.76	27858.34	2663.10	60928.55
<b>E</b>	Exclusion not	0.00	0.00	(-)95.51	(-)7.38	(-)4521.33	(-)4624.22



Sl. No.	Head of Work /Equipment	2014-15	2015-16	2016-17	2017-18	2018-19	Total
		Allowed in Order dated 9.3.2017 in Petition No. 266/GT/2014					
	allowed						
F	<b>Total Additional capital expenditure allowed (E=A+B+C+D+E)</b>	<b>40038.70</b>	<b>29308.48</b>	<b>13333.49</b>	<b>30331.06</b>	<b>678.88</b>	<b>113690.61</b>

\*Includes the adjustment of excess initial of (-) Rs.1387.55 lakh.

### Capital Cost allowed for the 2014-19 tariff period

84. Accordingly, the capital cost allowed for the generating station is as follows:

	(Rs. in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	761233.37	801272.07	830580.56	843914.05	874245.10
Add: Net additional capital expenditure allowed	40038.70	29308.48	13333.49	30331.06	678.88
<b>Closing Capital Cost</b>	<b>801272.07</b>	<b>830580.56</b>	<b>843914.05</b>	<b>874245.10</b>	<b>874923.98</b>
Average Capital Cost	781252.72	815926.32	837247.30	859079.58	874584.54

### Debt-Equity Ratio

85. Regulation 19 of the 2014 Tariff Regulations provides as follows:

*“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014 the debt equity ratio would be considered as 70:30 as on COD. 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 shall submit the resolution of the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund 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 1.4.2014 debt equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.*

*(4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014 but where debt: equity ratio*

has not been determined by the Commission for determination of tariff for the period ending 31.3.2014 the Commission shall approve the debt: equity ratio based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 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.”

86. The gross normative loan and equity amounting to Rs. 532863.36 lakh and Rs. 228370.01 lakh, respectively as on 1.4.2014, as considered in order dated 9.3.2017 in Petition No. 266/GT/2014, has been retained for the purpose of tariff. Further, the additional capital expenditure admitted as above has been allocated in the debt-equity ratio of 70:30. Accordingly, the debt-equity ratio in respect of the generating station, as on 1.4.2014 and 31.3.2019 allowed is as follows:

(Rs. in lakh)

	Capital cost as on 1.4.2014		Additional Capital Expenditure 2014-19		Capital cost as on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt (A)	532863.36	70.00%	79583.43	70.00%	612446.79	70.00%
Equity (B)	228370.01	30.00%	34107.18	30.00%	262477.19	30.00%
<b>Total (A+B)</b>	<b>761233.37</b>	<b>100.00%</b>	<b>113690.61</b>	<b>100.00%</b>	<b>874923.98</b>	<b>100.00%</b>

### **Return on Equity**

87. Regulation 24 of the 2014 Tariff Regulation provides as under:

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(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 the 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:

- i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:
- ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
- iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
- iv) the rate of return of a new project shall be reduced by 1% 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)/ Free Governor Mode

- Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
  - vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometer.”

88. Regulation 25 of the 2014 Tariff Regulations provides as under:

*“Tax on Return on Equity: (1) The base rate of return on equity as allowed by the Commission under Regulation 24 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 the 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 income on other income stream (i.e., income of non-generation or non-transmission business, as the case may be) shall not be considered 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*

*(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 2014-15 to 2018-19 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/DICs as the case may be on year to year basis.”*

89. The Petitioner has claimed Return on Equity (ROE) for the 2014-19 tariff period, after grossing up the base rate of return on equity of 15.50% with the effective tax rates (based on MAT rates) for each year as per Regulation 25 of the 2014 Tariff regulations. The Respondent BRPL has submitted that the statutory delegation is provided to Petitioner under Regulation 25(3) of 2014 Tariff Regulations, wherein documents related to actual tax paid only on generation business in the particular region need to be provided.



90. ROE considering the MAT rate (Effective Tax) as per Regulation 25 of the 2014 Tariff Regulations, as applicable in the respective years, is allowed for the generating station as follows:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Normative Equity-Opening (A)	228370.01	240381.62	249174.17	253174.21	262273.53
Addition of Equity due to additional capital expenditure (B)	12011.61	8792.55	4000.05	9099.32	203.66
Normative Equity-Closing (C) = (A) + (B)	240381.62	249174.17	253174.21	262273.53	262477.19
Average Normative Equity (D) = (A+C)/2	234375.82	244777.89	251174.19	257723.87	262375.36
Return on Equity (Base Rate) (E)	15.500%	15.500%	15.500%	15.500%	15.500%
Effective Tax Rate for the year (F)	20.961%	21.342%	21.342%	21.342%	21.549%
Rate of Return on Equity (Pre-Tax) (G) = (E)/(1-F)	19.610%	19.705%	19.705%	19.705%	19.758%
<b>Return on Equity (Pre-Tax) annualized (H) = (D)*(G)</b>	<b>45961.10</b>	<b>48233.48</b>	<b>49493.87</b>	<b>50784.49</b>	<b>51840.12</b>

### Interest on Loan

91. Regulation 26 of the 2014 Tariff Regulations provides as follows:

*“26. Interest on loan capital: (1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*

*(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of Decapitalization 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 up to 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 generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such refinancing shall be borne by the*



beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

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

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute: Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

92. Interest on loan has been out as follows:

- (a) Gross normative loan amounting to Rs.532863.36 lakh as considered in order dated 9.3.2017 in Petition No. 266/GT/2014 has been retained as on 1.4.2014.
- (b) Cumulative repayment amounting to Rs. 73600.88 lakh as considered in order dated 9.3.2017 in Petition No. 266/GT/2014 has been retained as on 1.4.2014.
- (c) Accordingly, the net normative opening loan as on 1.4.2014 is Rs. 459262.48 lakh.
- (d) Addition to normative loan on account of additional capital expenditure allowed above has been considered.
- (e) Depreciation allowed has been considered as repayment of normative loan during the respective year of the 2014-19 tariff period. Also, repayments have been adjusted for de-capitalization of assets considered for the purpose of tariff; and
- (f) The Petitioner has claimed weighted average rate of interest (WAROI) of 11.0621% in 2014-15, 11.0300% in 2015-16, 10.9888% in 2016-17, 8.8118% in 2017-18 and 8.8338% in 2018-19. In line with the provisions of the Regulations stated above, the weighted average rate of interest has been calculated by applying the actual loan portfolio existing as on 1.4.2014, along with subsequent additions during the 2014-19 tariff period, if any, for the generating station. In case of loans carrying floating rate of interest, the details of rate of interest, as furnished by the Petitioner, has been considered for the purpose of tariff duly adjusted for interest capitalized during the respective years.

93. Interest on loan has been worked out as follows:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan (A)	532863.36	560890.45	581406.39	590739.83	611971.57
Cumulative repayment of loan upto previous year (B)	73600.88	110709.06	149146.71	187559.22	227009.47
Net Loan Opening (C) = (A) - (B)	459262.48	450181.40	432259.69	403180.61	384962.10
Addition due to additional capital expenditure (D)	28027.09	20515.94	9333.44	21231.74	475.22



	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Repayment of loan during the period (E)	37154.82	38665.93	38430.49	39514.44	40339.43
Repayment adjustment on account of de-capitalization (F)	46.64	228.28	17.97	64.19	1761.95
Net Repayment of Loan during the year (G) = (E) - (F)	37108.18	38437.65	38412.52	39450.25	38577.48
Net Loan Closing (H) =(C) +(D) -(G)	450181.40	432259.69	403180.61	384962.10	346859.84
Average Loan (I) = (C+H)/2	454721.94	441220.54	417720.15	394071.36	365910.97
Weighted Average Rate of Interest of loan (J)	10.8643%	10.7708%	10.8382%	8.7550%	8.7451%
<b>Interest on Loan (K) = (I)*(J)</b>	<b>49402.53</b>	<b>47523.17</b>	<b>45273.22</b>	<b>34501.00</b>	<b>31999.28</b>

## **Depreciation**

94. Regulation 27 of the 2014 Tariff Regulations provides as under:

*“27. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. 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 or elements thereof.*

*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 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 in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:*

*Provided further 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 generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and 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-II 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 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.

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

(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.”

95. Cumulative depreciation amounting to Rs. 74084.08 lakh as on 1.4.2014, as considered in order dated 9.3.2017 in Petition No. 266/GT/2014 has been retained for the purpose of tariff. As the Petitioner has not submitted the detailed computation for WAROD for the period 2014-17, we have considered the rates as allowed in order dated 9.3.2017 in Petition No. 266/GT/2014. Accordingly, depreciation has been computed as under:

	<b>(Rs. in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Average Capital Cost (A)	781252.72	815926.32	837247.30	859079.58	874584.54
Value of freehold land included in average capital cost (B)	54520.48	58107.36	58350.68	70674.64	83765.84
Aggregated Depreciable Value (C)= (A-B)*90%	654059.02	682037.06	701006.96	709564.45	711736.83
Remaining aggregate depreciable value at the beginning of the year (D) = (C) - Cumulative Depreciation (shown at J) at the end of the previous year]	579974.94	570844.80	551377.06	521522.03	484244.16
No. of completed years at the beginning of the year (E)	1.98	2.98	3.98	4.98	5.98
Balance useful life at the beginning of the year (F) = 25 - (E)	23.02	22.02	21.02	20.02	19.02
Weighted Average Rate of Depreciation (WAROD) (F)	4.7558%	4.7389%	4.5901%	4.5996%	4.6124%
<b>Depreciation during the year/ period (G) = (A) * (F)</b>	<b>37154.82</b>	<b>38665.93</b>	<b>38430.49</b>	<b>39514.44</b>	<b>40339.43</b>

	2014-15	2015-16	2016-17	2017-18	2018-19
Cumulative depreciation at the end of the year (before adjustment for de-capitalisation) (H) = (G) + (Cumulative Depreciation (shown at J), at the end of the previous year)*	111238.90	149858.19	188060.39	227556.86	267832.10
Less: Depreciation adjustment on account of de-capitalisation (I)	46.64	228.28	17.97	64.19	1761.95
Cumulative depreciation at the end of the year (J) = (H) - (I)	111192.26	149629.91	188042.42	227492.67	266070.15

### **O&M Expenses**

96. Regulation 29(2) of the 2014 Tariff Regulations provides as follows:

*“Normative Operation and Maintenance expenses of thermal generating stations shall be as follows:*

*(a) Coal based and lignite fired (including those based on Circulating Fluidised Bed Combustion (CFBC) technology) generating stations, other than the generating stations/units referred to in clauses (b) and (d):*

Year	200/210/250 MW Sets	300/330/350 MW Sets	500 MW Sets	600 MW Sets and above
FY 2014-15	23.90	19.95	16.00	14.40
FY 2015-16	25.40	21.21	17.01	15.31
FY 2016-17	27.00	22.54	18.08	16.27
FY 2017-18	28.70	23.96	19.22	17.30
FY 2018-19	30.51	25.47	20.43	18.38

*Provided that the norms shall be multiplied by the following factors for arriving at norms of O&M expenses for additional units in respective unit sizes for the units whose COD occurs on or after 1.4.2014 in the same station:*

200/210/250 MW	Additional 5th& 6th units	0.90
	Additional 7th& more units	0.85
300/330/350 MW	Additional 4th& 5th units	0.90
	Additional 6th& more units	0.85
500 MW and above	Additional 3rd& 4th units	0.90
	Additional 5th& above units	0.85

97. The following normative O&M expenses were allowed by order dated 9.3.2017 in Petition No. 266/GT/2014:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
23200.00	24664.50	26216.00	27869.00	29623.50



98. The Petitioner has claimed the normative O&M expenses as allowed by order dated 9.3.2017 in this Petition. However, the Petitioner in its additional submissions has submitted that the Petitioner had challenged the findings for the O&M expenses allowed in order dated 9.3.2017 in Petition No. 266/GT/2014 before APTEL in Appeal No. 157 of 2017. The Petitioner has also submitted that the proviso to both Regulation 19 of the 2009 Tariff Regulations and Regulation 29 of the 2014 Tariff Regulations cannot be applied, as the generating station has achieved COD prior to 1.4.2014. Accordingly, the Petitioner has claimed revised normative O&M expenses as follows:

<i>(Rs. in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
24000.00	25515.00	27120.00	28830.00	30645.00

99. It is observed that the Commission while determining the tariff of some of the generating stations of the Petitioner for the 2014-19 tariff period, had, vide its order, allowed the normative O&M expenses with a multiplication factor of 0.9, by applying the proviso to Regulation 29(1)(a) of the 2014 Tariff Regulations. Against these orders, the Petitioner had filed Appeal (Appeal No.180/2017) before APTEL, raising amongst others, the issue of allowable O&M expenses. Since the issue of O & M expenses raised by the Petitioner was common in other pending appeals, (including Appeal No. 180/2017), APTEL vide judgment dated 11.1.2022 in Appeal No. 101/2017 and Appeal No. 110/2017, set aside the findings of the Commission on this issue. The relevant portion of the judgment dated 11.1.2022 is extracted below:

*“8.1(a) The Normative O&M charges for 2014-19 control period are determined on the basis of O&M charges incurred during the 2009-2014 control period.*

*Xxx*

*(b) Further, the O&M charges for the past years are collected as consolidated charges for the complete project /generating station irrespective of new /additional units during that period or existing units.*

*8.2. From the above, it is crystal clear that the Normative O&M charges are determined based on the actual consolidated O&M charges for the past five years for a specific project having similar unit sizes.*

*8.3 Also, the Normative O&M charges are determined for the complete Generating Station including all the units which achieve COD prior to 1.4.2014. The multiplication factor is to be applied for new units which achieve COD after 1.4.2014 and during the control period 2014-19. xxxx*



8.7 We agree with the submissions made by the Appellant that considering the above COD, only the revised O&M norms for units existing as on 1.4.2014, as laid down in Regulation 29 (1) (a) of the 2014 Tariff Regulations are to be applied in case of the Appellant. As such any other interpretation of the aforesaid regulations is contrary to the plain text and meaning.

Xxx

8.13 We decline to accept the said contention as the provisions of the Tariff Regulations, 2014 have already been deliberated in the foregoing paras and there is no doubt that the Normative O&M charges are determined by consolidating the actual O&M charges for the past five years (the last control period) thus considering the actual sharing benefits by the additional units for that period and rationalising the expenditure.

Xxx

8.15 We do not find any relevance to the above submission as the benefit of sharing of resources by the additional units have already been factored in the actual O&M charges considered for the past years

Xxx

8.17 There is no denial that the benefit of sharing of resources by the additional units should be passed on to the consumers, however, once already factored into the actual O&M charges which is the basis for determination of Normative O&M charges for the next control period, such a benefit becomes the integral part of O&M charges.

Xxx

8.25 However, in the Impugned Order, CERC has essentially amended Proviso to Regulation 29 (1) (a) of the Tariff Regulations, 2014 without providing an opportunity to the Appellant to make submissions on this issue of Proviso to Regulation 29 (1)(a) of the Tariff Regulations, 2014. It is apposite to mention that in the entire proceedings no party had even whispered that the Proviso to Regulation 29 (1)(a) ought to be made applicable to units achieving COD Prior to 01.04.2014. Hence, there was no occasion for the Appellant to even respond to such a course being adopted by Central Commission. Even Central Commission at no stage indicated that it is seeking to apply to Proviso to Regulation 29 (1)(a) to Units achieving COD before 01.04.2014. Such a course adopted by Central Commission violates the principle of Natural Justice and for this ground alone the Impugned Order is liable to be set aside.

Xxx

8.28 xxx

8.30 We agree that in the present case the said power cannot be invoked to substantially amend proviso to Regulation 29 (1) read with Proviso to Regulation 1 (2) of the Tariff Regulations, 2014. The Power to Remove Difficulty must be exercised in exceptional circumstance where the Regulation could not be implemented.

#### **ORDER**

In light of the above, we are of the considered view that the issues raised in the Batch of Appeals have merit and hence Appeals are allowed. The impugned order dated 21.01.2017 in Petition No. 283/GT/2014 and order dated 06.02.2017 in Petition No. 372/GT/2014 ("Petition 372"), are hereby set aside to the extent of our findings. The matter is remitted back to the Central Commission for passing a reasoned order pursuant to our observations are scrupulously complied with expeditiously and in a timebound manner."

100. Accordingly, the normative O&M expenses are allowed in terms of Regulation 29(1)(a) of the 2014 Tariff Regulations, as under:

**(Rs. in lakh)**

2014-15	2015-16	2016-17	2017-18	2018-19
24000.00	25515.00	27120.00	28830.00	30645.00



## **Water Charges**

101. Regulation 29(2) of the 2014 Tariff Regulations provides as under:

*“29.(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*

*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:  
xxx”*

102. The Commission vide its order dated 9.3.2017 in Petition No. 266/GT/2014 had allowed water charges amounting to Rs.3951.79 lakh during the 2014-19 tariff period (Rs. 901.15 in 2014-15 and Rs. 762.66 lakh each year from 2015-16 to 2018-19). Further, the Commission in the said order dated 9.3.2017 had directed the Petitioner to submit the details of actual water charges with all the relevant documents at the time of truing up of tariff. Accordingly, the details of water charges comprising the contracted quantity, allocation of water, the actual water consumed during 2014-19, the basis of calculation of quantity of consumptive water and computation of water charges have been submitted by the Petitioner. In addition, the Petitioner has submitted the notification for water charges from Haryana Government Public Works Department dated 30.7.2012. The Petitioner has also claimed total actual water charges (auditor certified) for Rs.5024.18 lakh during the 2014-19 tariff period (i.e., Rs.922.37 lakh in 2014-15, Rs. 784.80 lakh in 2015-16, Rs.806.30 lakh in 2016-17, Rs.1041.56 lakh in 2017-18 and Rs.1469.16 lakh in 2018-19). After scrutiny of the said information and on prudence check, the actual water charges claimed by the Petitioner, is allowed.

## **Capital spares**

103. Regulation 29(2) of the 2014 Tariff Regulations provides as follows:

*“29(2) The Water Charges and capital spares for thermal generating stations shall be allowed separately:*

*xxxx:*

*Provided that the generating station shall submit the details of year wise actual capital*



*spares consumed at the time of truing up with appropriate justification for incurring the same and substantiating that the same is not funded through compensatory allowance or special allowance or claimed as a part of additional capitalization or consumption of stores and spares and renovation and modernization.”*

104. As per the second proviso to Regulation 29(2) of the 2014 Tariff Regulations, capital spares are admissible separately. The Petitioner has claimed total actual capital spares for Rs.3639.11 lakh during the 2014-19 tariff period (i.e. Rs. 527.37 lakh in 2014-15, Rs. 1577.32 lakh in 2015-16, Rs. 412.87 lakh in 2016-17, Rs.341.83 lakh in 2017-18 and Rs.779.72 lakh in 2018-19). The Petitioner has submitted that in order to meet the customers demand and to maintain high machine availability at all times by the generating station, the units/ equipment's are taken under overhaul/maintenance and inspected regularly for wear and tear. It has stated that during such works, spares parts of equipment's which had been damaged/ unserviceable are replaced/consumed so that the machines continue to perform at expected efficiency, on a sustained basis. Therefore, the Petitioner has prayed that capital spares replaced/consumed by the generating station during the 2014-19 tariff period may be allowed. The Respondent BRPL has submitted that the claim of capital spares is as per actual expenditure and hence, should be certified by statutory auditor.

105. The Commission vide ROP of the hearing dated 18.11.2021, had directed the Petitioner to furnish the audited statement with respect to the consumption of capital spares, as per Form-17. In response, the Petitioner has submitted the auditor certificate in support of capital spares consumed. The amount of the Capital Spares consumed during the tariff period 2014-19 as submitted by the Petitioner in Form 17 is as follows:

**(Rs. in lakh)**

<b>Year</b>	<b>Total Capital Spares consumed</b>
2014-15	527.37
2015-16	1577.32
2016-17	412.87



Year	Total Capital Spares consumed
2017-18	341.83
2018-19	779.72

106. We have examined the list of the capital spares consumed by the Petitioner. It is evident from the audited statement and Form 9Bi of the respective years that capital spares claimed comprise of two categories i.e. (i) spares which form part of the capital cost and (ii) spares which do not form part of the capital cost of the project. After considering the information made available in the Petition, the segregated capital spares as part of tariff and those not part of tariff are as follows:

*(Rs. in lakh)*

Year	Capital Spares	Capital Spares	Total Capital Spares consumed
	(part of capital cost)	(not part of capital cost)	
	(A)	(B)	(A) + (B)
2014-15	527.37	0.00	527.37
2015-16	1577.32	0.00	1577.32
2016-17	60.13	352.75	412.87
2017-18	209.27	132.56	341.83
2018-19	603.55	176.17	779.72

107. In respect of capital spares which form part of the capital cost of the project, the Petitioner has been recovering tariff since their procurement and, therefore, the same cannot be allowed as part of the additional O&M expenses. Accordingly, only those capital spares, which do not form part of the capital cost of the project, are being considered. It is pertinent to mention that the term 'capital spares' has not been defined in the 2014 Tariff Regulations. The term capital spares, in our view, is a piece of equipment, or a spare part, of significant cost that is maintained in inventory for use in the event that a similar piece of critical equipment fails or must be rebuilt. Keeping in view the principle of materiality and to ensure standardized practices in respect of earmarking and treatment of capital spares, the value of capital spares exceeding Rs. 1 (one) lakh, on prudence check of the details furnished by the Petitioner in Form-17 of the petition, has been considered for the purpose of tariff. Based on this, the details



of the allowed capital spares considered for the 2014-19 tariff period is summarized as follows:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Capital Spares (not part of capital cost) claimed (A)	0.00	0.00	352.75	132.56	176.17
Value of capital spares (of Rs 1 lakh and below) disallowed on individual basis (B)			0.80	0.00	0.00
Net total value of capital spares considered (C) = (A) - (B)	0.00	0.00	351.95	132.56	176.17

108. Further, we are of the view that spares do have a salvage value. Accordingly, the salvage value of 10% has been deducted from the cost of capital spares allowed, during the 2014-19 tariff period, as above, which is in line with the practice of considering salvage value presumed to be recovered by the Petitioner on sale of other capital assets on becoming unserviceable. Therefore, on prudence check of the information furnished by the Petitioner in Form 17 and on applying the said ceiling limit along with deduction of salvage value @10%, the net cost of capital spares are allowed under Regulation 29(2) of 2014 Tariff Regulations as under:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Net total value of capital spares considered (A)	0.00	0.00	351.95	132.56	176.17
Salvage value @ 10% (B)	0.00	0.00	35.19	13.26	17.62
<b>Net Claim allowed (C) = (A)*(B)</b>	<b>0.00</b>	<b>0.00</b>	<b>316.75</b>	<b>119.30</b>	<b>158.55</b>

### **Impact of Goods and Service Tax (GST)**

109. The Petitioner has claimed impact of GST for Rs. 189.27 lakh during the period 2017-18 (1.7.2017 to 31.3.2018) and Rs. 288.09 lakh in 2018-19. The Respondent TPDDL has raised issues regarding the details of the computation of the total claim of the Petitioner and has stated that the impact of decrease in rate (if any) should also be passed onto the Respondents. The Respondent BYPL has submitted that though it does not dispute the principle laid down by the Commission, that the promulgation of GST is a change in law, it disputes the application of that principle, to the facts of the





present case, and the details of the computation of the total claim of the Petitioner. It has also submitted that the Petitioner has calculated the impact of increase in the rate of indirect tax from 15% to 18%, on all taxable services claimed for period 1.7.2017 to 31.3.2019. The Respondent BRPL has submitted that any proposal which has bearing on the norms can be accepted, only if the Petitioner proves that the norms are inadequate to meet additional capital expenditure on account of GST and therefore, the claim amounting to Rs. 477.36 lakh is liable to be rejected. The Petitioner has clarified that the O&M expenses, comprises of employee wages and generation administration and other expenses (renamed as "Other Expenses" in the books of the Company after introduction of IND AS) and these inter alia include repair and maintenance and other overheads of the station. The Petitioner has bifurcated the generation administration and other expenses into material consumed, taxable services and exempt services. The amount claimed by the Petitioner is only on account of differential in rate of tax for taxable services (i.e., under erstwhile Service Tax 15% and in GST 18%) as under:

<i>(Rs. In lakh)</i>			
<b>Nature</b>		<b>2017-18 Q2-Q4 Post GST period Claimable</b>	<b>2018-19 GST Claimable</b>
Material	A	2453.13	3310.72
Services- Taxable	B	7450.16	11338.51
Services- Exempt	C	8664.62	11702.90
Total General Administration Expenses	D=A+B+C	18567.82	26352.13
<b>Impact of 3% additional tax on Taxable Services due to GST</b>	<b>E= B*0.03/1.18</b>	<b>189.41</b>	<b>288.27</b>
<b>Amount claimed in Tariff petition</b>		<b>189.41</b>	<b>288.27</b>

110. We have considered the submissions of parties. While framing the 2014 Tariff Regulations, the variation in taxes and duties have been captured in the normative O&M expenses and thus any change in taxes is not admissible separately. Further, the 2014 Tariff Regulations has not specifically mentioned any consideration for



allowing taxes separately. The escalation rates considered in the normative O&M expenses is only after consideration of the variations during last five years, which also takes care of variation in taxes also. It may be noted that in case of reduction of taxes or duties, the Petitioner is not required to reimburse any taxes in tariff. Therefore, for any increase in taxes and duties, the Petitioner is not entitled to claim any additional expenses. As such, additional O&M expenses on account of GST are not admissible separately.

**Impact of wage revision**

111. The Petitioner has claimed Rs. 4061.95 lakh (Rs. 15.23 lakh in 2015-16, Rs. 504.29 lakh in 2016-17, Rs. 1833.48 lakh in 2017-18 and Rs.1708.94 lakh in 2018-19) as impact of wage revision in respect of employees of CISF and Kendriya Vidyalaya Staff from 1.1.2016 and the employees of the Petitioner posted in the generating station, with effect from 1.1.2017. However, it is noticed that the said claim of the Petitioner includes impact on account of the payment of additional PRP/ ex-gratia to its employee’s consequent upon wage revision. As such, as per consistent methodology adopted by the Commission, the additional PRP/ ex-gratia paid, as a result of wage revision impact, has been excluded from the wage revision impact claimed by the Petitioner in the present case. Accordingly, the claim of the Petitioner in respect of wage revision impact stands reduced to Rs. 3668.52 lakh with the following year-wise break-up

	<i>(Rs. in lakh)</i>				
	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>Total</b>
Wage revision impact claimed excluding PRP/ ex-gratia	15.23	484.91	1571.54	1596.83	3668.52

112. The Petitioner has also submitted that it is a single generating station, with no separate/centralized Corporate Office. The Petitioner has also furnished the actual O&M expenses of the generating station for the 2014-19 tariff period, along with the



wage revision impact (excluding PRP and ex-gratia) for the generating station as shown below:

(Rs. in lakh)		
Year	Actual O&M expenses for IGSTPP (excluding water charges & Capital Spares)	Wage Revision impact claimed for IGSTPP excluding PRP/Ex-gratia
2014-15	18645.83	-
2015-16	19570.49	15.23
2016-17	19550.33	484.91
2017-18	21857.20	1571.54
2018-19	25133.75	1596.83
<b>Total</b>	<b>104757.60</b>	<b>3668.52</b>

113. The Respondent TPDDL objected to claim of impact of pay revision and has submitted that employee expenses are controllable in nature and therefore, cannot be trued up. The Respondents BYPL and BRPL have submitted that employee expenses are controllable in nature and have already been accounted for while determining the norms for the period 2014 -19 and therefore, cannot be trued up. The Petitioner has submitted that it is entitled to claim the impact of employee pay revision and has reiterated its submissions made in the Petition.

114. The Commission, while specifying the O&M expense norms under the 2014 Tariff Regulations, had considered the actual O&M expense data for the period from 2008-09 to 2012-13. However, considering the submissions of the stakeholders, the Commission in the Statement of Object and Reasons (SOR) to the 2014 Tariff Regulations had observed that the increase in employees cost due to impact of pay revision impact will be examined on a case-to-case basis balancing the interest of generating stations and the consumers. The relevant extract of SOR is extracted as follows:

*"29.26 Some of the generating stations have suggested that the impact of pay revision should be allowed on the basis of actual share of pay revision instead of normative 40% and one generating company suggested that the same should be considered as 60%. In the draft Regulations, the Commission had provided for a normative percentage of employee cost to total O&M expenses for different type of generating stations with an intention to provide a ceiling limit so that it does not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission would however, like to review the same considering the*



macroeconomics involved as these norms are also applicable for private generating stations. In order to ensure that such increase in employee expenses on account of pay revision in case of central generating stations and private generating stations are considered appropriately, **the Commission is of the view that it shall be examined on case to case basis, balancing the interest of generating stations and consumers.**

33.2 The draft Regulations provided for a normative percentage of employee cost to total O&M expenses for generating stations and transmission system with an intention to provide a ceiling limit so that the same should not lead to any exorbitant increase in the O&M expenses resulting in spike in tariff. The Commission shall examine the increase in employee expenses on case to case basis and shall consider the same if found appropriate, to ensure that overall impact at the macro level is sustainable and thoroughly justified. Accordingly, clause 29(4) proposed in the draft Regulations has been deleted. **The impact of wage revision shall only be given after seeing impact of one full year and if it is found that O&M norms provided under Regulations are inadequate/insufficient to cover all justifiable O&M expenses for the particular year including employee expenses, then balance amount may be considered for reimbursement.**"

115. It is observed that the above methodology, as indicated in SOR suggests the comparison of normative O&M expenses with the actual O&M expenses on year-to-year basis. However, in this respect, the following facts need consideration:

- a) The norms are framed based on the averaging of the actual O&M expenses of past five years to capture the year-on-year variations in sub-heads of O&M expenses.
- b) Certain cyclic expenditure may occur with a gap of one year or two years and as such adopting a longer duration i.e. five years for framing of norms also captures such expenditure which is not incurred on year-to-year basis.
- c) When the generators find that their actual expenditure has gone beyond the normative O&M in a particular year, they put departmental restrictions and try to bring the expenditure for the next year below the norms.

116. In consideration of above facts, the Commission finds it appropriate to compare the normative O&M expenses with the actual O&M expenses for a longer duration, so as to capture the variation in the sub-heads. Accordingly, it is decided that for ascertaining that whether the O&M expense norms provided under the 2014 Tariff Regulations are inadequate/ insufficient to cover all justifiable O&M expenses, including employee expenses, after wage revision. The comparison of the normative O&M expenses and the actual O&M expenses shall be made for three years i.e., 2015-19, on combined basis, which is commensurate with the wage revision claim being spread over the four years.



117. In view of the above, the following is the comparison of the normative O&M expenses allowed to the generating station for the period 2015-19 versus the actual O&M expenses incurred after considering the impact of wage revision:

	<i>(Rs. in lakh)</i>				
	2015-16	2016-17	2017-18	2018-19	Total
Actual Audited O&M expenses(A)	19570.49	19550.33	21857.20	25133.75	86111.77
Normative O&M expenses as per Regulations(B)	25515.00	27120.00	28830.00	30645.00	112110.00
Difference between the normative and actual O&M expenses(B)-(A)	5944.51	7569.67	6972.80	5511.25	25998.23
Wage revision impact claimed (including PRP/ ex-gratia)	15.23	504.29	1833.48	1708.94	4061.95

118. It is observed from the table above, that for the years of wage revision impact i.e., 2015-16 to 2018-19, the normative O&M expenses allowed on a combined basis, are in excess of the actual expenses incurred by the Petitioner. As such, the Commission is not inclined to allow the recovery of impact of wage revision through additional O&M expenses, since the normative O&M expenses allowed to the generating station in terms of the Regulations, is sufficient to cater to the requirement of the impact of wage revision.

119. Based on the above discussions, the total annualized O&M expenses allowed in respect of the generating station is summarized as follows:

		<i>(Rs. in lakh)</i>				
O&M Expenses		2014-15	2015-16	2016-17	2017-18	2018-19
Installed Capacity (MW) (A)		1500.00	1500.00	1500.00	1500.00	1500.00
O&M Expenses under Reg.29(1) in Rs lakh / MW (B)		16.00	17.01	18.08	19.22	20.43
Total O&M Expenses (in Rs lakh) (C) = (A)*(B)	Claimed	24000.00	25515.00	27120.00	28830.00	30645.00
	Approved	24000.00	25515.00	27120.00	28830.00	30645.00
Water Charges (in Rs lakh) (D)	Claimed	922.37	784.80	806.30	1041.56	1469.16
	Approved	922.37	784.80	806.30	1041.56	1469.16

<b>O&amp;M Expenses</b>		<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Capital Spares Consumed (in Rs lakh) (E)	Claimed	527.37	1577.32	412.87	341.83	779.72
	Approved	0.00	0.00	316.75	119.30	158.55
<b>Total O&amp;M Expenses as allowed (including Water Charges and Capital Spares Consumed) (F) = (C+D+E)</b>	<b>Claimed</b>	<b>25449.74</b>	<b>27877.12</b>	<b>28339.18</b>	<b>30213.39</b>	<b>32893.88</b>
	<b>Approved</b>	<b>24922.37</b>	<b>26299.80</b>	<b>28243.05</b>	<b>29990.86</b>	<b>32272.71</b>
<b>Additional O&amp;M Expenditure</b>						
Impact of Wage Revision (in Rs lakh) (G)	Claimed	0.00	15.23	504.29	1833.48	1708.94
	Approved	0.00	0.00	0.00	0.00	0.00
Impact of GST (in Rs lakh) (H)	Claimed	0.00	0.00	0.00	189.27	288.09
	Approved	0.00	0.00	0.00	0.00	0.00
<b>Sub Total Additional O&amp;M Expenditure (J) = (F+G+H+I)</b>	<b>Claimed</b>	<b>0.00</b>	<b>15.23</b>	<b>504.29</b>	<b>2022.75</b>	<b>1997.03</b>
	<b>Approved</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total O&amp;M Expenses in Rs lakh (K) = (F+I)</b>	<b>Claimed</b>	<b>25449.74</b>	<b>27892.35</b>	<b>28843.46</b>	<b>32236.14</b>	<b>34890.91</b>
	<b>Approved</b>	<b>24922.37</b>	<b>26299.80</b>	<b>28243.05</b>	<b>29990.86</b>	<b>32272.71</b>

### Operational Norms

#### **Normative Annual Plant Availability Factor**

120. The Normative Annual Plant Availability Factor of 83% for 2014-15 to 2016-17 and 85% for 2017-18 and 2018-19, as approved by order dated 9.3.2017 in Petition No. 266/GT/2014 in accordance with the provisions of Regulation 36 (A) of the 2014 Tariff Regulations, is allowed.

#### **Auxiliary Energy Consumption**

121. The Normative Auxiliary Energy Consumption of 5.25% for 2014-15 to 2018-19, as approved by order dated 9.3.2017 in Petition No. 266/GT/2014 in accordance with the provisions of Regulation 36 (E)(a)(ii) of the 2014 Tariff Regulations is allowed.

#### **Station Heat Rate**

122. The Gross Station Heat Rate of 2362.99 Kcal/ kWh was approved by order dated 9.3.2017 in Petition No. 266/GT/2014. Further, the Petitioner was directed to submit justification for this discrepancy in Gross Station Heat Rate and boiler efficiency at the time of truing up in terms of Regulation 8 of the 2014 Tariff Regulations. The



Petitioner, in Form F2 has furnished the guaranteed turbine cycle heat rate of 1932 kCal/kWh, in terms of Regulation 36(C)(c)(i). The computations for Gross Station Heat Rate of the generating station are as under:

Gross turbine cycle heat rate	Boiler efficiency	Design heat rate (kCal/kWh)	Gross station heat rate (kCal/kWh)
(A)	(B)	(C=A/B)	(D=C*1.045)
1932	85.44	2261.23	2362.99

123. In accordance with the provisions of Regulation 36(C) of the 2014 Tariff Regulations, Gross station heat rate of 2362.99 kCal/kWh has been allowed.

### **Interest on working capital**

124. Sub-section (a) of clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as follows:

*“28. Interest on Working Capital:*

*(1) The working capital shall cover:*

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

*(i) Cost of coal or lignite and limestone towards stock if applicable for 15 days for pit-head generating stations and 30 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) Cost of coal or lignite and limestone for 30 days 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 specified in regulation 29;*

*(v) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and*

*(vi) Operation and maintenance 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 cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period.*

*(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 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.*

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

*from any outside agency.”*

### **Fuel Components and Energy Charges in working capital**

125. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of cost of fuel as a part of IWC is to be based on the landed price and gross calorific value of the fuel as per actuals, for the three months preceding the first month for which the tariff is to be determined. In terms of Regulation 30 (6) of the 2014 Tariff Regulations, for determination of the Energy Charges in working capital, the GCV on ‘as received’ basis is to be considered.

126. Regulation 30 (7) of the 2014 Tariff Regulations provides as under:

*“(7) The generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., as per the forms prescribed at Annexure-I to these regulations:*

*Provided that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels **as received** shall also be provided separately, along with the bills of the respective month:*

*Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months.”*

127. The issue of ‘as received’ GCV for computation of energy charges was challenged by the Petitioner and other generating companies through various writ petitions filed before the Hon’ble High Court of Delhi (W.P. No.1641/2014-NTPC v CERC) challenged Regulations 30(6) of the 2014-19 Tariff Regulations with regard to measurement of GCV of coal on ‘as received’ basis for purpose of Energy Charges and the Hon’ble Court had directed the Commission to decide the place from where the sample of coal should be taken for measurement of GCV of coal on ‘as received’ basis on the request of Petitioners. In terms of the directions of the Hon’ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 (approval of tariff of Kahalgaon STPS for the 2014-19 tariff period), decided as under:





*“58. In view of the above discussion, the issues referred by the Hon’ble High Court of Delhi are decided as under:*

*“(a) There is no basis in the Indian Standards and other documents relied upon by NTPC etc. to support their claim that GCV of coal on as received basis should be measured by taking samples after the crusher set up inside the generating station, in terms of Regulation 30(6) of the 2014 Tariff regulations.*

*(b)The samples for the purpose of measurement of coal on as received basis should be collected from the loaded wagons at the generating stations either manually or through the Hydraulic Auger in accordance with provisions of IS 436(Part1/Section1)-1964 before the coal is unloaded. While collecting the samples, the safety of personnel and equipment as discussed in this order should be ensured. After collection of samples, the sample preparation and testing shall be carried out in the laboratory in accordance with the procedure prescribed in IS 436(Part1/Section1)-1964 which has been elaborated in the CPRI Report to PSERC.”*

128. The review petition filed by the Petitioner against the aforesaid order dated 25.1.2016 was rejected by the Commission vide order dated 30.6.2016 in Petition No.11/RP/2016. The Petitioner filed Petition No. 244/MP/2016 before this Commission praying for removal of difficulties and the issues faced by it in implementing the Commission’s orders dated 25.1.2016 and 30.6.2016 with regard sampling of coal from loaded wagon top for measurement of GCV and the Commission by its order dated 19.9.2018 had disposed of the preliminary objections of the respondents therein and held that the petition is maintainable. Against this order, some of the respondents have filed appeal before the APTEL in Appeal Nos. 291/2018 (GRIDCO v NTPC & ors) and the same is pending.

129. In Petition No. 266/GT/2014 filed by the Petitioner for determination of tariff of this generating station for the 2014-19 tariff period, the Petitioner had not furnished GCV of ‘as received’ basis for the preceding 3 months i.e. for January 2014, February 2014 and March 2014 that were required for determination of Interest on Working Capital (IWC). Therefore, the Commission vide order dated 9.3.2017 in Petition No.266/GT/2014 had considered GCV of coal on as ‘billed basis’ and provisionally allowed adjustment for total moisture while allowing the cost of coal towards generation & stock and two months’ energy charges in the working capital.



130. The Petitioner, in this petition, has claimed the fuel related components of working capital based on GCV of coal as 3838.00 Kcal/kg (as indicated at Form-13F) consequent to the order of the Commission dated 9.3.2017 in Petition No. 266/GT/2014. This “as received” GCV of 3838.00 kcal/kg represents the average of monthly as received GCVs for period from October 2016 to March 2019 (30 months). Further, the Petitioner has submitted that CEA vide letter dated 17.10.2017 has opined that 85-100 kcal/kg for a pit-head station and a margin of 105-120 kcal/kg for non-pit head station may be considered as a loss of GCV of coal between ‘as received’ and ‘as fired’. Accordingly, the Petitioner has considered 120 kcal/kg margin on the average GCV of the period from October 2016 to March 2019 for computing working capital. Accordingly, the cost of fuel component in the working capital of the generating station as follows:

	<b>(Rs. in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Cost of Coal towards stock (30 days generation corresponding to NAPAF)	26317.11	26317.11	26317.11	26951.26	26951.26
Cost of Coal towards Generation (30 days generation corresponding to NAPAF)	26317.11	26317.11	26317.11	26951.26	26951.26
Cost of Secondary fuel oil (2 months generation corresponding to NAPAF)	595.91	597.54	595.91	610.26	610.26

131. The Petitioner has also submitted that it has filed separate petition (Petition No. 244/MP/2016) seeking appropriate reliefs due to extreme practical difficulty faced by the Petitioner in implementing Regulation 30(6) of the 2014 Tariff Regulations and directions issued by the Commission in its order dated 25.1.2016 and for consequential directions. It has also sought liberty to make additional submissions based on the final decision in Petition No. 244/MP/2016.

132. In response to the clarification sought from the Petitioner on the details of GCV on ‘as received’ basis for the months of January, 2014 to March, 2014, which was



uploaded in the website of the Petitioner and shared with the beneficiaries, the Petitioner vide affidavit dated 30.6.2021, has submitted that though the computation of energy charges moved from 'as fired' basis to 'as received' basis, with effect from 1.4.2014, in terms of Regulation 30(6) of the 2014 Tariff Regulations, however, for calculation of IWC under Regulation 28(2) of the 2014 Tariff Regulations, the GCV shall be as per 'actuals' for the three months preceding the first month for which tariff is to be determined. It has further submitted that for the 2014-19 tariff period, Regulation 28(2) of the 2014 Tariff Regulations unequivocally provide that the actual cost and GCV of the preceding three months shall be considered and for these preceding three months (January 2014 to March 2014), by virtue of it falling under the 2009 Tariff Regulations, shall be computed on the basis of 'as fired' GCV. Referring to the judgment of the Hon'ble Supreme Court in PTC India v CERC (2010) 4 SCC 603 and the judgment of APTEL in NEEPCO v TERC (2006) APTEL 148, the Petitioner has submitted that the Commission is bound by the provisions of the tariff regulations and that purposive interpretation ought to be given to the 2014 Tariff Regulations and interest on working capital ought to be computed in terms of Regulation 28 (2) of the 2014 Tariff Regulations, 2014 on actual GCV i.e. 'as fired' GCV. The Petitioner, without prejudice to the above submissions, has furnished the details of GCV on 'as received' basis for the months of January 2014 to March 2014, in compliance with the directions of the Commission, as under:

Sl.	Month	Wt. Avg GCV of coal received (EM basis) (kcal/kg) (A)	Total Moisture (TM) (in %) (B)	Equilibrated Moisture (EM) (in %) (C)	Wt. Avg GCV of coal received (TM basis) (kcal/kg) (D=A*(1-B%)/(1-C%))
1	January 2014	4148.23	15.98	6.95	3734.73
2	February 2014	4012.06	15.53	6.82	3629.98
3	March 2014	3879.79	15.01	6.52	3527.86
	<b>Average</b>				<b>3630.86</b>

133. The Respondent TPDDL and the Respondents BYPL & BRPL have objected to



the computation of the fuel component, while determining the working capital, stating that for the calculation of GCV, the Petitioner has erroneously relied upon the data/figure for October 2016 to March 2019 and applied a margin of 120kcal/kg. Further, the Respondents BYPL and BRPL have contended that the Petitioner has not shared data such as Station Heat Rate, Secondary Fuel Oil Consumption etc. with respect to truing up exercise under Regulation 8(6) of 2014 Tariff Regulations, that has to be carried out in respect of controllable parameters. Further, it is unclear whether the Auxiliary Consumption include energy consumed for supply of power to housing colony and other facilities at the generating station. The Petitioner has however reiterated its submissions made in the Petition. The Petitioner has submitted that it regularly shared the relevant information with the Respondents along with the monthly energy bills. The Petitioner has also clarified that the energy consumed for supply through housing colony or other facilities and the power consumed for construction works at the generating station has been excluded from the auxiliary consumption as per the 2014 Tariff Regulations.

134. The submissions have been considered. As discussed above, the Petitioner in Form-13 F, has considered the average GCV of coal on “as received basis” i.e. from wagon top for the period from October 2016 to March 2019, for the purpose of computation of working capital for the 2014-19 tariff period. In addition to the average GCV, it has also considered a margin of 120 kCal/kg for computation of the working capital of the generating station. Regulation 28(2) of the 2014 Tariff Regulations provides that the computation of cost of fuel as a part of IWC is to be based on the landed price and gross calorific value of the fuel, as per actuals, for the three months preceding the first month for which the tariff is to be determined. Thus, calculation of IWC for 2014-19 tariff period is to be based on such values for months of January 2014, February 2014 and March 2014. The Petitioner has not been able to furnish



these values at the time of determination of tariff for the 2014-19 tariff period in Petition No. 266/GT/2014. In the present petition, the Petitioner has proposed that instead of GCV for January 2014, February 2014 and March 2014, the Commission should consider the average values for months of October 2016 to March 2019 since the measurement of 'as received' GCV has been done in accordance with directions of the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014. In our view, the proposal of the Petitioner to consider the retrospective application of 30 months' (October 2016 to March 2019) average of 'as received' GCV data in place of 'as received' GCV of the preceding three months (January 2014 to March 2014) is not acceptable, keeping in view that the average GCV for 30 months may not be commensurate to the landed cost of coal for the preceding three months to be considered for calculating IWC in terms of Regulation 28(2) of the 2014 Tariff Regulations and that due to efflux of time (gap of 30 month), the quality of coal extracted from the linked mines would have undergone considerable changes. Also, the consideration of loss of GCV of 120 kCal/kg cannot be considered, as the same is not as per provisions of the 2014 Tariff Regulations.

135. It is observed that though the Petitioner has furnished the details of 'as received' GCV for the three months of January 2014 to March 2014 as discussed above, it has submitted that GCV of fuel is to be considered 'on actuals' for January 2014 to March 2014 and as such, GCV is required to be considered on an 'as fired' basis. In other words, the Petitioner has contended that since the period of January 2014 to March 2014 falls in the 2009-14 tariff period for measurement of GCV of coal, Regulation 18(2) read with Regulation 21(6) of the 2009 Tariff Regulations was applicable which mandates that generating company shall measure GCV on 'as fired' basis (and not on 'as received' basis). This submission of the Petitioner is also not acceptable in view of



provisions of Regulation 21(6) of the 2009 Tariff Regulations that was amended on 31.12.2012, by addition of the following provisos.

*"The following provisos shall be added under Clause (6) of Regulation 21 of the Principal Regulations as under, namely:*

*Provided that generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., as per the form 15 of the Part-I of Appendix I to these regulations:*

*Provided further that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as received shall also be provided separately, along with the bills of the respective month:*

*Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months."*

136. Thus, in terms of the above, amendment to the 2009 Tariff Regulations, the details regarding the weighted average GCV of the fuels on 'as received' basis was also required to be furnished by the Petitioner along with bills of the respective month. Also, bills detailing the parameters of GCV and price of fuel were to be displayed by the Petitioner on its website, on monthly basis.

137. As per SOR to the 2014 Tariff Regulations, we note that the main consideration of the Commission while moving from 'as fired' GCV to 'as received' GCV for the purpose of energy charges under Regulation 30(6) of the 2014 Tariff Regulations for the 2014-19 tariff period was to ensure that GCV losses which might occur within the generating station after receipt of coal are not passed on to the beneficiaries on account of improper handling and storage of coal by the generating companies. As regards the allowable (normative) storage loss within the generating station, CEA had observed that there is negligible difference between 'as received' GCV and 'as fired' GCV. As such, for the purpose of calculating energy charges, the Commission moved from 'as fired' GCV to 'as received' GCV under Regulation 30(6) of the 2014 Tariff Regulations without allowing any margin between the two measurements of GCV.



Thus, 'as received' GCV was made applicable for the purpose of calculating working capital requirements based on the actual GCV of coal for the preceding three months of the first month for which tariff is to be determined in terms of Regulation 28(2) of 2014 Tariff Regulations. In case the submission of the Petitioner that 'as fired' is to be considered 'at actuals' for the preceding three months for purpose of IWC, the same would mean allowing (and passing through) all storage losses which would have occurred during the preceding three months (January 2014 to March 2014) for the 2014-19 tariff period. This, according to us, defeats the very purpose of moving from 'as fired' GCV to 'as received' GCV in the 2014 Tariff Regulations. In this background and keeping in view that in terms of amended Regulation 21(6) of the 2009 Tariff Regulations, the Petitioner is required to share details of the weighted average GCV of the fuel on 'as received' basis, we consider the fuel component and energy charges based on 'as received' GCV of the preceding three months (January 2014 to March 2014) for the purpose of computation of IWC in terms of Regulation 28(2) of the 2014 Tariff Regulations.

138. The Petitioner has calculated GCV of 3630.86 kcal/kg which represents the simple average of GCV of the preceding three months. The weighted average GCV for three months, based on the net coal quantities as per Form-15 of the petition and the monthly GCVs as submitted by the Petitioner as discussed earlier, works out to 4010.49 kcal/kg.

139. Accordingly, the cost for fuel components in working capital has been computed considering the fuel details (price and GCV) as per Form-15 of the petition except for 'as received' GCV of coal, which is considered as 4010.49 kcal/kg as discussed above. All other operational norms such as Station Heat Rate Auxiliary Energy Consumption and Secondary Fuel Cost have been considered as per the 2014 Tariff



Regulations for calculation of fuel components in working capital.

140. Based on the above discussion, the cost of fuel components in working capital is worked out and allowed 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>
Cost of Coal towards stock (30 days generation corresponding to NAPAF)	24364.05	24364.05	24364.05	24951.14	24951.14
Cost of Coal towards generation (30 days generation corresponding to NAPAF)	24364.05	24364.05	24364.05	24951.14	24951.14
Cost of Secondary fuel oil (2 months generation corresponding to NAPAF)	595.97	597.61	595.97	610.33	610.33

### **Energy Charge Rate (ECR) for calculating working capital**

141. Regulation 30(6)(a) of the 2014 Tariff Regulations provides for computation and payment of Energy Charge for thermal generating stations:

*“6. Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal place in accordance with the following formula:*

*(a) For coal based and lignite fired stations*

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$$

*Where,*

*AUX = Normative auxiliary energy consumption in percentage.*

*CVPF = Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic metre, as applicable.*

*CVSF = Calorific value of secondary fuel, in kCal per ml.*

*ECR = Energy charge rate, in Rupees per kWh sent out.*

*GHR = Gross station heat rate, in kCal per kWh.*

*LC = Normative limestone consumption in kg per kWh.*

*LPL = Weighted average landed price of limestone in Rupees per kg.*

*LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable during the month.*

*SFC = Normative specific fuel oil consumption, in ml/ kWh*

*LPSFi = Weighted average landed price of secondary fuel in Rs/ ml during the month*

142. The Petitioner has claimed Energy Charge Rate (ECR) ex-bus of 3.133 Rs./kWh for the generating station based on the landed cost of coal during preceding three months, GCV of coal [on ‘as received’ basis for average of 30 months] along with the storage loss of 120 kCal/kWh} & GCV and price of Oil procured and burnt for the





preceding three months of 2014-19 tariff period for the generating station. Since these claims of the Petitioner has not be allowed as stated above, the allowable ECR, based on the operational norms as specified under the 2014 Tariff Regulations and on weighted average of 'as received' GCV of 4010.49 kcal/kg is worked out as follows:

	<b>Unit</b>	<b>2014-19</b>
Capacity	MW	1500
Gross Station Heat Rate	Kcal/kWh	2362.99
Auxiliary Energy Consumption	%	5.25
Weighted average GCV of oil (As received)	Kcal/lit	9450.00
Weighted average GCV of coal (As received)	Kcal/kg	4010.49
Weighted average price of oil	Rs./KL	65574.46
Weighted average price of Coal	Rs./MT	4622.23
<b>Rate of energy charge ex-bus</b>	<b>Rs./kWh</b>	<b>2.903</b>

### **Working Capital for Maintenance Spares**

143. The Petitioner in Form-13B vide additional submission in affidavit dated 7.2.2022 has claimed maintenance spares in the working capital shown in the table as follows:

*(Rs. in lakh)*

<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
5089.95	5578.47	5768.69	6447.23	6978.18

144. Regulation 28(1)(a)(iv) of the 2014 Tariff Regulations provide for maintenance spares @ 20% of the O&M expenses. As specified in Regulation 29(2) of the 2014 Tariff Regulations, the cost of maintenance spares @20% of the operation & maintenance expenses including water charges and cost of capital spares consumed, allowed are as follows:

*(Rs. in lakh)*

<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
4984.47	5259.96	5648.61	5998.17	6454.54

### **Working Capital for Receivables**

145. Receivables equivalent to two months of capacity charge and energy charge for Sale of Electricity at NAPAF has been worked out duly taking into account mode of operation of the generating station on secondary fuel, as follows:



(Rs.in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months (A)	49997.52	50134.50	49997.52	51202.28	51202.28
Fixed Charges – for two months (B)	29292.84	29864.53	29996.48	28929.15	29227.19
<b>Total (C) = (A+B)</b>	<b>79290.36</b>	<b>79999.03</b>	<b>79994.00</b>	<b>80131.43</b>	<b>80429.47</b>

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

146. O&M expenses for 1 month claimed by the Petitioner in Form-13B for the purpose of working capital is as follows:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
2120.81	2324.36	2403.62	2686.35	2907.58

147. Regulation 28(a)(vi) of the 2014 Tariff Regulations provides for O&M expenses for one month for coal-based generating station as a part of working capital. The one-month O&M expenses, allowed is as under:

(Rs. in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
2076.86	2191.65	2353.59	2499.24	2689.39

148. The difference between claimed O&M expenses for 1 month and maintenance spares claimed and the O&M expenses for 1 month and cost of maintenance spares allowed as above, is due to the fact that, while the Petitioner's claim is based on the O&M expenses inclusive of the expenditure on GST and impact of wage revision, these components have not been included in our calculations towards working capital requirements.

### **Rate of interest on working capital**

149. In terms of clause (3) of Regulation 28 of the 2014 Tariff Regulations, the rate of interest on working capital has been considered as 13.50% (Bank rate 10.00 + 350 bps). Accordingly, Interest on working capital has been computed as under:

(Rs. in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Working capital for Cost of Coal Stock (30 days)	24364.05	24364.05	24364.05	24951.14	24951.14



	2014-15	2015-16	2016-17	2017-18	2018-19
generation corresponding to NAPAF) (A)					
Working capital for Cost of Coal/Lignite (30 days generation corresponding to NAPAF) (B)	24364.05	24364.05	24364.05	24951.14	24951.14
Working capital for Cost of oil (2 months generation corresponding to NAPAF) (C)	595.97	597.61	595.97	610.33	610.33
Working capital for O & M expenses (1 month of O&M Expenses) (D)	2076.86	2191.65	2353.59	2499.24	2689.39
Working capital for Maintenance Spares (20% of Annual O&M Expenses) (E)	4984.47	5259.96	5648.61	5998.17	6454.54
Working capital for Receivables – (2 months of sale of electricity at NAPAF) (F)	79290.36	79999.03	79994.00	80131.43	80429.47
<b>Total Working Capital (I) = (A+B+C+D+E+F)</b>	<b>135675.77</b>	<b>136776.35</b>	<b>137320.27</b>	<b>139141.44</b>	<b>140086.01</b>
Rate of Interest (J)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Total Interest on Working capital (K) = (I)*(J)</b>	<b>18316.23</b>	<b>18464.81</b>	<b>18538.24</b>	<b>18784.09</b>	<b>18911.61</b>

### Annual Fixed Charges

150. Based on the above, the annual fixed charges approved for the 2014-19 tariff period in respect of the generating station is summarized below:

	<i>(Rs. in lakh)</i>				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	37154.82	38665.93	38430.49	39514.44	40339.43
Interest on Loan	49402.53	47523.17	45273.22	34501.00	31999.28
Return on Equity	45961.10	48233.48	49493.87	50784.49	51840.12
O&M Expenses	24922.37	26299.80	28243.05	29990.86	32272.71
Interest on Working Capital	18316.23	18464.81	18538.24	18784.09	18911.61
<b>Annual fixed charges approved</b>	<b>175757.04</b>	<b>179187.19</b>	<b>179978.87</b>	<b>173574.88</b>	<b>175363.14</b>
<b>Annual fixed charges approved vide order dated 9.3.2017 in Petition No. 266/GT/2014</b>	<b>173123.49</b>	<b>176871.71</b>	<b>175661.06</b>	<b>173379.03</b>	<b>170940.66</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.

151. The difference between the annual fixed charges recovered by the Petitioner in



order dated 9.3.2017 in Petition No. 266/GT/2014 and the annual fixed charges determined by this order shall be adjusted in terms of Regulation 8(13) of the 2014 Tariff Regulations.

152. Annexure-I as enclosed herewith shall form part of the order.

153. Petition No. 157/GT/2020 stands disposed of in terms of the above.

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

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

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

**Depreciation for the 2014-19 Tariff Period**

(Rs. In lakh)

Name of assets	CERC Dep. Rate	For 2014-15		2015-16		2016-17		2017-18		2018-19	
		Gross Block as on 01.04.2014	Depreciation Amount	Gross Block as on 01.04.2015	Depreciation Amount	Gross Block as on 01.04.2016	Depreciation Amount	Gross Block as on 01.04.2017	Depreciation Amount	Gross Block as on 01.04.2018	Depreciation Amount
Freehold Land	0.00%							90614.34	0.00	85184.16	0.00
Leasehold Land	3.34%							14.27	0.48	14.27	0.48
right of use	5.28%							307.55	16.24	307.55	16.24
Roads, bridges, culverts & helipad	3.34%							3059.06	102.17	3059.06	102.17
Main Plant Buildings	3.34%							78515.49	2622.42	79850.73	2667.01
Other Buildings	3.34%							22966.41	767.08	24532.67	819.39
Temporary erection	100.00%							103.38	103.38	103.38	103.38
Water supply, drainage & sewerage system	5.28%							4456.94	235.33	4464.81	235.74
MGR track and signalling system	5.28%							0.00	0.00	0.00	0.00
Railway siding	5.28%							12436.61	656.65	13182.52	696.04
Earth dam reservoir	5.28%							10161.04	536.50	10161.04	536.50
Plant and machinery	5.28%							717479.48	37882.92	718580.13	37941.03
Furniture and fixtures	6.33%							2270.44	143.72	2305.62	145.95
Other Office Equipments	6.33%							626.00	39.63	628.51	39.78
EDP, WP machines & SATCOM equipment	15.00%							1017.09	152.56	1145.68	171.85
Vehicles including speedboats	9.50%							2.94	0.28	2.94	0.28
Construction equipment	5.28%							1444.70	76.28	1444.70	76.28
Electrical installations	6.33%							1291.53	81.75	1415.64	89.61
Communication equipment	6.33%							172.56	10.92	179.14	11.34
Hospital equipment	5.28%							53.55	2.83	53.55	2.83
Laboratory and workshop equipment	5.28%							0.00	0.00	0.00	0.00
Leased assets - Vehicles	9.50%							0.00	0.00	0.00	0.00
Software	15.00%							57.47	8.62	56.91	8.54
Assets Not Owned By company	5.28%							0.00	0.00	0.00	0.00
Unserviceable/Obsolete assets	5.28%							0.00	0.00	0.00	0.00
Spares (IndAs)	5.28%							0.00	0.00	0.00	0.00
<b>Total</b>								<b>947050.85</b>	<b>43439.75</b>	<b>946673.01</b>	<b>43664.44</b>
<b>Weighted Average Rate of Depreciation</b>		<b>4.7558%</b>		<b>4.7389%</b>		<b>4.5901%</b>		<b>4.5996%</b>		<b>4.6124%</b>	

Note: As the Petitioner has not submitted the detail computation for WAROD for the 2014-17 tariff period, the Commission has considered the rates as allowed in order dated 9.3.2017 in Petition No. 266/GT/2014

