

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 144/GT/2015**

**Coram:  
Shri A.S. Bakshi, Member  
Dr. M.K. Iyer, Member**

**Date of Order : 16.3.2017**

**In the matter of:**

Approval of tariff of Mejia Thermal Power Station Unit 5 and 6 (2 x 250 MW) for the period from 1.4.2014 to 31.3.2019.

**And in the matter of**

Damodar Valley Corporation,  
DVC Towers, VIP Road  
Kolkata

.....Petitioner

**Versus**

1. BSES-Rajdhani Power Ltd.,  
PMG Office, 2<sup>nd</sup> Floor, B-Block,  
BSES Bhawan, Nehru Place,  
Delhi- 110 019
2. BSES-Yamuna Power Ltd.,  
Shakti Kiran Building, Karkardooma,  
Delhi- 110072
3. Tata Power Delhi Distribution Ltd.,  
(erstwhile North Delhi Power Ltd.)  
Grid Substation Building, Hudson Lines,  
Kingsway Camp, New Delhi- 110 009
4. Madhya Pradesh Power Management Co. Ltd.  
Shakti Bhavan, Vidyut Nagar,  
Jabalput – 482008



5. West Bengal State Electricity Distribution Company Limited  
Block 'DJ' Sector-11, Salt Lake City,  
Kolkata-700 091

6. Jharkhand Bijli Vitran Nigam Limited  
Engineering Building, HEC, Dhurwa,  
Ranchi- 834 004

.....**Respondents**

7. Damodar Valley Power Consumers Association  
9, Acharya Jagadish Chandra Bose Road,  
Kolkata-700017

.....**Objector**

Parties present:

For Petitioner: Shri Subrata Ghosal, DVC

For Respondents: Shri Anurag Naik, MPPMCL  
Shri Nishant Grover, BYPL

### **ORDER**

This petition has been filed by the petitioner, Damodar Valley Corporation (DVC), for approval of tariff of Mejia Thermal Power Station, Extension Unit Nos. 5 and 6 (2 x 250 MW) (hereinafter referred to as "the generating station") for the period 2014-19 in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations").

2. The petitioner is a statutory body established by the Central Government under the Damodar Valley Corporation Act, 1948 (hereinafter referred to as the 'DVC Act') for the development of the Damodar Valley, with three participating Governments, namely, the Central Government, the Government of West Bengal and the Government of Jharkhand. The generating station with a capacity of 500 MW comprises of two units of



250 MW each and the date of commercial operation of Unit 5 is 29.2.2008 and Unit 6 is 24.9.2008.

3. Petition No. 138/GT/2013 was filed by the petitioner for determination of tariff of the generating station for the period 2009-14 and the Commission vide order dated 23.1.2015, has determined the annual fixed charges for the period 2009-12 and projected additional capital expenditure for the period 2012-14. Thereafter, by order dated 9.2.2017 in Petition No. 115/GT/2015 the Commission had revised the annual fixed charges of the generating station for the period 2009-14 after truing-up exercise in terms of Regulation 6(1) of the 2009 Tariff Regulations, as summarized under:-

	<i>(₹ in lakh)</i>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	15887.77	16240.24	16447.14	16571.07	16557.84
Interest on Loan	12718.25	11531.17	9977.88	8217.14	6434.16
Return on Equity	11146.33	9470.15	9601.15	12101.07	9680.57
Interest on Working Capital	3183.54	3160.47	3171.14	3217.00	3163.72
O&M Expenses	9100.00	9620.00	10170.00	10755.00	11370.00
Cost of secondary fuel oil (for coal-based & lignite fired generating stations only)	1091.36	1091.36	1094.35	1091.36	1091.36
<b>Sub-Total</b>	<b>53127.25</b>	<b>51113.38</b>	<b>50461.65</b>	<b>51952.64</b>	<b>48297.64</b>
Common Office Expenditure	257.99	273.14	140.37	112.83	87.07
Additional O&M on account of Ash evacuation, Mega insurance, CISF security and Share of subsidiary activities	0.00	0.00	0.00	609.83	626.45
Pension & Gratuity Contribution	8238.63	8238.63	8238.63	8238.63	8238.63
Sinking Fund Contribution	0.00	0.00	0.00	687.71	1142.23
Adjustment of secondary fuel oil	34.64	275.26	739.16	901.38	930.68
<b>Sub-Total</b>	<b>8531.25</b>	<b>8787.03</b>	<b>9118.16</b>	<b>10550.38</b>	<b>11025.05</b>
<b>Total Annual Fixed Charges</b>	<b>61658.50</b>	<b>59900.41</b>	<b>59579.81</b>	<b>62503.02</b>	<b>59322.70</b>



4. The annual fixed charges determined vide orders dated 23.1.2015 and 9.2.2017 are subject to the final outcome of the Civil Appeals pending before the Hon'ble Supreme Court in relation to the tariff of the generating stations and inter-state transmission systems of the petitioner determined by the Commission in its various other orders for the period 2006-09.

5. The petitioner vide affidavit dated 15.5.2015 has sought approval of tariff of the generating station for the period 2014-19 in accordance with the provisions of the 2014 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner for the period 2014-19 are as under:

#### Capital Cost

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	214278.33	214302.13	214397.13	214397.13	214397.13
Additional capital expenditure	23.80	95.00	0.00	0.00	0.00
De-capitalization during the year/ period	0.00	0.00	0.00	0.00	0.00
<b>Closing Capital Cost</b>	<b>214302.13</b>	<b>214397.13</b>	<b>214397.13</b>	<b>214397.13</b>	<b>214397.13</b>
<b>Average Capital Cost</b>	<b>214290.23</b>	<b>214349.63</b>	<b>214397.13</b>	<b>214397.13</b>	<b>214397.13</b>

#### Annual Fixed Charges

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	17043.48	17048.20	17051.98	17051.98	17051.98
Interest on Loan	5021.90	3188.95	1353.48	216.70	0.00
Return on Equity	12606.98	12610.48	12613.27	12613.27	12613.27
Interest on Working Capital	5524.48	5612.01	5623.79	5647.62	5703.69
O&M Expenses	11950.00	12700.00	13500.00	14350.00	15255.00
Compensation Allowance	0.00	0.00	0.00	0.00	50.00
Capital Spares	0.00	335.09	335.09	0.00	0.00
<b>Sub-Total</b>	<b>52146.84</b>	<b>51494.73</b>	<b>50477.61</b>	<b>49879.57</b>	<b>50673.94</b>
Pension & Gratuity Contribution	2880.29	6018.62	6018.62	6018.62	6018.62
Common office expenditure	104.38	97.32	124.00	181.95	206.17



	2014-15	2015-16	2016-17	2017-18	2018-19
Additional O&M Expenses	314.37	358.96	427.41	483.54	513.77
Contribution to sinking fund	1222.19	1307.74	1399.28	1497.23	1602.04
<b>Sub-Total</b>	<b>4521.23</b>	<b>7782.64</b>	<b>7969.31</b>	<b>8181.35</b>	<b>8340.60</b>
<b>Total</b>	<b>56668.07</b>	<b>59277.37</b>	<b>58446.92</b>	<b>58060.91</b>	<b>59014.54</b>

6. In compliance with the directions of the Commission, the petitioner has filed additional information and has served copies on the respondents. The respondents, MPPMCL and BYPL and the Objector, M/s Damodar Valley Power Consumers Association (DVPCA) have filed their replies/objections in the matter. The petitioner has filed its rejoinder/response to the above. Taking into consideration the submissions of the parties and the documents available on record, we proceed to consider the claims of the petitioner in respect of this generating station for determination of tariff for the period 2014-19.

#### **Capital cost as on 1.4.2014**

7. Clause (1) of Regulation 9 of the 2014 Tariff Regulations provides that the capital cost as determined by the Commission after prudence check, in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.

Clause 3 of Regulation 9 of the 2014 Tariff Regulations provides as under:

*“The Capital cost of an existing project shall include the following:  
(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;  
(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and  
(c) expenditure on account of renovation and modernization as admitted by this Commission in accordance with Regulation 15.”*

8. The respondent, MPPMCL and the objector, DVPCA have submitted that petitioner has considered opening capital cost of ₹214278.33 lakh as on 1.4.2014 in respect of this generating station as against the capital cost of ₹207307.51 lakh approved by



Commission in order dated 23.1.2015. They have further submitted that in accordance with Regulation 9(3) of the 2014 Tariff Regulations, the admitted capital cost of ₹207307.51 lakh should be considered as the opening capital cost for determination of tariff for period 2014-19. In response, the petitioner vide has submitted that the opening capital cost as on 1.4.2014 may be considered in terms of the capital cost of ₹208194.63 lakh as on 31.3.2014 allowed vide order dated 9.2.2017 in Petition No. 115/GT/2015.

9. The matter has been examined. It is observed that the annual fixed charges claimed by the petitioner are based on opening capital cost of ₹214278.33 lakh as on 1.4.2014. The Commission vide order dated 9.2.2017 in Petition No. 115/GT/2015 had revised the tariff of the generating station for the period 2009-14 after truing up exercise and had approved the closing capital cost of ₹208194.63 lakh as on 31.3.2014. In accordance with Clause 3 of Regulation 9 of the 2014 Tariff Regulations, the capital cost approved by the Commission as on 31.3.2014 shall be considered as opening capital cost as on 1.4.2014 for the period 2014-19. Accordingly, the closing capital cost of ₹208194.63 lakh as on 31.3.2014 has been considered as the opening capital cost as on 1.4.2014 for the purpose of determination of tariff of this generating station.

### **Additional Capital Expenditure**

10. Regulation 14 (3) of the 2014 Tariff Regulations provides as under:

*“14.(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:*

*(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;*

*(ii) Change in law or compliance of any existing law;*



*(iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;*

*(iv) Deferred works relating to ash pond or ash handling system in the original scope of work;*

*(v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*

*(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*

*(vii) Any additional capital expenditure which has become necessary for efficient operation of generating station other than coal / lignite based stations or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*

*(viii) In case of hydro generating stations, any expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) and due to geological reasons after adjusting the proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;*

*(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolescence of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and*

*(x) Any capital expenditure found justified after prudence check necessitated on account of modifications required or done in fuel receiving system arising due to non-materialization of coal supply corresponding to full coal linkage in respect of thermal generating station as result of circumstances not within the control of the generating station:*

*Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff w.e.f. 1.4.2014:*

.....



11. The additional capital expenditure allowed by the Commission by order dated 9.2.2017 in Petition No. 115/GT/2015 is as under:-

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Additional capital expenditure allowed	2691.38	2106.72	3370.29	10.22	24.46
Less: De-capitalization	0.00	0.00	0.00	0.00	0.00
Less: Un-discharged liabilities	182.48	84.70	41.46	0.55	3.71
Add: Discharges of liabilities	4623.44	236.84	46.85	0.00	0.00
<b>Total additional capital expenditure allowed</b>	<b>7132.34</b>	<b>2258.86</b>	<b>3375.69</b>	<b>9.67</b>	<b>20.75</b>

12. The break-up of the projected additional capital expenditure claimed by the petitioner as per Regulation 14(3) of the 2014 Tariff Regulations for the period 2014-19 are as under:

(₹ in lakh)			
S. No.	Head of Works/ Equipment	Regulation	
	<b>2014-15</b>		
1	<b>Building</b>		
	002/34 Residential Building (V & VI)(0111024302)	14(3)(vi)	2.61
2	<b>Barrage, Barrage Gates &amp; Other Civil works</b>		
	River inake pipeline	14(3)(vi)	13.46
3	<b>Power House Plant &amp; Machinery:</b>		
	Boiler feed pump (V and VI)	14(3)(vi)	7.73
	<b>Sub-total</b>		<b>23.80</b>
	<b>2015-16</b>		
1	Procurement of CAAQMS devices( full set) (Item -Other Plant Machinery)	14(3)(iii)	95.00
	<b>Sub-total</b>		<b>95.00</b>
	<b>Total additional capital expenditure claimed</b>		<b>118.80</b>

13. The petitioner has submitted that some of the works allowed for additional capitalization for which orders were placed during the period 2009-14 could not be completed and were not put to use due to uncontrollable factors. The petitioner has also





submitted that the same will be capitalized during the period 2014-19. In this regard, the petitioner was directed to provide the details of the works which were allowed during the period 2009-14 and projected to be capitalized during the period 2014-19 and in response, the petitioner has submitted that no such works allowed during the period 2009-14 is projected to be capitalized during the period 2014-19 and in case there is any, the same may be claimed at the time of truing-up for the period 2014-19.

14. The respondents, MPPMCL and BYPL have submitted that the petitioner has not claimed any projected additional capital expenditure for the years 2016-17, 2017-18 and 2018-19, respectively and the claims, if any, in the truing-up petition for the period 2014-19 may be rejected by the Commission. In response, the petitioner has clarified that it has claimed projected additional capital expenditure on conservative basis, based on the past experience and hence the Commission may consider the same.

15. We now examine the year-wise claim of the petitioner for additional capital expenditure for the period 2014-19 as stated under:

#### **2014-15**

#### **Building, Barrage, Barrage Gates, Power House Plant & Machinery and Other Civil works**

16. The petitioner has claimed additional capital expenditure of ₹2.61 lakh for Residential Building and ₹13.46 lakh for barrage, barrage gates and Other civil works (River Intake Pipeline) under Regulation 14(3) of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that part payment (including taxes and duties) has been made to M/s BHEL for modification of Residential Building etc. and the same was kept as part of Construction Work-in-Progress (CWIP) and was not



capitalized as the work was not completed. The petitioner has further submitted that the modification work is under progress and major portion of expenditure was already incurred and transferred to fixed assets as on COD. It has also submitted that only remaining payments after COD / cut-off date was transferred from CWIP to this fixed asset vide journal entry of March, 2014. The petitioner has further submitted that the claim is within the original scope of work of the project and covered under SI no 3(a) of the sanction order.

17. The respondent, BYPL has pointed out that the submission of the petitioner that payment has been made to M/s BHEL is required to be clarified since the work of BHEL generally do not relate to construction of residential buildings. It has further submitted that since the journal entry is March, 2014, and the same pertains to the year 2013-14, but the said claim has been made out in 2014-15. In response, the petitioner has clarified that the word BHEL mentioned therein is a typographical error and the payments made relates to residential building constructed by M/s N.B.C.C Ltd. and is therefore a discharge of liability. As regards the journal entry, the petitioner has further clarified that the error may be corrected and read as March, 2015.

18. The matter has been examined and the clarification given by petitioner has been considered. The cut-off date of the generating station is 31.3.2010. It is noticed that the said works form part of the original scope of work which have been executed within the cut-off-date. Further, the said works have been approved by the Commission vide Order dated 23.1.2015 in Petition No. 138/GT/2013 and Order dated 9.2.2017 in Petition No. 115/GT/2015. It is observed that the additional capital expenditure claimed by the petitioner is towards part payment of the balance amount to the EPC contractors which



way lying in CWIP and now transferred to fixed assets on put to use basis, after the cut-off-date by the petitioner. It is noticed that these liabilities on assets have been created prior to the cut-off date of the generating station and the capitalization of the expenditure has been made for only after the said assets have been put to use. Since Regulation 14(3)(v) of the 2014 Tariff Regulations provides for consideration of un-discharged liability for works executed prior to the cut-off date, the additional capital expenditure claimed by the petitioner in respect of these assets in 2014-15 is found justified and accordingly been allowed.

**b. Power House Plant & Machinery, Switchgear and Other Assets**

19. The petitioner has claimed additional capital expenditure of ₹7.73 lakh in 2014-15 towards Boiler Feed Pump under Regulation 14(3) of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that these are the deferred liabilities relating to works/services including initial spares which are within the original scope of work under SI no 2 (A) & 2(B) of the sanction order. The petitioner has further submitted that part payment (including taxes and duties) has been made to M/s BHEL. It has further submitted that major portion of expenditure was already incurred and transferred to fixed assets as on COD and only residual payment after COD / cut-off date has been transferred from CWIP to this fixed asset vide journal entry of March, 2014.

20. The respondent, BYPL has submitted that the petitioner has not specified the relevant provisions of Regulation 14(3) under which the claim for additional capital expenditure for River Intake Pipeline and Boiler Feed Pump has been made and hence



may not be allowed. In response, the petitioner has submitted that it has made such claim under Regulation 14(3)(vi) of the 2014 Tariff Regulations.

21. The matter has been examined. It is observed that the petitioner has claimed the said additional capital expenditure under Regulation 14(3)(vi) of the 2014 Tariff Regulations, which is not correct as the nature of works under the said additional capital expenditure are covered under Regulation 14(3)(v) of the 2014 Tariff Regulations. As stated, the cut-off date of the generating station is 31.3.2010. It is noticed that the said works form part of the original scope of work which have been executed within the cut-off-date. Further, the above expenditure is towards part payment of the balance amount to the M/s BHEL (EPC contractor) which was lying in CWIP and which was transferred to fixed assets on put to use basis, after the cut-off-date by the petitioner. It is noticed that these liabilities on assets have been created prior to the cut-off date of the generating station and capitalization of the said expenditure has been sought for only after the said assets have been put to use. Accordingly, in terms of Regulation 14(3)(v) of the 2014 Tariff Regulations which provides for consideration of un-discharged liability for works executed prior to the cut-off date, the additional capital expenditure in 2014-15 is found justified and has been allowed.

## **2015-16**

### **Procurement, Installation and Commissioning of one set of CAAQMS devices**

22. The petitioner has claimed projected additional capital expenditure of ₹95.00 lakh towards CAAQMS device (full set) in 2015-16 under Regulation 14(3)(ii) of the 2014 Tariff Regulations. In justification of the same, the petitioner has submitted that one set of CAAQMS device was to be procured, installed and commissioned in phases as per



statutory norms of the Pollution Control Board. In this regard, the respondent, MPPMCL has submitted that though the incidence of change in law has been claimed by the petitioner, no justification has been provided for the same. Accordingly, it has submitted that in the absence of any proper justification, the claim of the petitioner may be rejected.

23. The matter has been examined. It is observed that the expenditure pertains to installation of Ozone analyzers in AAQMS for monitoring Ambient Air as per the Central Pollution Control Board (CPCB) Notification dated 18.11.2009. However, the petitioner has not furnished the copy of the said notification. It is noticed that the claim of additional capital expenditure on AAQMS by NTPC in the period 2009-14 was considered by the Commission in Petition No. 225 of 2009 and the Commission by Order dated 07.08.2012 had rejected the said claim. However, on an appeal by NTPC, the Tribunal vide its Judgment dated 12.5.2015 in Appeal No. 232/2012 had rejected the claim of NTPC. It is observed that APTEL in the above judgment had disallowed the claim of M/s NTPC regarding AAQMS approved to NTPC by CEA vide letter dated 17.4.2007. However, in instant petition, said expenditure pertains to installation of Ozone analyzers in AAQMS for monitoring Ambient Air as per the Central Pollution Control Board (CPCB) Notification dated 18.11.2009. However, the petitioner has not furnished the copy of the said notification. In absence of relevant supporting documents, the projected additional capital expenditure of ₹95.00 lakh in 2015-16 is not allowed under Regulation 14(3)(ii) of the 2014 Tariff Regulations. Since further details are required from the petitioner, we direct the petitioner to provide the supporting document in support of the installation of such system in 2015-16.



24. Based on the above discussions, the projected additional capital expenditure allowed for the period 2014-19 is summarized as under:

		(₹ in lakh)
<b>S. No.</b>	<b>Head of Works/ Equipment</b>	
	<b>2014-15</b>	
1	<b>Building</b>	
	002/34 Residential Building (V & VI)(0111024302)	2.61
2	<b>Barrage, Barrage Gates &amp; Other Civil works</b>	
	River inake pipeline	13.46
3	<b>Power House Plant &amp; Machinery:</b>	
	Boiler feed pump (V and VI)	7.73
	<b>Sub-total</b>	<b>23.80</b>
	<b>Total additional capital expenditure allowed</b>	<b>23.80</b>

### Capital cost for 2014-19

25. As stated above, the closing capital cost of ₹208194.63 lakh approved in order dated 9.2.2017 in Petition No. 115/GT/2015 has been considered as the opening capital cost as on 1.4.2014. Accordingly, the year wise capital cost considered for determination of tariff for the period 2014-19 is as under:

						(₹ in lakh)
	2014-15	2015-16	2016-17	2017-18	2018-19	
Opening Capital Cost	208194.63	208218.43	208218.43	208218.43	208218.43	
Net Additions Allowed	23.80	0.00	0.00	0.00	0.00	
Closing Capital Cost	208218.43	208218.43	208218.43	208218.43	208218.43	
Average Capital Cost	208206.53	208218.43	208218.43	208218.43	208218.43	

### Debt-Equity Ratio

26. Regulation 19 of the 2014 Tariff Regulations provides as under:

*“(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 utilisation 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 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.*

27. Accordingly, the gross normative loan and equity amounting to ₹145736.24 lakh and ₹62458.39 lakh respectively, as on 31.3.2014 as admitted in order dated 9.2.2017 has been considered as normative loan and equity as on 1.4.2014. The normative debt equity ratio of 70:30 has been considered in the case of additional capital expenditure.



This is subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations. The opening and closing debt and equity is as under.

(₹ in lakh)

Asset	As on 1.4.2014		Net Additional capitalization		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	145736.24	70.00%	16.66	70.00%	145752.90	70.00%
Equity	62458.39	30.00%	7.14	30.00%	62465.53	30.00%
<b>Total</b>	<b>208194.63</b>	<b>100.00%</b>	<b>23.80</b>	<b>100.00%</b>	<b>208218.43</b>	<b>100.00%</b>

### Return on Equity

28. Regulation 24 of the 2014 Tariff Regulations 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 kilometers.





29. 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.”*

30. The petitioner has claimed return on equity considering the base rate of 15.50% and effective tax rate (MAT rate) of 20.961%. The respondent, MPPMCL has submitted that present rate of MAT is 18.50% excluding surcharge and cess. The 2014 Tariff Regulations provides for MAT only and thus surcharge and cess cannot be considered in MAT for calculation of rate of return on equity. Therefore, the respondent has requested for considering the MAT rate of 18.5% for computation of rate of return on equity. In response, the petitioner vide affidavit dated 12.9.2016 has submitted that return on equity has been claimed in accordance with the 2014 Tariff Regulations.

31. The objector, DVPCA has submitted that petitioner has considered opening equity base of ₹64283.50 lakh as against the equity base of ₹62192.26 lakh approved by the Commission in order dated 23.1.2015 in Petition No. 138/GT/2013. It has further submitted that in accordance with Regulations 19(3) and 24 of the 2014 Tariff



Regulations, the equity base for return on equity should be based on the debt equity ratio allowed by the Commission in order dated 23.1.2015. Accordingly, it has stated that the return on equity should be computed at an opening equity based of ₹62192.26 lakh for the period 2014-19. In response, the petitioner has submitted that the opening capital cost as on 1.4.2014 shall be the closing capital cost as determined by the Commission in order dated 9.2.2017 in Petition No. 115/GT/2015 for the period 2009-14 and the debt-equity ratio shall be considered accordingly.

32. The matter has been examined. It is observed that the petitioner has claimed return on equity considering the base rate of 15.50% and effective tax rate (MAT rate) of 20.961%. However, the actual tax rate of 2013-14 is "NIL" as per annual audited accounts of 2013-14 submitted by the petitioner. It is also observed from the annual accounts for the years 2014-15 and 2015-16, the tax liability is 'nil' in respect of the Petitioner's Company as a whole. In view of this, the actual tax rate of 2013-14 to 2015-16 has been considered 'NIL' for grossing up of the base rate. This is however subject to truing-up and shall be considered as per the actual effective tax rate applicable for the respective financial year. Accordingly, Return on Equity has been worked out as under:-

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Notional Equity-Opening	62458.39	62465.53	62465.53	62465.53	62465.53
Addition of Equity due to Additional Capitalization	7.14	0.00	0.00	0.00	0.00
Normative Equity- Closing	62465.53	62465.53	62465.53	62465.53	62465.53
Average Normative Equity	62461.96	62465.53	62465.53	62465.53	62465.53
Return on Equity (Base Rate )	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate for the year	0.000%	0.000%	0.000%	0.000%	0.000%
Rate of Return on Equity (Pre Tax )	15.500%	15.500%	15.500%	15.500%	15.500%
<b>Return on Equity</b>	<b>9681.60</b>	<b>9682.16</b>	<b>9682.16</b>	<b>9682.16</b>	<b>9682.16</b>



## Interest on Loan

33. Regulation 26 of the 2014 Tariff Regulations provides as under:

**“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 de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalization of such asset.*

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

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

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

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

- a. The gross normative loan of ₹145736.24 lakh has been considered on 1.4.2014 in order dated 9.2.2017 in Petition No. 115/GT/2015. In addition to this, loan component towards additional capitalization has been considered as per the approved debt equity ratio.
- b. Cumulative repayment of loan as on 31.3.2014 has been considered as cumulative repayment as on 1.4.2014.
- c. Addition to normative loan on account of additional capital expenditure approved above has been considered on year to year basis.
- d. Depreciation allowed has been considered as repayment of normative loan during the respective year of the period 2014-19.



- e. In line with the provisions of the regulations, 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 period 2014-19, if any, for the Petitioner company. In case of loans carrying floating rate of interest, the rate of interest as furnished by the petitioner has been considered for the purpose of tariff. The calculations for weighted average rate of interest on loan have been enclosed as Annexure-I to this order.

35. The necessary calculations for interest on loan is as under:

	<i>(₹ in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Notional Loan for the purpose of tariff in the instant petition	145736.24	145752.90	145752.90	145752.90	145752.90
Cumulative repayment of loan up to previous year	94337.21	110896.82	127457.38	144017.94	145752.90
Net opening loan	51399.03	34856.08	18295.52	1734.96	0.00
Addition due to Net Additional Capitalization	16.66	0.00	0.00	0.00	0.00
Repayment of Loan during the period	16559.61	16560.56	16560.56	1734.96	0.00
Add: Repayment adjustment on account of de-capitalization	0.00	0.00	0.00	0.00	0.00
Less: Repayment on account of adjustment in discharge in liabilities	0.00	0.00	0.00	0.00	0.00
Net Closing Loan	34856.10	18295.50	1735.00	0.00	0.00
Average Loan	43127.56	26575.79	10015.26	867.48	0.00
Weighted Average Rate of Interest on Loan (%)	10.7859%	10.7896%	10.7942%	10.7999%	10.8075%
<b>Interest on Loan</b>	<b>4651.68</b>	<b>2867.42</b>	<b>1081.06</b>	<b>93.69</b>	<b>0.00</b>

## Depreciation

36. 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 up to 31.3.2014 from the gross depreciable value of the assets.



(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with 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.”

37. Regulation 53(2)(iii) of the 2014 Tariff Regulations provides as under:

**“53. Special Provisions relating to Damodar Valley Corporation.** (1) Subject to clause (2), these regulations shall apply to determination of tariff of the projects owned by Damodar Valley Corporation (DVC).

(2) The following special provisions shall apply for determination of tariff of the projects owned by DVC:

(i)....

(ii)....

(iii) Depreciation: The depreciation rate stipulated by the Comptroller and Auditor General of India in terms of section 40 of the Damodar Valley Corporation Act, 1948 shall be applied for computation of depreciation of projects of DVC.

38. The petitioner has claimed depreciation in accordance with the rate of depreciation stipulated by the Comptroller and Auditor General of India in terms of Section 40 of Damodar Valley Corporation Act, 1948 as under:-

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
17043.48	17048.20	17051.98	17051.98	17051.98

39. The respondent, MPPMCL has submitted that petitioner has considered the depreciation at a weighted average rate of 7.9535% which is exorbitant and has also not submitted any justification or detailed calculation for the same. The respondent has further submitted that all the items indicated in Appendix-II of the 2014 Tariff Regulations are below or at the level of 5.28% excluding few items like temporary erection, IT equipment software, apparatus on hire communication equipment, self-propelled



vehicles, etc. Accordingly, it has suggested that the petitioner may be directed to submit the detailed explanation for claiming such a higher rate of depreciation or else the same may be reduced to the level of around 5% on the basis of Regulation 27 of the 2014 Tariff Regulations. Further, the objector, DVPCA has submitted that depreciation has been considered by the petitioner at a weighted average rate of 7.9535%, whereas the depreciation rate of 7.1582% for the generating station has been approved by the Commission in order dated 23.1.2015 in Petition No. 138/GT/2013. Accordingly, the objector has suggested that depreciation rate may be allowed on prudence check.

40. In response, the petitioner has submitted that the rate of depreciation stipulated by the Comptroller and Auditor General of India in terms of Section 40 of the Damodar Valley Corporation Act, 1948 should be applied for computation of depreciation for the projects of DVC. The petitioner has further submitted that depreciation cannot be calculated annually based on straight line method at the rates specified in Appendix-II of the 2014 Tariff Regulations. The petitioner has further submitted that rate of depreciation has been considered as the weighted average rate of depreciation for 2013-14 as submitted in Petition No. 115/GT/2015 for true up tariff for the period 2009-14.

41. The respondent, BYPL has requested that the Commission may determine the depreciation rate based on the asset details for period 2014-19. In response, the petitioner has submitted that rate of depreciation considered in the petition is the weighted average rate of depreciation considered for the year 2013-14. The petitioner has further submitted that BYPL has failed to understand that the multi-year tariff petition is required to be filed at the beginning of the five-year tariff period on projection basis and at that point of time details of the asset cannot be ascertained. The petitioner has



further submitted that the average rate of depreciation, based on the records have been applied.

42. The matter has been examined. The petitioner's view that weighted average rate of depreciation for 2013-14 as approved in Petition No. 115/GT/2015 for true up tariff for the period 2009-14 has been considered. The rate of depreciation has been arrived at by considering the weighted average rate of depreciation computed on the gross value of asset as on 31.3.2014 and at the rates approved by C&AG which works out to 7.953% for 2013-14. The same has been considered for the period 2014-19. Necessary calculations in support of depreciation are as under:-

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	208194.63	208218.43	208218.43	208218.43	208218.43
Net Additional Capitalization	23.80	0.00	0.00	0.00	0.00
Closing Capital Cost	208218.43	208218.43	208218.43	208218.43	208218.43
Average capital cost	208206.53	208218.43	208218.43	208218.43	208218.43
Value of freehold land	38.33	38.33	38.33	38.33	38.33
Depreciable value	7.953%	7.953%	7.953%	7.953%	7.953%
Balance depreciable value	93014.15	76465.25	59904.69	43344.13	26783.57
<b>Depreciation</b>	<b>16559.61</b>	<b>16560.56</b>	<b>16560.56</b>	<b>16560.56</b>	<b>16560.56</b>
Cumulative depreciation at the end of the period (before adjustment)	110896.84	127457.40	144017.96	160578.52	177139.08
Less: Cumulative depreciation adjustment on account of de-capitalization	0.00	0.00	0.00	0.00	0.00
Cumulative depreciation after adjustment (at the end of the period)	110896.84	127457.40	144017.96	160578.52	177139.08

### Compensation Allowance

43. Regulation 17(1) of the 2014 Tariff Regulations provides as under:





**“17. Compensation Allowance:** (1) In case of coal-based or lignite-fired thermal generating station or a unit thereof, a separate compensation allowance shall be admissible to meet expenses on new assets of capital nature which are not admissible under Regulation 14 of these regulations, and in such an event, revision of the capital cost shall not be allowed on account of compensation allowance but the compensation allowance shall be allowed to be recovered separately  
(2) The Compensation Allowance shall be allowed in the following manner from the year following the year of completion of 10, 15, or 20 years of useful life.”

Years of operation	Compensation Allowance (lakh/MW/year)
0-10	Nil
11-15	0.20
16-20	0.50
21-25	1.00

44. The petitioner has claimed Compensation Allowance of ₹50.00 lakh in 2018-19 in order to meet the expenses on new assets of capital nature including in the nature of minor assets. As the COD of Units 5 and 6 are 29.2.2008 and 24.9.2008, respectively, Unit-5 has completed 10 years of operation in 2018-19 as claimed by the petitioner. Based on this, Compensation Allowance has been worked out and allowed as under:

(₹ in lakh)		
Description	Unit-5	Unit-6
Capacity in MW	250	250
COD	29-Feb-2008	24-Sep-2008
Balance useful life as on 1.4.2014 (yrs.)	18.91	19.48
a) 10 years	1-Mar-18	25-Sept-18
b) 15 years	1-Mar-23	25-Sept-23
c) 20 years	1-Mar-28	25-Sept-28
2014-15	0.00	0.00
2015-16	0.00	0.00
2016-17	0.00	0.00
2017-18	0.00	0.00
2018-19	50.00	0.00
<b>Total</b>	<b>50.00</b>	<b>0.00</b>



## Operation & Maintenance Expenses

45. Regulation 29(1)(a) of the 2014 Tariff Regulations provides as under:

### **“29. Operation and Maintenance Expenses:**

(1) 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):

(in Rs Lakh/MW)

Year	200/210/250 MW Sets	300/330/350 MW Sets	500 MW Sets	600 MW and above sets
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

...”

46. Regulation 29 (1) (a) of the 2014 Tariff Regulations provides the year-wise O&M expense norms for the generating station of the petitioner as under:-

(₹ in lakh)

2014-15	2015-16	2016-17	2017-18	2018-19
11950.00	12700.00	13500.00	14350.00	15255.00

47. In addition to above, the petitioner has claimed additional O&M expenses towards Mega insurance and Share of Subsidiary activity.



(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Ash Evacuation	0.00	0.00	0.00	0.00	0.00
Mega Insurance	56.99	56.99	62.69	73.78	81.16
CISF Security	0.00	0.00	0.00	0.00	0.00
Share of Subsidiary activity	257.38	301.97	364.71	409.76	432.62
<b>Total</b>	<b>314.37</b>	<b>358.96</b>	<b>427.41</b>	<b>483.54</b>	<b>513.77</b>

48. The respondent, MPPMCL has submitted that petitioner's claim for additional O&M expenses are unreasonable and is beyond the scope of the 2014 Tariff Regulations. In response, the petitioner has submitted that it has claimed only such items of expenditure which are not covered under the normative O&M expenses and has therefore, prayed that the Commission may allow the additional O&M expenses claimed.

49. The objector, DVPCA has submitted that the additional O&M expenses were allowed to some of the DVC generating stations for the previous tariff periods, as the expenses were not included in the normative O&M expenses allowed to the generating stations. It has further submitted that the allowance of additional O&M expenses for periods 2006-09 and 2009-14 has been challenged before the Tribunal by some of the command area consumers and the same is pending. It has further submitted that the Commission had notified the 2014 Tariff Regulations after due public consultation process with stakeholders including the petitioner and pointed out that the Commission in its Statement of Reasons to the 2014 Tariff Regulations has stated that the O&M norms are based on data from multiple stations with wide geographical spread and therefore specific expenditure aspects are already covered in the normative O&M expenses. Accordingly, the objector has submitted that the normative O&M expenses specified with the 2014 Tariff Regulations are in the nature of price-cap and accordingly,



the additional O&M expenses towards Mega Insurance and Share of subsidiary activity is unreasonable and should be disallowed. In response, the petitioner has submitted that it has claimed only such items of expenditure under additional O&M expenses which are not covered by the normative O&M expenses. It has further submitted that in accordance with the first proviso to Regulation 53(2)(i) of the 2014 Tariff Regulations, the expenditure incurred on head office, regional offices, administrative and technical centers of DVC shall also form part of the capital cost and these offices are otherwise termed as common offices. It has also submitted that both the issues of share of common office expenses as well as share of subsidiary activities are already settled issues.

50. We have examined the matter. In the Statement of Reasons in support of the 2014 Tariff Regulations, the Commission has observed as under:

*“...29.39 Some of the generating stations have suggested that site specific factors should be taken into account and additional O&M expenses should be allowed. The Commission is of the view that the site specific norms in case of thermal generating stations may not serve much purpose as there is a set of advantages and disadvantages associated with every site, which average out, and the proposed norms are also based on multiple stations with wide geographical spread and therefore, such aspects are already factored in the norms...”*

51. In line with the above observations and in accordance with the 2014 Tariff Regulations, the additional O&M expenses claimed by the petitioner under the above head has not been allowed.

### **Water Charges**

52. Regulation 29(2) of the 2014 Tariff Regulations provide 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:*

*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”*

53. The respondent, BYPL has submitted that the petitioner has not specified any reason for not furnishing the details for computation of water charges under Regulation 29(2) of the 2014 Tariff Regulations and therefore, the Commission may direct the petitioner to provide the details necessary for determination of normative water charges as further deferment would result in cascading impact on tariff on account of interest on differential amount. Accordingly, the respondent has prayed that the Commission may disallow the interest on account of deferment.

54. In response, the petitioner vide affidavit dated 12.9.2016 has submitted that the details for computation of water charges can only be submitted once the expenditure is incurred.

55. We have examined the matter. In terms of the above regulation, Water charges are to be allowed based on water consumption depending upon type of plant, type of cooling water system etc., subject to prudence check of the details furnished by the petitioner. The petitioner has submitted that at present water charges have not been claimed for the generating station. However, the petitioner has sought liberty to approach the Commission as and when the same is billed by the Authority and paid by the petitioner. In view of the above submissions, we grant liberty to the petitioner to claim water



charges at the time of truing up of tariff, with proper justification and documentary evidence, and the same will be considered in accordance with law.

### Capital spares

56. The petitioner has claimed capital spares on projection basis under Regulation 29(2) of the 2014 Tariff Regulations as under:-

<i>(₹ in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
0.00	335.09	335.09	0.00	0.00

57. The petitioner has also submitted that the actual year-wise capital spares along with adequate justification will be submitted at the time of truing up of tariff.

58. The respondent, MPPMCL has submitted that the petitioner's claim towards capital spares is beyond scope of the 2014 Tariff Regulations and hence should be disallowed. In response, the petitioner has submitted that Regulation 29(2) of the 2014 Tariff Regulations clearly provide for allowing capital spares for thermal generating stations separately over and above the normative O&M expenses. It has further submitted that the details of capital spares as required to be submitted in form 17 has been furnished at pages 7, 13 and 35 of the petition.

59. We have examined the matter. In conversation of the submission of the petitioner that justification of the claim of capital spares will be furnished at the time of truing up, we are not inclined to consider the claim of the petitioner at this stage. The petitioner shall submit detailed justification of the said claim for prudence check, at the time of truing-up of tariff in terms of the Regulation 29(2) of the 2014 Tariff Regulations.



## Operational Norms

60. The operational norms in respect of the generating station claimed by the petitioner are as under:

Target Availability (%)	83
Heat Rate (kCal/kWh)	2450
Auxiliary Energy Consumption (%)	9
Specific Oil Consumption (ml/kWh)	0.50

61. The operational norms claimed by the petitioner are discussed as under:

### Normative Annual Plant Availability Factor (NAPAF)

62. Regulation 36 (A) (a) of the 2014 Tariff Regulations provides as under:

*“(a) All Thermal generating stations, except those covered under clauses (b), (c), (d) & (e) - 85%.*

*Provided that in view of the shortage of coal and uncertainty of assured coal supply on sustained basis experienced by the generating stations, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed.*

*The above provision shall be reviewed based on actual feedback after 3 years from 01.04.2014.”*

63. The petitioner has considered the Target Availability of 83% for the period 2014-19 due to inadequate regular supply of quality coal. The respondent, MPPMCL has submitted that the procurement of coal and other raw material for efficient operation of the plant is the sole responsibility of the petitioner and the beneficiaries should not be burdened for inability of the petitioner to procure sufficient quantity of coal of this generating station. Accordingly, the respondent has submitted that the petitioner may be directed to revise the Target availability as 85% with retrospective effect. The respondent, BYPL has submitted that there was no shortage in coal in 2014-15 and



hence the Commission may direct the petitioner to consider NAPAF of 85%. It has further submitted that Regulation 36(A)(a) provides for relaxation in NAPAF from 85% to 83% in view of shortage of coal on sustained basis. But, there is nothing on record for claim that the petitioner had experienced shortage of coal on sustained basis. It has further submitted that the generator was at liberty to source coal by way of e-auction of purchase of imported coal which it has failed to do and under such circumstances the claim for relaxation of NAPAF is not justified. In response, the petitioner has submitted that in view of shortage of coal and uncertainty of assured coal supply on sustained basis, the NAPAF for recovery of fixed charges shall be 83% till the same is reviewed. It has further submitted that the said respondents have failed to consider the prayer wherein it has prayed for granting liberty to approach the Commission for relaxation of operating norms as per actual position during the period 2014-19 onwards. It has further submitted that NAPAF percentage considered in the tariff petition is strictly in accordance with the provisions of the 2014 Tariff Regulations. It has stated that the statement of the respondent that it has failed to procure imported coal by way of e-auction is incorrect and the failure to procure coal by the generator will deprive them from availing the NAPAF percentage as per the provisions of the 2014 Tariff Regulations is denied.

64. The matter has been examined. It is observed that the petitioner in Petition No. 352/GT/2014 (tariff of Mejia Unit 4 of the petition) for 2014-19 was directed to provide the details of month wise opening stock of coal, coal received during the month, closing stock of the coal for 2015-16 along with annual contracted quantity of coal and in





response, the petitioner has submitted the details of month wise details of coal for the year 2015-16 in respect of the Units 1 to 8 of Mejia TPS as under:-

		<i>(in MT)</i>					
		April-2015	May-2015	June-2015	July-2015	August-2015	September-2015
1	Opening Stock	292618.57	444862.48	322816.34	235407.00	145005.00	111931.00
2	Quantity received	773177.62	606314.26	628749.99	569919.00	612445.00	538359.00
<b>3</b>	<b>Total</b>	<b>1065796.19</b>	<b>1051176.74</b>	<b>951566.33</b>	<b>805326.00</b>	<b>757450.00</b>	<b>650290.00</b>
4	Less: Consumption	620933.71	728360.40	716159.33	660321.00	645519.00	584482.00
<b>5</b>	<b>Closing Stock</b>	<b>444862.48</b>	<b>322816.34</b>	<b>235407.00</b>	<b>145005.00</b>	<b>111931.00</b>	<b>65808.00</b>

		<i>(in MT)</i>					
Sl. No.		October-2015	November-2015	December-2015	January-2016	February-2016	March-2016
1	Opening Stock	65808.00	83716.00	102937.00	85832.00	201730.00	448832.00
2	Quantity received	613329.00	559720.00	594018.07	780562.00	860905.00	902717.32
<b>3</b>	<b>Total</b>	<b>679137.00</b>	<b>643436.00</b>	<b>696955.07</b>	<b>866394.00</b>	<b>1062635.00</b>	<b>1351549.32</b>
4	Less: Consumption	595421.00	540499.00	611123.07	664664.00	613803.00	704169.75
<b>5</b>	<b>Closing Stock</b>	<b>83716.00</b>	<b>102937.00</b>	<b>85832.00</b>	<b>201730.00</b>	<b>448832.00</b>	<b>647379.57</b>

Details of total quantity of coal for MTPS units 1 to 8 (4x210 MW + 2x250 MW + 2x500 MW)	in MT
Opening Stock as on 1.4.2015	292618.57
Quantity received in 2015-16	8040216.26
Consumption in 2015-16	7685455.26
Closing Stock as on 31.3.2016	647379.57

65. It is therefore evident that the coal supply of the generating station was adequate during the year 2015-16. Accordingly, as suggested above by the said respondents, the Target Availability of 85% has been considered for the period from 2014-15 to 2018-19.



### **Station Heat Rate (kCal/kWh)**

66. The petitioner has claimed Gross Station Heat Rate of 2450 kCal/kWh for the period 2014-19 in terms of Regulation 36 (C)(a)(i) of the 2014 Tariff Regulations. Regulation 36(C)(a) of the 2014 Tariff Regulations provides the Gross Station Heat Rate of 2450 kCal/kWh for existing coal based thermal generating stations of 250 MW sets whose CODs were before 1.4.2009. As stated, Units 5 and 6 of this generating station was declared under commercial operation on 29.2.2008 and 24.9.2008. Accordingly, the Gross Station Heat Rate considered by the petitioner is in line with the aforesaid regulation and hence is in order and allowed.

### **Auxiliary Energy Consumption**

67. Regulation 36(E)(a) of the 2014 Tariff Regulations provides Auxiliary Energy Consumption of 8.50% for coal based generating stations of 250 MW sets with Natural Draft cooling tower or without cooling tower with. It further provides that for thermal generating stations with induced draft cooling towers, the norms shall be further increased by 0.5%. The petitioner has claimed Auxiliary Energy Consumption of 9.00% for the period 2014-19 as the generating station comprises of induced draft cooling towers. Accordingly, the Auxiliary Energy Consumption considered is as per the Regulation 36(E)(a) of the 2014 Tariff Regulations and the same is allowed.

### **Specific fuel Oil Consumption**

68. Regulation 36(D)(a) of the 2014 Tariff Regulations provides secondary fuel oil consumption of 0.50 ml/kWh for coal-based generating stations of the petitioner and accordingly the same is allowed.



## Interest on working capital

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

*“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.*

## Fuel Components and Energy Charges in working capital

70. The petitioner has claimed cost for fuel components in working capital based on “as received” GCV of coal procured for the preceding three months of January, 2014, February, 2014 and March, 2014 and secondary fuel oil for the preceding three months of January, 2014, February, 2014 and March, 2014, as under:

	<i>(₹ 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/Lignite- 2 months	13860.59	13860.59	13860.59	13860.59	13860.59
Cost of Main Secondary Fuel Oil- 2 months	185.19	185.69	185.19	185.19	185.19
<b>Total</b>	<b>14045.78</b>	<b>14046.29</b>	<b>14045.78</b>	<b>14045.78</b>	<b>14045.78</b>

71. The respondent, MPPMCL has submitted that cost of coal towards stock for 15 days or 30 days for generation corresponding to the normative annual plant availability



factor or the maximum coal stock storage capacity whichever is lower has to be allowed. Accordingly, the respondent has submitted that the petitioner may be directed to demonstrate the actual coal stock storage capacity of this generating station for computation of cost of coal towards stock. The respondent has further submitted that weighted average cost of coal @ ₹3095.28 per MT for weighted average GCV of 3262.82 kCal/kg has been claimed on 'as received' basis. It has also submitted that the average cost of coal allowed for previous control period was ₹1781 per MT for weighted average GCV of about 3820 kCal/kg on as fired basis. Cost of coal has been almost doubled for significantly down - graded GCV of coal. Accordingly, the respondent has submitted that there is decrease in GCV of coal of the order of 550 kcal/kg on as received basis of coal as compared to 'as fired' basis as allowed in previous control period, and the same is expected to increase keeping in view the consideration of GCV on 'as received' basis in accordance with the 2014 Tariff Regulations. Accordingly, the respondent has prayed that the petitioner may be directed to clarify the reasons for increase in cost of coal vis-a-vis fall in GCV of coal. The respondent has further prayed that the petitioner may be directed to furnish the clarification/information of acute drop in GCV of primary fuel on 'as received' basis in comparison to on 'as fired' basis as considered in previous tariff orders. It has further submitted that the Coal company has billed at a GCV in the range of 5039 kCal/kg (non-cooking coal), but, the petitioner has received GCV in the range of 3227 to 3299 kCal/kg. Accordingly, it has requested that the matter may be examined in the interest of consumers. The respondent has also submitted that rate of fuel oil and petroleum products have been reduced significantly due to fall in crude oil prices and therefore, the fuel oil must have been cheaper in comparison to what has been allowed in previous tariff order but, the petitioner has



claimed a rate of ₹61127/kl, which is more than twice the rate of ₹29313/kl allowed earlier. The respondent has further submitted that the petitioner's claim for ₹185.19 lakh towards cost of secondary fuel oil for two months is erroneous and the same works out as ₹183 lakh. In response to the submissions made by the said respondent, the petitioner has clarified that the price of coal and oil have increased substantially with the deterioration of quality of coal and therefore, the objections raised by the respondent MPPMCL is misconceived and may be rejected.

72. The objector, DVPCA has submitted that the generating station also received coking coal, GCV of which was not determined at loading point and the grade of such coal is purportedly decided on the basis of ash percentage. It has further submitted that the petitioner has expressed its inability to furnish the GCV details of the coking coal. It has further submitted that the weighted average GCV of coking and non-coking coal (ARB) is 3227 kCal/kg (January 2014), 3261 kCal/kg (February 2014) and 3299 kCal/kg (March 2014) and the cost of coal of ₹3090/ton seems significantly excessive for coal with weighted average GCV of 3262 kCal/kg. It has further submitted that the rate of energy charge of ₹2.58/kWh seems excessive as the coal source is nearby and the transportation cost is low and is around ₹300/ton. It has accordingly suggested that the Commission may conduct prudence check of the coal price as the details pertaining to the procurement of coking coal has not been furnished by the petitioner. It has further submitted that the petitioner has not furnished Form-19 (station wise cost audit report) in terms of the 2014 Tariff Regulations. In response, the petitioner has clarified that GCV of non-coking coal, as mentioned in January, 2014, February, 2014 and March, 2014 is the weighted average GCV of billed quantity of coal for the above three months and the



GCV of individual grade of coal always vary. The petitioner has further submitted that taking into consideration of the GCV of coaking coal, the weighted average GCV of coal for the months of January, 2014, February, 2014 and March, 2014 works out to 3227 kCal/kg, 3261 kCal/kg and 3299 kCal/kg, respectively and therefore, the cost of coal is not excessive in comparison with the weighted average GCV. As regards the non-submission of Form-19, the petitioner has clarified that it has filed the petition in accordance with the provisions of the 2014 Tariff Regulations and CERC (Procedure for making of application for determination of tariff, publication and other related matters) Regulations, 2008.

73. The respondent, BYPL has submitted that the petitioner has not submitted Form 17 (Details / information to be submitted in respect of capital spares), Form 18 (Liability Flow Statement), Form 19 ( Station Wise cost Audit Report ) as required to be submitted under the 2014 Tariff Regulations and therefore the petitioner may be directed to furnish the same. The respondent has requested the Commission to direct the petitioner to provide details of quantity of raw and washed coal, quantity of washery rejects generated, cost of washing, value of washery rejects got by the linkage holder, etc. with reference to the minutes of meeting held on 22.02.2016 under the Chairmanship of Special Secretary, Ministry of Coal, Gol as regards policy formulation on disposal of washery rejects / middlings / surplus coal as required pertaining to sale of washery rejects. In response, the petitioner has submitted that the details / information in respect of capital spares in Form 17 is enclosed in page 35 of the petition. It has also clarified that all additional information / document / clarification as directed by the Commission has been filed for the purpose of tariff determination of the generating station. It has



further submitted that the petitioner procures ROM washery grade coal and not raw coal. It has further submitted that there is no bilateral arrangement between the petitioner and the washery operator by virtue of which coal is washed.

74. We have examined the matter. We have considered the submissions made by the said respondents. The issue of "as received" GCV for computation of energy charges was challenged by NTPC and other generating companies through writ petition in the Hon'ble High Court of Delhi. The writ petition was heard on 7.9.2015 and Hon'ble High Court of Delhi had directed that the Commission shall decide the place from where the sample of coal should be taken for measurement of GCV of coal on as received basis within 1 month on the request of petitioners.

75. As per the directions of the Hon'ble High Court, the Commission vide order dated 25.1.2016 in Petition No. 283/GT/2014 has 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."*

76. Further, the petitioner has claimed Energy Charge Rate (ECR) of Rs 2.582 /kWh based on the weighted average price, GCV of coal (as received basis) & oil procured



and burnt for the preceding three months. It is observed that the petitioner has not placed on record the GCV of coal on “as received” basis taken from the loaded wagons at the unloading point, though the petitioner was statutorily required to furnish such information with effect from 1.4.2014. In compliance with the direction of the Hon“ble High Court of Delhi, the Commission in its order dated 25.1.2016 in Petition No. 283/GT/2014 has clarified that the sample for measurement of GCV of coal on “as received” basis shall be taken from the loaded wagons at the unloading point either manually or through the Hydraulic Augur. The petitioner has not submitted the required data regarding measurement of GCV of coal in compliance with the directions contained in the said order dated 25.1.2016. The present petition cannot be kept pending till the petitioner submits the required information. Hence, the Commission has decided to compute the energy charges by provisionally taking the GCV of coal on as “billed basis” and allowing on adjustment for total moisture as per the formula given as under:

$$\frac{\text{GCV} \times (1 - \text{TM})}{(1 - \text{IM})}$$

Where: GCV=Gross Calorific value of coal  
 TM=Total moisture  
 IM= Inherent moisture

77. In view of the above, the cost for fuel components in working capital have been computed at 85% for the period from 2014-15 to 2018-19 and based on “as billed” GCV of coal and price of coal procured and secondary fuel oil for the preceding three months from January, 2014 to March 2014 and allowed as under:-

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of coal towards stock-30 days	4595.59	4595.59	4595.59	4595.59	4595.59
Cost of coal for generation-30 days	4595.59	4595.59	4595.59	4595.59	4595.59





	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of Main Secondary Fuel Oil- 2 months	189.65	190.17	189.65	189.65	189.65
<b>Total</b>	<b>9380.82</b>	<b>9381.34</b>	<b>9380.82</b>	<b>9380.82</b>	<b>9380.82</b>

### Maintenance spares

78. The petitioner has claimed maintenance spares in working capital as under:

<i>(₹ in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
2390.00	2540.00	2700.00	2870.00	3051.00

79. The expenses for maintenance spares as claimed by the petitioner are found to be in order and are allowed for interest on working capital.

### Receivables

80. Receivables equivalent to two months of capacity charge and energy charge for sale of electricity has been calculated on normative plant availability factor. Accordingly, receivables have been worked out on the basis of two months of fixed and energy charges (based on primary fuel only) as under:

<i>(₹ in lakh)</i>					
	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges -2 months	9508.47	9534.52	9508.47	9508.47	9508.47
Fixed Charges - 2 months	7817.57	7646.98	7483.41	7465.53	7609.77
<b>Total</b>	<b>17326.04</b>	<b>17181.51</b>	<b>16991.89</b>	<b>16974.01</b>	<b>17118.24</b>

### O&M expenses for 1 month

81. O & M expenses for 1 month as claimed by the petitioner for the purpose of working capital is allowed as under:

<i>(₹ in lakh)</i>				
2014-15	2015-16	2016-17	2017-18	2018-19
995.83	1058.33	1125.00	1195.83	1271.25



## Rate of interest on working capital

82. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

*“Interest on working Capital: (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.”*

83. In terms of the above regulations, SBI PLR of 13.50% (Bank rate 10.00% + 350 bps) has been considered for the purpose of calculating interest on working capital.

Interest on working capital has been computed as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Cost of coal towards stock- 30 days	4595.59	4595.59	4595.59	4595.59	4595.59
Cost of coal/ for generation- 30 days	4595.59	4595.59	4595.59	4595.59	4595.59
Cost of secondary fuel oil – 2 month	189.65	190.17	189.65	189.65	189.65
O&M expenses – 1 month	995.83	1058.33	1125.00	1195.83	1271.25
Maintenance Spares	2390.00	2540.00	2700.00	2870.00	3051.00
Receivables – 2 months	17326.04	17181.51	16991.89	16974.01	17118.24
Total working capital	30092.70	30161.18	30197.71	30420.66	30821.31
Rate of interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest on working capital</b>	<b>4062.51</b>	<b>4071.76</b>	<b>4076.69</b>	<b>4106.79</b>	<b>4160.88</b>

## Other Elements of tariff

84. In addition, the petitioner has claimed expenditure towards Pension & Gratuity Contribution, Contribution to sinking fund created for redemption of bond and Cost of Common offices. We now discuss and decide these elements as detailed below:

## Pension & Gratuity Contribution

85. The petitioner has claimed Pension and Gratuity contribution for the period 2014-19 and has submitted that it has considered the actuarial valuation as on 31.3.2014, for



liability towards pension and gratuity fund and projected P&G liability for the tariff period 2014-19 including impact of wage revision.

86. The respondent, MPPMCL has submitted that the claim of the petitioner is beyond the scope of the 2014 Tariff Regulations. It has also submitted that such expenditures were already considered in normative O&M expenses being allowed to the petitioner and accordingly the same may be disallowed. In response, the petitioner vide affidavit dated 12.9.2016 has submitted that the normative O&M expenses include only the Contribution part of the contributory provident fund which cannot be equated with Pension and liability. It has also submitted that while liability of the employer in case of CPF ceases with making contribution for a particular year itself, liability for pension is evaluated by an actuary considering the past services and other various factors, likely to be continued till the death of an employee and even beyond that up to the death of the spouse.

87. As regards the wage revision of employees, the respondent, MPPMCL has submitted that in view of huge return on equity earned, the petitioner should bear the burden of wage revision of its employees. It has further submitted that Ministry of Heavy Industries and Public Enterprises in its office memorandum dated 26.11.2008 had issued the following instructions:-

*“3. Affordability in implementation of pay revision: - The revised pay scale would be adopted, subject to the condition of additional outgo by such revision for a period of 12 month should not result in more than 20% in dip in profit before tax (PBT) for the year 2007-08 of a CPSE in respect of executive as well as non-unionized supervisory staff taken together in a CPSE. CPSEs that cannot afford to pay full package, can implement with either part PRP or no PRP. These CPSEs may pay full package subsequently, provided the dip in the profit (PBT) is fully recouped to the original level.*

*4. The CPSEs, which are not able to adopt the revised pay scale(2007), may give the increase on a basic pay plus DA drawn in the pre revised scale as on 01.01.2007,*



*with a uniform lower fitment of 10% or 20%, depending upon their affordability, with the approval of their Ministry/ Department.*

*16. Financial Implications: - The CPSE concerned has to bear their additional financial implications on account of pay revision from their own resources and no budgetary support will be provided."*

88. Accordingly, the respondent has submitted that the petitioner should bear the financial implications by own, and the respondents are not liable to bear the burden of pay revision of employees of the petitioner. In response, the petitioner vide affidavit dated 12.9.2016 has submitted that normative O&M expenses does not include effect of the pay revision. It has also submitted that the percentage of return on equity allowed to the petitioner is restricted to a reasonable limit only in accordance with the 2014 tariff Regulations.

89. The objector, DVPCA has submitted that the Commission in its order dated 23.1.2015 in Petition No. 138/GT/2013 had not allowed any amount towards P&G contributions for the period 2009-14 since the entire impact of P&G contribution was charged to the old generating stations primarily servicing the command area consumers without apportioning any amount to the new stations like this generating station. It has further submitted that the matter has been challenged by some of the command area consumers before the Tribunal including the apportioning of P&G contribution expenses among various businesses of DVC, netting off of incomes earned on P&G fund investments, etc. Accordingly, DVPCA has requested that no amount should be allowed to the petitioner towards P&G contributions for period 2014-19. The objector, DVPCA has further submitted that the assumption of the increase in P&G contributions due to the proposed pay revision from 1.1.2016 is also contrary to the 2014 Tariff Regulations and the Statement of Reasons published on 24.4.2014. It has also submitted that the



Commission at Clause 33.2 of the Statement of Reasons to the 2014 Tariff Regulations has clearly specified that the increase in pay revision would not be allowed on projection basis and it would be allowed only after considering the impact of one full year after its announcement and actual payment. It has further submitted that the impact of pay revision would be payable only when it is found that the normative O&M expenses are insufficient/ inadequate to cover the employee expenses including pay revision amounts. Accordingly, it has submitted that the projection of pay revision @40% and the consequent increase in P&G contribution is in contravention to the 2014 Tariff Regulations and ought to be disallowed. In response, the petitioner has submitted that in view of the various appeals pending before the Tribunal, no P&G should be allowed to the petitioner for the period 2014-19. It has further submitted that no utility can ignore the employee's remuneration and payment of such remuneration including the effect of periodical pay revision and therefore, periodical pay revision increases the employee cost and cost of generation. Accordingly, the petitioner has submitted that it should be allowed to recover such extra cost in tariff.

90. We have examined the matter. It is observed that the liability claimed by the petitioner pertains to the period 2009-14 and does not pertain to the tariff period 2014-19. The Commission vide order dated 9.2.2017 in Petition No. 115/GT/2015 while disallowing the claim of the petitioner had observed as under:

*"97. As stated, the Commission in order dated 7.8.2013 in Petition No. 276/GT/2012 had allowed the recovery of 40% of the difference in liability as per Actuarial valuation 31.3.2009 and 31.3.2006 in five equal installments. Also in the said order, the Commission had allocated the same to the generating stations of the petitioner except Mejia Unit 5 & 6. The Commission has also revised the allocation and has also allocated the share of P&G liability to Mejia Unit 5 and 6 on the basis of capital cost of ₹205946.66 lakh admitted as on 31.3.2009. It is observed that the O&M expenses norms specified by the Commission under the 2009 Tariff Regulations applicable for the period 2009-14 had taken into consideration the P&G liability as*



part of O&M expenses. Para 20.3 of the Statement of Reasons in support of the 2009 Tariff Regulations provides that O&M cost for purpose of tariff covers expenditure incurred on the employees including gratuity, CPF, medical, education allowances etc. The relevant para of the Statement of Reasons is extracted as under:-

*“20.3 The Operation & Maintenance cost for the purpose of tariff covers expenditure incurred on the employees including gratuity, CPF medical, education allowances etc, repair and maintenance expenses including stores and consumables, consumption of capital spares not part of capital cost, security expenses, administrative expenses etc. of the generating stations, corporate expenses apportioned to each generating stations etc. but exclude the expenditure on fuel i.e. primary fuel as well as secondary and alternate fuels.”*

98. Also, the expenses on account of CPF considered in Public Sector Undertakings take care of pension liability applicable in Government Undertaking.

99. In this background, the additional claim of the petitioner towards P&G liability for the period 2009-14 based on Actuarial valuation is not allowed...”

91. In line with the above observation, these expenses can be met from the normative O&M Expenses allowed to the generating station. In view of this, the share of Pension and Gratuity has not been allowed.

### **Contribution to Sinking Fund**

92. The petitioner has submitted that total debt borrowing is ₹7000 crore out of which actual allocation to generating stations of the petitioner is ₹3100 crore. The actual allocation of debt borrowing of ₹3100 crore among the generating stations of the petitioner is as under:-

	(₹ in lakh)				
	4400 bond	Crore	2600 bond	Crore	Total 7000 Crore bond
<b>Mejia TPS Units 5 and 6</b>		12000		12800	24800
Chandrapura TPS Units 7 and 8		30000		15000	45000
Mejia TPS B		40000		00	40000
Durgapur TPS		53000		34200	87200
Koderma TPS		65000		30000	95000
Raghunathpur TPS-I		00		18000	18000
<b>Total</b>		<b>200000</b>		<b>110000</b>	<b>310000</b>



93. Further, the petitioner has allocated Sinking fund contribution and interest for debt borrowing of ₹3100 crore among the generating stations of the petitioner as under:-

	<i>(₹ in lakh)</i>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Total contribution and interest for debt borrowing</b>	<b>15277.34</b>	<b>16346.76</b>	<b>17491.03</b>	<b>18715.40</b>	<b>20025.48</b>
<b>Mejia TPS Units 5 and 6</b>	<b>1222.19</b>	<b>1307.74</b>	<b>1399.28</b>	<b>1497.23</b>	<b>1602.04</b>
Chandrapura TPS Units 7 and 8	2217.68	2372.92	2539.02	2716.75	2906.92
Mejia TPS B	1971.27	2109.26	2256.91	2414.89	2583.93
Durgapur TPS	4297.37	4598.18	4920.06	5264.46	5632.97
Koderma TPS	4681.77	5009.49	5360.15	5735.37	6136.84
Raghnathpur TPS-I	887.07	949.17	1015.61	1086.70	1162.77
<b>Total</b>	<b>15277.34</b>	<b>16346.76</b>	<b>17491.03</b>	<b>18715.40</b>	<b>20025.48</b>

94. The respondent, MPPMCL has submitted that in accordance with the 2014 Tariff Regulations, the interest and contribution on sinking fund is not allowed as pass through in annual fixed charges and accordingly, the same should be disallowed. In response, the petitioner vide affidavit dated 12.9.2016 has submitted that Regulation 53(2)(iv) of the 2014 Tariff Regulations categorically provides that funds created under Section 40 of the Damodar Valley Corporation Act, 1948 shall be considered as item of expenditure to be recovered through tariff.

95. The objector, DVPCA has submitted that the funds mobilized by the petitioner in form of bonds can be either for working capital or for capital investment. It has also submitted that in case the same are for meeting the working capital requirements of the petitioner, then allowing both Sinking fund contribution and Interest on working capital in terms of the 2014 Tariff Regulations would amount to accounting and hence unjust. It has further submitted that if the funds (bonds) have been used for capital investment,



even then the petitioner is taxing twice, which is unjust, as normative debt and equity has already been considered by the Commission towards the capital expenditure and interest on loan, depreciation and return on equity is being allowed in terms of the 2014 Tariff Regulations. Therefore, DVPCA has submitted that the contribution towards sinking fund may be disallowed. It has further submitted that the petitioner in Form-7 and Appendix 9(1) of the petition has submitted that the bonds of an amount of ₹24800 lakh were utilized towards the capital expenditure in respect of this generating station and if there is any amount towards interest and contribution on sinking fund, then it would tantamount to double accounting towards recovery of capital. Thus, it has stated that the claim of interest and contribution on sinking fund should be disallowed as the interest on loan capital and depreciation is being allowed in accordance with the 2014 Tariff Regulations. In response, the petitioner has submitted that Regulation 53(2)(iv) of the 2014 Tariff Regulations provides that the funds created under Section 40 of the Damodar Valley Corporation Act, 1948 shall be considered as an item of expenditure to be recovered through tariff. It has further clarified that the petitioner does not earn any profit from creation of this fund rather this fund is created only for repayment of bond amount at maturity.

96. We have examined the matter. Section 40 of the DVC Act provides that the petitioner shall make provision for depreciation and for reserve and other funds at such rates and on such terms as may be specified by the C&AG in consultation with the Central Government. It is observed that the sinking funds have been created only for redemption of bonds. As per judgment of the Tribunal dated 23.11.2007 in Appeal No. 273/2006, sinking fund, established with the approval of Comptroller and Accountant





General of India vide letter dated 29.12.1992 under the provision of Section 40 of the DVC Act, 1948 is to be taken as an item of expenditure to be recovered through tariff.

Accordingly, the amount approved for this generating station is as under:-

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
1222.19	1307.74	1399.28	1497.23	1602.04

### Common Office Expenditure

97. The petitioner has submitted that the expenditure pertaining to Common office expenditure such as Direction Office, Central Office, Other Offices, Subsidiary activities, IT centre and R&D caters services to all generating stations as well as composite transmission and distribution systems. It has also submitted that the total cost of Common assets computed is based on capital cost as on 31.3.2014 as per Audited Accounts for the year 2013-14 which have been apportioned based on the opening cost of all generation and T&D system as on 1.4.2014 and apportionment thereof to each of the productive generating station in proportion to their installed capacities in MW as per directive of the Commission in order dated 29.7.2013 in Petition No. 268/GT/2013. The additional capital expenditure claimed by the petitioner towards various offices is as under:-

(₹ in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Direction office	-	-	-	-	-
Subsidiary activities	-	-	-	-	-
Other offices	-	-	-	-	-
R&D	-	-	-	-	-
IT	698.90	685.00	4508.00	4508.00	300.00
Central Office	-	-	-	-	-
<b>Total expenditure</b>	<b>698.90</b>	<b>685.00</b>	<b>4508.00</b>	<b>4508.00</b>	<b>300.00</b>



98. The petitioner has computed Return on Equity, Interest on Loan and Depreciation on the Common Assets for the period 2014-19 based on the opening capital cost as on 1.4.2014 and projected additional capitalization during the period 2014-19 towards different offices and has apportioned them to each generating stations and T&D system in proportion to the capital cost approved as on 31.3.2014. Further, the petitioner has allocated the cost of common offices among generating stations on the basis of installed capacity. Accordingly, the annual fixed charges claimed towards Common Assets are as under:-

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Direction office	181.64	83.17	60.36	60.36	60.36
Subsidiary activities	169.44	89.54	58.91	58.91	58.91
Other offices	126.07	122.24	122.24	105.32	48.81
R&D	280.10	270.44	260.17	253.34	241.98
IT	100.99	219.39	667.10	1497.65	1893.35
Central Office	554.87	532.74	509.91	487.66	487.66
<b>Total expenditure</b>	<b>1413.11</b>	<b>1317.51</b>	<b>1678.69</b>	<b>2463.24</b>	<b>2791.07</b>

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Generating Stations claimed	1327.15	1237.37	1576.58	2313.41	2621.29
T&D	85.96	80.14	102.11	149.83	169.78
<b>Total</b>	<b>1413.11</b>	<b>1317.51</b>	<b>1678.69</b>	<b>2463.24</b>	<b>2791.07</b>

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Mejia TPS Unit-5 and 6	104.38	97.32	124.00	181.95	206.17

99. The respondent, MPPMCL has submitted that the petitioner's claim towards share of common office expenses is beyond scope of the 2014 Tariff Regulations. In response, the petitioner has submitted that 1<sup>st</sup> proviso to Regulation 53(2)(i) of the 2014 Tariff Regulations clearly specify that the capital expenditure incurred on head office, regional



offices, administrative and technical centres of DVC shall also form part of the capital cost and therefore, the comment of respondent is misconceived.

100. In response to the directions of the Commission, the petitioner has not furnished any details as regards the additional capitalization claimed under IT office. In view of this, the additional capitalization claimed under IT office is not allowed. However, the petitioner is granted liberty to submit detailed justification on the said claim at the time of revision of tariff based on true-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. It is noticed that the claim of the petitioner for Common office expenditure is in line with the Commission's order dated 6.8.2009 in Petition No. 66/2005 and order dated 8.5.2013 in Petition No. 272/2010. Accordingly, the annual fixed charges for Common offices have been worked out in line with the methodology adopted in order dated 9.2.2017 in Petition No. 115/GT/2015. The annual fixed charges of Common offices as worked out has been apportioned to the generating stations / T&D systems of the petitioner as follows:-

*(₹ in lakh)*

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	438.37	390.47	331.22	331.22	331.22
Interest on loan	130.32	105.00	93.73	92.63	81.03
Return on Equity	573.79	573.79	573.79	573.79	573.79
<b>Total</b>	<b>1142.48</b>	<b>1069.27</b>	<b>998.75</b>	<b>997.65</b>	<b>986.05</b>

*(₹ in lakh)*

	Capital cost as on 1.4.2014	2014-15	2015-16	2016-17	2017-18	2018-19
Entire generating station	574165.23	989.45	926.04	864.97	864.01	853.97
T&D	88805.81	153.04	143.23	133.78	133.64	132.08
<b>Total</b>	<b>662971.04</b>	<b>1142.48</b>	<b>1069.27</b>	<b>998.75</b>	<b>997.65</b>	<b>986.05</b>



(₹ in lakh)						
Station	Capacity	2014-15	2015-16	2016-17	2017-18	2018-19
Bokaro TPS	630	99.64	91.77	85.72	85.62	84.63
Chandrapura TPS	390	61.68	56.81	53.06	53.01	52.39
Durgapur TPS	350	55.36	50.98	47.62	47.57	47.02
Mejia TPS #1 to 3	630	99.64	91.77	85.72	85.62	84.63
Mejia TPS #4	210	33.21	30.59	28.57	28.54	28.21
<b>Mejia TPS #5 &amp; 6</b>	<b>500</b>	<b>79.08</b>	<b>72.83</b>	<b>68.03</b>	<b>67.96</b>	<b>67.17</b>
Maithon HS	63.2	10.00	9.21	8.60	8.59	8.49
Panchet HS	80	12.65	11.65	10.88	10.87	10.75
Tilaiya HS	4	0.63	0.58	0.54	0.54	0.54
Total	2857.2	451.91	416.20	388.75	388.32	383.81
Chandrapura TPS #7 & 8	500	79.08	72.83	68.03	67.96	67.17
Mejia TPS 7 & 8	1000	158.16	145.67	136.06	135.91	134.33
Durgapur Steel TPS # 1 & 2	1000	158.16	145.67	136.06	135.91	134.33
Koderma TPS	898.63	142.13	145.67	136.06	135.91	134.33
<b>Total</b>	<b>3398.63</b>	<b>537.54</b>	<b>509.84</b>	<b>476.21</b>	<b>475.69</b>	<b>470.16</b>
<b>Grand Total-Generation</b>	<b>6255.83</b>	<b>989.45</b>	<b>926.04</b>	<b>864.97</b>	<b>864.01</b>	<b>853.97</b>
Total T&D		153.04	143.23	133.78	133.64	132.08
<b>Grand total</b>		<b>1142.48</b>	<b>1069.27</b>	<b>998.75</b>	<b>997.65</b>	<b>986.05</b>

101. Accordingly, annual fixed charges approved for the generating station for the period from 1.4.2014 to 31.3.2019 is summarized as under:

(₹ in lakh)					
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	16559.61	16560.56	16560.56	16560.56	16560.56
Interest on Loan	4651.68	2867.42	1081.06	93.69	0.00
Return on Equity	9681.60	9682.16	9682.16	9682.16	9682.16
Interest on Working Capital	4062.51	4071.76	4076.69	4106.79	4160.88
O&M Expenses	11950.00	12700.00	13500.00	14350.00	15255.00
Compensation Allowance	0.00	0.00	0.00	0.00	50.00
<b>Sub-Total</b>	<b>46905.41</b>	<b>45881.89</b>	<b>44900.47</b>	<b>44793.19</b>	<b>45708.59</b>
Share of Common Office Expenses	79.08	72.83	68.03	67.96	67.17
Additional O&M on account of Ash Evacuation, Mega Insurance, CISF Security and	0.00	0.00	0.00	0.00	0.00



	2014-15	2015-16	2016-17	2017-18	2018-19
Share of subsidiary activities					
Share of Pension & Gratuity Contribution	0.00	0.00	0.00	0.00	0.00
Sinking fund contribution	1222.19	1307.74	1399.28	1497.23	1602.04
<b>Sub-Total</b>	<b>1301.27</b>	<b>1380.57</b>	<b>1467.31</b>	<b>1565.19</b>	<b>1669.20</b>
<b>Total Annual Fixed Charges</b>	<b>48206.68</b>	<b>47262.46</b>	<b>46367.78</b>	<b>46358.38</b>	<b>47377.80</b>

### Energy Charge Rate (ECR)

102. Clause (6) sub-clause (a) of Regulation 30 of the 2014 Tariff Regulations provides for computation and payment of Capacity Charge and 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 formulae:*

*(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 = (a) Weighted Average Gross calorific value of coal as received, in kCal per kg, for coal based stations.*

*(b)....*

*(c) In case of blending of fuel from different sources, the weighted average Gross calorific value of primary fuel shall be arrived in proportion to blending ratio.*

*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. (In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)*

*SFC = Normative Specific fuel oil consumption, in ml per kWh.*

*LPSFi = Weighted Average Landed Price of Secondary Fuel in Rs./ml during the month.”*

103. The petitioner has claimed an Energy Charge Rate (ECR) of ₹2.582 /kWh considering the normative transit and handling losses of 0.8% for coal supplied through Railway system.



104. The respondent, MPPMCL has submitted that Regulation 30(11) of the 2014 Tariff Regulations provides for determination of Energy Charge Rate at the start of the tariff period. It has further submitted that the ECR rate approved by the Commission shall be the base energy charge rate at the beginning of the tariff period. Accordingly, it has requested that the petitioner may be directed to furnish the information for determination of base energy charge rate. In response, the petitioner vide affidavit dated 12.9.2016 has submitted that it has already furnished the fuel data for last three months, viz., January, February and March 2014 for the purpose of base energy charge. The Commission in its order dated 19.2.2016 in Petition No. 33/MP/2014 with reference to to introduce helpdesk to attend to the queries of the beneficiaries with regard to the Energy Charges of NTPC Ltd. The petitioner is directed contentious issues if any, which arise regarding the Energy Charges, should be sorted out by the petitioner with the beneficiaries at the Senior Management level.

### **Sharing of Financial Gains**

105. The respondent, BYPL has submitted that the petitioner may be directed to carry out the truing up of operational parameters as specified in Regulation 8(6) and share the efficiency gain in the ratio 60:40 between generating station and beneficiaries. It has further submitted that since there is delay in carrying out truing up exercise, the petitioner may be directed to refund the efficiency gain amount along with the carrying cost at the rate as stipulated in the 2014 Tariff Regulations. In response to this, the petitioner vide affidavit dated 12.9.2016 has submitted that the sharing of financial gains can only be taken up at the end of the tariff period as true-up exercise may be carried



out based on actual capital expenditure including additional capital expenditure upto 31.3.2019.

106.The matter has been examined. We have considered the submission of the petitioner that sharing of financial gains shall be computed at the time of truing-up exercise in accordance with the Regulation 8(6) of the 2014 Tariff Regulations.

#### **Application Fee and Publication Expenses**

107.The petitioner has sought the reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The petitioner has deposited the filing fees for the period 2014-15 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations and in line with the decision in Commission's order dated 5.1.2016 in Petition No. 232/GT/2014, we direct that the petitioner shall be entitled to recover pro rata, the filing fees and the expenses incurred on publication of notices for the period 2014-15 directly from the respondents on submission of documentary proof. The filing fees for the remaining years of the tariff period 2015-19 shall be recovered pro rata after deposit of the same and production of documentary proof.

108.The annual fixed charges determined as above are subject to truing-up in terms of Regulation 8 of the 2014 Tariff Regulations.

109.Petition No. 144/GT/2015 is disposed of in terms of the above.

**Sd/-  
(Dr. M. K. Iyer)  
Member**

**Sd/-  
(A.S. Bakshi)  
Member**



**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2014-19)**

(₹ in lakh)

	Interest Rate					Loan deployed as on 1.4.2014	Additions during the tariff period	Total
	2014-15	2015-16	2016-17	2017-18	2018-19			
Loan-1 PFC Loan	10.75	10.75	10.75	10.75	10.75	84680.00	0.00	84680.00
Loan-2 PFC	11.00	11.00	11.00	11.00	11.00	7000.00	0.00	7000.00
Loan-3 PFC	11.75	11.75	11.75	11.75	11.75	20800.00	0.00	20800.00
Loan-3 Share of Gol Guaranteed DVC Bonds (Series - 14 - Rs. 4,400 Crore)	10.30	10.30	10.30	10.30	10.30	12000.00	0.00	12000.00
Loan-3 Share of Gol Guaranteed DVC Bonds (Series - 15 - Rs. 2,600 Crore)	9.69	9.69	9.69	9.69	9.69	12800.00	0.00	12800.00
<b>Total</b>						<b>137280.00</b>	<b>0.00</b>	<b>137280.00</b>

**WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2014-19 TARIFF PERIOD**

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	137280.00	137280.00	137280.00	137280.00	137280.00
Cumulative Repayments of Loans upto Previous Year	32693.38	42080.05	51466.71	60853.38	70240.05
Net Loans Opening	104586.62	95199.95	85813.29	76426.62	67039.95
Add: Drawl(s) during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of Loan during the year	9386.67	9386.67	9386.67	9386.67	9386.67
Net Closing Loan	95199.95	85813.29	76426.62	67039.95	57653.29
Average Net Loan	99893.29	90506.62	81119.95	71733.29	62346.62
Interest on Loan	10774.35	9765.28	8756.21	7747.15	6738.08
Rate of Interest on Loan (%)	10.7859%	10.7896%	10.7942%	10.7999%	10.8075%

