

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 302/GT/2014**

**Coram:**

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

**Date of Hearing : 20.05.2016  
Date of Order : 30.07.2016**

**In the matter of:**

Revision of tariff of Badarpur Thermal Power Station (BTPS) 705 MW (3 x 95 + 2 x 210) for the period 1.4.2009 to 31.03.2014- Truing up of tariff determined by order dated 16.12.2013 in Petition No. 18/GT/2013.

**And in the matter of:**

NTPC Ltd  
NTPC Bhawan,  
Core-7, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi-110003

.....Petitioner

**Versus**

1. Tata Power Delhi Distribution Ltd.,  
Grid Sub-station Hudson Road,  
Kingsway Camp, Delhi-110009
2. BSES-Rajdhani Power Ltd.  
BSES Bhawan, Nehru Place,  
New Delhi - 110019
3. BSES-Yamuna Power Ltd.,  
Shakti Kiran Building, Karkardooma,  
Delhi- 110072
4. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110001



5. Military Engineering Services,  
Delhi Cantonment,  
New Delhi -110010

.....Respondents

**Parties present:-**

**For Petitioner:** Shri Ajay Dua, NTPC

Shri Nishant Gupta, NTPC  
Shri E. P. Rao, NTPC  
Shri P. Chaturvedi, NTPC  
Shri Bhupinder Kumar, NTPC  
Shri T. Vinodh Kumar, NTPC  
Shri Rajeev Choudhary, NTPC

**For Respondents:**

Shri R. B. Sharma, Advocate, BRPL  
Shri Abhishek Srivastava, BYPL  
Shri Kanishk Khetrpal, BRPL  
Shri Nishant Grover, BYPL  
Smt Megha Bajpai, BRPL  
Shri Sanjay Srivastava, BRPL

**ORDER**

This petition has been filed by the petitioner, NTPC, for revision of tariff of Badarpur Thermal Power Station (705 MW) (hereinafter referred to as "the generating station") for the period from 1.4.2009 to 31.3.2014, in terms of the proviso to Regulation 6 (1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations").

2. Petition No.332/2009 was filed by the petitioner for determination of tariff of the generating station for the period 2009-14 and the Commission by its order dated 23.5.2012 determined the annual fixed charges for the generating station. Subsequently, the Commission by its order dated 10.12.2012 in Review Petition No. 3/2011 (in Petition No. 194/2009) revised the tariff of the generating station for the period 2004-09 considering the capital cost of ₹45228.61 lakh as on 31.3.2009. Aggrieved by the said



order dated 10.12.2012, the petitioner filed Appeal No. 39/2013 before the Appellate Tribunal for Electricity (Tribunal) against the disallowance of the capitalization of ₹839.66 lakh towards the replacement of condenser tubes during 2007-08. Thereafter, the petitioner filed Review Petition No. 18/2012 against the order dated 23.5.2012 and the Commission by its order dated 8.2.2013 revised the tariff of the generating station. However, by judgment dated 26.9.2013 Appeal No. 39/2013, the Tribunal allowed the prayer of the petitioner for capitalization of the amount towards the replacement of condenser tubes after writing-off the cost of replaced condenser tubes after prudence check and accordingly remanded the matter to the Commission for re-consideration. The Commission by order dated 16.12.2013 in Petition No. 18/GT/2013 revised the annual fixed charges for the generating station for the period 2009-14 considering the actual additional capital expenditure for the years 2009-10, 2010-11 and 2011-12 and projected additional capitalization for 2012-13 and 2013-14. Thereafter, in compliance with the directions of the Tribunal in the judgment dated 26.9.2013, the capital cost approved for the period 2007-09 by order dated 10.12.2012 in Petition No. 194/2009 was revised. However, based on the revised capital cost as on 1.4.2009, the annual fixed charges of the generating station for 2009-14 was decided to be revised at the time of truing-up of tariff in terms of Regulation 6(1) of the 2009 Tariff Regulations.

3. The capital cost and the annual fixed charges approved by order dated 16.12.2013 is as under:-

### Capital Cost

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital cost	45165.68	45214.51	45797.11	48402.87	50007.85
Additional capital expenditure	48.83	582.60	2605.76	1604.98	125.19
Closing capital cost	45214.51	45797.11	48402.87	50007.85	50133.04
<b>Average Capital cost</b>	45190.10	45505.81	47099.99	49205.36	50070.45



## Annual fixed charges

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2356.41	2381.00	2467.61	2577.92	2623.24
Interest on loan	8.30	0.00	0.00	0.00	0.00
Return on Equity	3763.60	3262.62	3046.70	2963.54	2567.45
Interest on working capital	5450.69	5476.29	5521.27	5548.35	5579.52
O&M expense	22101.75	22736.25	23384.85	24054.60	24738.45
Cost of secondary fuel oil	1906.79	1906.79	1912.02	1906.79	1906.79
<b>Total</b>	<b>35587.54</b>	<b>35762.95</b>	<b>36332.46</b>	<b>37051.20</b>	<b>37415.45</b>

4. Regulation 6 of the 2009 Tariff Regulations provides as under:

*"6. Truing up of Capital Expenditure and Tariff*

*(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.*

*Provided that the generating company or the transmission licensee, as the case may be, may in its discretion make an application before the Commission one more time prior to 2013-14 for revision of tariff."*

5. Accordingly, the petitioner has filed this petition for revision of annual fixed charges considering the opening capital cost as ₹45984.30 lakh and the actual capital expenditure incurred for the period 2009-14. The annual fixed charges claimed by the petitioner are as under:

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	2395.80	2420.54	2507.21	2705.83	2675.58
Interest on loan	6.81	-	-	-	-
Return on Equity	3929.77	3414.43	3187.70	3007.05	2621.95
Interest on working capital	5454.90	5480.24	5524.99	5551.88	5581.71
O&M expenses	22101.75	22736.25	23384.85	24054.60	24738.45
Cost of secondary fuel oil	1906.79	1906.79	1912.02	1906.79	1906.79
<b>Total</b>	<b>35795.82</b>	<b>35958.25</b>	<b>36516.76</b>	<b>37226.15</b>	<b>37524.48</b>

6. In compliance with the directions of the Commission, the petitioner has filed additional information with copy to the respondents. The respondent, BRPL has filed reply in the matter and the petitioner has filed its rejoinder to the same. Accordingly,



based on the submission of the parties and the documents available on record, we proceed to consider the revision of tariff of the generating station for 2009-14 after truing up, as discussed in the subsequent paragraphs.

### **Capital cost**

7. The last proviso to Regulation 7 of the 2009 Tariff Regulations, as amended on 21.6.2011 provides as under:

*“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”*

8. The petitioner has claimed opening capital cost as ₹45984.30 lakh as on 1.4.2009. Accordingly, the closing capital cost of ₹45984.31 lakh as on 31.3.2009 as approved in order dated 27.11.2014 in Petition No. 194/2009 has been considered as the opening capital cost as on 1.4.2009 for revision of tariff on account of Tribunal judgment dated 26.9.2013.

### **Un-discharged liabilities as on 1.4.2009**

9. The un-discharged liabilities of ₹62.93 lakh approved in order dated 16.12.2013 in Petition No.18/GT/2013 has been adjusted from the capital cost as on 1.4.2009. Accordingly, the opening capital cost as on 1.4.2009, after adjustment of liabilities, works out to ₹45921.38 lakh. The un-discharged liability of ₹62.93 lakh has been discharged during the years 2009-10, 2010-11 and 2011-12 and the same has been considered as additional capital expenditure in the year of discharge.

### **Actual Additional Capital Expenditure**

10. Regulation 9 (2) of the 2009 Tariff Regulations, as amended on 21.6.2011 and 31.12.2012 provides as under:



*“9. (2) The capital expenditure incurred or projected to be incurred on the following counts after the cut-off date may, in its discretion, 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;*

*(ii) Change in law;*

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

*(iv) 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) including due to geological reasons after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation; and*

*(v) 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 of switchyard equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:*

*Provided that in respect sub-clauses (iv) and (v) above, any expenditure on acquiring the minor items or the assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, 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. 1.4.2009.*

*(vi) In case of gas/liquid fuel based open/ combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.*

*Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.*

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

*(viii) Any un-discharged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.*



(ix) Expenditure on account of creation of infrastructure for supply of reliable power to rural households within a radius of five kilometers of the power station if, the generating company does not intend to meet such expenditure as part of its Corporate Social Responsibility.”

11. The actual additional capital expenditure for the years 2009-10, 2010-11 and 2011-12 and the projected additional capital expenditure for the years 2012-13 and 2013-14 allowed vide order dated 16.12.2013 in Petition No. 18/GT/2013 is as under:-

Sr. No.		(₹ in lakh)				
		2009-10	2010-11	2011-12	2012-13	2013-14
		Actual			Projected	
1	Net expenditure allowed on R&M schemes approved vide Commission's order dated 12.5.2011 in Petition No. 324/2009.	127.99	624.15	2644.84	0.00	0.00
2	Amount allowed on other than R&M schemes.	3.91	0.00	64.51	1625.30	125.19
	<b>Total</b>	<b>131.90</b>	<b>624.15</b>	<b>2709.35</b>	<b>1625.30</b>	<b>125.19</b>
3	De-capitalization	4.60	0.13	0.00	0.00	0.00
4	Amount allowed	127.31	624.02	2709.35	1625.30	125.19
5	De-capitalization on replacement items	3.07	16.06	93.42	20.32	0.00
6	Additional Capital Expenditure allowed (5-6)	124.24	607.96	2615.93	1604.98	125.19
7	Exclusions not allowed	116.76	52.26	34.32	0.00	0.00
	<b>Net Additional Capital Expenditure allowed (7-8)</b>	<b>7.48</b>	<b>555.70</b>	<b>2581.61</b>	<b>1604.98</b>	<b>125.19</b>
8	Add: Discharge of liabilities	41.36	26.90	24.15	0.00	0.00
	<b>Additional Capital Expenditure allowed on cash basis</b>	<b>48.83</b>	<b>582.60</b>	<b>2605.76</b>	<b>1604.98</b>	<b>125.19</b>

12. There is no revision in the actual additional capital expenditure for the period 2009-12 allowed in order dated 16.12.2013 in Petition No. 18/GT/2013. Hence, the actual additional capital expenditure incurred during the years 2012-13 and 2013-14 has only been considered in this order. The break-up details of the actual additional capital expenditure claimed for the years 2012-13 and 2013-14 are as under:



(₹ in lakh)

Head of Work/ Equipment	Relevant Regulation	Actual Additional capital expenditure		Total claimed
		2012-13	2013-14	
Procurement of Portable Environment Monitoring Instruments	10	8.83	0.00	8.83
Dissolved Gas Analyzer		26.08	0.00	26.08
Passenger lift No. 2 of TG hall of unit 5		25.38	0.00	25.38
Strengthening of wagon tippler-3		77.97	0.00	77.97
Laying of water pipeline		11.58	0.00	11.58
2 <sup>nd</sup> raising of Ash Dyke		614.99	0.00	614.99
Ventilation system in CHP		11.25	0.00	11.25
Dry fly ash extraction system		121.46	1.73	123.19
Plant Boundary wall		35.75	2.81	38.56
Construction of boundary wall for balance portion of ash dyke		0.01	0.00	0.01
Pay loaders 2 nos.		0.00	70.30	70.3
Integrated CW system		0.00	183.57	183.57
Rain water harvesting		0.00	9.33	9.33
Labour rest room		0.00	49.40	49.4
Renovation of quarters of township		0.00	114.23	114.23
Off site building		0.00	30.39	30.39
Boundary wall in township		0.00	53.48	53.48
CCTV System-Design /Engg. /Supply Erec/Comm/Test	9(2)(iii)	0.00	0.36	0.36
Coal pick stone boundary wall for ash silo areas		0.97	0.00	0.97
Approach road to Silo area		0.00	0.00	0
<b>Total</b>		<b>934.26</b>	<b>515.59</b>	<b>1449.85</b>
<b>New Items</b>				
Ozone Analyzer (Location: CISF Township) (Lab Instruments)	9(2)(ii)	0.00	11.67	11.67
Stage-I Public address system	10	0.00	12.33	12.33
<b>Total</b>		<b>0.00</b>	<b>24.00</b>	<b>24.00</b>
<b>De-capitalization</b>				
SAP Licence		(3.72)	0.00	(3.72)
<b>Total</b>		<b>(3.72)</b>	<b>0.00</b>	<b>(3.72)</b>
<b>Discharge of Liabilities</b>				
Discharge of liabilities by way of payment on allowed items after 1.4.2009	9(2)(viii)	10.46	21.24	31.70





Head of Work/ Equipment	Relevant Regulation	Actual Additional capital expenditure		Total claimed
		2012-13	2013-14	
<b>Total discharge of liabilities</b>		<b>10.46</b>	<b>21.24</b>	<b>31.70</b>
<b>Total additional capital expenditure</b>		<b>941.01</b>	<b>560.84</b>	<b>1501.85</b>

13. The petitioner has claimed additional capital expenditure of ₹1501.85 lakh for the period 2012-14 as against the total estimated additional capital expenditure of ₹1730.17 lakh for 2012-14 allowed vide Commission's order dated 16.12.2013. The respondent, BRPL has requested the Commission to direct the petitioner to furnish the details of additional capitalization incurred for the period 2012-13 and 2013-14 duly audited and certified by the Auditors as per requirements of the Regulation 6(3) of the 2009 Tariff Regulations. In response, the petitioner has submitted that it has already submitted the details of additional capital expenditure incurred for the years 2012-13 and 2013-14 duly audited and certified by the auditors as per the requirement of the 2009 Tariff Regulations.. The respondent, BRPL has further submitted that true-up may be limited to the same items of works and the projected additional capital expenditure allowed by the Commission in its order dated 16.12.2013 in Petition No. 18/GT/2013. In response, the petitioner vide affidavit dated 27.6.2016, has submitted that it has claimed only the expenditure that were allowed by the Commission in order dated 16.12.2013 in Petition No. 18/GT/2013 except items of public address system of amount ₹12.33 lakh and ozone analyzer of ₹11.67 lakh. We now examine the claim of the petitioner and their admissibility, on prudence check, as stated in the subsequent paragraphs.



## **Other Schemes**

### **2012-13**

14. The petitioner has claimed actual additional capital expenditure of ₹136.69 lakh on cash basis during 2012-13 (₹8.83 lakh for procurement of Portable Environment Monitoring Instruments, ₹26.08 lakh for Dissolved Gas Analyzer, ₹77.97 lakh for Strengthening of wagon tippler-3, ₹11.58 lakh for Laying of water pipeline, ₹11.25 lakh for Ventilation system in CHP, ₹0.01 lakh for Construction of boundary wall for balance portion of ash dyke, ₹0.97 lakh for Coal pick stone boundary wall for ash silo areas) under 'Other schemes' which were allowed by Commission in orders dated 12.5.2011, 23.5.2012 and 16.12.2013 in Petition No. 324/2009, 332/2009 and 18/GT/2013 respectively. In view of this, the actual expenditure of ₹136.69 lakh excluding liabilities is allowed to be capitalized.

### **Passenger Lift No. 2:**

15. Against the approved additional capital expenditure of ₹17.00 lakh, the petitioner has claimed total completion cost on cash basis as ₹25.38 lakh towards passenger lift no. 2. The actual expenditure for ₹25.38 lakh has been allowed along with the corresponding de-capitalization of ₹2.54 lakh (i.e. 10% of ₹25.38 lakh). Accordingly, on net basis, the actual capital expenditure of ₹22.84 lakh (₹25.38 lakh - ₹2.54 lakh) has been allowed.

### **2<sup>nd</sup> Raising of Ash Dyke Phase-I:**

16. It is observed that against the approved additional capital expenditure of ₹460.00 lakh in order dated 23.5.2012 in Petition No. 332/2009, the petitioner has claimed actual additional capital expenditure of ₹614.99 lakh on cash basis. In response to Commission's query for the deviation, the petitioner has submitted that projections were



based on estimated value while the actual expenditure is based on the amount actually incurred. It has also submitted that the contract was awarded at a price of ₹426.63 lakh and an amount of ₹38.00 lakh is due to execution of pedestals which do not form part of the approved cost as the requirement of pedestals was based on the site conditions. In addition to above, the petitioner has submitted that the awarded value also does not include free issue of material while the amount claimed includes the free issue of material. The petitioner has submitted that in such type of work the petitioner provides to vendor materials like pipe, steel, cement and ash bricks free of cost which amounts to ₹150.41 lakh and the same has not been included in the approved cost.

17. The matter has been considered. It is evident from the submissions of the petitioner that the projected additional capital expenditure allowed earlier was based on estimates considering the past awarded contracts for works of similar nature. It is also observed that the capitalization value of Ash dyke raising work has increased on account of the execution of pedestals and free issue of material which was not considered in the earlier approved capitalization. .In this background, we allow the actual additional capital expenditure claimed in 2012-13 under Regulation 10 of the 2009 Tariff Regulations.

**Plant Boundary wall:**

18. Against the additional capital expenditure of ₹79.40 lakh, the petitioner has claimed actual additional capital expenditure of ₹38.52 lakh (₹35.75 lakh in 2012-13 and ₹2.81 lakh in 2013-14) on cash basis towards plant boundary wall. The petitioner has submitted that during work on Nallah Coverage, diversion of Nallah for various reasons had come up due to which raising part of boundary wall along the Nallah Coverage was not executed and therefore has proposed to capitalize the same during 2014-19. From the petitioner's submission, it is observed that the petitioner was not able to complete the



work on Nallah Coverage due to various reasons and therefore has claimed part capitalization during 2009-14 and has proposed to capitalize the balance work during 2014-19. In view of this, the actual capital expenditure of ₹38.52 lakh excluding liability during 2012-14 is allowed.

**De-capitalization:**

19. The petitioner has claimed de-capitalization of ₹3.72 lakh towards SAP license. The petitioner has submitted that de-capitalization towards SAP license is on account of final bill settlement against the scheme allowed by the Commission. In addition to that the petitioner has submitted that there is difference of ₹2.22 lakh in opening Gross Block as on 1.4.2012 and closing Gross block as on 31.3.2012 which is due to change in accounting policy. The petitioner also stated that the amount ₹2.22 lakh is towards vehicles which have become un-serviceable and now shown under other current assets. Since the vehicle does not render any useful service we have considered the same towards de-capitalization of vehicle for the purpose of tariff computation.

20. Based on the above discussions, the net actual additional capital expenditure allowed for the year 2012-13 is summarized as under:-

<i>(₹ in lakh)</i>				
Sr. No.	Name of work	Additional Capitalization allowed on cash basis	De-cap @ 10%	Net Amount Allowed
1	Procurement of Portable Environment Monitoring Instruments	8.83	0.00	8.83
2	Dissolved Gas Analyzer	26.08	0.00	26.08
3	Passenger lift No. 2 of TG hall of unit 5	25.38	(2.54)	22.84
4	Strengthening of wagon tippler-3	77.97	0.00	77.97
5	Laying of water pipeline	11.58	0.00	11.58
6	2 <sup>nd</sup> raising of Ash Dyke	614.99	0.00	614.99
7	Ventilation system in CHP	11.25	0.00	11.25
8	Dry fly ash extraction system	121.46	0.00	121.46



Sr. No.	Name of work	Additional Capitalization allowed on cash basis	De-cap @ 10%	Net Amount Allowed
9	Plant Boundary wall	35.75	0.00	35.75
10	Construction of boundary wall for balance portion of ash dyke	0.01	0.00	0.01
11	Coal pick stone boundary wall for ash silo areas	0.97	0.00	0.97
12	Approach road to Silo area	0.00	0.00	0.00
13	Total	934.26	(2.54)	931.72
	<b>De-capitalization</b>			
14	SAP Licence	3.72	0.00	3.72
15	Vehicles including speed boats	2.22	0.00	2.22
16	<b>Net Additional Capitalization</b>	<b>928.32</b>	<b>(2.54)</b>	<b>925.78</b>

#### 2013-14

21. The petitioner has claimed expenditure of ₹112.57 lakh during 2013-14 (₹9.33 lakh for Rain water harvesting, ₹49.40 lakh for Labour rest room, ₹53.48 lakh for Boundary wall in township, ₹0.36 lakh for CCTV System-Design/Engg./Supply/Erec/Comm/Test) under various heads of the Other schemes which were allowed by Commission in order dated 12.5.2011 and 23.5.2012 in Petition No. 324/2009 and 332/2009 respectively. In view of this, the actual additional capital expenditure of ₹112.57 lakh excluding liabilities is allowed to be capitalized.

#### Renovation of quarters of township

22. Against the additional capital expenditure amount of ₹1021 lakh allowed in the order dated 16.12.2013 in Petition No. 18/GT/2013, the petitioner has claimed actual additional capital expenditure of ₹114.23 lakh towards renovation of quarters of township. The petitioner has submitted that the work is not yet completed and has proposed to capitalize the balance work during the period 2014-19.



23. The Commission directed the petitioner to submit justification for capitalising the same before completion of works. In response, the petitioner vide affidavit dated 30.7.2016 has submitted that the renovation of some quarters of township were completed and taken in service and accordingly part capitalisation has been done during the year 2013-14.

24. Considering the fact that the expenditure claimed is towards part capitalization of renovation of quarters of township and the balance work will be capitalized during the period 2014-19. We allow, the actual additional capital expenditure of ₹114.23 lakh, excluding liability, is towards the works completed and capitalized in 2013-14.

**Pay Loaders:**

25. It is observed that against the additional capital expenditure of ₹51.74 lakh allowed in order dated 23.5.2012 in Petition No. 332/2009, the petitioner has claimed ₹118.82 lakh (₹48.52 lakh in 2010-11 for 2 pay loaders and ₹70.30 lakh in 2013-14 for another 2 pay loaders). The petitioner has also submitted that out of 4 pay loaders, 2 has been replaced and capitalized in 2010-11 and balance 2 pay loaders had become obsolete and had outlived their life by running more than 20 years. The petitioner has submitted that it has incurred very high cost of maintenance and were thus replaced with new pay loaders during 2013-14. The Commission in order dated 16.12.2013 in Petition No. 18/GT/2013 had allowed the cost of 2 nos. of pay loaders after adjusting the estimated de-capitalized @ 10% as ₹43.34 lakh (₹48.51 lakh - ₹5.17 lakh). It is evident from the petitioner's submission, that the said expenditure is towards handling coal and coal rejects in the generating station and the same is necessary for efficient and successful operation of the generating station. In view of this, we have considered petitioners submission and have allowed the actual additional capital expenditure



claimed under Regulation 10 of the 2009 Tariff Regulations. However,, the de-capitalization amount of ₹7.03 lakh has been considered and accordingly, on net basis the actual additional capital expenditure of ₹63.27 lakh (₹70.30 lakh - ₹7.03 lakh) is allowed.

**Integrated closed cycle operation of CW system:**

26. Against the allowed additional capital expenditure of ₹13850.00 lakh allowed in order dated 23.5.2012 in Petition No. 23.5.2012 in Petition No. 332/2009, the petitioner has claimed actual additional capital expenditure of ₹183.57 lakh in 2013-14. The petitioner has submitted that the integrated closed cycle operation of circulating water system mainly consists of packages: sewage water treatment (STP), additional cooling tower (CT), renovation of existing CTs, CT pumps and replacement of Hot water duct. Out of these, package STP and additional cooling tower are under tendering process. It has further submitted that, renovation of existing CTs, CT pumps and replacement of hot water duct consists of 23 sub-packages, out of which 12 sub-packages have been awarded and work is in progress which is likely to be capitalized during 2014-19.

27. The petitioner was directed to submit proper justification for capitalisation of works though the scheme was yet to be completed. In response, the petitioner vide affidavit dated 30.7.2016 has submitted that under this package civil works related with strengthening of existing CTs were completed and CT was put to service and hence part work was capitalised in 2013-14.

28. From the submissions of the petitioner, it is observed that out of three packages the petitioner has awarded only one package partially and has claimed part capitalization for the same. The major portion of work is yet to be awarded. The petitioner has done part capitalization towards renovation of quarters of township and will capitalize the



balance work during 2014-19. In view of this, the actual capital expenditure of ₹183.57 lakh excluding liability is allowed towards completed works in 2013-14.

**Dry Fly Ash Extraction System:**

29. Against the approved additional capital expenditure of ₹1918 lakh, the petitioner has claimed actual additional capital expenditure of ₹1653.02 lakh (₹1529.84 lakh in 2011-12, ₹121.46 lakh in 2012-13, ₹1.73 lakh in 2013-14) under this head. It is noticed that additional capital expenditure of ₹1529.84 lakh was approved by order dated 16.12.2013 in Petition No. 18/GT/2013. The petitioner has claimed actual additional capital expenditure of ₹123.19 lakh for the period 2012-14. The petitioner has submitted that it is statutory requirement of Ministry of Environment & Forest for achieving 100% Ash utilization by ash generating agencies and also submitted copy of show cause notice issued by Delhi Pollution Control Committee (DPCC) to it under section 31(A) of the Air (Prevention and Control of Pollution) Act, 1981 directing the petitioner to provide additional pollution control systems in order to bring down the emission level of particulate matter below 50 mg/Nm<sup>3</sup>. The petitioner has submitted that the work has been completed and the balance amount will be paid after successful completion of PG test and has proposed to capitalize the balance amount during 2014-19.

30. The petitioner was directed to submit proper justification for capitalising part of works though PG testing was yet to be done. In response, the petitioner vide affidavit dated 30.7.2016 has submitted that the works were capitalised towards dry fly ash extraction system after completion of work and the system being taken into service. It has further submitted that PG testing is done to ensure the efficient operation of asset as per specification and PG test along with some minor rectification work were not complete and hence the petitioner has retained the EMD and Security Deposit and hence these





amounts were not claimed in 2009-14 tariff period and shall be claimed as and when discharged. Considering the fact that the said work was carried out in line with MOEF, GOI guidelines, the actual additional capital expenditure of ₹123.19 lakh is allowed to be capitalized during the period 2012-14.

**Off Site Building: RCC Tank:**

31. The petitioner has claimed actual additional capital expenditure of ₹30.39 lakh on cash basis towards renovation of existing RCC O/H water storage tanks and has submitted that after renovation of old RCC overhead tank, the existing storage capacity was found to be adequate. Hence, additional overhead tank was not required and therefore the expenditure was not claimed. It is evident from the petitioner's submission that these storage tanks had been constructed during township construction and the condition of the tanks were very precarious. Also the capacity of the existing tanks were insufficient. However, due to renovation of these tanks the requirement of additional tank was not required and therefore expenditure has not been incurred by the petitioner. Considering the fact these works are required for safety against damage and for reliability of water supply the actual additional expenditure of ₹30.39 lakh, excluding liabilities, is allowed to be capitalized..

**New Items**

**Stage-I Public Address System:**

32. The petitioner has claimed an amount of ₹12.33 lakh towards public address system and has submitted that the existing system is more than 30 years old and it has become obsolete. Any breakdown would result in loss of communication between control room and machinery areas. The petitioner has therefore submitted that, it is an essential expenditure for ensuring smooth operation and safety of plant machinery and personnel.



It is observed that the said expenditure claimed by the petitioner is towards Stage-I units, and these units are in depleted condition and are planned to be phased out in the near future. In view of this, the additional capital expenditure is not allowed.

**Ozone Analyzer:**

33. The petitioner has claimed an amount of ₹11.67 lakh towards Ozone Analyzer and has submitted that the Central Pollution Control Board (CPCB) vide letter dated 18.6.2010 had conveyed that metals like Nickel (Ni), Lead (Pb) and Arsenic (As) are present in low concentration in Fly ash and bottom ash and therefore need monitoring of SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> and Ozone in coal based stations. Accordingly, the petitioner has procured 24 numbers of Ozone Analyzers and has commissioned the same in 2013-14. Further, the petitioner has submitted that the expenditure claimed under 'Other than R&M scheme' and the asset has been installed at CISF township and does not form a part of Stage-I. In line with the directions of CPCB we have considered petitioners submission under Regulation 10 of the 2009 Tariff Regulations and has allowed ₹11.67 lakh towards ozone analyzer in order to monitor and control pollution.

34. Based on the above discussions, the net actual additional capital expenditure allowed for 2013-14 is summarized as under:-

(₹ in lakh)				
Sr. No.	Name of work	Net Additional Capitalization allowed on cash basis	Estimated De-cap @ 10%	Net Amount Allowed
1	Pay loaders 2 nos.	70.30	(7.03)	63.27
2	Integrated CW system	183.57	0	183.57
3	Rain water harvesting	9.33	0	9.33
4	Dry fly ash extraction system	1.73	0	1.73
5	Plant Boundary wall	2.81	0	2.81
6	Labour rest room	49.40	0	49.40



Sr. No.	Name of work	Net Additional Capitalization allowed on cash basis	Estimated De-cap @ 10%	Net Amount Allowed
7	Renovation of quarters of township	114.23	0	114.23
8	Off site building	30.39	0	30.39
9	Boundary wall in township	53.48	0	53.48
10	CCTV System- Design/Engg./Supply/Erec/Comm/ Test	0.36	0	0.36
11	Sub-total	515.59	(7.03)	508.56
<b>New Items</b>				
12	Ozone Analyzer (Location: CISF Township) (Lab Instruments)	11.67	0	11.67
13	Sub-total	11.67	0	11.67
14	<b>Total</b>	<b>527.26</b>	<b>(7.03)</b>	<b>520.23</b>

35. Accordingly,, the actual capital expenditure allowed for the year 2012-13 and 2013-14 on 'Other schemes' and 'New schemes' under Regulation 9 (2) (ii) and Regulation 10 of the 2009 Tariff Regulations is summarized as under:-

(₹ in lakh)			
Sl. No.		2012-13	2013-14
1	Capital Expenditure claimed	934.26	539.60
2	De-capitalization	(5.94)	0.00
3	Net additional capital expenditure claimed (1-2)	928.32	539.60
4	Capitalization disallowed	0.00	12.33
5	Capitalization allowed (3-4)	928.32	527.26
6	Estimated de-capitalization @ 10% of the value of new assets	(2.54)	(7.03)
7	<b>Net additional capitalization allowed (5-6)</b>	<b>925.78</b>	<b>520.23</b>

36. The additional capital expenditure as per books of accounts vis-à-vis additional capital expenditure for which tariff claimed for the years 2012-13 and 2013-14 are as under:



2012-13		
Sr. No.		
1	Closing Gross Block as per Audited Balance Sheet as on 31.3.2012 (A)	34492.44
2	Opening Gross Block as per audited Balance Sheet as on 1.4.2012 (B)	34490.22
3	Difference in opening Gross Block as on 1.4.2012 (C)*	2.22
4	Closing Gross Block as per audited Balance Sheet as on 31.3.2013 (D)	39308.61
5	Addition during the year 2012-13 E=(D-B) (as per books)	4818.39
6	Exclusions (F)	3873.67
7	Additional capital expenditure claimed G=(E-F) (for tariff purpose)	944.71
8	Liability included (H)	20.21
9	Net additional capitalization excluding liabilities I=(G-H)	924.51
10	Discharge of liabilities (J)	10.46
11	<b>Net additional capitalization claimed on cash basis (I+J)</b>	<b>934.97</b>
2013-14		
Sr. No.		
1	Opening Gross Block as per audited Balance Sheet as on 1.4.2013 (A)	39308.61
2	Closing Gross Block as per audited Balance Sheet as on 31.3.2014 (B)	41952.14
3	Addition during the year 2013-14 C=(B-A) (as per books)	2631.20
4	Exclusions (D)	2555.17
5	Additional capital expenditure claimed E=(C-D) (for tariff purpose)	76.03
6	Liability included (F)	6.90
7	Net additional capitalization excluding liabilities G=(E-F)	69.13
8	Discharge of liabilities (H)	21.24
9	<b>Net additional capitalization claimed on cash basis (G+H)</b>	<b>47.89</b>

\*the petitioner has submitted that the difference in opening Gross Block is due to change in accounting policy. Unserviceable assets are now shown under other current assets.

37. It is observed that the actual additional capital expenditure claimed by the petitioner is at variance with the additional capital expenditure as per books of accounts on account of 'exclusion' of certain expenditure for the purpose of tariff. The respondent, BRPL has submitted that there is no provision of exclusion of any assets under the 2009 Tariff Regulations, 2009. Hence the contention of the petitioner that capitalization was not allowed in respect of spares and MGR and hence its de-capitalization may be allowed under exclusion is not correct. The respondent has submitted that the de-capitalization of the exclusion items is necessary and the same is required to be adjusted by reduction in the capital cost as per Regulation 7(1)(c) of the 2009 Tariff



Regulations. The respondent has pointed out that the petitioner has indicated capital spares, miscellaneous expenditures and MBOA items as not part of tariff to avoid de-capitalization. Accordingly, the respondent has requested the Commission to disallow the same. In response, the petitioner vide affidavit dated 27.6.2016 has submitted that expenditure (including de-capitalization) actually incurred and appearing in gross block but not claimed are shown as exclusion for the purpose of reconciliation of the additional capitalization with audited gross block. In respect to de-capitalization of spares, MBOA items and other disallowed items during 2012-13 and 2013-14, the petitioner has submitted that de-capitalization of these items may not be taken out of the capital cost and may be allowed under exclusions since these are not allowed under the 2009 Tariff Regulations. The petitioner's claim for the exclusions (year-wise) claimed under different heads has been examined and the same as discussed is as under:

### **Exclusions**

#### **2012-13**

38. The summary of exclusions from the books of accounts is as under:-

(₹ in lakh)				
<b>Sr. No.</b>	<b>Name of work</b>	<b>Capitalization / De-capitalization</b>	<b>Liabilities in Additional capitalization</b>	<b>Cash basis</b>
1	270 MVA, 15.75/236 kV Generator Transformer	1035.07	84.20	950.87
2	220 kV Switchyard (245 kV SF6 Circuit Breaker)	699.28	0.00	699.28
3	R&M of station lighting of unit 4 & 5	56.86	1.50	55.36
4	Design/supply/installation/testing & Commissioning of Lift (Goods lift)	66.96	11.46	55.50
5	Electric Hoist 5 T capacity	4.85	0.00	4.85
6	Quickerect Scaffolding	67.93	20.18	47.75
7	Paperless Recorder	14.00	0.00	14.00
	<b>Sub Total of disallowed items</b>	<b>1944.96</b>	<b>117.34</b>	<b>1827.62</b>
9	Capital spares	1575.68	51.20	1524.48
10	De-capitalization of spares	118.07	0	118.07
11	Capitalization of Miscellaneous Bought Out Assets (MBOA)	216.60	22.40	194.20



Sr. No.	Name of work	Capitalization / De-capitalization	Liabilities in Additional capitalization	Cash basis
12	De-capitalization of MBOA	1.22	0	1.22
13	Inter unit Transfer	3.02	0	3.02
14	capitalization of Miscellaneous items	246.66	42.87	203.79
15	<b>Exclusions Total</b>	<b>3867.64</b>	<b>233.81</b>	<b>3633.83</b>

### Spares & Minor Assets

39. The petitioner has excluded an amount of ₹1944.96 lakh towards spares & minor assets such as generator transformers, 220 kV switchyard, R&M of station lighting of Unit 4 & 5, Design supply installation testing & commissioning of Goods lift, Electric Hoist 5T capacity, Quick erect Scaffolding, Paperless Recorder etc. including liabilities of ₹117.34 lakh. Since capitalization of these spares and minor assets have not been allowed as per proviso to Regulation 9 (2) (v) of the 2009 Tariff Regulations, these items cannot be allowed as part of additional capitalization the exclusions on this count are in order.

### Capital Spares

40. The petitioner has procured capital spares amounting to ₹1575.68 lakh including liability of ₹51.20 lakh during 2012-13 for maintaining stock of necessary spares. As capitalization of spares over and above the initial spares procured after the cut-off-date are not allowed for the purpose of tariff, and since they form part of the O&M expenses when consumed, ₹1575.68 lakh under this head has not been considered as part of additional capitalisation.

### De-capitalization of spares

41. The petitioner has de-capitalized capital spares amounting to ₹118.06 lakh in books of account during 2012-13 on the ground that these spares have become



unserviceable. It is observed that out of the total spares de-capitalized for ₹118.06 lakh, spares amounting to ₹6.04 lakh were allowed in tariff as part of the capital cost and spares amounting to ₹112.03 lakh were not allowed and hence does not form part of tariff. Therefore, de-capitalization of spares for ₹6.04 lakh which were allowed as part of Capital Cost while approving the tariff has been considered as reduction from Capital Cost.

#### **Capitalization of Miscellaneous Bought Out Assets (MBOA)**

42. The petitioner has capitalized expenditure for ₹216.60 lakh (including liability of ₹22.40 lakh) towards MBOA items in books of accounts during 2012-13. Since capitalization of minor assets after the cut-off-date is not allowed, this cannot be considered as part of Capital Cost and the exclusion of ₹216.60 lakh is in order.

#### **De-capitalization of Miscellaneous Bought out Assets (MBOA)**

43. The petitioner has excluded the de-capitalized MBOA in books of accounts amounting to ₹1.22 lakh during 2012-13 as the same being rendered unserviceable. It is observed that MBOA amounting to ₹1.22 lakh were not allowed in tariff as part of the capital cost and hence it will not be appropriate to consider this de-capitalisation.

#### **Inter unit Transfer**

44. The petitioner has capitalized expenditure for ₹3.02 lakh towards inter unit transfer in books of accounts during 2012-13. The petitioner submitted that an amount of ₹3.02 lakh towards inter unit transfer were not allowed in tariff as part of the capital cost. Hence, these inter unit transfer is not allowed as additional capitalization.



## Capitalization of Miscellaneous items

45. The petitioner has excluded an amount of ₹246.66 lakh towards capitalization of miscellaneous items of P&M such as electrical installations, supply of Stage-I ESP controllers, retrofitting, sky climbers, HP cold water jet cleaning pump etc. including liabilities of ₹42.87 lakh. Since capitalization of these miscellaneous items of P&M nature is not been allowed, the exclusions on this count are in order.

46. Based on the above, the details of exclusions claimed and considered for the year 2012-13 is summarized as under:-

<i>(₹ in lakh)</i>	
Exclusions Claimed	3867.64
Exclusions Considered	3873.67
Additional Exclusion considered towards de-capitalisation of spares allowed in tariff	6.04

## 2013-14

47. The summary of exclusions from the books of accounts is as under:-

<i>(₹ in lakh)</i>				
Sr. No.	Name of work	Capitalization/ De-capitalization	Liabilities in Additional capitalization	Cash basis
1	220 kV Switchyard	728.13	109.87	618.26
2	Plant Lightings- R&M Stage-II	5.43	0.00	5.43
3	Magnetic Separators/susp magnet IV & V	66.20	0.00	66.20
4	Electric Hoist 5 T cap for CSHP	0.23	0.00	0.23
5	Generator Transformer 270 MVA Unit 5	23.00	0.00	23.00
6	Quickerect Scaffolding	2.25	0.00	2.25
7	Locodozer workshop building: wagon Tippler-3	0.00	0.00	0.00
	<b>Sub Total of disallowed items</b>	<b>825.23</b>	<b>109.87</b>	<b>715.37</b>
8	Capital spares	1584.94	39.88	1545.06
9	Less: De-capitalization of spares	438.65	0	438.65
10	Capitalization of Miscellaneous Bought Out Assets (MBOA)	137.06	11.50	125.56
11	Less: De-capitalization of MBOA	54.97	0	54.97
12	Inter unit Transfer	17.31	0	17.31
13	capitalization of Miscellaneous	24.21	9.81	14.39





Sr. No.	Name of work	Capitalization/ De-capitalization	Liabilities in Additional capitalization	Cash basis
	items			
14	Hospital equipments	1.91	0	1.91
15	<b>Exclusions Total</b>	<b>2097.04</b>	<b>171.06</b>	<b>1925.98</b>

### Spares & Minor Assets

48. The petitioner has excluded an amount of ₹825.23 lakh towards spares & minor assets such as 220 kV switchyard, plant lightings- R&M Stage II, Magnetic separators, electric hoist 5T, generator transformers 270 MVA Unit 5, Quickerect scaffolding, Locodozer workshop building etc. including liabilities of ₹109.87 lakh. Since capitalization of these spares and minor assets have not been allowed as per proviso to Regulation 9 (2) (v) of the 2009 Tariff Regulations, these items cannot be allowed as part of additional capitalization and the exclusions on this count are in order.

### Capital Spares

49. The petitioner has procured capital spares amounting to ₹1584.93 lakh, including liability of ₹39.88 lakh during 2013-14 for maintaining stock of necessary spares. As capitalization of spares over and above the initial spares procured after the cut-off-date are not allowed for the purpose of tariff, and since they form part of the O&M expenses when consumed, thus ₹1584.93 lakh, the exclusions on this count are in order.

### De-capitalization of spares

50. The petitioner has de-capitalized capital spares amounting to ₹438.65 lakh in books of account during 2013-14 on the ground that these spares have become unserviceable. It is observed that out of the total spares de-capitalized for ₹438.65 lakh, spares amounting to ₹433.16 lakh were allowed in tariff as part of the capital cost and spares amounting to ₹5.48 lakh were not allowed and hence do not form part of tariff.



Therefore de-capitalization of spares for ₹433.16 lakh which were allowed as part of Capital Cost while approving the tariff has been considered as reduction from Capital Cost.

#### **Capitalization of Miscellaneous Bought Out Assets (MBOA)**

51. The petitioner has capitalized expenditure for ₹137.06 lakh including liability of ₹11.50 lakh towards MBOA items in books of accounts during 2009-10. Since capitalization of miscellaneous assets after the cut-off-date is not allowed, this cannot be considered as part of Capital Cost and the exclusion of ₹137.06 lakh is in order.

#### **De-capitalization of Miscellaneous Bought out Assets (MBOA)**

52. The petitioner has claimed de-capitalization towards MBOA amounting to ₹54.97 lakh in books of account during 2013-14 is on the ground that the capitalization of MBOA items were not allowed by the Commission under the regulation. It is observed that out of the total MBOA de-capitalized for ₹54.97 lakh, MBOA amounting to ₹24.97 lakh were allowed in tariff as part of the capital cost and MBOA amounting to ₹30.00 lakh were not claimed and hence do not form part of tariff. Hence, de-capitalization of MBOA for ₹24.97 lakh which were allowed has not been considered under exclusions. However, the de-capitalization of MBOA for ₹30.00 lakh which were not claimed and which do not form part of the capital cost of the generating station for the purpose of tariff, has not been allowed.

#### **Inter unit Transfer**

53. The petitioner has capitalized expenditure for ₹17.31 lakh towards inter unit transfer in books of accounts during 2013-14. The petitioner submitted that an amount of ₹17.30 lakh towards inter unit transfer was not allowed in tariff as part of the capital cost. Hence, exclusion of these inter unit transfer is considered for the purpose of tariff.



### **Capitalization of Miscellaneous items**

54. The petitioner has excluded an amount of ₹24.21 lakh towards capitalization of miscellaneous items of P&M such as 30 m high mast lighting system, supply/ erection/ commissioning of 56 ESP controllers etc. including liabilities of ₹9.81 lakh. Since capitalization of these miscellaneous items of P&M nature is not been allowed, the exclusions on this count are in order.

### **Hospital Equipments**

55. The petitioner has capitalized expenditure for ₹1.91 lakh towards hospital equipment in books of accounts during 2013-14. Since capitalization of minor assets was not allowed, the exclusion of ₹1.90 lakh is in order.

56. Based on the above, the details of exclusions claimed and allowed for the year 2009-10 is summarized as under:

	<i>(₹ in lakh)</i>
Exclusions Claimed	2097.04
Exclusions Allowed	2555.17
Additional Exclusion considered towards de-capitalisation of spares	458.13

### **Discharge of liabilities**

57. The discharge of liabilities amounting to ₹10.46 lakh and ₹21.24 lakh during the years 2012-13 and 2013-14 respectively, out of the un-discharged liabilities pertaining to capital cost of the allowed capital assets/items after 1.4.2009 has been considered as additional capital expenditure during the respective years.

58. The actual additional capital expenditure for the years 2012-13 and 2013-14 has been allowed as under:-



	(₹ in lakh)	
	2012-13	2013-14
Amount allowed on other than R&M scheme	925.78	520.23
Exclusions pertaining to de-capitalisation not allowed	(6.04)	(458.13)
Net Additional Capital Expenditure allowed	919.75	62.10
Liabilities discharged during the year	10.46	21.24
<b>Total additional capitalization allowed including liabilities</b>	<b>930.21</b>	<b>83.35</b>

59. The capital cost considered for the purpose of tariff for the period 2009-14 is as under:-

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital cost	45921.38*	45970.21	46552.81	49158.57	50088.79
Additional capital expenditure	48.83	582.60	2605.76	930.21	83.35
Closing capital cost	45970.21	46552.81	49158.57	50088.79	50172.13
Average Capital cost	45945.80	46261.51	47855.69	49623.68	50130.46

\*Capital cost as determined vide order dated 27.11.2014 in Petition No. 194/2009 as on 31.3.2009 has been considered as on 1.4.2009 after adjustment of un-discharged liability of ₹62.93 lakh pertaining to period prior to 1.4.2009.

### **Debt: Equity**

60. Regulation 12 of the 2009 Tariff Regulations provides that:-

*(a) For a project declared under commercial operation on or after 1.4.2009, 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 where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.*

*Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.*

*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, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*

*(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.*



*(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.*

61. The gross loan and net equity amounting to ₹23866.13 lakh and ₹17946.58 lakh respectively as on 31.3.2009 has been considered as gross loan and net equity as on 1.4.2009. However, the un-discharged liabilities amounting to ₹62.93 lakh pertains to assets/works allowed for the purpose of tariff till 31.3.2009. Further, out of the un-discharged liabilities of ₹62.93 lakh, amount of ₹19.93 lakh pertains to liabilities prior to 1.4.2004 and ₹42.99 lakh pertains to liabilities for the period 2004-09. The un-discharged liabilities have been adjusted in the debt-equity ratio of 50:50 for liabilities pertaining to the period prior to 1.4.2004 and 70:30 for liabilities pertaining to period 2004-09. As such, the gross normative loan and net equity, on cash basis, considered for tariff as on 1.4.2009 is revised to ₹23826.07 lakh and ₹17923.71 lakh respectively. The admitted actual additional expenditure has been allocated in debt-equity ratio of 70:30.

### **Return on Equity**

62. Regulation 15 of the 2009 Tariff Regulations, as amended on 21.6.2011, provides that:

*“(1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.*

*(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation.*

*Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in Appendix-II.*

*Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.*



*(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.*

*(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:*

*Rate of pre-tax return on equity = Base rate / (1-t)*

*Where t is the applicable tax rate in accordance with clause (3) of this regulation.*

*(5) The generating company or the transmission licensee, as the case may be, shall recover the shortfall or refund the excess Annual Fixed charges on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:*

*Provided further that Annual Fixed Charge with respect to tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”*

63. The respondent, BRPL has requested the Commission to direct the petitioner to furnish the actual Corporate tax paid against the BTPS duly audited and certified by the Auditors. In response the petitioner has submitted that the Commission has already upheld the contention of the Petitioner, and therefore, this is a settled matter. As per methodology under NFA approach, return would be provided on constant equity component till the loans are fully paid and once the loans are fully repaid subsequent depreciation recovery would be utilized towards notional reduction in equity. In other words, return on equity would be calculated on reducing equity base once the loan is fully repaid notionally. The net equity worked out on cash basis as on 1.4.2009 is ₹17946.58 lakh whereas ₹17848.20 lakh has been considered by the petitioner for purpose of tariff. The grossing up of the base rate has been done with respect to the actual tax rate applicable to the petitioner for the years 2009-10, 2010-11, 2011-12, 2012-13 and 2013-14. Accordingly, return on equity has been worked out on the normative net equity as on 1.4.2009 after accounting for the admitted actual additional



capital expenditure for the period 2009-14 as above. Return on Equity has been computed as under:-

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening notional equity	17923.71	15699.11	13873.71	14063.84	12366.63
Addition due to Additional Capitalisation	14.65	174.78	781.73	279.06	25.00
Repayment of Equity (balance of depreciation after repayment of loan)	2239.25	2000.18	591.60	1976.27	2448.21
Closing Equity	15699.11	13873.71	14063.84	12366.63	9943.42
Average Equity	16811.41	14786.41	13968.77	13215.23	11155.02
Return on Equity (Base Rate ) (%)	15.50	15.50	15.50	15.50	15.50
Tax rate (%)	33.990	33.218	32.445	32.445	33.990
Rate of Return on Equity (Pre Tax) (%)	23.481	23.210	22.944	22.944	23.481
<b>Return on Equity (Pre Tax)</b>	<b>3947.49</b>	<b>3431.93</b>	<b>3204.99</b>	<b>3032.10</b>	<b>2619.31</b>

### Interest on Loan

64. Regulation 16 of the 2009 Tariff Regulations provides that:-

*“(1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.*

*(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year.*

*(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 annual depreciation allowed.*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project.*

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



*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.*

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

*(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute.*

*Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.*

65. Interest on loan has been worked out as under:-

- a. The gross normative loan of ₹23826.07 lakh (₹23866.13 lakh - ₹40.06 lakh towards undischarged liabilities) worked out on cash basis has been considered as on 1.4.2009.
- b. Cumulative repayment approved as on 31.3.2009 in order dated 27.11.2014 in Petition No. 194/2009 has been adjustment by an amount of ₹38.88 lakh on account of removal of un-discharged liabilities from the capital cost as on 1.4.2009.
- 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 tariff period 2009-14. Further proportionate adjustment has been made to the repayments corresponding to discharges of





liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009. Also, proportionate adjustment has been made to the repayments on account of de-capitalizations considered in the additional capital expenditure approved above.

- e. There is no loan portfolio existing during the period 2009-10, 2010-11 & 2011-12. Therefore, the weighted average rate of interest @ 10.5 % p.a. as considered in order dated 16.12.2013 in Petition No. 18/GT/2013 has been considered as rate of interest for the tariff period 2009-12. Further, the weighted average rate of interest of 10.0100% and 10.0847% has been considered for 2012-13 and 2013-14 respectively based on actual loan portfolio. The details of weighted average rate of interest are placed at **Annexure-I**.

66. The necessary calculation for interest on loan is as under:-

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	23826.07	23860.25	24268.07	26092.11	26743.26
Cumulative repayment of loan up to previous year	23696.37	23860.25	24268.07	26092.11	26743.26
Net opening loan	129.70	0.00	0.00	0.00	0.00
Addition due to Additional Capitalisation	34.18	407.82	1824.04	651.15	58.34
Repayment of Loan during the period	156.55	420.36	1915.61	659.30	214.12
Less: Repayment adjustment on a/c of decap	20.30	23.54	91.82	8.15	155.77
Add: Repayment adjustment on a/c of discharges / reversals corresponding to un-discharged liabilities deducted as on 01.04.2009	27.63	11.00	0.25		
Repayment of Loan during the period (Net)	163.88	407.82	1824.04	651.15	58.34



	2009-10	2010-11	2011-12	2012-13	2013-14
Net Closing Loan	0.00	0.00	0.00	0.00	0.00
Average Loan	64.85	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan (%)	10.5000	10.5000	10.5000	10.0100	10.0847
<b>Interest on Loan</b>	<b>6.81</b>	-	-	-	-

### **Depreciation**

67. Regulation 17 of the 2009 Tariff Regulations provides that:

*“(1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.*

*(2) 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 stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site.*

*Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.*

*(3) 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.*

*(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III 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 date of commercial operation shall be spread over the balance useful life of the assets.*

*(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting 3[the cumulative depreciation including Advance against Depreciation] as admitted by the Commission upto 31.3.2009 from the gross depreciable value of the assets.*

*(6) 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.”*

68. The cumulative depreciation on 31.3.2009 has been proportionately adjusted by an amount of ₹38.87 lakh on account of un-discharged liabilities deducted as on 1.4.2009. The depreciation has been calculated based on Straight Line Method and at



rates specified in Appendix to the 2009 Tariff Regulations. Further, the proportionate adjustment has been made to the cumulative depreciation corresponding to discharges of liabilities considered during the respective years on account of cumulative depreciation adjusted as on 1.4.2009. Also, the cumulative depreciation has been adjusted on account of de-capitalization considered during the period 2009-14 for the purpose of tariff. The necessary calculations in support of depreciation are as 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>
Average capital cost	45945.80	46261.51	47855.69	49623.68	50130.46
Value of freehold land	0.00	0.00	0.00	0.00	0.00
Depreciable value @ 90%	41351.22	41635.36	43070.12	44661.31	45117.41
Balance depreciable value	13345.57	11291.07	10384.11	9475.92	7452.18
Rate of depreciation (%)	5.214	5.232	5.239	5.311	5.311
Depreciation	2395.80	2420.54	2507.21	2635.57	2662.31
Cumulative depreciation at the end of the period (before adjustment)	30342.28	32764.83	35193.23	37820.96	40327.55
Add: Cumulative depreciation adjustment on account of discharges out of un-discharged liabilities deducted as on 1.4.2009	25.55	13.01	0.31	0.00	0.00
Less: Cumulative depreciation adjustment on account of de-capitalization	20.30	23.54	91.82	8.15	155.77
Cumulative depreciation after adjustment (at the end of the period)	30344.29	32686.02	35185.39	37665.24	40327.55



## **Operation & Maintenance Expenses**

69. The Operation & Maintenance expenses considered for the purpose of tariff is summarized as 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>
22101.75	22736.25	23384.85	24054.60	24738.45

## **Interest on working capital**

70. Regulation 18 (1) (a) of the 2009 Tariff Regulations provides that the working capital for Coal-based/lignite-fired thermal generating stations shall cover:

*“(i) Cost of coal or lignite and limestone, if applicable, for 1½ months for pithead generating stations and two months for non-pit-head generating stations, for generation corresponding to the normative annual plant availability factor;*

*(ii) 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.*

*(iii) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 19.*

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

*(v) Operation and maintenance expenses for one month.”*

71. Clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended on 21.6.2011 provides as under:-

*"Rate of interest on working capital shall be on normative basis and shall be considered as follows:*

*(i) SBI short-term Prime Lending Rate as on 01.04.2009 or on 1st April of the year in which the generating station or unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the unit or station whose date of commercial operation falls on or before 30.06.2010.*

*(ii) SBI Base Rate plus 350 basis points as on 01.07.2010 or as on 1st April of the year in which the generating station or a unit thereof or the transmission system, as the case may be, is declared under commercial operation, whichever is later, for the units or*



station whose date of commercial operation lies between the period 01.07.2010 to 31.03.2014.

Provided that in cases where tariff has already been determined on the date of issue of this notification, the above provisions shall be given effect to at the time of truing up

72. The respondent, BRPL has submitted that the petitioner in Form 15 has considered weighted average price of fuel for preceding 3 months as January, February & March, 2009 which is an old data and the petitioner should file the latest procurement price to arrive at the realistic variable price of the energy. The respondent, BRPL further, stated that it has not considered any escalation in price of fuel during 2009-14 while computing the IWC. In response, the petitioner has submitted that Form 15 contains the details of price of fuel in accordance with the Regulations. The interest on working capital computed and allowed as per Regulation 18 of the 2009 Tariff Regulations is shown below.

73. The cost of coal for two months as shown below has been considered as 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>
15991.93	15991.93	16035.74	15991.93	15991.93

74. The Cost of secondary fuel oil (for two months) as shown below has been considered as 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>
317.80	317.80	318.67	317.80	317.80



75. O&M expenses for 1 month as allowed in order dated 16.12.2013 for the purpose of working capital are allowed as under:

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
1841.81	1894.69	1948.74	2004.55	2061.54

76. Maintenance spares as allowed in order dated 16.12.2013 have been considered for the purpose of tariff as under.

(₹ in lakh)				
2009-10	2010-11	2011-12	2012-13	2013-14
4420.35	4547.25	4676.97	4810.92	4947.69

77. Receivables have been worked out on the basis of two months of fixed and energy charges as shown below:-

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Variable charges for two months	15991.93	15991.93	16035.74	15991.93	15991.93
Fixed charges for two months	5968.98	5996.02	6089.07	6196.67	6251.37
<b>Total</b>	<b>21960.91</b>	<b>21987.95</b>	<b>22124.81</b>	<b>22188.60</b>	<b>22243.30</b>

78. SBI PLR of 12.25% has been considered in the computation of the interest on working capital. Necessary computations in support of calculation of interest on working capital are given as under:-

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal – 2 months	15991.93	15991.93	16035.74	15991.93	15991.93
Cost of secondary fuel oil – 2 month	317.80	317.80	318.67	317.80	317.80
O&M expenses – 1 month	1841.81	1894.69	1948.74	2004.55	2061.54
Maintenance Spares	4420.35	4547.25	4676.97	4810.92	4947.69
Receivables – 2 months	21960.91	21987.95	22124.81	22188.60	22243.30
Total working capital	44532.81	44739.62	45104.93	45313.80	45562.26
Rate of interest (%)	12.25	12.25	12.25	12.25	12.25



	2009-10	2010-11	2011-12	2012-13	2013-14
<b>Interest on working capital</b>	<b>5455.27</b>	<b>5480.60</b>	<b>5525.35</b>	<b>5550.94</b>	<b>5581.38</b>

### Secondary Fuel Oil

79. The Secondary Fuel Oil has been considered same as allowed in order dated 16.12.2013 in Petition No. 18/GT/2013 as under:-

<i>(₹ in lakh)</i>				
2009-10	2010-11	2011-12	2012-13	2013-14
1906.79	1906.79	1912.02	1906.79	1906.79

### Annual Fixed charges for 2009-14

80. The annual fixed charges allowed for the period 2009-14 in respect of the generating station are summarized as under:-

<i>(₹ in lakh)</i>					
	2009-10	2010-11	2011-12	2012-13	2013-14
Return on Equity	3947.49	3431.93	3204.99	3032.10	2619.31
Interest on Loan	6.81	0.00	0.00	0.00	0.00
Depreciation	2395.80	2420.54	2507.21	2635.57	2662.31
O&M Expenses	22101.75	22736.25	23384.85	24054.60	24738.45
Interest on Working Capital	5455.27	5480.60	5525.35	5550.94	5581.38
Cost of secondary fuel oil	1906.79	1906.79	1912.02	1906.79	1906.79
<b>Total</b>	<b>35813.90</b>	<b>35976.11</b>	<b>36534.43</b>	<b>37180.00</b>	<b>37508.24</b>

81. The difference in the annual fixed charges determined by order dated 8.2.2013 and those determined by this order shall be adjusted in accordance with Regulation 6(6) of the 2009 Tariff Regulations.

82. Petition No. 302/GT/2014 is disposed of in terms of the above.

**Sd/-**

**(Dr. M. K. Iyer)**  
**Member**

**Sd/-**

**(A.S. Bakshi)**  
**Member**



**Annexure-I****DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO (2009-14)****(₹ in lakh)**

	Interest Rate (%)	Loan deployed as on 1.4.2012	Additions during the tariff period	Total
SBI-PFC V	10.0300%	3000.00	0.00	3000.00
SBI-VII D8	9.9500%	0.00	2000.00	2000.00
SBI-VII D12	0	0	0	0.00
SBI-VII D16	0	0	0	0.00
Total		3000.00	2000.00	5000.00

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2009-14****(₹ in lakh)**

	2009-10	2010-11	2011-12	2012-13	2013-14
Net opening loan	-	-	-	3000.00	5000.00
Add: Addition during the period	-	-	-	2000.00	2400.00
Less: Repayment during the period	-	-	-	0.00	187.50
Net Closing Loan	-	-	-	5000.00	7212.50
Average Loan	-	-	-	4000.00	6106.25
Rate of Interest (%)	-	-	-	10.0100	10.0847
Interest	-	-	-	400.40	615.80

