# CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

## **Petition No. 321/GT/2014**

Coram: Shri Gireesh B. Pradhan, Chairperson Shri A.K. Singhal, Member Dr. M.K.lyer, Member

Date of hearing: 03.03.2016 Date of Order: 27.06.2016

#### In the matter of

Revision of tariff of Feroze Gandhi Unchahar Thermal Power Station Stage-III (210 MW) for the period from 1.4.2009 to 31.3.2014 after truing up exercise

#### And in the matter of

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

...Petitioner

Vs

- Uttar Pradesh Power Corporation Ltd.
   Shakti Bhawan,
   Ashoka Road,
   Lucknow 226001
- 2. Jaipur Vidyut Vitran Nigam Ltd. Vidyut Bhawan, Janpath, Jaipur 302005
- 3. Ajmer Vidyut Vitran Nigam Ltd. Old Power House, Hathi Bhata, Jaipur Road, Ajmer
- 4. Jodhpur Vidyut Vitran Nigam Ltd. New Power house, Industrial Area, Jodhpur
- Tata Power Delhi Distribution Ltd.
   kV Sub-station, Hudson Lines,
   Kingsway Camp, Delhi 110009
- 6. BSES Rajdhani Power Ltd. 2<sup>nd</sup> Floor, B Block, Nehru Place, New Delhi 110019
- 7. BSES Yamuna Power Ltd. Shakti Kiran Building, Karkardooma, Delhi 110092



- 8. Haryana Power Purchase Centre, Shakti Bhawan, Sector VI, Panchkula - 134019
- 9. Punjab State Power Corporation Ltd. The Mall, Patiala 147001
- 10. Himachal Pradesh State Electricity Board Ltd, Kumar Housing Complex- Building -II, Vidyut Bhawan, Shimla 171004
- 11. Power Development Department (J&K), Government of J&K, Janipur Power House, Janipur Jammu (J&K)
- 12. Power Department (Chandigarh)
  Union Territory of Chandigarh
  Addl. Office Building
  Sector 9D, Chandigarh
- 13. Uttranchal Power Corporation Ltd Urja Bhawan, Kanwali Road, Dehradun 248001

... Respondents

## Parties present:

Shri Ajay Dua, NTPC
Shri Nishant Gupta, NTPC
Shri Ajay Mehta, NTPC
Shri Shankar Saran, NTPC
Shri Neeraj Kumar, NTPC
Shri R.B. Sharma, Advocate, BRPL
Shri Sanjay Srivastav, BRPL
Shri Manish Garg, UPPCL

#### **ORDER**

This petition has been filed by the petitioner for revision of the tariff of Feroze Gandhi Unchahar Thermal Power Station, Stage-III (210 MW) (the generating station) for the period 2009-14 after truing up exercise in terms of 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. The Commission vide order dated 25.5.2012 in Petition No.279/2009 had approved the tariff of the generating station for the period 1.4.2009 to 31.3.2014 based on the opening capital



cost of ₹86399.48 lakh, after adjusting un-discharged liabilities of ₹3742.22 lakh as on 1.4.2009 pertaining to the period prior to 1.4.2009. Against the said order dated 25.5.2012, the petitioner filed Review Petition No. 17/2012 and the same was rejected by the Commission vide order dated 2.4.2013. Aggrieved thereby, the petitioner filed Appeal No. 188/2013 before the Appellate Tribunal for Electricity (Tribunal) on various grounds namely the disallowance of (a) capitalization of spares amounting to ₹17.03 crore (including HP/IP Turbines module) (b) capitalization towards Sewerage System in plant amounting to ₹124.00 lakh and (c) capital expenditure towards balance work of various packages amounting to ₹21.29 lakh during 2009-10 and ₹8.61 lakh during 2010-11. However, the Tribunal by judgment dated 11.4.2014 dismissed the said appeal filed by the petitioner thereby affirming the order of the Commission. Subsequently, the Commission vide order dated 7.8.2015 in Petition No. 254/GT/2013 revised the annual fixed charges of the generating station based on the actual additional capital expenditure incurred for the years 2009-10, 2010-11 2011-12 and 2012-13 and the projected additional capital expenditure for the year 2013-14 in accordance with clause (1) of Regulation 6 of the 2009 Tariff Regulations. Accordingly, the capital cost and the annual fixed charges approved by order dated 7.8.2015 are as under:

## **Capital Cost**

(₹in lakh)

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	2009-10	2010-11	2011-12	2012-13	2013-14
	(Actual)	(Actual)	(Actual)	(Actual)	(Projected)
Opening capital cost	86399.49	86850.62	87040.90	87313.05	87290.25
Additional capital expenditure	451.14	190.27	272.16	(-) 22.81	1705.00
Closing Capital Cost	86850.62	87040.90	87313.05	87290.25	88995.25
Average Capital Cost	86625.05	86945.76	87176.98	87301.65	88142.75

## **Annual Fixed Charges**

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4474.90	4503.86	4520.98	4526.51	4578.46
Interest on Loan	3973.89	3640.79	3390.23	2980.98	2614.65
Return on Equity	6102.13	6054.03	6000.57	6009.15	6209.04
Interest on Working Capital	1582.61	1587.56	1597.49	1600.17	1612.31
O&M Expenses	3822.00	4040.40	4271.40	4517.10	4775.40
Cost of Secondary Fuel Oil	323.22	323.22	324.11	323.22	323.22
Total	20278.75	20149.87	20104.77	19957.12	20113.09

3. Clause (1) of 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."

4. The petitioner has filed the present petition in accordance with Regulation 6(1) of the 2009 Tariff Regulations for revision of tariff of the generating station for the period 2009-14 after truing-up exercise. The petitioner has considered the capital cost based on the capital cost admitted as on 31.3.2009 and the actual capital expenditure incurred (on cash basis) during the period 2009-14. Accordingly, the capital cost and the annual fixed charges claimed by the petitioner are as under:

## **Capital Cost**

(₹in lakh)

	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Actual)	2013-14 (Actual)
Opening capital cost	86399.49	88841.01	89770.34	90985.59	91313.88
Additional capital expenditure	2441.52	929.33	1215.25	328.30	296.47
Closing Capital Cost	88841.01	89770.34	90985.59	91313.88	91610.35
Average Capital Cost	87620.25	89305.68	90377.96	91149.73	91462.12

#### **Annual Fixed Charges**

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4525.84	4625.52	4686.40	4725.44	4750.37
Interest on Loan	3623.93	3390.76	3224.14	2860.44	2493.45
Return on Equity	6172.23	6218.35	6220.90	6274.02	6442.87
Interest on Working Capital	1577.84	1588.30	1602.07	1607.32	1618.25
O&M Expenses	3822.00	4040.40	4271.40	4517.10	4775.40
Cost of Secondary Fuel Oil	323.22	323.22	324.11	323.22	323.22
Total	20045.06	20186.55	20329.00	20307.54	20403.56

5. In compliance with the directions of the Commission, the petitioner has filed additional information and has served copies on the respondents. The respondents UPPCL and BRPL have filed replies in the matter and the petitioner has filed its rejoinder to the said replies. We now proceed to examine the claim of the petitioner, on prudence check, based on the submissions and the documents available on records, as stated in the subsequent paragraphs.



### Capital cost

6. 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."

7. The annual fixed charges claimed in the petition is based on opening capital cost of ₹86399.48 lakh as determined by Commission vide its order dated 25.5.2012 in Petition No. 279/2009. The petitioner vide its affidavit dated 10.9.2013 has furnished the capital cost and liabilities as on 1.4.2009 as per books of accounts in Form-9A. The details of liabilities and capital cost have been reconciled with the information available with the records of the Commission as under:

(₹in lakh)

	As per Form-9A	As per records of Commission
Capital cost as on 1.4.2009, as per books	91335.26	91335.26
Liabilities included above	3742.22	3742.22

- 8. It is evident from the above that there is no variation in the capital cost and liabilities as on 1.4.2009. Further, un-discharged liabilities amounting to ₹3742.22 lakh included in the gross block as on 1.4.2009 form part of the approved capital cost of ₹90141.71 lakh, as on 1.4.2009.
- 9. Accordingly, the capital cost as on 1.4.2009, after removal of un-discharged liabilities of ₹3742.22 lakh, works out to ₹86399.48 lakh, on cash basis. Further out of the un-discharged liabilities of ₹3742.22 lakh as on 1.4.2009, the petitioner has discharged amounts of ₹310.56 lakh, ₹116.27 lakh, ₹23.52 lakh and ₹43.57 lakh during the years 2009-10, 2010-11, 2011-12 and 2013-14 respectively, The petitioner has also reversed amounts for ₹232.68 lakh, ₹36.53 lakh, ₹52.80 lakh and ₹148.94 lakh during the years 2009-10, 2010-11, 2011-12 and 2013-14 respectively. Accordingly, the discharge of liabilities along with the discharges corresponding to assets admitted on cash basis, during the period 2009-14 has been allowed as additional capital expenditure during the respective years.



## **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 break-up of the additional capital expenditure allowed by the Commission vide order dated 7.8.2015 in Petition No. 254/GT/2013 is as under:

(₹in lakh)

SI.	Head of work/ Equipment	( <i>₹in lakh</i> )  Actual/Projected Capital Expenditure				
No.		2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Actual)	2013-14 (Projected)
Α	Deferred liabilities – Regulation					
i.	Construction of D type quarters	0.00	0.00	168.56	0.00	130.00
ii.	RCC paving & CLSM road	111.00	16.42	0.00	0.00	0.00
	Total (A)	111.00	16.42	168.56	0.00	130.00
В	Ash Related Works – Regulation					
i.	Ash Management complex gate	20.52	74.63	0.00	0.00	0.00
ii.	MPP-Wet Ash disposal system	61.25	18.31	0.00	7.61	0.00
iii.	Construction of ash corridor road alongside ash pipeline from SS canal	0.00	0.00	51.58	0.00	0.00
	Total (B)	81.77	92.94	51.58	7.61	0.00
С	Balance payments 9(2)(viii)		1	1		
i.	ERP implementation	3.91	0.00	0.00	0.00	0.00
ii.	Bal work in sewerage system	2.49	0.00	0.00	0.00	0.00
iii.	Green belt development township	0.01	0.00	0.00	0.00	0.00
iv.	Lighting system	1.05	0.00	0.00	0.00	0.00
V.	Off site building - structural work	1.14	0.00	0.04	0.00	0.00
vi.	MPP - Steam Generator supply	0.00	0.88	0.00	0.00	0.00
vii.	Association Bhawan	0.00	0.19	0.00	0.00	0.00
viii.	Garbage disposal pit	0.00	0.67	0.00	0.00	0.00
ix.	TG - supply	0.00	1.12	0.00	0.00	0.00
	Total (C)	8.60	2.86	0.04	0.00	0.00
D	New Items / Works					T
i.	Making of settling pits in marshal yard CHP area under Regulation 9(2)(ii)	0.00	0.00	0.00	15.10	0.00
ii.	X-ray baggage inspection under Regulation 9(2)(ii)	0.00	0.00	28.62	0.00	0.00
iii.	Solar water heater	0.00	0.00	0.00	0.00	0.00
iv.	Ductable panel New Adm. Building under Regulation 9(2)(viii)	0.00	0.00	9.22	0.00	0.00
V.	Capital Spares under Regulation 9(2)(viii)	0.00	0.00	0.00	0.00	0.00
vi.	Implementation of 5 Km scheme under Regulation 9(2)(ix)	0.00	0.00	0.00	0.00	1575.00
Total	* 7	0.00	0.00	37.84	15.10	1575.00
	Total (A+B+C+D)	201.37	112.22	258.02	22.71	1705.00
	apitalization	0.00	0.00	0.00	3.98	0.00
	tional Capital Expenditure /ed (E)	201.37	112.22	258.02	18.73	1705.00
Exclu	sions not allowed (F)	(-) 60.80	(-) 38.21	(-) 9.37	(-) 41.55	0.00
	Additional Capital Expenditure red (E+F)	140.58	74.00	248.64	(-) 22.81	1705.00



12. The details of the actual additional capital expenditure claimed by the petitioner in this petition for the period 2009-14 are as under:

(₹in lakh) SI. **Particulars** 2009-10 2010-11 2011-12 2012-13 2013-14 Total No. 1191.73 4698.61 Total additional capitalization 2130.97 813.06 332.27 230.58 2 De-capitalization 0.00 0.00 0.00 3.97 0.00 3.97 **Net Additional Capitalization** 3 2130.97 813.06 1191.73 328.30 230.58 4694.64 claimed (1-2) Discharge of liability by way of 4 310.56 115.56 23.52 0.00 43.57 493.21 payment before 1.4.2009 5 Discharge of Liability created 0.00 0.71 0.00 0.00 22.32 23.03 after 1.4.2009 6 Total discharge of liabilities by 310.56 116.27 23.52 0.00 65.89 516.23 way of payment (4+5) Additional Total Capital 2441.52 929.33 1215.25 328.30 296.47 5210.87 Expenditure claimed (3+6)

13. The break-up of the actual additional capital expenditure claimed by the petitioner is as under:

(₹in lakh) SI. 2009-10 2010-11 2011-12 2012-13 2013-14 No. 1 Construction of D Type Quarter 0.00 0.00 168.56 0.00 99.61 RCC Paving & CSLM Stage III 111.00 16.42 0.00 0.00 1.95 Ash Management Complex Gate 20.52 74.63 3 0.00 0.00 0.00 Construction of Ash Corridor road 4 0.00 0.00 51.58 0.00 0.00 alongside ash pipeline from SS Canal 5 MPP - Wet ash disposal system 18.31 0.00 0.00 7.61 0.00 ERP Implementation (SAP Unchahar) 0.00 0.00 3.91 0.00 0.00 6 7 Bal. Work in Sewerage System T/S 2.49 0.00 0.00 0.00 0.00 Green Belt Development-Township -8 0.01 0.00 0.00 0.00 00.00 Stage-III Lighting System 1.05 0.00 0.00 9 0.00 0.00 10 MPP-Offsite Building Stage-III-Structural 1.14 0.00 0.04 0.00 0.00 Steel Work MPP-Steam Generator -Supply 0.00 0.00 0.00 11 0.00 0.88 12 Association Bhawan 0.00 0.19 0.00 0.00 0.00 Garbage Disposal Pit 13 0.00 0.67 0.00 0.00 0.00 Turbine Generator-Supply Stage-III 14 0.00 1.12 0.00 0.00 0.00 103.27 5 Km scheme of electrification 0.00 0.00 15 0.00 0.00 16 X Ray Baggage Inspection 0.00 0.00 28.62 0.00 0.00 Ductable Panel New Adm. building St-III 17 0.00 0.00 9.22 0.00 0.00 18 Solar Water Heaters 0.00 0.00 0.00 0.00 0.00 Making of settling pits in marshal yard 0.00 0.00 19 0.00 15.10 0.00 CHP area 20 1929.59 933.7 Capital Spares 700.84 309.56 0.00 Rain Water Harvesting in Various 21 0.00 0.00 0.00 0.00 15.16 **Buildings** 22 Converting Non OPC system to OPC 0.00 0.00 0.00 0.00 10.59 Compliant system of EMS



23	Decapitalization of items claimed in Petition No 254/GT/2013	0.00	0.00	0.00	(-) 3.97	0.00
	Total	2130.97	813.06	1191.73	328.30	230.58

14. As stated, the Commission vide order dated 7.8.2015 in Petition No. 254/GT/2013 had revised the tariff of the generating station based on the actual capital expenditure incurred during the period 2009-13 and projected additional capital expenditure for 2013-14. Hence, the actual additional capital expenditure incurred and trued-up for the period 2009-13 by order dated 7.8.2015 is not reopened. However, the claim of the petitioner for actual additional capital expenditure for the year 2013-14 as per the table below is discussed in the subsequent paragraphs:

	(₹in lakh)
Head of work/ Equipment	2013-14
	(Actual)
Construction of D type quarters.	99.61
RCC paving & CLSM road	1.95
Rain water harvesting in various buildings	15.16
Converting non-OPC system to OPC Compliant system of EMS	10.59
Implementation of scheme for supply of electricity within 5 km	103.27
radius	
Total	230.58

# A. Construction of 'D' type quarters

15. The petitioner has claimed actual additional capital expenditure of ₹99.61 lakh in 2013-14 as against the projected additional capital expenditure of ₹130.00 lakh in 2013-14 vide approved vide order dated 7.8.2015 in Petition No. 254/GT/2014 for this work. In justification of the said claim, the petitioner vide affidavit dated 8.8.2014 has submitted that the work had already been approved by Commission's order dated 25.5.2012 in Petition No. 279/2009. It has also submitted that out of the additional capital expenditure of ₹350.00 lakh approved, only an amount of ₹268.17 lakh has been capitalized and the balance amount lying with CWIP which is going to be capitalized. In response, the directions of the Commission, the petitioner vide affidavit dated 11.1.2016 has clarified that the projected expenditure of ₹350.00 lakh in original petition was revised to ₹298.56 lakh in Petition No. 254/GT/2013 and the Commission in order dated 7.8.2015 had approved the said expenditure. The petitioner has added that the work could not progress at the pace as envisaged earlier due to poor financial condition of the agency and



therefore the work amounting to ₹268.17 lakh (168.56 + 99.61) could only be actually incurred during the period 2009-14 and that the balance work would be capitalized during the tariff period 2014-19.

- 16. We have examined the matter. The Commission in order dated 25.5.2012 in Petition No. 279/2009 had allowed the projected additional capital expenditure for this work and had observed as under:
  - "27. From the justification submitted by the petitioner, it is observed that though the work was placed before the cut-off date, the delay in completion of the said work was only on account of poor mobilization of the agent of the contractor, thereby leading to court cases, arbitration between the contractor and agent and finally leading to out of court settlement. Hence, the delay in execution of the work is not attributable to the petitioner. Since mediation and settlement form part of arbitration process, the capitalization of the said expenditure during 2011-12 and 2012-13 is allowed, under Regulation 9(2)(i) of the 2009 Tariff Regulations."
- 17. It is observed that the actual additional capital incurred for this work (₹99.61 lakh) is lesser than the projected additional capital expenditure (₹130.00 lakh) allowed under Regulation 9(2)(i) of the 2009 Tariff Regulations vide Commission's order dated 7.8.2015. In the above background and in view of the justification submitted by the petitioner, the actual additional capital expenditure of ₹99.61 lakh towards Construction of 'D' type quarters in 2013-14 is allowed under Regulation 9(2)(i) of the 2009 Tariff Regulations. As regards the claim for balance expenditure during 2014-19, the same will be considered in accordance with law based on the justification submitted by the petitioner for the same.

## **RCC paving & CLSM road**

- 18. The Commission vide order dated 25.5.2012 in Petition No. 279/2009 had allowed the projected additional capital expenditure of ₹111.00 lakh in 2009-10 and 16.42 lakh in 2010-11 and had observed as under:
  - "25. It is observed that the work was within the scope of work and was awarded to M/s Jay Dee Construction by the petitioner on 13.9.2006 before the date of commercial operation of the generating station. On account of poor mobilization by the agency, there was delay in execution of the work and ultimately the agency left the job without completing the work. The petitioner has taken necessary steps to reconcile the material issued and the work done by the agency and has foreclosed the contract. Since the work was awarded prior to the date of commercial operation and the liability for payment for such work had been incurred by the petitioner prior to the cut-off date, which was discharged during the years 2009-10 and 2010-



- 11, the case is covered under Regulation 9(2)(viii) of the 2009 Tariff Regulations. Accordingly, the expenditure is allowed."
- 19. The said amounts were allowed as actual additional capital expenditure for the years 2009-10 and 2010-11 respectively vide order dated 7.8.2015 in Petition No. 254/GT/2013. No amounts were projected /incurred and/or claimed for the period 2011-14 for this work. However, the petitioner, in this petition, has claimed the actual additional capital expenditure of ₹1.95 lakh against the 'nil' amount projected in Petition No. 254/GT/2013. In response to the directions of the Commission to submit the reasons for the variation in actual additional capital expenditure claimed against those allowed in order dated 7.8.2015, the petitioner vide affidavit dated 11.1.2016 has submitted that the variation in the claim is on account of changes during the actual execution of the work vis-à-vis the estimated values. Considering the fact that the variation in the claim is negligible for the year 2013-14 and keeping in view that the expenditure had been allowed in order dated 7.8.2015 for the reasons stated therein, we are inclined to allow the actual additional capital expenditure of ₹1.95 lakh for 2013-14.

# New items / works - Regulation 9(2)(ii)

# Rain Water Harvesting in various Buildings

- 20. The petitioner has claimed additional capital expenditure of ₹15.16 lakh in 2013-14 towards Rain water harvesting in various buildings under Regulation 9(2)(ii) of the 2009 Tariff Regulations. In justification of the said claim, the petitioner has enclosed the communication from Uttar Pradesh Pollution Control Board (UPPCB) and has submitted that the expenditure has been incurred to comply with the directions of UPPCB. The respondent, BRPL has submitted that the claim of the petitioner does not fall within the parameters of "change in law" and hence may be rejected by the Commission.
- 21. We have examined the matter. It is observed that the petitioner has incurred the said expenditure towards installation of 'rain water harvesting system' as per directions of Uttar Pradesh Pollution Control Board (UPPCB) considering the alarming reduction in the ground water level. Accordingly, we allow the actual additional capital expenditure of ₹15.16 lakh in 2013-14 under Regulation 9(2)(ii) i.e. change-in law.

# Regulation 9(2) read with Regulation 44

## Converting Non OPC system to OPC Compliant system of EMS

- 22. The petitioner has claimed an expenditure of ₹10.59 lakh in 2013-14 towards converting Non OPC system to OPC compliant system of EMS. In justification of the same, the petitioner has submitted that the scheme is required for monitoring and for control of Auxiliary Power Consumption and to make EMS system OPC (Object Linking and embedding for process control) compliance to facilitate data acquisition and analysis, in order to meet stiff targets set by the Commission.
- 23. The respondent, BRPL has submitted that once the terms and conditions of tariff have been framed by the Commission by balancing divergent interest, any attempt to seek further benefit over and above the regulatory provisions disturbs the delicate balance which the Commission has maintained through the 2009 Tariff Regulations. The respondent, UPPCL while objecting to the said claim has submitted that the petitioner has failed to provide any reason as to why the existing system has become obsolete in less than 10 years of commissioning of the plant.
- 24. The matter has been examined. On prudence check, it is found that the expenditure on this item has been incurred to enable the existing system with other technology advance system. In other words, this OPC system act as interface for the existing non-OPC system with the various diversified manufacturer equipments in order to facilitate data acquisition to a common platform thereby resulting in efficiency optimization. In our view, the additional capital expenditure incurred by the petitioner is not due to obsolescence of the existing system as argued by the respondent UPPCL. Accordingly, in terms of Regulation 44 of the 2009 Tariff Regulations, we relax the provisions of Regulation 9(2) of the 2009 Tariff Regulations and allow the actual additional capital expenditure of ₹10.59 lakh in 2013-14 on this count.



## Regulation 9(2)(ix)

# Expenditure towards the Scheme for supply of electricity within the radius of 5 km of the generating station

- 25. The petitioner has claimed actual additional capital expenditure of ₹103.27 lakh as against the projected additional capital expenditure of ₹1575.00 lakh allowed in order dated 7.8.2015 in Petition No. 254/GT/2013 towards implementation of 5 km scheme for provision of supply of electricity within the radius of 5 km of the generating station. In response to the directions of the Commission, the petitioner vide affidavit dated 11.1.2016 has submitted that most of the execution works under 5 km electrification scheme had been completed during the year 2013-14, but as the handing over of assets by the petitioner to the local authorities is a time taking activity, the work for only ₹103.27 lakh could be capitalized on cash basis, during 2009-14 and the balance work will be capitalized during the tariff period 2014-19.
- 26. The respondent, BRPL has submitted that the expenditure may be disallowed and if the petitioner wants to incur this expenditure, the same may be done under Corporate Social Responsibility (CSR) of the petitioner.
- 27. We have examined the matter. The Commission in its order dated 7.8.2015 in Petition No. 254/GT/2013 had allowed the projected claim of the petitioner and had observed as under:
  - "30. We have examined the matter. Considering the fact that the MoP, GoI had granted exemption from withdrawal of the said scheme by notification dated 5.3.2014 and since the implementation of the scheme has been approved by the Govt. of U.P. vide letter dated 21.7.2011 we are inclined to allow the projected additional capital expenditure of `1575.00 lakh for the year 2013-14 towards the said scheme under Regulation 9(2)(ix) of the 2009 Tariff Regulations. However, the petitioner is directed to furnish certificates / documentary evidence containing details of the handing over and taking over the assets, on affidavit, at the time of revision of tariff of the generating station based on truing up in terms of Regulation 6 of the 2009 Tariff Regulations."
- 28. The scheme for supply of electricity within 5 km radius around Central Power Plants was withdrawn vide Ministry of Power, Government of India notification dated 25.3.2013. It is noticed that the Ministry of Power, GOI by letter dated 8.3.2014 had granted exemption in respect of 8 ongoing projects around the generating stations of the petitioner, including this generating station, under the erstwhile scheme and has conveyed the approval for capitalization of



expenditure for this generating station also as per provisions of the said scheme, subject to orders of this Commission. Similar claim of the petitioner was considered by the Commission in Petition No. 315/GT/2014 (revision of tariff of Singrauli STPS (2000 MW) for 2009-14] and It is observed that the Commission vide order dated 21.12.2015 had allowed the said claim ad observing as under:

- "23. We are of the considered view that since the petitioner has incurred the expenditure for creation of the infrastructure, the same should be allowed. However, instead of servicing the same as part of the capital cost, we are of the view that the said expenditure should be reimbursed by the beneficiaries in proportion to their share, in the remaining three years of the tariff period 2014-19, in equal monthly installments beginning from April, 2016, along with regular bills, with the weighted average rate of interest on loan applicable for the relevant years as indicated in the table under para 54 of this order. The reimbursement directed as above is in relaxation of Regulation 9 (2) (ix) of the 2009 Tariff Regulations and shall not be cited as precedent in future"
- 29. In line with the above decision of the Commission and since the expenditure has been incurred and capitalized by the petitioner for creation of the infrastructure, we are of the view that the said expenditure should be reimbursed by the beneficiaries in proportion to their share, in the remaining three years of the tariff period 2014-19, in equal monthly installments beginning from July, 2016, along with regular bills, with the weighted average rate of interest on loan applicable for the relevant years as indicated in the table under para 50 of this order till the date of capitalization of Asset. The reimbursement directed as above is in relaxation of Regulation 9 (2) (ix) of the 2009 Tariff Regulations and shall not be cited as precedent in future. As regards the claim for balance expenditure during 2014-19, the same will be considered in accordance with law based on the justification submitted by the petitioner for the same. The petitioner shall however, ensure the security and safety of assets till the same is formally handed over to the State Distribution Company so that the assets stated and capitalized are neither removed nor destroyed.
- 30. The reconciliation of the actual additional capital expenditure for the period 2013-14 with that of books of accounts as submitted by the petitioner is as under:

(₹in lakh)	
	2013-14
Opening Gross Block as on 1 <sup>st</sup> April of the year <b>(A)</b>	97329.68
Closing Gross Block as on 31 <sup>st</sup> March of the year <b>(B)</b>	99313.00



Addition during the year as per books (C = B-A)	1983.32
Exclusion (D)	1750.15
Un-discharged liabilities (E)	2.59
Additional Capital Expenditure claimed on cash basis (C-D-E)	230.58

31. It is noticed from the above that the actual additional capital expenditure claimed by the petitioner is at variance with the additional capital expenditure as per books of accounts. This is on account of exclusion of certain expenditure and un-discharged liabilities for the purpose of tariff. The summary of exclusions claimed as per books of accounts is examined as under.

# **Exclusions**

32. The summary of exclusions from the books of accounts claimed during 2013-14 under different heads is as under:

	(₹in lakh)
	2013-14
Items not claimed	
Pay loader, Dozer, battery operated truck and other assets etc.	451.69
FERV	878.94
Inter-unit transfer (EDP, WP & SATCOM equipments)	2.41
Capital spares	438.49
De-capitalisation of spares part of capital cost	(-) 59.46
Capitalization of MBOA items	187.05
De-capitalisation of MBOA not part of capital cost	(-) 0.03
Liability reversal	(-) 148.94
Total Exclusion claimed	1750.15

33. We now consider the exclusions under different heads in the claim for the purpose of tariff as discussed in subsequent paragraphs.

## Items not claimed

34. The petitioner has excluded an amount for ₹451.69 lakh in 2013-14 in respect of items like Pay loader, Dozer, battery operated truck and other assets etc on the ground that they are not covered under Regulation 9(2) of the 2009 Tariff Regulations. Since capitalization of these items are not permissible under Regulation 9(2) of the 2009 Tariff Regulations, the exclusion of ₹451.69 lakh in 2013-14 is in order and is allowed.



#### **FERV**

35. The petitioner has excluded ₹878.94 lakh during 2013-14 on account of impact of FERV. As the petitioner has billed the said amount directly on the beneficiaries in accordance with the 2004 Tariff Regulations, the exclusion of FERV of ₹878.94 lakh during 2013-14 is in order and is allowed.

#### **Inter-Unit Transfers**

36. The petitioner has excluded an amount of ₹2.41 lakh in 2013-14 under this head on account of inter-unit transfer of certain assets such as EDP, WP and SATCOM equipments. The Commission in its various orders while dealing with the application for additional capitalization in respect of other generating stations of the petitioner had decided that both positive and negative entries arising out of inter-unit transfers of a temporary nature shall be ignored for the purposes of tariff. In line with the said decision, the exclusion of the said amounts on account of inter-unit transfer is allowed.

#### **Capitalization of Spares**

37. The petitioner has capitalized spares amounting to ₹438.49 lakh in 2013-14 in books of accounts. Since capitalization of spares over and above initial spares procured after the cut-off date are not allowed for the purpose of tariff, the aforesaid claim for exclusion is in order and is allowed.

#### De- capitalization of spares part of capital cost

38. The petitioner has de-capitalized capital spares in books of accounts amounting to (-) ₹20.70 lakh in 2013-14 on these becoming unserviceable. Since these spares were earlier allowed in tariff as part of the capital cost, exclusion has not been allowed.

## De- capitalization of spares not part of capital cost

39. The petitioner has de-capitalized capital spares in books of accounts amounting to (-) ₹38.76 lakh in 2013-14 against spares that were capitalized during 2009-13. Since capitalization of capital spares have been disallowed vide Commission's order dated 7.8.2015

during 2009-13 as these were capitalized after the cut-off date of the generating station, and hence do not form part of the capital cost, the de-capitalization of spares for (-) ₹38.76 lakh in 2013-14 which were not allowed in tariff has been allowed under exclusion.

# **Capitalization of MBOA items**

40. The petitioner has capitalized MBOA items in books of accounts amounting to ₹187.05 lakh in 2013-14. Since capitalization of MBOA items after the cut-off date is not allowed for the purpose of tariff, the exclusion of ₹187.05 lakh in 2013-14 is in order and has been allowed.

#### De-capitalization of MBOA items not part of capital cost

41. The petitioner has de-capitalized MBOA items in books of account amounting to (-) ₹0.03 lakh in 2013-14 upon the same becoming unserviceable. Since these MBOA items amounting to (-) ₹0.03 lakh in 2013-14 were not allowed in tariff and do not form part of the capital cost, the decapitalization of MBOA items for (-)₹0.03 lakh in 2013-14 which were not allowed in tariff is in order and has been allowed.

## **Liability Reversal**

- 42. The petitioner has excluded reversal of liability (-) ₹148.94 lakh in 2013-14. In justification of the same, the petitioner has submitted that since tariff is on cash basis, the liability has been kept under exclusion. In view of the submission of the petitioner, the reversal of liability is allowed.
- 43. Based on the above, the summary of exclusions allowed and disallowed for the period 2009-14 is as under:

(₹in lakh) 2009-10 2010-11 2011-12 2012-13 2013-14 Exclusions claimed (A) 1125.92 704.69 1750.15 (-) 463.49 61.33 1135.29  $746.\overline{24}$ Exclusion allowed (B) 99.54 1770.85 (-) 402.69 **Exclusions not allowed (B-A)** (-) 60.80 (-) 38.21 (-) 9.37 (-) 41.55 (-) 20.70

44. Based on above, the actual additional capital expenditure allowed for the year 2013-14 is allowed as under:

(₹in lakh)

No A i. ii.	Head of work/ Equipment  Deferred liabilities – Regulation 9(	2009-10 (Actual)	2010-11	2011-12	l Expenditu 2012-13	2013-14
i.	Deferred liabilities – Regulation 9(	(Actual)			2012 10	2013-14
i.	Deferred liabilities - Regulation 9(	(Actual)	(Actual)	(Actual)	(Actual)	(actual)
ii.	Construction of D type quarters	0.00	0.00	168.56	0.00	99.61
	RCC paving & CLSM road	111.00	16.42	0.00	0.00	1.95
	Total (A)	111.00	16.42	168.56	0.00	101.56
В	Ash Related Works - Regulation 9(	(2)(ii)				
i.	Ash Management complex gate	20.52	74.63	0.00	0.00	0.00
ii.	MPP-Wet Ash disposal system	61.25	18.31	0.00	7.61	0.00
iii.	Construction of ash corridor road alongside ash pipeline from SS canal	0.00	0.00	51.58	0.00	0.00
	Total (B)	81.77	92.94	51.58	7.61	0.00
С	Balance payments 9(2)(viii)					
i.	ERP implementation	3.91	0.00	0.00	0.00	0.00
ii.	Bal work in sewerage system	2.49	0.00	0.00	0.00	0.00
iii.	Green belt development township	0.01	0.00	0.00	0.00	0.00
iv.	Lighting system	1.05	0.00	0.00	0.00	0.00
٧.	Off site building - structural work	1.14	0.00	0.04	0.00	0.00
vi.	MPP - Steam Generator supply	0.00	0.88	0.00	0.00	0.00
vii.	Association Bhawan	0.00	0.19	0.00	0.00	0.00
viii.	Garbage disposal pit	0.00	0.67	0.00	0.00	0.00
ix.	TG - supply	0.00	1.12	0.00	0.00	0.00
_	Total (C)	8.60	2.86	0.04	0.00	0.00
D i.	New Items / Works	0.00	0.00	0.00	15.10	0.00
1.	Making of settling pits in marshal yard CHP area under Regulation 9(2)(ii)	0.00	0.00	0.00	15.10	0.00
ii.	X-ray baggage inspection under Regulation 9(2)(ii)	0.00	0.00	28.62	0.00	0.00
iii.	Solar water heater	0.00	0.00	0.00	0.00	0.00
iv.	Ductable panel New Adm. Building under Regulation 9(2)(viii)	0.00	0.00	9.22	0.00	0.00
V.	Capital Spares under Regulation 9(2)(viii)	0.00	0.00	0.00	0.00	0.00
vi.	Implementation of 5 Km scheme under Regulation 9(2)(ix)	0.00	0.00	0.00	0.00	0.00
Total	I (D)	0.00	0.00	37.84	15.10	0.00
Sum	Total (A+B+C+D)	201.37	112.22	258.02	22.71	101.56
E. Ca	apital spares allowed	0.00	0.00	0.00	0.00	0.00
F. Ne	ew Items/Works claimed					
` '	ain water harvesting in various uildings	0.00	0.00	0.00	0.00	15.16
(b) C	onverting Non OPC system to OPC ompliant system of EMS	0.00	0.00	0.00	0.00	10.59
	otal (F)	0.00	0.00	0.00	0.00	25.75
	nd total (A+B+C+D+E+F)	201.37	112.22	258.02	22.71	127.31
	apitalization	0.00	0.00	0.00	3.98	0.00
Net	Additional Capital Expenditure	201.37	112.22	258.02	18.73	127.31
	ved (G) usions not allowed	(-) 60.80	(-) 38.21	(-) 9.37	(-) 41.55	(- ) 20.70
	tional Capital Expenditure	140.58	74.00	248.64	(-)22.81	106.61
allow		170.00	1 7.00	270.07	( )~~.01	100.01



45. Considering the discharges of liabilities during the period 2009-14, the net additional capital expenditure allowed is as under:

(₹in lakh) 2009-10 2010-11 2011-12 2013-14 2012-13 Additional Capital Expenditure 140.58 74.00 248.64 (-) 22.81 106.61 (excluding discharges) Add: Discharges of liabilities (against 310.56 116.27 23.52 43.57 000 allowed assets / works) **Net Additional Capital Expenditure** 451.14 190.27 272.16 (-) 22.81 150.18

46. Based on the above, the capital cost considered for the purpose of tariff for 2009-14 is as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening capital cost	86399.49	86850.62	87040.90	87313.05	87290.25
Additional capital expenditure	451.14	190.27	272.16	(-)22.81	150.18
Closing Capital Cost	86850.62	87040.90	87313.05	87290.25	87440.43
Average Capital Cost	86625.05	86945.76	87176.98	87301.65	87365.34

## **Debt-Equity Ratio**

47. In terms of the Regulation 12 of the 2009 Tariff Regulations, the gross loan and equity of ₹63099.20 lakh and ₹27042.51 lakh respectively as allowed in order dated 21.4.2011 have been considered as on 1.4.2009. However, the un-discharged liability amounting to ₹3742.22 lakh has been deducted from the capital cost as on 1.4.2009 and has been adjusted to debt and equity in the ratio of 70:30 for all liabilities. The gross normative loan and equity as on 1.4.2009 is revised to ₹60479.64 lakh and ₹25919.85 lakh respectively for 2012-13 and 2013-14 respectively. Further, the admitted additional expenditure has been allocated in the debt and equity ratio of 70:30.

### **Return on Equity**

48. The petitioner has considered pre tax Return on Equity (ROE) of @ 22.944%, however, considering the actual tax rate for 2013-14, the pre tax ROE works out to 23.481% which has been considered. Accordingly, the return on equity worked out is as under:

Order in Petition No. 321/GT/2014

	2009-10	2010-11	2011-12	2012-13	2013-14
Notional Equity- Opening	25919.85	26055.19	26112.27	26193.92	26187.07
Addition of Equity due to additional	135.34	57.08	81.65	(-) 6.84	45.05
capital expenditure					
Normative Equity-Closing	26055.19	26112.27	26193.92	26187.07	26232.13
Average Normative Equity	25987.52	26083.73	26153.09	26190.49	26209.60
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for the year	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%
Return on Equity(Pre Tax)	6102.13	6054.03	6000.57	6009.15	6154.28
annualised					

#### Interest on loan

- 49. In terms of Regulation 16 of the 2009 Tariff Regulations, the interest on loan has been worked out in as given below:
- (a) Gross normative loan amounting to ₹60479.64 lakh has been considered as on 1.4.2009.
- (b) Cumulative repayment of ₹9728.94 lakh as on 31.3.2009 as considered in order dated 21.4.2011 in Petition No.181/2009 has been considered as cumulative repayment as on 1.4.2009. However, after taking in to account proportionate adjustment to the cumulative repayment on account of un-discharged liabilities deducted from the capital cost as on 1.4.2009, the cumulative repayment as on 1.4.2009 is revised to ₹9325.04 lakh.
- (c) Net normative opening loan as on 1.4.2009 is worked out as ₹51154.60 lakh.
- (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 and reversals of liabilities considered during the respective years on account of cumulative repayment adjusted as on 1.4.2009.
- Weighted average rate of interest has been calculated after adjusting appropriate accounting adjustment for interest capitalized and by considering the actual loan portfolio existing as on 1.4.2009 along with subsequent additions during 2009-14 for the generating station. In case of loans carrying floating rate of interest, the rate of interest as provided by the petitioner has been considered for the purpose of tariff. However, it is observed in case of LIC-III (T3, D1), (T4, D1&4) the petitioner has claimed additional interest of 0.0221% towards upfront fees. It is noticed that these loans have been allocated to various other generating stations namely, Barh, Unchahar-I, Koldam HPS, Kahalgaon TPS-II, Rihand TPS-II, Sipat TPS-I & II, Vindhyachal TPS-I & III, Farakka TPS-I & II, Ramagundam TPS-I,II & III, Singrauli TPS, Talcher TPS, Anta GPS, Badarpur TPS, Korba TPS-I & II & Tanda TPS wherein no additional interest has been claimed by the petitioner. It is also noticed that the petitioner has not claimed such upfront fees towards the aforementioned LIC-III loans in the respect of other generating stations like Sipat TPS-II, Vindhyachal STPS I-I&III, Kahalgaon TPS-II, Ramagundam TPS-III, Anta GPS, Korba TPS-I&II. The claim of the petitioner towards upfront fees had been disallowed by the Commission while working out the weighted average rate of interest on loan in respect of Badarpur TPS vide tariff order dated 15.5.2014 in Petition No. 304/2009. In line with this decision and for the purpose of consistency, the claim of the petitioner towards upfront fees for this generating station has not



been allowed. This is however subject to the final decision of the Appellate Tribunal for Electricity in the appeals filed by the petitioner on this count in respect of other generating stations.

- (f) Weighted average rate of interest has been computed after appropriate accounting adjustments for interest capitalized corresponding to assets allowed for the purpose of tariff.
- 50. The necessary calculations for interest on loan are given as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Gross opening loan	60479.64	60795.44	60928.63	61119.14	61103.17
Cumulative repayment of loan	9325.04	13816.02	18309.56	22832.21	27326.85
upto previous year					
Net Loan Opening	51154.60	46979.41	42619.07	38286.93	33776.32
Addition due to additional capital expenditure	315.80	133.19	190.51	(-)15.97	105.12
Repayment of loan during the year	4474.90	4503.86	4520.98	4526.51	4538.08
Less: Repayment adjustment on account of de-capitalization	42.56	26.75	6.56	31.86	14.49
Add: Repayment adjustment on account of discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	58.63	16.42	8.24	0.00	20.78
Net Repayment	4490.98	4493.53	4522.65	4494.64	4544.36
Net Loan Closing	46979.41	42619.07	38286.93	33776.32	29337.08
Average Loan	49067.00	44799.24	40453.00	36031.62	31556.70
Weighted Average Rate of Interest of Ioan	8.0989%	8.1269%	8.3807%	8.2729%	8.1737%
Interest on Loan	3973.89	3640.79	3390.23	2980.85	2579.35

## **Depreciation**

51. In terms of Regulation 17 of the 2009 Tariff Regulations, the cumulative depreciation as on 31.3.2009 as per order dated 21.4.2011 in Petition No. 181/2009 works out to ₹9728.94 lakh. Proportionate adjustment has been made to the cumulative depreciation on account of undischarged liabilities deducted as on 1.4.2009. Accordingly, the revised cumulative depreciation as on 1.4.2009 works out to ₹9325.04 lakh. The value of freehold land as considered in order dated 21.4.2011 is "nil". Accordingly, the calculations in support of depreciation are worked out as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Capital Cost	86399.49	86850.62	87040.90	87313.05	87290.25
Add: Additional Capital Expenditure	451.14	190.27	272.16	(-)22.81	150.18
Closing Capital Cost	86850.62	87040.90	87313.05	87290.25	87440.42
Average Capital Cost	86625.05	86945.76	87176.98	87301.65	87365.34



Rate of Depreciation	5.1658%	5.1801%	5.1860%	5.1849%	5.1944%
Depreciable value	77962.55	78251.18	78459.28	78571.48	78628.80
(excluding land)@ 90%					
Balance depreciable	68637.50	64396.58	60088.59	55673.51	51213.69
value					
Depreciation	4474.90	4503.86	4520.98	4526.51	4538.08
(annualized)					
Cumulative	13799.95	18358.47	22891.67	27424.49	31953.19
depreciation at the end					
Less: Cumulative	(-) 58.63	(-)16.42	(-) 8.24	0.00	(-) 20.78
Depreciation					
adjustment on account					
of un-discharged					
liabilities					
Less: Cumulative	3.98	4.19	1.93	9.38	5.37
Depreciation reduction					
due to de-capitalization					
Cumulative depreciation	13854.60	18370.69	22897.98	27415.11	31968.59
(at the end of the					
period)					

# **Normative Annual Plant Availability Factor (NAPAF)**

52. The NAPAF of 85% as considered in order dated 7.8.2015 in Petition No. 254/GT/2013 has been considered for the purpose of tariff.

#### **O&M Expenses**

53. O&M expenses as considered in order dated 7.8.2015 in Petition No.254/GT/2013 has been considered as under:

			(	₹in lakh)
2009-10	2010-11	2011-12	2012-13	2013-14
3822.00	4040.40	4271.40	4517.10	4775.00

## **Interest on Working Capital**

- 54. Regulation 18(1) (a) of the 2009 Tariff Regulations provides that the working capital for coal based generating stations shall cover:
  - i) Cost of coal for 1.5 months for pit-head generating stations and 2 months for non-pithead 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 liquid 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 charge and energy charge for sale of



electricity calculated on normative plant availability factor; and

- v) O&M expenses for one month.
- 55. 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

- (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".

56. Working capital has been calculated as under:

# Cost of Coal and Secondary Fuel Oil for two months

Fuel component in the working capital as considered in order dated 7.8.2015 has been considered as under:

	2009-10	2010-11	2011-12	2012-13	2013-14
Cost of coal for 2 months	4201.34	4201.34	4212.85	4201.34	4201.34
Cost of secondary fuel oil 2 months	53.87	53.87	54.02	53.87	53.87

#### **Maintenance Spares**

Maintenance spares as considered in order dated 7.8.2015 has been considered as under: 58.

				(₹in lakh)
2009-10	2010-11	2011-12	2012-13	2013-14
764.40	808.08	854.28	903.42	955.08

## Receivables

Receivable component of working capital have been worked out on the basis of two months of fixed and energy charges (based on primary fuel only) as under:



(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Variable Charges – for two months	4201.34	4201.34	4212.85	4201.34	4201.34
Fixed Charges – for two months	3379.79	3358.31	3350.80	3326.16	3329.99
Total	7581.13	7559.65	7563.64	7527.50	7531.32

# **O&M Expenses (1 month)**

60. O & M expenses for 1 month as considered in order dated 7.8.2015 has been considered as under:

				(Rs in lakh)
2009-10	2010-11	2011-12	2012-13	2013-14
318.50	336.70	355.95	376.43	397.95

61. Accordingly, SBI PLR of 12.25% has been considered for the purpose of calculating interest on working capital. The necessary computations in support of calculation of interest on working capital are as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Coal Stock- 2 months	4201.34	4201.34	4212.85	4201.34	4201.34
Oil stock-2 months	53.87	53.87	54.02	53.87	53.87
O&M expenses - 1 month	318.50	336.70	355.95	376.43	397.95
Spares	764.40	808.08	854.28	903.42	955.08
Receivables- 2 Months	7581.13	7559.65	7563.64	7527.50	7531.32
Total Working Capital	12919.23	12959.63	13040.74	13062.55	13139.56
Rate of Interest	12.2500%	12.2500%	12.2500%	12.2500%	12.2500%
Total Interest on working	1582.61	1587.56	1597.49	1600.16	1609.60
capital					

## **Annual Fixed Charges**

62. The annual fixed charges allowed for the generating station for the period 2009-14 are summarized as under:

(₹in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4474.90	4503.86	4520.98	4526.51	4538.08
Interest on Loan	3973.89	3640.79	3390.23	2980.85	2579.35
Return on Equity	6102.13	6054.03	6000.57	6009.15	6154.28
Interest on Working Capital	1582.61	1587.56	1597.49	1600.16	1609.60
O&M Expenses	3822.00	4040.40	4271.40	4517.10	4775.40
Cost of Secondary Fuel Oil	323.22	323.22	324.11	323.22	323.22
Total	20278.75	20149.87	20104.77	19956.99	19979.92

**Note**: (1) All figures are on annualised basis. (2) All figures under each head have been rounded. The figure in total column in each year is also rounded. As such, the sum of individual items may not be equal to the arithmetic total of the column



- 63. The difference between the annual fixed charges determined by this order and those allowed vide order dated 7.8.2015 in Petition No. 254/GT/2013 shall be recovered by the petitioner in accordance with Clause (6) of Regulation 6 of the 2009 Tariff Regulations.
- 64. Petition No. 321/GT/2014 is disposed of as above.

-Sd/- -Sd/(Dr. M.K.lyer) (A. K. Singhal) (Gireesh B. Pradhan)
Member Member Chairperson

