CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 130/GT/2016

Coram:
Shri Gireesh B. Pradhan, Chairperson
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member
Dr. M.K Iyer, Member

Date of order: 25th April, 2017

In the matter of

Revision of tariff of Circulating Fluidized Bed Combustion (CFBC) Technology based Barsingsar Thermal Power Plant (2 X 125 MW) of Neyveli Lignite Corporation Ltd for the period from the date of commercial operation of Units-I and II till 31.3.2014-Truing-up of annual fixed charges determined by Order dated 10.7.2015 in Petition No. 197/GT/2013 and Order dated 14.3.2016 in Petition No. 18/RP/2015.

And

In the matter of

Neyveli Lignite Corporation Limited
Neyveli House, 135, EVR Periyar Road,
Kilpauk, Chennai – 600010 **…….Petitioner**

Vs

1. Jaipur Vidyut Vitaran Nigam Ltd
Vidyut Bhavan, Ist floor Janpath
Jaipur,Rajasthan – 302005

2. Ajmer Vidyut Vitaran Nigam Ltd.
Old Power House Hathi Bhata,
Jaipur Road, Ajmer, Rajasthan-305001

3. Jodhpur Vidyut Vitaran Nigam Ltd.
New Power House, Heavy Industrial Area
Jodhpur, Rajasthan-342003

4. Rajasthan Urja Vikas Nigam Ltd.
Vidyut Bhawan, Janpath
JyotiNagar, Jaipur -302005 **……..Respondents**

Parties present:

Shri M.G Ramachandran, Advocate, NLC
Shri Shubham Arya, Advocate, NLC
Shri K. Nambirajan, NLC
Shri S.K Agarwal, Advocate, Rajasthan Discoms
Shri A.P Sinha, Advocate, Rajasthan Discoms
Shri Abhinav Anand, Advocate, Rajasthan Discoms
Ms. Babita Kumari Advocate, Rajasthan Discoms

ORDER

This petition has been filed by the Petitioner, Neyveli Lignite Corporation for revision of tariff of Circulating Fluidized Bed Combustion (CFBC) Technology based Barsingsar Thermal Power Plant (2 x 125 MW) (hereinafter referred to as "the generating station") for the period 2009-14 after truing-up exercise based on Regulation 6 (1) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter "the 2009 Tariff Regulations").

2. The generating station with an installed capacity of 250 MW comprises of two units of 125 MW each with Circulating Fluidised Bed Combustion lignite fired boilers feeding to Turbines. The allocation of power to the respondents is based on the Energy Department, Govt. of Rajasthan letter dated 29.9.2011. Unit-II of the generating station was declared under commercial operation on 29.12.2011 and Unit-I/generating station on 20.1.2012.

3. Petition No. 197/GT/2013 was filed by the petitioner for fixation of tariff for Unit-II of the generating station for the period from 29.12.2011 to 19.1.2012 and for Units I & II for the period from 20.1.2012 to 31.3.2014 in accordance with the provisions of the 2009 Tariff Regulations. Accordingly, the Commission vide order dated 10.7.2015 in Petition No. 197/GT/2013 had determined the tariff of the generating station for the period 29.12.2011 to 31.3.2014 as under:

(₹in lakh)

	2011-12		**2012-13**	**2013-14**
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**	**1.4.2012 to 31.3.2013**	**1.4.2013 to 31.3.2014**
Return on Equity	331.07	1949.91	8716.50	10735.39
Interest on Loan	325.71	1895.47	9384.22	8870.46
Depreciation	393.05	2314.45	11165.53	7759.23
Interest on Working Capital	45.10	280.95	1406.86	1390.73
O&M Expenses	201.52	1319.02	7090.00	7495.00
Cost of secondary fuel oil	36.44	238.51	1209.11	1209.11
Total	**1332.88**	**7998.31**	**38972.21**	**37459.91**

4. Aggrieved by the said order, the petitioner had filed review petition (Petition No. 18/RP/2015) on the following issues:

(i) Decision as to the consequence of delay of 16 months for Unit-I and 18 months for Unit-II during the construction period till synchronization of the respective units;

(ii) Disallowance of the delay of 21 months for Unit-I and 13 months for Unit-II from the date of synchronization to the date of actual COD;

(iii) Reduction in capital cost by ₹88.23 crore after adjustment of the value of infirm power

and fly ash sales;

(iv) Considering the liquidated damages adjustment of an amount of ₹129.88 crore based on the quantum of the bank guarantee of ₹61.52 crore;

(v) Wrong calculation of IDC without considering the deferred deployment of the debt and implication thereof;

(vi) Arithmetical mistakes in the tables pertaining to calculation of gross normative equity, gross notional loan and opening gross block;

5. The Commission by order dated 14.3.2016 disposed of the said review petition by allowing the prayer of the petitioner in sl nos. (i) and (ii) above. However, the prayers of the petitioner in Sl nos. (iii) to (vi) above were disposed of by the Commission, with directions to consider the same at the time of truing-up of tariff of the generating station for the period 2009-14. Against the said order, the petitioner has filed Appeal No.171/2016 before the Appellate Tribunal for Electricity (the Tribunal) and the same is pending.

6. As stated, the petitioner has sought revision of tariff of the generating station for the period 2011-14 in terms of Regulation 6(1) of the 2009 Tariff Regulations, based on the opening capital cost of ₹92976.57 lakh as on COD of Unit-II (29.12.2011 to 19.1.2012) and ₹168908.77 lakh as on COD of Unit-I/generating station (20.1.2012 to 31.3.2012) and has claimed the annual fixed charges for the generating station as under:

(₹in lakh)

	2011-12		**2012-13**	**2013-14**
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**		
Return on Equity	6399.76	11695.52	9979.33	11959.34
Interest on Loan	6512.26	11761.91	11236.20	10544.13
Depreciation	7599.71	13885.74	12784.98	8645.58
Interest on Working Capital	837.79	1602.02	1555.19	1520.15
O&M Expenses	3352.50	6705.00	7090.00	7495.00
Cost of secondary fuel oil	606.21	1212.41	1209.10	1209.10
Total	**25308.23**	**46862.61**	**43854.81**	**41373.30**

7. In compliance with the directions of the Commission, the petitioner has filed the additional information and has served copies on the respondents. The respondents, discoms of Rajasthan have filed their replies. The matter was heard on various dates and the Commission after directing the petitioner to file certain additional information, reserved order in the petition on 14.2.2017. Based on the directions of the Commission in order dated 14.3.2016 in Petition No. 18/RP/2015 including the submissions of the parties and documents available on record, we proceed to revise the tariff of the generating station as stated in the subsequent paragraphs. The tariff determined by

this order is however subject to the final decision of the Tribunal in Appeal No.171/2016 filed by the petitioner.

Capital Cost

8. The Commission vide order dated 10.7.2015 in Petition No. 197/GT/2013 had approved the opening capital cost of ₹80011.01 lakh as on 29.12.2011 (COD of Unit-II) and ₹143940.71 lakh as on 20.1.2012 (COD of Unit-I/station). However, the petitioner in this petition has claimed opening capital cost of ₹92976.57 lakh as on 29.12.2011 and ₹168908.77 lakh as on 20.1.2012 in respect of the generating station, after considering the impact of the Commission's order dated 14.3.2016 in Petition No.18/RP/2015. We now consider the directions of the Commission in the said order dated 14.3.2016 for working out the capital cost for the purpose of revision of tariff of the generating station as under:

Reduction in IDC &IEDC (pro rata)

9. The Commission vide order dated 10.7.2015 in Petition No.197/GT/2013 had adjusted the IEDC claimed by the petitioner on *pro rata* basis, considering the impact of time and cost overrun of 37 months for Unit-I and 31months for Unit-II to be equally shared by the parties. Accordingly, the pro rata reduction in IEDC due to time overrun of Unit-I and II was worked out as under:

(₹ in crore)

	Total period taken from zero date to actual COD	Time overrun disallowed	Overheads (Establishment, Audit & Accounts, design and contingencies)	Pro-rata reduction (Col. 3 X Col. 4 / Col.2)	Total reduction (Col. 5/ 2)
Unit-II	84.5	30.5	97.66	35.25	17.625
Unit-I/generating station	85	37	202.33	88.07	44.035

10. The Commission in order dated 14.3.2016 in Petition No. 18/RP/2015 had allowed the prayer of the petitioner and had observed as under:

> *"9………. According to us, the observations in para 21 of the order does not truly reflect the decision in para 19 of the order to condone the delay based on new technology (from construction stage till synchronization) and accordingly, is an error apparent on the face of the order and is required to be reviewed. In view of this, we allow the prayer of the petitioner for condonation of delay of 16 months for Unit-I and 18 months for Unit-II from construction stage till synchronization.*
>
> *10………In the background of these facts, we hold that the impact of time overrun of 21 months for Unit-I and 13 months for Unit-II (from date of synchronization upto the actual COD) should be equally shared by the parties. Accordingly, theprayer of the petitioner for review of order dated 10.7.2015 on this count is allowed in terms of the above and tariff shall be revised at the time of truing-up in terms of Regulation 6 of the 2009Tariff Regulations."*

11. It is noticed from the above that the Commission in the order dated 14.3.2016 had condoned the delay of 16 months for Unit-I and 18 months for Unit-II from Construction stage till synchronization and had directed that the impact of time overrun of 21 months for Unit-I and 13 months for Unit-II (from date of synchronization upto the actual COD) should be equally shared by the parties. Based on this, the pro-rata reduction in IEDC as on COD of Unit-I and Unit-II has been revised as under:

(₹ in crore)

	Total period taken from zero date to actual COD	Time overrun disallowed	Overheads (Establishment, Audit & Accounts, Design and Contingencies)	Pro-rata reduction (Col. 3 X Col. 4 / Col.2)	Total reduction (Col. 5/ 2)
Unit-II	84.5	13	97.66	15.025	7.512
Unit-I/generating station	85	21	202.33	49.987	24.993

12. The pro-rata reduction in IEDC worked out as above has been considered for adjustment in the capital cost as on COD of Unit-II and COD of Unit-I/generating station for the purpose of revision of tariff. Also, based on the directions of the Commission in the said order, the Scheduled COD of Unit-I and Unit-II has been reset to 16 months & 18 months for the purpose of calculation of IDC and normative IDC as under:

	Scheduled date of COD - Original	Time overrun allowed	Scheduled date of COD-Revised	Actual COD
Unit-I	15.12.2008	16 months	15.4.2010	20.1.2012
Unit-II	15.6.2009	18 months	15.12.2010	29.12.2011

13. Accordingly, IDC and Normative IDC as considered in order dated 10.7.2015 is revised as under:

Revised IDC

(₹in lakh)

Units	IDC allowed up to scheduled COD: (a)		IDC allowed during time over-run: (b)		Unit-wise total
	Scheduled COD	100% of IDC allowed	Scheduled COD to actual COD	50% of the IDC allowed	
Unit-I	15.4.2010	6830.36	15.4.2010 to 20.1.2012	3572.30	10402.66
Unit-II	15.12.2010	9213.22	15.12.2010 to 29.12.2011	2243.70	11456.92
	IDC allowed: a	**16043.58**	**IDC allowed: b**	**5816.00**	**21859.58**
	Total IDC allowed (a+b) = 21859.58				

Revised Normative IDC

(₹in lakh)

Units	Normative IDC allowed up to Scheduled COD: a		Normative IDC allowed during time over-run: b		Unit-wise total
	Scheduled COD	100% of IDC allowed	Scheduled COD to actual COD	50% of IDC allowed	
Unit-I	15.4.2010	851.15	15.4.2010 to 20.1.2012	76.25	927.40
Unit-II	15.12.2010	900.89	15.12.2010 to 29.12.2011	33.16	934.05
	Normative IDC allowed: a	**1752.04**	**Normative IDC allowed: b**	**109.41**	**1861.45**
	Total Normative IDC allowed (a+b) = 1861.45				

Adjustment of Infirm Power

14. The Commission in order dated 14.3.2016 in Petition No. 18/RP/2015 had disposed of the prayer of the petitioner and observed as under:

> *"14. ……Considering the fact that the amount of ₹88.23 crore deducted from capital cost in order dated 10.7.2015 is subject to truing-up and that the petitioner has now furnished details of the amount adjusted towards infirm power etc., we are inclined to consider the Audited certificate dated 24.7.2015 and the revenue earned from sale of infirm power/fly ash will be adjusted at the time of revision of tariff of the generating station based on truing-up exercise in terms of Regulation 6 of the 2009 Tariff Regulations."*

15. The petitioner in this petition has furnished documentary evidence containing a joint statement signed by the petitioner and the constituents of Rajasthan Discoms Power Procurement Centre indicating the details of revenue earned from sale of infirm power as under:

(amount in ₹)

Infirm Power injection from Synchronization to Date of commercial operation	
Jaipur Discom - Bills settled	365480371
Ajmer Discom - Bills settled	286031694
Jodhpur Discom - Bills settled	298145516
Total amount received	**949657581**

16. The petitioner has further submitted that the fuel used for Start-up is for testing including full load testing up to COD. It has also submitted that more startups are due to technology and was not due to time overrun. The petitioner has further submitted that cost of fuel consumed was ₹79.15 crore and has been abated against the revenue of ₹94.97 crores earned through sale of infirm power. Accordingly, it has stated that the revenue earned after excluding fuel cost, works out to ₹15.82 crore (94.97-79.15) and the same is adjusted in the capital cost of the generating station.

Liquidated Damages

17. The Commission in order dated 14.3.2016 in Petition No. 18/RP/2015 had considered the prayer of the petitioner for adjustment of LD and had observed as under:

> *"18. We have examined the matter. The Commission in its order dated 10.7.2015 had adjusted an amount of `64.94 crore (50% of 129.88 crore) in the capital cost keeping in view the submissions of the petitioner in affidavit dated 20.7.2012 that the LD recovered from BHEL on account of the delay was `129.88 crore (` 68.35 crore in form of cash and `61.52 crore in form of BG). Though the petitioner has now pointed out that the amount of `108.20 crore recovered as LD should only be apportioned, no documentary evidence indicating the details of LD recovered from all the parties has been submitted. In view of this, there is no error apparent on the face of the record. However, in the interest of justice, the petitioner is directed to submit documentary evidence in support of the LD's recovered for consideration of the Commission at the time of revision of tariff of the generating station based on truing-up exercise in terms of Regulation 6 of the 2009 Tariff Regulations. Accordingly, review on this count is disposed of as above".*

18. The petitioner in this petition has furnished documents attested by the Chartered Accountant and has submitted that a sum of ₹108.39 crore has been actually recovered by the petitioner towards Liquidated Damages for the delay in all the packages (including the above against M/s BHEL) in the form of cash and a sum of ₹3.50 crore is available in the form of Bank Guarantee and with the petitioner. The petitioner has further submitted that the total amount of Liquidated Damages is ₹111.89 crore out of which the Contractors have disputed the levy and have initiated Arbitration/ Conciliation proceedings against the levy of Liquidated Damages amounting to ₹29.16 crore. Thus, the petitioner has submitted that the balance Liquidated Damages recovered is ₹82.73 crore and hence the adjustment of 50% of Liquidated Damages amounting to ₹64.94 crore in order dated 10.7.2015 in Petition No. 197/GT/2013 is incorrect. It has submitted that the finalized Liquidated Damages recovered due to the delay in all packages by the petitioner is ₹82.73 crore and hence the adjustment of LD is limited to ₹41.37 crore (50% of ₹82.73 crore).The submissions of the petitioner are not acceptable. It is noticed that as on date of COD of generating station the petitioner has recovered Liquidated Damages amounting to ₹111.89 crore (108.39 + 3.50) and the petitioner is still in possession of the same amount. Accordingly, we are inclined to consider 50% of the LD amount of ₹111.89 crore towards adjustment in capital cost of the generating station. However, if any amount is released by the petitioner on a subsequent date based on the final decision in Arbitration proceedings or Court, liberty is granted to the petitioner to claim the said amount.

19. Based on the above discussions, the capital cost, based on audited accounts works out is worked out as under:

(₹ in lakh)

	COD of Unit-II (29.12.2011)	COD of Unit-I/ station (20.1.2012)
Capital cost including IDC	87134.00	175064.00
Less: IDC claimed	15117.00	30330.00
Capital cost excluding IDC	72017.00	144734.00
Less: Pro-rata reduction in IEDC (Overheads: Establishment, Audit & Accounts, Design and Contingencies	751.20	2499.30
Capital cost (excluding IDC) after pro rata reduction in IEDC	71265.80	142234.70
Adjustment due to infirm power	-	(-) **1582.00**
Adjustment of LD recovered (50%)	-	(-) 5594.50
Capital cost for purpose of tariff (excluding IDC, pro-rata reduction in IEDC & adjustment due to infirm power & LD)	**71265.80**	**135058.20**
Add: IDC allowed	**11456.90**	**21859.59**
Add: Normative IDC allowed	**927.40**	**1861.45**
Opening Capital Cost	**83650.10**	**158779.23**

Additional Capital Expenditure

20. Regulation 9 (1) and 9(2) of the 2009 Tariff Regulations provides as under:

"9(1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Un-discharged liabilities;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of Regulation 8;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) Change in law:

Provided that the details of works included in the original scope of work along with estimates of expenditure, un-discharged liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.

21. The petitioner in Petition No. 197/GT/2013 had claimed additional capital expenditure of ₹101.00 lakh in 2011-12 and ₹12011.00 in 2012-13 and the Commission in order dated 10.7.2015 had allowed the claim of the petitioner with the following observations:

"47.The petitioner's claim of additional capital expenditure amounting to ₹101.00 lakh during 2011-12 is towards expenditure on certain infrastructure facilities such as residential accommodation, vehicles etc., to be provided to CISF deployed at the generating station the cost of which is to be borne by the petitioner. The petitioner has submitted that considering the remote location of the project and its proximity to the border CISF is mandated to provide security and the cost incurred for providing infrastructural facilities may be allowed as additional capital expenditure for 2011-12. In view of the submissions the expenditure of ₹101.00 lakh in 2011-12 is allowed. For the period 2012-13, the petitioner has claimed an amount of ₹12011.00 lakh towards discharge of liabilities on projected basis in respect of the balance work within

original scope of work to be completed within the cut-off date of 31.3.2015. This claim has been considered and allowed for the purpose of tariff. The petitioner is however directed to submit the asset-wise, party-wise and year-wise details of discharge of liabilities at the time of revision of tariff based on truing-up exercise in terms of Regulation 6(1) of the 2009 Tariff Regulations"

22. The year-wise actual additional capital expenditure claimed by the petitioner for the period from COD of Unit-II (29.12.2011) till 31.3.2014 vide affidavit dated 19.7.2016 is as under:

(₹in lakh)

	2011-12	**2012-13**	**2013-14**
Direct Asset Addition	2010.53	0.00	324.84
Common Asset Addition	0.00	0.00	0.00
Total Additional capital expenditure	**2010.53**	**0.00**	**324.84**

23. The petitioner was directed to submit additional information vide letter dated 15.12.2016 and the petitioner vide affidavit dated 7.1.2017 has filed the relevant information. Thereafter, the petitioner vide ROP of the hearing dated 14.2.2017 was directed to submit detailed and clear justification for capitalization of expenditure for each of the assets along with the relevant clauses under Regulation 9 of the 2009 Tariff Regulations. In response, the petitioner in Form-9 of the affidavit dated 24.2.2017 has furnished the actual additional capital expenditure incurred for the period from COD of Unit-II i.e 29.12.2011 to 31.3.2014 as under:

Sl. No.	**Head of Work/Equipment**	**Regulation**	**2011-12**	**2012-13**	**2013-14**
1	Armoury Guard & Quarter guard		10185757		
2	35 hp submersible pump & motor for Bore well no.5	9(1)(iv)	329097		
3	Barrier wall to prevent entry of Ash in thermal		2995616		
4	Insulation tester & lead set for electricity Division Thermal	9(1)(ii)	227924		
5	Hot air oven/Switchyard/BTPP		58224		
6	100 t capacity portable pit less Elect. Weigh bridge		3850247		
7	Canon make fax machine image class MF 4450 in AO		16700		
8	Car parking shed at AO building				706950
9	2 nos Sump & laying of PVC line near AO building	9 (1)(iv)			2349117
10	Godrej make table T-9 11 nos.				158179
11	Executive table 718 1 no.				31590
12	Steel chair without arm chair-4 (10 no)				20064
13	Book 2 door 1 no.				12073
14	Almirah(steelplain 4shelf) 10 nos.				173804
15	Steel rack 6 band panel 4 nos.				24177
16	Steel rack 3 band panel 1 no.				3022
17	Filing cabinet (4 shelf) 5 no.				83265
18	Computer table c-3d 1 no.				9325
19	Godrej almirah steel plain (4 shelf) 2 nos.				34760

20	RPG fiber body air cooler 6 nos.				29040
21	Atlas cycles 3 nos. for CISF	9(1)(iv)			9300
22	Pump room & providing valves-dust suppression tank				238278
23	Protective wall at 11 kV sub-station dump yard-mine				1362590
24	Providing storage shed & yard for boiler division				534960
25	Provision of aluminum partition at raw water pump(ra8)				209737
26	Construction of waiting shed outside material gate BTPP				495000
27	Aluminum partition &glazed door at UCR & experiment lab				181519
28	Control room,reception for CISF at TPS material gate				1015938
29	Mini excavator loader-JCB 2dx				1479000
30	Server with software oracle 11g with rack in thermal				1166042
31	Antivirus server for DCS network make hp 2 nos.				662447
32	Digital micro ohm meter (200 amps.)				489600
33	Micro ohm meter(10 amps)with backup battery-thermal				428064
34	Invertor 1 kVA in thermal				34000
35	Circuit breaker timing measurement kit				1114350
36	Insulation tester 10 kV				503243
37	Digital earth resistance tester				113610
38	Portable type power quality analyzer				347812
39	CTPT test set with accessories				912900
40	Secondary injection test set 100 amps				810900
41	Testing kit to measure moister of transformer oil				798840
42	Transformer winding resistance ohm. metre				713553
43	Barrel unloader				118046
44	Digital insulation tester 5 kVA				380970
45	Portable energy meter test system				1320200
46	Bearing analyzer& vibration measuring instrument				406856
47	Screw element of GA 160 w 5/7.5bar air compressor				926000
48	Screw element of 160w 5/7.5 atlas co Air compressor				926000
49	12kV automatic capacitance & tan delta test kit				2105106
50	Vacuum interrupter test kit				488580
51	Circuit breaker time interval metre				168408
52	Erection & Commissioning of 245 kV CVT & CT-energy metre system	9(1)(iv)			10247041
53	2 ton split ac(2 disp,1audit,2 off.club, 1dgm/ta)6				276000
54	50 ton 3 jaw hydraulic puller				395907
55	Storing Almirah 4 nos				49875
56	Working table 2 nos.				37000
57	Working chair 3 nos				20400
58	Record file rack 6 nos				58200
59	Wooden working platform 1 no.				186500

60	Sitting wooden bench 13 nos.				189800
61	Conference table in ph room at thermal				58105
62	Compactor 4 nos.for storing records in thermal off				816832
63	ECG machine 108 T digi-make BPL 1 no. in dispensary				19898
64	Prov for raw water supply(PVC pipe)to horticulture opp silo				911343
65	4 wheeler battery operated platform trolley-2000kg				404892
66	Bajaj room heater for AC/BP2 nos				5395
	Total claim		**17663565**		**37774403**
	Total claim (₹in lakh)		**176.64**		**377.74**

24. The COD of the generating station is 20.1.2012 and hence the cut-off date of the generating station is 31.3.2015.The total additional capital expenditure of ₹554.38 lakh (176.64 + 377.74) claimed for the period 2011-14 is within the cut-off date of the generating station and hence fall within the scope of Regulation 9(1) of the 2009 Tariff Regulations. As stated, the Commission in order dated 10.7.2015 in Petition No.197/GT/2013 had allowed the projected additional capitalization of ₹101.00 lakh in 2011-12 and ₹12011.00 lakh in 2012-13 under Regulation 9(1)(i) of 2009 Tariff Regulations. It is however noticed that the petitioner has only capitalized an expenditure of ₹176.64 lakh in 2011-12 and ₹377.74 lakh in 2013-14. Accordingly, the claim of the petitioner is examined on prudence check as stated here under.

Regulation 9 (1) (ii)

25. The petitioner has claimed total additional capital expenditure of ₹29.96 lakh in 2011-12 for the work of barrier wall to prevent entry of ash in thermal power station under Regulation 9(1)(ii) i.e Works deferred for execution. In justification of the same the petitioner has submitted that the fly ash generated from the plant is handled at silo and from there they are disposed through various sources thro different agencies. It has also submitted that while handling, the ash tends to ingress into the plant due to spillage and windages. It has also submitted that the ash entry into the plant pose occupational hazard and to keep the cleanliness of the plant, high rise wall is built. Considering the fact that the expenditure incurred is within the original scope of work and is within the cut-off date of the generating station, the claim of the petitioner is allowed.

Regulation 9(1)(iv)

26. The petitioner has claimed total additional capital expenditure of ₹227.91lakh under this head in respect of the following items/assets.

		Amount in (₹)
Armory guard & Quarter guard	2011-12	101.86
2 nos, Sump & laying of PVC line near AO building	2013-14	23.49
Atlas cycles 3 nos. for CISF		0.93
Erection &Commissiong of 245 kV CVT & CT energy meter system		102.47
Total		**227.91**

27. We have examined the matter. The Commission vide order dated 10.7.2015 in Petition No.197/GT/2013 had allowed additional capital expenditure of ₹101.00 lakh in 2011-12 towards expenditure on certain infrastructure facilities such as residential accommodation, vehicles etc., to be provided to CISF deployed at the generating station. The petitioner has claimed additional capital expenditure ₹101.86 lakh in 2011-12 towards Armoury guard and quarter guard and `0.93 lakh towards Atlas cycle (3 no) and has submitted that the Plant is remotely located and topographically a very critical zone with respect to security. It has also submitted that in order to ensure proper vigil, full-fledged CISF personnel are to be employed with all infrastructure facilities and without any compromise. Accordingly, it has submitted that armoury guard and quarters guard are resorted to by CISF and the services of CISF are absolutely essential for the plant including the patrolling of Water Carrier System, which carries water from IGNP canal (which is about 65 km from the plant). In consideration of the submissions of the petitioner and keeping in view the safety and security of the plant, we allow the above claims of the petitioner under Regulation 9(1) (ii) of the 2009 Tariff Regulations.

28. The petitioner has claimed additional capital expenditure of ₹23.49 lakh in 2013-14 for the work of Sump along with PVC line. In justification of the same, the petitioner has submitted that the plant is located in a typically hot and dry region. It has also submitted that afforestation is to be developed as part of commitment made to Ministry of Environment & Forests, GOI and hence, for providing uninterrupted water supply, Sump with Pipe lines was provided. As regards the claim for ₹102.47 lakh for Erection & commissioning of 245 kV CVT & CT energy metre system in 2013-14, the petitioner has submitted that in order to comply with the requirements of Rajasthan Rajya

Vidyut Prasaran Nigam Ltd (RRVPNL), the CTs and CVTs were purchased and commissioned as the plant is new and all the power generated is supplied to the State of Rajasthan only. It has further stated that the State Electricity Board - RRVPNL has insisted for dedicated CT & CVT for the Energy meters in all four feeders connected to the State Grid for billing purposes. Considering the submissions of the petitioner and since the expenditure incurred within the cut-off date are based on the requirements of MoE&F and RRVPNL, we allow the capitalization of expenditure under Regulation 9 (1) (v) of the 2009 Tariff Regulations.

Other claims

29. The petitioner claimed total actual additional capital expenditure of ₹44.82 lakh in 2011-12 towards Submersible pump & motor for bore well, Insulation tester & lead set for electrical division, hot air oven/ switchyard, 100 T capacity portable pitless electrical weighbridges and canon make fax machine. It has also claimed total actual additional capital expenditure of ₹251.69 lakh in 2013-14 towards Car parking shed at AO building, Table, chair, door, almirah, rack, filing cabinet, computer table, air cooler, pump room & providing valves dust suppression tank, protective wall at 11 KV substation, dump yard-Mine, storage shed, shed & yard, aluminum partition, mini excavator loader, digital micro ohm meter, inverter, tester, portable type quality analyser, barrel unloader, bearing analyzer & vibration measuring instrument, 50 Ton 3 jaw hydraulic puller, etc. Considering the fact that claim of the petitioner in respect of these assets are in the nature of tools and tackles required for normal operation of the plant upto useful life and since these assets are not allowed after cut-off date the same is allowed to be capitalized under Regulation 9 (1) (ii) of the 2009 Tariff Regulations.

Reconciliation of Actual additional capital expenditure

30. The Commission vide ROP of the hearing dated 14.2.2017 directed the petitioner to submit the reconciliation of the actual additional capital expenditure for the period 2011-14 with books of account and accordingly, the petitioner vide affidavit dated 24.2.2017 has submitted the following:

(₹in lakh)

Sl. No.		2011-12	2012-13	2013-14
1	Gross Capital addition as per balance sheet	2010.53	0.00	324.84
	Less: Assets commissioned before COD	(-)1873.15	0.00	0.00

	Net Capital additions	137.38	0.00	324.84
2	Net Capital additions as per books of account	137.38	0.00	324.84
	Add : Value increase for an asset	0.76	0.00	0.00
	Add: Modification of value for assets (total)	0.00	0.00	0.45
	Add: New asset additions	38.50	0.00	0.00
	Add: Asset purchased and included in truing-up	0.00	0.00	52.45
	Additional Capitalization claimed	**176.64**	**0.00**	**377.74**

31. It is observed from the reconciliation statement furnished by the petitioner that in 2011-12 the gross capital addition is ₹2010.53 lakh and an amount of ₹1873.15 lakh has been reduced for assets commissioned prior to COD. Accordingly, the net capital addition is ₹137.38 lakh. Further, the total additional capital expenditure of ₹176.636 lakh claimed by the petitioner in 2011-12 is inclusive of an amount of ₹39.26 lakh (0.758 lakh for increase in value of an asset and ₹38.50 lakh for addition of new asset) which has not been accounted for in the balance sheet. Hence, out of claim of ₹176.64 lakh as total additional capital expenditure in 2011-12 as per balance sheet, an amount of ₹137.38 lakh has only been allowed. Similarly, for the year 2013-14, the gross capital addition as per balance sheet is ₹324.84 lakh and the petitioner has claimed additional capital expenditure of ₹377.74 lakh in 2013-14. This is due to the fact that the petitioner has included an amount of ₹0.451 lakh for modification of value for assets and ₹52.45 lakh for different assets purchased during the year 2013-14 which has not been accounted for in the balance sheet. Hence, an amount of ₹324.84 lakh as per balance sheet has been allowed as total additional capital expenditure in 2013-14. These amounts have been allowed for the purpose of revision of tariff based on truing-up exercise..

Un-discharged liabilities

32. The Commission vide order dated 10.7.2015 in Petition No.197/GT/2013 had allowed an amount of ₹12011.00 lakh towards discharge of liabilities on projected basis as on 20.1.2012 in respect of the balance work within the original scope of work to be completed within the cut-off date of 31.3.2015. The Commission had also directed the petitioner to submit the asset wise, party-wise and year-wise details of discharge of liabilities at the time of revision of tariff. Accordingly, the petitioner in this petition has submitted such details of amount of liabilities discharged as under:

(₹ in lakh)

2012-13	2013-14	2014-15
1500.80	6465.63	4994.02

The amount of liabilities discharged for the period 2012-14 has only been considered in this order. The amount indicated for the year 2014-15 shall however be considered while determination of tariff of the generating station for the period 2014-19.

33. Based on the above discussions, the additional capital expenditure allowed for the generating station for the period 2011-14 is summarized as under:

(₹in lakh)

	2011-12	2012-13	2013-14
Assets commissioned prior to COD	1873.15	-	-
Additional capital expenditure allowed	137.38	-	324.84
Discharge of liabilities	-	1500.80	6465.63
Total	**2010.53**	**1500.80**	**6790.47**

Capital Cost

34. Accordingly, the capital cost allowed for the generating station the period 2011-14 is as under:

(₹ in lakh)

	2011-12		2012-13	2013-14
	29.12.2011 to 19.1.2012	20.1.2012 to 31.3.2012		
Opening Capital Cost	83650.12	158779.23	160789.76	162290.56
Admitted Additional Capital expenditure	0.00	2010.53	1500.80	6790.47
Capital Cost as on 31st March of the year	**83650.12**	**160789.76**	**162290.56**	**169081.03**

Debt Equity Ratio

35. The petitioner has considered Gross Fixed Assets for this generating station unlike other generating stations of the petitioner wherein Net Fixed Assets approach is considered in terms of Regulation 38(2) of the 2009 Tariff Regulations. Accordingly, Gross Fixed Assets has been considered and the debt-equity ratio of 70: 30 has been considered for the purpose of tariff

Return on Equity

36. The petitioner has considered rate of Return on equity as under:

	2011-12	2012-13	2013-14
Base Rate for RoE	15.500%	15.500%	15.500%
Tax Rate	32.445%	32.445%	33.990%
Rate of ROE (pre-tax)	22.944%	22.944%	23.481%

37. The petitioner has claimed corporate tax for grossing up the Return on Equity. It is observed that the Commission in order dated 5.8.2015 in Petition No.521/MP/2014 (NLC v TANGEDCO & ors) has observed as follows:

"12 (b)…………..NLC is entitled to grossing up the RoE at 20.008% during the financial year 2012-13 at the rate at which it is paying to the Income tax Authorities. NLC cannot be allowed to gross up RoE at Corporate tax rate of 32.445% which NLC is not paying to the Income tax authorities."

38. Based on the above rates, Return on equity has been computed as under:

(₹in lakh)

	2011-12		**2012-13**	**2013-14**
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**		
Opening Equity	25095.04	47633.77	48236.93	48687.17
Addition due to Additional Capital expenditure	0.00	603.16	450.24	2037.14
Closing Equity	25095.04	48236.93	48687.17	50724.31
Average Equity	25095.04	47935.35	48462.05	49705.74
Return on Equity	346.10	2163.60	9390.49	11404.48

Interest on loan

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

i) The opening gross normative loan as on COD of each unit has been arrived at in accordance with Regulation 16 of the 2009 Tariff Regulations.

ii) The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project.

iii) The repayment for the year of the tariff period 2009-14 has been considered equal to the depreciation allowed for that year.

iv) Interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest.

40. Interest on Loan has been calculated as under:

(₹in lakh)

	2011-12		**2012-13**	**2013-14**
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**		
Gross Notional Loan	58555.08	111145.46	112552.83	113603.39
Cumulative Repayment of Loan	0.00	410.95	2979.56	15009.40
Net Opening Loan	58555.08	110734.51	109573.27	98593.99
Addition due to Additional Capitalisation	0.00	1407.37	1050.56	4753.33
Repayment of Loan during the period	410.95	2568.61	12029.84	8244.07
Net Closing Loan	58144.14	109573.27	98593.99	95103.25
Average Loan	58349.61	110153.89	104083.63	96848.62
Weighted Average Rate of Interest on Loan	9.71%	9.71%	9.71%	9.70%
Interest on Loan	**340.52**	**2103.85**	**10103.68**	**9397.86**

Depreciation

41. The weighted average rate of depreciation calculated in terms of Regulation 17 of the 2009 Tariff Regulations has been considered. Necessary calculations in support of depreciation are as shown below:

(₹in lakh)

	2011-12		2012-13	2013-14
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**		
Opening Gross Block	83650.12	158779.23	160789.76	162290.56
Addition during 2009-14 due to Additional Capitalization	0.00	2010.53	1500.80	6790.47
Closing Gross Block	83650.12	160789.76	162290.56	169081.02
Average Gross Block	83650.12	159784.49	161540.16	165685.79
Rate of Depreciation	8.181%	8.180%	7.455%	4.981%
Depreciable Value	75207.71	143652.14	145232.24	148963.31
Remaining Depreciable value	75207.71	143241.19	142252.68	133953.91
Depreciation	**410.95**	**2568.61**	**12029.84**	**8244.07**

O&M Expenses

42. O&M expenses as allowed in order dated 10.7.2015 has been allowed as under:

(₹ in lakh)

	2011-12		2012-13	2013-14
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**		
O&M expenses (annualised)	3352.50	6705.0	7090.00	7495.00
O&M expenses (pro rata)	201.52	1319.02	7090.00	7495.00

Interest on Working Capital

43. 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 two 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.*

44. 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.

45. Working capital has been calculated considering the following elements:

Fuel component in working capital

46. The Commission in its order dated 10.7.2015 in Petition No.197/GT/2013 had allowed the cost for fuel component in working capital as under:

(₹in lakh)

	2011-12		2012-13	2013-14
	29.12.2011 to 19.1.2012	20.1.2012 to 31.3.2012		
Cost of Lignite for 1½ months (annualised)	638.76	1277.52	1274.03	1274.03
Cost of Lignite for 1½ months (pro rata)	38.40	251.32	1274.03	1274.03
Cost of Lime Stone for 1½ months (annualised)	63.35	126.70	126.36	126.36
Cost of Lime Stone for 1½ months (pro rata)	3.81	24.93	126.36	126.36
Cost of Secondary Fuel oil for 2 months (annualised)	101.03	202.07	201.52	201.52
Cost of Secondary Fuel oil for 2 months (pro rata)	6.07	39.75	201.52	201.52

47. The petitioner in the true- up petition has claimed the cost for fuel component in working capital as under:

	2011-12		2012-13	2013-14
	29.12.2011 to 19.1.2012	20.1.2012 to 31.3.2012		
Lignite Stock + Generation cost	685.05	1370.11	1370.11	1370.11
Cost of Limestone towards generation	62.31	124.63	124.63	124.63
Cost of secondary fuel oil	101.03	202.07	201.52	201.52

48. It is noticed that there is revision in the claim of the petitioner in the lignite cost due to consideration of revised lignite transfer price of `701/MT for the year 2011-12. This revised lignite transfer price has been claimed by the petitioner vide affidavit dated 25.9.2015 in Petition No.227/MP/2015 (pertaining to truing up of lignite transfer price for 2009-14). The Commission vide order dated 14.3.2017 in Petition No. 227/MP/2015 has allowed the revised lignite transfer price of Rs 673/MT for the year 2011-12, which is exclusive of clean energy cess w.e.f 1.7.2010 and excise duty on lignite and other taxes and duties include revision of rates of royalty per tonne. The lignite transfer price of `673/MT as allowed by the Commission in order dated 14.3.2017 in Petition No.227/MP/2015 has been considered for the year 2011-12 for computation of fuel component in

working capital. The petitioner has claimed the cost of limestone for 45 days. However as per the 2009 Tariff Regulations, the cost of limestone for 1½ months is only applicable and the Commission in the order dated 10.7.2015 had allowed the same accordingly. There will be no change in the limestone and oil cost. Based on the norms and lignite transfer price as allowed by the Commission vide order dated 14.3.2017 in Petition No. 227/MP/2015, the lignite cost has been revised and the fuel components as allowed in Working Capital as under:

(₹in lakh)

	2011-12		**2012-13**	**2013-14**
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**		
Cost of Lignite for 1½ months (annualised)	617.65	1235.30	1231.93	1231.93
Cost of Lignite for 1½ months (pro rata)	37.13	243.01	1231.93	1231.93
Cost of Lime Stone for 1½ months (annualised)	63.35	126.70	126.36	126.36
Cost of Lime Stone for 1½ months (pro rata)	3.81	24.93	126.36	126.36
Cost of Secondary Fuel oil for 2 months (annualised)	101.03	202.07	201.52	201.52
Cost of Secondary Fuel oil for 2 months (pro rata)	6.07	39.75	201.52	201.52

O&M expenses for 1 month

49. O&M expenses for 1 month as considered in order dated 10.7.2015 is allowed as under:

(₹ in lakh)

2011-12		**2012-13**	**2013-14**
29.12.2011 to 19.1.2012	20.1.2012 to 31.3.2012		
16.79	109.92	590.83	624.58

Maintenance Spares

50. In terms of Regulation 18(1)(a)(iii) of the 2009 Tariff Regulations, maintenance spares for the generating station has been worked out @ 20% of the operation and maintenance expenses specified in Regulation 19 and allowed as under:

(₹in lakh)

2011-12		**2012-13**	**2013-14**
29.12.2011 to 19.1.2012	20.1.2012 to 31.3.2012		
40.30	263.80	1418.00	1499.00

Receivables

51. In terms of Regulation 18(1)(a)(iv) of the 2009 Tariff Regulations, receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor, has been computed as under:

(₹in lakh)

	2011-12		2012-13	2013-14
	29.12.2011 to 19.1.2012	20.1.2012 to 31.3.2012		
Fixed Charges	230.20	1447.62	6877.22	6527.18
Energy Charges	54.58	357.25	1811.05	1811.05

Rate of interest on working capital

52. Sub- Clause (3) of Regulation 18 of the 2009 Tariff Regulations provides that the Rate of interest on working capitals hall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2009 or 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. Accordingly, SBI PLR of 11.75% as on 1.4.2012 claimed by the petitioner has been considered for tariff.

53. Based on the above, Interest on working capital allowed for the period 2011-14 is as under:

(₹in lakh)

	2011-12		**2012-13**	**2013-14**
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**		
O&M expenses (1 month)	16.79	109.92	590.83	624.58
Receivables (Fixed Charges)	230.20	1447.62	6877.22	6527.18
Receivables (Energy Charges)	54.58	357.25	1811.05	1811.05
Maintenance Spare	40.30	263.80	1418.00	1499.00
Secondary fuel oil cost	6.07	39.75	201.52	201.52
Fuel Cost	40.93	267.94	1358.29	1358.29
Total Working Capital	**388.89**	**2486.28**	**12256.90**	**12021.61**
Interest Rate	11.75%	11.75%	11.75%	11.75%
Interest on Working Capital	**45.69**	**292.14**	**1440.19**	**1412.54**

Fixed Charges

54. Accordingly, the fixed charges allowed for the period from 2011-14 are summarized as under:

(₹in lakh)

	2011-12		**2012-13**	**2013-14**
	29.12.2011 to 19.1.2012	**20.1.2012 to 31.3.2012**		
Return on Equity	346.10	2163.60	9390.49	11404.48
Interest on Loan	340.52	2103.85	10103.68	9397.86
Depreciation	410.95	2568.61	12029.84	8244.07
Interest on Working Capital	45.69	292.14	1440.19	1412.54
O&M Expenses	201.52	1319.02	7090.00	7495.00
Secondary fuel oil cost	36.44	238.51	1209.11	1209.11
Fixed Charges	**1381.21**	**8685.72**	**41263.30**	**39163.06**

55. The difference between the fixed charges determined by order dated 10.7.2015 and those determined by this order shall be adjusted in terms of the proviso to Regulation 6 (6) of the 2009 Tariff Regulations.

56. Petition No. 130/GT/2016 is disposed of in terms of the above.

Sd/-	*Sd/-*	*Sd/-*	*Sd/-*
(Dr. M.K.Iyer)	**(A. S. Bakshi)**	**(A. K. Singhal)**	**(Gireesh B. Pradhan)**
Member	**Member**	**Member**	**Chairperson**