

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 27/RP/2017**

**in**

**Petition No.255/GT/2014**

**Coram:**

**Shri P.K.Pujari, Chairperson  
Shri A.K. Singhal, Member  
Shri A.S. Bakshi, Member  
Dr. M.K. Iyer, Member**

**Date of Order: 23<sup>rd</sup> July, 2018**

**In the matter of**

Review of Commission's order dated 3.5.2017 in Petition No. 255/GT/2014 regarding approval of tariff of CFBC Technology based Barsingsar Thermal Power Plant (2 x 125 MW) of NLC Ltd for the period 2014-19

**And**

**In the matter of**

NLC India Limited,  
Commercial Department, Corporate office,  
Neyveli- 607801

**...Petitioner**

**Vs**

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

2. Jaipur Vidyut Vitaran Nigam Ltd,  
Vidyut Bhawan, 1st floor, Janpath  
Jaipur- 302005

3. Ajmer Vidyut Vitaran Nigam Ltd,  
Old power House, Hathi Bhata,  
Jaipur Road, Ajmer- 305001

4. Rajasthan Urja Vikas Nigam Ltd,  
Shed no. 5/5, Vidyut Bhawan,  
Janpath Jaipur- 302005

**...Respondents**



## Parties present:

Shri M.G.Ramachandran, Advocate, NLC  
Shri Pulkit Aggarwal, Advocate, NLC  
Shri S.K.Agarwal, Advocate, Rajasthan discoms

## ORDER

This review petition has been filed by the Petitioner, NLC India Limited seeking review of order dated 3.5.2017 in Petition No. 255/GT/2014, whereby the Commission had determined the tariff of Barsingsar Thermal Power Station (2 x 125 MW) (hereinafter referred to as 'the generating station') for the period 2014-19 in terms of the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter 'the 2014 Regulations'). The annual fixed charges determined by the order dated 3.5.2017 is as under:

	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	9956.01	10013.25	10013.25	10013.25	10013.25
Interest on Loan	9401.76	8515.28	7636.15	6760.03	5886.68
Depreciation	8426.81	8434.40	8434.40	8434.40	8434.40
Interest on Working Capital	1647.52	1680.08	1689.05	1701.05	1715.13
O&M Expenses	7433.90	7781.40	8266.40	8783.90	9333.90
<b>Total</b>	<b>36866.00</b>	<b>36424.42</b>	<b>36039.25</b>	<b>35692.63</b>	<b>35383.36</b>

2. Aggrieved by the said order dated 3.5.2017, the Petitioner has pointed out that there are certain error apparent on the face of the order and has sought review on the following issues:

- a) *To take on record the review petition for fixation of tariff of NLC Barsingsar TPS for the period from 1.4.2014 to 31.3.2019;*
- b) *To approve Station Heat Rate at 2547.80 kcal/kwh as approved in Petition No. 197/GT/2013;*
- c) *To approve the Target Availability of 75% upto 31.3.2015 and 80% from 1.4.2015;*
- d) *To approve Interest on working capital by considering the landed price of primary fuel (inclusive of all statutory duties) instead of base rate; and*



*e) To approve revised annual fixed charges on account of revision of Station Heat Rate, Target availability and Interest on working capital.*

3. The Commission by interim order dated 1.8.2017 admitted the review petition on the above issues and issued notice to the respondents. By letter dated 1.8.2017 Petitioner was directed to furnish the following information:

“Value of total lignite transfer price for the year 2013-14 including the base transfer price of ₹755/ tonne (as allowed in order dated 14.3.2017 in Petition No. 227/MP/2015), clean energy cess, excise duty and other taxes and duties corresponding to the base transfer price of lignite.”

4. In compliance with the above direction, the Petitioner vide affidavit dated 21.8.2017 has filed the requisite information. The matter was heard on 5.6.2018 and the Commission after hearing the parties, reserved its order in the petition. The respondents have not filed any reply in the matter.

5. Based on the submissions of the Petitioner and the documents available on record, we proceed to examine the issues raised by the Petitioner as stated in the subsequent paragraphs.

### **Consideration of Target Availability**

6. As regards Target Availability, the Commission in para 40 of the order dated 3.5.2017 had decided the following:

*“40. The COD of the generating station is 20.1.2012. Accordingly, the Target Availability norm considered is 75% for the period from 1.4.2014 to 19.1.2015 and 80% for the period from 20.1.2015 to 31.3.2019.”*

7. The Petitioner has submitted that the COD of the generating station is 20.1.2012. Accordingly, in terms of Regulation 36(A)(e) of the 2014 Tariff Regulations, the first three years from the COD is 31.3.2015. Based on this, the NAPAF of 75% as per clause 1 of the said regulation is to be considered for the first three years i.e. for the period upto 31.3.2015 and as per clause 2 of the said regulation, NAPAF of 80% is



to be considered for the next year i.e. 2015-16 (after completion of three years from COD) instead of 20.1.2015. Accordingly, it has submitted that the error in the order may be corrected.

### **Analysis and decision**

8. The matter has been considered. Regulation 36(A)(e) of the 2014 Tariff Regulations provides for the following:

*“36(A) Normative Annual Plant Availability Factor (NAPAF)*

*(e) Lignite fired Generating Stations using Circulatory Fluidized Bed Combustion (CFBC) Technology and Generating stations based on coal rejects*

- 1. First Three years from COD- 75%*
- 2. For next year after completion of three years of COD-80%”*

9. The above regulation stipulates that Target Availability of 75% is to be considered for first three years from COD for lignite fired generating stations using CFBC technology and subsequently 80% for next year after the completion of three years of COD. The COD of the generating station is 20.1.2012. Therefore, the Commission in terms of the above regulations had considered the Target Availability of 75% for the first three years which completed on 19.1.2015 and 80% for the year after completion of three years of COD. i.e from 20.1.2015 to 31.3.2019. Similar methodology was adopted by the Commission in its order dated 24.7.2017 in Petition No. 146/GT/2015, while working out the Target Availability of CBFC based NLC TPS-II Expansion units (Units I & II) of the Petitioner. Since the Commission by a conscious decision had allowed the Target Availability of 75% for the period from 1.4.2014 to 19.1.2015 and 80% for the period from 20.1.2015 to 31.3.2019 in order dated 3.5.2017, there is no error apparent on the face of the order. Accordingly, the contention of the Petitioner on this ground is rejected and review on this ground fails.



## Station Heat Rate

10. As regards Station Heat Rate, the Commission in order dated 3.5.2017 has considered the SHR of 2547.80 kcal/kWh with the following observations:

*“44. The Petitioner has furnished the design turbine cycle heat rate and boiler efficiency as 1994.60 kcal/kWh and 81.81% respectively. Accordingly the unit design heat rate is  $1994.60/0.8181=2438.09$  kcal/kWh. As per the above regulations, in respect of the lignite fired Thermal generating station achieving COD on or after 1.4.2009 till 31.3.2014, the Gross Station Heat Rate is  $1.045 \times$  Design Heat Rate (kcal/kWh) (i.e.  $1.045 \times 2438.09 = 2547.80$ ). It also provides that the heat rate norms computed as per above shall be limited to the heat rate norms approved during the period 2009-14. The heat rate norms approved by the Commission vide order dated 10.7.2015 in Petition No.197/GT/2013 for the period 2009-14 is 2596.56 kcal/kWh. The Heat rate norm of 2547.80 kcal/kWh computed for the period 2014-19 is lower than the norm of 2596.56 kcal/kWh, as allowed for the generating station for the period 2009-14. Accordingly, the heat rate norm of 2547.80 kcal/kWh considered by the Petitioner is as per norms and hence allowed for the period 2014-19.”*

11. The Petitioner has submitted that the Heat Rate norm of 2547.80 kcal/kwh claimed in the petition was an error as the heat rate determined by Commission's order dated 10.7.2015 in Petition No. 197/GT/2013 (related to tariff period 2009-14 for this generating station) was not incorporated by the Petitioner, as the Commission's order was passed pursuant to the filing of tariff petition for the period 2014-19. It has stated that since the respondents were fully aware of the order dated 10.7.2015 and as the petition filed for 2014-19 should be read along with the order related to the previous year, the heat rate as decided by the Commission in order dated 10.7.2015 may be allowed in the order dated 3.5.2017 pertaining to the period 2014-19. Based on this, the Petitioner has prayed that the SHR of this generating station may be approved as 2596.56 kcal/kwh for the period 2014-19 as approved by Commission's order dated 10.7.2015 for the period 2009-14.

## Analysis and decision

12. We have considered the submissions of the Petitioner and the documents available on record. Regulation 36(C)(c)(i) of the 2014 Tariff Regulations provides as under:



*“(C) Gross Station Heat Rate*

*(c) Thermal Generating Station having COD on or after 1.4.2009 till 31.03.2014*

*(i) Coal-based and lignite-fired Thermal Generating Stations= 1.045 X Design Heat Rate (kCal/kWh).*

*Where the Design Heat Rate of a generating unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/ back pressure.*

*Provided that the heat rate norms computed as per above shall be limited to the heat rate norms approved during FY 2009-10 to FY 2013-14.”*

13. The Petitioner has submitted that in terms of the proviso to the said regulations the heat rate norm computed for the period 2014-19 shall be limited to heat rate norm approved during the period 2009-14. It is noticed that the Commission while determining tariff of the generating station for the period 2009-14 in Petition No. 197/GT/2013 had allowed the SHR of 2596.56 kcal/kwh by order dated 10.7.2015. However, in order dated 3.5.2017, the design heat rate of 2547.80 kcal/kWh was worked out and allowed by the Commission for the period 2014-19 as per the proviso to the above regulations. It is pertinent to mention that as per the proviso, the heat rate norm worked out for 2014-19 shall be limited to heat rate norms approved during the period 2009-14, which means that if the heat rate norms worked out for the period 2014-19 is higher than the heat rate norm for the period 2009-14, the heat rate norm allowed for the period 2009-14 shall be adopted. Since the heat rate norm of 2547.80 kcal/kWh has been worked out and allowed for 2014-19 and is less than the allowed heat rate of 2596.56 kcal/kwh for the period 2014-19, we find no error apparent on the face of the order. Accordingly, the claim of the Petitioner for heat rate of 2596.56 kcal/kwh for the period 2014-19 is rejected and review on this ground fails.

### **Interest on Working Capital**

14. The Commission in order dated 3.5.2017 had allowed interest on working capital as under:



“57. The Commission vide order dated 14.3.2017 in Petition No. 227/MP/2015 has revised and allowed the lignite transfer price for the period 2011-12 to 2013-14 after truing-up which is exclusive of clean energy cess w.e.f 1.7.2010 and excise duty on lignite and other taxes and duties including revision of rates of royalty per tonne. The lignite transfer price of `755/MT as allowed by the Commission for the year 2013-14 after truing-up of the lignite price in order dated 14.3.2017 in Petition no. 227/MP/2015 has been considered for computation of fuel component in working capital.

58. The price & GCV of lignite and secondary oil as considered by the Petitioner and as adopted by the Commission are as under:

Description	As adopted by NLC	As adopted by CERC
Price of Lignite (Rs./Tonne)	988.02	755.00
GCV of Lignite (Kcal/kg.)	2663.00	2664.00
Price of Secondary fuel oil (Rs./KL)	67326.5329	67326.53
GCV of Sec. Fuel oil (Kcal./Kg)	10039.00	10040.00
Price of Limestone (Rs./MT)	1099.00	1099.00

59. The difference in the Price of Lignite as adopted by the Petitioner as against those adopted by the Commission is on account of the fact that the Petitioner has adopted the lignite transfer price of `988/tonne based on the weighted average price of January 2014, February 2014 and March, 2014 including the clean energy cess, excise duty & other taxes and whereas the lignite transfer price of `755/tonne (excluding the clean energy cess, excise duty & other taxes) adopted by the Commission is based on the approved lignite transfer price vide order dated 14.3.2017 in Petition No. 227/MP/2015. Though the Petitioner has not furnished any details of the Limestone in Form-15 of the petition. The Petitioner has considered the rate of Limestone as `1099/ton in the petition which is considered for 45 days in terms of the 2014 Tariff Regulations. Accordingly, the cost for fuel component in working capital based on price and GCV of Lignite, Lime Stone & Oil for preceding three months have been worked out in this order. Based on the Availability, weighted average GCV and price of fuels as adopted by the Commission and in line with Regulation 28(1)(a) of the 2014 Tariff Regulations, the cost for fuel components in working capitals and 2 months Energy Charge is as under:

	1.4.2014 to 19.1.2015	20.1.2015 to 31.3.2015	2015-16	2016-17	2017-18	2018-19
Cost of Lignite for 45 days	1173.092	302.184	1553.48	1553.48	1553.48	1553.48
Cost of Limestone for 45 days	100.38	25.86	132.94	132.94	132.94	132.94
Cost of Secondary Fuel oil for 2 months	148.45	38.24	197.13	196.59	196.59	196.59
Energy Charges for 2 months	1870.01	481.71	2483.17	2476.38	2476.38	2476.38

15. The Petitioner has pointed out that in the Interest on working capital for the period 2014-19, the Commission has included only the base transfer price of lignite



for the period January, 2014, February, 2014 and March, 2014 instead of the Landed Price of Primary Fuel (LPPF), which includes all the statutory duties and taxes. According to the Petitioner, the Commission ought to have considered landed price of primary fuel into account while computing interest on working capital, in terms of the 2014 Tariff Regulations. Accordingly, the Petitioner has prayed for review of order dated 3.5.2017.

### **Analysis and decision**

16. Regulation 28 of the 2014 Tariff Regulations provide as under:

**“28. Interest on Working Capital:**

*(1) The working capital shall cover:*

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

- (i) Cost of coal or lignite and limestone towards stock, if applicable, for 15 days for pit-head generating stations and 30 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;*
- (ii) Cost of coal or lignite and limestone for 30 days for generation corresponding to the normative annual plant availability factor;*
- (iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;*
- (iv) Maintenance spares @ 20% of operation and maintenance expenses specified in regulation 29;*
- (v) Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on the normative annual plant availability factor; and*
- (vi) Operation and maintenance expenses for one month.*

*(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this regulation shall be based on the landed cost incurred (taking into account normative transit and handling losses) by the generating company and gross calorific value of the fuel as per actual for the three months preceding the first month for which tariff is to be determined and no fuel price escalation shall be provided during the tariff period.*

17. Regulation 30 (8) Tariff Regulations 2014 provides as follows:

**“(8) The landed cost of fuel for the month shall include price of fuel corresponding to the grade and quality of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail / road or any other means, and, for the purpose of Computation of energy charge.”**





18. It is evident from the above that the Commission by order dated 14.3.2017 in Petition No. 227/MP/2015 had tried up the lignite price for the period 2011-14 in respect of this generating station and had allowed the lignite transfer price of Rs 755/MT which was exclusive of clean energy cess, excise duty on lignite and other taxes & duties but inclusive of royalty per tonne. Since the Petitioner had not furnished any details of the excise duty & other taxes in the original petition, the base transfer price of lignite of Rs 755/MT (which was exclusive of taxes & duties) was adopted by the Commission for computation of the fuel component in working capital in order dated 3.5.2017. In this background, the Commission after admitting the review petition, directed the Petitioner to submit the value of the total lignite transfer price for the year 2013-14 including the clean energy cess, Excise duty and other taxes and duties, corresponding to the base transfer price of Rs 755/MT.

19. In response to the above, the Petitioner vide affidavit dated 21.8.2017 has submitted the lignite transfer price, including clean energy cess, excise duty and other duties and taxes corresponding to the base transfer price of the lignite, as under: Accordingly, the lignite transfer price including clean energy cess, excise duty and other duties and taxes furnished by the Petitioner for the period from January, 2014 to March, 2014 are as follows:

Transfer price of Lignite for 2013-14	Base Price	Clean Energy Cess	Excise Duty	(₹/tonne)
				Total
January, 2014	755.00	50.00	10.05	815.05
February, 2014	755.00	50.00	6.51	811.51
March, 2014	755.00	50.00	13.50	818.50

20. It is noticed that the Petitioner in Petition No. 32/MP/2018 has claimed increase in O & M expenses incurred by NLC Mines and had prayed to allow appropriate adjustment of money due from/payable to beneficiaries of the Petitioner for the period 1.1.2012 to 31.3.2014. The Commission vide its order dated



9.7.2018 had directed the Petitioner to calculate the increase in lignite transfer price due to wage revision of its non-executives and workmen and accordingly recover the amount corresponding to scheduled energy from each generator. The impact of wage revision of the non-executives and workmen of NLC mines allowed as per the order of the Commission would further change the lignite transfer price. In view of this, the Petitioner is granted liberty to approach the Commission with revised lignite transfer price, after including the Clean Energy Cess, Excise duty and the wage revision impact of the non-executives & workmen in the base transfer price of lignite and the same would be considered in accordance with law.

21. Petition No. 27/RP/2017 is disposed of in terms of above.

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

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

**Sd/-**  
**(A.K.Singhal)**  
Member

**Sd/-**  
**(P.K.Pujari)**  
Chairperson

