

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 496/MP/2020

Subject : Petition under Section 79 of the Electricity Act, 2003 read with Regulation 29 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of additional capital expenditure on installation of various Emission Control Systems at Feroze Gandhi Unchahar Thermal Power Station Stage-II (2x210 MW) in compliance of Ministry of Environment, Forest and Climate Change, Government of India Notification dated 7.12.2015.

Petitioner : NTPC Limited (NTPC)

Respondents : Uttar Pradesh Power Corporation Limited (UPPCL) and 10 Ors.

Petition No. 515/MP/2020

Subject : Petition under Section 79 of the Electricity Act, 2003 read with Regulation 29 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of additional capital expenditure on installation of various Emission Control Systems at Solapur Super Thermal Power Station (2x660 MW) in compliance of Ministry of Environment, Forest and Climate Change, Government of India Notification dated 7.12.2015.

Petitioner : NTPC Limited (NTPC)

Respondents : Madhya Pradesh Power Management Co. Ltd. (MPPMCL) and 5 Ors.

Petition No. 516/MP/2020

Subject : Petition under Section 79 of the Electricity Act, 2003 read with Regulation 29 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of additional capital expenditure on installation of various Emission Control Systems at Vindhyachal Super Thermal Power Station Stage-IV (2x500 MW) in compliance of Ministry of Environment, Forest and Climate Change, Government of India Notification dated 7.12.2015.

Petitioner : NTPC Limited (NTPC)



Respondents : Madhya Pradesh Power Management Co. Ltd. (MPPMCL) and 6 Ors.

Petition No. 517/MP/2020

Subject : Petition under Section 79 of the Electricity Act, 2003 read with Regulation 29 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of additional capital expenditure on installation of various Emission Control Systems at Kahalgaon Super Thermal Power Station Stage-II (1500 MW) in compliance of Ministry of Environment, Forest and Climate Change, Government of India Notification dated 7.12.2015.

Petitioner : NTPC Limited (NTPC)

Respondents : GRIDCO Limited (GRIDCO) and 18 Ors.

Petition No. 519/MP/2020

Subject : Petition under Section 79 of the Electricity Act, 2003 read with Regulation 29 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of additional capital expenditure on installation of various Emission Control Systems at Vindhyachal Super Thermal Power Station Stage-II (2x500 MW) in compliance of Ministry of Environment, Forest and Climate Change, Government of India Notification dated 7.12.2015.

Petitioner : NTPC Limited (NTPC)

Respondents : Madhya Pradesh Power Management Co. Ltd. (MPPMCL) and 6 Ors.

Petition No. 520/MP/2020

Subject : Petition under Section 79 of the Electricity Act, 2003 read with Regulation 29 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for approval of additional capital expenditure on installation of various Emission Control Systems at Talcher Super Thermal Power Station Stage-II (4x500 MW) in compliance of Ministry of Environment, Forest and Climate Change, Government of India Notification dated 7.12.2015.



Petitioner : NTPC Limited (NTPC)

Respondents : AP Eastern Power Distribution Co. Limited and 12 Ors.

Date of Hearing : 21.8.2020

Coram : Shri P. K. Pujari, Chairperson
Shri I. S. Jha, Member
Shri Arun Goyal, Member

Parties present : Shri Rohit Chhabra, NTPC
Shri Anand Sagar Pandey, NTPC
Shri Vinay Kumar Garg, NTPC
Shri Evani Prabhakara Rao, NTPC
Shri Parimal Piyush, NTPC
Shri Sukhjinder Singh, NTPC
Shri Surya Prakash Kesarwani, NTPC
Shri B Vinodh Kanna, Advocate, TANGEDCO
Ms. R. Ramalakshmi, TANGEDCO
Dr. R. Alamelu, TANGEDCO
Shri R. K. Mehta, Advocate, GRIDCO
Shri Nitish Kala, Advocate, TPDDL
Shri Kunal Singh, Advocate, TPDDL
Shri Anurag Bansal, TPDDL
Ms. Sefali Sobti, TPDDL
Shri B. K. Saxena, UPPCL

Record of Proceedings

The matters were heard through video conferencing.

2. The representative of the Petitioner submitted that the present Petitions have been filed under Section 79 of the Electricity Act, 2003 and Regulation 29 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (in short '2019 Tariff Regulations'), *inter-alia*, for approval of additional expenditure on installation of various emission control systems at its Thermal Generating Stations in compliance of Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India Notification dated 7.12.2015. He further submitted that in these Petitions, the Petitioner has furnished details of implemented technology/ emission control systems to comply with the revised emission norms in respect of its various generating stations along with the estimated costs for implementation and the supplementary tariff impact on account thereof.

3. Learned counsel for the Respondent, GRIDCO Limited in Petition Nos.517/MP/2020 and 520/MP/2020 objected to the 'maintainability' of the Petitions and submitted as under:

(a) As per the CEA's '*Norms for Installation of FGD for New Environmental Regulations- 7.12.2015*', technology selection has to be on the basis of various factors such as (i) sulphur content in coal (ii) SO₂ removal efficiency



requirement of a plant (iii) availability of reagent, if any (iv) disposal and handling of by-product (v) location/geographical factors of plant (vi) plant life, and (vii) space requirement for FGD facility. However, the Petitioner has not indicated as to how a particular technology has been selected on the basis of the above factors.

(b) The Petitioner has also not provided any cost benefit analysis considering the useful life of its plants.

(c) Any additional/ supplementary tariff ought to be considered only after the notification of first amendment to the 2019 Tariff Regulations relating to the emission control system.

4. The representative of the Respondent, Uttar Pradesh Power Corporation Limited (UPPCL) in Petition Nos.496/MP/2020 and 517/MP/2020 submitted that the Respondent has already filed its reply in these matters. He further submitted as under:

(a) The Petitioner has not shared the critical factors of tendering process and its concluding aspects. The Petitioner has also not shown the basis on which the cost of technology has been ascertained by it.

(b) The Petitioner has sought additional O & M Expenses, GSHR and auxiliary consumption on account of implementation of emission control systems. However, admittedly, the Petitioner has no prior experience of operation of such systems as they have not been installed at any of its generating stations. Accordingly, such proposals ought not to be considered.

(c) Any recommendations of CEA on operation norms for thermal generating station cannot be implemented unless such norms are deliberated upon and approved by the Commission.

(d) Keeping in view the mandate of Section 61 of the Electricity Act, 2003 and the intent of Environment (Protection) Act, 1986, the Commission may develop a 'methodology' which keeps an account of the expenditure involved for installation of emission control systems separate from generation cost and recovery from the beneficiaries/Respondents is only 50% of such expenditure whereas the remaining 50% of such expenditure is borne by the Petitioner for its generating stations.

5. Learned counsel for the Respondent, Tata Power Delhi Distribution Limited in Petition No.496/MP/2020 also submitted that the Petitioner ought to be directed to furnish all the requisite information/details as per the 2019 Tariff Regulations.

6. The representative of the Petitioner submitted that the selection of appropriate technology/system at its various generating stations has been done as per the CEA's guidelines/recommendations and on the basis of various factors indicated therein. CEA has considered various FGD technologies, namely, Dry Sorbent Injection (DSI), Ammonia base FGD and Limestone based FGD and has noted that for the unit size of 500 MW and above, Limestone based FGD is well suited for various reasons. The Petitioner has prudently selected the suitable FGD technology for its generating



stations only after considering the CEA's observations on the above technologies. He further added that, at present, the Petitioner has only provided an indicative supplementary tariff as required under Regulation 29(2) of the 2019 Tariff Regulations and the Petitioner would file separate Petitions for supplementary tariff after implementation of the emission control systems as per Regulation 29(4) the 2019 Tariff Regulations.

7. After hearing the representatives and learned counsel for the parties, the Commission admitted the Petitions and directed to issue notice to the Respondents.

8. The Commission directed the Petitioner to serve copy of the Petitions on the respective Respondents, if not already served. The Respondents were directed to file their reply to the Petitions by 11.9.2020 with copy to the Petitioner, who may file its rejoinder, if any, by 22.9.2020.

9. The Commission observed that as per Regulation 29 of the 2019 Tariff Regulations, the Petitioner is required to consult the beneficiaries for installation of emission control systems before filing of the Petitions. However, the Petitioner has not complied with the above Regulation. Accordingly, the Petitioner was directed to share the complete details of its proposal with the beneficiaries of the generating stations and obtain their views/consent specifically with regard to the period over which the 90% of the capital cost of emission control system shall be recovered by way of depreciation for the projects whose useful life has already expired or is expiring in next few years.

10. The Commission observed that to minimize the impact on tariff, the Petitioner and the beneficiaries should come to an understanding upfront with regard to extension of life beyond the useful life of the generating station. Accordingly, the Commission directed the Petitioner to consult and submit the response of all the beneficiaries on extension of life beyond the useful life of the generating stations on or before 15.9.2020.

11. The Commission further directed the Petitioner to file the following information/ justification in all the Petitions, on affidavit, by 15.9.2020:

(a) Reason for not consulting the beneficiaries for the proposed additional capital expenditure prior to floating/ finalizing the bid for incurring such additional capital expenditure;

(b) Reasons for depreciating 90% of the capital cost of the Emission Control System (FGD/SNCR) over the balance useful life of the generating station or 5 years, whichever is higher;

(c) Whether the generating station has availed the benefit of special allowances under the applicable provisions of Tariff Regulations or has undertaken additional capital expenditures for R&M?

(d) Whether life of the generating station has been extended or is proposed to be extended?

(e) Reasonable estimation of the remaining useful life of the generating station?



- (f) Certificate to the effect that FGD technology adopted would meet the evaluation criteria as indicated by CEA in its advisory dated 7.2.2020 and would also meet the SO₂ emission norms specified by MoEF&CC;
- (g) Detailed note with regard to selection of technology for SO₂ control for the subject power plant based on the evaluation criteria as indicated by CEA in its advisory dated 7.2.2020;
- (h) Detailed note on bidding (ICB or domestic) for award of different packages of FGD system (firm basis or escalation basis), number and names of the bidders which participated in the bid and name of the L-1 bidder/s with awarded cost of each package, if already awarded;
- (i) Resolution of the Board/ decision of the competent authority to go ahead with the bidding and award of the contract(s), if already awarded; and
- (j) Break-up of the capital cost claimed including awarded capital cost of different packages, IEDC, IDC, taxes and duties considered, opportunity cost for shutdown period and any other cost.

12. The Commission further directed the Petitioner to file the following details/ information, on affidavit, by 15.9.2020:

A. Petition No. 496/MP/2020

- (a) OEM guaranteed and PG test performance results of the ESP in terms of the efficiency and outlet particulate matter emission levels in mg/Nm³;
- (b) Detailed note with regard to the bidding process followed for the award of works of ESP retrofitting to meet the emission norm of 100 mg/NM³ including scope of works as per RFP documents, number of bidders, negotiations with the lowest bidder to further reduce the award cost, etc. and any other information deemed relevant by the Petitioner;
- (c) With regard to ESP retrofitting, whether the Petitioner has approached the CEA for expert opinion or guidelines as certain generating stations are already meeting the norms of outlet particulate matter emission levels of 100 mg/Nm³ without any major investment on ESP. Even the Petitioner has not envisaged/claimed the R&M of ESP of stage-I (COD: 1989) of the same generating station in Petition No 267/MP/2020 which is 12 years older than the instant stage-II (COD: 2001);
- (d) Detailed note to justify the expenditure with regard to ESP retrofitting including existing PM emission levels, scope of works envisaged for bringing down the PM emission below the 100 mg/NM³ norm and any other information deemed necessary by the Petitioner to justify the expenditure, etc;
- (e) Reasons and justification for high cost of Rs.87.04 lakh/MW claimed for FGD in comparison to capital cost (base cost) of Rs. 45.00 lakh/MW, prescribed by CEA.

B. Petition No. 515/MP/2020



(a) Basis of technology selection and cost claimed towards 'SCR' and certificate to the effect that the power plant would meet the NOx emission norms stipulated by MoEF&CC after installation of the same, and the status of bidding process with respect to SCR for NOx control; and

(b) Basis of claimed increase in GSHR by 2.24 kCal/kWh (0.1%) for installing the SCR.

C. Petition No. 516/MP/2020

(a) Basis of technology selection and cost claimed towards NOx control and certificate to the effect that the power plant would meet the NOx emission norms stipulated by MoEF&CC after installation of the same, and the status of bidding process with respect to SCR for NOx control; and

(b) Basis of claimed increase in GSHR by 19.32 kcal/kWh and by 12.08 kCal/kWh for installing the combustion modification and SNCR system respectively.

D. Petition No. 517/MP/2020

(a) Basis of cost claimed towards 'SNCR' and combustion modification certificate to the effect that the plant would meet NOx emission norms specified by MoEF&CC after installation of the same, and the status of bidding process with respect to SNCR and combustion modification for NOx control;

(b) Basis for increase in GSHR by 14.83 kCal/kWh and 19.77 kCal/kWh after installation of SNCR and combustion modification measures, respectively along with basis for claiming the increase in APC as 0.2% for installing the SNCR; and

(c) Reasons and justification for high cost of Rs.69.40 lakh/MW claimed for FGD in comparison to capital cost (base cost) of Rs. 40.50 lakh/MW, prescribed by the CEA.

E. Petition No. 519/MP/2020

(a) Reason for increase in claimed capital cost of Wet Limestone FGD for Stage-II units when compared to projected cost for FGDs to be installed in units of Stage- III of similar capacity i.e. 500 MW of Vindhyachal STPS.

F. Petition No. 520/MP/2020

(a) Basis of cost claimed towards SNCR and combustion modification and certificate to the effect that the plant would meet the NOx emission norms stipulated by MoEF&CC after installation of the same, and the status of bidding process with respect to SNCR and combustion modification for NOx control;

(b) Basis for increase in GSHR by 14.83 kcal/kWh and 19.77 kcal/kWh after installation of SNCR and combustion modification measures,



respectively along with basis for claiming the increase in APC as 0.2% for installing the SNCR; and

(c) Reasons and justification for high cost of Rs.57.77 lakh/MW claimed for FGD in comparison to capital cost (base cost) of Rs. 40.50 lakh/MW, prescribed by the CEA.

12. The due date of filing of reply, rejoinder and additional information/justification shall be strictly complied with.

13. The Petitions shall be listed for hearing in due course for which separate notice will be issued.

By order of the Commission

**Sd/-
(T.D. Pant)
Deputy Chief (Law)**

