

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition Nos. 283/GT/2014**

Subject: Approval of tariff of Kahalgaon Super Thermal Power Station, Stage-II (1500 MW) for the period 1.4.2014 to 31.3.2019.

**Petition No. 290/GT/2014**

Subject: Approval of tariff of Singrauli Super Thermal Power Station (2000 MW) for the period from 1.4.2014 to 31.3.2019

**Petition No. 270/GT/2014**

Subject: Approval of tariff of Simhadri Super Thermal Power Station Stage-I (2 x 500 MW) for the period from 1.4.2014 to 31.3.2019.

Petitioner : NTPC limited

Respondents : APEPDCL & Others

Date of hearing : **7.10.2015**

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

Parties present : Shri M.G. Ramachandran, Advocate, NTPC  
Ms. Poorva Saigal, Advocate, NTPC  
Shri Shubham Arya, Advocate, NTPC  
Shri Sitiesh Mukherjee, Advocate, APP  
Shri Deep Rao, Advocate, APP  
Shri Ajay Dua, NTPC  
Shri Abhay Anand, NTPC  
Shri Shankar Saran, NTPC  
Shri A.K. Bishoi, NTPC  
Shri A. Basu Roy, NTPC  
Shri S.R. Sarangi, NTPC  
Shri A. K. Haldar, NTPC  
Shri Bhupinder Kumar, NTPC  
Shri K.K. Shah, NTPC  
Shri Vivek Kumar, NTPC  
Shri T. Vinod, NTPC  
Shri B.S. Rajput, NTPC  
Shri Rohit Chhabra, NTPC  
Shri Navneet Goel, NTPC  
Shri Nishant Goel, NTPC  
Shri Somes Bandopadhyay, NTPC  
Shri R.B. Sharma, Advocate, BRPL  
Ms. Swapna Seshadri, Advocate, GUVNL  
Shri S. Vallinayagam, Advocate, GRIDCO  
Ms. Megha Bajpeyi, BRPL  
Shri Rajesh Tiwari, MPPGCL



Shri J.A. Ansari, MPPGCL  
Shri Manish Garg, UPPCL  
Shri Nishant Grover, BYPL  
Shri Sameer Singh, BYPL

### **Record of Proceedings**

The matter was taken up for hearing on the issue regarding “the stage at which the GCV of coal should be measured on as received basis” in terms of the observations dated 7.9.2015 of the Hon’ble High Court, Delhi.

2. The learned counsel for NTPC made detailed submissions as under:

(i) In terms of the order of the Hon’ble High Court, the issue regarding the interpretation and application of Regulation 30 (6) on the aspect of “as received” basis is required to be decided by the Commission in this proceedings.

(ii) If the GCV of the coal has to be measured on “as received” basis, it should be considered at a stage after the crusher which is installed along with the Automatic Mechanical Sampler (AMS) or manual sampling after the crusher and not on the basis of the samples taken from stationery railway wagon when the wagon reaches the power plant.

(iii) UPPCL has supported the contention of NTPC and has stated that the sample shall be taken before injection to stockyard. BRPL’s affidavit has only raised issues relating to relationship between the coal company and the generating company, which are not relevant to this proceeding. While GUVNL’s affidavit supports measurement of GCV of coal on “as received” basis, the regulations notified by the GERC specifies the measurement of GCV of coal on “as fired” basis. Except for the generating companies of the two states viz., PSPCL and UPPCL, the gencos of all other states follow the methodology of measurement of GCV of coal on “as fired” basis.

(iv) Referring to page 47 of the affidavit dated 14.9.2015 (Coal flow diagram) it was pointed out that the crusher house is located at the distance of 200 meters and the loss of GCV is after crusher house. There is no manual intervention below the wagon tippler and crusher house. From wagon tippler to crusher house there is no loss to GCV.

(v) Computation of GCV is done on a sample duly crushed and taken out while the coal is in transit and not when the coal is stationery. The samples taken in the said manner is the homogeneous mixture of coal drawn immediately on the unloading of coal from the railway wagon and duly crushed to the required size. If samples are taken from the wagons, then it will not be representative in nature. There is no time lag from the time when the coal is unloaded till it reaches the crusher. Since, the process generally takes a few minutes, it forms an essential part for computation of GCV of coal.



(vi) The 2014 Tariff Regulations specifying measurement of GCV of coal on “*as received*” basis is on the ground that the generator should not be rewarded for its inefficiency in stocking and maintaining the coal in stockyard. There is no reference to anything other than the loss of moisture content, self ignition and efficiency of the generating companies in maintaining the coal after it is received, either in the statement of reasons notified by the Commission or in the CPRI report or in the CEA recommendations.

(vii) The various authorities on coal sampling process was relied upon by NTPC in its affidavit dated 14.9.2015 which do not support sampling the coal when wagons are stationery.

3. The learned counsel for the NTPC referred to the various paragraphs and the documents in the affidavit dated 14.9.2015 and submitted that the process of sampling the coal on “*as received*” basis at the crusher stage in the coal flow diagram for determination of GCV is the appropriate process as compared to measuring the adhoc quantum of coal taken from railway wagons.

4. On a specific query by the Commission as to whether there would be difference in the GCV of coal if the sample is taken from wagon and after the secondary crusher, the learned counsel for NTPC replied in the affirmative. It was also clarified by the learned counsel for the petitioner that NTPC has only one crusher. He however, clarified that when coal is fired just after crusher, there will be no change in the GCV. Learned counsel also referred to para 3.4.2 at page 56 of the affidavit (Indian Standards – methods for sampling of coal and coke) and submitted that the representativeness of the samples drawn when the coal is stationery cannot be conclusive and reliable.

5. The Commission directed NTPC to submit on affidavit as to whether there would be difference in the GCV of coal between the sample taken from wagon and the sample taken after the crusher. On a further query by the Commission as regards the time taken for movement of coal from wagon to crusher house and the manual intervention involved (both for box type and bottom open wagons), the learned counsel clarified that it would submit on affidavit, the video recording of the events for consideration of the Commission.

6. The learned counsel for APP adopted the submissions of petitioner NTPC as above and submitted that coal sampling for GCV “*as received*” ought to be done after crushing. In case of power plant that do not have crusher at all, the sampling for GCV of coal on “*as received*” basis ought to be done after unloading and from the conveyer belt. He also submitted that APP took a wrong position in High Court by stating that there are difficulties in measuring the coal on “*as received*” basis to which the Commission has filed an affidavit to the effect that there is no difficulty in measurement of coal on “*as received*” basis. The learned counsel submitted that GCV on “*as received*” basis can be measured but the object behind the 2014 Tariff Regulations will be served only if coal sampling for GCV measurement is done after crushing.

7. The learned counsel for BRPL referred to the reply filed in the matter and mainly submitted that there is huge gap between the weighted average GCV of coal as billed and as fired and that the loss in the calorific value due to self ignition, windage, spillage etc. which is only a minuscule proportion of the said difference. The learned counsel referred to the provision (IS-436 Part I/ Section 1-1964) in the BIS report on sampling of coal and submitted that the sampling can be done during unloading of coal at power station and thus, there is no conflict in the sampling of coal prescribed by the BIS and the Central Commission. He also submitted that NTPC has refused to follow the regulatory provisions on



the issue related to measurement of GCV of coal on “*as received*” basis during unloading of coal at the power station. He accordingly, prayed that the contention of the petitioner may be rejected.

8. The learned counsel for GUVNL mainly submitted as under:

(i) The submissions of NTPC in its affidavit dated 14.9.2015 cannot be accepted since there is no ambiguity at all in Regulation 30 (6) of the 2014 Tariff Regulations specified by the Commission and the intention is clear from the statement of reasons issued by the Commission along with the Tariff Regulations.

(ii) The coal flow diagram enclosed by NTPC is only an internal procedure for handling the coal at its generating stations. In case of non-pit head stations there is no difficulty for NTPC to take the sample of GCV of coal as it is received from railway wagons. In case of pit-head stations coal is carried from mines to the power stations through dedicated MGR system through coal racks for unloading. Hence, there would be no difficulty to measure GCV at this unloading point. Merely because it is inconvenient to do a particular act would not mean that the said act cannot be done, especially when mandated by regulations. It was also clarified that in case GCV is measured at crusher end and directly fed to the bunker, it will be just as GCV on “*as fired basis*”.

(iii) In the state owned generating company of Gujarat (GSECL), GCV of coal is measured at the point of unloading and on “*as received basis*”. These generating stations use wagon tippler to unload the coal and sample is collected without any wastage of time and safety threat to the persons. These samples are tested in the laboratories to measure the GCV on “*as received basis*”. It was also clarified that GCV of coal is also measured at the point of unloading in Punjab as well.

(iv) In Form-15 (page 98 of the petition) there is huge difference between the GCV of domestic coal billed and the weighted average of GCV of coal as fired.

(v) Para 0.3.4.2 of the BIS report provides that coal can be sampled in stationery position but the accuracy will depend on the representativeness of the sample. However, if the safeguards provided under Standard – 6, 7 & 8 is followed then there is no reason that the sample will not be a representative one. The CPRI report supports the position that coal sampling can be done on “*as received basis*” and para 2.3 of the said report provides that the samples can be taken from wagons only.

(vi) The CFRI study does not indicate that wagon top sampling cannot be done. Para 4.7 of the Fuel Supply Agreement dated 24.6.2009 between NTPC and Northern Coalfields Limited supports the contention that the coal sample should be taken in the unloading point and not after crusher stage as submitted by NTPC.



(vii) No prejudice is caused to NTPC in taking GCV at railway wagon when coal is received except that deployment of additional personnel and change in internal procedure of NTPC could be made.

(viii) If the submissions of NTPC be accepted it would amount to setting aside Regulation 30 (6). If the words "*as received*" is interpreted to mean the coal after crusher stage, the same would defeat the purpose of the regulations.

(ix) No material has been placed by NTPC to show that there would be safety threat to the personnel deploy for taking GCV of coal samples when received at the generating station.

(x) On the aspect of GCV of coal to be measured on "*as received basis*" the learned counsel referred to the judgments of Tribunal in MSPGCL vs. MERC and PSPCL vs. PERC.

9. As regards the contention of the learned counsel that samples for GCV of coal are taken from wagons by the generating companies in state of Gujarat, the Commission directed the learned counsel to file the details on affidavit.

10. The learned counsel TANGEDCO submitted as under:

(i) The submissions made by respondents above are adopted by this respondent.

(ii) The Indian Standard specification deals with the issue of collecting the samples from stock pile or moving wagon or at any point prior to crusher. The sampling need not be after crusher as submitted by NTPC and it can be from the heap or wagon or at site after unloading. The documents enclosed by NTPC deals with the sampling method to be followed before the coal is passed through the crusher.

(iii) In terms of the report of Bureau of Indian Standards, coal samples collected from wagons during unloading operation will give reliable results.

(iv) The submission of NTPC that GCV is not measurable at wagons and coal samples collected after crusher will provide a homogeneous mixture is factually incorrect. As per methodology stipulated in the standards mentioned, sample will be prepared after collection to form a homogeneous mixture, before using for testing. Even if samples are collected at wagon end while unloading of coal, acceptable standards will be followed for making the tested samples homogeneous, free from foreign material, with reduced size.

(v) The practice of measuring the GCV from "*as fired*" basis to "*as received*" basis in 2014 Tariff Regulations, is to bring transparency, efficiency in fuel handling by the generating companies, optimum performance of power plants and computation of energy charges in a just, fair and equitable manner. This can be achieved only if the GCV is truly on "*as received*" basis as the receiving end of the power plant during unloading of coal from the wagons.



11. The representatives of the respondents MPPMCL and HPGCL, submitted that the comments in the matter has been filed and the same may be considered by the Commission.

12. In response to the above, the learned counsel for NTPC, submitted detailed clarification and contended that if the GCV of coal is measured at crusher end and fired just after crusher, there will be no change in GCV value. He also stated that if the coal is stored in bunker, then there would be change in GCV value. The Commission directed the learned counsel to submit a signed copy of the Fuel Supply Agreement and clarify that the unloading point as indicated in the FSA relates to AMS located after crusher. The Commission also directed NTPC to clarify as to whether any effort has been made by NTPC for measuring GCV of coal from the wagons.

13. The clarifications/ information as sought for by the Commission in Paras 5 & 12 above from NTPC and in Para 9 from the respondent, GUVNL shall be filed on affidavit on or before 26.10.2015.

14. Subject to above, order in the petition on the issue of “the stage at which the GCV of coal should be measured on as received basis” is reserved.

By Order of the Commission

**-Sd/-**  
(T. Rout)  
Chief (Law)

