

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELH**

**Petition No: 333/MP/2018**

**Coram:**

**Shri P.K. Pujari, Chairperson  
Shri I. S. Jha, Member  
Shri Pravas Kumar Singh, Member**

**Date of Order: 15<sup>th</sup> December, 2021**

**In the matter of**

Petition under Section 79(1)(f) of the Electricity Act, 2003 read with Regulations 6.3A and 6.3B of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 regarding the validity of the Commercial Operation Dates of Units I and II of Nabinagar Thermal Power generating station as declared by Bhartiya Rail Bijlee Company Limited.

**AND**

**IN THE MATTER OF:**

East Central Railway,  
Hajipur,  
Bihar

**....PETITIONER**

**VERSUS**

1. Bhartiya Rail Bijlee Company Limited,  
Through its Chief Executive Officer,  
Nabinagar Thermal Power Project,  
Post- Khaira, Aurangabad, Bihar-824303
2. Eastern Regional Power Committee,  
Through its Member Secretary,  
14, Golf Club Road, Tollygunje,  
Kolkata-700033,
3. Eastern Regional Load Despatch Centre,  
Through its Executive Director,  
14, Golf Club Road, Tollygunje,  
Kolkata-700033,



4. North Bihar Power Distribution Company Limited,  
Through its Managing Director,  
Vidyut Bhawan, Bailey Road,  
Patna, Bihar-800001

5. South Bihar Power Distribution Company Limited,  
Through its Managing Director,  
Vidyut Bhawan, Bailey Road,  
Patna, Bihar-800001

....RESPONDENTS

**Parties Present:**

Ms. Swapna Seshadri, Advocate, BRBCL  
Shri Anand K. Ganesan, Advocate, BRBCL  
Ms Ritu Apurva, Advocate, BRBCL  
Shri. Sitiesh Mukherjee, Advocate, ECR  
Shri. Deep Rao Palepu, Advocate, ECR  
Ms. Harneet Kaur, Advocate, ECR  
Shri. Arjun Agarwal, Advocate, ECR  
Shri. Rajnish Goyal, NTPC  
Shri. Shashwat Kumar, Advocate, NBPDCCL & SBPDCL  
Shri. Rahul Chouhan, Advocate, NBPDCCL & SBPDCL  
Shri. Nadim Ahmad, ERLDC  
Ms. Shabari Pramanick, ERLDC

**ORDER**

The Petitioner, East Central Railway has filed the present Petition on 18.10.2018 under Section 79(1)(f) of the Electricity Act, 2003 (hereinafter referred to be as 'the Act') and challenged the Commercial Operation Dates (COD) declared by the Respondent No. 1, Bharatiya Rail Bijlee Company Limited (BRBCL) in respect of Unit-I and Unit-II of Nabinagar Thermal Power Plant (NTPP).

2. The Petitioner has made the following prayers:

- “(a) Admit and allow the present Petition;*
- b) Declare that BRBCL's certificates dated 14.01.2017 and 07.09.2017 declaring the COD of Units I and II of the Project respectively, are void being contrary to Regulation 6.3A of the IEGC;*
- c) Consequently, declare that Units I and II of the Project have not achieved COD on the dates claimed by BRBCL;*



- d) *Pass appropriate directions determining when BRBCL will be entitled to validly declare COD of Units I and II of the Project;*
- e) *Declare that the power injected by Units I and II of the Project up to the actual COD, as determined by this Hon'ble Commission, be accounted for and treated as infirm power;*
- f) *Direct the refund and reimbursement of excess tariff charges recovered from the Petitioner for Units I and II by BRBCL for periods when COD for Units I and II of the Project had not been declared validly by BRBCL;*
- g) *Direct BRBCL to revise its bills for power supplied from Units I and II at the prevalent rate of infirm power, as may be ascertained by this Hon'ble Commission; and*
- h) *Pass such further order(s) or direction(s) as this Hon'ble Commission may deem fit and proper in the facts and circumstances of the case."*

### **Background**

3. The Petitioner, East Central Railway (ECR) is a Railway zone under the aegis of the Ministry of Railways, Government of India. The Petitioner, as part of the Indian Railways, is a deemed distribution licensee in terms of the third proviso to Section 14 of the Electricity Act, 2003. The Respondent No.1, Bharatiya Rail Bijlee Company Limited (BRBCL), is a Joint Venture (JV) Company between NTPC Limited (in short, "NTPC") and the Ministry of Railways (in short, "Railways"), with shareholding in the ratio of 74% and 26% respectively, and has been established consequent upon approval of Cabinet Committee for Economic Affairs (CCEA). BRBCL is a "generating company" as defined under Section 2(28) of the Act and is responsible for construction and operation of NTPP, a thermal power plant at Nabinagar, Bihar with a total capacity of 1000 MW, comprising of 4 units of 250 MW capacity each (in short, "the Project").

4. MoP, vide its communications dated 30.06.2007 and 02.07.2010, allocated 90% of the power generated from the Project to Railways and the remaining 10% of power to the State of Bihar. The Petitioner has entered into a Bulk Power Purchase Agreement



(BPPA) dated 16.12.2010 with BRBCL to procure 900 MW power generated from the Project.

### **Submissions of the Petitioner and Respondents**

5. The Petitioner, ECR has made the following submissions regarding COD of Unit-I and Unit-II of the Project:

(a) As per CCEA approval, Unit-I of the Project was to be commissioned by 22.10.2010 and each of the remaining three units were to be commissioned thereafter at an interval of 6 months each. However, it was only after a delay of more than 6 years that Unit-I and Unit-II of the Project were allegedly commissioned on 15.01.2017 and 10.09.2017, respectively. Thus, the project had huge time over-run.

(b) Tariff for the Project from COD of Unit-I to 31.3.2019 was determined by the Commission vide order dated 18.09.2018 in Petition No. 23/GT/2017. Tariff forms filed by BRBCL in Petition No. 23/GT/2017 reveal that while the generating units for Unit-I and Unit-II may be operational since COD, a lot of the critical auxiliaries and Balance of Plant equipment were yet to be commissioned as on COD of Unit-I and Unit-II. However, commissioning of the auxiliaries and Balance of Plant equipment is a necessary pre-requisite for declaration of COD, as prescribed by the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (in short, "the Grid Code"). In absence of such requirement having been satisfied, BRBCL had wrongly declared COD of Unit-I and Unit-II. Such an invalid declaration of COD has resulted in excess recovery of tariff (in terms of clause 5.2 of BPPA) by BRBCL. Therefore, the tariff collected should be returned along with the interest, as per BPPA.

(c) Regulation 6.3A(1) of the Grid Code read with Regulation 12 of the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 (in short, "the CEA Technical



Standards”), provides the mandatory conditions to be fulfilled by a generating station in order to declare its COD or that of a unit thereof. As per proviso (iii)(b) to Regulation 6.3A(1) of the Grid Code, it is a mandatory that all the auxiliary systems including Balance of Plant equipment are commissioned and are capable of operation at full load operation on a sustained basis along with the main plant equipment.

(d) The Commission has also emphasised the importance of ensuring proper functioning of main plant equipment and associated auxiliaries in accordance with Appendix VI of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (in short, “the 2014 Tariff Regulations”) prior to declaration of COD of generating units/ station. The Statement of Objects & Reasons for the 2014 Tariff Regulations mentions that:

*“Considering the view of stakeholders as well as recommendation of CEA, the Commission is of the view that in order to avoid any unnecessary delays, instead of certification from CEA, self-certification prior to declaration of CoD by the generating company to the effect that all key provisions as specified in Appendix VI of technical standards have been ensured, will meet the required intent. The issuance of such certificate shall be approved by the Board of Directors of the company and signed by authority not below the CMD / CEO & MD of the company. However, the Commission in order to restrict false declaration of COD has included a proviso that the generating station should submit copy of certificate to the Member Secretary (concerned RPC) and concerned RLDC before declaration of COD. The intent of self-certification and submission to Member Secretary is to ensure that the developer observe certain standards prior to COD. Hence, in the event of any deficiency with reference to self-certification, the Commission may, on receipt of report from Member Secretary or filing of petition by beneficiary, initiate action for noncompliance of provisions of Tariff Regulations/technical standards of CEA in accordance with law.”*

(e) ERLDC vide its letter dated 13.01.2017 has certified the successful trial run of Unit-I. Further, on BRBCL’s certificate dated 14.01.2017, this unit was declared to have purportedly achieved COD on 15.01.2017 and the approval of the Board of BRBCL for this certificate was communicated on 10.03.2017. The Eastern Regional Power Committee (ERPC) accepted COD of Unit-I in its 129<sup>th</sup> OCC (Operation Coordination Sub-Committee) meeting held on 17.01.2017 and apprised the Central Electricity Authority (CEA) about the same.



(f) Similarly, ERLDC vide its letter dated 31.08.2017 has certified the completion of trial run of Unit-II which was declared to have purportedly achieved COD on 10.09.2017 as per BRBCL's certificate dated 07.09.2017.

(g) On bare perusal of Form-5D filed by BRBCL in Petition No. 23/GT/2017, it is evident that most of the auxiliaries were either yet to be commissioned or commissioned after purported declaration of COD of Unit-I and Unit-II. A list of such auxiliaries along with their commissioning or anticipated commissioning date is (i) steam generator including ESP (30.11.2018), (ii) Turbine Generator & Auxiliaries (30.11.2018), (iii) Coal Handling Plant (30.11.2018), (iv) DM plant (30.11.2018), (v) Infrastructure Civil works & Ash Dyke (31.07.2018), (vi) Cooling Tower (18.12.2017), (vii) Ventilation System (30.06.2017) and (viii) Air conditioning system (30.06.2017).

(h) MoM (minutes of meeting) for the 76<sup>th</sup> meeting of the Board of Directors (BoD) of BRBCL, held on 04.01.2018 also shows that works of major Balance of Plant equipment such as Ash Dyke and Coal Handling Plant ("CHP") were not complete as on COD of Unit-I and Unit-II. These demonstrate that COD for Unit-I and Unit-II is invalid on account of being in violation of proviso (iii)(b) to Regulation 6.3A(1) of the Grid Code. ERPC and ERLDC, while accepting COD declared by BRBCL for Unit-I and Unit-II of the project, failed to take cognizance of the non-commissioning of auxiliaries and Balance of Plant equipment.

(i) As per regulation 6.3B(1) of the Grid Code, the technical minimum of central generating station or a unit thereof is 55 % of installed capacity. There were a large number of revisions in the Declared Capacity (DC) of Unit-I and Unit-II since the commencement of flow of electricity from 02.08.2017 onwards and these units of the Project have repeatedly failed to maintain the technical minimum schedule of 55% of the installed capacity for operation of the units, which is in violation of Regulation 6.3B(1) of the Grid Code.



(j) Declared Capacity (DC) of the subject units is low and even below the technical minimum for many time blocks. The Petitioner had communicated its concerns to BRBCL in this regard including shortage of power, difficulty in arranging power from other sources, over-drawl from grid and consequential heavy charges for such over-drawl under Deviation Settlement Mechanism (DSM). Such constant reduction in DC being declared by Units-I and II of the Project lend weight to the conclusion that COD of these units was declared without commissioning the auxiliary systems and Balance of Plant equipment.

(k) The Petitioner has submitted a detailed chart exhibiting the percentage of time blocks when DC of Unit-I and Unit-II was less than the technical minimum of their installed capacity from August 2017 to June 2018.

(l) Further, BRBCL's incapability to run these units at full load on sustained basis poses a grave and imminent threat to the security and reliability of the grid. It has to be ascertained whether the Unit-I and Unit-II and associated equipment, which were allegedly commissioned, and other equipment which are about to be commissioned, duly conform to the CEA Technical Standards. It also needs to be ascertained whether the trial runs for Unit-I and Unit-II of the Project were successful in terms of the standards prescribed by Regulation 5 of 2014 Tariff Regulations.

(m) The Commission may direct BRBCL to place on record the Environmental Clearance, their Consent to Operate, Consent to Establish, and the Quarterly Progress Reports, which are to be mandatorily filed before the Bihar State Pollution Control Board and the Ministry of Environment, Forest and Climate Change in order to ascertain the factual situation of the actually installed equipment at the plant site.

(n) BRBCL has been charging the Petitioner for supply of electricity for entire capacity in accordance with the revised cost estimate of the Project. However, the same has not been approved by this Commission. The Petitioner has been



charged at abnormally high rates for the supply of electricity since 15.01.2017 and 10.09.2017 in respect of Unit-I and Unit-II of the Project, respectively and it has resulted in the excess recovery of tariff by BRBCL.

(o) The levy of tariff by BRBCL in the absence of declaring valid COD is in contravention to the 2014 Tariff Regulations. Accordingly, the Petitioner has right to recover all such amounts that have already been collected by BRBCL along with applicable interest as per provisions of the BPPA and in terms of Section 62(6) of the Act. Further, the power generated by the Project from the claimed COD up to the actual COD determined by the Commission may be treated as infirm power.

6. The Respondent No.1 (BRBCL) has filed its reply dated 28.01.2019 and has submitted as under:

(a) The Petitioner has filed the instant Petition in an attempt to delay the determination of tariff of the Project by this Commission and to avoid payment of provisional tariff billed on certification of DC after successful COD of Unit-I and attempting to colour the power from the Project as infirm power.

(b) BRBCL had filed a Petition being Petition No. 24/MP/2017 for acceptance of Declared Capacity of Unit-I of the Project from the successful declaration of COD as per procedure laid down in the Grid Code.

(c) The Petitioner filed a substantive application being IA No. 20 in Petition No. 24/MP/2017 of 2017 of BRBCL but did not raise the issues mentioned in instant petition at the time of the proceedings in Petition No. 24/MP/2017, including any objections to COD declaration by BRBCL.

(d) Only after the Project completed successful trial run as per procedures laid down under the 2014 Tariff Regulations and the Grid Code and after certification of successful trial run by ERLDC that BRBCL has declared COD of Unit-I and Unit-II of NTPP w.e.f. 15.01.2017 and 10.09.2017 respectively. Based on the ERLDC's validation of successful trial run operation and certificate issued





by CEO (BRBCL), ERPC has confirmed COD of Unit-I and Unit-II of the Project. The said certificate has already been approved by the Board of Directors of BRBCL.

(e) The petition is also barred by res judicata and constructive res judicata since the same issue of COD declaration has been noted and decided by the Commission in the Order dated 29.06.2017. Further, if COD is not properly declared, Commission could not have directed ERLDC to give DC to the plant.

7. The Respondent No.3 (ERLDC) filed its reply dated 19.02.2019 and submitted as under:

(a) In line with the Regulations 6.3A(1) and 6.3A(3) of the Grid Code, the responsibility of RLDC in regard to the declaration of COD of Central Generating Stations and Inter-State Generating Stations is to convey clearance or any deficiency noticed in the trial run, as the case may be, to the generating company for declaration of COD within 7 days from receiving the generation data based on the trial run.

(b) The trial run period considered for Unit-I was from 00:00 hrs of 03.01.2017 to 24:00 hrs of 05.01.2017 and that of Unit-II was from 23:00 hrs of 27.08.2017 to 23:00 hrs of 30.08.2017. The results in respect of trial run of Unit-I and Unit-II are as follows:

Unit-I:	<b>Various Load at Ex-Bus</b>	<b>MW</b>
	Maximum	268.61
	Average	262.99
	Capability to raise load up to 105% of MCR	Demonstrated
Unit-II:	<b>Various Load at Unit End</b>	<b>MW</b>
	Maximum	264.95
	Average	256.98
	Demonstration of peaking Capacity	Demonstrated



(c) It is the responsibility of CEO/ CMD/ MD of the generating company to certify that while declaring COD, the various clauses as required under clause (iii) of Regulation 6.3A(2) of the Grid Code have been satisfied.

8. The Petitioner submitted a rejoinder dated 13.03.2019 and submitted that the only issues decided by this Commission in Petition No. 24/MP/2017 were pertaining to the acceptance of BRBCL's Declared Capability ("DC") of Unit-I of the Project and the operationalization of Long Term Open Access (LTA) by the Central Transmission Utility (CTU). The issue of COD was noticed only after disposal of the Petition No. 24/MP/2017. The Petitioner also submitted that instant Petition is not barred by res judicata or constructive res judicata since the question of the COD of Unit-I and Unit-II of the Project has never been directly or substantially an issue in any proceedings decided by this Commission.

**Hearing dated 13.03.2019 and subsequent hearings**

9. The matter was again heard on 13.03.2019 and Commission decided to hear this Petition No. 333/MP/2018 along with Petition No. 23/GT/2017 (petition for determination of tariff of the Project from COD of Unit-I to 31.03.2019) and also directed BRBCL to file certain additional information.

10. Subsequently, the Petitioner filed an additional affidavit dated 09.04.2019 mentioning the factual developments that had taken place subsequent to filing of Petition No. 333/MP/2019 as under:

a) On receipt of communication for trial run operation of Unit-III from 10.01.2019 by BRBCL, the Petitioner vide its letter dated 25.01.2019 suggested BRBCL to strictly adhere to the Grid Code before declaration of COD of Unit-III.



b) Thereafter, on receipt of communication dated 22.02.2019 from BRBCL that COD of Unit-III has been declared as 20.02.2019, the Petitioner objected and refused to accept the declaration of COD of Unit-III and communicated the same to BRBCL and ERPC vide communication dated 28.02.2019.

c) Subsequently, ERPC had a meeting with concerned stakeholders and decided COD of Unit-III as 26.02.2019 and decided that the generation prior to 26.2.2019 shall be treated as infirm generation.

d) The issues raised in Petition No. 24/MP/2017 pertained to operationalization of LTA by CTU and acceptance of DC of Unit-I by ERLDC. Accordingly, the Petitioner hadn't any occasion to look into the declaration of COD of Unit-I and the Commission decided issued on LTA and acceptance of DC but had no occasion to analyse the veracity of declaration of COD of Unit-I. Same is the case with Unit-II.

e) In line with the above, the Petitioner challenged COD declaration of Unit-III of BRBCL on the same grounds of Unit-I and Unit-II.

11. In line with directions vide RoP of hearing dated 13.03.2019, the Respondent No.1 (BRBCL), vide affidavit dated 18.04.2019, has submitted the following:

a) As regards allegation of low DC of Unit-I, Unit-II & Unit-III of the Project is concerned, its units are capable of generating full load but the Petitioner has not been able to obtain LTA/ NOC from the States for scheduling of power to their Traction Sub-Stations (TSS) and, therefore, has filed this petition to avoid fixed charges. A table in this regard has been furnished by the Respondent No.1.

b) The schedule given by railways for several time blocks was lower than technical minimum of 55% and, therefore, the generating station was forced to operate at technical minimum with oil support. In this regard, BRBCL has requested Railways and ERLDC to give optimum schedule to the units of the



Project so that technical minimum can be maintained. Unit-I & Unit-II have maintained technical minimum DC at ex-bus as per the Grid Code.

c) The Petitioner never raised any objections to COD of Unit-I & Unit-II at the time of COD declaration.

d) The CEA Technical Standards are not directly linked with the declaration procedure of COD except for certification of meeting key provisions.

e) The packages referred in form 5D of Petition No. 23/GT/2017 are being executed for all four units put together and the date of completion of Steam Generator, TG packages and BOP packages are the anticipated completion dates of respective packages which are in line with the anticipated COD of last unit of the Project.

f) CEO, BRBCL has furnished a certificate w.r.t. Unit-I as per provisions of the Grid Code certifying that the main plant equipment and auxiliary systems have been commissioned and capable of full operation on sustained basis.

g) At the time of COD of Unit-I and Unit-II, main plant equipment and auxiliary systems were commissioned and were capable of full load operation of the commissioned units as is evident from the trial run operations that were done without any tripping of units and they achieved more than 105% of full load in many time blocks.

h) In August 2017, DC was lower due to teething problems, transmission line outage, lesser truck movement from wharf wall to plant, problem in coal feeding and bunkering issues on account of monsoon. After the monsoon season, the improvement in DC can be observed in September 2017 with improvement in coal receipts.

i) The Petitioner has not been scheduling power at all after commissioning of Unit-II since open access to the Petitioner is not available. This led to the



reserve shutdown of one unit. Low DC during certain time blocks, as alleged by the Petitioner, is due to Reserve Shut Down (RSD) of one unit and ramp up/ down pertaining to unit outage. A chart has been submitted indicating reasons for DC less than technical minimum in selected dates as pointed out by the Petitioner.

j) The petition is an abuse of the process of this court. The Petitioner was not in position to supply power to its TSS as NOC from States was not there and, therefore, it has been finding ways to avoid fixed charges. When the Petitioner became aware that after COD of Unit-II, it would not be able to utilize the power since it did not have the requisite open access, it has filed the petition and challenged COD of Unit-I & Unit-II to avoid liability to pay fixed charge under BPPA.

k) The fixed charges are being levied on the basis of DC from COD and claim of refund of any tariff is not tenable.

12. The Petitioner vide affidavit dated 06.05.2019 has additionally submitted as under:

a) A table has been submitted with details of component/ package, COD/ anticipated COD based on Form – 5D along with the comments against each of these components/ packages. No material particulars/ evidence have been placed on record by BRBCL in support of its contention that partially commissioned auxiliaries including Balance of Plant (BoP) equipment were capable to run the commissioned units on a sustained basis.

b) It is also misconceived on part of BRBCL to claim that at the time of COD of Unit-I and Unit-II, the main plant equipment and auxiliary systems including BOP were capable of facilitating the operations of the commissioned Units on a sustained basis. It is because the auxiliaries and BOP equipment such as Fuel Oil System, Coal Handling Plant (“CHP”), DM plant, pre-treatment plant, fire-fighting system, Ash Disposal system etc. are each a single unit and there is neither any



technical basis nor any evidence of the same being commissioned in a phased manner in accordance with the commissioning of the Units. There is no basis to suggest that a half complete CHP/ DM plant, or a half complete Ash disposal system is capable of supporting the existing commissioned Units. They are either commissioned as a whole or not commissioned. In the absence of any technical basis for such an arrangement even being possible, BRBCL's submissions are merely trying to evade the illegality committed by it.

c) Further, non-completion of various components is hard to ignore. For instance, CHP is incapable of handling the needs of the commissioned Units. Around 1 rake of coal is required to operate a Unit of 250 MW generation capacity at full capacity for 1 day. At this rate of coal consumption, since as on date 3 units have been allegedly commissioned, BRBCL ought to necessarily have the capability to handle 3 rakes in a day. The Petitioner, being the body that owns and operates the operations of railways, has complete record of how many rakes were sent to BRBCL, and how much time BRBCL took in handling one rake of coal. It has been observed that the Petitioner's average time of handling coal rakes exhibits serious inefficiency in their capability to handle the coal rakes. The Petitioner has shown no capability to handle more than 1-1.5 rakes in a day on an average, which itself is not a steady rate as it keeps increasing or decreasing. Such a long time to handle even a single rake evidences the fact that CHP was not commissioned and whatever exists of CHP, if anything at all, is incapable of handling the requirements of the Project. A chart exhibiting the month-wise consumption of coal rakes has been annexed and has been marked as Annexure P-1.

d) The fact that CHP is incomplete is also evidenced from the fact that satellite images of the Project dated 13.03.2019 reveal that while one tippler was commissioned and there was no rail track beyond the second tippler. It means that not only is the CHP incapable of handling more than 1 rake at any given time, it is also not capable of offloading the coal from the rake using the second tippler.



Further, even these tipplers were commissioned much after the alleged date of commissioning of Unit-I and Unit-II. Moreover, the satellite images also show that the conveyor belt for transporting coal is not complete and there is a break in the conveyor belt, which reveals serious inadequacies in CHP and lays bare the inability of CHP in facilitating operation of even one of the allegedly commissioned Units, leave alone all the three Units. In fact, such has been the inadequacy of CHP that BRBCL pays demurrage charges to the Petitioner for the delay in handling the rake and returning it back to the Petitioner. As on December 2018, a total of Rs.2,03,65321/- was outstanding against BRBCL as demurrage charges. Copies of the satellite images of the Project dated 13.03.2019 are annexed and marked as Annexure P-2 (Colly). Copy of the latest letter dated 07.03.2019 regarding demurrage charges issued by the Petitioner is annexed herewith and marked as Annexure P-3.

e) The minutes of 76<sup>th</sup> meetings of BoD of BRBCL recorded that “CEO intimated that focus of project works is on early completion of railways track, ash dyke and in CHP – wagon tippler and reclamation stream-I”. Thus, it is evident that Ash Dyke and CHP were not in place at the time of COD of Unit-I & Unit-II.

f) In case of schedule being less than technical minimum, the generator either shuts down the unit or uses secondary oil but it doesn't prevent it from declaration of full DC. DC declared by BRBCL is lower than commissioned capacity of Unit-I & Unit-II for 88% of days. Similarly, DC declared for Unit-III is lower than commissioned capacity for 70% of days between 01.03.2019 and 03.05.2019.

g) The claim of low DC on account of ramp up and ramp down is misconceived.

h) BRBCL has mentioned that wharf wall is around 5 km away from plant and trucks were being used for coal transportation. Thus, it is evident that CHP and rail track are incomplete.



- i) Even though Unit-II has been allegedly declared COD on 03.09.2017, DC declared between 16.09.2017 and 28.09.2017 is 227.5 MW i.e. lower than combined technical minimum of Unit-I & Unit-II. Further, on tripping of one unit, DC has been reduced to 130 MW from 29.09.2017 to 30.09.2017 and also as when one unit tripped, other unit could have been started to maintain DC.
- j) With regard to NOC from States, the Petitioner has filed Petition No. 132/MP/2019 with Commission and the same is pending adjudication.

13. The Respondent No. 4 (North Bihar Power Distribution Company Limited) and Respondent No. 5 (South Bihar Power Distribution Company Limited) have filed a combined reply dated 04.07.2019 and submitted the following:

- (a) Neither Member Secretary, ERPC, a statutory body under section 29(4) of the Act nor General Manager, ERLDC, another statutory body under section 32 of the Act had any knowledge to ascertain whether the subject units were complete, except on basis of letter from CEO, BRBCL. ERPC and ERLDC have completed the procedure on strength of the certificate issued by CEO, BRBCL under the Grid Code. It was only after filing of amended Petition No. 23/GT/2017 that new facts are emerging and questions are being raised regarding correctness of certificate issued by CEO, BRBCL for Unit-I & Unit-II.
- (b) Considering the percentage of time when Declared Capacity of Unit-I & Unit-II is lower than technical minimum during the period from August 2017 to June 2018, it emerges that the critical auxiliaries were incomplete that ultimately resulted in unreliable supply from the Project.
- (c) The Board of Directors of BRBCL has supported the erroneous act of CEO i.e. certificate of declaration given for COD of Unit-I and Unit-II. Thus, Revised Cost Estimates approved by the Board for the Project is questionable, particularly, since BRBCL is not a Navratna company.





(d) In RoP dated 13.03.2019, the Commissions sought various documents from BRBCL, including Report of Electrical Inspector, but same are not yet filed.

(e) The certificate declaring COD of Unit-I and Unit-II are contrary to the provisions of the Grid Code.

(f) The Commission may declare COD of Unit-I & Unit-II as proposed by CEO, BRBCL as illegal and determine fresh dates for the same and till such time, the power injected from these units should be considered as infirm power. BRBCL may be directed to return the tariff collected from the procurers along with interest.

(g) The Commission may consider allowing participation of any association/ forum/ other bodies to represent the interest of consumer in the instant petition.

14. BRBCL vide its reply dated 30.08.2019 to additional affidavit dated 09.04.2019 and rejoinder dated 06.05.2019 of the Petitioner has submitted as under:

a) COD of Unit-III has been accepted by ERPC as 26.02.2019 after certification of successful trial run operation by ERLDC vide letter dated 11.02.2019. Further, CEA vide its letter dated 01.04.2019 has certified COD of Unit-III and included the same under capacity Addition since COD.

b) Trial run and declaration of COD of these three units have been done as per provisions of the 2014 Tariff Regulations and the Grid Code. The three units have completed 72 hours continuous trial run operation at MCR and the same is not possible without Balance of Plant equipment and auxiliaries not being capable of delivering the required capacity.

c) All three units were operated at almost full load after COD of Unit-III based on schedule given by beneficiaries and sale of power in short term market. The performance of the Project is as under:



**Performance of NTPP (750 MW) after COD of Unit#3**

	DC	PLF (%)	DC( MW-Ex bus)	SG( MW-Ex bus)	Actual Generation (MW-Ex Bus)	SG(Rly)-EX Bus MW	Bihar(SG)-Ex Bus MW	STOA/PX/RRAS (MW)	NOC Available with Railways
Date	(%)	(%)	MW	MW	MW	MW	MW	MW	MW
2/28/2019	91.29	67.84	623.1	421.3	463.0	381.3	64.4	17.3	430
3/1/2019	94.09	64.79	642.1	401.8	442.2	375.6	64.5	2.2	430
3/2/2019	100.00	64.82	682.5	406.1	442.4	381.6	68.3		430
3/3/2019	100.00	92.93	682.5	595.3	634.3	377.5	68.3	188.5	430
3/4/2019	100.00	87.32	682.5	552.0	595.9	378.6	68.3	149.1	430
3/5/2019	100.00	96.44	682.5	614.3	658.2	381.7	68.3	208.3	430
3/6/2019	100.00	95.29	682.5	608.9	650.4	386.7	68.3	195.4	430
3/7/2019	100.00	95.92	682.5	612.6	654.6	377.5	68.3	208.9	430
3/8/2019	100.00	96.08	682.5	612.5	655.8	375.5	68.3	212.0	430
3/9/2019	98.61	93.49	673.0	587.3	638.1	359.2	65.5	213.4	430

d) It is evident from the above table that the all three units along with auxiliaries are capable to operate on full capacity whenever station got the full schedule.

e) The Petitioner has alleged that CHP is incapable of handling the needs of the commissioned Units and has given some calculation to show that the Petitioner's average time of handling coal rakes exhibits serious inefficiency in capability to handle the coal rakes. This submission is entirely misconceived. BRBCL is able to handle three(3) to four(4) rakes per day subject to availability of coal rakes. The following table provides month-wise consumption of rakes vis-à-vis demand for rakes:

Year	Month	Number of Rakes Received	Number of Rakes Demanded by BRBCL
2017	Feb	2	2
	Jul	3	5
	Aug	19	20
	Sep	24	30
	Oct	30	100
	Nov	20	60
	Dec	16	60
2018	Jan	20	60
	Mar	16	90
	Apr	18	60
	May	31	60



	June	29	60
	Jul	50	60
	Aug	26	60
	Sep	12	85
	Oct	36	90
	Nov	49	90
	Dec	62	90
2019	Jan	61	90
	Feb	48	90
Grand Total		572	1262

f) The claim of the Petitioner based on satellite images that there is a break in conveyor system, is incorrect, as part of this system is underground/ in the tunnel. The coal handling plant is capable of handling three(3) to four(4) rakes per day. However, the coal received is much lower than demand raised by BRBCL.

g) The intent of a paragraph of minutes of 76<sup>th</sup> Board meeting cited by the Petitioner, is for early completion of the balance works but does not mean that system is not ready for sustained operation of Unit-I & Unit-II.

h) The issue of demurrage charges raised by the Petitioner is an operational issue and is applicable to all old and newly commissioned thermal power stations and is not limited to BRBCL. The delay in coal unloading is due to various operational reasons which is not in the control of BRBCL such as boulders and foreign material received, damaged coal wagons in the rake received in generating station and other failures that takes more time to unload the wagon and also the unloading system gets damaged. Payment of demurrage charges by no means leads to the conclusion that COD of the Units is not properly declared. Conclusion drawn by the Petitioner that BoP equipment of CHP is not commissioned based on demurrage is devoid of merits.

i) DC depends on various factors such as unit tripping, equipment outage, coal shortage etc. and it is not because of incomplete BoP equipment and auxiliaries. As there was shortage of coal in country, BRBCL has low coal supply



from October 2017 to November 2018 and, thus, DC was low. With regard to low DC of Unit-III, in the first month i.e. March 2019, forced outage was high but improved significantly from 01.04.2019 to 16.05.2019 and the availability was 88%. PLF (plant load factor) has been low due to low schedule being given by the Petitioner on account of non-availability of NOC of States for total quantum. The Petitioner's contention is so lopsided that it is singling out the points when DC was less due to some technical reasons but not accepting the fact that when full DC has been given by BRBCL, the Petitioner was not able to offtake the power due to non-availability of NOC by various States.

j) The contention of the Petitioner that there is no evidence or material particulars for low DC is misconceived. All the details of DC revision are available in ERLDC website. The manner of computation of DC at paragraph 21 of the Petitioner's rejoinder is not correct. It appears that the Petitioner does not trust ERLDC, a part of POSOCO (GOI Organization) which is a statutory body.

15. The Petitioner has filed additional information dated 09.04.2021 and mostly reiterated its earlier submissions. It has submitted that subsequent to the filing of this petition, BRBCL has declared COD of unit III. The Petitioner has submitted certain satellite images of the Project and also coal stock data of CEA has been submitted.

16. BRBCL vide its response dated 22.05.2021 has mainly reiterated its earlier submissions. It has additionally submitted that infirm power is allowed only under specific circumstances and it cannot be scheduled continuously. Further, infirm power cannot be scheduled from generating unit, having achieved its CoD. The Commission in its order date 03.01.2017 in Petition No. 10/MP/2017 held that commissioning of plant and auxiliaries both had taken place on 21.03.2016 for Unit-I and commissioning of plant and equipment will refer to readiness of plants and equipment. The generator



turbine with its auxiliaries together make the plant work successfully and plant cannot start without its auxiliaries. Thus, successful trial run implies that all the auxiliaries and main machines had commissioned.

17. The matter was again heard on 25.05.2021 order was reserved. The Petitioner and the Respondents were permitted to file written submissions.

18. In terms of liberty to file written submissions, the Petitioner has made following additional submissions vide affidavit dated 28.05.2021:

a) ECR has shown through minutes of BRBCL's Board of Director's meetings that vendors/ contractors executing works of BoP equipment and auxiliaries were very adversely commented upon for their performance, contracts were cancelled and penalties were imposed. If BoP equipment and auxiliaries were duly commissioned and were capable of running the allegedly commissioned units at full load on sustained basis, the question of terminating the contracts and imposing penalties/ liquidated damages would not have arisen.

b) Contrary to BRBCL's submission that the information provided in Form 5D is corresponding to the anticipated commissioning of Unit-IV of the Project, the commissioning has already been completed for some of the auxiliaries/ BoP equipment before the filing of the initial tariff petition and they do not correspond to the anticipated commissioning of the Unit-IV of the Project. Therefore, it is not phase-wise commissioning.

c) DC has to be declared irrespective of scheduling given by the beneficiaries and the same was admitted by BRBCL in its affidavit dated 06.02.2017. Further, beneficiary cannot schedule over and above DC declared by generating company and it can give full DC even if no power is scheduled.



Therefore, the submission that low schedules by the Petitioner has resulted in low DC is baseless.

d) As per “Detailed Operating Procedure for Reserve Shut Down (RSD)”, a unit can be taken under reserve shut down for scheduling below technical minimum but not on low coal availability. Further, the unit under RSD has to be fully ready in all respects, including fuel, to start at any moment and the generating station can declare off-bar DC. The average DC versus allegedly commissioned capacity during the period between 15.01.2017 to 18.08.02017 shows that DC is flat prior to scheduling given by the Petitioner but crashed and fluctuated after the same. From August 2017 to June 2018, DC was fluctuating and it is less than technical minimum for large number of time blocks i.e. out of these 11 months, DC is lower than technical minimum for 98.97% time for four months, 92.41% time for two months and 83% time for one month. It is evident that non-commissioning of BoP equipment and auxiliaries are responsible for such fluctuation in DC.

e) ERLDC has clarified vide its affidavit that the responsibility of certifying commissioning of BoP equipment and various auxiliaries rests on CEO/ CMD/ MD of the generating company. Further, ERLDC has nowhere claimed to have verified the commissioning of BoP equipment and various auxiliaries.

f) With regard to claim of BRBCL that the coal availability mentioned in coal stock report of CEA dated 09.05.2018 is pertaining to only one unit and not two, the Petitioner submitted that the subject report mentions maximum of average actual consumption of plant for last 7 days or required for installed capacity of plant at 55% PLF. Further, as mentioned by BRBCL, the coal required for each unit is 4000 MT/day and the coal available was 4290 MT/day and the second unit was allegedly commissioned by that time. CEA report is pertaining to both units of the plant and BRBCL could have run these two units at 55% PLF for 7 days. In addition, on perusal of CEA’s coal stock data from 11.10.2017 to 21.08.2018, BRBCL’s claim that there was coal shortage from October 2017 to November



2018, proves to be incorrect. Thus, lower DC was not on account of coal shortage but their BoP & auxiliaries couldn't support on a sustained basis. BRBCL, while seeking condonation of delay, has furnished correspondence with its contractors but correspondence with these vendors that BoP such as CHP, Track hopper and tippler were actually commissioned to support its claim that these are commissioned in a phased manner, is missing.

g) As per provisions of the 2014 Tariff regulations, generating company's CMD/ CEO/ MD is required to submit copy of a certificate in Appendix VI format, after prior Board approval, to the concerned RPC and RLDC, wherein, such format contemplates certification of proper commissioning of plant in line with the CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010. However, no such certificate has been placed on record by BRBCL for Units-I, Unit-II and Unit-III of the Project.

h) The satellite images filed by ECR depict that track hopper and tipplers were set up in 2019 and not in 2017 or 2018. Further, images indicate that railway track was under construction in 2017, even after the alleged commissioning of Unit-I.

i) The Commission in its Record of Proceedings (RoP) dated 13.03.2019 directed BRBCL to submit PERT chart in a particular format but BRBCL consciously altered and omitted certain critical details especially with reference to BoP as well as auxiliaries and same is wholly misleading, incomplete and at variance with the prescribed sample. As per provisions of Regulation 12(1)(c) of the 2014 Tariff Regulations, works executed by a contractor shall be deemed to be within the control of the generating company and any additional cost incurred due to the delay or inefficiency of the contractors shall have to be borne by BRBCL but can't passed through as increased tariff.

j) In addition, the note on legal propositions of the Petitioner includes its submissions primarily associated with tariff petition i.e. 23/GT/2017.



19. Respondent No.1 has made the following additional submissions (it has clarified various allegations of the Petitioner. However, only those submissions have been reproduced which are relevant for deciding the matter) vide its affidavit dated 12.07.2021:

(a) Delay in construction of CHP and Railways siding and additional cost on account of transportation, was mainly due to land acquisition. BRBCL has acted in the best interest of the Project and all possible steps were taken to mitigate the delay being caused.

(b) BRBCL has been supplying power to the Petitioner to the extent of availability of coal supplies and has not been constrained on account of non-availability of railways siding.

(c) In the tariff petition, BRBCL had sought condonation of delay on account of land acquisition but not on account of non-performance of its contractors, suppliers or agencies.

(d) The Petitioner has contended that there is no evidence of auxiliaries and BoP equipment being commissioned in a phased manner in accordance with the commissioning of the Units and that there is no basis to suggest that a half complete CHP/ DM plant, or a half complete make up water system is capable of supporting the commissioned Units. Each unit of the Project has successfully completed its trial run of 72 hours as per procedure laid down in the Grid Code and the same was certified by ERLDC. Further, a plant cannot even start without its auxiliaries and BOP.

(e) The objection of ECR that BRPL's contracts with the contractor were terminated and penalties were imposed upon damages and the same would not have arisen if BoP equipment and auxiliaries were duly commissioned and could run the allegedly commissioned units at full load on sustained basis, is quite vague.





(f) With regard to objection of ECR that bare perusal of Forms submitted by BRBCL shows that the commissioning has already been completed for some of the auxiliaries/ BOP before the filing of the initial tariff Petition and they do not correspond to the anticipated commissioning of the Unit-IV of the Project, it is submitted that the dates shown are either actual dates or anticipated dates. It is submitted that some of the BoP equipment are common for Unit-I & Unit-II or for all the four(4) units and have adequate redundancy for carrying out maintenance works while the units continue to generate power under normal operations. Commissioning of some BoP equipment and stand-by equipment are done progressively matching with Units.

(g) The Petitioner has contended that DC crashed after Railways gave the schedule. On the first day of scheduling, DC was low due to ramping up on account of cold start-up and carrying out mandatory checks for generator and electrical protection testing and steam & metal temperatures, as the unit was bringing after a long gap of 6 months. During the night hours, the demand was well below technical minimum of 125 MW (ex-bus) as the load in Mumbai suburban Railways is only 10-15 MW as against dispatch of 120 MW and for DVC maximum schedule allowed was only 70 MW. After achieving full load, full DC has been declared.

(h) With regard to contention of the Petitioner that on the basis of coal stock data of CEA, BRBCL could have declared 55% DC for two units, it is submitted that when the scheduling by railways was less than technical minimum of installed capacity (02 units), it had to do multiple shutdown and light up of at least one unit and thus, couldn't run both units together. Further, less DC declared by BRBCL on 09.05.2018 is a rare instance and the reasons for the same were given to ERLDC and beneficiaries. One unit was kept under RSD due to low schedule by railways from November 2017 to April 2018.



(i) Any thermal unit without proper disposal of ash cannot operate for a single day in view of the strict environmental norms. Further, the civil works on ash dyke continue to be carried out during operation of the generating station through rotation of ash discharge pipes, ash bund raising, shifting discharge into different lagoons. Similarly, coal feeding to Units and trial operation of 72 hours at MCR without essential BOP auxiliary system cannot be achieved.

(j) As regards objections made by the Petitioner based on satellite images, it is mentioned that machine-based statements are not evidences and machine might have malfunction, produce inconsistent results or can be tampered with. Further, judicial system does not consider these as reliable source of evidence and, thus, these images are not admissible.

(k) PERT chart has been provided by BRBCL as directed by the Commission vide RoP. Further, revised CPM of Unit-II is also submitted.

### **Analysis and Decision**

20. After consideration of the submissions of the parties, proceedings during hearing of the Petition and on perusal of documents on record, the following issues arise for our consideration:

**Issue No.1: Whether COD as declared by BRBCL in relation to Unit-I and Unit-II of NTPP are valid as per the relevant provisions of the Grid Code and the 2014 Tariff Regulations?**

**Issue No.2: Whether the auxiliaries and Balance of Plant equipment of Unit-I and Unit-II of BRBCL were completed and capable of operating at full load capacity of the units on sustained basis, i.e. whether there was compliance of the units with respect to the CEA technical standards, including operation on sustained basis?**

We deal with the issues one by one in the subsequent paragraphs.



**Issue No.1: Whether COD as declared by BRBCL in relation to Unit-I and Unit-II of NTPP are valid as per the relevant provisions of the Grid Code and the 2014 Tariff Regulations?**

21. Relevant provisions related to the process of declaration of COD in the 2014 Tariff Regulations and the Grid Code are extracted as under:

a) Provisions of the 2014 Tariff Regulations

**“3. Definitions and Interpretations.**—*In these regulations, unless the context otherwise requires-*

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(14) **“Date of Commercial Operation”** or **“COD”** shall have the same meaning as defined in Regulation 4 of these regulations;

.....

**4. Date of Commercial Operation:** *The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:*

(1) *Date of commercial operation in case of a generating unit or block of the thermal generating station shall mean the date declared by the generating company after demonstrating the maximum continuous rating (MCR) or the installed capacity (IC) through a successful trial run after notice to the beneficiaries, if any, and in case of the generating station as a whole, the date of commercial operation of the last generating unit or block of the generating station:*

*Provided that:*

(i) *where beneficiaries have been tied up for purchasing power from generating station, scheduling process for a generating unit of the generating station or demonstration of peaking capability corresponding to installed capacity of the generating station through a successful trial run shall commence after seven days notice by the generating company to the beneficiaries and scheduling shall commence from 0000 hr after completion of trial run:*

(ii) *the generating company shall certify to the effect that the generating station meets key provisions of the technical standards of Central Electricity Authority (Technical Standards for Construction of Electrical plants and electric lines) Regulations, 2010 and Grid Code:*

(iii) *the certificate shall be signed by CMD/CEO/MD of the company **subsequent to its approval by the Board of Directors** in the format enclosed at Appendix VI and a copy of the certificate shall be submitted to the Member Secretary, (concerned Regional Power Committee) and concerned RLDC before declaration of COD:*

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b) The Grid Code

**“6.3A Commercial operation of Central generating stations and inter-State Generating Stations**

1. *Date of commercial operation in case of a unit of thermal Central Generating Stations or inter-State Generating Station shall mean the date declared by the generating company after demonstrating the unit capacity corresponding to its Maximum Continuous Rating (MCR) or the Installed Capacity (IC) or Name Plate Rating on designated fuel through a successful trial run and after getting clearance from the respective RLDC or SLDC, as the case may be, and in case of the generating station as a whole, the date of commercial operation of the last unit of the generating station:*

*Provided that:*

*(i) Where the beneficiaries / buyers have been tied up for purchasing power from the generating station, the trial run or each repeat of trial run shall commence after a notice of not less than seven days by the generating company to the beneficiaries/buyers and concerned RLDC or SLDC, as the case may be.*

*(ii) Where the beneficiaries / buyers have not been tied up for purchasing power from the generating station, the trial run or each repeat of trial run shall commence after a notice of not less than seven days by the generating company to the concerned RLDC or SLDC, as the case may be.*

*(iii) The generating company shall certify that:*

*(a) The generating station meets the relevant requirements and provisions of the technical standards of Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 and Indian Electricity Grid Code, as applicable:*

*(b) The main plant equipment and auxiliary systems including Balance of Plant, such as Fuel Oil System, Coal Handling Plant, DM plant, pre-treatment plant, fire-fighting system, Ash Disposal system and any other site specific system have been commissioned and are capable of full load operation of the units of the generating station on sustained basis.*

*(c) Permanent electric supply system including emergency supplies and all necessary instrumentation, control and protection systems and auto loops for full load operation of unit have been put in service.*

*(iv) The certificates as required under clause (iii) above shall be signed by the CMD/CEO/MD of the generating company and a copy of the certificate shall be submitted to the Member Secretary of the concerned Regional Power Committee and the concerned RLDC / SLDC before declaration of COD. **The generating company shall submit approval of Board of Directors to the certificates as required under clause (iii) within a period of 3 months of the COD.***

*(v) Trial run shall be carried out in accordance with Regulation 6.3A.3 of these Regulations.*

*(vi) Partial loading may be allowed with the condition that average load during the duration of the trial run shall not be less than Maximum Continuous Rating or the Installed Capacity or the Name Plate Rating excluding period of*



*interruption and partial loading but including the corresponding extended period.*

*(vii) Where on the basis of the trial run, a unit of the generating station fails to demonstrate the unit capacity corresponding to Maximum Continuous Rating or Installed Capacity or Name Plate Rating, the generating company has the option to de-rate the capacity or to go for repeat trial run. Where the generating company decides to de-rate the unit capacity, the demonstrated capacity in such cases shall be more or equal to 105% of de-rated capacity.*

*(viii) The concerned RLDC or SLDC, as the case may be, shall convey clearance to the generating company for declaration of COD within 7 days of receiving the generation data based on the trial run.*

*(ix) If the concerned RLDC or SLDC, as the case may be, notices any deficiencies in the trial run, it shall be communicated to the generating company within seven (7) days of receiving the generation data based on the trial run.*

*(x) Scheduling of power from the generating station or unit thereof shall commence from 0000 hrs after declaration of COD.”*

2. -----

3. *Trial Run or Trial Operation: Trial Run or Trial Operation in relation to a thermal Central Generating Station or inter-State Generating Station or a unit thereof shall mean successful running of the generating station or unit thereof on designated fuel at Maximum Continuous Rating or Installed Capacity or Name Plate Rating for a continuous period of 72 hours and in case of a hydro Central Generating Station or inter-state Generating Station or a unit thereof for a continuous period of 12 hours:*

*Provided that:*

*(i) The short interruptions, for a cumulative duration of 4 hours, shall be permissible, with corresponding increase in the duration of the test. Cumulative Interruptions of more than 4 hours shall call for repeat of trial operation or trial run.*

*(ii) The partial loading may be allowed with the condition that average load during the duration of the trial run shall not be less than Maximum Continuous Rating, or the Installed Capacity or the Name Plate Rating excluding period of interruption and partial loading but including the corresponding extended period.*

*(iii) Where the beneficiaries have been tied up for purchasing power from the generating station, the trial run or each repeat of trial run shall commence after a notice of not less than seven days by the generating company to the beneficiaries and concerned RLDC or SLDC, as the case may be.*

*(iv) Units of thermal and hydro Central Generating Stations and inter-State Generating Stations shall also demonstrate capability to raise load upto 105% or 110% of this Maximum Continuous Rating or Installed Capacity or the Name Plate Rating as the case may be.*

4. ----

5. ----

6. ----

7. *In the event of inconsistency between the provisions relating to trial operation and commercial operation as specified in Sub-Regulation 6.3A.1 to 6.3A.6 of these regulations and the provisions of the Central Electricity Regulatory Commission*



*(Terms and Conditions of Tariff) Regulations, 2014, or any subsequent amendment thereof, the provisions of these regulations shall prevail.”*

22. From the above-quoted provisions, it is observed that the Grid Code provides for the concept of self-certification by CEO/ MD/ CMD of generating company regarding completion of auxiliaries and Balance of Plant equipment. Further, to provide confidence to stakeholders about correctness of certificate of CEO/ MD/ CMD, the same needs to be approved by Board of Directors of the generating company.

23. The Commission observes that in terms of proviso (i) of Regulation 6.3A(1) of the Grid Code, BRBCL had given notice to its beneficiaries including the Petitioner and concerned RLDC on 25.12.2016 for trial run of Unit-I of the Project that was to start from 03.01.2017. In case of Unit-II of the Project, BRBCL had given trial run notice to its beneficiaries on 19.08.2017 for start of trial run which commenced from 23:00 hrs of 27.08.2017 and was up to 23:00 hrs of 30.08.2017. This satisfies the condition of seven days' notice as mandated by the 2014 Tariff Regulations as well as the Grid Code.

24. It is observed that the trial run period of Unit-I commenced from 00:00 hrs of 03.01.2017 and was up to 24:00 hours of 05.01.2017 i.e. for 72 hours. During trial run, Unit-I achieved maximum load of 268.61 MW and average load of 262.99 MW without any interruption. The average load (262.99 MW) during the duration of the trial run was more than Maximum Continuous Rating of the unit i.e. 250 MW. Further, Unit-I of the Project had achieved load more than 262.50 MW (105% of MCR of the unit) in various time blocks of 15 minutes during trial run. Unit-II of the Project has achieved maximum load of 264.95 MW and average load of 256.98 MW without any interruption. The



average load during the duration of the trial run is more than Maximum Continuous Rating and the load was more than 105% of MCR in various blocks of 15 minutes during trial run. Thus, Unit-I and Unit-II of the Project demonstrated Capability to achieve the average load more than MCR and also achieved load up to 105% of MCR as per provisos (i), (ii) and (iv) of Regulation 6.3A(3) of the Grid Code.

25. ERLDC vide its letter dated 13.01.2017 has certified the successful trial run of Unit-I. Based on BRBCL's certificate dated 14.01.2017, this unit was declared to have achieved COD w.e.f. 00:00 hours of 15.01.2017. The Eastern Regional Power Committee (ERPC) has accepted COD of Unit-I in its 129<sup>th</sup> OCC meeting held on 17.1.2017 and apprised CEA about the same. Further, Board of Directors of BRBCL in its 70<sup>th</sup> meeting dated 17.02.2017 had approved the certificate of CEO and accepted COD of Unit-I. The approval of the Board for this certificate was communicated to ERLDC vide letter dated 10.03.2017.

26. As regards Unit-II, ERLDC vide its letter dated 31.08.2017 has certified the successful trial run. Based on BRBCL's certificate dated 07.09.2017, this unit was declared to have achieved COD on 10.09.2017. Eastern Regional Power Committee (ERPC) has confirmed COD of Unit-II in its 137<sup>th</sup> OCC meeting held on 25.09.2017 and apprised CEA about the same. Further, Board of BRBCL in its 75<sup>th</sup> meeting dated 30.10.2017 had approved the certificate of CEO.

27. We note that with regard to approval of the Board of Directors for certificate to be signed by CMD/ CEO/ MD, the provisions of the 2014 Tariff Regulations and the Grid



Code are at variance. The 2014 Tariff Regulations requires that the certificate shall be signed by CMD/ CEO/ MD of the company subsequent to its approval by the Board of Directors, whereas, the Grid Code requires that the generating company shall submit approval of Board of Directors within a period of 3 months of COD. We note that in the instant case, the Petitioner has followed the provision of the Grid Code by submitting the Board approval within 3 months of COD. Further, as per Regulation 6.3A(7) of the Grid Code, in the event of inconsistency between provisions related to trial operation and COD, the provisions of the Grid Code shall prevail over provisions of the 2014 Tariff Regulations.

28. CEO, BRBCL vide certificates dated 14.01.2017 and 07.09.2017 for Unit-I and Unit-II respectively had certified that the Units are able to meet the requirements of the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 and the Grid Code and are capable of full load operation of the units of the generating station on sustained basis.

29. Board of BRBCL (having nominee Director from Railways) has approved the certificates of CEO, BRBCL on 17.02.2017 and 30.10.2017 for Unit-I and Unit-II respectively. BRBCL vide letters dated 10.03.2017 and 27.11.2017 respectively has submitted the same to ERLDC.

30. The Grid Code requires that if the concerned RLDC or SLDC, as the case may be, notices any deficiencies in the trial run, it shall be communicated to the generating company within seven (7) days of receiving the generation data based on the trial run.





In this regard, it has been observed that no communication from ERLDC to BRBCL was served to indicate any deficiency and rather ERLDC has certified successful trial run of each unit of NTPP. Further, COD of the units has been accepted by ERLDC, ERPC and CEA.

31. In view of above deliberations, we are of the view that BRBCL has followed the procedure as laid down in the Grid Code and the 2014 Tariff Regulations while declaring COD of Unit-I and Unit-II.

32. The issue is answered accordingly.

**Issue No.2: Whether the auxiliaries and Balance of Plant equipment of Unit-I and Unit-II were completed and capable of operating at full load capacity of the units on sustained basis, i.e. whether there was compliance of the units with respect to the CEA technical standards, including operation on sustained basis?**

33. The Petitioner has contended that Technical Minimum of 55% was not being maintained by Unit-I and Unit-II of the Project as per Regulation 6.3B of the Grid Code which indicates that all the auxiliaries and BoP equipment were not in operation.

34. Relevant extract of Regulation 6.3B of the Grid Code is as under:

***“6.3B – Technical Minimum Schedule for operation of Central Generating Stations and Inter-State Generating Stations***

*1. The technical minimum for operation in respect of a unit or units of a Central Generating Station of inter-State Generating Station shall be 55% of MCR loading or installed capacity of the unit of at generating station.*

*2. The CGS or ISGS may be directed by concerned RLDC to operate its unit(s) at or above the technical minimum but below the normative plant availability factor on account of grid security or due to the fewer schedules given by the beneficiaries.”*

35. We observe that Regulation 6.3B of the Grid Code is related with the technical minimum schedule for operation of Central Generating Stations and Inter State



Generating Stations. This clause does not mandate the generating station to declare DC above the technical minimum. All the generating stations are required to maintain minimum level of DC during a year in terms of the 2014 Tariff Regulations in order to claim fixed charges. If DC by a generating station is less than normative DC, the annual fixed charges of generating station will be reduced as per provisions of the 2014 Tariff Regulations and is, therefore, a disincentive for generating station.

36. The Petitioner has submitted some satellite images to contend that *“while one tippler was commissioned, there was no rail track beyond the second tippler. It means that not only is the CHP incapable of handling more than 1 rake at any given time, it is also not capable of offloading the coal from the rake using the second tippler.”* The Petitioner has also submitted that as per the satellite images, there were breaks in the conveyor system and based on the same the Petitioner has contended that the CHP was not complete.

37. In response, BRBCL has submitted that the part of the conveyor which is underground/ in the tunnel is being understood or thought by the Petitioner as a break in the conveyor system as produced by Petitioner in satellite images. BRBCL has also submitted that it is able to handle three(3) to four(4) rakes per day subject to availability of coal rakes. To clarify the position, BRBCL has submitted month-wise demand of coal rakes made by BRBCL and the number of rakes received by it.

38. We have considered the submissions. On basis of satellite images, the contention of the Petitioner that CHP was not ready, cannot be accepted since BRBCL



has submitted that some part of conveyor system was underground and in the tunnel, which has not been contested by the Petitioner. Similarly, contention of the Petitioner that CHP was incomplete on basis of coal rakes' handling is not acceptable since BRBCL has submitted that it could not receive the coal it demanded and, therefore, coal handled by it was lower.

39. In support of its contention that BRBCL was not ready with BoP equipment and auxiliaries, the Petitioner has relied upon Form-5D submitted in Petition No. 23/GT/2017 wherein BRBCL has provided the completion date of various packages such as Steam Generator, TG packages and BOP packages which are beyond COD of Unit-I and Unit-II. The Petitioner has also submitted a table which consists of the names of components/ packages, COD/ anticipated COD based on Form-5D along with the comments against each of these components/ packages and questioned whether it is even possible to commission these packages partially possible or not. The Petitioner has further submitted that no material particulars/ evidence has been placed on record by BRBCL in support of its contention that partially commissioned auxiliaries including BoP equipment were capable to run the commissioned units on a sustained basis. The Petitioner has contended that auxiliaries and BoP equipment such as Fuel Oil System, Coal Handling Plant ("CHP"), DM plant, pre-treatment plant, fire-fighting system, Ash Disposal system etc. are each a single unit and they cannot be commissioned in a phased manner. There is no basis to suggest that a half complete CHP/ DM plant, or a half complete Ash disposal system is capable of supporting the existing commissioned Units.



40. The Respondent No.1, BRBCL, in its submissions, has stated that these packages are being executed for all four units of the Project put together and the date of completion of Steam Generator, TG packages and BOP packages are the anticipated completion dates of respective packages which are in line with the anticipated COD of last unit of station. Responding to the Petitioner's specific contentions with respect to non-availability of BoP equipment and auxiliaries, the Respondent has submitted as under:

Sl. No.	Name of the Component/ Package	COD/ Anticipated COD	Petitioner's Contention	BRBCL's Reply
1	Coal Handling Plant	30.11.2018	It is not clear whether it is even possible to commission a CHP partially. Further, no date, material particulars, or evidence of such partial commissioning have been provided by BRBCL.	Readiness of CHP is proven by the delivery of coal to bunkers. This has been established again and again and on sustained basis. The Petitioner while being unable to obtain NOC and draw power is raising frivolous queries and undesirable litigation just to cover up its failures.  CHP is able to meet the requirements of running the Unit-I and Unit-II on sustained basis.
2	DM Plant	30.11.2018	It is not clear whether it is even possible to commission a DM Plant partially. Further, no date, material particulars, or evidence of such partial commissioning have been provided by	By repeatedly raising issues of BoP packages' readiness, the Petitioner is trying to divert the attention from the main problem i.e. non-availability of NOC by Railways to draw the power to other issues.



			BRBCL.	DM plant is able to meet the requirement of the running of Unit-I and Unit-II on sustained basis.
3	Infrastructure Civil works and Ash Dyke	31.07.2018	It is not clear whether it is even possible to commission an Ash Dyke in part. Further, no date, material particulars, or evidence of such partial commissioning have been provided by BRBCL.	Ash Dyke consists of 2 lagoons with lagoon-I over 305 acres and lagoon-II over 260 acres. BRBCL charged lagoon-I while lagoon-II is under construction. Lagoon-I is able to handle the ash discharge of Unit-I and Unit-II. When lagoon-I will be filled, ash will be discharged in lagoon-II and raising of lagoon-I will be done.  The Petitioner is unnecessarily raising issues without sufficient knowledge and is trying to cover up its failure to draw power from BRBCL due to less NOC.
4	Cooling Tower	18.12.2017	It is not clear whether it is even possible to commission a cooling tower partially. Further, no date, material particulars, or evidence of such partial commissioning have been provided by BRBCL.	BRBCL has 4 Cooling Towers, one corresponding to each of its Unit. Commissioning of Cooling Tower has been done well before its respective Unit commissioning.
5	Ventilation System	30.06.2017	It is not clear whether it is even possible to commission the ventilation system partially. Further, no	BRBCL has separate ventilation system for each Unit. For TG Hall, BC Bay, VFD/ESP Ctrl Room Building and Exhaust Fans are installed



			date, material particulars, or evidence of such partial commissioning have been provided by BRBCL.	in various off-site area buildings as a part of Vent. System.
6	Air conditioning system	30.06.2017	It is not clear whether it is even possible to part-commission the Air conditioning system. Further, no date, material particulars, or evidence of such partial commissioning have been provided by BRBCL.	BRBCL has separate Air Conditioning System for each unit. For Unit Control Room, VFD/ESP Ctrl Room Building, etc. and AC systems for various off-site area buildings.

41. In case of new projects i.e. generating stations/ units that have been put into commercial operation on or after 01.04.2014 (such as that of BRBCL), relevant provision related to capital cost as per the 2014 Tariff Regulations are as under:

**“9. Capital Cost:**(1) *The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.*

*(2) The Capital Cost of a new project shall include the following:*

*(a) the expenditure incurred or projected to be incurred **up to the date of commercial operation of the project;***

.....

*(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;*

**14. Additional Capitalisation and De-capitalisation:**

*(1) The capital expenditure in respect of the new project or an existing project 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) Undischarged liabilities recognized to be payable at a future date;”*



42. In view of the above-quoted provisions, we observe that various works of generating stations are expected to be completed up to date of commercial operation of the project i.e. COD of the last unit of the generating station and corresponding expenditure are allowed accordingly. Further, some work may be capitalized up to cut-off date (i.e. 31<sup>st</sup> March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut-off date shall be 31<sup>st</sup> March of the year closing after three years of the year of commercial operation) also.

43. As submitted by BRBCL, we also observe that some of the BoP equipment are common for two units or for all the four(4) units and have adequate redundancy for carrying out maintenance works while the units continue to generate power under normal operations. In such case, the commissioning of some of the BOP equipment and stand-by equipment are done progressively matching with unit/units as practice.

44. As brought out by BRBCL, we observe that the package of SG, TG, DM plant, Cooling tower, CHP etc. have more than one stream and each stream can cater to the load requirement of one or more units. Further, continuous operation of 72 hours is only possible when such streams can meet the requirement of individual units.

45. It is further observed that post commencement of power from Unit-I of the Project, NTPP was able to declare availability in the range of 140 MW to 227.5 MW on many days based on the availability of coal against the installed capacity of 250 MW.



Without BoP and auxiliaries being in place which can sustain the generation capacity corresponding to the commissioned unit, it is not possible to declare such availability. As stated by BRBCL, the low DC in comparison to the installed capacity has been due to low coal receipt, impact of heavy rains on coal movement or due to some forced outage.

46. Similarly, it is observed that after CoD of Unit-II i.e. 10.09.2017, NTPP was able to declare availability in the range of 400 MW to 420 MW during the month of December 2017 against the installed capacity of 500 MW. It has been submitted by the Respondent BRBCL that low DC during initial three months i.e. September 2017, October 2017 and November 2017 was due to low receipt of coal and forced outages. One unit was unavailable for 31 days i.e. from 30.10.2017 to 30.11.2017. It is also observed that during 2018 also, the position of DC was in the range of 437.5 MW for 70 days (From 31.01.2018 to 10.04.2018), 455 MW during 23.11.2018 to 05.12.2018, 13.12.2018 to 17.12.2018, 24.12.2018 to 19.02.2019 against installed capacity of 500 MW. This is not possible in absence of plant auxiliaries including BoP equipment. Such DC declaration is proof enough that plant auxiliaries including BoP equipment commensurate to two units were in operation.

47. It is observed that BRBCL has provided valid explanations for low DC post-COD of Unit-II. Low DC post-COD of Unit-II has been attributed to low coal receipts, shut down of one unit due to low coal stock and RSD of one unit due to low schedule. Low coal receipt during the periods of low DC is visible from the coal receipt data. A table





indicating the percentage coal receipt against the allocated coal from CIL based on CEA Monthly Coal Report has been submitted by BRBCL

48. Further, BRBCL has submitted that coal shortage was a regular phenomenon for almost all thermal power stations in country including NTPC's thermal power plants. BRBCL has further submitted that in view of acute coal shortage situation, its main promoter, NTPC, had also approached CIL and its subsidiaries for supply of coal to BRBCL for mitigating coal shortage.

49. BRBCL has also submitted that it has sent numerous emails to the Petitioner/ ERLDC asking them to give the optimum schedule to the units so that at least the technical minimum can be maintained by the units. Few representative emails written by BRBCL to the ERLDC/ the Petitioner during the relevant period have also been provided by BRBCL.

50. In the instant case, CEO, BRBCL has certified that the auxiliaries and BOP equipment are completed and Board of Directors has approved the same. We note that there is also a nominee Director of Railways on the Board of BRBCL. The Commission does not find any documents on record showing objections or reservations raised by the nominee Director of Railways on the Board of BRBCL on the issue of COD of units, while approving the same in the Board.

51. In view of above deliberations, it is held that the auxiliaries and Balance of Plant equipment capable of supporting the commissioned units were in service at the time of respective CODs of the units.



52. The issue is answered accordingly.

**Other issues**

53. The Petitioner has also contended that coal delivery system to the plant i.e. railway siding is not yet complete. The Respondent is transporting the coal from Nabinagar Railway Station to the plant site through trucks. We observe from submissions of BRBCL in Petition no. 23/GT/2017 that railway siding being commissioned by M/s RITES got delayed due to various reasons including land acquisition.

54. With regard to non-completion of railway siding, we note that the Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010 does not specify any technical standards in respect of Railway Siding. Further, commissioning of railway siding is neither explicitly required under the Grid Code.

55. Arranging coal and delivering it to the plant is the responsibility of the generator as per 2014 Tariff Regulations. The Generator is free to arrange coal from any source, including linked mines. The Generator is also free to deliver the coal to the project site through any mode of transportation, including railways. In case the generator is not able to arrange coal and transport it to the project site, the 2014 Tariff Regulations do not allow it to declare availability, which in turn, affects recovery of annual fixed charges as per 2014 Tariff Regulations.



56. The Petitioner has raised issues of time over-run being attributable to the Respondent BRBCL and low performance of equipment/ works by contractors of BRBCL. In our view, they are not relevant in deciding the issue at hand.

57. In terms of above discussions and findings, Petition No. 333/MP/2018 is disposed of.

Sd/-  
**(Pravas Kumar Singh)**  
Member

sd/-  
**(I.S. Jha)**  
Member

sd/  
**(P.K. Pujari)**  
Chairperson

