

**RECORD NOTE OF DISCUSSIONS OF MEETING HELD IN CEA ON 18TH & 19TH APRIL, 2018 TO REVIEW THE STATUS OF UNDER CONSTRUCTION THERMAL POWER PROJECTS OF CENTRAL, STATE AND PRIVATE SECTORS TARGETED FOR COMMISSIONING DURING THE PERIOD 2018-22.**

List of participants is annexed

Member (Thermal), CEA welcomed all the participants. The main agenda was to review status of under construction thermal power projects of Central, State and Private Sectors planned for commissioning during the period 2018-22 along with their work schedule. At the outset Member (Thermal) informed that from 1<sup>st</sup> April 2018 onwards, the capacity addition will take place only after achieving COD, while commissioning remains as a major milestone. He emphasized on timely completion of the project and on reducing the time lag between commissioning and COD to the maximum of 1-2 months. The gist of discussion is furnished below:

**I) STATE SECTOR PROJECTS:**

**A. GUJARAT, GUJARAT STATE ELECTRICITY CORPORATION LIMITED (GSECL):**

**A.1 Wanakbori TPS Extn., Unit-8 (1x800MW):**

BLU is expected by 15/05/18 and full load is expected in 10/18. There is delay of 4 to 6 months from the scheduled COD program of October '18 due to delay in civil works because of less manpower, non-readiness of DM plant due to payment issues to sub vendors by BHEL. Accordingly, project will be targeted during 2019-20. Member (Thermal) emphasized that meeting should be conducted quarterly with vendors, sub vendors etc by BHEL with GSECL as a participant so that bottlenecks can be handled in more efficient way which reduces the time and cost overrun. BHEL and GSECL agreed upon that.

**FGD implementation:** It was informed that Combined tender for FGD has been floated for Wanakbori, Ukai 500 MW and Sikka 2x250 MW; technical bid will open in May '18 and LOI is expected in December '18.

**B. TELANGANA, TSGENCO:**

**B.1 Kothagudem TPS, St.VII (1x800MW):**

stated that the Steam blowing has started on 16/04/18 and expected to be completed within a month time including the Normalizations. The Synchronization is expected in May '18. Commissioning is expected in 06/18. COD is targeted for July '18. Coal feeding for COD will be done through priority stream (ERH), as total completion of CHP is delayed.

Regarding FGD, negotiations have been completed to place order on nomination basis to M/s BHEL. The proposal has been placed before TSGENCO Board on 11/4/2018 for placing LOI. The order is being placed on M/s BHEL for providing wet lime based FGD with a completion period of 24 months from the date of LOI.

## **B.2 Bhadradri TPP, U-1 to 4 (4x270MW):**

TG erection start is expected in 05/18. Considering the present status of project, COD of one unit can be achieved by 12/18. The COD of remaining three units will be possible only in 2019-20. Regarding FGD, negotiations completed to place order on nomination basis to M/s BHEL. The proposal has been placed before TSGENCO Board on 11/4/2018 for placing LOI. The order is being placed on M/s BHEL for providing wet lime based FGD with a completion period of 24 months from the date of LOI, FGD installation cost is 0.4 crore /MW.

## **C. MADHYA PRADESH, MSPGCL:**

### **C.1 Shree Singaji TPP, Ph-II, U-3&4 (2X660 MW):**

Steam blowing was completed on 09/04/18 and Oil Synchronization is expected to complete by 25/04/18. Ash Handling Plant (M/s Indure) is yet to be completed and one stream will be ready by 25/05/18. Accordingly, full load of Unit-3 is expected by 25/06/18. COD is targeted by 31/07/18. MPGCL informed that CTO may be achieved by 23/04/2018. In case of unit-4: commissioning is expected by 10/18 and COD by 11/18.

Tender for wet type FGD will be issued by 15/05/18. Order placement is expected by 12/18.

## **D. ODISHA, OPGCL**

### **D.1 IB Valley TPP, U-3&4 (2x660MW):**

Due to some urgent engagement, OPGCL representative could not attend the meeting. Liaisoning officer of OPGCL posted in Delhi assured to send the latest status. As project is being executed by BHEL, it was informed by BHEL that COD of Unit-4 planned by December '18. COD of Unit – 3 is delayed and planned after 3 months of COD of Unit-4. FGD implementation could not be discussed.

## **E. RAJASTHAN, RRVUNL**

### **E.1 Chhabra SCTPP Extn; Unit – 5&6 (2X660 MW)**

Chhabra Unit-5 was commissioned in April '17, but its COD could not be achieved due to various reasons. EPC contractor is not able to maintain water chemistry and RGF needs to be rectified. AHP (M/s Indure) is not able to demonstrate ash evacuation at full capacity. COD of Unit-5 is planned by end April '18.

**Unit-6:** BLU for starting SBO is expected on 30.04.18. SBO completion is expected by end May, 2018. Oil synchronizations planned in 06/18 commissioning in 07/18 and COD in November '18. Tendering process for Railway siding is expected to be completed by June 2018 and work is expected to start in July 2018 with expected completion period of 3 months. Priority path is already operational.

For FGD, consultant has been appointed and combined NIT for Suratgarh, Chhabra and Kalisindh projects will be floated in July '18, and awarded by October '18.

## **E.2 Suratgarh SCTPP, Unit – 7 & 8 (2X660 MW):**

**Unit-7:** Representative from RRVUNL told that Steam blowing is expected to start by 10/05/18 and completion by 20/06/18. Synchronization is expected to complete in first week of July '18 and Full Load in August '18. Trial of coal handling priority route was completed on 08/04/18 and COD is targeted for September,2018.

**Unit-8:** Representative from RRVUNL told that for U-8 BLU completed on 28/09/17. BHEL informed that Synchronization is expected in 09/18, Full Load in 10/18 and COD in 12/18. COD targeted for 2019-20, though attempt will be made to complete this in 2018-19. BHEL requested CEA to help for impressing upon readiness of telemetry works which are essential for obtaining clearance for commissioning from NLDC. RRVUNL informed Suratgarh-Bikaner line is expected to be ready by end April '18, after which balance works of telemetry will be taken up.

For FGD, RRVUNL informed that they have appointed consultant and combined NIT for Suratgarh, Chhabra and Kalisindh projects will be floated in July '18, and awarded by October '18.

## **F. TAMILNADU, TANGEDCO**

### **F.1 Ennore EXPN. SCTPP, Unit-1 ( 1x 660 MW):**

Representative from TANGEDCO told that presently IDBI, the Banker for the EPC Contractor have initiated corporate insolvency resolution process against the contractor in NCLT, Hyderabad under IBC 2016 on 7.8.2017 to resolve huge outstanding debts. Under these circumstances work in the project has been stalled from Aug 2017. Termination notice has been issued to M/s. LANCO INFRA TECH Ltd vide letter dated 9.4.2018. The security deposit Bank guarantee has been invoked from the respective Banks and amount realized by TANGEDCO. Tender will be floated on "as is where is" basis to complete the balance work within 30 months after award.

Provision for installing FGD included in the EPC Contract.

### **F.2 Ennore SCTPP-SEZ, Unit-1&2(2X660 MW):**

Commissioning and COD of both units is planned in the year 2019-20. Due to Hon' High Court order work is held up at site from 10/15 onwards. M/s TANGEDCO has filed Special Leave Petition (SLP) in the Supreme Court of India, hearing/arguments completed on 08/02/16. However, judgment in favour of TANGEDCO came on 18/10/16 only and work at site commenced with effect from 02/11/16. Construction water supply available at site. Compaction Piling work for Chimney, Boiler Unit-I,II, T.G.Unit I,II, CT-I, II etc. completed. Material supply is in progress. Unit-I Boiler erection started on 15.09.17.

Regarding FGD, Opinion of Consultant sought for regarding the type of technology to be adopted for FGD and allied issues like water availability, disposal of Gypsum etc.

### **F.3 North Chennai TPP,St-III, Unit-1 (1x800 MW):**

Representative from TANGEDCO informed that Unit Commissioning and COD planned in the year 2019-20.

Regarding FGD, Opinion of Consultant sought for regarding the type of technology to be adopted for FGD and allied issues like water availability, disposal of Gypsum etc .

### **F.4 Udangudi SCTPP, Unit-1&2 (2X660 MW):**

Unit Commissioning and COD planned in the year 2020-21. TANGEDCO will finalize project consultant shortly. Site Office opened. Soil Investigation and Site levelling works in progress. Regarding FGD, Specification to be prepared by consultant

#### **F.5 Uppur SCTPP, Unit-1&2(2X800 MW):**

Contract for BOP packages finalized with M/s Reliance Infra. Project commissioning and COD planned in year 2020-21. Test piling works over. Main piling works yet to start. TANGEDCO will float open tender for FGDs of all projects by July '18.

#### **G. KARNATAKA, KPCL**

##### **G.1 Yelahanka CCPP, GT+ST (370 MW):**

Gas pipeline works upto Gas Conditioning Skid have been completed. It was mentioned that project completion was affected by delay in civil works caused by local issues. GT cranking is expected by June '18; HRSG Steam Blowing – August '18. Commissioning and COD by October '18.

#### **H. ASSAM, APGCL**

##### **H.1 Namrup CCPP(ST:36.15MW):**

Namrup Replacement Combined Cycle Power Plant (CCPP) comprises GT(62.25 MW)+ST(36.15 MW). After the incidence of GTG stalling on 06-11-2017, it was decided to send the GT rotor to BHEL-Hyderabad for detail check-up. The rotor was dismantled at NRPP site on 09/12/2017 and the rotor was dispatched on 16/12/2017 to Hyderabad. The rotor reached Hyderabad BHEL's factory on 30/12/2017. The Load Gear Box was dispatched from Mysore and reached at site on 08-03-2018 after rectification.

As per BHEL schedule the CCPP mode of operation will be started in mid Aug,'2018 and COD may be at the last week of Aug,'18.

#### **I. UTTAR PRADESH, UPRVUNL**

Representative from UPRVUNL, Lucknow office attended the review meeting on 18<sup>th</sup> April, 2018 and provided the following details on the status of progress of works at Harduaganj, Obra 'C', Jawaharpur & Panki Project sites.

##### **I.1 Harduaganj TPP, Extn.-II Unit-1 (1 x 660MW) :**

The Zero Date of the project is 08.09.2015 and is scheduled for commissioning on 07.01.2020 with COD on 07.06.2020. The cause of delay in the progress of works at project site is due to the late receipt of revised MOEF Order i.e. in December, 2016 (inclusion of FGD & SCR Systems). The Boiler & Bunker Foundation Civil work/handover completed and Boiler pressure part erection started. The TG Building Foundation Civil works along with civil works of BoP Area are also in progress. All other BoP Packages have been awarded to various contracting agencies  
**FGD Plant:** Date of Award(Actual) is 22.12.2016 to M/S Toshiba /M/S DPSI with date of commissioning on 07.01.2020

##### **I.2 Obra-C STPP, Unit-1&2 (2 x 660MW):**

The Boiler & Turbine Foundation work are under progress. The anticipated dates of commissioning are 21.08.2020 & 21.12.2020 with COD on 21.12.2020 & 21.04.2021 for Unit-I & Unit-II respectively. Installation of FGD included in EPC contract being executed by M/S Doosan Power Systems India Pvt. Ltd. (DPSI)

### **I.3 Jawaharpur STPP, Unit-1&2 (2 x 660MW):**

Boiler & Turbine Piling work under progress. The Date of Commissioning is 21.08.2020 & 21.12.2020 with COD on 21.12.2020 & 21.04.2021 for Unit-I & Unit-II respectively.

**FGD Plant:** Installation of FGD included in EPC contract being executed by M/S Doosan Power Systems India Pvt. Ltd. (DPSI)

### **I.4 Panki STPP, Unit-1 (1 x 660MW):**

The Zero Date is 31.03.2018. Date of Commissioning is 30.09.2021 with COD on 31.01.2022

**FGD Plant:** Installation of FGD included in EPC contract being executed by M/S BHEL

## **II. CENTRAL SECTOR :-**

### **A. NTPC's OWN PROJECTS:-**

Salient points discussed were:

#### **(i) Bongaigaon TPP, U-3 (1X250 MW):**

Unit-3 COD is targeted in October '18. FGD of Unit-1 is expected to be commissioned in March '19.

#### **(ii) Barh STPP-I, Unit-1,2&3 (3X660 MW):**

Capacity addition of Unit-1 is planned in August 2020.

#### **(iii) Darlipalli STPP, unit-1&2 (2X800 MW):**

Full Load of Unit-1 planned in December '18 and COD will be attempted in Q4 of 2018-19. (Not kept in CEA target for the year).

### **B. NTPC,s JOINT VENTURE PROJECTS:-**

#### **(i) BRBCL - Nabi Nagar TPP, Unit-3 & 4 (2X250 MW):**

Unit-3 COD scheduled in December '18 and Unit-4 COD in Q4 of 2019-20.

#### **(ii) NPGCL - New Nabi Nagar STPP, Unit-1,2&3 (3X660 MW):**

NTPC will attempt Unit-1 COD in Q4 of 2018-19. (Not kept in CEA target for the year).

### **C. NLC:-**

#### **C.1 Neyveli New TPP, Unit-1&2(2X500 MW):**

Representative from NLC informed that Considering the present status (BLU for Unit-1 is expected in September '18) and in view of new technology (Tower type Boiler) being used for the first time in India, project COD will be targeted in 2019-20.

Regarding FGD, the Bid opened on 23.11.2017. Techno commercial discussion complete. Order for FGD is yet to be placed.

## **C.2 Ghatampur TPP, Unit-1,2&3 (3x660MW):**

The site is fully mobilized and work is going on in full swing. The U-1 can be commissioned in the last month of the year 2019-20 and COD in the year 2020-21. U-2 can also be added to the capacity during the year 2020-21. The unit-3 will go the year 2021-22.

Regarding FGD Bids have already opened on 02.02.18. Techno commercial discussions also completed. LOA is expected in 06/18. FGD gestation period is 22 months from date of LOA for unit-1, thereafter 6months phase difference for each unit.

## **C.3 Barsingsar TPP Extn; unit-1(1x250MW):**

Project has been put on hold due to withdrawal of PPAs by DISCOMS.

## **C.4 Bithnok TPP, unit-1(1x250MW):**

Project has been put on hold due to withdrawal of PPA by DISCOMS.

### **III. PRIVATE SECTOR**

#### **A. TAMIL NADU, SEPC/MEIL**

##### **A.1 Tuticorin TPP, St-IV, Unit-1 (1x525 MW):**

Project commissioning can be achieved in January '19. It was informed by BHEL that this program of commissioning is not achievable as MEIL / SEPC is not opening LC for accepting materials for carrying out erection at parallel fronts.

Regarding FGD, in view of no prior experience of similar systems in India, they are yet to conclude the contract with the vendor.

#### **B. WEST BENGAL**

##### **B.1 Haldia TPP, Unit-3 (1X150 MW): (formerly known as India Power Corporation (Haldia) Limited)**

CEA raised issue as to how the project commissioning and COD of Unit-2 can be achieved the same day. Upon query from BHEL, it was informed that BHEL was not associated during commissioning of Unit-2 and arbitration proceeding have been initiated against India Power. Regarding FGD, tender for feasibility study invited.

#### **C. CHHATTISGARH**

##### **C.1 Binjkot TPP, Unit-2(1x300MW): SKS Power Generation (Chhattisgarh) Limited.**

The project has already been commissioned. M/s SKS Power Generation(Chhattisgarh) Limited has intimated that they are in discussion with their Lenders for funding of FGD. The developer has informed that they will install FGD on or before 31.03.2022.

##### **C. 2 Uchpinda TPP, Unit-4(1x360MW): RKM Powergen Pvt. Limited.**

This project is comprising of 4 units of 360 MW each. 3 units out of 4 units have already been commissioned. Unit-4 is ready for commissioning but due to non-availability of CTO commissioning is awaited.

M/s RKM Powergen Pvt. Ltd. has intimated that they are in discussion with several vendors and expected visit of one vendor is by next month.

## **D. MADHYA PRADESH**

### **D.1 Essar(Mahan) TPP, Unit-2(1x600MW): Essar Power MP Limited.**

This project is comprising of 2 units of 600 MW each. Unit-1 has already been commissioned. Unit-2 has already been synchronized, however due to power evacuation constraints it could not be commissioned. Now the transmission line is nearing completion and commissioning is expected by 06/18.

Regarding FGD, M/s Essar Power MP Limited have hired M/s Tractebel India Private Limited. M/s Tractebel India Private Limited is carrying out a feasibility study to identify the suitable technology to comply with the revised environmental norms.

## **E. CHHATTISGARH**

### **E.1 Akaltara TPP, Unit-4 (600 MW): KSK Mahanadi Power company Ltd.**

This project is comprising of 6 units of 600 MW each. 3 units out of 6 units have already been commissioned. Unit-4 commissioning is expected by 12/2018.

Regarding FGD, Feasibility study by M/s B&W is in final stage. The expected commissioning of FGD for unit-1 is 31.03.2022 and for other units with a phase difference of 3 months for each unit.

### **E.2. Lanco Amarkantak TPP, Unit-3 (2x660 MW): Lanco Infratech. Ltd.,**

The case of M/s. Lanco Infratech. Ltd., the EPC contractor has been admitted into NCLT on 07.08.2017 and work is stalled at site. The project is comprising of 2 units of 660 MW each and unit-3 progress is well ahead of unit-4. The overall progress of 84% is already achieved. For Unit-3 TG already boxed up and boiler is ready for light up. During the meeting M/s. Lanco Infratech Ltd., intimated that they are expecting to restart the work at site in October, 2018. The capacity addition of both the units would be possible only during the year 2019-20.

Regarding FGD M/s. LAPL has engaged M/s. Fitchner India for feasibility report. M/s. Fitchner India completed the draft report which is under finalization. Time required for implementation for FGD implementation is about 36 months from the date of award.

## **F. MAHARASHTRA**

### **F.1 Lanco Vidarbha TPP, Unit-1&2 (2x660 MW): Lanco Infratech. Ltd.**

The case of M/s. Lanco Infratech. Ltd., the EPC contractor has been admitted into NCLT on 07.08.2017 and work is stalled at site. Delays/non-disbursement by lenders towards project activities together with equity fund constraints in the past have delayed the projection implementation. Capacity is untied due to paucity of case-1 bidding opportunity. Overall progress of the project is 45.72%. Boiler structural erection completed. Restart of work at site is expected in October, 2018, thereafter, capacity addition would be possible during September, 2020.

Regarding FGD process will be similar to the Amarkantak project subject to respective project lenders approval.

## **G. ODISHA**

### **G. 1 Lanco Babandh TPP, Unit-1&2 (2x660 MW): Lanco Infratech. Ltd.,**

The case of M/s. Lanco Infratech. Ltd., the EPC contractor has been admitted into NCLT on 07.08.2017 and work is stalled at site. Ash pond pipe corridor and railway siding land acquisition is delayed due to process delay by district/local authorities and also due to non-release of debt funds by lenders. Transmission system was delayed due to land acquisition delay and other force majeure conditions. The overall progress of the project is 60%. Pressure part erection has started. The restart of work at site is expected in October, 2018. The capacity addition is expected in May, 2020.

Regarding FGD process will be similar to the Amarkantak project subject to respective project lenders approval.