

## **MINUTES OF THE 45<sup>th</sup> MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER & COAL MINING PROJECTS**

The 45<sup>th</sup> Meeting of the reconstituted EAC (Thermal Power) was held on 29<sup>th</sup> -30<sup>th</sup> October, 2015 in the Ministry of Environment, Forest & Climate Change at Teesta Meeting Hall, Vayu Wing, First Floor, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi-110003. The following members were present:

1. Prof. C.R. Babu - Vice Chairman (Acting Chairman)
2. Shri T.K.Dhar - Member
3. Shri J.L Mehta - Member
4. Shri N.K. Verma - Member
5. Shri A.K. Bansal - Member
6. Shri G.S. Dang - Member
7. Dr. S.D. Attri - Member (Representative of IMD)
8. Dr. Asha Rajvanshi - Member (Representative of WII)
9. Shri N.S. Mondal - Member (Representative of CEA)
10. Shri B.B. Barman - Member Secretary

Dr. Ratnavel and Dr. S.S. Bala (Representative of CPCB) could not be present. List of other participants is at **Annexure-I**.

### **Item No.1: CONFIRMATION OF THE MINUTES OF THE 43<sup>rd</sup> EAC (LAST) MEETING.**

No comments/observations were received and therefore, the Minutes of the 43<sup>rd</sup> EAC (Thermal Power) meeting held on 18<sup>th</sup> September, 2015 were confirmed.

### **Item No. 2: CONSIDERATION OF PROJECTS**

#### **2.1 Expansion of Ramagundam STPP by addition of 2x800 MW (Stage-IV, Telangana STPP, Phase-I) at Village & Mandal Ramagundam, District Karimnagar, Telangana by M/s. NTPC Ltd. - reg. EC**

The Project Proponent (PP) along with their environmental Consultant, Vimta Labs, Hyderabad made a presentation and *inter-alia* provided the following information:

- (i) ToR for carrying out EIA study and preparation of EMP for the above proposal (2x660 MW) was accorded by the Ministry on 16.09.2014 and an amendment of ToR for revision of capacity to 2x800 MW was accorded on 12.12.2014. The baseline data for EIA/EMP was collected during December, 2014-February, 2015. The final EIA/EMP report, after conducting Public Hearing on 23.05.2015, was submitted to the Ministry for consideration of environmental clearance.
- (ii) The land requirement for the proposed TPP would be about 635 acres (main plant- about 235 acres and ash pond-about 400 acres) and will be accommodated within the existing Ramagundam Thermal Power Station. No R&R issues are involved. There are no ecologically sensitive areas such as Biosphere Reserve, National Park and Wildlife Sanctuary within a radius of 10 km from the site. River Godavari flows at a distance of about 4 km from the project site. The nearest railway station, Ramagundam is about 5 km from the plant which lies on the main Kazipet - Ballarshah broad gauge railway line

of South Central Railway. The cost of the expansion project is about Rs. 9,954.20 Crores, which includes about Rs. 834.81 crores for environmental protection measures.

- (iii) The coal requirement will be 8 MTPA based on GCV of coal between 3,200-3,900 Kcal/kg Ministry of Coal (MoC) vide letter dated 10.09.2015 has allotted Mandakini-B Coal Mine block in Odisha to the proposed TPP. To expedite the process of project implementation, MoC vide its letter dated 21.09.2015 has accorded in-principle approval for grant of tapering linkage from Coal India Limited (CIL) for the proposed TPP as an exceptional case till the operation of Mandakini-B coal block. The sulphur and ash content in the coal will be 0.5 % (max) and 34-43 % respectively. The transportation of coal will be by rail.
- (iv) The water requirement of the proposed TPP is 5,825 cum/hr (about 58 Cusecs), which is proposed to be drawn from Sreepada Yellampally barrage on River Godavari at a distance of about 14 km from proposed site. Govt. of Telangana vide letter dated 31.03.2015 has accorded commitment for 60 Cusecs (2.0 TMC) of water from Sreepada Yellampalli barrage for the proposed TPP. COC of 5.0 shall be adopted. The plant would be designed on zero discharge concept in normal circumstances.
- (v) The detailed Hydro-Geological study was carried out through Multi-Tech Services, Hyderabad and the report is enclosed as Annexure-XVI in the final EIA report. As per the said report, the stage of ground water development including existing industrial utilization in the study area is 48.92%. The long term water level monitoring data of CGWB observation well data at Ramagundam and Mancherial in the study area indicate a marginal increasing trend of pre-monsoon or post-monsoon ground water levels. The proposed project does not envisage any drawl of ground water. As the required water from the Yellampalli project is very less compared to the availability, no adverse impact on surface water is envisaged.
- (vi) One Twin flue stack of 275 m height shall be installed. The base-line monitoring was done during December, 2014-February, 2015. The maximum base line concentrations of PM, SO<sub>2</sub> and NO<sub>x</sub> are 68.5 µg/m<sup>3</sup>, 23.5 µg/m<sup>3</sup> and 32.8 µg/m<sup>3</sup> respectively. The maximum incremental concentrations of PM, SO<sub>2</sub> and NO<sub>x</sub> are 0.52 µg/m<sup>3</sup>, 34.22 µg/m<sup>3</sup> and 13.04 µg/m<sup>3</sup> respectively. The resultant Ground Level Concentrations (GLCs) of these parameters will be within the National Ambient Air Quality Standards (NAAQS).
- (vii) The ash generation will be 3.44 MTPA. Ash utilization/management shall be done as per MOEF Gazette Notification on utilization of ash dated 03.11.2009. Ash utilization plan will be implemented for 100% extraction and utilization of dry fly ash along with suitable collection, storage, segregation, loading, transportation and disposal etc. facilities. Dry form fly ash shall be pneumatically transported to fly ash silos. Loading this ash in tankers/ bulkers and also into rail wagons. Fly ash shall be taken by High Concentration Slurry Disposal system (HCSD) and bottom ash through Wet Slurry Disposal system for ultimate disposal to ash disposal area. Expressions of interests for using ash from the proposed TPP were received from Orient Cement, Kesoram Cement and Vasavadatta Cement plants.
- (viii) Public Hearing/Public Consultation for the project was conducted by Telangana SPCB on 23.05.2015. The issues raised in the PH pertained to increasing the funds allocated under CSR, employment to the locals & land oustees, adopting the affected villages and provide basic amenities like water, roads, education, health etc., green belt development, control of pollution, facilitating better infrastructure, to construct women society

building and underground drainage system in Annapurna colony, to facilitate an agreement for establishing an ESI hospital, medical college, school in collaboration with SCCL & NTPC. The Committee discussed the issues raised in the Public Hearing and the reply of the PP.

2. After detailed deliberations, the Committee sought the following information/documents which was either not available in the EIA/EMP report or not appropriate. Accordingly, the proposal was **deferred**.

- I. Commitment and Action Plan for compliance to the Ministry's Notification dated 02.01.2014 regarding use of coal with ash content not exceeding thirty-four per cent, on quarterly average basis.
- II. Detailed note on rise in temperature in consultation with IMD. The data shall be as old as possible.
- III. Certification from the concerned authority that the site is not located on economically feasible mineable mineral deposit (ToR 15).
- IV. Occupational Health and epidemic health disorders survey of the study area.
- V. The Quality of effluent from ash pond vis-à-vis the River water quality. The impact on agricultural fields in terms of heavy metal in food chain and ground water/soil.
- VI. Plan for recycling and reuse of ash pond effluent after minimizing the discharge of cooling water blow down etc. to the ash pond. No untreated ash pond effluent shall be discharged.
- VII. Detailed report on water drawl, water channels and diversion duly certified by the Irrigation & Flood Control Department of the State Government.
- VIII. Satellite map showing the existing green belt. Revised plant layout by maintaining thick three-tier green belt in minimum 33% area.
- IX. As committed, revised CSR action plan for the proposed expansion with a minimum budget of Rs. 20 Crores (only for the construction phase).
- X. Budgeted Action plan for the Public Hearing issues.
- XI. Reply to the representation received by the EAC, a copy of which was provided to the PP.
- XII. Revised AAQ modeling results.
- XIII. Commitment for installation of FGD.
- XIV. Detailed document/permission for tapering coal linkage.
- XV. All the discrepancies, if any, in the EIA/EMP shall be addressed and submitted.

**2.1(A) Patratu Super Thermal Power Project, Phase-I (3x800 MW) Patratu, District Ramgarh, Jharkhand by M/s. Patratu Vidyut Utpadan Nigam Ltd. (PVUNL)- reg. ToR.**

The PP made a presentation before the Committee. It was noted by the Committee that, Patratu Vidyut Utpadan Nigam Ltd. is a Joint Venture (JV) formed between NTPC Ltd. and Jharkhand Bijli Vitran Nigam Ltd. (JBVNL). However, the handing over and take over from the existing Authority, M/s. Patratu Energy Ltd. is not yet done. Further, the PP has no clear picture of the proposed site. The PP informed that ToR for 2X660 MW TPP was accorded for the same site on 09.05.2013 and the project will not come up. However, the Ministry was not informed of the same/requested for withdrawal of ToR and no representative from Patratu Energy Ltd. was present.

2. In view of above, the proposal was **deferred** and shall be considered only after submission of all the requisite information/documents. M/s. Patratu Energy Ltd. shall also request the Ministry for withdrawal of ToR accorded to 2x660 MW TPP as the above proposed TPP seems to be in the same location.

## **2.2 2x660 MW Supercritical imported coal based Thermal Power Plant at Villages Ottapidaram & Sillanatham, Taluk Ottapidaram, District Thoothukkudi, Tamil Nadu by M/s KU Thermal Power Pvt. Ltd.- reg. reconsideration of EC.**

The proposal was earlier discussed in the 34<sup>th</sup> Meeting of the EAC (Thermal) held during 29<sup>th</sup> -30<sup>th</sup> April, 2015 the minutes of which are as under:

**Quote** "The PP along with their environmental consultant, Vimta Labs Ltd., Hyderabad made a presentation and inter-alia provided the following information-

1) The ToR for preparation of EIA/EMP report was accorded on 28.12.2011 and the validity was extended till 27.12.2015. The EIA/EMP report, after conducting Public Hearing, was submitted to the Ministry for consideration of environmental clearance.

2) The optimized land requirement for the project is 750 acres of which 725 acres has already been acquired. There are no R & R issues involved as there are no homestead outstees in the project area and the land has been purchased through mutual consent. The land is a dry & barren land. The Tahsildar of Ottapidaram Taluk certified that the project site does not come under ayacut area of any irrigation project. The project site does not involve any forest land, does not fall under the Kaveri Basin and is located at a distance of about 11 km from the sea. There is no grazing land and common property resources within the project site. There is no National Park, Sanctuary, Elephant/ Tiger Reserve (existing as well as proposed), migratory route / wildlife corridor, ecological sensitive location, archaeological monument, place of tourist interest and defense installation within 10 km radius of the project site. Chalikulam Reserve Forests is at a distance of 4.3 km, NW. The estimated cost of the project is Rs. 6600 Crores of which the cost towards environment protection measures is Rs. 418 Crores. The budget towards CSR is Rs. 20.25 Crores with a recurring budget of Rs.1.5 Crores per annum.

3) An application was filed with Ministry of Coal for domestic coal which is under process. Imported coal shall be used till indigenous coal is made available. FSA has been made with M/s PT Krishapusaka Sejati for providing 100% imported coal from Indonesia. The imported coal requirement is 3.25 MTPA. The EIA /EMP has been prepared for three different sources of coal like imported coal (Indonesia), blended coal (70% domestic + 30% imported) and domestic coal (MCL mines). Coal will be shipped to Thoothukudi Port and transported to rail network to Tattaparai, which is about 7 km from the project site. From Tattaparai, the coal will be transported by road/rail network to the plant.

- 4) High efficiency ESP will be installed to control particulate emissions < 50 mg/Nm<sup>3</sup>. One bi-flue stack of 275 m height and low NO<sub>x</sub> burners will be installed.
- 5) The base-line monitoring was done during Oct-Dec, 2011. The base line concentration for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> and Hg is in the range of 24.5-32.6 µg/m<sup>3</sup>, 9.2-11.3 µg/m<sup>3</sup>, 7.9- 9.9 µg/m<sup>3</sup> and < 0.01 µg/m<sup>3</sup> respectively. The incremental concentration of PM, SO<sub>2</sub> and NO<sub>x</sub> in the worst case scenario is 0.53 µg/m<sup>3</sup>, 38.64 µg/m<sup>3</sup> and 15.14 µg/m<sup>3</sup> respectively. Final GLC of all these will be within the limits prescribed in ambient air quality.
- 6) The water requirement of 60 m<sup>3</sup>/h will be met from desalinated water supplied by M/s South Ganga Water Technologies Private Limited. Water supply agreement has been signed with South Ganga Waters Technologies Private Limited on 9.11.2011. Air Cooled Condensing (ACC) System and induced draft cooling towers for recirculation water are proposed. M/s South Ganga Water Technologies Pvt. Ltd. has obtained the CRZ clearance for the desalination plant and the water shall be sourced from them. The ETP and STP will be based on Zero discharge concept. Marine impact is not applicable as the site is land locked.
- 7) Fly ash generated from the project will be supplied to the nearby cement manufacturers and 100% fly ash utilization will be done from 4th year onwards & in compliance with the fly ash utilization Notification. MOU has been signed on 19.11.2014 with My Home Industries for lifting of flyash. High Concentration Slurry Disposal (HCSD) system will be adopted for ash disposal. HDPE/LDPE liners will be provided for the ash pond in order to control any seepage from ash pond water into groundwater. Green belt will be developed of 50-100 m width all along the plant & ash pond.
- 8) Public hearing/public consultation for the project was conducted by Tamil Nadu Pollution Control Board on 25.07.2014. It was noted that the issues raised in the public hearing pertained to ground water pollution & kidney failure, welcoming the project due to more employment opportunities, providing employment to locals, installation of FGD, water scarcity infrastructure development of the area, CSR activities, non conducting of the PH at the project site etc. The Committee discussed the issues raised in Public Hearing and the reply of the Project Proponent.

2. After detailed deliberations, the Committee felt that area for the ash pond should be reduced. 25 acre which is yet to be acquired may be forgone. The plant shall be constructed in a way that surface water drainage is not altered and no ground water should be extracted. The Committee sought the following information which was either not available in the EIA/EMP report or was given wrong. Accordingly, the proposal was deferred.

- (i) The ash content in blended coal is given more than the domestic coal. The Sulphur Content is given the same for both domestic and imported coal. These needs to be relooked into. The ash content has to be less than 34%.
- (ii) The base-line monitoring was done during Oct-Dec, 2011, which is a rainy season in the area. Further, the data is more than three years old. Hence, the monitoring shall be re-done during non-monsoon season and cumulative impacts (including those of proposed industries, TPPs etc. in the area) shall be assessed. The data may corroborate with other data available with the existing industries and data of proposed projects. Prediction of air quality may be done after incorporating their data too. The Sulphur content used for prediction modeling shall be of the worst case scenario. List of other industries, both existing and proposed may be given. Protocol for ambient Hg monitoring may also be given.

- (iii) Since there are variations in sea and land breeze during the day, the monitoring result may be reported 8 hrly.
- (iv) This would change the data and EIA report too. However, the Committee felt that there is no need to carry out the Public Hearing again. To make the Public Aware, public notice/s in the leading newspapers including local language informing the public about the revised EIA/EMP with revised AAQ data etc. should be published. The comments from the public should be obtained giving a time period of minimum 15 days after the public notice is published. The revised EIA/EMP report should be placed on the website for public information.
- (v) Breakup of the proposed project area specifying storage areas etc.
- (vi) Coal storage area and quantity shall be re-looked into and submitted.
- (vii) Action plan for establishment of railway siding for coal transportation. Alternatively, a separate study may be carried out for impact of transportation of coal by road in case of delay in commissioning of railway siding.
- (viii) Details of proposed CDM benefits as mentioned in the EIA report.
- (ix) Details of number of Salt pans including any closed one and the distance of nearest salt pan from the site. These may be given on a site map.
- (x) Status of CRZ clearance and CMFRI approval for the Desalination plant of M/s South Ganga Water Technologies Pvt. Ltd. Ensure that impact on Marine ecology has been taken into account by the Supplier.
- (xi) Alternate source of water in case of any breakdown or close down of the de-salination plant from where water will be obtained.
- (xii) Details of COC for recirculation of water.
- (xiii) Storm water management system.
- (xiv) Commitment for non alteration of the surface drainage pattern of the area and for not extracting ground water.
- (xv) In the EIA report, it is mentioned that fly ash shall be used as fertilizer. This may be corrected as usage of fly ash as fertilizer is not allowed.
- (xvi) Clear and discrete fly ash utilization plan.
- (xvii) Copies of tie up with cement plants.
- (xviii) Optimized land area for ash pond.
- (xix) Action plan for provision of drinking water to the locals. In the Public Hearing, it is mentioned that people in the project area are suffering from Kidney problem. Plan to take care of the same.

- (xx) Population of fishermen in the area and affect on their livelihood.
- (xxi) Revised detailed response and Action plan with budgetary provisions for issues raised in PH.
- (xxii) Justification for the venue for holding PH at Collectorate instead of the project site.
- (xxiii) Details of employment proposed for locals.
- (xxiv) Area of the project is TB prone. Pretreatment of TB may be included in the CSR.
- (xxv) Vision Document given in EIA report does not provide any vision.

All the discrepancies in the EIA/EMP report shall be rectified and the revised EIA/EMP incorporating the above shall be submitted along with the revised Form-1. **Unquote”**

2. On submission of the above information, the proposal was placed before the EAC, wherein the PP made a presentation along with their environmental consultant, B S Envitech Pvt. Ltd., Secunderabad and inter-alia provided the following information. The committee noted that the proposal at present is only being considered based on 100 % imported coal due to lack of firm coal linkage for the domestic coal.

- (i) The maximum sulphur and ash contents in the imported coal shall be 0.5% and 10% respectively. Baseline monitoring was redone during May-July, 2015 which is non rainy season. Cumulative Impact Assessment was also carried out and the resultant GLCs of the parameters will be within the NAAQS. Wind Rose showing 8 Hourly Wind Pattern are presented.
- (ii) Public notices were published on 19-09-2015 in the local newspapers Tamil (Dinamani) and English (Indian Express)) about the Revised EIA/EMP with revised AAQ data for offering comments giving a time period of 15 days. The Revised Final EIA Reports were made available for comments of the public at District Collector Office, Thoothukudi, Village Panchayat-Sillanatham and Ottipidaram, District Industries, Thoothukudi, Tamil Nadu Pollution Control Board, Thoothukudi & Chennai and the website of KUTPPL for public information. No comments/objections/views of the Public were received.
- (iii) The total project area is 750 acres of which the plant area, greenbelt and MGR & township are 440 acres, 160 acres and 150 acres respectively. 36 acres is earmarked only for Coal Storage and this area will accommodate coal of minimum 30 days requirement.
- (iv) Coal is proposed to be received at Thoothukudi Port and then transported to Project site by Railway. The railway siding network of the Project would be connected at a suitable location on proposed new line connecting Thoothukudi to Madurai. Ministry of Railways have already sanctioned the railway line and is about to commence. The Right of Way for Railway line and Transmission corridor will be obtained after receipt of Environmental Clearance. In case, there is delay in completion of main railway line connecting Thoothukudi Port to Madhurai, an alternate study has been carried out by M/s Jeeva Management & Financial Consultant Private Limited for transport of coal by road. 600 Trucks/day (135 PCUs/Hr) will be required for road transportation of coal. The existing road comprises both rigid & flexible pavement and already the trucks are

plying on these roads. Coal movement to the TPP would be carried out with small repairs/ modifications, wherever required. The present traffic is 900 PCUs/Hr and the additional traffic due to the TPP would be 135 PCUs/Hr. Indian Road Congress (IRC) Norms for carrying capacity for 4 lane road is 3600 PCUs/Hr. The requisite environmental protection measures would be adopted.

- (v) The nearest salt pan is at a distance of 7.8 km and from 7.8 km, the salt pans extend towards the sea in Eastern direction. Total number of operating salt pans in 10 km radius are 1075 (approx.) in an area of 730 ha.
- (vi) The water requirement for the proposed TPP is 6.24 MLD and will be sourced from Desalination plant of South Ganga Water Technologies Private Limited (SGWTPL), which is operating 3 MLD Desalination plant. All necessary clearances including CRZ clearance vide letter dated 16.02.2012 was obtained for enhancing the capacity to 10 MLD. Marine Environmental Impact Assessment and Dispersion Study for the desalination plant prepared by Institute of Ocean Management, Anna University, Chennai was submitted to MoEF&CC while obtaining the CRZ clearance. Water reservoir in an area of 25 acres with a storage depth of 2 m (30 days requirement) is proposed to meet any contingency including shutdown of the Desalination plant. The project is based on Air Cooled Condenser System. COC considered for auxiliary cooling is 5.
- (vii) Storm water network for collection of rain water was plotted on the plant layout and presented. Rain water harvesting pits are proposed. No perennial nallas are existing within the project site. Surface drainage pattern of the area will not be altered. No ground water extraction is proposed.
- (viii) The fly ash generation with imported coal will be 0.2 MTPA. The PP has already entered into MoUs for off take of fly ash with M/s. My Home Industries Ltd. (0.33 MTPA max.) and M/s. Ramco Cements Ltd. (0.34 MTPA max.). Additionally the PP is also exploring the possibility of exporting fly ash and tie-up with the other industries. Unutilised ash will be disposed to the ash dyke proposed in an area of 100 acres. The PP will abide to the Fly Ash Utilisation Notification and shall utilised 100 % fly ash from 4<sup>th</sup> year.
- (ix) Socio economic study was conducted by Dr. D V L N V Prasad Rao, Ex. Dy. Director, NIRD (QCI approved). Primary survey was conducted in villages. Need based assessment has been carried out to list out various needs of the villagers. The budget allotted for CSR activities is Rs. 20.25 crores in the areas of infrastructure, lively hood & training, health, education and sports. The recurring budget for CSR would be Rs. 1.5 crores per annum during the operational phase.
- (x) Primary survey and data collected from Govt. hospital medical records of Ottapidaram Taluk reveals that there were no instances of Kidney ailments. It is proposed to provide R.O based potable drinking water facilities with a budget of Rs 195 lakhs and covering an area of 5 km radius from the date of start of construction of Power Plant. The same shall be implemented phase wise covering five villages in each year.
- (xi) No Fishermen community/villages are located in 10 km radius (Source: Primary data). Two villages of Fishermen are located beyond 10 km radius towards E direction on coast of Bay of Bengal i.e. Thiruvaikulam-10.2 km-E and Ino-nagar-10.5 km-E. Discussions were held with the fishing community people. The PP has earmarked Rs.

125 Lakhs towards Fishermen Welfare Fund even though the fishermen villages are located beyond study area.

- (xii) Revised detailed response and Action plan with budgetary provisions for issues raised in Public Hearing is presented. Public Hearing Venue was fixed by District Collector, Thoothukudi. Normal practice at Thoothukudi is to conduct all Public Hearings at District Collectorate Office. Details of two projects whose Public Hearings were conducted at collector office in the last one year are presented.
- (xiii) The employment during peak construction and operation would be 2000 (peak) and 575 respectively. Preference would be given to the persons from whom lands have been acquired based on the suitability i.e. for skilled and unskilled jobs. Balance employment will be given to locals based on suitability and imparting training. Indirect employment would be provided to local people for utilizing their expertise in different areas like horticulture, site clearing (for power plant construction), etc.
- (xiv) 75 TB Cases (Adult-Male-37, Female-33; Child-Male-4, Female-1) were reported from Ottapidaram Taluk (primary data). Based on Primary Survey, TB was mainly observed from persons involved in Sheep farming. As part of CSR activity, the PP will provide support to the TB prone individuals by financial support (Budget allotted-Rs 50 Lakhs) to the patient hospitalized for pre-treatment evaluation and treatment initiation. All costs will be borne by the PP for Pre-treatment evaluation which includes a thorough clinical evaluation. Patients identified/prone for TB will be provided regular treatment. The PP will provide awareness to locals to prevent TB through campaign and screening tests in association with NGOs working in the area of TB eradication.

3. As sought by the Committee, the PP submitted AAQ modeling for the seasons other than that of the revised EIA/EMP and letters from the Port & Railways regarding the feasibility of handling & transportation of coal. The cumulative AAQ modeling was carried out for the winter and summer seasons of 2015 and resultant GLCs of the parameters in all the seasons will be within the NAAQS. V.O. Chidambaranar (VOC) Port Trust vide letter dated 02.11.2015 confirmed that the necessary infrastructure for handling coal requirement of 6.05 MTPA for the proposed TPP will be available as the port is presently developing two deep draught coal berths with the capacity of 9.15 MTPA. The Southern Railway vide letter dated 05.11.2015 has stated that the proposed TPP is approximately 9 km from the existing railway station at Tattapparai which is in between Milavattan – Maniyachchi section. The proposed siding line can be taken off from Tattapparai which will be the nearest point. However, the Milavattan-Aruppukkottai-Madurai proposed new line work is in the initial stage and after finalizing the alignment of new line, the feasibility of connectivity of siding line can be studied.

4. *The Committee has received two emails on the proposed TPP. The issues raised and the reply of PP to the same was examined. The Committee opined that these allegations are not factual.*

5. *Based on the information and clarifications provided by the Project Proponent and detailed discussions held on all the issues, the Committee recommended the project for environmental clearance subject to stipulation of the following additional specific conditions:*

- I. *The PP shall make all efforts to commission the railway siding along with the TPP so that road transportation of coal can be avoided.*

- II. *The Sulphur and ash content of coal shall not exceed 0.5% and 10 % respectively. In case of variation of quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to the environmental clearance.*
- III. *As committed, a minimum amount of Rs. 20.25 Crores shall be earmarked as capital cost for CSR activities and Rs.1.5 Crores/annum or the amount as per the CSR policy of GOI whichever is higher shall be earmarked as recurring cost per annum till the operation of the plant.*
- IV. *Regular screening/check up of locals specifically for TB shall be done and requisite assistance for prevention/treatment shall be provided.*

### **2.3 2x270 MW Thermal Power Plant at Tehsil Goindwal Sahib, District Taran Taran, Punjab by M/s GVK Power (Goindwal Sahib) Ltd. -reg. amendment of EC.**

The proposal was earlier discussed in the 18<sup>th</sup> Meeting of the EAC (Thermal) held during 31<sup>st</sup> July & 1<sup>st</sup> August, 2014 the minutes of which are as under:

**“Quote 1.** The PP along with their environmental consultant, Bhagavathi Ana Labs Pvt. Limited, Hyderabad made a presentation and provided the following information. EC for 2x300 MW (600 MW) for Goindwal Sahib TPP was accorded on 09.05.2008 and an amendment for revision of plant configuration to 2x270 MW was accorded. The validity of EC has been extended on 19.02.2014 for a further period of five years, i.e., till 08.05.2018. The unit 1 & 2 were synchronized to grid on 06-07-2013 and 04-03-2014 respectively. Greenbelt development activities are in progress with 50 m width all along the boundary and 100 m around the ash pond area. About Rs 3.43 Crores have been spent on greenbelt activities till date. Under CSR activities, houses were provided for economically weaker section at Manikhera Village.

2. As per the EC, coal will be sourced from captive coal mines in Tosikud North Sub-Block in Jharkhand by rail and that the Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 34% respectively. However, as the mine development has been delayed due to reasons beyond control of the company, the PP proposes to use imported coal from South Africa (2.28 MTPA or 130.32 tph/unit at 100% PLF with 30% of maximum ash content and 0.8% of maximum Sulphur content) as a stop gap arrangement to commission the plant operations. It is also proposed that in case Ministry of Coal (MoC) allocates tapering coal linkage from CIL (177.38 tph/unit at 100% PLF with 37% of maximum ash content and 0.5% of maximum Sulphur content) through MOU as per the recommendations from Govt. of Punjab and SLC, the PP would like to use the same. Once the Tosikud North Sub-Block captive mine becomes operational, the coal from same will be used.

3. The imported coal will be sourced from Richards Bay, South Africa by sea route till Kandla port, Gujarat and then by trains to the coal storage yard at the plant complex. FSA has been signed on 12.06.2014 with M/s Coal and Oil Company DMCC, UAE for supply of 2.0 MTPA of imported Coal to the project. The PP has signed Coal Transportation Agreement on 11.12.2008 with ECR for development of private railway siding near Khadur Sahib railway station on Beas-Tarn Taran section. The Work Order for handling all shipment and delivering of imported coal to power plant site has been given to M/s Coastal Energy Pvt. Ltd. Meanwhile, tapering coal linkage recommendation has been made from the Chief Minister, Govt. of Punjab to the Minister of State for Power, Coal & NRE, GoI. SLC also recommended allotment of 2.4 million tonnes of tapering coal on MoU basis as the plant is ready for coal firing. The tapering coal from CIL will be transported through rail.

4. Impacts (air environment and ash generation) due to change in type of coal are anticipated during operational phase due to change in fuel quality and quantity. The resultant SO<sub>2</sub> concentrations due to use of imported and tapering coal will be 33.2 µg/m<sup>3</sup> and 32.4 µg/m<sup>3</sup> as against 31.3 µg/m<sup>3</sup> due to use of captive coal. The ash generation due to change in fuel from Indigenous coal (Case-1) to Imported coal (Case-2) will reduce from 0.82 MTPA to 0.68 MTPA i.e. a decrease in total ash generation of 0.14 MTPA. For tapering coal, the ash generation will increase by 0.32 MTPA. The PP is committed to comply with the Fly Ash Utilization Notification and as amended thereof. The ash will be utilized in various construction materials to the maximum extent and 100% utilization will be achieved. The PP has signed MoU with M/s Ambuja Cements for off-take of ash of 4.8 lakh TPA.

5. *Based on the information and clarifications provided by the Project Proponent and detailed discussions held on all the issues, the Committee recommended for amendment of EC for change in source of coal for **maximum two years** subject to the following additional conditions.*

- (i) *Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5 % and 37% respectively for domestic coal and 0.8 % and 30% respectively for imported coal at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.*
- (ii) *The PP shall advertise in the newspaper and place on the website, the amendment issued by the Ministry for public information. **Unquote”***

2. The Committee inter-alia, noted that, subsequent to the above recommendation of EAC, the Ministry has examined the proposal and sought an addendum EIA report for the proposed change of source of coal from domestic to imported. The PP has now submitted the same to Ministry. However, the Committee noted that the PP has not collected any fresh data as there is no new industry operating/proposed in the area. The addendum report is based on the data of 2006, 2011 and 2012, wherein the resultant GLCs are within the NAAQS. Further, the PP informed that the AAQ has improved in the area due to closure of brick kilns etc.

3. The Tokisud North coal mine was also one of the coal blocks cancelled by the Hon'ble Supreme Court in September, 2014. Hence, the PP proposes to use imported coal and domestic coal through tapering coal linkage till long term coal linkage is provided. As on date, the TPP has an allotment of adhoc/one time basis coal of 6.5 lakhs tons from CIL/its subsidiaries. Further, as per the recommendations of Govt. of Punjab and SLC, there are bright chances of allotment of tapering coal to the TPP.

4. *In view of above and after detailed discussion, the Committee re-iterated its earlier recommendation as above subject to compliance of the Ministry's Notification dated 02.01.2014 regarding use of coal with ash content not exceeding thirty-four per cent, on quarterly average basis.*

#### **2.4 Expansion project of 4x600 TPP at Tamnar, Taluk Gharghoda, District Raigarh, Chhattisgarh by M/s. Jindal Power Ltd. -reg. amendment of EC.**

The proposal was **deferred** upon the request of the PP.

**2.5 2,640 MW Bhavanapadu Thermal Power Project near Village Kakarapalli, District Santhabommali Mandal, Srikakulam, Andhra Pradesh by M/s. East Coast Energy Pvt. Ltd. -reg. amendment of EC.**

These minutes are not being displayed as per Hon'ble NGT Order.

**2.6 5x800 MW Super Critical Coal Based Thermal Power Project at Damaracherla, District Nalgonda, Telangana by M/s. Telangana State Power Generation Corporation Ltd. (TSGENCO) - reg. ToR**

The PP along with their environmental Consultant, Bhagavathi Ana Labs Pvt. Limited, Hyderabad made a presentation. The Committee noted that, a tributary/channel of River Krishna is passing across the proposed site. The Committee had detailed discussions with the PP regarding shifting of the proposed site/revising the layout so that the said channel is not affected. The Committee opined that a site visit by a Sub-Committee is required to ascertain the ground situation before taking a decision. The PP also requested the Committee for the site visit.

2. In view of above, the proposal was **deferred** and shall be considered after submission of the site visit report by the Sub-Committee.

3. A copy of the representation received by the Committee from ERC, New Delhi on the proposed project was provided to the PP and a detailed reply was sought on the issues raised.

**2.7 Udangudi Super Critical Thermal Power Project Stage-II (2x660 MW) and Stage-III (2x660 MW) at Villages Udangudi, Kalankudiiruppu and Manadu Thandapathi, Taluk Tiruchendur, District Tuticorin, Tamil Nadu by M/s. Tamil Nadu Generation and Distribution Corporation (TANGEDCO)- reg. ToR**

The PP made a presentation before the Committee. It was noted by the Committee that, the PP did not obtain an amendment from the Ministry for change in configuration from 2X800 MW (as per EC) to 2X660 MW for Stage-I TPP. Further, the PP did not present the progress made in the Stage-I. Hence, the PP shall first obtain an amendment for the Stage-I and then come with the detailed progress made in Stage-I.

2. The proposal was accordingly, **deferred**.

**2.8 Setting up of 2x660 MW Coal Based Thermal Power Project near Village Malwan, District Etah, Uttar Pradesh by M/s. Jawaharpur Vidyut Utpadan Nigam Ltd. (JVUNL)- reg. ToR**

The PP along with their environmental Consultant, Desein Private Ltd., Delhi made a presentation and inter-alia, provided the following information. The above proposal was accorded TOR on 11.03.2010. Baseline study was conducted between March-May, 2010. Public Hearing was conducted on 11.03.2011. The proposal was recommended by the EAC in its 52<sup>nd</sup> Meeting held during 2<sup>nd</sup> -3<sup>rd</sup> July, 2012. However, the Committee directed to submit necessary amendment about allocation of coal from the then mentioned Chendipada Coal Block as per directives of Ministry of coal. The Chendipada coal block was, however, subsequently cancelled by the Hon'ble Supreme Court. Saharpur-Jamarpani Coal Block was allocated to the project on 25.03.2015. UPRVUNL, which is the parent organization of JVUNL,

has also entered into an MoU with MMTC for obtaining supply of imported coal having the desired parameters.

2. Fresh Form-I, PFR and application for revalidation of ToR/consideration of EC submitted to the Ministry on 23.09.2015. Meanwhile, fresh baseline data for post-monsoon period are also being generated from 15.09.2015. The project area is 350.074 ha. (865 acres) out of which 336.318 ha was already acquired and the remaining 13.756 ha is notified for acquisition. The coal requirement is 5.38 MTPA and will be sourced from Saharpur-Jamarpani Coal Block in Dumka District, Jharkhand. The new coal block may take 5-6 years to start coal supply, whereas, 1<sup>st</sup> Unit may be ready before that. Hence, JVUNL intends to start and run the plant with imported coal till the availability of coal from the newly allotted coal block. Water allocation of 53 cusecs was made from the lower Ganga Canal. The project cost is Rs. 8,078.56 crores.

3. The PP requested to allow to use the baseline data being collected from post monsoon of 2015 (15.09.2015) and exempt them from conducting fresh Public Hearing considering the Public Hearing held on 11.03.2011.

*The Committee, while agreeing for using the baseline data being collected since 15.09.2015, recommended that the Ministry may take a decision on exemption of Public Hearing based on Govt. policy. Further, the PP shall also request the Ministry for withdrawal of their EIA/EMP submitted earlier for the same project.*

4. After detailed deliberations, the Committee recommended the following ToR in addition to the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP.

(i) *Impact of drawl of water from the irrigation canal on the agriculture and drinking water supply.*

## **2.9 12.5 MW Power Plant (using Sponge Iron plant waste) at Village Bileipada, Tehsil Barbil, District Keonjhar, Orrisa by M/s. Tata Sponge Iron Ltd.- reg. ToR.**

The PP along with their environmental Consultant, Creative Engineers & Consultants, Chennai made a presentation and inter-alia, provided the following information. The Proposal is to install 1 x 12.5 MW TPP using the waste generated from their existing sponge iron plant. It will be established over an extent of 14 acres within the existing sponge iron plant over an area of 303 acres. Earlier, 25 MW TPP was proposed over an area of 20 acres within the sponge iron plant premises based on the waste from the sponge iron plants (Existing & Proposed DR Kilns). TOR was accorded on 16.4.2008. Draft EIA/EMP report was prepared and Public Hearing held on 15.11.2011. Final EIA/EMP was submitted to MOEF in March, 2013. In the meantime, due to change in policy of the State & Central Governments, the proposed 4 more DR kilns could not be further pursued immediately. Hence now, it is proposed to reduce the capacity of the Power plant to 12.5 MW based on the available waste from the existing units as against 25 MW planned earlier. The proposal is submitted at the Centre due to location of the Inter-State boundary within 10 km radius and also for being located within the premises of an category 'A' sponge iron plant.

2. The PP is already having NOC for drawl of 410 m<sup>3</sup>/hr water from Kundranullah (Sona River), out of which about 250 m<sup>3</sup>/hr is consumed now. The additional raw water requirement for the power plant is around 95 m<sup>3</sup>/hr. Hence the entire water requirement can be easily met

from the existing water facilities available for the sponge iron plant. The project cost is Rs. 80 crores.

3. *Regarding the request of PP for exemption of Public Hearing, the Committee recommended that the Ministry may take a decision on exemption of Public Hearing based on Govt. policy. The Committee also noted that the PP vide letter dated 02.11.2015 has informed the Ministry of their withdrawal of the final EIA/EMP submitted earlier for the 25 MW TPP.*

4. *After detailed deliberations, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP.*

**2.10 2x500 MW Chandrapur Super Thermal Power Project Expansion Project at Chandrapur, District Chandrapur, Maharashtra by M/s. Maharashtra State Power Generation Company Ltd. (MAHAGENCO) - reg. extension of validity of EC.**

The PP made a presentation and *inter-alia* provided the following information.

(i) EC and CTE to the above project were accorded by MoEF and SPCB on 30.01.2009 and on 30.12.2008 respectively. The detailed progress of various units/facilities along with photographs was presented. The CODs of Unit-I and Unit-II are planned for December, 2015 and January, 2016 respectively.

(ii) The reasons for delay in implementation & commissioning of the TPP are mainly due to non-sequential & inadequate supply of BTG material by M/s BHEL, delay by BoP contractor, M/s BGR Energy and drought & excess rains during 2010-15.

2. *Based on the information and clarifications provided, the detailed discussion and considering the status/progress of the project, the Committee recommended **Extension of Validity of EC till 31.08.2017 (considering the unexpected delays etc.) to start the production/operations by the TPP** subject to the following additional condition. The Committee also recommended that additional conditions which were earlier not prescribed but relevant now be stipulated while issuing the extension of validity.*

(i) *The action plan formulated by CPCB and SPCB for the Critically Polluted Area (CPA) of Chandrapur shall be strictly complied.*

3. *The Ministry may however, note that the application for extension was submitted after expiry of the validity of EC, and may consider this while taking a decision in the matter.*

**2.11 1x525 MW (Phase-I) Imported Coal Based TPP at Tuticorin Port Area, District Tuticorin, Tamil Nadu by M/s. SEPC Power Private Ltd.- reg. extension of validity of EC.**

The PP made a presentation and *inter-alia* provided the following information.

(i) EC was accorded to the above TPP on 03.11.2010 and the subsequently amended on 15.02.2011 (for certain clerical errors, sulfur content to 0.62% and green belt etc.). CRZ Clearance for Coal Jetty, Intake, Outfall, Conveyor and Pipeline was accorded on 09.04.2013. Since this is a PPA based project with TANGEDCO, PPA and Cost has to be approved by TNERC as per the conditions laid down by TANGEDCO and Lenders. The project was granted 1<sup>st</sup> stage approval by TNERC on 09.05.2011 and SEPC

submitted the proposal for 2<sup>nd</sup> Stage approval on 10.01.2012. However, the 2<sup>nd</sup> Stage approval was conveyed only on 30.04.2015.

- (ii) In view of the delay in receiving the 2<sup>nd</sup> Stage approval for the PPA & Cost, substantial physical progress was not made. After receipt of the 2<sup>nd</sup> Stage approval, the project has been hastened and tied up all resources i.e. statutory clearances, manpower, 100% finance & required construction infrastructure. Thus, the PP is now in a position to complete the project within a period of 42 Months. The photographs of the site showing the current status of the project were also presented.

2. *Based on the information and clarifications provided, the detailed discussion and considering the status/progress of the project, the Committee recommended **Extension of Validity of EC for five years i.e. till 02.11.2020 (considering the unexpected delays etc.) to start the production/operations by the TPP.** The Committee also recommended that additional conditions which were earlier not prescribed but relevant now be stipulated while issuing the extension of validity.*

#### **2.12 Proposed 1200 MW (4x300 MW) Coal Based Thermal Power Plant at Villages Binjkot & Darramura, Taluk Kharsla, District Raigarh Chhattisgarh by M/s. SKS Power Generation (Chhattisgarh) Ltd.- reg. extension of validity of EC.**

The PP made a presentation and *inter-alia* provided the following information.

- (i) EC and CTE to the above project were accorded by MoEF and SPCB on 05.10.2010 and on 24.01.2011 respectively. The detailed progress of various units/facilities along with photographs including greenbelt was presented. The CODs of Unit-I, II, III and IV are planned for September, 2016, December, 2016, September, 2018 and December, 2018 respectively.
- (ii) The reasons for delay in implementation & commissioning of the TPP are due to the delay in land acquisition of 362 acres which is due to litigation, lack of case I bids during last four years (PPA), financial issues, delay in performance of EPC contractor and cancellation of Fatehpur coal block by the Hon'ble Supreme Court.

2. *Based on the information and clarifications provided, the detailed discussion and considering the status/progress of the project, the Committee recommended **Extension of Validity of EC for five years i.e. till 04.10.2020 (considering the unexpected delays etc.) to start the production/operations by the TPP.** The Committee also recommended that additional conditions which were earlier not prescribed but relevant now be stipulated while issuing the extension of validity.*

#### **2.13 2X660 MW Super Critical Coal based Thermal Power Plant at Villages Painampuram & Sivarampuram, in Muthukur Mandal, District Nellore, Andhra Pradesh by M/s NCC Power Projects Ltd. - reg. extension of validity of EC.**

The PP along with their environmental Consultant, B S Envitech Pvt Ltd., Secunderabad made a presentation and *inter-alia* provided the following information.

- (i) EC was accorded to the above TPP on 30.09.2010 and subsequently amended on 18.05.2011 for using 70:30 blended coal as fuel & Sea Water. The detailed progress of various units/facilities along with photographs including greenbelt and CSR activities

was presented. The CODs of Unit-I and Unit II are planned for March, 2016 and June, 2016 respectively.

- (ii) The delay in implementation & commissioning of the TPP is due to financial issues which led to delay in supply of BTG components and subsequent erection works.

2. *Based on the information and clarifications provided, the detailed discussion and considering the status/progress of the project, the Committee recommended **Extension of Validity of EC for two years i.e. till 29.09.2017 (considering the unexpected delays etc.) to start the production/operations by the TPP.** The Committee also recommended that additional conditions which were earlier not prescribed but relevant now be stipulated while issuing the extension of validity.*

**2.14 1x600 MW Coal Based Thermal Power Plant at Villages Barela & Gorakpur, Tehsil Ghansore, District Seoni, Madhya Pradesh by M/s Jhabua Power Ltd.– reg. extension of validity of EC and amendment of EC for temporary permission for road transportation of coal**

The proposal was earlier discussed in the 18<sup>th</sup> Meeting of the EAC (Thermal) held during 31<sup>st</sup> July – 1<sup>st</sup> August, 2015 the minutes of which are as under:

**Quote “1.** The PP made a presentation and provided the following information. EC was accorded for the above project on 17.02.2010. About 90% construction work of proposed thermal power plant has been completed and it will be ready by September 2014 for COD. The PP had proposed the transportation of coal from coal pit-head to plant site by way of railway. Work for connection of railway network to plant site is in advanced stage. However, the work is not complete; hence, it is proposed to transport coal by way of road for the interim period of 3 years from September 2014 to August 2017.

2. Regarding the status of railway line, In-Principle Approval and DPR Approval were accorded on 10.08.2010 and 26.08.2012 respectively. The ESP approval has been applied for on 28.08.2013 and is under approval in SECR-Nagpur Division. The railway route length is 68 km (Jabalpur to Binaiki) and 12.15 km outside and inside the plant respectively. The outside track conversion from narrow to broad gauge is about 65% complete. It is proposed to take-off from Binaiki station which falls under Jabalpur-Gondia Section. Since Jabalpur-Gondia Section is under Gauge Conversion stage; the Engineering Scale Plan (ESP) submitted to M/s South East Central Railway in August 2013 is still under approval. Without formal approval of ESP, the PP cannot move ahead for execution of the railway line.

3. The proposed route of coal transportation by road is Gosalpur Rly. Station-Jabalpur Bypass-Bargi- Dhuma-Lakhnadon-Mehta-project site which is about 162 km. The turn around time for each truck is 10 hrs and 8 hrs during day time and night time respectively. The coal requirement is 8767 tonnes/d for which 351 trucks of coal @25 MT would be required. The total traffic load for coal transportation is  $351 \times 2 = 702$  truck trips (to and fro) per day. The impact on AAQ due to the proposed increase in road traffic was assessed and the resultant concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> would be within the NAAQS.

4. The assessment of proposed road for its categorization & carrying capacity as per IRC: 64-1990 – Guidelines has been carried out. Route survey has been carried out at 16 locations and the observation on road condition & width made. Traffic surveys were carried out as per IRC: 9-1972- Traffic Census on Non-Urban Roads. The traffic measured was

converted into equivalent Passenger Car Units (PCU) as per IRC: 64 -1990. The carrying capacity of the roads has been assessed based on current traffic, proposed traffic and road width. It was observed that all the roads were black topped and in good condition. The average width was found to be 7.35 m with width of 4.0 m to 17.4 m. No bottlenecks & issues were found at any location at the time of study and there were no traffic jams. When the PCU projections for the future percent utilization were estimated it was found that the carrying capacity (as per IRC 64-1990) were within limits for Traffic Census Points except near JPL plant (151% utilization) where the road width is merely 4 m. Widening of bitumen road is proposed by the PP for existing road (mehta to plant area road). Design capacity of road will increase from 6-8 tonne to 30-50 tonne and existing road carriage way width is proposed to increase to 5.5 m. Provisions of road furniture and traffic sign & ornaments in proposed roads will be made.

5. As per the traffic survey & the measured road widths along the entire transportation route, there is no need for widening except at the project. Near the project, after the proposed widening of road from 4.0 m to 5.5 m, the future percent utilization would be only 50.3%. The maintenance of road will be carried out diligently with due follow up with the State Department. The vehicles used for transportation will be covered with tarpaulin, be spill-proof, have their PUC certificates, be well maintained and the drivers sensitised to their specific work to minimise accidents and pollution.

6. *Based on the information and clarifications provided by the Project Proponent and detailed discussions held on all the issues, the Committee recommended for amendment of EC for road transportation of coal for a limited period of **three years**, by which time the railway siding shall be put in place for coal transportation and subject to the following additional conditions*

- (i) *The coal transportation by road shall be through mechanically covered trucks to the extent feasible, else, shall be through tarpaulin covered trucks.*
- (ii) *Avenue plantation of 2/3 rows all along the road shall be carried out by the project proponent at its own expenses in consultation with the State Government Authorities.*
- (iii) *Periodic maintenance of the road shall be done by the project proponent at its own expenses and shall also facilitate the traffic control on the road in consultation with the State Government Authorities.*
- (iv) *The PP shall advertise in the newspaper and place on the website, the amendment issued by the Ministry for public information.” **Unquote.***

2. The Committee inter-alia, noted that, subsequent to the above recommendation of EAC, the Ministry has examined the proposal and also sought an inspection report of MPPCB regarding the likely impact of road transportation of coal. The said report was received in the Ministry in July, 2015, vide letter dated 19.05.2015. MPPCB has recommended the temporary permission for road transportation of coal with a condition to ensure the water and air pollution arrangements and consent from the Board. The PP vide letter dated 30.06.2015 has submitted to the Ministry that the recommendations of MPCB were noted and shall be complied effectively.

3. In the meantime, a meeting was taken by the Principal Secretary to Hon'ble PM on 06.07.2015 on the above project, wherein it was inter-alia, stated that MoEF&CC will expedite necessary clearances based on the certificates from Railways for Garha (GGGS) and other sites

as the Garha siding will reduce the extent of road transportation of coal by almost 100 km. Based on the earlier request of the PP, the EAC earlier recommended for road transportation of coal only from Gosalpur Railway siding (GSPR). Now the PP has requested permission from Garha siding also.

4. While a suitable decision on mode of coal transportation is yet to be taken by the Ministry, it has been found by the Ministry that the five years EC validity period ended on 16.02.2015 and the PP has not applied for the same before 16.02.2015 as per EIA Notification, 2006. The PP has now (last week of September, 2015) applied to the Ministry for extension of EC validity along with permission for road transportation of coal from Gosalpur (GSPR) & Garha Sidings (GGGS).

5. The PP made a presentation before the Committee, wherein it was inter-alia noted that, Consent to Operate (CTO) was accorded by MPPCB on 13.04.2015. The Garha siding also falls on the same rail route and is 45 km ahead on the same road route as that of Gosalpur siding. Hence, an overall road distance of 90 km (to and fro) shall be reduced. The Garha siding was notified on 30.10.2015 as a full rake handling point. The detailed progress of various units/facilities along with photographs including greenbelt and CSR activities was presented.

6. *Based on the information and clarifications provided, the detailed discussion and considering the status/progress of the project, the Committee recommended **Extension of Validity of EC for two years i.e. till 16.02.2017 (considering the unexpected delays etc.) to start the production/operations by the TPP.** Further, the Committee recommended for amendment of EC for road transportation of coal for a limited period of **two years from Gosalpur (GSPR) & Garha Sidings (GGGS)** subject to the additional conditions recommended earlier and the following condition.*

- (i) *As recommended by MPPCB vide letter dated 19.05.2015, their Consent shall be obtained and the conditions therein shall be duly complied.*

There being no agenda item left, the meeting ended with a vote of thanks to the Chair.

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(Prof. C.R. Babu)  
Vice Chairman (Acting Chair)

(Shri T.K.Dhar)  
Member

(Shri J.L Mehta)  
Member

(Shri N.K. Verma)  
Member

(Shri G. S. Dang)  
Member

(Shri A. K. Bansal)  
Member

(Dr. S.D. Attri)  
Member

(Dr. Asha Rajvanshi)  
Member

(Shri N.S. Mondal)  
Member

(Shri B.B. Barman)  
Member Secretary

**Terms of Reference (TOR):**

- i) The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.
- ii) Vision document specifying prospective long term plan of the project shall be formulated and submitted.
- iii) Latest compliance report duly certified by the Regional Office of MoEF for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.
- iv) The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted.
- v) Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.
- vi) Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.
- vii) The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.
- viii) Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.
- ix) Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.
- x) Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.
- xi) If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents.
- xii) The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.
- xiii) Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
- xiv) Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.

- xv) Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.
- xvi) A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.
- xvii) A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.
- xviii) Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash.
- xix) The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re-circulation of effluents.
- xx) Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.
- xxi) It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.
- xxii) Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted.
- xxiii) Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.
- xxiv) Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.
- xxv) Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.
- xxvi) Feasibility of near zero discharge concept shall be critically examined and its details submitted.
- xxvii) Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified.

- xxviii) Plan for recirculation of ash pond water and its implementation shall be submitted.
- xxix) Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.
- xxx) Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.
- xxxi) Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
- xxxii) If the area has tribal population it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
- xxxiii) A detailed CSR plan along with activities wise break up of financial commitment shall be prepared. CSR component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified. Separate budget for community development activities and income generating programmes shall be specified.
- xxxiv) While formulating CSR schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CSR details done in the past should be clearly spelt out in case of expansion projects.
- xxxv) R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.
- xxxvi) Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.
- xxxvii) Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required.
- xxxviii) One complete season site specific meteorological and AAQ data (except monsoon season) as per latest MoEF Notification shall be collected and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction,

- other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.
- xxxix) In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs).
  - xl) A list of industries existing and proposed in the study area shall be furnished.
  - xli) Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modeling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics.
  - xliv) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
  - xlvi) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
  - xlvii) Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted
  - xlviii) Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.
  - l) For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.
  - li) Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.
  - liii) EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
  - liiii) A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be carried out. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Mock drills shall be suitably carried out from time to time to check the efficiency of the plans drawn.
  - liiii) The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.

- li) Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary with tree density of 2000 to 2500 trees per ha with a good survival rate of around 80% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO<sub>2</sub> and other gaseous pollutants and hence a stratified green belt should be developed.
- lii) Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months.
- liii) Corporate Environment Policy
  - a. Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
  - b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
  - c. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.
  - d. Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

All the above details should be adequately brought out in the EIA report and in the presentation to the Committee.

- liv) Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished.

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**List of Participants**

**2.1 M/s. NTPC Ltd.**

1. Sh. R.K. Baderia, HOD (Env. Engg.)
2. Sh. A.K. Mittal, (PE-WS) DGM
3. Ms. S. Padmapriya
4. Sh. V. Ravi Babu
5. Sh. Ram Krishan Khandekar
6. Sh. Neeraj Kapoor, AGM (LA/R&R)
7. Sh. Pankaj Dhyani, AGM (R&R)
8. Sh. Ravi S. Verma, Dy. Mgr., Env. Engg.
9. Sh. P. Rama Krishna, Vimta Labs
10. Sh. M. Janardhan, Vimta Labs
11. Rajeev Baijal
12. Dr. P.R. Rao
13. Akilesh Podda
14. M. Ali
15. Manoj Sahu

**2.1-A M/s. Patratu Vidyut Utpadam Nigam Ltd.**

1. Sh. R.K. Baderia, HOD (Env. Engg.)
2. Sh. Praveen Saxena, AGM (BD)
3. Sh. A.K. Mittal, DGM (PE-WS)
4. Sh. Ram Krishna Khandekar
5. Sh. Neeraj Kapoor, AGM
6. Sh. Pankaj Dhyani, AGM (R&R)
7. Sh. Sankalp Srivastava, Dy. Mgr.
8. Sh. C.V. Subramanian, CEO Designate, PVUNL.
9. Sh. T.K. Konar, AGM (TS), PVUNL
10. Sh. V.P. Srivastava, AGM
11. Rajeev Baijal
12. Akilesh Podda
13. M. Ali
14. Manoj Sahu

**2.2 M/s. KU Thermal Power Pvt. Ltd.**

1. Sh. C.H. Rama Krishna, V.P., Project Development
2. Sh. K. Ujwal, Director
3. Sh. M. Sai Ram Sandeep, Director
4. Sh. Y.B.S. Moorthy, B.S. Envi Tech Pvt. Ltd.
5. Sh. B.S. Chandra, B.S. Envi Tech Pvt. Ltd.
6. Sh. K. Srinivas, EICIPL
7. Sh. L. Venkateswaran, EICIPL

### **2.3 M/s. GVK Power (Govindwal Sahib) Ltd.**

1. Sh. M. Ramamurty
2. Sh. N. Hosabettu
3. Sh. Hemant Sharma
4. Sh. E. Shyam Sundar, Bhagavathi Ana Labs (P) Ltd.

### **2.6 M/s. Telangana State Power Generation Corporation Ltd. (TSGENCO)**

1. Sh. D. Prabhakar Rao
2. Sh. C. Radha Krishna
3. Sh. A. Ajay
4. Sh. E. Hanuman
5. Sh. K. Rama Krishna Reddy
6. Sh. V. Arudhra
7. Sh. G. Srinivasa Rao
8. Sh. E. Shyam Sunder, Bhagvathi Ana Labs (P) Ltd.
9. Sh. G. Mallikarjuna Murthy, Bhagvathi Ana Labs (P) Ltd.

### **2.7 M/s. Tamil Nadu Generation & Distribution Corp. (TANGENCO)**

1. Sh. S. Sampath Kumar, Director, Projects
2. Sh. R. Kamaraj, Chief Engineer, Projects
3. Ms. A. Munevar Sultana, EE/Env. Cell
4. Sh. N. Srinivasan, EE/C/Env. Cell

### **2.8 M/s. Jawaharpur Vidyut Utpadan Nigam Ltd.**

1. Sh. A.P. Mishra, MD
2. Sh. Rajesh Sabharwal, Desein
3. Sh. Rakesh Trivedi, Director
4. Sh. Mukesh Chandra, R.O
5. Sh. Sunil Kumar Goel
6. Sh. N. N. Tripathi
7. Sh. Subir Chakravorty, CE, Project Planning
8. Sh. R.K. Jain, CE (Civil) new projects
9. Sh. L.P. G...

### **2.9 M/s. Tata Sponge Iron Ltd.**

1. Sh. Ujjwal Chatterjee, Chief Business Development Officer
2. Sh. Kundan Kumar, Chief (RMS)
3. Sh. S.K. Ray, Head (Environment Management)

**2.10 M/s. Maharashtra State Power Gen. Corp. Ltd.**

1. Sh. C.S. Thotawe, Director, Project
2. Sh. R.V. Taskar, Dy. C.E.

**2.11 M/s. SEPC Power Pvt. Ltd.**

1. Dr. K.S. Gandhi, Sr. Consultant (MEIL)
2. Sh. N. Kamalakar, Sr. Manager
3. Ms. Suchitra Joshi
4. Sh. Sathya Kumar

**2.12 M/s. SKS Power Generation (Chhattisgarh) Ltd.**

1. Sh. Saurav Srivastav
2. Sh. Ajay Vishnoi, DGM, Corporate Affairs
3. Sh. Ashesh K. Padhy, V.P
4. Sh. Rajeev Ranjan, Manager Env.
5. Sh. R.K. Agarwal, E.D

**2.13 M/s. NCC Power Projects Ltd.**

1. Sh. Ramesh Raman, Plant Head
2. Sh. Prasad Chavare
3. Sh. Y.B.S. Moorthy, B.S. Envi. Tech. Pvt. Ltd.

**2.14 M/s. Jhabua Power Ltd.**

1. Sh. Nitesh Nath, AVP-Project Mgmt.
2. Sh. Anoop Kumar Srivastava
3. Sh. M.V. Nagarjuna