MINUTES OF THE 55th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER & COAL MINING PROJECTS

The 55th Meeting of the reconstituted EAC (Thermal Power) was held on 5th & 6th May, 2016 in the Ministry of Environment, Forest & Climate Change at Teesta Meeting Hall, First Floor, Vayu Wing, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi. The following members were present:

1. Shri Anil Kumar - Chairman
2. Prof. C.R. Babu - Member
3. Shri T.K. Dhar - Member
4. Shri N.K. Verma - Member
5. Shri J.L. Mehta - Member
6. Shri G.S. Dang - Member
7. Dr. S.D. Attri - Member (Representative of IMD)
8. Shri P.D. Siwal & N.S. Mondal - Member (Representative of CEA)
9. Dr. S.K. Paliwal - Member (Representative of CPCB)
10. Shri Manoj K Gangeya - Member Secretary

Shri A.K. Bansal, Shri Shantanu Dixit, Dr. Ratnavel and Representative of WII could not be present.

At the outset, the Committee welcomed Dr. Paliwal, the new representative of CPCB.

Item No.1: CONFIRMATION OF THE MINUTES OF THE 54th EAC (LAST) MEETING.

The Minutes of the 54th EAC (Thermal Power) meeting held on 31st March, 2016 were confirmed.

Item No. 2: CONSIDERATION OF PROJECTS

2.1 4,000 MW Ultra Mega Power Project (UMPP) near Village Kanwara, Taluk Katoriya, District Banka, Bihar by M/s Bihar Mega Power Limited (A wholly owned subsidiary of PFC Ltd.) - reg. ToR

(2.1.1) The Project Proponent (PP) along with their environmental Consultant, Desein Private Limited, New Delhi, made a presentation and inter-alia, provided the following information:

i. M/s Bihar Mega Power Limited (BMPL) was incorporated on 09.07.2015. The proposed UMPP will be based on Super-Critical Technology. The project will be developed through competitive bidding process as per guidelines issued under Section 63 of the Electricity Act, 2003 by Ministry of Power, Govt. of India. CEA considered potential 3 sites in consultation with the State Govt. and the above site has been recommended and accepted by Govt. of Bihar.

ii. The land requirement for the TPP will be about 2,440 acres, which is mainly uncultivable land and no forest land is involved. There is no ecologically sensitive area or wildlife within 15 km of the project site. About 200 households are expected to be affected. No major R&R issues are involved. The land requirement
for Corridors (water, coal, approach roads etc.) is about 2,660 acres. The project cost is Rs. 30,000 crores.

iii. The coal requirement is about 18-20 MTPA which shall be sourced from the captive Pirpainti- Barahat coal block of the Rajmahal group of coalfields located at a distance of about 80 km from the project site. The same has been ‘in-principle’ allocated by the Ministry of Coal, Govt. of India. The coal transportation shall be by MGR Rail. The water requirement is about 12,000 m³/hr and will be sourced from the River Ganga near Sultanganj at a distance of about 70 km through pipeline. The Water Resource Department, Govt. of Bihar has accorded ‘in-principle’ approval for allocation of 120 cusec of water

(2.1.2) After detailed deliberations in this 55th meeting on 5th & 6th May 2016, 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) The land requirement shall be optimized especially for the corridors. In any case, it should be within the CEA norms.

ii) The area for the green belt shall be 1/3rd of the total project area.

iii) The surface drainage pattern of the area should not be disturbed.

iv) Since the PP wants to keep the flexibility of the Unit size within the supercritical technology, the EIA/EMP shall be made for all the options and this shall be mentioned in the bidding documents.

v) Since the UMPP shall be near to Banka Town, a washery shall be set up at the captive coal mines so that washed coal with ash content < 34% is transported.

vi) Approval of CWC and other requisite authorities like NGRBA for water drawl shall be submitted.

vii) The EIA/EMP shall contain a separate chapter on water optimization, which shall also take into account maximum storage of rain water, recycling etc.

viii) The EIA/EMP shall be based on the standards notified on 07.12.2015 for TPPs including FGD calculations etc.

ix) An innovative ash utilization plan should be drawn up to maximize ash utilization.

x) Possibility of using the existing railway circuit should be explored instead of the new line being proposed from the mine which involves a distance of approx. 100 km.

xi) The water pipe line approx. 70 km away from Ganga River should be laid underground to reduce land degradation and usage in agriculture.

xii) Possibility of having residential colony and rehabilitation centre near the Banka town be explored for better amenities.

2.2 2x660 MW Imported Coal Based Thermal Power Plant at Villages Kattupalli & Kalanjhi, Taluk Ponneri, District Thiruvallur, Tamil Nadu, by M/s Chennai Power Generation Ltd.- reg. re-consideration for ToR.

(2.2.1) The above proposal (for 2X515 MW) was earlier discussed in the 43rd Meeting of the EAC (Thermal Power) held on 18.09.2015, the minutes of which are as under:

Quote “The PP along with their environmental Consultant, Creative Engineers & Consultants, Chennai made a presentation and inter-alia provided the following information:

(i) The above location was selected by Tamil Nadu Electricity Board (TNEB) for setting up the Power Plant and allotted through MOU route to the PP (CPGL). The MOU was
signed with TNEB on 18.2.95. Land was reserved vide G.O No. 47 dated 5-2-1998 for setting up of this power plant. Initially 1000 MW Gas based power plant was proposed based on LNG Terminal to be erected by TIDCO. EC from MOEF was obtained vide letter dated 19.3.1997 using naphtha as fuel and various other clearances were also obtained. Subsequently, TIDCO dropped the proposal to establish the LNG Terminal. Then the company approached MOEF to give amendment for change of fuel from Naphtha to Imported coal (Ltr. no 27/12/2007). MOEF asked for revised EIA/EMP report for the proposed imported coal based thermal power-plant.

(ii) Subsequent to submission of fresh application to get EC to MOEF for the project during January 2009, based on the EAC Meeting held during 12th - 13th March, 2009 and again on 15th-16th April, 2009, TOR was issued for the project on 03.06.2009. During the presentation to the EAC, it was informed that there is overlapping of lands between this project site and the North Chennai Power Company Project site and CPGL requested the Committee to impress upon North Chennai Power to spare 70 acres of land for this project so that both the projects can come up in the same area. However, M/s North Chennai Power Company refused to spare and MOEF gave EC to North Chennai Power Company ignoring our objections and also imposed two special conditions in our ToR namely a) Clear ownership of the lands belonging to the company free of all encumbrances and b) There should not be any overlapping of the lands belonging to any other company and we have to get a certificate from Revenue Authorities for the above two conditions. Even though studies were completed as per TOR, could not proceed further as Pollution Control Board, Tamil Nadu refused to conduct Public Hearing stating that overlap of land issue was not resolved. As the project could not proceed further and in order to get remedy, CPGL approached Hon’ble High Court, Madras in W.P. No. 25545 of 2010 and 25080 of 2010 for cancellation of environmental clearance issued to M/s North Chennai Power Company.

(iii) In the counter filed by MOEF, it was stated that MOEF had no objection for the two power projects co-existing in the areas in question with maintenance of environmental integrity of power project to come up vis-à-vis that of the base line environment. Further, during the arguments in the Court, M/s North Chennai Power Company submitted that they have no objection for CPGL to acquire lands in the overlapping area and proceed with their project. Based on the assurance given by MOEF in the Counter that both projects can co-exist, the case pending in the High Court of Madras was disposed on 29.11.2011. During the litigation in the Court, the validity of TOR given to our project on 03.06.2009 had expired and as per the direction of MOEF, fresh application for issue of TOR has been submitted.

2. The Committee noted that there is no documentary proof that the North Chennai Power Company agreed for the use of some land which was already included in the EC given to North Chennai Power Plant, although the PP claims that there is no objection of the use of land by the Chennai Power Corporation. Further, North Chennai Power Company has also not approached the Ministry for any amendment in the EC regarding deletion of the land claimed by the Chennai Power Plant from the EC. Hence, the Committee suggested that the PP may amicably resolve the issue with North Chennai Power Company and both shall approach the Ministry for further consideration of the TOR for Chennai Power Corporation TPP. The proposal was, accordingly, deferred.” Unquote.
(2.2.2) Subsequently, the PP vide letter dated 15.04.2016 has inter-alia, submitted that they had taken up the matter with M/s North Chennai Power Company and they refused to spare any lands for the project and the same was also informed by North Chennai Power Company to MoEF. Therefore, feasibility of completely excluding North Chennai Power Company lands was examined and alternate route for aligning coal handling & cooling water system was identified. Accordingly, the plot plan and other enclosures were changed based on the revised proposal. Meanwhile, it is understood that as per recent CEA norms, only super critical TPPs are allowed to be commissioned beyond 01.04.2017. Hence, the earlier proposal for 2X515 MW based on sub critical technology has been revised to 2X660 MW super critical technology.

(2.2.3) The PP along with their environmental Consultant, Creative Engineers & Consultants, Chennai made a presentation during this 55th meeting on 05.05.2016 and inter-alia, provided the following information:

i. The TPP area is 296 acres, which is outside the CRZ area. Besides, 29 acres within CRZ area will be utilized as corridor for sea water pipeline and for coal conveying. The site is seaside waste land and no agricultural land is involved. There is a road connecting Kalanji village passing through the project area and the same is proposed to be diverted on the western side of the project boundary. Buckingham canal and Bay of Bengal are at a distance of 100 m and 500 m (from the HTL) respectively. Pulicat Sanctuary/lake is at a distance of 12 km. The project cost is Rs. 8,367.1 crores.

ii. The imported coal requirement is 5.3 MTPA @ GCV 4,100 kCal/kg, plant heat rate 2,300 kcal/kwhr and PLF of 80%. Coal from dedicated jetty/nearby Port to Site shall be transported through conveyor belts. The sea water requirement is 12,570 m³/hr considering recirculation closed cooling water system with Induced Draft Cooling Towers and shall be sourced from Bay of Bengal.

(2.2.4) 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) Authenticated map from Chief Wildlife Warden depicting the location of the proposed TPP and Pulicat Sanctuary.

ii) Additional conservation measures for the Pulicat sanctuary are to be taken, and the Conservation plan incorporating such additional measures shall be prepared in consultation with the WII.

iii) The layout shall be finalized so as to develop minimum 50 m width of green belt around the coal handling areas and ash pond.

iv) The coal storage capacity and area presently indicated by the PP to be for 45 days storage is too high and shall be revised based on CEA norms.

v) Green belt will be implemented all around the coal handling area.

vi) Cumulative environmental impacts for minimum 10 km considering the existing and proposed industries should be carried out by the PP. One of the monitoring stations shall be located at the Pulicat Sanctuary.
vii) The EIA/EMP shall be based on the standards notified on 07.12.2015 for TPPs including FGD calculations etc.

viii) The ash pond shall be lined.

2.3 Proposed 1x500 MW Coal Based Sagardighi Phase III Extension Unit – 5 at Sagardighi Thermal Power Station (SgTPP) in Murshidabad District, West Bengal by M/s The West Bengal Power Development Corporation Ltd.– reg. amendment of ToR for revision of capacity to 660 MW

The Committee noted that the background documents had not been received by the members. As such, the Committee was not in a position to consider the case. The proposal was, therefore, deferred.

2.4 2x300 MW Yamuna Nagar Thermal Power Project, Stage-II, Phase I, Yamuna Nagar, Haryana by M/s Haryana Power Generation Corporation Ltd.– reg. amendment of EC

The Committee noted that the background documents had not been received by the members. As such, the Committee was not in a position to consider the case. The proposal was, therefore, deferred.

2.5 2x67.5 MW Coal Based Captive Thermal Power Plant at Village Anantapur, Tehsil Athagarh, District Cuttack, Odisha by M/s Bhubaneshwar Power Pvt. Ltd. – reg. amendment of EC

(2.5.1) The case was last considered by the EAC in its 41st meeting held on 27.08.2015. Regarding coal transportation issue, the following was recorded in the August, 2015 meeting under Para 2.2 Quote “The PP along with their environmental consultant BS Envi Tech Pvt. Ltd. Hyderabad made a presentation and inter alia, provided the following information:-

(i)..................

(ii) The present proposal is to transport the coal by road/rail & road until the private railway siding is commissioned, which shall take at least 3-4 years as per the discussions with the East Coast Railways. Two options have been studied for the temporary transportation of road/ rail & road. The option 1 involves only road transportation from mine to the TPP over a total distance of 97 km via NH-42. The option 2 involves primarily rail transportation and road transportation over a distance of 16.78 km. The total quantity of coal required to be transported is 3,600 tonnes/ day and no. of dumpers/ trucks required are ..........”

In the light of the above EAC’s recommendation, the MoEF&CC had issued an EC amendment vide letter dated 23.12.2015. However, the PP has now again approached the EAC for further amendment of the road transportation condition, along with an additional request, as follows:-

1. Amendment to EC for use of e-auction coal.
2. Amendment to EC for temporary permission for road transport from MCL Talcher to project site.
While considering the above request of the PP in the present 55th EAC meeting on 05.05.2016, the EAC noted that as far as the issue relating to road transportation was concerned, the EAC in its August, 2015 meeting, taking into account the presentation made by the PP as reproduced in Para 2.5.1 (ii) above, had made the following recommendation as recorded in Para 2 of those minutes (relevant extract below):

“2. Based on the information and clarifications provided, the detailed discussion that ensued and considering the status/progress of the project, the Committee recommended for temporary permission for transportation of coal by road for a period of three years subject to the following additional conditions:

i) ………

ii) The proposed Option 1 i.e. entire road transportation from mine to the TPP shall be done only in case of emergency i.e. when Option 2 is not feasible due to non-availability of rakes. The same shall be duly documented (emphasis added).

iii) ………”

The EAC further noted that the Ministry had, on this aspect of road transportation of coal, amended the EC in December, 2015 only in the following limited manner:

“…..the Ministry hereby accords temporary permission for transportation of coal by road (about 16.78 km) from Raj Athagarh Railway siding for a period of three years subject to ……….”

As may be seen from the above, the EC amendment was limited in its scope as compared to the recommendation of the EAC in August, 2015. The EAC was of the view that the present request of the PP for inclusion of e-auction coal was not really the main issue here, since alternative coal sources would necessarily have to be included in case of a shortfall from the earlier approved source. The substantive issue therefore was the PP’s repeated request for road transportation over the entire distance of 97 kms. The EAC was therefore, of the view that since the Ministry had already taken a decision in this matter, and, as compared to the EAC’s recommendation, had agreed to only a limited amendment as reflected in the EC amendment issued on 23.12.2015, a re-look at this request of the PP should more appropriately be dealt with by the Ministry itself.

Regarding the total quantity of coal required for this 2x67.5 MW Coal Based Captive Thermal Power Plant, the Committee noted that under Para 1.1 on pg. 2 of the background document circulated to the Members, it has been stated that as against the PP’s application to MCL for 1 MTPA, the PP has received a linkage for only 6.87 lakh tons per annum. In other words, the Committee noted that on this basis, the coal shortfall would be 1-6.87 = 3.13 lakh tons. However, as against this, in Para 1.2 on pg. 3 of the same document, the PP has stated that they need to “…….source the balance requirement of 6,27,000 tons per annum through the e-auction route”. The total coal requirement projected by the PP for this 2x67.5 MW now therefore is higher at 1.314 MTPA (i.e. 6.87 already available through linkage + 6.27 now being proposed through e-auction). The Committee was therefore of the view that the coal requirement would need to be calculated in the light of CEA norms.

2.6 Expansion of existing 4,620 MW Mundra Thermal Power Plant to 7,620 MW (by addition of 3x1000 MW) at Mundra, Kutch District, Gujarat by M/s Adani Power Limited - reg. ToR
(2.6.1) Based on the position brought out by the PP during this 55th meeting on 5th & 6th May 2016, the Committee noted that the site proposed for expansion of 4,620 MW Mundra Thermal Power Plant to 7,620 MW (by the addition of 3 X 1,000 MW) at Mundra is situated very close to a network of estuarine (creek) ecosystem (Kotdi creek, Boradi Mata creek, Mundra Mangrove RF) complex with mud flat forests located northwards. According to the documents (Form I) submitted by the PP, the site for the expansion is located on one such forest patch covering 201.5 ha reserve forest (Siracha- Danderi Reserve Forest). This RF (Reserve Forest) serves as a shield to prevent silting of creek ecosystem complex and also ensure the low levels of turbidity of the estuarine water that permits high levels of productivity. The same documents also show the existence of other RFs in very close proximity to the proposed site (Navinal RF – 2.6 km; Mundra Mangrove RF including Dhoa RF– 1.2 km; a RF near Zarpara village – 9.8 km). The coastal zone (Gulf of Kutch) itself has been shown to be only 3.5 km from the proposed site. In fact Danesri Nadi passes through the forested site. Besides this Nadi, Khari Nadi and Nagvanti Nadi, also in close proximity to the proposed site, also discharge their freshwater contents into the creek ecosystem. Consequently, the creek ecosystems are the breeding grounds for fish and estuarine biota and mangroves and are ecologically sensitive. The documents also reveal the existence of about nine villages in close proximity to the proposed site (ranging from 0.6 km to 9 km) along with their attendant schools, hospitals etc.

(2.6.2) The Committee noted that in this area, there is already an existing functional thermal power generation capacity of 8,000 MW (the Tata’s 4000 MW thermal power plant, as well as the PP’s own 4,000 MW thermal power plant). There are also several other major ongoing industrial activities in the area. Consequently, the land use patterns and the natural environment of the area have already undergone major changes, and have come under stress.

(2.6.3) In the light of the above, after detailed deliberations, the Committee suggested to the PP to find out another site away from the ecologically sensitive creek ecosystem complex for location of the proposed 3x1000 MW expansion TPP.

2.7 1,600 (2x800) MW Paraspani Thermal Power Project at Villages Paraspani, Teloliya & Telo, Tehsil Pthargama, District Godda, Jharkhand by M/s Adani Power (Jharkhand) Ltd.- reg. re-consideration for ToR

(2.7.1) The above proposal was earlier discussed in the 52nd meeting of the EAC (Thermal Power) held on 29.02.2016 & 01.03.2016, the minutes of which are as under:

Quote “(2.3.1) In the 52nd meeting on 29th Feb – 01st Mar 2016, the PP along with their environmental Consultant, Greencindia Consulting Private Limited, NCR, Ghaziabad made a presentation and inter-alia, provided the following information:

i. Adani Power (Jharkhand) Limited, (APJL) is a subsidiary company of APL which has been formed to develop Thermal Power Plant in Jharkhand. The power plant is being developed as a result of the MoU signed between Government of India (GoI) and Government of Bangladesh (GoB) on 11.01.2010 with a view to enhance traditional ties of friendship, through economic co-operation. Accordingly, Adani Power Limited (APL) on 11.08.2015 signed a MoU with Bangladesh Power Development Board (BPDB), to develop a 2X800 MW thermal power plant on BOO basis in India and supply the entire power generated to Bangladesh Power Development Board (BPDB) through a dedicated Transmission Line.
ii. NOC from Ministry of Power, Government of India has been obtained to set up Thermal Power Plant in Jharkhand for supplying power to Bangladesh through a dedicated 400 kV transmission line. Government of Jharkhand has signed MoU with Adani Power (Jharkhand) Limited for setting up this Power Plant.

iii. After exploring four sites, the site at Paraspani has been finalized because of No Protected or Reserve Forest involved in project site, No Wildlife Sanctuary/National Park is located within 15 km from the project site, Land is mostly barren with single crop thus least impact on Agriculture and livelihood in comparison to other location and Minimum Displacement, therefore lesser R & R issues. A second order seasonal stream passes through the site, which will be conserved. To maintain natural drainage profile, storm water drains will be developed along the profile of first order streams.

iv. The land requirement is 1,014 acres/410 Ha. (includes Main plant, Coal Storage, Water Reservoir and Green Belt) [Private land: 302 + Govt. land: 108]. The coal requirement is 7.0 MMTPA of Imported Coal which will be met from Indonesia, South Africa, Australia and other possible sources. The imported coal shall be received at Dhamra port (Odisha) and the same will be transported to the project site by rail. Coal storage of 15 days requirement of coal is proposed at the power plant. The annual requirement of coal is estimated to be about 7.0 MMTPA. Hasdia- Godda Railway Line is under development. Railway Infrastructure will be developed from Godda to the Site. The nearest Railway Station is Hansdiha (39 Km, SW) and the nearest Sea Port is Kolkata Port (350 km, S). The project site falls under ZONE – III as per IS 1893: 200. The project cost is Rs. 13,906 Crores.

v. The water requirement is 4,000 m$^3$/hr (35 MCM per annum) which shall be sourced from Chir River with a water intake point at a distance of 20 km. The water will be drawn from the River Chir by constructing a pump house and pumping the water to the plant through a dedicated pipeline. An intermediate booster pumping station shall be provided for Paraspani site. Closed circuit cooling water system would be adopted for steam generator and turbine generator and common auxiliaries like air compressors, ash handling plant equipment etc. It is proposed to install Two (2) natural/induced draft cooling towers, one for each unit and of approx. capacity 92,000 m$^3$/hr per tower. The cooling tower would be designed for a cooling range of 9°C. 100% Ash disposal shall be as per MOEF guidelines.

(2.3.2) The Committee observed that although the proposed site seems to be suitable for the TPP w.r.t ecology etc., the PP did not provide the information/data regarding the water availability from Chir River so as to assess the impact of proposed water drawl on the downstream users and ecology. Accordingly, the proposal was deferred and the following information was sought:

i. Data from the State Irrigation Department justifying the water availability.

ii. Impact of proposed water drawl on the downstream users and ecology.

iii. Confirmation that the imported coal parameters shall be as per the O.Ms of the Ministry.

iv. Copy of the NOC from Ministry of Power for the export of power.
(2.3.3) However, as requested by the PP for generating the baseline data (meteorological and air quality) of pre-monsoon season from March, 2016 the Committee agreed for the same at the PP’s own cost Unquote.

(2.7.2) In this 55th meeting on 5th & 6th May 2016, the PP informed that they had submitted report on water availability for proposed withdrawal of water at a point in Chir River prepared by M/s. Nano System Consultant Pvt. Ltd., an empanelled consultant by Water Resources Department, Govt. of Bihar. Based on this report, the PP applied to Water Resources Department, Govt. of Jharkhand for allocation of 36.0 MCM of water on annual basis from Chir River, which the Department has conveyed concurrence for said withdrawal at Lat. 24° 56' 12.85” N & Long. 87° 08’ 59” E through storage intervention of specified capacity at a location to store water for operation of the TPP during on Monsoon period i.e. 15th of October to 15th of June.

(2.7.3) The Committee noted that from this report, it is observed that no flow data on Chir River is reported. All values presented are based on computation taking secondary data on rain fall. The information was not available about total catchment area of Chir River with map and separate catchment before and after proposed abstraction point on Chir River. The details on land use in the catchment and the irrigation scheme details in catchment area with all existing abstraction points for different uses in the catchment area of the Chir River are also not available. The PP could also not give details as to whether Chir is tributary of Chandan River or directly flows in River Ganga. The route of two Rivers is also not given.

(2.7.4) In absence of above data, information & details the proposal is deferred. The following shall also be submitted by PP:

(i) Detailed reply to the issues raised by ERC, New Delhi
(ii) The PP shall get a clarification from WRD, Jharkhand regarding the requirement of NGRBA approval for the water drawl and if so, whether the same has been obtained.

(2.7.5) Further, the senior official(s) of the Water Resources Department, Govt. of Jharkhand and M/s. Nano System Consultant Pvt. Ltd., who prepared the said report shall also be present before the EAC, when the proposal is considered next.

2.8 3x800 MW Super-Critical TPP at Village Annupurna Khamar, Taluk Kamakhyanagar, District Dhenkenal, Odisha by M/s Odisha Thermal Power Corporation Ltd. – reg. extension of validity of ToR

(2.8.1) In this 55th meeting on 5th & 6th May 2016, the PP along with their environmental Consultant, Mecon Limited, Ranchi, made a presentation and inter-alia, provided the following information:

i. ToR for preparation of EIA/EMP for the above proposal was accorded on 05.03.2013 with a validity period of two years. The baseline data was generated during March-May, 2013 and the Public Hearing was conducted by the SPCB on 05.08.2014. The ToR validity is extended for one year i.e. till 04.03.2016 as per the Ministry’s O.M. dated 08.10.2014.
ii. Due to the delay in allocation of coal block, the submission of final EIA/EMP is being delayed and hence, an application for further extension of validity of ToR by one year i.e. till 04.03.2017 has been made on 05.12.2015 and 27.01.2016.

(2.8.2) The Committee noted that as per the Ministry's O.M. dated 22.08.2014 regarding extension of validity of ToR, the PP needs to apply to the Ministry at least three months before the expiry of validity period, together with an updated Form-I, based on proper justification. Although the PP has submitted the application for extension of validity of ToR on 05.12.2015 (one day delay), the extension requested in the same was only till 05.03.2016. The PP has clarified that it was an inadvertent error and the intention was to request the extension till 04.03.2017. The same has also been clarified to the Ministry on 27.01.2016, in response to their direction. The Committee was of the view that subject to condonation of delay by the Ministry in submission of the Application, the extension of validity of ToR may be agreed to.

(2.8.3) The Committee also noted that as per the Ministry's O.M. dated 22.08.2014 and its amendment dated 07.11.2014, the date of Public Hearing and the primary data used in the preparation of EIA/EMP report should not be more than 3 years old for submission of the final EIA/EMP report to the Ministry. In the instant case, since the three years period of baseline data collected expires in May, 2016 and the PP may not be able to submit the final EIA/EMP report to the Ministry in time, the EAC recommended that fresh baseline data for one season (non-monsoon) shall be collected and the EIA/EMP report shall be accordingly updated. Regarding fresh Public Hearing, the EAC opined that the same may not be required as the validity period of Public Hearing shall exist till the ToR validity of four years. However, the EAC recommended that public notices in the leading local newspapers, Gram Panchayats, Website of PP etc. should be published clearly summarizing the comparative baseline datas and along with the intimation that the public can send its comments if any to the PP and also MoEF&CC within 15 days one month respectively after publication of the public notice.

2.9 1X660 MW Margherita Coal Based TPP at Village Saleki NC & Lekhapani, Tehsil Makum Mouza, Margherita Revenue Circle, District Tinsukla, Assam by M/s Assam Power Generation Corpn. Ltd. – reg. extension of validity of ToR

(2.9.1) In this 55th meeting on 5th & 6th May 2016, the PP along with their environmental Consultant, Ramky Enviro Engineers Ltd., Hyderabad, made a presentation and inter-alia, provided the following information:

i. ToR for preparation of EIA/EMP for the above proposal was accorded on 15.03.2013 with a validity period of two years. The baseline data was generated during Summer, 2013. An amendment of ToR for revision of capacity to 1X660 MW super-critical TPP and the extension of validity till 14.03.2016 (3 years as per O.M. 08.10.2014) was accorded on 12.12.2014. The Public Hearing was conducted by the SPCB on 22.03.2015.

ii. Although the final EIA etc. was submitted online to MoEF&CC on 23.01.2016, the same has not been accepted for want of firm coal linkage and it was also instructed by MoEF&CC to apply for extension of validity of ToR. Accordingly, an application was submitted to the Ministry on 30.03.2016 for the extension of validity of ToR by further one year i.e. till 14.03.2017.
(2.9.2) The Committee noted that as per the Ministry’s O.M. dated 22.08.2014 regarding extension of validity of ToR, the PP needs to apply to the Ministry at least three months before the expiry of validity period, together with an updated Form-I, based on proper justification. In the instant case, upon the instruction of the Ministry, the PP has applied to the Ministry for extension only on 30.03.2016 i.e. after the lapse of validity of ToR. The Committee was of the view that subject to condonation of delay by the Ministry in submission of the Application, the extension of validity of ToR may be agreed to.

(2.9.3) The Committee also noted that as per the Ministry’s O.M. dated 22.08.2014 and its amendment dated 07.11.2014, the date of Public Hearing and the primary data used in the preparation of EIA/EMP report should not be more than 3 years old for submission of the final EIA/EMP report to the Ministry. In the instant case, since the three years period of baseline data collected expires in Summer, 2016 and the PP may not be able to submit the final EIA/EMP report to the Ministry in time, the EAC recommended that fresh baseline data for one season (non-monsoon) shall be collected and the EIA/EMP report shall be accordingly updated. Regarding fresh Public Hearing, the EAC opined that the same may not be required as the validity period of Public Hearing shall exist till the ToR validity of four years. However, the EAC recommended that public notices in the leading local newspapers, Gram Panchayats, Website of PP etc. should be published clearly summarizing the comparative baseline datas and along with the intimation that the public can send its comments if any to the PP and also MoEF&CC within 15 days/one month respectively after publication of the public notice.

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

(2.10.1) The proposal was earlier discussed in the 45th & 52nd Meetings of the EAC (Thermal Power) held during 29th-30th October, 2015 and 29.02.2016-01.03.2016, the minutes of which are as under:

*Quote* “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. (JVBNL). 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.

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.

(2.2.2) In the 52nd meeting on 29th February & 1st March, 2016, it was seen from the documents circulated by the PP to the EAC members that the assets (including land for main plant, ash dykes I & II, and for the railway tract totaling 1,190.267 acres) had not yet been transferred to the PVUNL, and according to the PP, it was now expected to be transferred by the 1st week of
March 2016 (as against the earlier committed time frame of end Feb 2016). It was noted that PEL has requested the Ministry vide letter dated 16.12.2015 for cancellation of earlier ToR.

(2.2.3) According to the site projection shown by the PP, it was seen that the site for the earlier proposal of 2X660 MW and for the present proposal of 3X800 MW were overlapping to some extent. In this connection it was recalled that for the earlier proposal of 2X660 MW, a Sub-Committee of EAC had visited the site prior to the grant of ToR, and had given recommendations for the ecological protection of that area and its surroundings. Since there was some overlap between the two sites, and since the sub-committee had made recommendations for that area, the PP was asked to indicate his response as well as his proposed ToRs for the new (3x800 MW) proposal with reference to the recommendations of the Sub-Committee report. However, it was found that the PP was completely unprepared on this aspect and was even unaware of the Sub-Committees recommendations.

(2.2.4) It was also brought to the Committee’s notice that phasing out/closure of the existing 10 units had been raised earlier, and the PP was asked to clarify the action taken with reference to this point. In this connection, it emerged that although officials of the JBVNL were present in the meeting, there was no clarity regarding the State Gouv.’s approval to the phasing out/closure plan of the existing 10 units of Patratu Energy Ltd. In addition, the EAC further noted that significant environmental damage has already been caused by the existing TPP. Hence, an action plan to rectify the same needs to be submitted.

(2.2.5) The proposal was accordingly deferred. It was also noted that there was no senior level representation from either of the 2 JV partners i.e. NTPC and JBVNL. This needs to be taken care of for all future cases involving either of the JV partners.

(2.2.6) A detailed reply to the issues raised by ERC, New Delhi in their communication to the EAC shall also be submitted. ”Unquote.

(2.10.2) The above information sought by EAC, was submitted by the PP vide letter dated 30.04.2016 to MOEF&CC and accordingly, the proposal was again placed before the EAC in this 55th meeting on 06.05.2016, wherein the PP made a presentation on the said information.

(2.10.3) 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) Based on the submission by the Principal Secretary, Energy of the State Government that the matter was already in an advanced stage for final approval of the phasing out /closure plan of the existing 10 units of Patratu Energy Ltd., the State Gouv.'s approval to same shall be submitted to the Ministry within two months.

(ii) Detailed compliance to the recommendations of Sub-group of EAC in its visit dated 28.01.2013.
(iii) The water storage capacity shall be enhanced by desilting of dam and dredging of River Damodar.

(iv) The ash dyke (existing & proposed) embankments shall be stone pitched.

(v) The old ash dykes should be excavated and the ash should be used in various road projects etc. The excavated site can then be reused as an ash dyke.

2.11 2x660 MW Thermal Power Plant (TPP) near Chausa, District Buxar, Bihar by M/s SJVN Thermal Pvt. Ltd. – reg. ToR

(2.11.1) In this 55th meeting on 5th & 6th May 2016, the PP along with their environmental Consultant, Cholamandalam MS Risk Services Limited, Chennai made a presentation and inter-alia, provided the following information:

i. The Project Company “Buxar Bijlee Company P Ltd.” was taken over by SJVN Ltd. through MOU dated 17.01.2013 with Bihar State Power (Holding) Company Limited (BSPCL) & Bihar Power Infrastructure Company Limited (BPICL) for the implementation of 1,320 MW (2x660 MW) Buxar Thermal Power Project (BTPP). Name of the Project Company “Buxar Bijlee Company P Ltd.” was subsequently changed to “SJVN Thermal Pvt. Ltd”.

ii. ToR for the above proposal (in the name of Buxar Bijlee Company P Ltd.) was accorded on 10.09.2008. The baseline study was done by EPTRI, Hyderabad during April–June, 2008 and Public Hearing was conducted by SPCB on 30.07.2010. The coal block (Deocha-Pachami) was allocated on 06.09.2013. Fresh baseline monitoring was conducted by an accredited laboratory, AES Laboratories Pvt. Ltd. during March – June, 2015. Considering the delay in development of the coal block, MoU was signed for imported coal in February, 2016. Studies (ecology, socioeconomics, hydrogeology etc.) for addendum EIA report were done by Cholamandalam MS Risk Services Limited, Chennai, an accredited consultant. Considering the outer limit of ToR validity of 4 years, revised Form I and updated PFR was submitted to MoEF&CC in May, 2016.

iii. The land required for the proposed TPP is 1064.69 acres and the estimated land required for the corridors is about 225 acres. There is no forest land involved. River Ganga and Karmanasa flow at a distance of 3.0 km and 2.5 km respectively. The project cost is Rs. 9,591 crores.

iii. The coal requirement is 6.25 MTPA and 3.9 MTPA for Indian coal and imported coal respectively. The imported coal will be used for initial 4 year period and thereafter Indian coal will be used for the project. The water requirement is about 3,550 m³/hr and shall be sourced from River Ganga. The water allocation for 55 Cusecs is available.

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

(2.11.3) Regarding the request of PP to use the baseline data of March – June, 2015 in the preparation of EIA/EMP report, the EAC taking into account the written submission made in the background document that the comparative baseline data of 2008 & 2015
revealed no changes, and the certification of DM (Buxar) dated 23.05.2015 that no new industries have come up in the nearby area, agreed for utilizing the earlier baseline data in the EIA/EMP and also recommended to supplement the same with minimum one month fresh baseline data (non-monsoon).

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

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**ANNEXURE- A1**

**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.
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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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 drawal and discharge into open sea.

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$_{10}$, PM$_{2.5}$, SO$_2$, NO$_x$, 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.

xlii) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.

xliii) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.

xiv) 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

xlv) 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.

xlvi) 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.

xlvii) 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.

xlviii) 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.

xlx) 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.

l) 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 CO₂ 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.