

MINUTES OF THE 28th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE ON ENVIRONMENTAL IMPACT ASSESSMENT OF THERMAL POWER & COAL MINING PROJECTS

The 28th Meeting of the reconstituted Expert Appraisal Committee (Thermal Power) was held on **22nd & 23rd December, 2014** at Bhramputra Meeting Hall, Vayu Wing, First Floor, Indira Paryavaran Bhawan (new building), Jorbagh, New Delhi-110003. The members present were:

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|----|-------------------------------------|---|---------------------------------|
| 1. | Dr. C.R. Babu | - | Vice Chairman (Acting Chair) |
| 2. | Shri T.K.Dhar | - | Member |
| 3. | Shri A.K. Bansal | - | Member |
| 4. | Shri J.L Mehta | - | Member |
| 5. | Shri N.K. Verma | - | Member |
| 6. | Dr. S.D. Attri | - | Member (Representative of IMD) |
| 7. | Shri P.D Siwal and Shri N.S. Mondal | - | Member (Representative of CEA) |
| 8. | Dr. S.S. Bala | - | Member (Representative of CPCB) |
| 9. | Dr. Saroj | - | Member Secretary |

In attendance: Dr. M. Ramesh, Scientist 'D' and Shri Deepak Gautam, R.O., MoEF.

Shri G.S. Dang, Dr. Ratnavel, Dr. Asha Rajvanshi and Dr. C.B.S Dutt could not be present.

Item No.1: CONFIRMATION OF THE MINUTES OF THE LAST MEETING.

The Minutes of the 26th EAC meeting held during 27th-28th November, 2014 were confirmed with minor corrections.

Item No. 2: CONSIDERATION OF PROJECTS

2.1 1980 (3x660) MW Ghatampur Thermal Power Station of M/s Neyveli Uttar Pradesh Power Ltd. (A JV from of M/s. NLC Ltd., and M/s. UPRVUNL) in Tehsil Ghatampur, District Kanpur Nagar, Uttar Pradesh. – reg. reconsideration for Environmental Clearance.

1. The proposal was earlier discussed in the 6th and 11th Meetings of the EAC (Thermal) held during **December 5-6, 2013, and 13-14, February 2014** the minutes of which are as under:

Quote. “The proposal is for setting up of 1980 MW (3x660 MW) Thermal Power Plant in Ghatampur, Kanpur, Uttar Pradesh by M/s Neyveli Lignite Corporation Ltd. The ToR for preparation of EIA/EMP report was accorded on 28.12.2011. The EIA/EMP report after conducting public hearing was submitted to the Ministry for consideration of environmental clearance. The project proponent along with their environmental consultant, M/s Vimta Labs Ltd., Hyderabad made a presentation and provided the following information:

The total project area is 1886 acres including ash pond area and township. The breakup of land use is 190.19 acres of single crop, and 1694.42 acres as others. Regarding the status of land acquisition, there was no clarity and commitment provided. As per the TOR issued there were 1032 project affected families. However, there was no mention about the detailed rehabilitation plan. On the contrary, it was informed that the disbursement of compensation for 7 villages is in progress with the approval of the State Govt. and for the 8th

village it has not been initiated. *In view of this, the committee desire to know the details of the land use pattern, land acquired, to be acquired, compensation to the affected families etc. The total project cost is Rs. 14375.4 crores.*

There are no national parks, wildlife sanctuaries, biosphere/tiger reserves etc. within 10 km of the plant. There are four reserve forests in the study area viz. Mannjhupur R.F at 3.4 km in the west direction, Chandupur East Block R.F. at 4.0 Km in the west direction, Badanpur R.F. at 4.0 Km in the west direction and Chandupur West Block R.F at 6.0 km in the west.

The coal requirement would be 8.511 MTPA. The Ministry of Coal has allocated Pachwara South Coal Block for the project on 25th July, 2013. The proposal for environmental clearance of the aforesaid coal block was submitted to MoEF and as informed was considered for ToR for preparation of EIA/EMP in the EAC meeting held on 26.11.2013. The coal block involves about 50% of forest land and the proposal for forest clearance was submitted to the concerned DFO, U.P.

The Total water requirement is estimated to be 6275 m³/hr (150.6 MLD), which will be met from River Ganga (seepage water from West Allahabad branch canal near Bidhnu Kasba Village). The permission for water drawl has been obtained from the Govt. of U.P. on 6th June, 2012. *The committee noted that the present proposal for water drawl may affect the agriculture and irrigation of farmers. Hence, alternate options for water drawl shall be explored and the details of conservation of seepage water by lining shall also be submitted. A plan for sustainability of ecology also needs to be submitted.*

Public hearing/public consultation was conducted by the Uttar Pradesh Pollution Control Board held on 23.03.2013. It was noted that the issues raised in the public hearing include ash utilization, employment, pollution of River Yamuna, damage to the crops near by and compensation for the land. The Committee discussed the issues raised in Public Hearing and the responses made by Project Proponent.

The committee noted that Pachwara South Coal Block was allocated for the project only on 25.07.2013, whereas the EIA/EMP report was prepared prior to it. Therefore, a detailed clarification was sought from the PP regarding the basis for the predictions on ambient air quality data etc. submitted in the EIA/EMP report. The characteristics of coal from Pachwara South Coal Block also need to be submitted. The committee also noted that the environmental clearance & Stage-I forest clearance for the coal block will take substantial time and are mandatory as per the policy of MoEF.

Further, the committee noted that detailed MOU for ash utilization has not been submitted. As far as, ash pond area is concerned, it was felt that it needs to be optimized. The ash pond shall be lined by HDPE as the project is in the Ganga Basin and the ash dyke embankment shall be stone pitched. The committee noted the PP did not submit any permission letter /assurance from Railways for transportation of coal. As the project involves 1032 affected families, a detailed R&R plan needs to be submitted. With respect to CSR, an action plan with budgetary provisions for (i) Capital cost @ 0.4% of the Project Cost during the construction phase (ii) and thereafter expenditure towards annual Recurring CSR @ 0.08% of the Project Cost indicating the activities needs to be submitted.

*In view of the above short comings, the proposal was **deferred** for reconsideration at a later stage.*

On submission of information by the PP for the above aspects, the matter was again placed before the EAC for its re-consideration and the following information was provided by the PP and their environmental consultant.

The land use pattern for 1886 acres at the time of land acquisition was submitted. Conversion from the existing land use pattern to Industrial land has been issued by ADM, Kanpur Nagar. The PP has deposited an amount of Rs. 130.32/- Crores as per demand letter received from the Revenue authorities. More than 80% of land owners in the eight villages have given their consent for land acquisition. Land compensation distribution process to the individual owners is going on and the compensation details were submitted. The detailed R&R plan included in the compensation package along with calculation made for the R&R provision was submitted.

Alternate options for drawl of water were explored from River Yamuna and Ganga. After discussing various options available, the State Govt. has awarded the allocation of water from River Ganga. The water will be drawn from the River Ganga by effecting saving of water by strengthening the West Allahabad branch canal system by way of lining to prevent water leakage loses, wastage and also improving the optimization of water to the agriculture by construction of 122 check dams, thus improving the water table to benefit more no. of farmers dependant on agriculture. Apart from this, efforts will also be made to improve the optimal utilization of water by forming water users committees in collaboration with Irrigation Department as part of CSR initiative. The proponent is committed to develop greenbelt (479 acres) as per the norms by conservation and protection of local species as suggested by the committee.

Standard F Grade washed Coal has been considered for the Air Dispersion modeling while preparing the EIA/EMP report. New scenario considering a worst case of sulphur content at 1% and also at 0.7% is carried out. The Pachwara South coal block is in the Gondwana coal formation region. The occurrence of sulphur in this region is only in traces. The report/letter of GSI/CMPDI for the characteristics of coal from this region is submitted. NLC being an experienced Mining Company is confident of exploiting the coal reserves of the Pachwara south coal block to meet the power plant requirement for its commissioning. The required clearances are being vigorously pursued with various agencies.

The total ash generated from the power plant will be 2.89 Million Tonnes out of which 2.31 MTPA will constitute fly ash (80%) and the balance as bottom ash. M/s JK Cements have already given a commitment letter to lift the fly ash generated from the proposed Ghatampur Thermal Power Plant. They have agreed to lift 1.16 MT during the first year, 1.93 MT during the second year and 2.31 MT from the third year onwards. To this effect they have signed a Fly Ash off take agreement with NUPPL. The area provided for ash dyke is 427 acres which is well within the CEA norm of 495 acres for 3 x 660 MW plant. NUPPL is committed to line the ash dyke with an impervious lining to prevent seepage of ash water. As recommended in the Hydrological study done by NUPPL thro' Hydro-Geosurvey Consultants Private Limited, Jodhpur, it is proposed that the ash pond area, after compaction, will be provided with either clay layer of 300 mm thickness of permeability value of 10^{-7} cm/sec to 10^{-9} cm/sec for making it a fool proof impervious barrier or with HDPE lining so that no pollutants from fly ash and bottom ash join the surface or ground water.

Railways informed that no separate Rail Transport Clearance (RTC) is required as per the present Policy guidelines and no special permission/approval required for transportation of coal. Also the Zonal Railway have agreed in principle that Coal from Pachwara can be moved to GTPS. The letters of correspondence to support the same are submitted. CSR plan for

construction phase @ 0.4% of project cost i.e Rs 57.50 Crores and during operational stage @ 0.08% of project cost i.e Rs 11.50 Crores per annum of project cost was submitted.

The committee noted that the CSR details presented are only indicative. A detailed Action Plan needs to be worked out within next three months after taking views of Gram Sabhas and District Authorities. Further, a detailed clarification was sought from the PP regarding the resettlement colony etc. under the R&R plan.

The committee further deliberated on the source of water as seepage water from West Allahabad branch canal and recommended to explore the possibility of installation of ACC for conservation of water vis-à-vis the cost for lining of the canal etc. The committee also desired a commitment from the PP that no water shall be drawn from River Yamuna and that the water proposed to be drawn from West Allahabad branch canal throughout the year is sufficient for the project. The water drawl for the project shall not affect the water drawl for irrigation and drinking water.

The committee noted that the predicted SO₂ emissions based on baseline AAQ collected is high and shall be touching the AAQ standards. Hence, it was recommended that FGD shall be installed to minimize the sulphur emissions.

An original full scale satellite map from NRSA/NRSC showing the land use pattern needs to be submitted by the PP. As suggested by the EAC, the green belt species shall be revised and submitted. The MoU for fly ash utilization shall be revised and submitted. The permission letter of DRM for transportation of coal shall also be submitted.

In response to the above, the PP provided following information/documents.

The satellite imagery details of the study area and compensation demand letters raised by the Land Acquisition Department inclusive of compensation towards R&R were submitted. As suggested by the EAC, the green belt species that would be planted were revised and submitted.

Regarding permission of Railways for transportation of coal, a letter dated 07.02.2014 from RITES Ltd. was submitted, which inter-alia states that Railway Ministry used to give permission letter/assurance for transportation of coal in the form of rail traffic clearance (RTC). However, as per the revised policy issued by Railway Board on 23.07.2012, Railways have dispensed with system of RTC for power plants. RITES is already preparing a feasibility report for the above power plant which will be submitted to Railways in due course. Considering the various options of the routes for transportation of coal Railways shall be in a position to transport the coal form mints the plant. However, final route for movement of coal shall be decided by the Railways after examination of the feasibility report.

The details of CSR activities proposed and undertaken along with budget were submitted. A MoU was signed with M/s JK Cement Ltd. for utilization of 100% fly ash from the third year of operation of the TPP. The MoU is valid for a period of five years from the date of commencement of lifting of fly ash, which is further extendable.

The committee also noted that as per the existing policy of MoEF, the environmental clearance & Stage-I forest clearance for the linked coal block is a pre-requisite. Although the EC and Stage-I FC for the Pachwara South coal block allotted for the project are under process, it may take substantial time, therefore the proposal

needs to be referred to the Committee once again when the EC and Stage-I FC for the linked Coal block has been obtained.

*In view of the above, the proposal was **deferred** for reconsideration at a later stage.*
Unquote”

2. The PP has informed the Ministry that Secretary, MoC has requested Secretary, MoEF to consider the proposal of NLC to use the imported coal in Ghatampur TPS of NUPPL till such time the Pachwara South coal block is developed. The PP has signed a MoU with M/s. MSTs to supply the imported coal to the power plant. NUPPL has considered 3,700 GCV coal in EIA/EMP report and proposes to import through MSTC of coal quality equal to or higher than that envisaged in EIA/EMP report. The Railways has replied to PP that they are in a position to supply imported coal to the proposed power project by rail as per the logistic plan of railways. In view of above, the proposal was placed before the EAC, wherein the PP along with their environmental consultant, M/s Vimta Labs Ltd., Hyderabad made a presentation and inter-alia provided the following information.

3. Physical Possession of the entire land of project site has been given on 27.11.2014. MoC has allocated Pachwara South Coal Block on 25.07.2013. The drilling and exploration is being done by CMPDIL through M/s Maheswari Mining Pvt. Ltd., Raniganj since 11.01.2013. The drilling was started in the month of April 2013 and after completion of one bore hole, the rig was damaged & workmen were assaulted & beaten. The drilling was stopped in June, 2013. M/s NUPPL has submitted the application for Forestry Stage-I Clearance on 25.11.2013 but the same was returned mainly due to want of Mining Plan. For preparation of Mining Plan, detailed drilling & exploration and Geological Report are required. M/s Vimta Labs Ltd., Hyderabad has been engaged for carrying out EIA/EMP study. M/s Total Survey Consultancy, Ranchi has been engaged for carrying out DGPS survey works. The MoEF issued ToR on 25.02.2014. The CMPDIL was impressed upon through MoC for expediting detailed exploration of the block on 26.05.2014.

4. The MoC has sanctioned the Advance Action Plan (AAP) of Rs.1945 Lakhs on 02.07.2014. Several meetings of Mining Task Force (19.02.2014, 25.06.2014 and 19.09.2014) were conducted under Chairmanship of Dy. Commissioner, Dumka to address the problems faced in development of coal block in Dumka District and to create conducive environment for starting exploration. The CMPDIL has awarded Extension of Time to M/s Maheswari Mining Private Ltd., (MMPL) from July, 2014 to March, 2015. Again drilling was restarted on 30.07.2014 and after completion three holes, the drill rig was burnt on 05.09.2014 night & damaged by miscreants. The drilling has been stopped since 06.09.2014 and the same has not commenced so far. Unfortunately, none of the above awarded works namely drilling, surveying, EIA/EMP study are progressing due to poor law & order situation in Dumka District where coal block is situated despite NUPPL's efforts with District & State Administration. Efforts are also on to develop the Pachwara South Coal Block in two Phases i.e., Phase-I and Phase-II through Mine Developer and Operator (MDO) route, the NUPPL Board has approved the same in its meeting held on 03.11.2014.

5. Coal from all the ten seam zones are in general non-coking with high moisture (4.60% - 11.8%) mostly high ash (16.60% - 47.20%) medium to high volatile (21.5% - 34.0%). The fixed carbon ranges from 28.2% to 45.9%. The seam zones vary in grade mostly from C to G. The calorific value varies generally from 1834 Kcal/Kg to 5201 Kcal/Kg. Above fuel would be appropriately blended and an aggregate GCV of 3700 kCal/kg will be obtained. Due to Law & Order problem, the exploration & drilling is being delayed. Further, the land acquisition and R&R activities is also tedious work in tribal dominated area. It is expected that the rated

production would commence from 01.06.2024 based on the experience gained in development of neighbouring Central Pachwara Coal Block. Since the power plant will be ready for operation prior to 5 years from the commencement of coal from South Pachwara, there is an imperative need to utilize the imported coal to meet the requirement of GTPS.

6. Imported coal will be utilized for the project till such time the South Pachwara Coal Block attains the rated production. Accordingly, an MOU was signed with MSTC on 21.11.2014. The PP has adequate expertise in procuring the imported Coal. LOA has been given to M/s MSTC for supply of imported coal of GCV 4200 (ADB) for NLC's subsidiary company NTPL situated at Tuticorin, a Joint Venture Company of NLC Ltd., and TANGEDCO as per the requirement. The firm has already started supplying Coal to NTPL. The scope includes arranging vessels, delivery at Indian ports, handling, storage, port clearances, arranging railway rakes, loading, transportation, delivery at the delivery point i.e. coal receiving end of GTPS plant and unloading of coal at the GTPS. All other activities for clearing and forwarding of the consignments like Customs Clearance, coordination with Ports, Railways and any statutory authorities shall also be part of scope of work of the supplier. All liaisons, coordination with coal mine(s) outside India, coordination at Load port, Discharge Port, Railways handling agents etc., shall also be part of scope of work of the supplier. The supplier shall be responsible for quality control.

7. Steam Generator is designed for all the three combinations, i.e. 100% Indigenous Coal with GCV of 4000 kCal/kg, 70% Indigenous Coal with GCV of 4000 kCal/kg blended with 30% Imported Coal with GCV of 5500 kCal/kg – average GCV of 4450 kCal/kg and 100% Imported Coal with GCV of 4450 kCal/kg. The worst case maximum resultant 24 hourly concentrations for PM, SO₂ and NO_x after implementation of the above project will be well within the CPCB Standards. For indigenous, blended as well as imported coal, the impact of PM₁₀ would be negligible in core or buffer zone of the Project. The incremental and resultant concentrations of SO₂ and NO_x will be well within the NAAQ limits (2009 standards).

8. The distance of the project site from Pachwara South Coal Block and Paradip Port (for imported coal) is 970 Km and 1130 Km respectively. Railways have confirmed transportation of imported coal to GTPS site from Paradip Port as per their logistics plan. The budget for CSR activities for Construction Phase and Operation Phase shall be Rs. 57.50 Crores Rs. 11.5 Crores/Annum respectively. An amount of about Rs. 1.61 crores has been committed as on 01.12.2014. Entire fly ash quantity (2.31 MTPA) has been tied up with M/s JK Cements, however only when the ash handling system is not working, the ash dyke will be utilized. NUPPL is committed to line the ash dyke with impervious lining to prevent seepage of ash water. As recommended in the Hydrological study done by NUPPL through Hydro Geo survey consultants Private Limited, Jodhpur, it is proposed that the ash bund area, after compaction, will be provided with either clay layer of 300 mm thickness of permeability value of 10⁻⁷ cm/sec to 10⁻⁹ cm/sec for making it fool proof impervious barrier or with HDPE lining so that no pollutants from fly ash and bottom ash join the surface or ground water.

9. The representative of CEA informed that CEA is in the process of bringing out Guidelines for import of coal. This would be applicable as and when it is framed. The PP confirmed that they will comply with all the Government guidelines regarding import of coal in vogue as well as the future amendments, if any.

10. The Committee deliberated on the information provided by the PP and sought the following additional information. *The proposal was accordingly **deferred**.*

- (i) *Need to clarify the Sulphur content in the coal and a consistency to be maintained in all the documents (whether 0.5 %, 0.7% or 0.46%) and re-submit.*
- (ii) *Quality of ash generated needs to be re-submitted as per the import being done for TPP of NTPL situated at Tuticorin.*
- (iii) *Need to publish in local newspaper and on website, the environmental impact of the proposed change of source of coal from domestic to imported and seek comments giving a time-frame of one month. The concerned SPCB and the R.O. of MoEF&CC need to be informed accordingly. The comments received and the proposed action shall be submitted to the Ministry for further consideration.*
- (iv) *MoU for import of coal does not mention the quality and quantity. The same needs to be incorporated and agreed by both the parties*

2.2 4x1000 MW Pudimadaka Super Thermal Power Project at Lalamkoduru, Rambilli, Veduruvdda & Pudimadaka, Distt. Visakhapatnam, Andhra Pradesh by M/s NTPC Ltd. - Re-consideration for ToR

1. The proposal was earlier discussed in the 13th Meeting of the EAC (Thermal) held during **March 25-26, 2014** the minutes of which are as under:

Quote “At the outset, the Committee noted that only one alternate site has been proposed by the PP and hence recommended that minimum two proper alternate sites shall be proposed on a topo sheet. The proposal was accordingly **deferred. Unquote**”

2. The PP has submitted the details of an additional alternate site along with the two earlier proposed sites. The Committee after detailed deliberation opined that the proposed site is not environmentally and ecologically suitable site as there are large number of water bodies in the proposed site and are inter-linked. Further, the creek is only about 100 m away, the region falls in high flood zone/Tsunami prone area, has high rain fall and close to salt pans. Due to complex hydrological system, this area is ecologically sensitive. Hence, the proposed site in the present form **cannot be recommended**. The PP may re-locate/shift the site away from the ecological sensitive area in consultation with the State Government.

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. ToR

1. The project proponent along with their environmental consultant, Development Consultants Private Limited, Kolkata made a presentation and provided the following information. The proposed 1x500 MW unit is an extension unit – Phase III (Unit # 5). It will enhance the existing capacity (Phase I: 2x300MW, Phase II: 2x500 MW). The Phase- I has been commissioned and Phase-II is under construction. Fly ash utilization of 100% has been achieved till date.

2. The existing plant has enough space within its plant boundary to accommodate the expansion unit and its auxiliaries. The approximate Latitude and Longitude of the centroid of the site is Latitude: 24° 22' 13.7”N and Longitude: 88° 06' 15.8”E. There is no National Park, Wildlife Sanctuary, Mangroves, Biosphere Reserve, Heritage Site around 10 km radius of Project Site. There are no PFs and RFs within 15 km radius. Ganga (Bhagirathi) River flows around 5 km from the project. The site is located at Manigram Village, 8 km North of

Sagardighi Town by the side of the SMGR (Sagardighi-Manigram-Gankar-Raghunathganj) Road. Distance from the nearest National Highway 34, is 20 km and is Project 240 km from Kolkata. The nearest railway station is Manigram adjacent to the site on Bandel-Barhawara branch line. Estimated Project Cost is Rs. 35184.34 Million.

3. The coal requirement is 2.76 million MTPA at 85 % PLF and it is proposed that coal from the Pachwara (N) block would be transported by road dumpers to the dedicated Pakur siding which is presently under construction (about 50 km distance). From there, coal would be transported to the plant site through rakes covering a route length of around 87 km and would take approximately 4 hours. Around 43,200 kld (i.e. 1800 m³/hr) of raw water will be drawn from River Bhagirathi.

4. *Based on the information provided and the presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP.*

2.4 2x660 MW (Unit- I & II) coal based TPP at Village Phephar, Tehsil Banswara, Distt. Banswara in Rajasthan by M/s Rajasthan Rajya Vidyut Utpadan Nigam Ltd.- reg. Extension of validity of ToR.

1. The PP and their environmental consultant, Pollution Control Research Institute (PCRI), Haridwar, made a presentation on the above proposal and inter-alia provided the following information. ToR for preparation of EIA/EMP for the above project was accorded on 07.12.2011 and extension of ToR was accorded vide letter dated 21.01.2014 for TOR validity upto 06.12.2014.

2. Regarding the present status of the proposed project, Government of Rajasthan accorded administrative and financial approval of the project under State sector on 24.06.2010. Total 462.52 Ha land has been identified for the power project which comprises 238.05 Ha Private Land, 102.17 Ha Government Land and 122.30 Ha Forest Land. Notification for acquisition of private land has been issued by Govt. of Rajasthan. Award for compensation (Rs 16.10 Crores) of land was issued on 27.12.2013 and Government land was allotted to RVUN. Application for diversion of forest land has been submitted to the Chief Wildlife Warden, Jaipur vide letter dated 01.08.2011. The shortcoming as observed by Nodal office was attended and communicated by the PP vide letter dated 08.10.2011. Further, ACCF and nodal office vide letter dated 14.11.2012 has desired the compliance of the point no. 7 & 10 of their letter dated 25.08.2011 which is regarding NoC from Gram Sabha and District Collector. The compliance of the said points are still awaited from the District Administration. The PP is regularly persuading the District Administration vide letters dated 12.09.2012, 01.12.2014 and 24.12.2014. M/s BHEL, PCRI Haridwar appointed as Environmental consultant for conducting EIA study at site.

3. The total land requirement for the proposed power project is 462.52 Hectare. Land will be made available for proposed Thermal Power Project as per Govt. Rules and Land Acquisition Act. Notification under Section 4, 6 & 9 of land acquisition Act-1894 issued by GoR for private land and approval for allotment of Govt. land issued by GoR on 25.04.2011. The daily raw coal requirement for 1320 MW shall be about 17800 tones. Application for long term coal linkage was submitted to Ministry of Coal, GoI on 19.01.2010. Ministry of Coal has allotted a small coal block (Kante Extension) on 05.08.2013 to RVUN. The envisaged mode of coal transportation from the coal mines to the power plant is through Indian Railway system. RVUN intends to use partly imported coal as per CEA guidelines. 2,000 MCFT of Water was allocated by Water Resource Department, GoR vide letter dated 02.09.2009 from Mahi Dam.

4. Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the recent policy of Ministry dated 08.10.2014, wherein an outer limit of **four years** was prescribed.

2.4 (A) Discussion on Standard ToR for Thermal Power Plants.

The committee after detailed discussion and deliberation amended the earlier standard TOR and recommended the standard TOR (as applicable) at **Annexure-A1** and **Annexure-A2** for undertaking detailed EIA study and preparation of EMP.

2.5 1600 (2x800) MW Coal Based Power Project at Village Dherand & Shahpur, Taluka Alibaug, District Raigarh, in Maharashtra by M/s The Tata Power Co. Ltd. – reg. extension of validity of EC

1. The proposal was earlier discussed in the 26th Meeting of the EAC (Thermal) held during **November 27-28, 2014** the minutes of which are as under.

Quote “The proposal is for extension of validity of EC accorded by the Ministry for the above project on 09.12.2009. The PP made a presentation and inter-alia provided the following information.

1. Regarding current status of the project, Land (total land 418 Hectares): Pass-through acquisition by Maharashtra Industrial Development Corp. (MIDC)/Govt. of Maharashtra. Private Land (387.75 Hectares): Acquisition of entire private land for the project is peacefully completed by MIDC/ GoM. Possession of land transferred to Tata Power on 24.11.2014. Govt. Land (29.19 Hectares): Transfer of Govt. Land to MIDC is at final stage of approval with Govt. of Maharashtra and transfer of land to Tata Power is expected by December, 2014. The lease agreement for the entire land is expected to be completed by December, 2014. It is envisaged that Unit I will achieve Full load operation & COD in 48 months from Zero date and Full load operation & COD for 2nd unit will be achieved in 4 months after 1st Unit COD.

2. Consent to Establish was received from Maharashtra Pollution Control Board (MPCB) and Environment & CRZ clearance was received from MoEF. Water front Permission was accorded by Maharashtra Maritime Board (MMB) and Raw Water allotment done by MIDC for 14 MLD of raw water. R&R Agreement was signed with GoM and NoC for the project was received from Gram panchayat. Chimney & NDCT height clearance was accorded by Airport Authority of India & Ministry of Defence. An expenditure of about Rs. 260 crores was incurred towards project till date which includes Rs. 2.34 crores for CSR activities in the area of Enhancing Employability and Livelihood, Inclusive Growth and Sustainable Development, Education and Health.

3. Regarding environmental status of the area, no new large project has taken up in the area till date. 4000 MW TPP was proposed by Maharashtra Energy Generation Ltd. (MEGL) adjacent to the project. Cumulative impact assessment for the same was done & submitted for grant of EC. However, MEGL project has been shelved.

4. Regarding reasons for delay in implementation of the project, Land Acquisition for the project is being done under Maharashtra Industrial Development Act, 1961 (MID act) by Maharashtra Industrial Development Corporation (MIDC)/GoM. Land acquisition adhering to MID Act provisions, all relevant legal provisions and in achieving a peaceful process took longer time. A Writ Petition was filed in Hon'ble Bombay High Court (HC) by 5 out of 2132

PAPs in 2010. The same was dismissed by High Court in favour of the project in 2012. The Order of High Court was challenged by the Petitioners in Hon'ble Supreme Court in 2012 and the Petition is still not admitted. Next hearing in the Supreme Court is on 2.12.2014.

5. *The Committee noted that the Ministry has received a representation from Mr. Debi Goenka, from an organization called 'Conservation Action Trust', Mumbai against the project. The reply of PP in this regard was sought. The reply from PP on all the issues raised in the representation has been received in the Ministry vide letter dated 11.12.2014, however, this needs to be discussed in the next EAC meeting.*

6. *Further, the Committee had sought information regarding the Latest operational LoA/FSA for coal and Details of CSR activities undertaken & proposed along with budgetary break up. This information has also been submitted by PP vide letter dated 11.12.2014.*

7. *In view of the above information submitted, the same would be discussed in the next EAC meeting for making a recommendation. **Unquote"***

2. The PP made a presentation on the above information sought. The Committee deliberated on the information provided by the PP and recommended that the information presented shall be further detailed and submitted. A copy of the reply shall also be provided to the complainant. Accordingly, the PP has inter-alia submitted the following reply. It was also informed that a copy of the reply was also forwarded to the complainant.

3. The allegations made in the letter by Mr. Debi Goenka are generic in nature & totally incorrect and far from the facts. The allegations are totally baseless without any supporting documentary evidence. Tata Power denies all such allegations. Tata Power is a very responsible company towards the protection of environment and complies with all the standards at all the times. Tata Power has taken various initiatives for Environment protection at Trombay & Mundra.

4. The initiatives at Trombay are certified for IMS (Integrated Management System) by M/s TUV for effective implementation of environmental management system, awarded with Vasundhara Award for the Best Environment performance by MPCB in the year 2011, first Flue Gas Desulphurization (FGD) Unit for reduction of SO₂ emission for Power Plant in India in 1986, first 275 m tall stack in India for Unit # 6 along with ESP for Unit # 5 & 8, use of low sulphur Indian/imported LSHS/LSWR for Unit # 6, use of low sulphur/low ash imported coal for Unit # 5 and Unit # 8, State-of-the art Captive Coal Berth Facility for unloading and handling coal, low NO_x burners for Unit # 7 for reduction of NO_x emission, pipe conveyors for transportation of coal, water sprinkling system at coal yard, dust suppression system at junction towers and transfer points, Sewage Treatment Plant for treatment of sewage, 100 % fly ash utilization, green lawns & brick making using bottom ash, Online Ambient Air Quality Monitoring Stations for real time data measurement, Bio Gas plant for utilization of Kitchen Waste and installation of surface aerators for reduction of temperature of cooling water discharge.

5. The initiatives at CGPL, Mundra are India's first plant to use Supercritical technology leading to lower CO₂ emissions, the plant is based on imported coal having low sulphur (<1%) and low ash (<10%), high efficiency Electro Static Precipitators (ESPs) installed to meet PM emission norm of 50 mg/Nm³, low NO_x Burners installed to minimize NO_x emission, 275 meter tall stacks for better dispersion of the pollutants, special acoustic enclosure provided to control TG noise level, Green Belt development in 33% of land with varied species using drip irrigation system, mangrove plantation on 1000 Ha area in Kantiyajal Bharuch (Gujarat) in

association with Gujarat Ecological Commission (GEC), Bio Gas plant for utilization of Kitchen Waste, 9 m high wind barrier erected along the periphery of the coal stock pile, tall growing trees planted along the side of wind barrier, water sprinklers installed at coal stock pile, Pipe Coal conveyer belt proposed on the section near village Vandh, dust suppression system at junction towers and transfer points.

6. Regarding R&R, agreement for R&R of the project was signed with Government of Maharashtra (GoM) on 13/7/2011 as per the National & State R&R policy. Land acquisition was done under MID act and the entire land acquisition for the project is completed. The possession of acquired private land is handed over to Tata Power by MIDC. Tata Power also initiated various CR activities in addition to R&R commitments. Since land acquisition process has already been completed, the new LARR act is not applicable to this project.

7. Regarding Karnala Bird Sanctuary and approval of NBWL, as per the EIA Notification, 2006 & subsequent amendments issued by MoEF from time to time, there is no requirement of NBWL clearance for the projects which are beyond 10 KM distance from eco-sensitive zone. Hence, there is no question of obtaining NBWL clearance for this project. All facts as required under EIA Notification, 2006 have already been furnished to MoEF/EAC while according EC to the project. Kanrala Bird Sanctuary is around 18 KM away from the Dherand Project in NE direction which is beyond 10 km study area as specified in EIA Notification, 2006. As per the EIA studies carried out, the wind direction is predominantly in the direction away from the sanctuary i.e. from WNW to ESE. 275 mtr stack as stipulated in the EC will minimize the contribution to GLC. The air dispersion studies show that the maximum GLC contribution due to the project emissions is in ESE direction between 6 to 8 KM. Thick green plantation as specified in EC along with other control measures will ensure that there is no fugitive emission from the project. Hence, it is clear that there will not be any adverse impact on the Karnala Bird Sanctuary, as submitted to EAC/MoEF before grant of EC.

8. Regarding the impact of transmission lines, the present proposal is only for extension of EC for thermal power project. Transmission line is separate project & is under process of obtaining applicable clearances. All the details of this project are available on MoEF website. The **400 KV Double Circuit Transmission Line** is between Dherand Thermal Power plant & Maharashtra State Electricity Transmission Company Ltd. (MSETCL) Nagothane Receiving station, of route length 45 km. The **400 KV Double Circuit Transmission Line** is between Dherand Thermal Power plant & proposed tapping point at Palm Beach Road, Navi Mumbai of route length 55 km. From Palm Beach, the Transmission Lines shall be connected to the Tata Power's proposed 400/220/33KV receiving station at Vikhroli to inject bulk power into the Mumbai Transmission System. The proposed 400 KV Dherand-Nagothane transmission line is at a distance of 17 km from the boundary of Karnala Bird sanctuary & proposed 400 KV Dherand-Palm Beach transmission line is at a distance of 100 m from the boundary of Karnala Bird sanctuary & not passing through the bird sanctuary. It is to be noted that transmission line projects passing through the Eco-sensitive zones or passing through buffer zones are considered on case to case basis by EAC (Infrastructure) covering domains like CRZ, Forest & mangrove. Extract of certified route map by competitive Authority showing the distance of transmission line from Karnala Bird Sanctuary is submitted.

9. Regarding the impact of discharge of heated and polluted cooling water in the creek, the impact of hot water discharge & barge movement on marine environment was studied as per requirements of EAC & was submitted to MoEF, on the basis of which EC was granted for the project. Report concluded that: "Impact of hot water discharge from Tata Power at Dherand on marine fauna of Dharamtar creek would be negligible. It is important that the proposed plant should not discharge waters that exceed the maximum temperature rise prescribed under the

MoEF guidelines of 7 deg". Further, as suggested by EAC, Tata Power accepted Natural Draft Cooling towers in place of once through cooling system & stands committed to the same. Tata Power will explore possibilities to further reduce the discharge water temperature. Tata Power will comply with all the conditions as laid down in the EC granted for Dherand project.

10. Regarding cumulative EIA, all the existing Industries were already covered in the base line studies carried out as part of EIA study. The main Industries existing at that time in the near by area were Ispat Ind (JSW now), RCF - Thal, IPCL (Reliance now). The cumulative impact was also carried out considering proposed MEGL project of 4000 MW based on coal & natural gas. The findings of cumulative Impact assessment were considered & deliberated by EAC during meeting held on 13/10/2008, based on which EC was granted for the project. As of now, MEGL project has been shelved due to Government's decision to cancel the land acquisition. As per information available from MoEF website, there are no new projects of significantly large size proposed to come up in the near by area.

11. Regarding industrial zone as per the Regional Plan, as per Gazette Notification dtd. 9/11/2006 under Maharashtra Industrial Development Act 1961 (MID act 1961) article 1 & sub article (3), land for the project is declared as Industrial area. The Bombay High Court has also upheld the land acquisition under MID Act for the project vide their order dated 4th April 2012 on Writ petition no. 8515/2010.

12. Regarding Nagothane Irrigation Scheme and water requirement for the project, during the initial project development stage, various options of fresh water sources were explored. During the RIEA study in Year 2006 by WAPCOS, fresh water requirement was envisaged either from local irrigation scheme or from Maharashtra Industrial Development Corporation (MIDC). During the EAC consideration, fresh water supply from MIDC was finalized and hence, all other options were dropped. Subsequently, water supply agreement for 14 MLD has been signed with MIDC on 31/12/2010. Same is communicated to MoEF during half yearly progress reports. Since the source of water for the project is from MIDC, the allegations are out of place & not applicable.

13. Regarding corrigendum to the EC for change in latitude of the project etc., there is no change in latitude and longitude of the project area. The typographical error occurred in the EC letter dtd. 9/12/2009 which was subsequently brought to the notice of MoEF by Tata Power and rectified through the corrigendum letter dtd. 20/10/2010 issued by MoEF. Corrigendum issued is in line with the first application dated 14th May 2007. The coordinates remain same through out the project appraisal process. There is no confusion. CRZ EC dated 16th June, 2008 states that plant location is within 72° 57' 30" & 73° 00' 00" E & 18° 42' 30" & 18° 45' 00" N and in EC amendment dated 20/10/2010 there are project coordinates 72° 58' 20" & 72° 59' 10" E & 18° 43' 40" & 18° 45' 00" N which are within the coordinates mentioned in referred CRZ EC.

14. Regarding appraisal of the project in a piece-meal manner etc., the entire project was appraised by MoEF following due process of EIA Notification. A separate CRZ clearance has been granted by MoEF for coal jetty & cooling water systems. There is no forest land involved in the project & hence clearance under FCA is not applicable. Transmission line is separate project & all applicable clearances for the same are being processed separately. Present application is only for extension of validity of EC, hence there is no question of fresh TOR & Public Hearing. Since the project was proposed prior to new Notification of September 2006, the same was considered & granted EC by MoEF as per section 12 of new notification. Same was confirmed by MoEF vide their letter dtd. 10th April, 2007.

15. MoEF has accorded CRZ clearance for the Jetty and associated facility by following due process of law. All aspects were considered during the process of clearance. Tata Power will comply with all the conditions as laid down in CRZ clearance. It was technically difficult to have a common jetty for both and same was explained to the EAC members and was accepted. Moreover the 4000 MW MEGL project has been shelved due to government's decision to cancel the land acquisition. The present proposal is only for the extension of validity of EC without change in the conditions.

16. Regarding the CSR expenditure, till date about Rs. 2.34 crores have been spent on the CSR initiatives in the area. The thrust areas were education, health, livelihood & employability and inclusive growth & sustainability.

17. Regarding Coal tie-up confirmation, the PP already have a firm coal tie up for the project. Coal (6 MTPA) for the project will be sourced from PT. Kaltim Prima Coal mine, Indonesia (subsidiary of Tata Power). Letter of intent dated 20.11.2014 by supplier is submitted.

18. *Based on the information and clarifications provided, the Committee noted that the project has been delayed due to factors beyond the control of PP and decided that, in public interest, the request for extension can be agreed to in accordance with the provisions of EIA Notification, 2006. The Committee further recommended that additional conditions which were earlier not prescribed but relevant now be stipulated while issuing the extension of validity.*

2.6 2x660 MW Coal Based STPP near Khurunti, in Dhenkanal Distt., in Orissa by M/s Lanco Babandh Power Ltd.- reg. extension of validity of EC.

1. The PP made a presentation and inter-alia provided the following information. The proposal is for extension of validity of EC accorded by the Ministry for the above project on 17.02.2010. An amendment in EC for change in location of ash pond was accorded on 21.08.2014. CTE was accorded by OSPCB on 20.05.2009 and renewed on 16.09.2014.

2. Regarding current status of the project, an overall progress of 40% has been made. The progress of various units/facilities including green belt development along with photographs was presented. Bulk Power Transmission Agreement was signed with PGCIL on 24.02.2010. PPA was signed with Home State, Odisha on 04.01.2011 for 330 MW. State Government of U.P and Rajasthan have tied up for 454 MW and 374 MW respectively under Case-1 Bid on 08.08.2013 and 01.11.2013 respectively. The Unit 1 and Unit 2 are scheduled for synchronization by 30.09.2016 and 30.11.2016 respectively. The COD for Unit 1 and Unit 2 are scheduled for 31.12.2016 and 28.02.2017 respectively. Out of the total project area of 1200 acres, 746 acres for main plant is in possession and 454 acres for ash pond and ash corridor is under LA mode (section 6-1 issued on 25.10.2014). For Unit 1, domestic coal linkage for 2.83 MTPA exists from MCL @ 25 km from the plant. For Unit 2, domestic coal linkage is expected subsequent to cancellation of captive coal block and the PP is also participating in the forthcoming coal block auction. Financial closure achieved in September, 2010 and an amount of Rs. 5,280 crores was invested till 30.11.2014. Out of the planned budget of Rs. 18.4 crores, an expenditure of Rs. 6.5 crores has been made till date in the area of education, health, drinking water, environment, electrification, community development, R&R and sports & culture.

3. The reasons for delay in implementation of the project are delay in land acquisition, delay in fund disbursement by lenders as per project schedule requirement and policy change on mega status resulting in difficulties for materials to site.

4. In reply to the representation of M/s. ERC, Delhi, the PP has submitted that regarding the land falling under ayacut area, the Government of Odisha has sanctioned for the construction of proposed plant on the condition to compensate the loss of proposed command area by creating and providing new lift irrigation facilities. As per the approval received, the PP has paid Rs 28.23 Crores to Govt. of Odisha and complied the conditions therein.

5. Regarding WP No. 27302 of 2011, Govt. of Odisha is the principal respondent, while the company is one of the respondents. However, as per the information, the matter has not yet been admitted by the Hon'ble High Court of Odisha. In this regard, it is to be noted that the PP had obtained the clearance for "Consent to Establish" from State Pollution Control Board in May 2009 which has been renewed in Sept., 2014. Also, PP has obtained other permits and clearances from respective, State Govt. Departments, as applicable.

6. The PP also informed that, all the other points have already been examined by the concerned Depts. like OSPCB, WRD and DoE, and the clearances have been given accordingly. Also, these points were duly considered by the then EAC while recommending grant of EC.

7. *Based on the information and clarifications provided, the Committee noted that the project is in an advance stage of implementation and decided that, in public interest, the request for extension can be agreed to in accordance with the provisions of EIA Notification, 2006.*

2.7 2x500 MW Marwa TPP of CSPGCL in Chhattisgarh by M/s Chhattisgarh State Power Generation Company Ltd.- reg. extension of validity of EC.

1. The PP made a presentation and inter-alia provided the following information. The proposal is for extension of validity of EC accorded by the Ministry for the above project on 05.02.2008. CTE was accorded by CECB on 05.05.2008 and the validity was extended till 01.05.2016. The CTO for Unit 1 was accorded vide letter dated 31.03.2014 with the validity of three months. The validity extension has been requested from CECB and the same is awaited.

2. Regarding current status of the project, trial synchronization of Unit 1 was done on 20.12.2013 and coal fired synchronization of Unit 1 was done on 30.03.2014 to achieve the CEA capacity addition plan. O&M team is available at site for operation of Unit 1. The construction of track hopper is under progress and CHP commissioning is expected by March, 2015. Rail connection from the Naila Railway Station for coal transport is expected by January, 2015. Ash dyke civil work for HCSD and water mash lagoon was completed and laying of piping is under progress, which is expected to be completed by end of January, 2015. Steam blowing of Unit 2 (steam piping) was done and normalization is under process, which is planned for synchronization in February, 2015. Work on ETP is in progress.

3. Raw water from Hasdeo River is being utilized for different utilities of the power plant i.e. D. M water, clarified water, fire fighting system etc. Two reservoirs of 5 lakh cu.m each are ready and D.M plant has been commissioned. Tapering coal linkage from SECL was obtained and FSA signed on 04.09.2013 between SECL and CESPCL. The compliance to conditions stipulated in the EC was presented. The progress of various units/facilities including CSR activities along with photographs was presented. An amount of Rs. 18.75 lacs has been incurred for CSR activities during 2009-13. It is proposed to donate Rs. 8.6 crores for an engineering college in the District and first installment of Rs. 2.0 crores has already been provided to District Administration. Green belt development shall be initiated after completion of erection activities. However, plantation of one lac tree in vicinity of intake pump house in 44.534 ha has been done in the year 2010-12 through Rajya Van Vikas Nigam, Chhattisgarh.

4. The reasons for delay in implementation of the project are delay in land acquisition and very slow progress by BOP vendor.

5. *The Committee noted that the Ministry has received a representation from Mr. Jaigopal Soni against the project. The reply of PP in this regard was sought which is still awaited. The proposal was accordingly **deferred**.*

2.8 6x600 MW coal based Thermal Power Project at Village Nariyara, Janjgir- Champa District, Chhattisgarh by M/s KSK Mahanadi Power Company Ltd.- reg. extension of validity of EC.

1. The PP and their environmental consultant, Vimta Labs Ltd., Hyderabad made a presentation and inter-alia provided the following information. The proposal is for extension of validity of EC accorded by the Ministry for the above project on 19.10.2009. An amendment in EC regarding tapering coal linkage was accorded on 24.01.2012. CTE was accorded by CECB on 16.02.2010 and CTO for Unit 1 and Unit 2 were accorded on 28.02.2013 and 15.10.2014 respectively.

2. Regarding progress of the project, clearance letter regarding stack height has been obtained from 'Airports Authority of India' on 20.06.009 & 20.04.2011. Financial closure has been completed in the month of March, 2010. EPC contract for works within the project site is awarded on turn-key basis on 26.02.2009, to M/s. SEPCO Electric Power Construction Corporation, China, one of the largest EPC Contractors in the World. LOI for construction of River Water intake system has been awarded on EPC basis to M/s. Zuberi Engineering Company, Jaipur on 19th April, 2010. LOI for design, engineering, procurement and commissioning of 400 kV Power evacuation line has been awarded on EPC basis to M/s Larsen and Toubro Ltd., Chennai. Agreement is signed with PGCIL towards construction of bays at PGCIL's Pooling station. NEPDI, Changchun, China is SEPCO's Engineering Consultants for project Engineering. NWEPMI is Local Chinese Consultants of KMPCL for project Engineering.

3. The Unit wise status of the project including green belt development and CSR activities along with photographs was presented. Commercial operation of Unit 1 and Unit 2 were declared on 18.05.2013 and 15.04.2014 respectively. For Unit 1, PPA was signed with Discoms of A.P & Telangana Governments for supplying 400 MW of power and for Unit 2, PPA was signed with TANGEDCO for supplying 500 MW of power. The entire plant will be operational with fully completed facilities by end of December, 2015. Green belt of 100 m wide has been developed around the project site. An amount of about Rs. 40.39 crores was incurred on CSR activities till November, 2014 in the areas of education, health care, infrastructure development, etc.

4. The committee noted that FSA exists for only three units and hence, sought the status of coal linkage for other units. In reply, the PP submitted that MoP had already pre-qualified the balance three Units and recommended for grant of coal linkage to CIL in the year 2011. The same is pending for consideration by MoC. The long term coal linkage from CIL is envisaged by the PP through three options i.e. coal ordinance promulgated by GoI for allocation of coal block to Government Undertakings (Goa IDC), bidding for the blocks under auction and contingency plan of the government due to cancellation of coal blocks. Until the long term coal supply is established, the PP will procure coal under e-auction route or from domestic coal traders. *The Committee did not recommend the sourcing of coal from domestic coal traders/open market.*

5. *Based on the information and clarifications provided, the Committee noted that the project is in an advance stage of implementation and decided that, in public interest, the request for extension can be agreed to in accordance with the provisions of EIA Notification, 2006. The Committee further recommended that additional conditions which were earlier not prescribed but relevant now be stipulated while issuing the extension of validity.*

2.9 1x400MW Gas based Combined Cycle Power Plant at Village Jaun Samana in Dadri Taluk in Gautam Budh Nagar District, Uttar Pradesh by M/s Noida Power Company Ltd. – reg. extension of validity of ToR.

1. The PP made a presentation on the above proposal and inter-alia provided the following information. ToR for preparation of EIA/EMP for the above project was accorded on 07.12.2011 and extension of ToR was accorded vide letter dated 21.05.2014 for TOR validity upto 06.12.2014.

2. Draft EIA/EMP Report was submitted for Public Hearing to UPPCB on 02.07.2014 and PH was conducted by UPPCB on 18.11.2014 i.e. after more than 4.5 months of submission. Till date the PP has not received the proceedings of PH inspite of regular follow up. Hence, the PP was unable to submit the final EIA/EMP report to MoEF&CC.

3. *Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the recent policy of Ministry dated 08.10.2014, wherein an outer limit of **four years** was prescribed.*

2.10 2x660 MW Supercritical coal based Thermal Power Plant at Villages Ottapidaram & Sillanatham, In Ottapidaram Taluk, in Thoothukkudi Distt.Tamil Nadu by M/s KU Thermal Power Pvt. Ltd.- reg. extension of validity of ToR

1. The PP and their environmental consultant, Vimta Labs Ltd., Hyderabad made a presentation on the above proposal and inter-alia provided the following information. ToR for preparation of EIA/EMP for the above project was accorded on 28.12.2011 and extension of ToR was accorded vide letter dated 21.01.2014 for TOR validity upto 27.12.2014. The baseline studies were conducted during 01.10.2011 to 31.12.2011. Public Hearing was conducted by TNPCB on 25.07.2014.

2. Regarding the reasons for delay, application has been submitted to MoC on 23.02.2012 for grant of coal and the same is still awaited. Hence, FSA was signed for 100% imported coal from Indonesia till indigenous coal is made available.

3. *Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the recent policy of Ministry dated 08.10.2014, wherein an outer limit of **four years** was prescribed.*

2.11 2x660 MW Super Critical coal based Khurja Super Thermal Power Plant at Villages Dashashra Kherli, Jahanpur, Naiphah and Rukanpur, Khurja Taluk, Bulandshahar Distt., Uttar Pradesh by M/s. THDC India Ltd. reg. amendment and extension of validity of ToR.

1. The PP and their environmental consultant, Mantec Consultants Pvt. Ltd., Noida, made a presentation on the above proposal and inter-alia provided the following information. ToR for preparation of EIA/EMP for the above project was accorded on 27.10.2011 and extension of

ToR was accorded vide letter dated 03.12.2013 for TOR validity upto 26.10.2014. The proposal is for extension of validity of ToR as per the recent policy of Ministry dated 08.10.2014 and amendment in the lay out of project subsequent to re-routing of NH-91 & future provision of 1x660 MW Unit.

2. Draft EIA/EMP Report was submitted for Public Hearing to UPPCB on 30.03.2013. However, PH could not be conducted as the process of final settlement of compensation to the land owners of already acquired land of UPSIDC was in advanced stage. DPR prepared by NTPC for 2x660 MW Units. Rate of compensation for land to farmers was finalized in September, 2014. Application for long term coal linkage was made to MoC on 25.05.2011 and MoP vide letter dated 27.05.2014 has also recommended prioritization for allocation of coal linkage to Khurja STPP. However, the coal linkage allocation by MoC is awaited.

3. A total of 1362 acres of land shall be required to implement 2x660 MW Khurja STPP and the details of land required is duly vetted by CEA vide letter dated 28.12.2012. Land of 1200.843 acres is already acquired by GoUP through UPSIDC and entire land acquired by UPSIDC has also been mutated in their name for industrial use. MoU for transfer of possession of 1200.843 acres of land to THDCIL for implementation of Khurja STPP has been signed with UPSIDC on 14.12.2013 and the transfer of land is in advanced stage of implementation.

4. Earlier, while preparing PFR, layout was planned considering NH passing through the plot. Accordingly, ToR was prescribed by MoEF to accommodate the plant layout keeping 500 m distance on either side of the NH. As per this condition, about 370 acres of land was to be left unutilized. With a view to gainfully utilize the entire land for the project, the matter regarding re-routing of NH- 91 was taken up with NHAI/MoRTH through MoP. NHAI vide letter dated 29.10.2013 has provided its in-principle consent for the re-routing of NH-91 around the eastern side of the site. While re-routing of NH-91, the acquired land will be available in one consolidated plot and the land can be optimized by locating various plant component adjacent to each other **enabling provision for additional Unit at a later stage. Hence, plant layout has been revised. DPR updated by NTPC for 2x660 MW Units with provision of 660 MW Unit expansion in future considering land availability after NH re-routing.**

5. *Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the recent policy of Ministry dated 08.10.2014, wherein an outer limit of **four years** was prescribed. Further, the committee recommended amendment in the lay out of project, utilizing entire plot of 1200.843 acre land, with provision of future expansion by additional 1x660 MW Unit subsequent to re-routing of NH-91.*

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

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 PM₁₀, PM_{2.5}, SO₂, 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.
- xliv) 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
- xlvi) 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.
 - xlvi) 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.
 - xlvi) 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.
 - xlvi) 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.

Additional TOR for Coastal Based TPPs:

Over and above the TOR mentioned in **Annexure- A1**, the following shall be strictly followed (as applicable):

- a) Low lying areas fulfilling the definition wetland as per Ramsar Convention shall be identified and clearly demarcated w.r.t the proposed site.
- b) If the site includes or is located close to marshy areas and backwaters, these areas must be excluded from the site and the project boundary should be away from the CRZ line. Authenticated CRZ map from any of the authorized agencies shall be submitted.
- c) The soil leveling should be minimum with no or minimal disturbance to the natural drainage of the area. If the minor canals (if any) have to be diverted, the design for diversion should be such that the diverted canals not only drains the plant area but also collect the volume of flood water from the surrounding areas and discharge into marshy areas/major canals that enter into creek. Major canals should not be altered but their embankments should be strengthened and desilted.
- d) Additional soil required for leveling of the sites should as far as possible be generated within the site itself in such a manner that the natural drainage system of the area is protected and improved.
- e) Marshy areas which hold large quantities of flood water to be identified and shall not be disturbed.
- f) No waste should be discharged into Creek, Canal systems, Backwaters, Marshy areas and seas without appropriate treatment. Wherever feasible, the outfall should be first treated in a Guard Pond and then only discharged into deep sea (10 to 15 m depth). Similarly, the Intake should be from deep sea to avoid aggregation of fish and in no case shall be from the estuarine zone. The brine that comes out from Desalinization Plants (if any) should not be discharged into sea without adequate dilution.
- g) Mangrove conservation and regeneration plan shall be formulated and Action Plan with details of time bound implementation shall be specified, if mangroves are present in Study Area.
- h) A common **Green Endowment Fund** should be created by the project proponents out of EMP budgets. The interest earned out of it should be used for the development and management of green cover of the area.
- i) Impact on fisheries at various socio economic level shall be assessed.
- j) An endowment **Fishermen Welfare Fund** should be created out of CSR grants not only to enhance their quality of life by creation of facilities for Fish Landing Platforms / Fishing Harbour / cold storage, but also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc.
- k) Tsunami Emergency Management Plan shall be prepared wherever applicable and Plan submitted prior to the commencement of construction work.
- l) There should not be any contamination of soil, ground and surface waters (canals & village pond) with sea water in and around the project sites. In other

words necessary preventive measures for spillage from pipelines, such as lining of Guard Pond used for the treatment of outfall before discharging into the sea and surface RCC channels along the pipelines of outfall and intake should be adopted. This is just because the areas around the projects boundaries could be fertile agricultural land used for paddy cultivation.

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

(Shri T.K.Dhar)
Member

(Shri A.K. Bansal)
Member

(Shri J.L Mehta)
Member

(Shri N.K. Verma)
Member

(Dr. S.D. Attri)
Member

(Shri P.D Siwal &
Shri N.S. Mondal)
Member

(Dr. S.S Bala)
Member

(Dr. Saroj)
Member Secretary