

## **MINUTES OF THE 11<sup>TH</sup> MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS**

The 11<sup>th</sup> Meeting of the re-constituted EAC (Thermal Power) was held on 26<sup>th</sup> October, 2017 in the Ministry of Environment, Forest & Climate Change at Teesta Meeting Hall, Vayu Wing, First Floor, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi under the Chairmanship of Dr. Navin Chandra. The following members were present:

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|---------------------------|----------------------------------|
| 1. Dr. Navin Chandra      | - Chairman                       |
| 2. Dr. N.P. Shukla        | - Member                         |
| 3. Shri N. Mohan Karnat   | - Member                         |
| 4. Dr. S. Lele            | - Member                         |
| 5. Dr. J.K. Pandey        | - Member                         |
| 6. Shri S.D. Vora         | - Member                         |
| 7. Shri G.P. Kundargi     | - Member                         |
| 8. Dr. Manjari Srivastava | - Member                         |
| 9. Shri N.S. Mondal       | - Member (Rep. of CEA)           |
| 10. Prof. Om Prakash      | - Member (Rep.. IIT/ISM Dhanbad) |
| 11. Dr. S.K. Paliwal      | - Member (Rep. of CPCB)          |
| 12. Dr. R.K. Giri         | - Member (Rep. of IMD)           |
| 13. Dr. S. Kerketta       | - Member Secretary               |

### **Item No.11.0: CONFIRMATION OF THE MINUTES OF THE 10<sup>th</sup> EAC MEETING.**

The Minutes of the 10<sup>th</sup> EAC (Thermal Power Sector) meeting held on 25<sup>th</sup> September, 2017 were confirmed.

### **Item No. 11: CONSIDERATION OF PROJECTS**

#### **11.1 2x660 MW Super Critical Coal based Thermal Power Project (Expansion) at Lalpania Village, Bokaro District, Jharkhand by M/s Tenughat Vidyut Nigam Limited (TVNL)- reg. ToR (File No.: J-13012/15/2017-IA.I(T) & Online No.: IA/JH/THE/69754/2017)**

(11.1.1) Project Proponent (PP) submitted online application on 22.9.2017 for grant of ToR. PP made the presentation *inter-alia*, submitted the following information:

- i. TVNL is operating at 420 MW Tenughat Thermal Power Station (TTPS) having two units of 210 MW capacity each. The first unit of 210 MW was put under commercial operation in September, 1996 and second unit of 210 MW in September, 1997. TTPS has already acquired land of approximately 1,800 acres for sitting up of these two units.
- ii. Earlier a proposal for expansion of the existing plant by addition of 3 units of 210 MW was submitted to MoEF & CC for which environmental clearance was accorded on 21.02.1989. However, due to some unavoidable situations, these units could not be installed.
- iii. TVNL now proposes for expansion project (Stage-II) at the existing site by addition of two units of 660 MW each. The project site is situated on the left bank of Tenughat Reservoir which is built on Damoder River.
- iv. The land required for setting up of 2x660 MW Thermal Power project shall be approximately 1,038 acres including the main plant, BoP, switchyard, Green Belt & Ash disposal site. No R&R is required. The site has no interference with the forestland and the plant is not on the mineral zone as per the mineral map. There are no protected areas such as National Parks, Wildlife Sanctuaries and

- other protected areas notified under Wildlife (Protection) Act, 1972 within 10 km radius of the project.
- v. The proposed power plant shall consist of 2 units of 660 MW installed capacity with Supercritical technology utilizing indigenous coal as the major fuel for running the units.
  - vi. The proposed project site is accessible by road & rail network. It is accessible by National Highway No. 33 at a distance of 30 km and the nearest Railway Station is Gomia about 15 km. The nearest Airport is Ranchi and is located about 120 km in SW direction from existing Site.
  - vii. The primary fuel for this power plant shall be 100% indigenous coal. The linkage coal source for this project shall be from Rajbar E&D Coal Block which is approximately 200 km from the project site. The proposed power plant shall require around 6.8 Million Tons Per Annum (TPA) considering the 85% PLF, GCV: 3,400 kCal/kg. Ministry of Coal has allocated Rajbar E&D Coal block, Auranga Coalfields, Rajbar, Ranchi, Darea, Jerang, Serak, Lejang Villages, Latehar Dist., Jharkhand vide MoC orders dated 30.6.2015 and 21.12.2016.
  - viii. Further, the transportation of the coal to the power plant shall be through the railway line and MGR system envisaged inside the plant. Light diesel oil (LDO) would be used as secondary fuel and the main purpose of this fuel oil is to facilitate start up of the boiler and flame stabilization at low load operation with pulverized coal as the primary fuel.
  - ix. The source of consumptive water for the thermal power plant would be through Tenughat Reservoir, which is near the plant boundary. The total requirement of make up water for both units (i.e. 1,320 MW) shall be around 3,300 m<sup>3</sup>/hr and is inline with the latest environmental regulations. TVNL have been allocated 50 Cusec (i.e. approximately 5,100 m<sup>3</sup>/hr) of water from the Tenughat Reservoir.
  - x. The allocated water quantity will be sufficient if the existing plant of 2x210 MW will be converted to closed cycle system (in line with the latest guidelines of MoEF &CC) with the installation of the cooling towers before the commissioning of the proposed 2x660 MW extension unit. As per latest regulations of using a maximum of 3.5 m<sup>3</sup>/MWh for modified plants, the maximum water requirement for the existing 2x210 MW plant will be 1,470 m<sup>3</sup>/hr. Hence, the total water requirement in the above scenario, for the existing 2x210 MW plant as well as the proposed 2x660 MW extension plant will be 4,770 m<sup>3</sup>/hr. However, if TVNL does not convert the existing plant of 2x210 MW to the closed cycle system (i.e. after installations of Cooling Towers) then a separate water allocation of 3,300 m<sup>3</sup>/hr from the Tenughat reservoir for the proposed two units would be required.
  - xi. The Coal Handling plant shall be designed with a new track hopper & crusher house for increased reliability and availability.
  - xii. Ash Handling Plant (AHP) design would be based on the BMCR generation and worst coal quality. Considering average ash content of 42.54% for indigenous coal & operating plant PLF of 0.85, the average bottom ash generation & fly ash generation shall be 0.346 MTPA and 1.31 MTPA, respectively for each unit. The proposed Ash Handling System is for dry as well as wet disposal of the both bottom ash and fly ash. High concentration slurry disposal (HCSD) system shall be provided for wet disposal. This HCSD system shall be common for both bottom ash as well as the fly ash.
  - xiii. The power shall be evacuated through TTPS-PTPS twin moose conductor transmission line and TTPS-Bihar Sharif twin moose conductor transmission line, all upgraded to 400 kV voltage level. In addition, by considering (n+1) contingency, one more 400 kV twin moose conductor transmission line shall be

considered for redundancy, reliability & uninterrupted power evacuation in case of tripping of any outgoing line.

xiv. Consultant for carrying EIA studies is M/s Greencindia Consulting Private Ltd.

**xv. Estimated Project cost is Rs.9,686 Crores.**

(11.1.2) Committee noted that none of the senior officers at the level of Director or Chief Engineer representing the company were present. Committee felt that though Jharkhand state is a power starving state, there is a lack of seriousness in the project management for the proposed project. Committee suggested to write to the Secretary, Power of the Jharkhand State to alert the project group. Committee also noted that various maps presented were not visible and details of rivers/water bodies have not been shown on the map. Committee also took a note of Public Representation. In their representation, it is mentioned that existing power plant (420 MW) is releasing effluents in to the Tenughat reservoir. It was also mentioned that Jharkhand State Pollution Control Board has issued several show-cause notices. The representation also cited a paper '**Phycodiversity in tenughat thermal power station at Lalpania District Bokaro, Jharkhand**' published in the Asian Journal of Environmental Science. Water samples were collected near Thermal Power Plant area where effluents are released, near Tenughat dam where there is a less human interference and near Tenughat residential block where sewage is released into Tenughat reservoir. The samples were collected at one-month interval from May, 2007- May, 2008. The analysis of these samples established that there was enormous amount of oils and grease as well as several tones of ashes were generated everyday from the thermal power plant. These were hazardous pollutants which was mixed with the river water. They directly influenced the aquatic community. It was responsible for the existence of pollution tolerant algae in the river water. Committee sought whether there was any inspection report given by Jharkhand State Pollution Control Board. However, PP mentioned that there is no such report available. Committee noted that SPCB generally carryout site inspections once in a year for Red category industries. As informed by the PP, no site inspection has been carried out by the SPCB. Committee also sought the details of Consent to Operate (CTO). Committee noted that zero liquid discharge may have been stipulated by SPCB. Committee also noted that there is no clear breakup of land for the proposed power plant and existing power plant. PP proposed additional land for ash pond. Committee noted that already there is an ash pond available for the existing power plant. 100% flyash utilisation shall be achieved by 4<sup>th</sup> year.

(11.1.3) **Committee after detailed deliberations, suggested for a site visit by the following four-member sub-committee** for verifying the land requirement, existing water consumption and effluent disposal mechanism, flyash utilisation pattern and disposal mechanism, proposed water consumption and its allocation, sensitive areas like water bodies, forests, protected areas, status of compliance to the directions issued by the different Statutory Authorities, etc. A representative from concerned Regional Office of MoEF&CC may also be invited for the visit.

A gentleman

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|------------------------------|---|-------------------|
| 1. Shri Gururaj P. Kundargi  | - | Chairman          |
| 2. Shri M. Mohan Karnat      | - | Member            |
| 3. Dr. S.K. Paliwal, CPCB    | - | Member            |
| 4. Representative of MoEF&CC | - | Member Secretary. |

**Accordingly, the project has been deferred.**

**11.2 Proposed Integrated Municipal Solid Waste Management Plant (1,000 TPD) including 23 MW power plant at Adampur Chhavani, Phanda Block, Huzur Tehsil, Bhopal District by M/s Bhopal Municipal Solid Waste Private Limited. - reg. ToR. (File No.: J-13012/16/2017-IA I(T)& Online No.: IA/MP/THE/69646/2017)**

(11.2.1) Project Proponent (PP) submitted online application on 19.9.2017 for grant of ToR. PP along with the EIA consultant M/s ABC Techno Labs India Private Limited made the presentation *inter-alia*, submitted the following information:

- i. Bhopal Municipal Solid Waste Processing Plant Pvt. Ltd. (BMSWPL) proposes to install an Integrated MSW management facility for treating 1000 TPD of Unsegregated Municipal Solid Waste (Treating by Landfill - Mass Incineration Technology) and also to generate power of 23 MW by using MSW. Eventhough the project is of municipal solid waste management under Sl. No.7(i) of Schedule and category 'B' activity as per EIA Notification, it will be treated as an integrated project and will be considered as 1(d) category 'A' activity.
- ii. The proposed site is located at Villages Kolua Khurd, Adampur and Chhawani Huzur, Bhopal, Madhya Pradesh. For the Waste processing, the Adampur Chhawani site has been selected which is located at a distance of 16 km from Bhopal. Total land requirement is 45.51 acres. Power Plant: 2.71 acres, Sanitary landfill for 20 years and green belt: 42.80 acres.
- iii. There are no national parks, wildlife sanctuaries, archaeological sites, defence installations, etc within 10 km radius of the project.
- iv. Bhopal Municipal Corporation (BMC) has proposed for waste collection, segregation, recycling, transportation, processing and disposal with an option for composting, waste to energy, disposal of 8 Urban Local Bodies (ULBs) within a radius of 80 km of Bhopal. The BMC intends to institutionalize a holistic Integrated, sustainable environment and eco-friendly Municipal Solid Waste Management System in the ULBs.
- v. WtE plant designed to intake waste up to 600 x 2 TPD having a calorific value ranging from 1,100 to 2,200 kcal/kg.
- vi. 1,000 TPD of unsegregated MSW generated from Bhopal, Sehore and Raisen Districts will be pre-segregated, then Landfilled and Incinerated. HDPE will be used as Landfill bottom liner. Leachate generated from the Landfill will be treated in separate 'Leachate Treatment Plant' shall be disposed either by sprinkling on landfill cell or by treatment as per CPCB guidelines. The ash generated from Waste to Energy plant will be sent to sanitary landfill.
- vii. Incineration technology will be adopted for generating power from MSW. It is the process of direct burning of wastes in the presence of excess air (oxygen) at temperatures of about 800 °C and above, liberating heat energy, inert gases and ash.
- viii. In practice, near about 65 to 80% of the energy content of the organic matter can be recovered as heat energy, which can be utilized either for direct thermal applications, or for producing power via steam turbine generators (with typical conversion efficiency of about 30%).
- ix. During the construction phase, the total water requirement is 50 KLD. During operation phase, the total water requirement is 500 KLD. It will be sourced either from Bhopal Municipal Corporation or from Borewells. 4 nos. of borewells are proposed.
- x. General electricity required will be 1,500 kVA, hired through MPPTCL (Madhya Pradesh Power Transmission Company Ltd.). One DG Set of 1,250 kVA will be used in case of power failure.
- xi. Total manpower required during construction phase will be 300, of which is 80 will be skilled labours, 200 unskilled labours and 20 will be supervisors. The



total manpower required during operation phase will be 115, of which will be 43 skilled labours, 52 unskilled labours and 20 will be supervisors.

xii. The total cost of the proposed project has been estimated to be Rs. 293 Crores.

(11.2.2) Committee noted that the project comprises of integrated municipal solid waste facility for 1000 Ton per day and 23 MW Municipal Solid waste based Power Plant. The integrated solid waste facility is category 'B' project and is to be dealt by SEIAA. The proposed power plant of 23 MW is category 'A' and is to be dealt by the centre. However, PP requested to combine both category 'B' and 'A' projects and consider as category 'A' at the centre. Member Secretary has been requested to check with existing policies/guidelines in the Ministry for considering as Category 'A' project. Committee noted that no representative from Bhopal Nagar Palika/Municipal Corporation was present in the meeting. It is Municipal Corporation of Bhopal who is the owner of the land and has given land on lease to project proponent. In addition to representatives of Municipal Corporation of Bhopal, Board Member/Director/any statutory member under companies act should have been present in the meeting. Committee noted that none of the officials who attended the meeting are residents or aware of the geography of Bhopal including the proposed site. There are water bodies present at 1.5 km from the site. Committee noted that the pre-feasibility report is not comprehensive about integrated municipal solid waste facility. PP could not explain how segregation of municipal solid waste is carried out. Collection, segregation and disposal of inert waste such as construction waste, glass bulb, etc could not be explained. PP stated that e-waste of approx.1% which forms part of the total waste will be burnt in the incineration process along with Refused Derived Fuel. There is no separate collection and disposal facility is envisaged. Committee took a serious note on the proposal of PP regarding e-waste disposal. Committee suggested that there are e-waste regulations notified and PP has to segregate e-waste and send it to authorised recyclers failing which PP will be penalised under EP Act, 1986. PP mentioned in the Form-1 that there is no forestland involved in the project. However, PP during the meeting mentioned that some forestland is involved. PP may get a certificate from the concerned local DFO that there is no forest land involved and no forest diversion is required for the proposed project. A clear map indicating project facility, water bodies, forest area, etc. shall be depicted on survey of India toposheet.

(11.2.3) **Committee after deliberations, deferred the project for revising the Pre-Feasibility Report for integrated solid waste facility and in accordance with the Ministry guidelines.**

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### **11.3 2x660 MW Imported Coal Based TPP at Village Erukkattanchery, Kazhizppanallur and Manichkapangu, Tarangambadi Taluk, Nagapattinam District, Tamil Nadu by M/s Chettinad Power Corporation Private Limited - reg. extension of validity of EC. (File No.: J-13012/89/2009-IA II (T) & Online No.: IA/TN/THE/10619/2011)**

(11.3.1) Project Proponent (PP) submitted application for extension of validity of EC on 22.9.2017. PP made the presentation *inter-alia*, submitted the following information:

- i. The Environmental Clearance for 2x600 MW imported coal based Sub-critical Thermal Power Plant has been issued **vide Ministry's letter dated 20.1.2011** which was valid for five years, i.e. till 19.1.2016. As per EIA amendment Notifications Nos. S.O.114(E) dated 29.4.2015 & S.O.2944(E) dated 14.9.2016 and Ministry's OM dated 12.4.2016, the validity of EC is presumed as seven years for the above mentioned project. Accordingly, the said EC is valid till 19.1.2018.

- ii. Later on the EC has been revised for change in configuration from 2x600 MW Sub-critical technology to 2x660 MW **Super critical technology vide Ministry's letter dated 13.6.2013.**
- iii. After EC was granted, Coastal Action Group vide Appeal No.12/2011 filed in December, 2011 before the Hon'ble NGT, Delhi. Due to the initiation of dispute over grant of EC, the action initiated to finalize technical specification was stopped immediately.
- iv. NGT Delhi vide order dated 30.5.2012 suspended EC for six months with some directions to MoEF.
- v. **After ensuring the compliance to the directions of Hon'ble NGT, the EC has been restored vide Ministry's letter dated 23.8.2013.**
- vi. Immediately, Coastal Action Network vide Appeal No.169/2013 challenged the reinstatement of the EC before Hon'ble NGT, Chennai. The re-agitation of the entire issued stopped the PP for setting up of the project. Hence, no action could be taken by the PP to proceed with project activities.
- vii. **Subsequently, the case was transferred to Hon'ble NGT, Delhi bench in December, 2014. Case is still pending before Hon'ble Tribunal.**
- viii. From December, 2011 till date, 6 years has been passed in the long pending dispute. The very challenge of the grant of EC prevented the PP from proceeding with project activities.
- ix. PP submitted that as the proposed project is a mega project, a minimum time frame of 5 to 6 years, after the clearance by NGT is required for establishment activities alone. Apart from that, a time of 2 years is required to complete the technical specification and finalize purchase orders and contracts. The commissioning of the project will be possible only after 8 years. Hence, a time extension of 8 years was requested by the PP for commissioning of the project i.e. beyond 19.01.2018.

(11.3.1) Committee noted that the validity of 7 years of EC will expire on 19.1.2018. As per the provisions of the EIA Notification, maximum of three years can be extended. The validity cannot be extended beyond 10 years whereas PP requested for extension of validity for further 8 years which is not possible. Further, committee noted that the EC which was suspended by Hon'ble NGT has been reinstated by Ministry on 23.8.2013. Since then, PP has not initiated a single project activity. PP submitted that the EC was again challenged in the Hon'ble NGT which prevented the PP from initiating any physical activities at the site which is not logical. Till date, there has been no progress on construction activities. Even after extending three years validity which is available under EIA Notification, it is clear that PP cannot commission the project within the extended validity. In case, validity is extended and progress of construction activities are under half way at the expiry of the validity, it will become *fait accompli* to grant a fresh EC for the project as it will be at midway for completion.

(11.3.2) **Committee after detailed deliberations, suggested that PP may have to apply afresh to obtain Environmental Clearance. Accordingly, extension of the validity of EC for 8 years is denied and further suggested that the PP should wait for the order of the Hon'ble NGT which will be heard on 12.12.2017. The proposal has accordingly been deferred.**

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**11.4 3x660 Expansion of Coal Based power unit at Koradi TPP in Nagpur District, Maharashtra by M/s Maharashtra State Power Generation Company Limited -reg. amendment in Environment Clearance.**  
(File No.: J-13012/87/2007-IA.II (T)& Online No.: IA/MH/THE/24219/2010)

**11.5 1x500 MW Coal based expansion project at Khaperkheda Thermal Power Station at Khaperkheda, Nagpur, Maharashtra by M/s Maharashtra State Power Generation Company Limited - reg. amendment in Environment Clearance.**  
(File No.: J-13011/24/2005-IA.II(T) & Online No.: IA/MH/THE/10223/2005)

**11.6 2x500 MW Chandrapur Super Thermal Power Project Expansion Project at Chandrapur, District Chandrapur, Maharashtra by M/s Maharashtra State Power Generation Company Limited - reg. amendment in Environment Clearance.**  
(File No.: J-13011/53/2008-IAII(T) & Online No.: IA/MH/THE/10241/2008)

(11.4.1/11.5.1/11.6.1) PP submitted three online applications on 27.9.2017 for -

- i. Change of mode of transportation of coal from Gondagaon and adjacent coal mines of WCL to the Koradi Thermal Power Station.
- ii. Change of mode of transportation of coal from Gondagaon and adjacent coal mines of WCL to the Khaperkheda Thermal Power Station.
- iii. Change of mode of transportation of coal from Bhatadi coal mines of WCL to the Chandarpur Thermal Power Station.

The new mode of transport will be Closed Pipe Conveyor System instead of existing Transportation by Road in all three cases.

(11.4.2/11.5.2/11.6.2) Committee noted that PP has submitted only a covering letter along with Form-1 applications. Committee noted that even though, the proposal is environment friendly proposal as the present mode of coal transportation shall be changed from road mode to pipe conveyor mode. However, PP has not submitted any detailed project report, layout maps, impact assessment report, details of land acquisition, environmental sensitivity to know the details of the project and to assess the various impacts. In absence of these details, Committee did not discussed the proposal. **Accordingly, all the three proposals have been deferred to submit the following for re-consideration:**

- i. Detailed project report including coal source and quantity
- ii. Environmental Impact Assessment report which includes land acquisition, R&R and environmental sensitivity.
- iii. Layout map on Survey of India toposheet showing proposed routes, location of mines and power plants. Shape file (.kml) showing proposed project features.

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**11.7 2x600 MW coal based TPP at Village Singhitarai, Benipali, Odekera & Nimohi, Tehsil Dabhara, District Janjgir-Champa, and Chhattisgarh by M/s Athena Chhattisgarh Power Limited - reg. extension of validity of EC.**  
(File No.: J- 13011/7/2009-IA II (T) & Online No.: IA/CG/THE/18794/2008)

(11.7.1) Project Proponent originally submitted online application on 11.5.2017 for extension of validity of EC for three more years i.e. beyond seven years. An EDS (Essential Details Sought) was raised on 19.5.2017 for submit the certified compliance report from MoEF&CC Regional Office. PP submitted certified compliance report on 5.10.2017. PP made the presentation during the meeting inter-alia submitted the following information:

- i. Environmental Clearance for establishing 2x600 MW Thermal Power Project has been issued vide Ministry's letter dated 4.6.2010 which was valid for five years, i.e. till 3.6.2015.
- ii. The validity of the said EC has been extended for three more years, i.e. till 3.6.2017 along with temporary permission for road transportation of coal by road and amendment for increase in project area from 930 acres to 995.235 acres vide Ministry's letter dated 22.3.2016.
- iii. The project activities have progressed up to 88%. In the meantime, financial restructuring has been taken up by the project lenders lead by SBI and 17 other banks/financial institutions. In view of the financial restructuring, project activities have stalled since April, 2016 and would start only after financial restructuring which includes additional funding for making necessary modifications in the plant to comply with the new emission norms notified by MoEF&CC. The company is continuously following up with the banks for early restructuring which will be expected to be completed by January, 2018.
- iv. An amount of Rs.6,493 Crores, out of Rs.8,500 crores (revised project cost) has already been spent so far.
- v. Civil work of BTG and BoP completed. Erection of structure has been completed for cooling towers, track hopper, wagon tippler, tunnels, transfer points, hydro bins, etc. and associated buildings. About 10,600 MT of structural steel for Power House building is erected. About 56,000 MT of BTG material dispatched from DEC, China in 38 shipments. Out of this, 48,500 MT already received at site and erection of the same is in progress. Twin flue chimney wind shield along with erection of flue cans completed. Boiler drum for Units # 1 & 2 has been erected. Generator Stator for Units # 1 & 2 has also been completed. Generator Rotor insertion completed for Unit#1. Temporary Box up for LPT-A & B completed. Raw water reservoir works completed. Equipment erection for 400 kV switchyard has been completed and testing & commissioning is in progress. Condenser-A & B Tubes Insertion 20124/20124 completed. All transformers (GT's, UT's, etc.) have been erected. Unit # 1 Boiler Hydro test has been successfully completed. Manufacturing of 98.53% BTG & auxiliary equipment is completed.
- vi. About 2,037 labour force (Including Skilled & Unskilled) working at the project site. About 105 Engineers and supporting staff positioned at site (ACPL & Contractors). 24 No's. of Engineers from DEC, DEIPL from China have been deployed at the site.
- vii. Nursery has been developed at Project site to take up plantation activities in the project area. More than 2,50,000 saplings are planted covering about 230 Acres. Survival rate is more than 90%. Local & native species are preferred for plantation.

(11.7.2) Committee noted that a substantial progress has been achieved by the project proponent. About Rs.6,493 crores have been spent in project execution. Committee also reviewed the certified compliance report which was found satisfactory. Committee, however felt that the activities pertaining to installation of FGD and complying to new emission norms notified vide dated 7.12.2015 are yet to be initiated. A condition in this regard may be imposed so that FGD and other environmental control mechanism will be in place on the date of commissioning of the plant as these revised standards shall be met from the date of commissioning. Committee also noted that PP has revised the project cost. The financial commitment for CSR activities shall be in commensurate with the revised project cost. Committee also suggested that Gulmohar plants shall be avoided in greenbelt development. *Moringa* (Drumstick plant) *tinctoria* and other indigenous species shall be developed.

(11.7.3) As there is a provision for extending the validity of EC for three years and considering the substantial progress of construction activities, **Committee recommended for extending the validity of EC for further period of three years, i.e. till 3.6.2020** subject to the following additional conditions:

- i. Capital budget of Rs. 22.8 crores, out of total project cost Rs. 5,700 Crores as stipulated earlier for implementing CSR activities shall be in commensurate with increased project cost of Rs.8,500 crores. Accordingly, revised CSR capital budget shall be Rs.34 crores.
- ii. Thermal Power Plant shall achieve specific water consumption, zero liquid discharge and emission standards as per MoEF&CC Notification S.O. 3305(E) dated 07.12.2015 or subsequent notifications issued from time to time.
- iii. As per the Revised Tariff Policy notified by Ministry of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality/ local bodies/ similar organization located within 50 km radius of the proposed power project to minimize the water drawl from surface water bodies.
- iv. Native and indigenous species shall be planted as a part of greenbelt development.
- v. Computer facilities may be provided in the school along with a trained computer teacher to inculcate computer skill among the youths.
- vi. Water supply provisions shall be made for all the bio-toilets under Swachh Bharat Abhiyan.
- vii. Preventive health programme may be preferred than the curative health programme such as nutrition development of small children in and around the project.

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**11.8 Captive Power Plant (2×30 MW) at Village Mora, Taluka Chorayshi, District Surat in Gujarat by M/s ABG Energy Gujarat Limited -reg. extension of validity of EC. (File No: J-11011/853/2008-IA II (I) & Online No: IA/GJ/THE/70142/2010)**

(11.8.1) Project Proponent submitted online application on 5.10.2017 for extending the validity of Environmental Clearance. The PP made the presentation *inter-alia*, submitted the following information:

- i. Environmental Clearance for establishing Captive Power Plant (2x30 MW) has been issued vide Ministry's letter dated 22.11.2010 in the name of 'M/s ABG Energy (Gujarat) Ltd.'
- ii. Prior to grant of EC for captive power plant, Ministry had earlier accorded a combined EC for establishing 60 MTPA capacity Cement grinding unit and 2x30 MW capacity Captive Power Plant at the same location on 7.7.2009 in the name of 'M/s ABG Cement Ltd.'
- iii. It is requested for

(11.8.2) Committee noted that the proposal for setting up of cement grinding unit and 2x30 MW have been dealt by EAC (Industry) and the EC has been granted by the Industry division of the Ministry. Though the separate EC has been issued by the Industry division for Captive Power Plant, it appears that the EIA studies have been carried out while granting combined EC. Committee felt that it is appropriate that the validity of

extension of the said EC may be dealt by Industry-I Sector of IA Division and **accordingly, the proposal is returned.**

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**11.9 1×660 MW (Unit IV) Super Critical Coal Based Thermal Power Plant near village Pathadi, District Korba, Chhattisgarh by M/s Lanco Amarkantak Power Limited - reg. extension of validity of EC.  
(File No: J-13011/3/2009-IA.II(T) & Online No: IA/CG/THE/10227/2009)**

(11.9.1) Project Proponent (PP) submitted online application on 11.10.2017 for extension of validity of EC for a period of two and half years. PP made the presentation *inter-alia*, submitted the following information:

- i. The Environmental Clearance for establishing 1x660 MW (Unit-IV) has been issued vide Ministry's letter dated 26.5.2010 which was valid for five years, i.e. till 25.5.2010. The validity of the said EC has been extended till 31.12.2017 vide Ministry's letter dated 22.6.2015.
- ii. Both the units i.e. 2x300 MW (Unit-I & II) are now in operation. Environmental Clearance for Unit-III (1x660 MW) has been granted vide Ministry's letter dated 31.12.2007.
- iii. The project has achieved 75% physical progress in respect of the main plant and 60% progress in respect of the Balance of Plant comprising Coal and Ash Handling System, Cooling water system, and so on.
- iv. Project expenditure incurred till 30 September, 2017 is about Rs. 4,673 Crore as against the project cost of Rs. 6,430 Crore.
- v. In the first 12 months, the project was on fast track and achieved significant construction progress in Main Plant as well as Balance of Plant (BOP) areas.
- vi. The project got delayed due to reasons beyond the control of LAPL:
  - a. Delay in obtaining physical possession of land for certain BOP facilities due to frequent disturbances by locals interrupting the construction activities
  - b. Mid-way change in plant layout and re-engineering due to the above delay in obtaining physical possession of land
  - c. Mid-way change in Policy guidelines withdrawing Duty Drawback benefits and introduction of mechanism of FDRs/Bank Guarantees under the revised Mega Power Policy guidelines
  - d. Delay in getting FDRs/BGs from Project Lenders
  - e. Post-award changes in the scope of EPC contract necessitated by statutory directives of CECB/Indian Railways
  - f. Macro-economic factors including sharp increase in interest rates, substantial Rupee depreciation w.r.t. US Dollar and power sector issues like fuel shortages, policy changes in respect of coal supply and Fuel Supply Agreements (FSAs), etc.
- vii. Due to the above delay, there were Cost & Time overrun and the project was required to be re-appraised by the consortium of Project Lenders, comprising ten Banks and FIs led by Power Finance Corporation (PFC). After completion of the Lenders' re-appraisal process in March 2015, project was reinstated in April, 2015.
- viii. Even after the re-start of project, fund based as well as non-fund based disbursements started very late, and further delays took place thereby impeding smooth execution of the project. While the delays of debt fund disbursals affected physical progress of the project construction activities, delays in issuance of BGs from Lenders has affected the Customs clearance process and deliveries of imported equipment.
- ix. The timeline for completing the balance works and commissioning (COD) of the 660 MW Unit No. IV is about 15-18 months, which takes into account the Lenders' approval process as well as remobilization by the EPC Contractor at the project site.

(11.9.2) As informed by the PP, Committee noted that there has been progress of 70% in main plant and 60% in Balance of Plant. However, PP has not provided detailed report on completed and remaining physical activities. Committee also observed that the progress towards FGD installation/ meeting revised emission norms which will be initiated only after release of funds by the lenders.

(11.9.3) As there is a provision for extending the validity of EC for three years and considering the substantial progress of construction activities, **Committee recommended for extending the validity of EC till the outer limit of 10 years, i.e. till 25.5.2020** subject to compliance/submission of the following additional details/conditions:

- i. PERT chart to be prepared for the balance portion of the project work and submitted to the Ministry
- ii. Capital budget of Rs. 7 crores out of total project cost Rs.2,800 Crores as stipulated earlier for implementing CSR activities shall be in commensurate with increased project cost of Rs.6,430 crores. Accordingly, revised CSR capital budget shall be Rs.16.1 crores.
- iii. Greenbelt development plan is found to be inadequate. Therefore, native and indigenous species shall be carried out as a part of greenbelt development plan for better survival rate.
- iv. Thermal Power Plant shall achieve specific water consumption, zero liquid discharge and emission standards as per MoEF&CC Notification S.O. 3305(E) dated 07.12.2015 or subsequent notifications issued from time to time.
- v. As per the Revised Tariff Policy notified by Ministry of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality/ local bodies/ similar organization located within 50 km radius of the proposed power project to minimize the water drawl from surface water bodies.
- vi. Computer facilities may be provided in the school along with a trained computer teacher to inculcate computer skill among the youths.
- vii. Water supply provisions shall be made for all the bio-toilets under Swachh Bharat Abhiyan.
- viii. Preventive health programme may be preferred than the curative health programme such as nutrition development of small children in and around the project.
- ix. Modern methods of agriculture such as organic farming, compost/vermiculture making and utilization, drip/direct to root irrigation) to be promoted in and around the Project area.
- x. School for the children of special needs shall be planned and created as a part of CSR activities before commissioning of the plant.

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**11.10 3x660 MW Super-Critical Technology Coal Based Nabinagar Thermal Power Plant at village Majhiyan, in Nabinagar Taluk, in Aurangabad District in Bihar by M/s Nabinagar Power Generating Company Private Limited-reg. extension of validity of EC.  
(File No: J-13012/127/2007-IA II(T) & Online no: IA/BR/THE/11929/2007)**

(11.10.1) Project Proponent submitted online application on 14.10.2017 for extension of validity of EC for further two years. PP made the presentation *inter-alia*, submitted the following information:

- i. The Environmental Clearance for the setting up of 3x660 MW Super-critical Thermal Power Plant has been issued vide Ministry's letter dated 27.12.2010 which was valid for five years, i.e. till 26.12.2015. As per EIA amendment notifications Nos. S.O.114(E) dated 29.4.2015 & S.O.2944(E) dated 14.9.2016 and Ministry's OM dated 12.4.2016, the validity of EC is presumed as seven years for the above mentioned project. Accordingly, the said EC is valid till 26.12.2017.
- ii. The project is in its advanced stage of development. Commissioning of Unit-1 (1x660 MW), Unit-2 (1x660 MW) and Unit-3 (1x660 MW) are scheduled in March, 2018, September, 2018 and March, 2019, respectively. The delay in scheduled implementation has been due to various issues and majorities are relating to delay in land acquisition, resettlement of homestead owners, availability of raw material, availability of start-up power, frequent bandha, etc. which are beyond the control of the PP.
- iii. In view of this, the PP requested to extend the validity of EC for another two years, i.e. till 26.12.2019.

(11.10.2) Committee noted that PP has not submitted the detailed report on physical progress of construction activities and the balance of activities. It was also noted that the Project Proponent has not submitted the Basic Information as per the pro-forma given in the agenda and brief summary. Committee suggested that Member Secretary may seek a detailed report on progress of activities and a PERT chart so that Committee can assess the time required to complete the remaining activities for commissioning of the total plant operations which may be followed for all extension proposals. As informed by PP in the meeting, almost all the activities have been completed. Only boiler tubes have to be cleaned. Committee is of the opinion that cleaning of boiler tubes will not take five months' time. Committee also sought the progress of FGD and compliance to the revised emission norms notified by Ministry on 7.12.2017. As per the said notification, the plants, which will be commissioned on or after 1.1.2017, shall have to comply with new standards from the commissioning date. As informed by PP, only tender has been placed recently and installation will take about 2-3 years. Committee felt that the first unit will be commissioned in March, 2017 whereas the FGD will be functional only after 3 years which may lead to noncompliance of the said notification. Committee also of the opinion that progress on green belt is not satisfactory.

**(11.10.3) Committee after detailed deliberations, recommended for extending the validity of EC for further period of two years, i.e. till 26.12.2019** subject to compliance/submission of the following additional details/conditions:

- i. PERT chart to be prepared for the balance portion of the project work and submitted to the Ministry
- ii. Capital CSR budget of Rs. 51.86 crores, out of total project cost Rs.12,964.58



Crores as stipulated earlier for implementing CSR activities shall be in commensurate with revised increased project cost. The time bound action plan for implementing CSR activities shall be submitted to concerned Regional Office of the Ministry.

- iii. Greenbelt development plan is found to be inadequate. Therefore, native and indigenous species shall be carried out as a part of greenbelt development plan for better survival rate.
- iv. Thermal Power Plant shall achieve specific water consumption, zero liquid discharge and emission standards as per MoEF&CC Notification S.O. 3305(E) dated 07.12.2015 or subsequent notifications issued from time to time.
- v. As per the Revised Tariff Policy notified by Ministry of Power vide dated 28.01.2016, project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality/ local bodies/ similar organization located within 50 km radius of the proposed power project to minimize the water drawl from surface water bodies.
- vi. Computer facilities may be provided in the school along with a trained computer teacher to inculcate computer skill among the youths.
- vii. Water supply provisions shall be made for all the bio-toilets under Swachh Bharat Abhiyan.
- viii. Preventive health programme may be preferred than the curative health programme such as nutrition development of small children in and around the project.
- ix. Modern methods of agriculture such as organic farming, compost/vermiculture making and utilization, drip/direct to root irrigation) to be promoted in and around the Project area.
- x. School for the children of special needs shall be planned and created as a part of CSR activities before commissioning of the plant.

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#### **11.11 Standardization of EC conditions for all Thermal Power Plants (Coal, Lignite, Petcoke, Gas, Bio-mass & Municipal Solid Waste)**

- (11.11.1) Committee could not discuss on the standardization of EC conditions due to paucity of time. It has been decided that Member Secretary may circulate the conditions once again and Members will provide the comments/changes through e-mail. Thereafter, a special EAC meeting shall be convened on or before the second week of November, 2017. Accordingly, the matter has been **deferred**.

#### **11.12 ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR.**

##### **(11.12.1) 1x660 MW Ennore Thermal Power Station Replacement TPP in Thiruvallur district, Tamil Nadu by M/s Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO)- reg. Environmental Clearance. (Online Proposal No. IA/TN/THE/22934/2014 & F. No. J-13012/07/2014-IA.I(T))**

- (11.12.1.1) The proposal for grant of Environmental Clearance has been considered by the EAC (Thermal Power) in its 9<sup>th</sup> meeting held on 30.8.2017. Committee in its meeting held on 30.8.2017 recommended that a site visit be carried out by a sub-committee to

cross verify the baseline data, dredging activities, decommissioning activities of existing plant and flyash utilisation.

(11.12.1.2) The Sub-committee consists of the following Members:

<b>Sl. No.</b>	<b>Name of the Member</b>	<b>Designation</b>
1.	Dr. Navin Chandra	Chairman, EAC
2.	Shri N. Mohan Karnat	Member
3.	Dr. S.K. Paliwal	Rep. of CPCB & Member, EAC
4.	Dr. S. Kerketta	MoEF & CC & Member Secretary, EAC

The Sub-committee was duly approved by the Competent Authority vide Ministry's Office Order No. J-13012/07/2014/IA.I (T) dated 19.09.2017. The Sub-committee visited the project site on 13.10.2017 and held discussion on 14.10.2017. Shri N. Mohan Karnat could not be present due to preoccupation.

(11.12.1.3) **Committee after detailed deliberations, agreed the recommendation of the site visit report (Enclosed as Annexure-A3) of the Sub-committee and accordingly the case of grant of EC of the proposed project shall be reconsidered again after submission of all the information to the Ministry.**

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

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

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

- a. Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
- b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
- c. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.
- d. Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

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

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

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**Specific Conditions related to Thermal Power Projects:**

- (i) Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.
- (ii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.
- (iii) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.
- (iv) Online continuous monitoring system for stack emission, ambient air and effluent shall be installed.
- (v) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 30 mg/Nm<sup>3</sup> or as would be notified by the Ministry, whichever is stringent. Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system.
- (vi) Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- (vii) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.
- (viii) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.
- (ix) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.
- (x) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
- (xi) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area.
- (xii) No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.



- (xiii) Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.
- (xiv) Green Belt consisting of three tiers of plantations of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80 %.
- (xv) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.
- (xvi) The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.
- (xvii) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.
- (xviii) For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.

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**Annexure – A3**

**Site visit of Sub-committee of EAC for Thermal Power Projects for the proposed 1x660 MW ETPS Replacement of Thermal Power Plant, Ernavoor, Thiruvottiyur Taluk, Thiruvallur District, Tamil Nadu by M/s Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO)**

During 9<sup>th</sup> meeting of the EAC for Thermal Power Project held on 30.08.2017 at Ministry of Environment, Forest and Climate Change, New Delhi, it was decided by the EAC that a Sub-committee consisting of four Member committee could be constituted, which shall visit the project site of 1x660 MW ETPS Replacement Thermal Power Plant, Ernavoor, Thiruvottiyur Taluk, Thiruvallur District, Tamil Nadu of M/s Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO). Based on the site visit, this Sub-committee shall submit a report on the verification of baseline data of air quality, dredging activities and de-commissioning activities of the existing plants and their fly ash utilization. The Sub-committee consists of the following Members:

<b>Sl. No.</b>	<b>Name of the Member</b>	<b>Designation</b>
1.	Dr. Navin Chandra	Chairman, EAC
2.	Shri N. Mohan Karnat	Member
3.	Dr. S.K. Paliwal	Rep. of CPCB & Member, EAC
4.	Dr. S. Kerketta	MoEF & CC & Member Secretary, EAC

The Sub-committee was duly approved by the Competent Authority vide Ministry's Office Order No. J-13012/07/2014/IA.I (T) dated 19.09.2017. The Sub-committee visited the project site on 13.10.2017 and held discussion on 14.10.2017. Shri N. Mohan Karnat could not be present due to preoccupation. The following officials and other senior officers were present from the project site:

<b>Sl. No.</b>	<b>Name of the officer</b>	<b>Designation</b>
1.	Er. R. Kamaraj	Chief Engineer, Projects (HQR), Chennai
2.	Er. S. Marimuthu	Chief Engineer, ETPS
3.	Er. N. Sadayappa Vallal	Chief Engineer, ETPS
4.	Er. Thatchinamoorthy	Chief Engineer, NCTPS, Stage I
5.	Er. D. Sundar	Superintending Engineer, Civil (Projects & Environment)

The Project Proponent gave a power point presentation and *inter-alia*, informed the Sub-committee the following:

The existing ETPS was established during 1970-75 in an area of about 237 acres having an installed capacity of 450 MW (3x110 MW + 2x60 MW). Since, these units are now more than 40 years old and not efficient and





environmentally friendly, the project Proponent (PP) proposed to replace all these units with higher capacity and better efficiency by adopting modern technology as per the guidelines of 13<sup>th</sup> five-year plan. All 5 units (3x110 MW+2x60 MW) of ETPS have been decommissioned on 31.03.2017. One unit of 660 MW Supercritical unit of ETPS Expansion Project is already being constructed at the adjacent vacant land in an area of about 120 acres. The total estimated cost of the project is Rs. 4,800 Crores.

The total land available inside the ETPS complex is about 237 acres, out of which 120 acres is earmarked for the ETPS Expansion Project (1x660 MW), which is being erected now. The balance area of 117 acres is available for this proposed Replacement Plant after dismantling the existing units. After the demarcation of project site, which was part of the CRZ area, around 110 acres of land is available for setting up of this power plant. CRZ clearance for the proposed Expansion has been already obtained from Ministry on 23.12.2008 and further extension obtained on 31.03.2014 having valid period upto 22.12.2018 to draw sea water for use in the plant. The water requirement for the ETPS Expansion (Annex) TPP is 12,000 m<sup>3</sup> per hour. Water required for construction purposes is 200 m<sup>3</sup> per day and is proposed to draw from CMWSSB and shall be stored in an underground water tank.

100% domestic coal shall be used for this proposed expansion project. Ministry of Coal has allotted coal from Chandrabela coal block located in the state of Odisha vide letter No. 13016/26/2004-CA-I/CA-III (Pt.) (Vol. II) dated 24.02.2016. The annual coal requirement will be about 3.0 MTPA at 85% PLF. A total 9,500 tonnes per day of coal would be required (310 days per year). Coal to the plant shall be brought from Ennore Port through coal yard of the North Chennai TPS, TANGEDCO via coal conveyor belt which is under execution for the ETPS Expansion (Annex) Project. As informed by the PP, the above coal pipe conveyor belt is having additional capacity of 10,000 Tonnes per day to cater to the requirement for the proposed replacement. Therefore, no separate pipe conveyor system is proposed for this project. CRZ clearance for the above pipe conveyor has already been obtained from the Ministry on 23.12.2008 and further extension has been taken on 31.03.2014 with validity upto 22.12.2018.

The Sub-committee visited the project site and visited the areas namely existing fly ash pond, existing plant which shall be retarded, Buckingham Canal Site, the proposed Coal Conveyor facility, proposed fore bays and Pump Water drawl facility of inlet water from the sea, Creek near to Eranavoor Village and the proposed project site. The Sub-committee deliberated at length with the PP on the ToR assigned vide letter dated 19.09.2017. During the visit, 2 NGOs namely the Coastal Resource Centre and Healthy Energy Initiative, India were also present and held discussions with the Sub-committee. The two NGOs also gave representation to the Sub-committee on various issues. The Sub-committee accepted their written representation at the site.





During the visit of existing fly ash pond, it has been found that storm water has been stored and the lining of the ash dyke has been found to be damaged all through. Similarly, construction of fore bays and pumps facility for drawl of inlet water from of sea is in progress which is located about 70 m away from the HTL and the area falls in CRZ-II. As per the DPR, it was found that permission has been granted for construction of the same in the CRZ area. The compliance status of ToR assigned to the Sub-committee is provided below:

#### **1. Baseline data around the project site**

The industries located around the proposed replacement of existing ETPS (3x110 MW & 1x60 MW) are Ashok Leyland (Automobile Manufacturing Company), Ennore Foundries (Manufacturing of Automobile Engine Parts), Vallur Thermal Power Plant (3x500 MW) of NTPC Tamil Nadu Energy Company Ltd., North Chennai Thermal Power Station (3x210 MW, 2x600 MW & 1x800 MW) of TANGEDCO, ETPS Expansion Thermal Power Plant (1x660 MW) of TANGEDCO and Ennore SEZ Thermal Power (2x800 MW).

The PP submitted the AAQ monitoring data that was presented before the EAC for grant of environmental clearance. The baseline data have been collected by M/s Ramky Enviro Services Private Ltd, Hyderabad (Consultant for preparation of EIA for ETPS Replacement TPP) during July to September, 2015, January to March, 2016 and April to June, 2016 for monitoring of PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>x</sub>, NO<sub>x</sub>, O<sub>3</sub> and Hg at 9 locations. The monitoring values of all the parameters are found to be within the NAAQ standards. The PP has also carried out the impact of the domestic coal during post project scenario (Point source emissions). The overall scenario for cumulative value of PM<sub>10</sub> is estimated to be 60.06 µg/m<sup>3</sup> at 2.3 km, North direction from the Project Site during April-June, 2016 and that of NO<sub>x</sub> is 40 µg/m<sup>3</sup> at 1.2 km, South-West direction from the Project Site during January-March, 2016. Similarly, the overall scenario with FGD for cumulative value of SO<sub>2</sub> is found to be 32.5 µg/m<sup>3</sup> at 2.1 km, East direction from the nearest stack during July-September, 2015.

The online ambient air quality monitoring data of CPCB from 01.09.2017 to 25.10.2017 at Manali station (Industrial and other areas) near Chennai reveals that the average values of PM<sub>2.5</sub>, NO<sub>2</sub> and SO<sub>2</sub> are 43.58 µg/m<sup>3</sup>, 18.76 µg/m<sup>3</sup> and 11.60 µg/m<sup>3</sup>, respectively and data have not exceeded the prescribed standards. **During visit, there was a plan to install mobile HVS to assess the air quality in the villages. But, the day of site visit, it was raining and therefore, monitoring of air quality in the villages could not be carried out.**

#### **2. Dredging activities of ETPS**

The PP informed that creek water was being taken for cooling purposes of the existing ETPS, therefore, dredgers were used to clear the sand bar formed across the mouth of the Ennore Creek so that free flow of sea water





takes place into the creek. However, as all the existing units of ETPS (3x110 MW & 2x60 MW) have decommissioned on 31.03.2017, cooling water from creek is not being drawn. **During visit, dredgers were seen kept near to the mouth of Ennore creek. The PP informed that dredgers have been kept idle and are no more used to clear the sand bar.**

### **3. Decommissioning schedule for the existing ETPS and disposal of waste**

M/s Protocol Insurance Surveyors & Loss Assessors Pvt. Ltd, Noida have been awarded the work to assess the valuation of the assets of existing ETPS on 21.08.2017. Now, the valuation is in progress. The PP informed that based on the report, disposal of the existing ETPS shall be carried out by following the due procedure of Construction and Demolition of Waste Management Rules, 2016. It was also informed that the powerhouse is made up of steel structure, so disposal will be done through auctioning only. Other wastes like concrete materials, broken bricks, etc. shall be utilized for levelling of proposed 765 kV substation including low lying filling. Hazardous wastes like broken asbestos sheets, etc. shall be disposed of to the authorized agencies.

### **4. Detailed utilization of Flyash**

The PP has provided the fly ash utilisation from 2010-11 to 2016-17 and found that fly ash utilization was 108%. The PP is supplying fly ash to cement manufacturers, Small Scale Industries, Contractors, Govt. Departments, etc. **MoU has been signed with Dalmia Cement for the total fly ash generation and Bottom ash with local Brick Manufacturers. During emergency, ash will be disposed off in the existing ash ponds.** The PP is 100% compliant as per the Fly Ash Notifications of the Ministry.

### **Observation and Recommendation of the Committee:**

After detailed discussions with project and the NGOs, the Sub-committee recommends the following points:

- i. Cumulative pollution level to be reassessed in the post project scenario by considering all the point sources including the proposed ETPS replacement TPS. **In this regards, a one season data may be again collected at all the 9 locations preferably during dry season.**
- ii. Capacity of the Coal Conveyor belt, proposed facility for intake seawater and out falls to be ensured so that it can cater to both the units namely ETPS and NCTPS.
- iii. Broken lining of the existing ash dyke to be replaced either with HDPE or LDPE lining so that supernatant water from the existing fly ash pond will not leach into the groundwater table.
- iv. The storm water collected in the existing ash pond may be used for construction purposes so that consumption of raw water can be

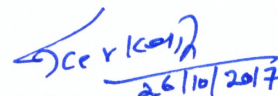




minimized and in this regard the PP should submit written commitments.

- v. At the time of dismantling of the existing Thermal Power Plant, care should be taken to dispose of asbestos sheet in a proper manner following the standard procedure of Ministry so that health problem will not occur to the workers. In this regard necessary awareness to be developed among all the contractual labourers.
- vi. As per the representation of the NGOs, it has been brought out that a village (Kuruvimedu, a hamlet of Vallur village, Ponneri Taluk, Thiruvallur district) is located near to the existing fly ash pond having around 200 people. The health check up carried out on 6.08.2017 by Project TBF free India through a Rotary club reveals that that people are suffering from *Bronchitis*. It is therefore suggested that PP should conduct study on bioaccumulation of plant, dust fall measurement to apportionment the different sources of dust emission, etc.
- vii. Necessary permission has been obtained from the State PWD regarding temporarily construction of the approach road for construction of proposed coal conveyor belt. Once the Coal conveyor belt is completed, the temporary road should be decommissioned so that free flow be maintained in the Creek.
- viii. The water of Buckingham canal is found to be stagnated and black. The PP agreed to desilt the canal and will do some supplementary study of the cause of water becoming black and accordingly necessary measures will be taken to clean the canal water.
- ix. Some photographs of the different locations of the Existing ETPS and proposed construction of ETPS are attached as **Annexure**.

  
(Dr. S K PALIWAL)

  
(Dr. S KERKETTA)

  
(Dr. NAVIN CHANDRA)

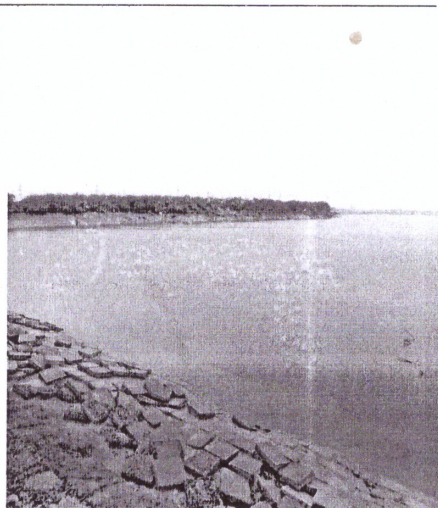


**Photographs of proposed ETPS Replacement TPS of TNGEDCO and existing units**

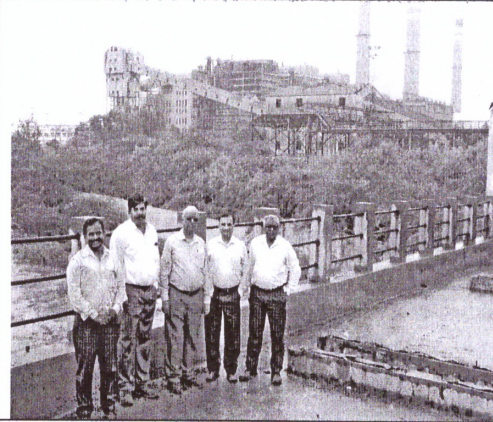
**Plate-1 (13.10.2017)**



Discussion is in progress by the Sub-Committee with Project Officials



Existing Flyash pond-damaged ash dyke



Sit view of Existing ETPS plant

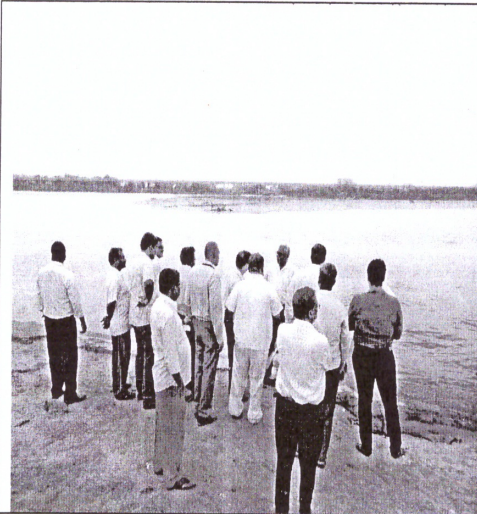


Approach road for construction of Coal conveyor belt

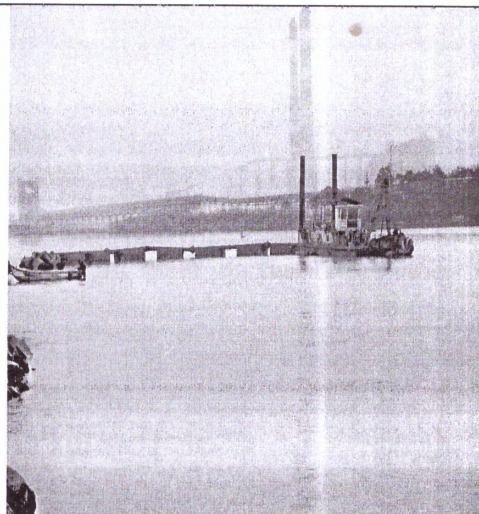


**Photographs of proposed ETPS Replacement TPS of TNGEDCO and existing unit**

**Plate-2 (13.10.2017)**



Sand bar across the Ennore Creek



One dredger near Ennore Creek -  
stated to be idle



Construction is in progress- fore bays and Pumping facilities of inlet and outfall  
for seawater







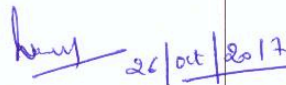

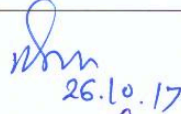
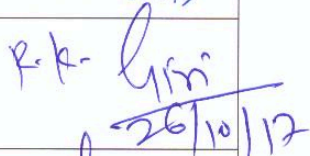
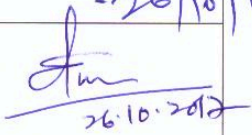
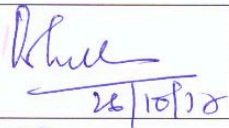

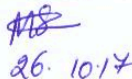
Attendance of the 11<sup>th</sup> Meeting of the Re-constituted Expert Appraisal Committee (EAC) for Thermal Power Projects Meeting held on 26<sup>th</sup> October, 2017.

**LIST OF MEMBERS (Attendance Sheet)**

**11<sup>th</sup> EXPERT APPRAISAL COMMITTEE MEETING (Thermal & Coal Mining Sector)**

**DATE & TIME** : 26<sup>th</sup> October , 2017

**VENUE** : TEESTA HALL, INDIRA PARYAVARAN BHAWAN.

Sr.No.	Name of Member	Signature
1.	Dr. Navin Chandra Chairman	
2.	Dr. Narmada Prasad Shukla Member	
3.	Sh. N. Mohan Karnat, IFS Member	 26/oct/2017
4.	Dr. Sharachchandra Lele Member	 26/10/17
5.	<del>Sh. P.D. Siwal</del> / Sh. N.S. Mondal, Member	 26.10.17
6.	Dr. R.K. Giri, Member	 26/10/17
7.	Dr. S.K. Paliwal, Member	 26.10.2017
8.	Prof. D.C. Panigrahi/ Prof. S.K. Sinha/ Prof. Om Prakash Member	 26/10/17
9.	Dr. Jai Krishna Pandey, Member	 25/10/17
10.	Dr. Manjari Srivastava, Member	 26. 10/17

11.	Dr. Gururaj P Kundargi, Member	<i>Gururaj</i> 26/10/17
12.	Shri Suramya Dolarray, IFS (Retd.) Member	<i>SDA</i>
13.	Dr. S. Kerketta Member Secretary MoEFCC	<i>S. Kerketta</i> 26/10/2017

Approval of Minutes of the 11<sup>th</sup> Meeting of the Re-constituted Expert Appraisal Committee (EAC) on Environmental Impact Assessment (EIA) of Thermal Power Projects by the Chairman.

11/2/2017 [https://mail.gov.in/iwc\\_static/layout/shell.html?lang=en&3.0.1.2.0\\_15121607](https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607)  
[https://mail.gov.in/iwc\\_static/layout/shell.html?lang=en&3.0.1.2.0\\_15121607](https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607) 1/1

Subject: Fw: Finalized Minutes

To:

Date: 11/01/17 10:41 PM

From:

Finalized 11th\_MoM\_EAC\_Thermal\_26.10.2017.docx (446kB)

"Dr S. Kerketta" <s.kerketta66@gov.in>,

"Dr S. Kerketta" <suna1466@rediffmail.com>,

"Dr S. Kerketta" <sunamani1466@gmail.com>,

"Dr S. Kerketta" <s.kerketta66@nic.in>

navin chandra <navinchandrarrl@yahoo.com>

I forgot to attach the Finalized Minutes. It is attached now.

-----  
Dr. Navin Chandra,

Director General

M P Council of Science and Technology (MPCST),

Vigyan Bhawan, Nehru Nagar, Bhopal - 462003 (M.P.) India

Phone : 91-755- 2671800 (Office)

e-mail : dg@mpcost.nic.in

navinchandrarrl@yahoo.com, navinchandraampri@gmail.com

----- Forwarded Message -----

From: navin chandra <navinchandrarrl@yahoo.com>

To: Dr S. Kerketta <s.kerketta66@gov.in>; Dr S. Kerketta <suna1466@rediffmail.com>; Dr S. Kerketta

<sunamani1466@gmail.com>; Dr S. Kerketta <s.kerketta66@nic.in>

Sent: Wednesday, November 1, 2017, 10:34:08 PM GMT+5:30

Subject: Finalized Minutes

01.11.2017

Dear Dr. Kerketta,

I have gone through the Draft Minutes of the meeting. They are in order. The finalized minutes are

attached with this e-mail. You can now upload them on Ministry's web.

Regards,

yours sincerely,

(NAVIN CHANDRA)

-----  
Dr. Navin Chandra,

Director General

M P Council of Science and Technology (MPCST),

Vigyan Bhawan, Nehru Nagar, Bhopal - 462003 (M.P.) India

Phone : 91-755- 2671800 (Office)

e-mail : dg@mpcost.nic.in

navinchandrarrl@yahoo.com, navinchandraampri@gmail.com

**AGENDA OF 11<sup>th</sup> MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE  
ON THERMAL POWER PROJECTS**

**DATE : 26<sup>th</sup> October, 2017**

**TIME : 10.30 A.M. ONWARDS**

**VENUE : TEESTA MEETING HALL, VAYU WING, FIRST FLOOR, INDIRA PARYAVARAN  
BHAWAN, JORBAGH ROAD, NEW DELHI-110003.**

<b>ITEM</b>	
<b>Item No. 11.0</b>	<b>CONFIRMATION OF MINUTES OF 10<sup>th</sup> EAC (Thermal) MEETING</b>
<b>Item No.</b>	<b>CONSIDERATION OF PROJECTS</b>
11.1	Expansion of 420 MW Tenughat Thermal Power Station by addition of 2 units of 660 MW at Lalpania Village, Bokaro District, Jharkhand by <b>M/s Tenughat Vidyut Nigam Limited- reg. ToR</b> <b>File No:</b> J-13012/15/2017-IA.I(T) & <b>Online no:</b> IA/JH/THE/69754/2017
11.2	Proposed Integrated Municipal Solid Waste Management Plant (including 23 MW power plants) at Adampur Chhavani, Phanda Block, Huzur Tehsil, Bhopal District by <b>M/s Bhopal Municipal Solid Waste Private Limited. - reg. ToR.</b> <b>File No:</b> J-13012/16/2017-IA I(T)& <b>Online no:</b> IA/MP/THE/69646/2017
11.3	2x600 MW Imported Coal Based TPP at Village Erukkattanchery, Kazhizppanallur and Manichkapangu, Tarangambadi Taluk, Nagapattinam District, Tamil Nadu by <b>M/s Chettinad Power Corporation Private Limited - reg. extension of validity of EC.</b> <b>File No:</b> J-13012/89/2009-IA II (T) & <b>Online no:</b> IA/TN/THE/10619/2011
11.4	3x660 Expansion of Coal Based power unit at Koradi TPP in Nagpur District, Maharashtra by <b>M/s Maharashtra State Power Generation Company Limited -reg. amendment in Environment Clearance.</b> <b>File No:</b> J-13012/87/2007-IA.II (T)& <b>Online no:</b> IA/MH/THE/24219/2010
11.5	1x500 MW Coal based expansion project at Khaperkheda Thermal Power Station at Khaperkheda, Nagpur, Maharashtra by <b>M/s Maharashtra State Power Generation Company Limited - reg. amendment in Environment Clearance.</b> <b>File No:</b> J-13011/24/2005-IA.II(T) & <b>Online no:</b> IA/MH/THE/10223/2005
11.6	2x500 MW Chandrapur Super Thermal Power Project Expansion Project at Chandrapur, District Chandrapur, Maharashtra by <b>M/s Maharashtra State Power Generation Company Limited - reg. amendment in Environment Clearance.</b> <b>File No:</b> J-13011/53/2008-IAII(T) & <b>Online no:</b> IA/MH/THE/10241/2008
11.7	2x600 MW coal based TPP at Village Singhitarai, Benipali, Odekera & Nimohi, Tehsil Dabhara, District Janjgir-Champa, and Chhattisgarh by <b>M/s Athena Chhattisgarh Power Limited -reg. extension of validity of EC.</b> <b>File No:</b> J- 13011/7/2009-IA II (T) & <b>Online no:</b> IA/CG/THE/18794/2008
11.8	Captive Power Plant (2x30 MW) at Village Mora, Taluka Chorayshi, District Surat in Gujarat by <b>M/s ABG Energy Gujarat Limited -reg. extension of validity of EC.</b> <b>File No:</b> J-11011/853/2008-IA II (I) & <b>Online no:</b> IA/GJ/THE/70142/2010
11.9	1x660 MW (Unit IV) Super Critical Coal Based Thermal Power Plant near village Pathadi, District Korba, Chhattisgarh by <b>M/s Lanco Amarkantak Power Limited -reg. extension of validity of EC.</b> <b>File No:</b> J-13011/3/2009-IA.II(T) & <b>Online no:</b> IA/CG/THE/10227/2009

11.10	3x660 MW Super-critical Technology Coal Based Nabinagar Thermal Power Plant at village Majhiyan, in Nabinagar Taluk, in Aurangabad District in Bihar by <b>M/s Nabinagar Power Generating Company Private Limited-reg. extension of validity of EC.</b> <b>File No:</b> J-13012/127/2007-IA II(T) & <b>Online no:</b> IA/BR/THE/11929/2007
11.11	Standardisation of EC conditions for all Thermal Power Plants (Coal, Lignite, Petcoke, Gas, Bio-mass & Municipal Solid Waste)
11.12	<b>ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR.</b>

**Note:** If project documents are not submitted to Committee Members on time along with brief summary/basic information as per pro-forma, it will be the Committee's discretion to consider the project. Project proponents shall bring shape file (.kml file) containing project boundaries & facilities and shall be saved on computer in the meeting hall. Project Proponents shall submit the attendance form duly filled to the Member Secretary before starting the presentation