

MINUTES OF THE 8th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE ON ENVIRONMENTAL IMPACT ASSESSMENT OF THERMAL POWER & COAL MINE PROJECTS

The 8th Meeting of the reconstituted Expert Appraisal Committee (Thermal) was held on **January 9-10, 2014** at Fazal Hall, Scope Convention Centre, Scope Complex, Lodhi Road, New Delhi. The members present were:

1.	Shri A.S. Lamba	-	Chairman
2.	Dr. C.R. Babu	-	Vice Chairman
3.	Shri T.K. Dhar	-	Member
4.	Shri J.L. Mehta	-	Member
5.	Shri N.K. Verma	-	Member
6.	Shri P.D. Siwal	-	Member
7.	Shri A.K. Bansal	-	Member (only on 10 th)
8.	Dr. S.D. Attri	-	Member (only on 9 th)
9.	Dr. Saroj	-	Member Secretary

In attendance: Dr. M. Ramesh, Deputy Director, MoEF.

Shri G.S. Dang, Dr. C.B.S Dutt, Dr. Ratnavel, Representatives of CPCB and WII were absent.

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

The Minutes of the 6th EAC meeting held during December 5-6, 2013 were confirmed with minor corrections.

Item No. 2: CONSIDERATION OF PROJECTS

2.1 2x250 MW Barauni (Extension) Thermal Power Project by M/s Bihar State Power Generation Company Ltd. at Village Barauni, Districts Begusarai & Patna, Bihar – reg. Environmental Clearance

The proposal is for setting up of 2x250 MW Barauni (Extension) Thermal Power Project at Village Barauni, District Begusarai, Bihar by M/s Bihar State Power Generation Company Ltd. The project was accorded TOR for preparation of EIA/EMP report on 16.01.2009. The EIA/EMP report after conducting public hearing was submitted to the Ministry for consideration of environmental clearance. The Project Proponent (PP) along with their environmental consultant, M/s Bhagavathi Ana Labs Limited, Hyderabad made a presentation and provided following information:

The total project area is 410 acres of which the power plant area is 200 acres, ash pond area is 190 acres and 20 acres for rail, road etc. The proposed extension units (2x250 MW) will be constructed on the ash pond area of the existing plant after evacuation and a common ash pond shall be developed for all units. The plant site co-ordinates are Latitude 25°23'13.5" N to 25°23'54" N & Longitude 86°01'05.1" E to 86°01'46.3" E and the ash pond co-ordinates are Latitude 25°21'54.05" N to 25°22'27.11" N & Longitude 86°02'26.4" E to 86°03'21.21" E. There are no National Parks, Wildlife Sanctuaries, Biosphere/Elephant/Tiger Reserves, Heritage sites within 10 km of the project site. The project cost is around Rs. 3,666 crores.

The total installed capacity is 365 MW (3X15, 2X50 and 2X110). All the units are very old, of which the latest ones were installed in 1980s. EC was not obtained for any of these

units as was not applicable at that time. The 2X110 MW units are only viable and undergoing R&M. Other 5 units are being phased out gradually. Tapering coal linkage from Eastern Coalfields Limited (ECL) of GCV grade of G10 and above coal (ash content, sulphur content and GCV are in the range of 12.1 - 40.1%, 0.2 - 0.6 %, and 4,750 - 6,725 Kcal/Kg) was accorded till the allocated coal block (Urma Paharitola) becomes operational. LoA was issued by ECL on 27.09.2013.

The water requirement is estimated to be 2530 m³/h, which will be met from River Ganga flowing at a distance of about 3 km. Water Resources Department, Govt. of Bihar has accorded permission for 60 cusecs of water drawl for the existing as well as the proposed units. CWC has approved 45 cusecs of water for the proposed TPP for the lean season i.e. January to May.

Base line data of ambient air quality monitored at eleven locations indicates that concentrations of PM₁₀, PM_{2.5}, SO₂ and NO_x are varying from 31.7 µg/m³ to 59.0 µg/m³, 12.7 µg/m³ to 23.6 µg/m³, 4.6 µg/m³ to 13.9 µg/m³ and 8.0 µg/m³ to 15.1 µg/m³ respectively. The predicted maximum incremental GLCs due to the proposed unit would be 2.93 µg/m³, 17.61 µg/m³ and 7.82 µg/m³ with respect to PM₁₀, SO₂ and NO_x respectively. The resultant concentrations are within the NAAQS. About 394 m³/h of wastewater will be generated, which shall be treated and utilized within the plant premises.

Public hearing/public consultation was conducted by the Bihar State Pollution Control Board on 08.07.2011 and 11.11.2011 in Districts Begusarai and Patna respectively. The issues raised in the public hearing inter-alia include proper compensation to the land losers before acquisition, identification of land for ash pond, fly ash generation and its utilization, pollution control measures, CSR activities. The Committee discussed the issues raised in Public Hearing and the responses made by Project Proponent. The proposed CSR activities are maintenance of schools, village roads, drainage, power supply and water supply, scholarships to poor children, health facilities and nursery plantation with a capital cost of 14.64 crores and recurring cost of 0.31 crores.

The committee opined that the proposed 2X250 MW units need to be examined by the PP whether they are techno economically feasible. In this regard it would be appropriate for the PP to consult CEA. The PP needs to submit status of phasing out of old units (3X15, 2X50) in a time bound manner. The status of removal of ash from the existing pond area on which the proposed 2X250 MW units are to be constructed, and the details of ash utilization from the existing and the proposed units. An action plan with budgetary provisions for the public hearing issues shall be submitted. The committee noted that the capital cost of CSR budget is acceptable, however the recurring cost needs to be increased. The photographs of the existing green belt shall also be submitted.

*In view of the above short comings, the proposal was **deferred** for reconsideration after submission of all the above information/documents.*

2.2 Expansion by addition of 1x660 MW Imported Coal based Thermal Power Plant at Village Toranagallu, in Sandur Taluk, in Bellary Distt., in Karnataka by M/s JSW Energy Ltd. - reg. Environmental Clearance

The proposal is for expansion by addition of 1x660 MW Imported Coal based Thermal Power Plant at Village Toranagallu, in Sandur Taluk, in Bellary Distt., in Karnataka by M/s JSW Energy Ltd. The ToR for preparation of EIA/EMP report was accorded on 13.05.2011. The

EIA/EMP report after conducting public hearing was submitted to the Ministry for consideration of environmental clearance. The project proponent along with their environmental consultant, M/s MECON Ltd., Ranchi made a presentation and provided the following information:

The land requirement is about 89.19 acres which is available within the existing project area. The plant site corner co-ordinates are Latitude 15°11'1.16" N to 15°11'32.7" N & Longitude 76°39'39.8" E to 76°39'58.0" E and the ash pond corner co-ordinates are Latitude 15°11'21.39" N to 15°11'27.57" N & Longitude 76°40'21.88" E to 76°40'32.94" E. Daroji Bear Sanctuary is located at a distance of 5.4 km from the project site. The project capital cost is Rs. 3,300 crores. The MoEF's Regional Office at Bangalore had visited the project site on 06.12.2012 and rated the efforts taken by the PP in implementing the environmental safeguards as satisfactory.

The coal requirement would be 2.25 MTPA and will be imported from South Africa/Australia through Goa/Mangalore/Krishnapatnam ports. An MoU was signed on 10.2.2012 with M/s Avani Coal Resources PTE Ltd., Singapore for supply of coal from South Africa and Australia. The guaranteed values of the ash content, sulphur content and GCV of the coal will be 28% max, 0.6 % max, and 4,500 Kcal/Kg minimum. The additional water requirement of 1,469 m³/h will be sourced from the captive reservoir. COC of 7 will be maintained for the cooling water system.

Base line data of ambient air quality monitored at eight locations indicates that the maximum concentrations of PM, SO₂ and NO_x are 93 µg/m³, 26.4 µg/m³ and 33.8 µg/m³ respectively. The predicted maximum incremental GLCs due to the proposed unit would be 0.9 µg/m³, 18.4 µg/m³ and 7.0 µg/m³ with respect to PM, SO₂ and NO_x respectively. The resultant concentrations are within the NAAQS. Effluent zero discharge concept will be adopted.

About 0.5 MTPA of fly ash and 0.12 MTPA of bottom ash would be generated. 95% of the Fly ash generated will be collected in dry form, stored in silos and dispatched in closed bulker to the group cement plant. A MoU was signed with M/s JSW Cement Ltd. on 07.03.2012 for supply of fly ash. The balance 5% of the fly ash will be utilized for the manufacture of bricks and ready mix concrete. The bottom ash will be used for low lying area development, strengthening of bund, road & embankment and mining segment.

Public hearing/public consultation was conducted by the Karnataka State Pollution Control Board on 07.07.2012. The issues raised in the public hearing inter-alia include electricity to surrounding villages, traffic congestion due to increased level crossings, infrastructure development, employment to the locals, health care and medical facilities, pollution control measures. The Committee discussed the issues raised in Public Hearing and the responses made by Project Proponent.

The committee noted that there is a difference between the guaranteed values & the rejection values of the coal characteristics in the MoU and recommended that the rejection values shall be same as the guaranteed values i.e. GCV of minimum 4,500 Kcal/Kg, Ash content of maximum 28% and sulphur content of maximum 0.6%. Hence, the MoU shall be revised accordingly and shall also be signed for a long term basis, as MoU is only upto 2015.

It was informed that the cumulative impact assessment of AAQ were carried out but were not submitted to MoEF/EAC. The committee desired that the same shall be submitted along with the cumulative water balance for the proposed power plant which shall also include the steel plant. It was noted that the permission from Ports and Railway authorities regarding additional

handling of coal were not obtained and hence, the same need to be provided. The status of NBWL clearance also needs to be submitted. Social audit for the CSR activities by the JSW group and the contribution of JSW energy towards the same shall be submitted. An action plan with budgetary provisions for public hearing issues shall be revised and submitted. The existing Occupational Health and Safety survey and proposed action plan, details of environment management cell and traffic management for avoiding congestion shall also be submitted.

In view of the above short comings, the proposal was **deferred** for reconsideration after submission of all the above information/documents.

2.3 380 MW Gas based Combined Cycle Power plant of M/s GAIL India Ltd. at Village Vijaipur, in Guna Distt., Madhya Pradesh – reg. re-consideration for Environmental Clearance

The proposal was earlier discussed in the 58th meeting of the EAC held during October, 8-9, 2012, the minutes of which are extracted as under.

“The proposal is for consideration for environmental clearance. The project proponent made a presentation along with its consultant M/s EMRTC Consultants Pvt. Ltd., Delhi and provided following information:

The proposal is an inter-state case and hence is being dealt at the Centre.

The proposal is for setting up of 380 MW Gas Based CCPP Plant at village Vijaipur, in Guna District, in Madhya Pradesh. Land requirement will be 45 acres which is within existing premises of GAIL's LPG manufacturing facility/Compressor station. The co-ordinates of the site are located within Latitude 24°27'52.46" N to 24°29'14.28" N and Longitude 77°08'40.96"E to 77°09'34.72" E. Gas requirement will be 1.452 MMSCMD at 85% PLF. Blend of Natural Gas and Re-Gasified LNG in 60:40 ratio will be used. Water requirement of 10920 KLD will be sourced from Gopi Krishna Sagar Dam through a pipeline at a distance of about 12 km from project site. Induced draft cooling system will be installed. Stack height will be 60 m. There are around 3 protected forests namely Raghogarh, Dongar and Ajrora and 3 water bodies namely Parwati river, Ruthyai river and Gopi Krishna Sagar Dam within 10 km of the project site. Public Hearing was held on 11.04.2012. Cost of the project will be Rs.1209.0 Crores.

The Committee sought clarification / response to the Ministry of Power Circular / Advisory asking project developers not to plan gas based power projects until 2015-16. The Committee also observed that there are large number of stranded gas based power projects and desired to know why a new gas based plant be permitted which would add to the number of stranded projects. The project proponent stated that the circular is only for domestic gas based projects, whereas, their project is conceived based on internal availability of domestic gas and imported LNG.

The Committee decided that the case can be considered based on 100 % imported LNG provided copy of gas supply contract and feasibility of the project with details of power production cost at users end are provided.

It was informed that obtaining environmental clearance is a part of the process for development of the power project and based on the clearance investment decision will be taken.

The Committee noted that the above mentioned statement of the project proponent is highly objectionable since public investor need to know the detail facts and accordingly decided under these circumstances the project proponent need to issue a public notice declaring the same so that investors know about the facts and are not given false hopes.

The project proponent also informed that they intend to sign PPA with PTC / Tata and discussions are being held. The Committee decided that road map for PPA shall be submitted.

The Committee also noted that the site does not seem to satisfy the requirement for location of a TPP as the railway line is running adjacent the boundary. It was therefore decided that the project proponent shall first revise its power project layout fulfilling the requirement for location of a TPP as prescribed in the 'Guidelines' and submit the same to the Ministry.

The Committee also noted that some of the provisions of TOR prescribed such as TOR points (iii), (xv), (xvi), (xxiii) & (xxiv) seem to have been not complied.

The Committee also desired that the project proponent shall first submit compliance to the observations mentioned above to the Ministry before the proposal is next placed for re-consideration.

*In view of the above stated inadequate information as detailed in various paras above, the Committee decided that the proposal in its present form is pre-mature for consideration for environmental clearance and accordingly **deferred** the proposal."*

On submission of the information sought above, the matter was again placed before the EAC for its re-consideration. The PP along with their environmental consultant, M/s EMRTC Consultants Pvt. Ltd., Delhi made a presentation and provided the following information:

Gas requirement for the proposed project is 1.45 MMSCMD and GAIL will use the gas from its existing and new sources. GAIL has already signed a long term gas contract with M/s Sabine Pass Liquefaction, LLC for supply of 3.5 MMTPA of LNG and with M/s Gazprom Marketing and Trading Singapore for supply of 2.5 MMTPA of LNG. The LNG supplies from Sabine Pass are expected to start by the end of 2017. The total levelised tariff for power is estimated to be Rs. 6.37/KWH.

As part of Public Hearing held on 11.04.2012, public hearing notice for setting of the proposed power plant had been published in various newspapers and as a standard practice, GAIL would take investment decisions once EC is granted. The PPA (based on definite minimum base tariff and then binding both the parties on the minimum sell and supply obligations) with power trader shall be for a period of 10 years with minimum agreed base tariff for first 5 years, and thereafter tariff shall be negotiated for the next block of 5 years.

The revision of plant layout is not required because the site meets the siting criteria guidelines. The study to assess the impact of emission of the gas based power plant on the chemistry of the upper troposphere and stratosphere of the atmosphere shall be initiated by GAIL after the commissioning of the power plant. Water will be sourced from Gopi Krishna Sagar Dam at a distance of 12 km and the Water Resources Department, Govt. of M.P has allotted 10 MCM of water to the project on 06.04.2011. permission for water drawl has been obtained. There will be no drawl of ground water. Water reservoir is also proposed within the plant premises. The site is characterized by lateritic. The Raghogarh block is classified as "Safe

Category” by CGWB and the stage of ground water development in Raghogarh Block is 46.62%.

GAIL is not acquiring any additional land to establish the power plant. No R&R issues are involved. 61 villages fall in 10 km radius of the project site with a total population of 39,817, 16% population of SC and 11% population of ST. All the villages are connected either by Village road or PWD road and hand pumps are used for drinking water purpose. The employment policy of GAIL is governed by the Govt. of India and the CSR policy mandates contribution of 2% of GAIL's Profit after Tax of the previous financial year to the CSR activities.

Based on the information and clarifications provided, the Committee *recommended the project for environmental clearance* subject to stipulation of the following specific conditions:

- i) In case fuel for running the power plant is proposed to be changed from natural gas to other fuel (liquid or solid) the project proponent shall apply for such a change in environmental clearance along with necessary documents as required under EIA notification, 2006 (and its amendments).
- ii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation shall be submitted periodically.
- iii) Stacks of 70 m each shall be provided with continuous online monitoring equipments. Exit velocity of flue gases shall not be less than 22 m/sec.
- iv) One of the AAQ monitoring Station shall be installed in the down wind direction i.e. across the river during the whole life of operation of the plant.
- v) Dry Low NO_x burners shall be installed to control NO_x emission. NO_x emission from each Gas Turbine shall not exceed 50 ppm.
- vi) Concentration for photochemical oxidants shall be monitored along with NO_x and permanent monitoring stations shall be installed.
- vii) Regular monitoring of ground level concentration of NO_x shall be carried out in the impact zone and records maintained. If at any stage the levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.
- viii) 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 be undertaken.
- ix) 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
- x) **No discharge in the River is permitted except if the quality of the effluent is of the same quality as that of River.**
- xi) COC of minimum 5.0 shall be adopted.
- xii) 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.
- xiii) A minimum amount of Rs 5.0 Crores as one time investment shall be earmarked for activities to be taken up under CSR during construction phase of the Project. Recurring

expenditure for CSR thereafter shall be minimum Rs 1.0 Crores per annum till the life of the plant. Details of the activities to be undertaken with budgetary provisions shall be **submitted within one month** along with road map for implementation.

- xiv) Social Audit by a reputed University or an Institute shall be carried out annually and details to be submitted to MOEF besides putting it on Company's website.
- xv) An Environmental Cell comprising of at least one expert in environmental science / engineering, occupational health and social scientist, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.

2.4 Change of source of coal for 2x660 MW from Imported to Domestic Coal Based TPP of M/s Adani Power Rajasthan Ltd. at Kawai, in Baran Distt., in Rajasthan – reg. amendment in EC

The proposal was earlier discussed in the 3rd meeting of the reconstituted EAC held during October, 10, 2013, the minutes of which are extracted as under.

“The Ministry had accorded environmental clearance for setting up of 2x660 MW Super Critical Coal Based Thermal Power Plant at village Kawai, in Atru Taluk of District Baran, Rajasthan to M/s Adani Power Rajasthan Ltd. (M/s APRL) on 04.05.2011. M/s APRL informed that the first unit of 660 MW is already commissioned and the second unit is also at the advance stage and likely to be commissioned by October, 2013.

M/s APRL informed that the project has been conceived and developed on the basis of fuel from domestic coal sources and Environment Impact Assessment (EIA) Report was prepared on the basis on domestic coal. The EIA was later revised and presented to Expert Appraisal Committee indicating the impact of the project based on imported coal as well as domestic coal. It was also then informed that the use of imported coal is only an interim arrangement and that the plant is being developed to run on domestic coal. That they had applied to Ministry of Coal for allocation of coal for both the units of the project and accordingly the Government of India has issued the following orders:

- (a) The Cabinet Committee on Economic Affairs (CCEA), vide their note dated 11th June 2013 had allocated coal for the project.
- (b) A Presidential Directive was issued on 17th July, 2013 asking CMD's of ECL/BCCL/CCL/MCL/SECL/WCL/NCL for signing FSAs.
- (c) M/s Coal India Limited, vide letter dated 8th August, 2013 has agreed to supply coal to the units mentioned in CCEA's Note.

In view of the above, M/s APRL has requested for amendment of the environment clearance as may be necessary.

The Committee noted the contents of the Presidential Directive issued by the Ministry of Coal which is extracted as under:

“Directive issued under Article 37 of the memorandum and Articles of Association of Coal India Limited.

1. Whereas the competent authority has decided the following course of action for signing of fuel Supply Agreement (s) by subsidiary companies of Coal India Limited with the power utilities:-
 - (i) CIL to sign FSAs for a total capacity of about 78,000 MW, including tapering linkage cases as now identified, which are likely to be commissioned by 31.3.2015. MOC to issue directions to CIL to replace the identified list of 60,000 MW power projects earlier sent vide Ministry of Coal letter No. 23011/185/2013 dated 17.02.2012 by the revised list now provided by MOP vide their letter dated 27.05.2013.
 - (ii) Taking into account the overall domestic availability and the likely actual requirements of these power plants, FSAs be signed for the domestic coal quantity of 65%, 65% 67% and 75% of ACQ for the remaining four years of the current Plant for the power plants having normal coal linkages. Cases of tapering linkage would get coal supplies as per the tapering linkage policy. Actual coal supplies would, however, be available when the required long term PPAs are tied up.
 - (iii) To meet its balance FSA obligations towards the above categories, CIL may import coal and supply the same to the willing power plants on cost plus basis. Power plants may also directly import coal themselves, if they so opt. MOC to issue suitable instructions as per the decisions taken by CCEA.
2. And whereas the competent authority has also directed that coal may be supplied to power plants of 4660 MW capacity and other similarly placed power plants that do not have any fuel linkage (as per the list attached with Ministry of Power's letter No. FU-12/2011-IPC Vol.II dated 14.05.2013 subject to the availability of coal and on the condition that such supplies do not adversely impact the availability of coal for the identified plants of 78000 MW capacity as per approval accorded vide Paragraph 1 above and other Letters of Assurance holders.
3. And whereas the Object III A4 of the memorandum of Association of Coal India Limited provides as follows:

“CIL to act as an entrepreneur on behalf of the State in respect of the coal industry and plan and organize production of coal as also its beneficiation and the manufacture of other by products of coal in accordance with the targets fixed in the Five Year Plan and the economic policy and objectives laid down by the Government from time to time.
4. Whereas Article 37 of the Articles of Association of Coal India Limited *inter-alia* provides as under:

“Notwithstanding anything contained in all these Articles the President may from time to time issue such directives or instructions as may be considered necessary in regard to the conduct of business and affairs of the company and in like manner may vary and annual any such directives or instruction. The Directors shall give immediate effect to the directives of instructions so issued. In particular, the President will have the powers:

 - (i) To give directives to the Company as to the exercise and performance of its functions in matters involving national security or substantial public interest.”
5. And whereas the policy regarding power generation/capacity addition of coal based power plants has been based on coal linkage and coal availability of 100% of the

normative requirement, corresponding to 85% PLF and assured supply of coal by CIL. Banks and Financial Institutions, developers and the competitive bidding regime are critically dependent on the quantity of linkage/ LoA given and supplies made. Failure to supply adequate quantity will have many consequences affecting the power utilities and ultimately, the consumers of power. Any major deviation in the coal supplies will have far reaching implications on power and financial sector and ultimately on the economic growth of the country. Therefore, this is considered a matter involving substantial public interest.

6. Now, therefore, keeping in view the need for making adequate coal available to the power utilities, in exercise of the power conferred under Article 37 of the Articles of Association read with the Object contained in Article III.A.\$ of memorandum of Association of CIL, the President is pleased to issue a directive to CIL to implement the decisions mentioned above within a period of four weeks in so far as the matter of signing of FSAs with the power projects commissioned during 01.04.2009 to 31.03.2015 is concerned and as mentioned at para 1(i)
7. In continuation of para 1(i) above, read with letter no. FU-12/2011-IPC (Vol. II) dated 14.05.2013 of the Ministry of Power, once the actual capacity of 60000 MW of power plants out of the said 78000 MW becomes eligible for drawing coal as per the FSA, the actual supply schedule may be further reviewed with the Ministry of Coal.
8. The Ministry's letter No. 23011/185/2011-CPD dated 17.02.2012 and the Presidential Directive of the same number dated 04.04.2012 would stand modified to this extent.

For and on behalf of the President of India”.

The Committee perused through the contents of the Presidential Directive and was of the view that when the highest authority in the country has already given certain Directives, the question of CIL not following the said Directive as made out by the project proponent seem a little out of the context. This more so because the environmental clearance accorded on 04.05.2011, itself mentions that imported coal from South Africa will be used for an interim period until domestic coal is made available. Regarding the provision of specific condition no. (ii) under para no.4, the Committee noted that while appraisal of the power project was based on imported coal, the impact has been taken into account based on both domestic coal as well as imported coal from South Africa, with varying coal characteristics.

The Committee also noted that the existing provisions of the environmental clearance does not seem to demand any amendment requiring substitution by domestic coal, for the present. Domestic coal is yet to be made available by CIL, therefore, the issues can be addressed by the Committee at a later date when the source of coal is known and the impact due to transportation can be examined.

In view of the above, the Committee decided that the member from the Central Electricity Authority may take up the issue with the Ministry of Coal so that the project proponent is not subjected to unnecessary burden for the purpose of getting the FSA signed with CIL and its subsidiaries.”

The PP vide letter dated 09.12.2013 has informed MoEF that MCL has signed an MoU with them on 09.12.2013 to supply coal from Kulda/Basundhara (sources/collieries) and requested for the amendment in EC for change of source of fuel. The matter was placed before

the EAC for its re-consideration, wherein the PP made a presentation along with its consultant M/s Greencindia Consulting Private Limited and provided the following information:

Both units of Kawai TPP have been commissioned and fully operational. Mahanadi Coalfields Limited (subsidiary of Coal India Ltd) has now signed MOU with APRL for supply of G10 grade of coal from Kulda/Basundhara (sources/collieries). The MOU is signed as per the presidential directive for the first year (2013-14). Coal from the source collieries will be transported to the Railway Siding by Road (33 to 55 km) through covered trucks and thereafter transported by Rail to the Power Plant. The total distance of coal transportation from the source collieries to the Power Plant will be less than 1000 km. At the Power Plant, facilities for coal unloading and handling is already operational. All the necessary pollution control facilities such as water sprinklers, dust extraction system, dry fogging system, bag filters, etc. have been provided to control the fugitive dust emissions.

The ash content in the domestic coal will be less than 33% as against 29% in imported coal. The sulphur content will remain same at less than 0.4%. There will be marginal increase in ash generation which will be fully utilized and will not be disposed in the ash dyke.

Based on the information and clarifications provided, the Committee **recommended** the project for amendment in environmental clearance for change of source of coal from Imported to Domestic subject to stipulation of the following conditions:

- i. The coal transportation by road shall be through tarpaulin covered trucks for a maximum period of two years and hence forth shall be only through mechanically covered trucks.
- ii. Avenue plantation of 2/3 rows all along the road shall be carried out by the project proponent at its own expenses.
- iii. Periodic maintenance of the road shall be done by the project proponent at its own expenses and shall also facilitate the traffic control on the road.

2.5 Change of source of coal for expansion by addition of 3x660 MW Imported Coal Based TPP of M/s Adani Power Maharashtra Ltd. at MIDC Industrial Area, in Tiroda, in Maharashtra – reg. Amendment of EC.

The proposal was earlier discussed in the 3rd meeting of the reconstituted EAC held during October, 10, 2013, the minutes of which are extracted as under.

“M/s Adani Power Maharashtra Ltd. was accorded environmental clearance for its expansion by addition of 3x660 MW Imported Coal Based TPP at MIDC Industrial Area, in Tiroda, in Maharashtra on 22.04.2010.

M/s Adani Power Maharashtra Ltd. (M/s APML) have informed that the 1st Phase of 2x660 MW (1320 MW) is fully operational and the expansion from 1320 MW to 3300 MW by addition of 3x660 MW under Phase-II is at an advanced stage of construction. That the 1st Unit of the second Phase (domestic coal based EC) is already commissioned and the next two units of 660 MW are also likely to be commissioned by December 2013.

M/s APML informed that the project has been conceived and developed on the basis of fuel from indigenous sources and Environment Impact Assessment (EIA) Report was prepared on the basis on domestic coal. It was also then informed that the use of imported coal for two units under Phase-II was only an interim arrangement and that the plant is being developed to run on indigenous coal only. That they had applied to Ministry of Coal for allocation of coal

for all the three units of the project and accordingly the Government of India has issued the following orders:

- (a) The Cabinet Committee on Economic Affairs (CCEA), vide their note dated 11th June 2013 had allocated coal for the project.
- (b) A Presidential Directive was issued on 17th July, 2013 asking CMD's of ECL/BCCL/CCL/MCL/SECL/WCL/NCL for signing FSAs.
- (c) M/s Coal India Limited, vide letter dated 8th August, 2013 has agreed to supply coal to the units mentioned in CCEA's Note.

In view of the above, M/s APML has requested for amendment of the environment clearance as may be necessary.

The Committee noted the contents of the Presidential Directive issued by the Ministry of Coal which is not repeated for sake of brevity as the same has been already extracted while discussion on the item at S.N 6 above.

The Committee noted that as per environmental clearance, domestic coal of 2.89 MTPA for 1x660 MW was required. Ash and Sulphur contents in the domestic coal will be 34% and 0.5% respectively. Whereas, the Imported coal requirement for the two units under Phase-II will be 5.44 MTPA and the Ash and Sulphur contents in imported coal will be 32% and 0.3% respectively. Total coal requirement will be 8.36 MTPA.

That the likely source of domestic coal will be from SECL, Korba/ MCL, IB Valley. That the impact after change of fuel from imported to domestic coal and the environmental parameters will remain within the stipulated guidelines of MoEF.

As deliberated in the previous item, the Committee was of the view that when the highest authority in the country has already given certain Directives the question of CIL not following the said Directive as made out by the project proponent seem a little out of the context. This more so because the environmental clearance accorded on 22.05.2010, itself mentions that imported coal from South Africa will be used for an interim period until domestic coal is made available. Regarding the provision of specific condition no. (ii) under para no.4, the Committee noted that while appraisal of the power project based on imported coal, the impact has been taken into account based on both domestic coal as well as imported coal from South Africa, with varying coal characteristics.

The Committee also noted that the existing provisions of the environmental clearance does not seem to demand any amendment requiring substitution by domestic coal, for the present. Domestic coal is yet to be made available by CIL, therefore, the issues can be addressed by the Committee at a later date when the source of coal is known and the impact due to transportation can be examined.

In view of the above, the Committee decided that the member from the Central Electricity Authority may take up the issue with the Ministry of Coal so that the project proponent is not subject to unnecessary burdened for the purpose of getting the FSA signed with CIL and its subsidiaries."

The PP vide letter dated 09.12.2013 has informed MoEF that MCL has signed an MoU with them on 09.12.2013 to supply coal from Kulda/Basundhara (sources/collieries) and requested for the amendment in EC for change of source of fuel. The matter was placed before

the EAC for its re-consideration, wherein the PP made a presentation along with its consultant M/s Greencindia Consulting Private Limited and provided the following information:

One unit of Phase-II expansion of Tiroda TPP is already commissioned and fully operational. The other two units are also likely to be commissioned by March, 2014. Mahanadi Coalfields Limited (subsidiary of Coal India Ltd) has now signed MOU with APML for supply of G10 grade of coal from Kulda/Basundhara (sources/collieries). The MOU is signed as per the presidential directive for the first year (2013-14). Coal from the source collieries will be transported to the Railway Siding by Road (33 to 55 km) through covered trucks and thereafter transported by Rail to the Power Plant. The total distance of coal transportation from the source collieries to the Power Plant will be less than 500 km. At the Power Plant, facilities for coal unloading and handling is already operational. All the necessary pollution control facilities such as water sprinklers, dust extraction system, dry fogging system, bag filters, etc. have been provided to control the fugitive dust emissions.

The ash content in the domestic coal will be less than 33% as against 32% in imported coal while sulphur content will be less than 0.4% as against 0.3%. There will be marginal increase in ground level concentration of SO₂ but will be within the permissible limits. There will also be marginal increase in ash generation which will be fully utilized and will not be disposed in the ash dyke.

Based on the information and clarifications provided, the Committee **recommended** the project for amendment in environmental clearance for change of source of coal from Imported to Domestic subject to stipulation of the following conditions:

- i. The coal transportation by road shall be through tarpaulin covered trucks for a maximum period of two years and hence forth shall be only through mechanically covered trucks.
- ii. Avenue plantation of 2/3 rows all along the road shall be carried out by the project proponent at its own expenses.
- iii. Periodic maintenance of the road shall be done by the project proponent at its own expenses and shall also facilitate the traffic control on the road.

2.6 3x660 MW (Stage-I) and 2x500 MW (Stage-II) Sipat Super Thermal Power Project of M/s NTPC Ltd. at District Bilaspur in Chhattisgarh- reg. amendment in EC for change of source of coal

The proposal was earlier discussed in the 4th meeting of the reconstituted EAC held during November 18-19, 2013, the minutes of which are extracted as under.

“M/s NTPC is operating Sipat Super Thermal Power Project (Stage-I: 3x660 MW; Stage-II: 2x500 MW; Total Capacity: 2980 MW) in Bilaspur district of Chhattisgarh. Environmental clearance for Sipat STPP was accorded by MOEF vide letter dated 22.02.1999 for capacity of 2000 MW (4x500 MW). However, due to changes in configuration of the project from 4x500 MW to 3x660 MW, an amendment to environmental clearance was issued by MOEF vide dated 30.04.2002.

- Environmental clearance letter dated 22.02.1999 stipulates that Coal should be used @ 10 MT/year for Stage-I with sulphur content not exceeding 0.24%. The coal should be transported from Korba coalfields by captive MGR in closed wagons to avoid dust pollution.

- Environmental clearance letter dated 30.04.2002 stipulates that Coal linkage has been firmed up from Dipika mine block (Korba area) which will have a maximum sulphur content of 0.36%

South Eastern Coalfields Limited (SECL) have expressed constraints in supplying the coal to Sipat STPP, Stage-I from Dipika mine only and agree to supply coal from operating mines of SECL. While signing Memorandum of Understanding with NTPC for supply of coal to Sipat SECL have mentioned that, there shall not be any source specific commitment of supply. However, in case of Sipat Stage-I (Unit-I only), as per the condition incorporated in MOEF clearance letter dated 22.02.1999 read with 30.04.2002, supplies would be made from Dipika mine block of Korba coalfields till purchaser submits an amendment in MOEF clearance in this regard.

It is pertinent to mention here that the sulphur content of coal from operating mines of SECL varies from 0.27% to 0.40%, which is similar to the sulphur content specified in environmental clearance letter dated 30.04.2002.

M/s NTPC also informed that the coal transportation has been envisaged in BOBRN/BOXN wagons of NTPC/ Indian railways, which are open wagons. It is a general practice in India to transport coal in open wagons with suitable measures for control of fugitive dust emissions. The same has been envisaged in Sipat STPP also.

In view of the above, M/s NTPC has requested the Ministry to amend the condition regarding coal linkage to facilitate signing of long term coal supply agreement with SECL.

Based on the information and clarifications provided, the Committee deferred the request made by M/s NTPC for change of source of coal and desired that composition of the coal need to be submitted before a view is taken.”

The PP vide letter dated 29.11.2013 has submitted the coal characteristics of the operating mines of SECL and requested for the amendment in EC for change of source of fuel. The matter was placed before the EAC for its re-consideration, wherein the PP made a presentation and informed that the coal characteristics of F Grade (G10-G11) coal are: GCV: 4001-4600 kcal/kg, ash content: 32-41 %, moisture content: 3-7.7 % and sulphur content: 0.23-0.4 %.

It was requested to amend the EC condition regarding coal linkage for sourcing coal from operating mines of SECL with a maximum sulphur content of 0.4% and transportation by open wagons with suitable measures instead of closed wagons as stipulated in the EC.

Based on the information and clarifications provided, the Committee recommended amendment in EC for sourcing coal from operating mines of SECL with a maximum sulphur content of 0.4% instead of sourcing from Dipika mines with sulphur content not exceeding 0.36% and transportation by open wagons with suitable measures instead of closed wagons, depending on the availability. The Committee further recommended that transportation of coal shall be only by Rail and additional conditions which were earlier not prescribed but relevant now be stipulated while issuing the amendment in EC.

2.7 Construction of New ash pond on 111 ha. Land for Satpura TPS in Sarni, Dist. Betul, Madhya Pradesh by M/s M.P Power Generation Co. Ltd.

The proposal is for construction of new ash pond on 111 ha. Land for Satpura TPS in Sarni, Dist. Betul, Madhya Pradesh by M/s M.P Power Generation Co. Ltd. (MPPGCL). The PP has made a presentation and provided the following information:

MPPGCL has a generating capacity of 1392.5 (1X62.5, 1X200, 3X210 and 2X250) MW at Satpura TPS in Sarni, M.P. MPPGCL, STPS has started functioning way back in the year 1967-70 with five units of 62.5 MW capacity and later on during 1979-83, 1X200, 3X210 MW units were commissioned. EC was accorded by MoEF for 2X250 MW extension units on 27.02.2009 which inter-alia stipulates that the existing units no. 1-5 shall be decommissioned within one year of the commissioning of the proposed units. In compliance to the same, Units 2-5 have been decommissioned in 2013.

The capacity of existing ash bund is almost full and likely to be exhausted by March 2014. The fly ash utilization was 25.866% in 2012-13. MoEF has granted approval for diversion of 111.00 ha of forest land for construction of new ash bund on 13.10.2009. The construction of ash bund is nearing completion except some finishing work. NEERI, Nagpur has carried out studies for ground water contamination and its remedial measures due to construction of ash bund and allied works of ash disposal at STPS, Sarni and found no contamination of ground water. The 111 hectare land is just adjacent to the existing ash bund (to be reclaimed and rehabilitated).

The Committee noted that the Fly ash utilization achieved in the power plant is only about 26%. That since the existing units are not able to comply with the fly ash utilization notification, other avenues/options shall need to be explored for fly ash utilization before the request can be agreed to. The Committee therefore declined to agree to the present request.

2.8 Durgapur Captive Power Project-III (2x20 MW) at Durgapur, Distt. Burdwan in West Bengal by M/s NTPC-SAIL Power Company Private Ltd. – reg. ToR

The proposal is for prescribing ToR for preparation of EIA/EMP report for the Durgapur Captive Power Project-III (2x20 MW) at Durgapur, Distt. Burdwan in West Bengal by M/s NTPC-SAIL Power Company Private Ltd. Although the proposal falls under Category 'B' of the schedule of the EIA Notification, 2006, since it is proposed to be located within the Durgapur Steel Plant (DSP), which is a Category 'A' project, the proposal was appraised at the Centre. The PP has made a presentation and provided the following information:

The proposed coal based Durgapur Captive Power Plant-III is to be located inside the boundary of DSP and shall cater to their CAT-I (emergency) power requirement including DSP's ongoing expansion program. The site is located in the District of Burdwan of West Bengal at Latitude: 23° 32' 48" N to 23° 32' 33" N and Longitude: 87°14' 25" E to 87°14'43" E. It is located at about 170 Km from the city of Kolkata on NH-2. The total land for the power plant excluding the ash dyke is envisaged to be 20 acres which is already within DSP's premises and does not require any further acquisition. No separate township is required for the plant as existing DSP residential facilities shall be made available.

Around 0.3 MTPA of coal is committed to be supplied by SAIL from their Captive Ramnagar Mines. No separate Railway Siding and coal storage area is envisaged as existing facilities of PP-II are proposed to be utilized. The water requirement of around 400 m³/hr shall be supplied by DSP from their network using already allocated quota. CPP-III is envisaged to use FBC Boilers for better SO_x and NO_x control with particulate emission <50 mg/Nm³. The ash generated is proposed to be discharged in existing ash dyke of CPP-II.

The committee deliberated on various issues and sought the following additional information:

- i. Certified compliance report from the MoEF R.O. for the conditions stipulated in the EC accorded to the existing plant
- ii. Coordinates of ash dyke and power plant along with the HFL on the toposheet.
- iii. Details of the installed capacities of the existing CPPs vis-à-vis the current production capacities, the phase out plan of the old units etc.
- iv. Details of the production capacity of captive coal mine from which the coal is proposed to be sourced vis-à-vis the utilization by various power plants including the proposed.
- v. Details of fly ash utilization
- vi. Water balance for the proposed CPP including the steel plant.

In view of the above short comings, the proposal was **deferred** for reconsideration after submission of all the above information/documents.

2.9 Captive Thermal Power Plant of 2x30 MW at Budni industrial Area, Distt. Sehore, Madhya Pradesh by M/s Trident Corporation Ltd. - reg. ToR

The PP has made a presentation and provided the following information:

The PP has submitted the proposal for EC to Captive Thermal Power Plant of 2x30 MW at Budni industrial Area, Distt. Sehore, Madhya Pradesh to SEIAA, M.P on 23.05.2011 and subsequent presentation was made to the SEAC on 02.09.2011. The SEAC had issued TOR on 19.11.2011 for the 2*30 MW project having approx. coal consumption of 820 MT per day with fly ash generation of 205 MT per day. The total water requirement of 6600 KLD will be sourced from Narmada River. The permission for water drawl is already obtained. The EIA/EMP report was submitted to SEIAA, M.P and subsequent presentation was made to the SEAC in its 99th meeting held on 25.07.2012. Request was made for exemption of Public Hearing. The SEAC again discussed the proposal in its 116th meeting held on 15.01.2013 about the requirement of public hearing and instructed the PP for conducting public hearing.

Public hearing was conducted on 30.04.2013 and the public hearing issues were considered at the 138th meeting of SEAC held on 25.07.2013. The proposal was appraised by the SEAC and recommended for environment clearance under project Category "B". This decision was based on the letter No. 990 dated 01.10.2012 of SDO Forest (Budhni) stating that the nearest Ratapani wild life sanctuary is more than 10 km from the project site. However, before the consideration of recommendation of SEAC by SEIAA, M.P, the PCCF office informed vide Letter no. 5069 dated 26.08.2013 that the said project falls within 10 km radius of the wild life sanctuary. The SEAC and SEIAA were requested by the PP for forwarding the case to MOEF as the project site comes within 10 km radius of Ratapani Sanctuary and technically project falls into Category "A". Anticipating a delay in forwarding the case from SEIAA to MOEF, the PP has filed a fresh application for consideration of EC for 2 X 30 MW Captive Power Plant to MoEF.

In view of above, the PP has requested the committee to consider the proposal as forwarded by the SEIAA, M.P rather than as a new proposal. In the proposal submitted to MoEF Pet-coke was added as an additional fuel. However, this proposal for mixed fuel will be withdrawn since the studies already conducted were only based on 100% imported coal.

*The committee prima-facie opined that the PP should not be penalized for the above issue of distance of project site from the wild life sanctuary especially after the appraisal and recommendation of the proposal by the SEAC. However, considering the environmental issues, the committee recommended that the PP shall submit an addendum EIA/EMP report as per the ToRs (as applicable) at **Annexure-A1** with minimum one month base line data of the same season as that of the EIA submitted. The committee also noted that the existing EIA/EMP report was prepared by a consultant accredited only for Category 'B' TPPs and hence recommended that the addendum EIA/EMP report shall be prepared by a consultant accredited for Category 'A' TPPs. The requirement of conducting public hearing again shall be ascertained by the committee based on the findings of the addendum EIA/EMP report vis-à-vis the original EIA/EMP report.*

The following ToR are prescribed in addition to the standard ToRs at Annexure-A1.

- 1. The status of the application submitted to NBWL for its clearance.*
- 2. One AAQ station shall be located in the vicinity of the Ratapani wild life sanctuary so as to study the impact of the proposed CPP.*
- 3. Comparison of the data and predictions of the original EIA/EMP report and the addendum EIA/EMP report.*

2.10 5x800 MW Coal Based TPP of M/s Maha Tamil Mining & Thermal Energy Ltd. at Village Gharghoda, Jhariapali, Charbhanta, Barpali, Nawapara, Taluk Gharghoda and Tamnar, in Raigarh Distt., in Chhattisgarh -reg. re-consideration for ToR.

The proposal was considered in 54th Meeting of the reconstituted Expert Appraisal Committee (Thermal) held during **August 6-7, 2012**, the minutes of which are extracted as under.

“The proposal was considered for determination of terms of reference for undertaking EIA/EMP study as per the provisions of EIA Notification, 2006. The project proponent gave a presentation through its consultant M/s Vimta Labs Ltd., Hyderabad and provided the following information:

The proposal is for setting up of 5x800 MW Coal Based TPP at village Gharghoda, Jhariapali, Charbhanta, Barpali, Nawapara, Taluk Gharghoda and Tamnar in Raigarh Distt., in Chhattisgarh. The site is in CBM Coal Block identified by MoP&NG. The TPP site is about 8 kms from Gare Palma-II sector Coal Block, where coal is proposed to be sourced. This coal block was allotted by Ministry of Coal jointly to Tamil Nadu Electricity Board and Maharashtra State Mining Corporation Ltd. Land requirement will be 1400 acres of which 1346 acres is single crop agricultural land; 24 acres is waste land and 30 acres is others (not specified by PP). The co-ordinates of the site are located in between Latitude 22°09'09" N to 22°11'05" N and Longitude 83°21'10"E to 83°22'29"E. Coal requirement will be 18 to 19 MTPA. Water requirement of 42 to 45 MCM will be sourced from the Mahanadi river through a pipeline at a distance of 60 km from the project site. Air cooled condenser shall be installed. Suitable raw water intake system including intake well and Pump house is envisaged. There are around 5 Reserve Forests within 10 km radius of the project. There are no National Parks, Wildlife Sanctuaries, and Tiger/Biosphere Reserves etc. within 10 km of the site. About 1700 land oustees will be involved.

The Committee noted that CBM block was accorded EC in October, 2008 but purportedly due to lack of CBM potential the project seemed to have been shelved for the present. The Committee observed that even North Karanpura TPP of M/s NTPC has still not got approval as it purportedly is proposed in a coal bearing area and therefore advised the project proponent that prior clearance from MoP&NG and MoC shall be first obtained for consideration of the present site. It was also noted that the chosen site appeared to be surround by forests all around and may not therefore be an ideal site for a TPP. The Committee also informed the project proponent that parallely they may choose to identify alternative sites.

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

The PP vide letter dated 09.12.2013 has informed MoEF that MoP&NG has issued NOC for the project and the NOC from MoC is expected shortly and requested for ToR. The matter was placed before the EAC for its re-consideration, wherein the PP made a presentation along with its consultant M/s Vimta labs and provided the following information:

The MoP&NG vide letter dated 17.01.2013 has informed the Ministry of Coal that the Mand-Raigarh CBM block in Raigarh District, Chhattisgarh operated by consortium Dart Energy Pvt. Ltd., GAIL India Ltd. and EIG Infrastructure Group has been relinquished and requested MoC for further necessary action on the request of the PP. The clearance from MoC is expected in due course. The details of other existing/planned infrastructure projects in the CBM Block were provided by the PP.

Three potential sites were identified for the project and the site near Gharghoda is preferred as earlier. The selected site has no forest land, no double crop land and no habitants in the project boundary. The layout has been optimized so that the land requirement is only 1400 acres against the CEA guidelines of 2400 acres. MGR and coal stock yard are not required as the coal transportation from the captive coal block is proposed through conveyor.

Based on the information provided and the presentation made, the Committee recommended the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP along with the specific TOR as under:

1. NoC/Clearance from MoC shall be submitted.
2. Explore the installation of FGD since the forests are surrounded by.
3. Permission letter for water drawl and the water balance.
4. If barrage is proposed, a detailed EIA/EMP of the barrage on the upstream and downstream users.

2.11 2x300 MW (600 MW) CB TPP of M/s Creative Thermolite Power Pvt. Ltd. at Murka, Distt. Chhitrakoot in Uttar Pradesh – reg. amendment in ToR for change in Co-ordinates

The proposal of 2x300 MW (600 MW) CB TPP by M/s Creative Thermolite Power Pvt. Ltd. at Murka, Distt. Chhitrakoot in Uttar Pradesh was accorded ToR for preparation of the EIA/EMP report on 28.12.2011 and was considered for extension of the validity of ToR by the EAC in its 4th meeting held in November, 2013.

The PP vide letter dated 12.12.2013 has requested MoEF for the change in Co-ordinates of the project site. The matter was placed before the EAC, wherein the PP made a presentation along with its consultant, M/s Vimta labs and provided the following information:

As suggested by the EAC in its 4th meeting, the Co-ordinates of the project site were revised by avoiding the surveyed wooded areas. The land requirement has been optimized from 500 acres to 450 acres. The area shown under Co-ordinates is only 400 acres, out of which 360 acres will be taken for the main plant. The remaining 90 acres will be taken separately for railway corridor, water corridor and township.

*The committee noted that the coordinates for the entire proposed project area of 450 acres was not submitted. Further, the Govt. land of 40 acres is proposed to be excluded. Hence, the coordinates shall be revised and submitted. Accordingly, the proposal was **deferred**.*

2.12 Expansion by addition of 2x800 MW (Phase-II) Super-Critical Coal Based Thermal Power at village Khanpur, in Matenhail Taluk, in Jhajjar Distt., in Haryana by M/s Jhajjar Power Ltd. – reg. Extension of Validity of ToR.

The proposal is for extension of validity of ToR accorded by MoEF on 29.12.2011 for the preparation of EIA/EMP report for the above project. The project proponent along with their environmental consultant, GIS Enabled Environment & Neo-Graphic Centre made a presentation requesting for the extension and provided the following information.

The EIA study has been completed as per ToR and is under finalization. DPR has been prepared. The water drawl study from Jawaharlal Nehru Canal has been completed by WAPCOS. The PP has applied for coal linkage in February 2012 and Ministry of Coal has not awarded any linkage yet. Since, the ToR requires the PP to demonstrate fuel supply arrangement as a pre-condition to seek EC, an extension of ToR validity is sought.

Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the policy of MoEF. However, the PP shall ensure that the environmental impacts assessed in the draft EIA/EMP report are in consonance with the coal linkage. Else, the EIA/EMP report shall be amended accordingly. The Committee further recommended that additional ToR which were earlier not prescribed but relevant now, if any, may be prescribed while issuing the extension of validity.

2.13 1x400 MW Gas Based Combined Cycle Power Plant at Village Jaun Samana in Dadri Taluk, Gautam Budh Nagar Distt., Uttar Pradesh by M/s Noida Power Company Ltd. – reg. Extension of Validity of ToR.

The proposal is for extension of validity of ToR accorded by MoEF on 07.12.2011 for the preparation of EIA/EMP report for the above project. The project proponent along with their environmental consultant, Development Consultants Private limited made a presentation requesting for the extension and provided the following information.

The total land for the project is under possession of the PP. the AAQ monitoring was carried out from November, 2012 to February, 2013. The draft EIA report preparation is under final stage and will be submitted to UPPCB by February, 2014 for conducting public hearing. Selection of EPC contractor is in advanced stage. In reply to the PPs letter dated 03.01.2012 requesting for allocation of Natural Gas for the project, CEA vide letter dated 12.01.2012 had informed that the allocation of Natural Gas for the project would be decided subject to availability of gas to power sector from new discoveries and other sources, in the 12th five year

plan (2012-17). Since, the ToR requires the PP to demonstrate fuel supply arrangement as a pre-condition to seek EC, an extension of ToR validity is sought.

Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the policy of MoEF. However, the PP shall ensure that the environmental impacts assessed in the draft EIA/EMP report are in consonance with the natural gas linkage. Else, the EIA/EMP report shall be amended accordingly. The Committee further recommended that additional ToR which were earlier not prescribed but relevant now, if any, may be prescribed while issuing the extension of validity.

2.14 2x660 MW Super-Critical Coal Based Thermal Power at village Jamunda, in Banarapal Taluk, in Angul Distt., in Orissa by M/s Jindal Power Ltd. – reg. Extension of Validity of ToR.

The proposal is for extension of validity of ToR accorded by MoEF on 28.12.2011 for the preparation of EIA/EMP report for the above project. The project proponent made a presentation requesting for the extension and provided the following information.

The entire land for the project is in possession. One season field data collection was completed in 2012. Coal linkage for 7.5 MTPA of coal was applied on 29.11.2011. An amount of Rs. 75 lakhs was deposited for formal sanction of 50 cusecs of water from River Mahanadi. The finalization of draft EIA report is held up for want of coal linkage from the Ministry of coal and firm allocation of water. Hence, an extension of ToR validity is sought.

Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the policy of MoEF. However, the PP shall ensure that the environmental impacts assessed in the draft EIA/EMP report are in consonance with the coal linkage. Else, the EIA/EMP report shall be amended accordingly. The Committee further recommended that additional ToR which were earlier not prescribed but relevant now, if any, may be prescribed while issuing the extension of validity.

Any other items with the permission of the Chair

3.1 500 MW (2x100 MW + 2x150 MW) Captive Power Plant of at Village Hathneora, in Champa Taluk, in Janjgir-Champa Distt., in Chhattisgarh by M/s Prakash Industries Ltd. – reg. Extension of Validity of ToR.

The proposal is for extension of validity of ToR accorded by MoEF on 18.04.2011 for the preparation of EIA/EMP report for the above project. The project proponent made a presentation requesting for the extension and provided the following information.

The draft EIA report was prepared and submitted to CECB for conducting public hearing. The public hearing was held on 05.04.2013 and the public hearing proceedings were forwarded to MoEF on 31.05.2013. The final EIA report incorporating the public hearing comments is ready. The MoEF R.O, Bhopal has visited the site on 29.10.2013 for verification of compliance of the previous ECs. Due to the delay in getting the public hearing proceedings from CECB, Raipur etc. an extension of ToR validity is sought. The PP has expressed their regret for the delay in requesting MoEF for the extension.

Based on the information and clarifications provided, the committee recommended the extension of validity of ToR by one year as per the policy of MoEF. However, the PP shall ensure

that the environmental impacts assessed in the draft EIA/EMP report are in consonance with the coal linkage. Else, the EIA/EMP report shall be amended accordingly.

3.2 Modernization of existing unit -6 (500 MW) by change of fuel from LSHS/LSFO to imported Coal of M/s. The Tata Power Company Ltd. at Trombay Thermal Power Station at Mahul Road, District Chembur, Mumbai- reg. Environmental Clearance.

The above proposal was recommended for EC by the committee in its 4th meeting held during 18-19 November, 2013. An e-mail was received by MoEF from Shri Debi Goenka, of an organization called 'Conservation Action Trust', Mumbai that the recommendations of the EAC for the project needs to be relooked into. MoEF forwarded the same to all members of EAC.

*The committee noted that the project proponent in the past had submitted detailed response to the issues raised by Shri Debi Goenka. The email from Shri Debi Goenka was again placed in the aforesaid EAC meeting. The Committee after deliberating at length, had earlier advised the project proponent that the response given by them need to be shared with Shri Debi Goenka. The PP informed that they have shared all the information and were willing to address any further issues. The PP further stated that no further queries have been sent thereafter. The committee had detail discussion on all the issues raised from time to time and had in fact visited the project site and had prescribed additional ToRs on 24.08.2012. The proposal was examined several times by EAC and have addressed all environmental issues including issues raised by Shri Debi Goenka. In view of this, **EAC reiterated its earliest recommendation for granting EC to the project.***

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

Terms of Reference (TOR):

- i) Vision document specifying prospective long term plan of the site, if any, shall be formulated and submitted.
- ii) Certified compliance report from the Regional Office of MoEF for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s), as applicable, shall be submitted.
- iii) Executive summary of the project indicating relevant details along with recent photographs of the approved site shall be provided. Response to the issues raised during Public Hearing and to 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.
- iv) Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and status of implementation shall be submitted to the Ministry.
- v) The coordinates of the approved site including location of ash pond shall be submitted along with topo sheet (1:50,000 scale) and confirmed GPS readings of plant boundary and NRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/river shall be specified, if the site is located in proximity to them.
- vi) Layout plan indicating break-up of plant area, ash pond, area for green belt, infrastructure, roads etc. shall be provided.
- vii) 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 and revised layout (as modified by the EAC) shall be provided.
- viii) Present land use as per the revenue records (free of all encumbrances of the proposed site, shall be furnished. Information on land to be acquired) if any, for coal transportation system as well as for laying of pipeline including ROW shall be specifically stated.
- ix) The issues relating to land acquisition and R&R scheme with a time bound Action Plan should be formulated and clearly spelt out in the EIA report.
- x) Satellite imagery or authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest villages, creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
- xi) 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 Office of the Chief Wildlife Warden of the area concerned.
- xii) 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 fill material required; its source, transportation etc. shall be submitted.
- xiii) 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 to be acquired is developed alternatively and details plan shall be submitted.

- xiv) A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on economically feasible mineable mineral deposit shall be submitted.
- xv) Details of 100% fly ash utilization plan as per 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.
- xvi) Water requirement, calculated as per norms stipulated by CEA from time to time, shall be submitted along with water balance diagram. Details of water balance calculated shall take into account reuse and re-circulation of effluents which shall be explicitly specified.
- xvii) Water body/nallah (if any) passing across the site should not be disturbed as far as possible. In case any nallah / drain has to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of diversion required shall be furnished which shall be duly approved by the concerned department.
- xviii) 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.
- xix) 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.
- xx) 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/creek/ 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.
- xxi) 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. Commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.
- xxii) Detailed plan for carrying out rainwater harvesting and its proposed utilization in the plant shall be furnished.
- xxiii) Feasibility of zero discharge concept shall be critically examined and its details submitted.
- xxiv) Optimization of COC along with other water conservation measures in the project shall be specified.
- xxv) Plan for recirculation of ash pond water and its implementation shall be submitted.
- xxvi) 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.
- xxvii) Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out by a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of local communities.

- xxviii) 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.
- xxix) 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.
- xxx) 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. Sustainable income generating measures which can help in upliftment of poor 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.
- xxxii) 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.
- xxxiii) 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.
- xxxiv) Assessment of occupational health as endemic diseases of environmental origin shall be carried out and Action Plan to mitigate the same shall be prepared.
- xxxv) 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-conductive 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 years shall be conducted with an excellent follow up plan of action wherever required.
- xxxvi) One complete season site specific meteorological and AAQ data (except monsoon season) as per MoEF Notification dated 16.11.2009 shall be collected and the dates of monitoring recorded. The parameters to be covered for AAQ shall include SPM, RSPM (PM10, PM2.5), SO₂, NO_x, Hg and O₃ (ground level). The location of the monitoring stations should be so decided so as to take into consideration the pre-dominant downwind direction, population zone, villages in the vicinity and sensitive receptors including reserved forests. 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.
- xxxvii) A list of industries existing and proposed in the study area shall be furnished.
- xxxviii) Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be well assessed. 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 wind roses should also be shown on the location map as well.
- xxxviiii) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.

- xxxix) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
- xl) Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished.
- xli) 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.
- xlii) For proposals based on imported coal, inland transportation and port handling and rolling stocks /rail movement bottle necks shall be critically examined and details furnished.
- xliii) 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.
- xliv) 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.
- xlv) 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.
- xlvi) The DMP so formulated shall include measures against likely Tsunami/Cyclones/Storm Surges/Earthquakes etc, as applicable. It shall be ensured that DMP consists of both on-site and off-site plan, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan shall be prepared both in English and local languages.
- xlvii) Detailed plan for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary (except in areas not possible) with tree density of 2000 to 2500 trees per ha with a good survival rate of about 80% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports.
- xlviii) Over and above the green belt, as carbon sink, additional plantation shall be carried out in identified 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.
- xliv) 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 system of reporting of non compliances / violations of environmental norms to 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.

- 1) Details of litigation pending or otherwise with respect to project in any court, tribunal etc. shall invariably be furnished.

Additional TOR for Coastal Based TPPs:

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

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

adopted. This is just because the areas around the projects boundaries is fertile agricultural land used for paddy cultivation.
