

MINUTES OF THE 13TH MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS

The 13th Meeting of the re-constituted EAC (Thermal Power) was held on 28th November, 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. Narmada Prasad Shukla | - | Member |
| 3. | Shri N. Mohan Karnat | - | Member |
| 4. | Dr. Jai Krishna Pandey | - | Member |
| 5. | Shri Gururaj P. Kundargi | - | Member |
| 6. | Shri Suramya Dolarray Vora | - | Member |
| 7. | Prof. S. K. Sinha | - | Member (Representative of ISM Dhanbad) |
| 8. | Dr. R. K. Giri | - | Member (Representative of IMD) |
| 9. | Dr. S. Kerketta | - | Member Secretary |

Dr. Sharachchandra Lele, Dr. Manjari Srivastava, Shri N. S. Mondal (Representative of CEA) and Dr. S. K. Paliwal (Representative of CPCB) could not be present.

Item No.13.0: CONFIRMATION OF THE MINUTES OF THE 11th and 12th EAC MEETING.

The Minutes of the 11th EAC (Thermal Power) Meeting held on 26.10.2017 were confirmed in presence of the Members. Minutes of 12th (Special) EAC meeting on 10.11.2017 have been circulated to all members which is under finalisation.

Item No. 13: CONSIDERATION OF PROJECTS

13.1 2400 MW (Phase-I & Phase-II) Gas Based Combined Cycle Power Plant at Industrial Development Area (IDA), Peddapuram, in Samalkot Mandal, in East Godavari Distt., Andhra Pradesh by M/s Samalkot Power Ltd.-reg. Extension of validity of Environment Clearance.

File No: J-13012/134/2010-IA.II(T)& Online No: IA/AP/THE/63198/2010.

(13.1.1) PP earlier submitted online application on 14.3.2017 for extension of validity of Environment Clearance. Essential Details were sought for obtaining certified compliance report by RO, Chennai. PP submitted the certified compliance report on the point-wise EC conditions on 13.11.2017. PP made the presentation *inter-alia*, submitted the following information:

- i. Environmental Clearances for 1200 MW (Phase-I) power plant has been issued vide Ministry's letter dated 28.5.2010. Further, Environmental Clearance for 1200 MW (Phase-II) power plant has been issued vide Ministry's letter dated 26.4.2011. Then the name of the PP granted this EC has been changed from M/s Reliance Infrastructure Ltd to M/s Samalkot Power Ltd. vide Ministry's letter dated 29.6.2011. Further, amendment in EC (Phase-II) has been issued on 29.6.2011. Ministry's vide

letter dated 21.9.2011 issued amendment for change in configuration of the project from 6x400 MW to 3x800 MW units and from 6 units of 2GTG+ 2 HRSG+ 1STG to 3 units of 2GTG+ 2 HRSG+ 1STG without changing the total capacity. In addition, now 220 MW gas based power plant is under operation.

- ii. Fuel gas requirement for 2400 MW power plant is approx. 12.04 Million Metric Standard Cubic Meter per Day (MMSCMD) with calorific value of 9,000-10,000 kcal/kg. Company had planned to build a dedicated gas transportation pipeline from the site at Gadimoga, the landfall point at RIL's D-6 gas field at East Coast of Andhra Pradesh which is at a distance of 45 km from the project site. There has been delay in allocation of gas to all the new power projects including Samalkot Project due to decline in availability of gas in India.
- iii. The equipment for the project have already been ordered and procured. All the offshore supplies have been received. All the material is lying at Kakinada port. 95% of onshore supplies have also been received at site. 4 Gas turbines and its associated equipment have been erected, commissioned and test has been synchronised. Consent to Operate from State Pollution Control Board has also been obtained for all four units.
- iv. The commissioned equipment is maintained and preserved in such a way so as to start the project at short notice. Out of total project investment of Rs.10,000 crores, approximately Rs.7,500 crores have been invested. Initially the fuel was to be supplied from KGD-6 and GSPC for which comfort letters have been secured. However, the fuel supply agreement is yet to be made. There are proposals to set up an LNG terminal at Kakinada.. The GSPC India Transco Limited is also building a gas transmission network in Andhra Pradesh and the project could potentially get connected to this network.
- v. As and when the confirmed fuel linkage is given, the balance activities will be completed in 12-35 months. It is requested to extend the validity of EC for three more years i.e. till 27.5.2010.

(13.1.2) Committee noted that the project has substantially progressed in terms of construction activities. However, PP has stopped the construction activities as there is no firm gas linkage available. The project expenditure of Rs.7,500 Crores has already been invested. RO certified compliance mentions few non-compliances specific to uploading of six monthly compliance reports along with monitoring data on company's website. RO mentioned that PP agreed to upload the same once the project is commissioned. Committee felt that PP shall upload the copy of EC, six monthly compliance report and monitoring data on company's website during construction phase also. Committee noted that EC for Phase-I (1200 MW) and Phase-II (1200 MW) has been issued on 28.5.2010 and 26.4.2011 which was valid for five years i.e. till 27.5.2015 and 25.4.2016, respectively. However, as per EIA amendment notifications vide S.O.1141(E) dated 29.4.2015 and S.O 2944(E) dated 14.9.2016 and Ministry's OM dated 12.4.2016, the validity of EC automatically get extended from five years to seven years, if the EC is valid on 29.4.2015. As both the ECs are valid on 29.4.2015, the validity of the said EC is now for seven years, i.e. till 27.5.2017 and 25.4.2018 for Phase-I and II, respectively.

(13.1.3) Committee after detailed deliberations, **recommended for extension of validity of EC for three years for Phase-I, i.e. till 27.5.2020 and two years for Phase-II, i.e. till 25.4.2020** subject to following additional conditions:

- i. Greenbelt development plan along with inventory of species, plant survival rate and details of indigenous plants shall be submitted along with six monthly compliance report.
- ii. Agriculture, organic farming, modern irrigation techniques, training youth and women, community biogas plants, tribal welfare activities shall be part of CSR activities.
- iii. Modern methods of agriculture organic forming, compost/vermiculture making and utilization, drip/direct to root irrigation) to be promoted in and around the Project area.
- iv. Computer facilities may be provided in the school along with a trained computer teacher to inculcate computer skill among the youths.
- v. Water supply provisions shall be made for all the bio-toilets under Swachh Bharat Abhiyan.
- vi. Preventive health programme may be preferred than the curative health programme such as nutrition development of small children in and around the project.
- vii. Sports activities shall be introduced among the local youths.

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(13.2, 13.3 & 13.4) 6x600 MW Coal based Thermal Power Plant at village Nariyara, in Janjgir-Champa, in Chhattisgarh by M/s KSK Mahanadi Power Company Ltd - compliance to NGT directions, amendment in EC and validity extension of EC.

File No: J-13012/44/2008-IA.II(T) & Online Nos.: IA/CG/THE/59395/2009 dated 2.10.2016, IA/CG/THE/19767/2009 dated 5.8.2017 & IA/CG/THE/19767/2009 dated 9.10.2017.

PP submitted three online applications on 02.10.2016, 5.8.2017 and 9.10.2017 for amendment and Extension of validity of Environment Clearance.

(13.2.1) Online No: IA/CG/THE/59395/2009 dated 2.10.2016: PP submitted following information during the presentation:

- i. As per the Hon'ble NGT Bhopal Order dated 19.8.2016 in the OA No.308/2014 in the matter of Amarnath Agarwal Vs. Union of India & Ors, Hon'ble NGT directed to approach Ministry for identification of various CSR activities in the 6 villages whose lands were acquired for the purposes of laying of the railway track and for determination of the amount in accordance with CSR Policy and guidelines.
- ii. The proposal was appraised in the 2nd Re-constituted EAC meeting held on 20.1.2017. EAC recommended to submit the completion certificate from the District Collector and Gram Panchayats of the concerned 6 villages whose land was acquired for the railway track for undertaking various CSR activities/works till date.
- iii. Subsequently, Ministry vide letter dated 6.3.2017 sought from the PP for the completion certificate from the District Collector and Gram Panchayats of the

concerned 6 villages whose land was acquired for the railway track for undertaking various CSR activities/works till date.

- iv. In response to MoEF&CC letter dated 6.3.2017, PP on 18.9.2017 uploaded the reply vide letter dated 27.1.2017 online. An amount of Rs.4.4 crores have already been spent in the 6 villages i.e. Akaltara, Latiya, Pakaria, Murlidih, Amora and Rogda. PP has also earmarked an amount of Rs.11.53 crore for undertaking CSR activities in these six villages. PP submitted several certificates from the individual Gram Panchayats in completion against a specific activity.
- v. PP mentioned that the thrust areas of CSR activities are on Education and Capacity Building, Health & Family Welfare, Sustainable Development, Infrastructure Development and Cultural & Community Support.
- vi. A certificate from District Collector could not be found from the documents. However, M/s Anant Rao & Mallik (FRN: 006266S, and Membership No. 23350), Chartered Accounts, have verified the Books of Accounts, Records and other relevant documents of the PP and certified that an amount of Rs. 48.46 crores have been incurred till 31.08.2016 towards all the CSR activities carried till date.
- vii. The PP mentioned that CSR activities have been extended not only to the villages whose land has been acquired both for plant site and railway line, but also to the surrounding and other villages. Vide Ministry's letter dated 6.3.2017 regarding submission of completion certificate from Gram Panchayats, PP has also submitted the completion certificate from the Gram Panchayats of Banahill, Nariyara, Rogda, Dongakarod, Latiya, Murlidih, Pakariya, Taroud, Amora, etc. for implementation of various CSR activities.
- viii. A certificate of Joint Inspection by Deputy Collector, Incharge of Tehsildar Akaltara, Jangir Champa and Manager, District Trade and Industry Center, Janjgir Champa mentioning that **a joint inspection has been carried out on 05.12.2016 and implementation of detailed works in the project affected villages by PP has been found to be physically in order.**
- ix. NGT's order dated 19.8.2016 specifically mentions the implementation of CSR activities to those 6 villages in accordance with the procedure laid down for CSR activities and a separate amount should be earmarked and needs to be set apart after identifying such activities. NGT has also directed PP to approach both the MoEF&CC and the Collector for identifying such CSR activities and also for determination of the amount in accordance with the scale and the formula applicable in this behalf. The objective of the NGT order is to ensure the benefits of CSR activities and shall be extended to affected people due to land acquisition for railway line.

(13.2.2) Committee after deliberations, found that CSR activities have been carried out in all the affected villages and have already spent Rs. 48.46 crores, of which a total of Rs.4.40 crores has been spent in the 6 villages whose land has been acquired for laying of railway line. **The Committee opined that as the PP submitted the Completion Certificates from the Gram Panchayats including a certificate of Joint Inspection of the District Administration, the matter need not be placed again before the EAC.** However, the balance of CSR activities, to be taken up on the remaining funds, shall be intimated to the Ministry on six monthly basis.

(13.3.2) PP submitted another application requesting for change in coal source and transportation of coal by road. PP made presentation and submitted following information.

- i. PP mentioned that Hon'ble Supreme Court and Ministry of Coal have cancelled the tapering coal linkages granted to PP and directed CIL (SECL) to continue coal supplies to PP under MoU mechanism till 31.3.2016 and till formulation of new policy by government, whichever is earlier. Govt. of India stopped supplying coal from SECL as per MoU. Now Coal is being procured under special forward E-auction carried out by CIL.
- ii. The proposed coal quantity and transportation is as follows:

Type of coal		Transportation
Domestic	11.56 MTPA	50% rail and 50% road
Imported	2.58 MTPA	100% Rail mode

- iii. Coal will be transported by road through 28 T capacity trolley trucks. PP submitted impact assessment study due to coal transportation. A total of 11.56 MTPA domestic coal would be procured and shall be transported 50% each by both rail and road modes. Dipka, Gevra, Manikpur and Kusumunda opencast mines are major sources of coal in Korba region have been tentatively considered as coal sources.
- iv. Ministry vide amendment letter dated 26.5.2016 permitted for transportation of imported coal by rail. The relevant conditions stipulated in the said letter are mentioned here below:
 - a. Necessary action shall be taken for compliance of the operating & proposed units to the standards for TPPs notified on 7.12.2015.
 - b. The matter regarding rail transportation of coal shall be taken up with the railways and all other concerned authorities immediately so that the EC condition regarding 100% rail transportation from the 4th year or before can be duly complied.

- v. The mine details along with distance are presented below:

Sr.No.	Coal Mines/washery	Distance in km	Width of road from median (m)
1.	Garota Siding and Hind washery	31.6	3.7 to 4.0
2.	KJSL washery, Dhatura	41.0	3.7 to 4.0
3.	Gevera mines	52.1	3.7 to 4.0
4.	Dipak mines	52.3	3.7 to 4.0
5.	Kusmunda mines	57.9	3.7 to 4.0
6.	Manikpur mines	69.3	3.7 to 10.0
7.	Chhal mines	108.0	3.7 to 10.0

- vi. Air quality monitoring has been carried out during 4.4.2017-18.4.2017 at 17 locations along the proposed routes. The baseline values for PM₁₀, PM_{2.5}, NO₂ and CO are in the range of 41.3-88.4 µg/m³, 25.2-52.6 µg/m³, 15.9-27.9 µg/m³

and 490-890 $\mu\text{g}/\text{m}^3$, respectively. All the values are found to be within NAAQS standards.

- vii. Air quality impacts/ maximum ground level concentrations have been predicted using AERMOD version 7.1.0 line source was used.
- viii. Predicted maximum incremental concentrations due to additional truck movement and likely to occur within 10 m from the centre of the road which are as below:

Sl. No.	Coal Mines/washery	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	CO ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
1.	Garota Siding & Hind Washery	48.0	7.2	3.6	05.6
2.	KJSL washery, Dhatura	11.1	1.7	1.3	01.3
3.	Gevera mines	34.2	5.1	2.6	04.0
4.	Dipak mines	34.3	5.1	2.6	04.0
5.	Kusmunda mines	15.9	2.4	1.2	01.9
6.	Manikpur mines	41.4	16.6	7.1	11.0
7.	Chhal mines	15.3	2.3	1.2	01.8

- ix. Prediction of 24 hourly maximum resultant concentration due to additional truck movement in the nearby habitations at 18 locations reveals that PM₁₀, PM_{2.5}, NO_x and CO are in the range of 48.4-98.3 $\mu\text{g}/\text{m}^3$, 28.5-55.25 $\mu\text{g}/\text{m}^3$, 16.9-28.1 $\mu\text{g}/\text{m}^3$ and 582.4-889.4 $\mu\text{g}/\text{m}^3$, respectively. All the values are found to be within NAAQS standards. However, incremental concentration of PM₁₀, PM_{2.5}, NO_x and CO are in the range of 1.0-20.4 $\mu\text{g}/\text{m}^3$, 0.2-9.5 $\mu\text{g}/\text{m}^3$, 0.2-4.3 $\mu\text{g}/\text{m}^3$ and 0.2-4.3 $\mu\text{g}/\text{m}^3$, respectively.
- x. Incremental PM₁₀ values are very high due to proposed traffic within 10 m from the centre of the road. However, concentration of PM₁₀ due to additional truck movement in the nearby habitations at 18 locations are in the range of 48.4-98.3 $\mu\text{g}/\text{m}^3$. But, the incremental concentration of PM₁₀ at these location vary in the range of 1.0-20.4 $\mu\text{g}/\text{m}^3$. Ghatmunda village located towards Gevra, Dipka, Kusmunda and Manikpur Mines is found to be relatively more stressed due to truck movement.
- xi. Noise levels have been monitored at four locations near habitations along side of the road. The day-time noise levels at all locations are observed to be in the range of 46.0-47.8 dBA and night-time noise levels are in the range of 42.8-44.8 dBA. Both noise levels are in accordance with the prescribed limit of residential areas (Day-time: 55dBA and Night-time: 45 dBA).
- xii. Traffic flow was monitored at Nariyara village which is connecting to NH-200, Tarod village, Akaltara and near Amartala village. Traffic contribution due to road network will be 748 vehicles per day (to and fro) which is equivalent to 2,244 PCU per day wherein maximum carrying capacity of 7 m wide road is of 15,000 PCU per day. For transporting the coal by road, existing roads are sufficient to bear the load.
- xiii. Forward E-auction mode procurement has been initiated by Ministry of Coal to over come coal shortages to various Thermal Power Plants in light of loss of Coal block/ Coal linkages. Considering similar constraint faced by the PP, their

suggestions for inclusion to forward E-auction as mode of procurement from similar sources may be considered in the amendment in EC after complying to all the clarification of the EAC members.

- xiv. In order to substantiate to augment coal supplies to Thermal Power Plants, Ministry of Coal has given impetus for enhancing road mode deliveries to various power stations nearer to Coal mines less than 60 km. This has been informed by Ministry of Coal by their Press release on 07.11.2017. The allocation of supplies mode for the year 2016-17 was 65% road mode and that was 35% by Rail mode. Inline with this policy initiative, the expected 2017-18 allocation of supplies mode is given as 81% by road mode and 19% by rail mode. Considering the change of procurement mode and offers made by Coal India by Rail and Road mode as above, PP has requested for considering 50% supplies by Road mode.

(13.3.3) Committee after detailed deliberation, **recommended for grant of coal transportation by road** with the following additional conditions:

- i. Estimated peak traffic in terms of PCU as compared with the stipulated standards by IRC for traffic capacity of the existing road network is adequate. Further, as forward E-auction mode procurement has been initiated by the Ministry of Coal to overcome coal shortages to various Thermal Power Plants in light of loss of Coal block/Coal linkages, participation in the forward E-auction as mode of procurement from coal linkage is allowed.
- ii. As forward e-auction is a participation and shall not guarantee the PP to confirm coal sourcing, therefore, on confirmation of sourcing of e-auction of coal blocks/basket of coal mines, the PP shall inform the details of coal procurement and shall limit the coal transportation by road not more than 50% of the total domestic coal procured.
- iii. As Ghatmunda village located towards Gevra, Dipka, Kusmunda and Manikpur Mines is found to be relatively more stressed due to truck movement, necessary control measures be taken at this location to reduce air pollution and noise levels.
- iv. Once the e-auction is firmed up, the road routes with distribution of total quantity of coal along with number of trucks to be plyed on various routes shall be provided.

(13.4.1) Online No.: IA/CG/THE/19767/2009 dated 9.10.2017

(13.4.2) PP submitted another application for extension of validity of EC from 31.12.2017 to **18.10.2019**. PP made the presentation and submitted the following information.

- i. The environmental clearance for the above mentioned project was accorded on 19.10.2009. EC validity has been extended till 31.12.2017 (two months above seven years) vide Ministry's letter dated 23.9.2015. As per the EIA amendment notification dated 14.9.2016, EC is valid for seven years and can be extendable for further period of three years.
- ii. PP mentions that out of 6x660 MW, only 2x660 MW have been commissioned. The progress of remaining four units are as follows:

Unit	% of completion	Target date for completion
Unit-III	90	30.11.2017
Unit-IV	80	31.07.2018
Unit-V	40	31.01.2019
Unit-VI	30	30.09.2019

(13.4.3) Committee noted that there has been substantial physical progress achieved by PP. Also, as per EIA Notification, validity for further period of three years can be extended beyond seven years. The present application has a window of approximately two years and ten months for extension under EIA Notification. Committee noted that PP may complete balance of activities and commence operations by the outer validity of 10 years. Committee after detailed deliberations, **recommended for extension of validity of EC up to 18.10.2019 to commence operations by all units.**

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(13.5) 2x600 MW and 3x800 MW Coal based TPP at Villages Kottai, Ariyagosthi, Villianallur & Silambimangalam, Taluk, Chidambaram, Distt. Cuddalore, Tamil Nadu by M/s IL&FS Tamil Nadu Power Company Ltd.- reg. Extension of validity of EC.
File No. J-13012/34/2008-IA.I(T) & Online No. IA/TN/THE/11883/2008.

(13.5.1) Project Proponent submitted online application for extension of validity of EC 30.05.2017.

Environmental Clearance for setting up of 2x600 MW and 3x660 MW has been issued vide Ministry's letters dated 31.5.2010 & 4.2.2014. The said EC is valid for seven years i.e. till 30.5.2017 as per the new EIA amendment notification dated 14.9.2016. **PP has commissioned 2x600 MW. However, remaining three units (3x660 MW) could not be established within 7 years of EC validity. The proposal has been considered by the EAC in its 7th meeting held on 28.6.2017 and suggested for site visit by sub-committee** to assess whether remaining three units can be established within 3 years as the outer limit for the validity of EC is for ten years (7+3) including the compliance to the EC conditions as applicable in its present form. Sub-committee visited the site on 11.8.2017 and submitted the report to EAC in its 9th meeting held on 30.8.2017. However, RO Chennai could not visit the site along with sub-committee. EAC in its meeting held on 30.8.2017 recommended for extension of validity of EC subject to **the submission of satisfactory EC compliance report from the MoEF&CC, Regional Office. Ministry vide letter dated 26.9.2017 requested to RO, Chennai to arrange for EC compliance report based on site visit. RO inspected the site during 3rd-4th October, 2017. The RO compliance report has been placed before EAC in this meeting.**

(13.5.2) PP attended the meeting and presented the compliance report of the Regional Office, Chennai, Ministry of Env., Forest & Climate Change.

(13.5.3) Committee noted the following non-compliances and suggested that an action plan from PP to be submitted to comply with all EC conditions:

Sr.No.	Condition	Remarks by EAC
1.	Since the dredged material is reported to be dumped 13 km away from the dredging site, the quality of sediments at the dumping site in sea should be monitored periodically and its impact on benthic fauna, if any, should be mitigated.	RO reported that PP agreed to comply. Sediment sampling shall be periodically collected and analysed to assess the impacts.
2.	A long term study on radio activity and heavy metals contents in coal to be used shall be carried out through reputed institute. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and flyash (including bottom ash) shall be put in place.	RO reported that PP agreed to comply. As PP started operations, this condition needs to be complied immediately.
3.	Harnessing solar power within the premises of the plant particularly available at rooftops shall be undertaken and the status of implementation shall be submitted periodically to the Regional Office.	RO reported that it was noted for compliance. PP has to calculate open space/rooftops available and install solar power.
4.	Hydrogeological study of the area shall be reviewed annually and a report submitted to the Ministry. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/ operations of the plant.	RO reported that PP agreed to comply. PP mentioned during the presentation that no groundwater is being used for plant operations. However, being the area is coastal land, saline water intrusion into the groundwater table shall be verified along with change in surface drainage pattern.

5.	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.	RO reported that PP agreed to comply. PP has to immediately lay an Environment Policy and designate specialists in environment for ensuring compliance, monitoring and adherence to environmental laws.
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Committee noted that there are certain non-compliances reported by RO, Chennai. During discussions, PP mentioned that the construction of captive port has not yet started. Location of desalination plant has been shifted from CRZ areas to the plant premises. Hence, these conditions will be complied during construction of port.

(13.5.4)Committee after detailed deliberations, recommended for extension of validity of EC subject to submission of action plan for non-compliances of EC conditions to the Ministry.

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(13.6, 13.7)Expansion by additional of 1x600 MW (Stage-IV) at Rayalseema Coal Based Thermal Power Plant near V.V. Reddy Nagar in Yerraguntla Mandal in Kadapa District in Andhra Pradesh by M/s Andhra Pradesh Power Generation Co. Ltd.-reg. amendment and extension of validity of EC.

File No: J-13012/87/2008-IA.II(T)pt. &Online No.: IA/AP/THE/10613/2008 dated 31.8.2017 & IA/AP/THE/10613/2008 dated 1.11.2017

(13.6.1)Project Proponent (PP) submitted online application on 31.8.2017 for granting EC for 600 MW. The EC dated 21.10.2010 was accorded only for 500 MW as coal linkage for remaining 100 MW was not available during grant of EC. The proposal has already been considered in the 10th EAC meeting held on 25.9.2017. Committee recommended for grant of EC for remaining 100 MW also. Subsequently, Ministry vide letter dated 10.10.2017 sought updated Form-1, copy of coal linkage and basic information to be filled in the pro-forma. PP vide online submission dated 8.11.2017 submitted the details. Standing Linkages Committee, Ministry of Coal vide letter dated 19.9.2017, granted coal linkage for additional 100MW from CIL.

(13.6.2) PP submitted another application for extension of validity of EC for one year, i.e. till 21.10.2018. PP attended the meeting and submitted the following information:

- i. Total expenditure of Rs. 3915.17 crores have been made till September, 2017.

- ii. Main Plant (BTG package): Purchase orders were placed to BHEL for execution of BTG package on 18.11.2010. M/s PFC sanctioned loan of Rs.3432.56 crores. Contract was entered with M/s Desein Pvt. Ltd., New Delhi on 13.4.2011 for providing Engineering Consultancy services for the project. PO placed to M/s Quest Pvt. Ltd., Bangalore for third party inspection of BHEL equipment at vendor places.
- iii. Balance of Plant (BOP Package): Purchase orders were placed on M/s Tecpro Systems for execution of Balance of Plant Package.
- iv. TG deck concreted completed on 18.7.2015. TG erection commenced on 04.03.2016. EOT crane erected and load test completed on 11.03.2016. Boiler light up was achieved on 29.12.2016. Unit was synchronised with grid on 02.07.2017. Tentative date of achieving COD was on 31.10.2017.

(13.6.3) Committee noted that PP has now submitted the coal linkage pertaining to grant of EC for remaining 100 MW. Further, PP sought extension for one year. PP has achieved substantial progress on construction activities. EC validity of seven years has been completed on 20.10.2017. This validity can be further extended maximum up to three years as per the latest provisions of the EIA notification. However, PP requested only for one year. Further, regarding progress of FGD and complying to the emission norms dated 07.12.2015, PP informed that tenders have been floated but no one has applied for the same. Subsequently, BHEL conducted technical study in this regard. PP mentioned that emissions regarding Particulate Matter will be met. However, installation of FGD will require 32-36 months.

(13.6.4) Committee after detailed deliberations, recommended for the following:

a. Grant of EC for remaining 100 MW

b. Grant of extension of validity of EC for one year, i.e. till 20.10.2018
subject to the following additional conditions:

- i. Revised emission standards as per the Ministry's notification dated 07.12.2015 and subsequent amendments notified from time to time shall be complied. In case, plant is ready for commissioning and not meeting revised emission norms, operations shall be stopped.

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(13.8) 5x270 MW Coal based TPP at Sinnar Industrial Area, Dist. Nasik, Maharashtra by M/s RattanIndia Nasik Power Ltd.- reg. amendment of EC for temporary permission for transportation of coal by road.
File No.:J-13012/11/2008-IA II (T) & Online no: IA/MH/THE/10301/2010.

(13.8.1) Project Proponent vide online application dated 03.11.2017 requested for amendment of EC for temporary permission for transportation of coal by road. PP made the presentation and inter-alia submitted the following information:

- i. The environment clearance for the 5x270 MW coal based TPP at Sinnar Industrial Area, District Nashik, Maharashtra was granted by MoEF&CC on 28.07.2010 which was valid up to July 2015.
- ii. The project was granted permission for change in mode of transport of coal by road up to 24.08.2015 vide Ministry's letter dated 25.8.2014.

- iii. The project was commissioned on 30.05.2017.
 - iv. The project was granted extension of validity of EC up to 27.07.2017 and the permission for transportation of coal by road was further extended to another two years, i.e. till 24.8.2017 vide Ministry's letter dated 10.2.2016.
 - v. Since the construction of railway siding has been delayed due to hurdles of land acquisition during the initial stage, the Proponent now seeks permission for transportation of coal by road for further period of two years, i.e. till 31.08.2019.
 - vi. Traffic Impact Assessment study has been conducted for proposed routes.
- (13.8.2) Committee noted that PP has submitted only traffic volumes in the proposed routes. Accordingly, **the proposal of road transportation by road has been deferred** for want of the following information:

- i. Baseline monitoring for air quality and noise levels along the proposed routes to be carried along with incremental pollution load. Air quality and noise modelling shall be carried out to assess the incremental impacts due to increase of traffic in the proposed road for transportation coal.
- ii. Dust fall measurement to be carried out at habitated areas.
- iii. To reduce traffic burden, there shall be least loading on the routes proposed along Shirdi and Mumbai-Nagpur road.
- iv. Details of forest area falling enroute to the proposed routes, if any.

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(13.9) 2x660 MW Super-critical Technology Coal Based Thermal Power Plant near, Kohadhar, Bhagdeva & Mai Kalam Villages, Meja Taluk, Allahabad Dist. in Uttar Pradesh by M/s Meja Urja Nigam private Ltd. - reg. extension of validity of EC.
File No: J-13012/03/2008-IA.II (T)& Online No.: IA/UP/THE/52631/2011.

(13.9.1) Project Proponent submitted online application on 13.11.2017 for extension of validity of Environment Clearance. PP submitted the following information during the meeting.

- i. EC for 2x660 MW power project has been issued vide Ministry's letter dated 10.01.2011 which was valid for five years, i.e. till 09.01.2016. As per EIA amendment notification, the validity of the EC has been made as seven years. Accordingly, the validity of the said EC is till 09.01.2018.
- ii. The EC was amended vide Ministry's letter dated 21.7.2017 for transportation of 2 Lakh MT of coal by road for temporary period of one year.
- iii. The project was scheduled to commission in August, 2016. However, the project could not be commissioned due to various reasons including that mainly related to acquisition of land and issues thereof etc.
- iv. The project is in advance stage of completion and commissioning and Unit-I is expected in the first quarter of year 2018 and that for Unit-II in December, 2018
- v. It has been stated that the land falling between the Power Plant and the Ganga river is being rejuvenated.
- vi. Validity of EC requested for further period of two years, i.e. till 09.01.2020.

(13.9.2) Committee noted that Unit-I was synchronized. Trial operations and Commissioning will be done in first quarter of 2018. Regarding compliance to

the revised emission norms dated 07.12.2015, PP informed that tenders for installation of FGD will be opened soon. Installation will take at least three years.

(13.9.3) Committee after deliberations, recommended for **grant of extension of validity of EC for one year, i.e. till 9.1.2019**. A Sub-committee comprising of following EAC Members shall make a site visit –

Sl. No.	Name	Responsibility
1.	Dr. Navin Chandra	Chairman
2.	Dr. J.K. Pandey	Member
3.	Prof. S.K. Sinha	Member
4.	Prof. Manjari Srivastava	Member
5.	Dr. S. Kerketta	Member Secretary

at the project site to assess the following:

- i. Implementation of R & R activities and plantation.
- ii. Rejuvenation of vacant land falling between the River Ganga and the Power plant.
- iii. Any other matter in the interest of the Environment, if any.

Once the units will achieve COD, the revised emission standards as per the Ministry's Notification dated 7.12.2015 and subsequent amendments notified from time to time shall be complied. In case, plant is ready for commissioning and not meeting revised emission norms, operations shall be stopped.

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(13.10) 3x800 MW NLC Talabira Thermal Power Project at Village Khumberi, Taraikela and Thelkolai, Tehsil and District Jharsuguda, Odisha by M/s NLC India Ltd. – reg. discussion on site visit report submitted by Sub-Committee for ToR.

File No.: J-13012/14/2017-IA.I(T)& Online No.: IA/OR/THE/67938/2017.

(13.10.1) Project Proponent submitted online application on 05.09.2017 for consideration of ToR. The proposal has been considered in the 10th EAC meeting held on 25.09.2017 and EAC recommended for a site visit by Sub-committee considering the environmental sensitivity and location of the project. Sub-committee visited the site on 04.11.2017 and submitted the report to EAC in the present meeting. Report of site visit by sub-committee is annexed as **Annexure-A3**.

(13.10.2) Committee deliberated on the facts as presented by the PP during the meeting including representation received from the Civil Society and also report of the site visit of the Sub-committee. Committee after detailed deliberations, **recommended for grant of ToR subject to submission of revised layout** along with the following additional conditions:

- i. All the recommendations made in the site visit of the Sub-committee shall be followed.

- ii. The proposed power plant area shall be reduced and the Raw Water Reservoir area be shifted near to the existing water bodies. Re-alignment of proposed power plant is to be done and the revised layout map is to be submitted.
- iii. Ficus species to be raised in and around the temples.

(13.11) ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR.

(13.11.1) NIL.

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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-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 to three years shall be conducted with an excellent follow up plan of action wherever required.
- xxxviii) One complete season site specific meteorological and AAQ data (except monsoon season) as per latest MoEF Notification shall be collected and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM₁₀, PM_{2.5}, SO₂, NO_x, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration 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.
- xlii) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
- xliii) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
- xliv) Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted

- xlvi) Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.
- xlvi) For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.
- xlvi) Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.
- xlvi) EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
- xlvi) A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be carried out. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Mock drills shall be suitably carried out from time to time to check the efficiency of the plans drawn.
- l) The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.
- li) Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary with tree density of 2000 to 2500 trees per ha with a good survival rate of around 80% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO₂ and other gaseous pollutants and hence a stratified green belt should be developed.
- lii) Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months.

lii) 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.

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/Nm³ 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.

Site visit report of the Sub-committee of the proposed 3x800 MW NLC Talabira Thermal Power Plant at Village Khumberi, Taraikela and Thelkolai, Tehsil and District Jharsuguda, Odisha by M/s NLC India Ltd.

During 10th Meeting of the EAC for Thermal Power Projects held on 25.09.2017 at Ministry of Environment, Forest and Climate Change, New Delhi, it was decided by the EAC that a Sub-committee consisting of 4 member committee could be constituted, which shall visit the project site of the proposed 3x800 MW NLC Talabira Thermal Power Plant at Village Khumberi, Taraikela and Thelkolai, Tehsil and District Jharsuguda, Odisha by M/s NLC India Ltd. Based on the site visit, the Sub-committee shall submit a report on the verification of the environmental sensitivity and location of the project and based on the report, the project shall be reconsidered again in the EAC for grant of ToR to the proposed project for preparation of EIA/EMP report. The Sub-committee consists of the following members:

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|----|--------------------|------------------|
| 1. | Dr. N.P. Shukla | Chairman |
| 2. | Shri N.S. Mondal | Member |
| 3. | Dr. S. Kerketta | Member Secretary |
| 4. | <i>Dr. S. Lele</i> | <i>Member</i> |

The Sub-committee was duly approved by the Competent Authority vide Ministry's letter No. J-13012/14/2017-IA.I (T) dated 11.11.2017. The Sub-committee visited the project site on 04.11.2017 and also held discussion with the Project Officials. Dr. Sharachchandra Lele, Member of the Sub-committee could not be present due to pre-occupation. The following officials and other senior officers were present from the project site:

A. M/s NLC India Ltd., Neyveli

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| 1. | Shri V. Thanga Padian | Director (Power) |
| 2. | Dr. M. Velan | Dy. GM (Env.) |
| 3. | Shri D. Vijay Kumar | Chief Manager |

B. Project Site, M/s NLC India Ltd., Talabira

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|----|--------------------------|----------------------|
| 4. | Shri A. Rajasekhar Reddy | General Manager |
| 5. | Shri Sathia Moorthy | General Manager (HR) |
| 6. | Shri Rohit Kumar Pandey | Chief Manager |
| 7. | Shri Ramprit Ram | Asst. Ex. Engineer |

C. M/s NLC India Ltd., New Delhi

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| 8. | Shri Dileep Mathur | Adviser |
| 9. | Shri G. Venkateswara Rao | DGM (PSE) |
| 10. | Shri V. Balasubramanian | Addl. DGM (PSE) |

D. M/s ABC Techno Labs, Consultant

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| 11. | Shri P. Hari Prasad | Manager |
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The PP gave a power point presentation and *inter-alia*, informed the Sub-committee the following:

M/s Neyveli Lignite Corporation Ltd. have proposal to set up of Talabira Thermal Power Plant in 2 Stages i.e. Stage-I: 3x800 MW and Stage-II: 1x800 MW. The present proposal is for setting up of 3x800 MW Talabira Thermal Power Plant Stage-I. The total land identified for the project is 1,511 acres. The project has been planned in the identified 1,511 acres of land comprising of **Plant area - 661 acres**, Green Belt - 250 acres, **Ash Disposal Area - 400 acres**, Common Township - 100 acres and Corridors - 100 acres. Proposal has already been submitted for acquisition of land to IPICOL. The project site is approachable from Sambalpur-Jharsuguda State Highway after crossing Bheden River Bridge *via* state PWD road. The plant and Township of the project are located near Kumbhari and Taraikela villages, on south-west of Brajarajnagar town, on Sambalpur-Rourkela highway in Jharsuguda district and ash disposal area is located near Thelkolai village in Sambalpur district.

It has also further been informed that Ministry of Coal, Govt. of India vide their Order No. 103/I/ 2016-NA dated 02.05.2016 have allotted Talabira-II and III captive coal mining blocks in Odisha to M/s NLC. The capacity of Talabira-II and III mines is 20 MTPA. For the present proposal, coal requirement would be ~11 MTPA having GCV of 3,700 Kcal/kg, Station Heat Rate of 2,163 kcal/kwh and PLF of 85%. Coal would be transported to the plant site through Pipe/belt Conveyor Belt which is located across Bedhen river and a separate chute shall be provided in the fast loading silo for meeting the requirement of the power plant.

Consumptive water requirement for present stage of 2,400 MW is 60 Cusec (80 cusecs for ultimate capacity). The water is to be drawn from Hirakud reservoir at a distance of about 20 km. In-principle approval of State Govt. has been obtained. Additional water requirement for FGD plant would be 2 cusec per unit i.e. 6 cusec for all the three units. Thus, the total consumptive water requirement shall be 66 cusecs (88 cusecs for all 4 units). An additional land of ~60 acres shall also be acquired for laying of pipelines. Total project cost is Rs. 16,073.86 crores.

During the visit of the proposed power plant, the Sub-committee visited the location of the HFL point, proposed plant site, along the river Bheden till a Tower point, existing water tanks, etc. The point-wise present status of the project location and environmental sensitivity is as follows:

- i) The project is located on the right bank of river Bhedan in area of 751 acres and raw water reservoir area is also proposed in an area 160 acres. The HFL of the river at gauge point (21°46'49.16" N and 84°00'07.46" E) is 200.9 m AMSL near the existing bridge. The HFL location was visited and then the Sub-committee went along the right bank of the river Bheden up to a Tower point of 132 kV TL (21°46'49.16" N and 84°00'07.46" E) having elevation of 200.00 m AMSL. There is a depression with elevation 197.046 m AMSL to



200.00 m AMSL i.e. up to the Tower point. Similarly, near to the gauge point, there is another depression with elevation 200.291 m AMSL to 200.388 m AMSL. The project informed that since, these are the two lowest depressions from the gauge point, flooded water might have entered from the river and inundated the area till HFL. The Sub-committee has also observed that from river bank i.e. starting from the over bridge near gauge point to the Tower Point of the Transmission Line (two 132 kV TL and one 220 kV TL), the land is at higher elevation (>200.9 m AMSL) and its elevation varies from 200.9 m AMSL to 202.434 m AMSL.

- ii) There are two over bridges have been proposed (one for transportation of coal and one for transportation of fly ash through HCSD pipeline) on river Bheden.
- iii) 5 Transmission Lines are present both in the proposed Power Plant and proposed Ash Pond area.
- iv) The proposed ash pond located on the left bank of river Bhedan and its part of area is falling in a village on North-Eastern direction and also few water bodies including one Nala, joining Bhedan river.
- v) Tree species like Mango, Bamboo, Ficus species, economic trees, etc. are present in the proposed project site. Young trees may be transplanted as a part of green belt development plan.

Observation of the Sub-committee:

- i) In the vicinity of the proposed Power Plant, cluster of Power Plants, Integrated Steel Plants, Alumina plants, Open Cast Coal Mines, etc. are existing, cumulative pollution level to be assessed by considering all the point sources including the proposed TPS.
- ii) Along the riverbanks, the PP should construct a bund of minimum width of 20 m having elevation of at least 202 m AMSL. The PP may construct the bund in consultation with Irrigation Department of Water Resource Department and State Forest Department for their guidance and necessary permission.
- iii) Due to construction of boundary wall after leaving 500 m width from the HFL, the villagers shall not have direct access to their agricultural land. Therefore, an approach road all along the boundary wall of the power plant should be constructed so that villages can have easy access to their agricultural fields.
- iv) As per the order of Hon'ble Supreme Court, no construction within 500 m distance from the HFL shall be proposed. The area requiring for construction of over bridges should be included in the proposed project and accordingly necessary permission be taken from the Competent Authorities.
- v) Due to paucity of the land and keeping agricultural land unaffected, construction of the Raw Water Reservoir may be shifted towards the existing water pond and re-aligned accordingly. Space provision for construction of



- 4th unit of 800 MW may not be kept at the existing proposal as lot of agricultural land is getting affected.
- vi) Before any construction is taken up in either of the areas, the transmissions lines are to be shifted.
 - vi) The course of the Nala exists in the proposed Ash Pond Areas should not be diverted and necessary protection measures such as proper lining at both banks, etc. be provided. Ash pond area requires to be re-aligned so that the village shall remain out side the boundary of the proposed ash pond area and a fresh lay out map, in this regards, be submitted.
 - vii) Green belt between the village and the proposed ash pond be developed. Fresh water available in the existing water bodies in the proposed project should be reused for construction work to minimize requirement of fresh water. No groundwater shall be drawn for construction work.
 - viii) Wind barrier shall be erected to arrest fugitive dust in Coal Handling Plant area.
 - ix) Few photographs of the site visit of the Sub-Committee are annexed as **Annexure.**


(DR S. KERKETTA)

(N.S. MONDAL)


(DR N. P. SHUKLA)



1- Sub-committee is discussing on the HFL with PP



2-Sub-committee at the lowest depression near Tower point



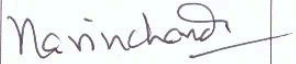
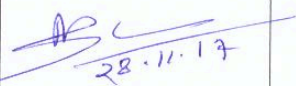

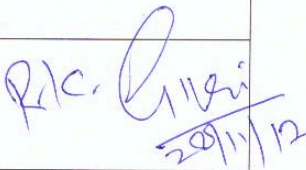
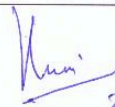
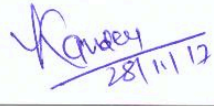
3- A view of land within 500 m from HFL

LIST OF MEMBERS (Attendance Sheet)

13th EXPERT APPRAISAL COMMITTEE MEETING (Thermal & Coal Mining Sector)

DATE & TIME : 28th November , 2017

VENUE : NARMADA HALL, JAL WING,
INDIRA PARYAVARAN BHAWAN.

Sr.No.	Name of Member	Signature
1.	Dr. Navin Chandra Chairman	
2.	Dr. Narmada Prasad Shukla Member	 28.11.17
3.	Sh. N. Mohan Karnat, IFS Member	 28/11/2017
4.	Dr. Sharachchandra Lele Member	Absent
5.	Sh. P.D. Siwal/ Sh. N.S. Mondal, Member	Absent
6.	Dr. R.K. Giri, Member	 28/11/17
7.	Dr. S.K. Paliwal, Member	Absent
8.	Prof. D.C. Panigrahi/ Prof. S.K. Sinha/ Prof. Om Prakash Member	 28.11.17
9.	Dr. Jai Krishna Pandey, Member	 28/11/17
10.	Dr. Manjari Srivastava, Member	Absent

11.	Dr. Gururaj P Kundargi, Member	<i>Gururaj</i> 28/11/17
12.	Shri Suramya Dolarray Vora, IFS (Retd.) Member	<i>SDV/e</i>
13.	Dr. S. Kerketta Member Secretary MoEFCC	<i>S. Kerketta</i>

14. N. Subrahmanyam
Scientist 'C', MoEFCC

N. Subrahmanyam
28/11/17

12/8/2017

https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607

Subject: Fw: Re: Draft Minutes of 13th EAc meeting for Thermal Sector - reg

Date: 12/08/17 12:27 PM

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>

From: navin chandra <navinchandrarrl@yahoo.com>

Final 13th EAC MoM 28.11.2017.docx (105kB)

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

From: navin chandra <navinchandrarrl@yahoo.com>

To: Dr S Kerketta <s.kerketta66@gov.in>

Sent: Friday, December 8, 2017, 12:26:20 PM GMT+5:30

Subject: Re: Draft Minutes of 13th EAc meeting for Thermal Sector - reg

08/12/2017

Dear Dr. Kerketta Ji,

Attached please find the Finalized Minutes of the meeting of Thermal Sector held on 28th Nov. 2017. The minutes may be uploaded to the Ministry's web site now.

Warm 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

On Thursday, December 7, 2017, 6:14:49 PM GMT+5:30, Dr S Kerketta <s.kerketta66@gov.in> wrote:

Sir,

Yesterday i.e. on 06.12.2017, the draft minutes were circulated to all the Members (only those were present in the meeting) with a request to send their comments/suggestion, if any.

Please find the draft minutes of the above cited subject with a request to kindly approve the same for uploading in the website of the Ministry.

—
regards,

Dr. S. Kerketta
Director- IA (Thermal, River Valley & HEP)
MoEF&CC, New Delhi
Phone: 011-24695314 (O), 26113096 (R)

https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607

1/1

**AGENDA OF 13th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE
ON THERMAL POWER PROJECTS**

DATE : 28th November, 2017

TIME : 10.30 A.M. ONWARDS

VENUE : NARMADA MEETING HALL, JAL WING, GROUND FLOOR, INDIRA PARYAVARAN BHAWAN, JORBAGH ROAD, NEW DELHI-110003.

ITEM	
Item No. 13.0	CONFIRMATION OF MINUTES OF 12th EAC (Thermal) MEETING
Item No.	CONSIDERATION OF PROJECTS
13.1	2400 MW (Phase-I & Phase-II) Gas Based Combined Cycle Power Plant at Industrial Development Area (IDA), Peddapuram, in Samalkot Mandal, in East Godavari Distt., in Andhra Pradesh by M/s Reliance Infrastructure Ltd.-reg. Extension of validity of Environment Clearance. File No: J-13012/134/2010-IA.II(T)& Online no: IA/AP/THE/63198/2010
13.2, 13.3 & 13.4	6x600 MW Coal based Thermal Power Plant at village Nariyara, in Janjgir-Champa, in Chhattisgarh by M/s KSK Mahanadi Power Company Ltd – compliance to NGT directions, amendment in EC and validity extension of EC. File No: J-13012/44/2008-IA.II(T) & Online no: IA/CG/THE/59395/2009 dated 2.10.20156, IA/CG/THE/19767/2009 dated 5.8.2017 & IA/CG/THE/19767/2009 dated 9.10.2017.
13.5	2x600 MW and 3x800 MW Coal based TPP at Villages Kottai, Ariyagosthi, Villianallur & Silambimangalam, Taluk, Chidambaram, Distt. Cuddalore, Tamil Nadu by M/s IL&FS Tamil Nadu Power Company Ltd.- reg. Extension of validity of EC. File No. J-13012/34/2008-IA.I(T) & Online No. IA/TN/THE/11883/2008
13.6 & 13.7	Expansion by additional of 1x600 MW (Stage-IV) at Rayalseema Coal Based Thermal Power Plant near V.V. Reddy Nagar in Yerraguntla Mandal in Kadapa District in Andhra Pradesh by M/s Andhra Pradesh Power Generation Corporation Ltd.-reg. amendment and extension of validity of EC. File No: J-13012/87/2008-IA.II(T)pt. & Online no: IA/AP/THE/10613/2008 dated 31.8.2017 & IA/AP/THE/10613/2008 dated 1.11.2017
13.8	3x800 MW NLC Talabira Thermal Power Project at Village Khumberi, Taraikela and Thelkolai, Tehsil and District Jharsuguda, Odisha by M/s NLC India Ltd. – reg. reconsideration for ToR. File No: J-13012/14/2017-IA.I(T)& Online no: IA/OR/THE/67938/2017
13.9	5x270 MW Coal based TPP at Sinnar Industrial Area, Dist. Nasik, Maharashtra by M/s RattanIndia Nasik Power Ltd.- reg. amendment of EC for temporary permission for transportation of coal by road. File no: J-13012/11/2008-IA II (T) & Online no: IA/MH/THE/10301/2010

13.10	2x660 MW Super-critical Technology Coal Based Thermal Power Plant near, Kohadar, Bhagdeva & Mai Kalam Villages, Meja Taluk, Allahabad Dist. in Uttar Pradesh by M/S MEJA URJA NIGAM PRIVATE LTD. - reg. amendment in EC File No: J-13012/03/2008-IA.II (T)& Online no: IA/UP/THE/52631/2011.
13.11	ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR.

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 are required to bring hard copy (A0/A1 size) and soft copy (pdf) of a map showing project facilities superimposed on Survey of India Toposheet Proponents shall submit the attendance form duly filled to the Member Secretary before starting the presentation.