

MINUTES OF THE 13th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS HELD ON 13th JULY, 2021

The 13th Meeting of the re-constituted EAC (Thermal Power) organized by the Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi was held on 13th July, 2021 through video conference under the Chairmanship of Shri Gururaj P. Kundargi. The list of Members participated in the meeting is at **Annexure**.

Agenda Item No.13.1: Confirmation of the Minutes of the 12th EAC meeting

The Minutes of the 12th EAC (Thermal Power) meeting held on 14th June, 2021 were confirmed in the meeting.

Agenda No. 13.2

Regularisation of 3x21 MW Gas based Thermal Power Station in an area of 55.89 ha at Rokhia in Village Manikyanagar, Boxanagar PS, Sipahijala District, Tripura by M/s Tripura State Electricity Corporation Ltd. - Reconsideration of Terms of Reference - reg.

[Proposal No. IA/TR/THE/125111/2019; F. No. J-13012/13/2019-IA. I (T)]

13.2.1 The proposal is for Terms of Reference to Regularisation of 3x21 MW Gas based Thermal Power Station in an area of 55.89 ha at Rokhia in Village Manikyanagar, Boxanagar PS, Sipahijala District, Tripura by M/s Tripura State Electricity Corporation Ltd.

13.2.2 The proposal was earlier considered by reconstituted EAC in its 36th EAC meeting held on 4th December 2019 and 40th EAC meeting on 14th May 2020 and the project proposal was deferred as SPCB did not initiate action as directed by Ministry and proponent was yet to stop the operation of 2x21 MW.

The details of the project submitted by project proponent and ascertained from the document submitted are mentioned below:

- (i) The project is located at Plot No. 3316, 3317, 3318, 319, 3320, 3387, 3385, 3322, 3323, 3334, 900, 906, 706, village – Manikyanagar, Dist. Sepahijala, Tripura.
- (ii) Total land area is 55.89 acres of which 39.63 acres is a forest land. Total project cost is 251.11 crores (phase I-85.17cr phase II-80.94cr phase III-85 cr).
- (iii) The chronology of the establishments and decommissioning of the of the units are presented below –

Phase	Unit	Configuration (In Mw)	Status of EC	Date of	
				Commissioning	Decommissioning
I	1	8		07/03/1990	22/01/2006

	2	8	EC for 75 MW vide letter no. 1-3011/21/87-IA dated 08/02/1988	20/12/1990	14/02/2002
II	3	8	EC for 32 MW vide letter no. 1-13011/21/87-IA-IIIt) dated 20.09.1991	04/06/1995	Not Operational & Decommissioning in process
	4	8		15/12/1995	
III	5	8		02/03/1997	
	6	8		05/08/1997	
IV	7	21	No EC Granted	02/08/2002	Currently Operational
V	8	21		31/03/2006	
VI	9	21		31/08/2013	

Chronology till Date

- (iv) Application for Regularisation of EC for 3 x 21 MW Gas Based Thermal Power Station at Rokhia in Village Manikyanagar, Boxanagar PS, Sepahijala District, Tripura by M/s Tripura State Electricity Corporation Ltd. on 13/11/2019 through online PARIVESH portal of MoEF&CC.
- (v) The project was considered in 36th EAC (Thermal) Meeting held on 04/12/2019 organized by MoEF&CC. In view of the recommendation of the EAC, the Ministry directed TSECL to stop operation of the 3x21 MW Power plant at Rokhia vide F.NO. J-13012/13/2019-IA. I(T) dated 02/03/2020. In response to the above direction, TPGL (erstwhile TSECL) requested MoEF&CC to allow operation of the Power plant under extraordinary situation prevailing in the state vide letter No. F. 1(53)/TS/GTED/Rokhia/2020/47-57 dated 01/05/2020.
- (vi) The project was again considered in 40th EAC (Thermal) Meeting held on 14/05/2020 through video conferencing where EAC noted that TSPCB is yet to initiate action as directed by Ministry and Project Proponent is yet to stop the operation of 2x21 MW plant. Accordingly, the proposal was deferred till the action is completed.
- (vii) The reply for the same has been given by TPGL vide Letter No. F. 1(53)/TS/GTED/Rokhia/2020/127-29 dated 22/05/2020. Accordingly, 'Stop Operations' direction was issued from TSPCB vide letter No. F.17(10)/TSPCB/Sp/Power plant (L-Red)/5460/6050-55 dated 08/06/2020. Reply to the same has been given by TPGL vide letter No. F. 1(53)/ TS/ GTED/ Rokhia/ 2020/ 213-220 dated 10/06/2020.
- (viii) In pursuance to order No. F. J-13012/13/2019. IA. I (T) dated 02/03/2020 of MoEF&CC and No.F.17(10)/TSPCB/Sp precautions and prevailing pandemic Covid-19 in the State w.e.f. 10/06/2020. MOEF&C/Power Plant-(L-red)/5460/6050-55 Dated 8th June 2020, operational capacity has been reduced to 42 MW to maintain below 50 MW capacity by stopping operation of one 21 MW GT unit considering technical C requested Central Electricity Authority (CEA) to clarify about load constraint

(power transmission & distribution) of 132 KV network of Tripura vide No. F. J-13012/01/2020. IA. I (T) dated 13/07/2020.

- (ix) CEA referred the query to NERPC and subsequently NERPC forwarded to TPGL for detail clarification. In reply, TPGL clarified the same technical fact as mentioned in earlier letter No.F.TPGL/TECH/27/2020-21/463-66 dated 4th August 2020. In line of this letter, NERPC confirmed about load restriction of 132 KV network to CEA vide letter No.NERPC/SE/CEA/2020 Dated: August 14, 2020. Accordingly, CEA communicated the same fact to MOEF&CC based on report of NERPC vide letter No.8/X/GEN/GM/2020/407 dated 24/12/2020.
- (x) **Project Highlights:** The principal features or highlights of the plant of are as follows:

Sr. No.	Particulars	Details	
1.	Capacity of the plant	3 x 21 = 63 MW	
2.	Fuel - Gas	Requirement	0.57 MMSCMD
		Source	ONGC & GAIL
3.	Gas Turbine	Single shaft axial flow compressor turbine is being used	
4.	Compressor, Combustion and Fuel System	Suitable multistage (17 stage) axial flow compressor with two – piston inlet guide van is being used.	
5.	Starting Device	125 volt DC starter Motor	
6.	Lube Oil Cooler and Reservoir	Lubricant oil reservoir consists of shaft mounted main pump, A.C. and D.C. pumps to cater running and emergency requirements. It's a close system. Capacity of Tank is 6000 lit Required during emergency for bearing, gear and coupling.	
7.	Fire Detection and Protection System	Halogen / CO ₂ automatic fire detection and protection system is installed.	

13.2.3 The EAC during deliberations noted the following:

- i. The proposal is for Terms of Reference to 3x21 MW Gas based Thermal Power Station in an area of 55.89 ha at Rokhia in Village Manikyanagar, Boxanagar PS, Sipahijala District, Tripura by M/s Tripura State Electricity Corporation Ltd. It is a case of violation for constructing and operating 3x21 mw Gas based TPP from 2002, 2006 and 2013 respectively under violation.
- ii. As per recommendation of the EAC during the 36th EAC (Thermal) Meeting held on 04/12/2019, the Ministry directed TSECL to stop operation of the 3x21 MW.
- iii. It has been decided by the Ministry that TPGL may be asked to comply with the direction of Ministry. Further, EAC may consider the project for ToR on merit.
- iv. It was also informed that Project Authorities vide letter MOEF&C/Power Plant-(L-red)/5460/6050-55 Dated 8th June 2020, operational capacity has been reduced to 42 MW to maintain below 50 MW capacity by stopping operation of one unit of 21 MW.

13.2.4 The EAC after deliberations **recommended** the proposal for grant of standard Terms of Reference issued by Ministry for 3x21 MW Gas based Thermal Power Station in an area of 55.89 ha at Rokhia in

Village Manikyanagar, Boxanagar PS, Sipahijala District, Tripura by M/s Tripura State Electricity Corporation Ltd. under the EIA Notification, 2006 and its amendment therein along with following Specific Terms of Reference for undertaking EIA and preparation of Environmental Management Plan (EMP):

- (i) The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no consent to operate to be issued till the project is granted EC.
- (ii) The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.
- (iii) Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.
- (iv) Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
- (v) The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.
- (vi) The PP is required to conduct public hearing as per EIA notification, 2006.
- (vii) One season fresh base line data to be generated for EIA/EMP preparation.
- (viii) Statement on the commitment (Activity-wise) made during public hearing to facilitate the discussion on the CER in compliance of the Ministry's OM F.No.22-65/2017-IA.III dated 30th September, 2020.

Agenda No. 13.3

Expansion of 155 MW Thermal Power Plant (TPP) to 411 MW by addition of 256 MW (175+3x27) Imported Coal based Thermal Power Plant at Meraniandali, Distt. Dhenkanal, in Orissa by M/s Tata Steel BSL Limited - Amendment in Environmental Clearance – reg.

[Proposal No. IA/OR/THE/213846/2021; F. No. J-13012/77/2011-IA.II (T)]

13.3.1 The proposal is for amendment in Environment Clearance Ministry vide letter dated 12th February 2015 to expansion of 155 MW Thermal Power Plant (TPP) to 411 MW by addition of 256 MW (175+3x27) Imported Coal based Thermal Power Plant at Meraniandali, Distt. Dhenkanal, in Orissa by M/s Tata Steel BSL Limited

13.3.2 The details of the project submitted by project proponent and ascertained from the document submitted are mentioned below:

- (i) Environmental Clearance was accorded by Ministry of Environment, Forest and Climate Change vide its letter no. J-13012/77/2011-IA. II (T), dated. 12th February, 2015 to expansion of 155 MW Thermal Power Plant (TPP) to 411 MW by addition of 256 MW (175+3x27) Imported Coal based Thermal Power Plant at Meraniandali, Distt. Dhenkanal, in Orissa by M/s Tata Steel BSL Limited.

- (ii) Earlier it was proposed to install 3x275 TPH CFBC imported coal fired boilers (Dual fired – imported coal/coal tar / mixed waste gases from (a) Coke Oven, (b) Blast Furnace, (c) BOF) to produce steam to run the 256 MW (1x175 MW + 3x27 MW) turbo-generators. It was also proposed to use surplus steam generated from various boilers already installed e.g. CFBC, WHRB, CDQ boilers in 256 MW TPP. However, out of 3x275 MW CFBC boilers, the Company had installed 1x250 TPH gas fired boilers.
- (iii) Subsequently, M/s Tata Steel Limited through its wholly owned subsidiary namely Bannipal Steel Limited, took over the management and business of M/s. Bhushan Steel Limited w.e.f, 18th May, 2018 in accordance and compliance with the provisions of the Insolvency and Bankruptcy Code, 2016. Thereafter, the name of the Company got changed to M/s Tata Steel BSL Ltd. w.e.f 27th November 2018.
- (iv) Afterwards, the Company applied to MoEF&CC for transfer of said EC to the name of M/s. Tata Steel BSL Limited and transfer of EC was approved vide Ministry’s letter no. J-13012/77/2011- IA.II (T) (Pt.), dated 10.02.2020 with one of the additional conditions to submit application for amendment in EC for switching from 50% coal and 50% mix gases from steel plant to 100% mixed gases from the steel plant. Therefore, Tata Steel BSL Limited has applied for change in fuel vide its letter no. TSBSL/MoEF& CC/BS-01/2021-03/62, dated. 7th June, 2021 to MoEF&CC.
- (v) Salient feature of the proposal are as follows:

S. No	Particulars	Details
1.	Date of EC granted	12 th Feb, 2015
2.	Configuration of Turbo Generators	(175 + 3x27) MW
3.	Configuration of Boilers	3X275 TPH Boilers (Out of 3 boilers, 1x250TPH gas fired boiler has been installed and balance two numbers are under review by the new management)
4.	Fuel approved in the EC	100% imported coal (Indonesia) or 50% coal and 50% mixed gases & also to use surplus steam generated from already installed CFBC, WHRB, CDQ Boilers of 5.6 MTPA Steel plant
5.	Proposal of Fuel switching	100% mixed gases (BFG, COG) from Steel Plant & also to use surplus steam generated from already installed CFBC, WHRB, CDQ Boilers of 5.6 MTPA Steel plant
6.	Advantages of proposed Fuel switching	Reduction of CO ₂ emission by 0.40 million ton per annum

13.3.3 *The EAC after deliberations observed that the proposal for change in fuel from coal + mix gases to 100% mix gases is more beneficial from environmental perspective, accordingly, the EAC recommended the proposal for amendment in EC dated 12th February, 2015 for switching from 50% coal and 50% mix gases from steel plant to 100% mixed gases for Expansion of 155 MW Thermal Power Plant (TPP) to 411 MW by addition of 256 MW (175+3x27) Thermal Power Plant at Meraniandali, Distt. Dhenkanal, in Orissa by M/s Tata Steel BSL Limited subject to the condition that PP shall submit Compliance report of Ministry’s Regional office within 6 months.*

Agenda No. 13.4

4x250 MW (Phase I & II) Thermal Power Plant of Jindal Power Ltd. by M/s Jindal Power Limited at Village and Tehsil Tamnar, District Raigarh, Chhattisgarh – Reconsideration of Amendment in Environment Clearance – reg.

[Proposal No. IA/CG/THE/199096/2021; F. No. J-13011/8/2006-IA.II (T)]

13.4.1 The proposal is for amendment in Environment Clearance granted by the Ministry vide letter dated 8th June 2006 to 4x250 MW (Phase I & II) Thermal Power Plant of Jindal Power Ltd by M/s Jindal Power Limited at Tamnar, Raigarh (Chhattisgarh).

13.4.2 The proposal was earlier considered by reconstituted EAC in its 8th EAC meeting held on 1st March 2021, and project was deferred the proposal seeking additional information from Project Proponent (PP). Point-wise replies submitted by the PP vide letter dated 18th June, 2021 in response to additional details sought (ADS) by EAC in its 8th meeting are as follows:

- (i) Re-validation report of the stability of ash dyke after raising height from 14m to 18m from certified institution.

Reply: Report on stability of existing ash dyke and stability analysis after proposed raising of the dyke by further 04 metres i.e. upto RL 286 m has been carried out by the engineering consultant M/s L&T - Sargent & Lundy Limited. The stability analysis report has been checked and approved by Prof. S.R. Gandhi, Director- S.V. National Institute of Technology, Surat. The report has also been submitted. It has been concluded that based upon the slope stability analysis, the dyke is observed to be stable during construction as well as serviceability condition after filing upto RL 286m.

- (ii) Complete plan to be submitted for establishing new pond and obtained amendment in Consent to Establish (CTE) from CEGB as soon as possible and start construction work for ash Dyke for 4X600 MW as per MoEF&CC letter dated 26.04.2017.

Reply: Chhattisgarh Environment Conservation Board (CECB) vide letter dated 19.03.2021 has informed JPL that the amendment in CTE for construction of ash dyke at new location may not be granted citing a judgment of NGT, Delhi. Company vide letter dated 25.03.2021 has requested CECB to reconsider the CTE amendment application, since need for construction of an ash dyke is essential for a power plant due to the fact that the bottom ash from the power plant has to be evacuated in slurry form and disposed to ash pond before same can be dried and utilized. Response from the CECB is awaited. As per the planned schedule of construction, the first lagoon of the new ash dyke is expected to be operational within 08 months from the grant of CTE by CECB.

- (iii) Ash utilization plan for future, details regarding ash generated by washed coal and unwashed coal and ash and electricity generated during last 3 years by all TPP.

Reply: The detailed ash utilization plan for future is attached as Annexure-II. Details of ash generated from washed and unwashed coal and electricity generated during the last 03 years by the TPP are given below:

Quantity in Metric tonnes

Type of Coal	FY-20+21	FY-19-20	FY-18-19
	Qty	Qty	Qty
Ash generated from Washed Coal	3,81,030	2,30,575	2,97,915
Ash generated from Unwashed Coal	42,64,626	30,85,054	30,68,328
Total Ash Generation	46,45,656	33,15,629	33,66,243
Power Generation (MU)	13075	9463	103396

- (iv) Justify incremental ash generation during the year 2020-21.

Reply: There has been an increase in ash generation during the year 2020-21 due to increase in power demand. Further, the average GCV of coal received during the year 2020-21 was 2935 Kcal/kg as against average GCV of 2978 Kcal/kg during the year 2019-20. Thus, due to decrease in the average GCV of coal there was increase in coal consumption and in turn increase in ash generation.

- (v) Certified compliance report from Ministry's Regional office of previous ECs.

Reply: The certified compliance report from the Ministry's regional officer dated 9th June 2021 has been submitted. Date of monitoring is 11.05.2021. In the report, Ministry's regional officer reported that most of the conditions are complied/being complied. It has also observed partial compliance to certain stipulations. It was observed that FY 2020-21 (4x250 MW plant (unit I & II)) only 15.19% of ash utilization was achieved and FY 2020-21 (2x600 MW plant (Unit 1,2,3 & 4)) 18.15% of ash utilization was achieved. Certified compliance report from Ministry's Regional office of previous ECs has been submitted. Action plan for compliance to such stipulations for 4x250 MW plant (unit I & II) and (2x600 MW plant (Unit 1,2,3 & 4)) has been prepared and submitted.

- (vi) Disaster management plan and afforestation plan for Fly Ash dump site.

Reply: Disaster Management plan for total install capacity of 3400 MW (4x250 MW +4x600 MW) of the ash dyke has been prepared and has been submitted.

Afforestation Plan:

The top area of the ash dyke will be around 146.4 ha after final raising of 4 metres i.e. up to 286 m RL. On complete filling of the ash dyke, the company has planned to reclaim and afforest the dyke in consultation with an institute of repute for proper scientific guidance. Green cover development over the dry ash dyke will be advantageous in reducing the wind and water erosion and will provide habitat for wild flora and fauna. Success of reclamation of the ash dyke will depend on the plant species selected for the vegetation. Thus, those plant species which can grow in marginal nutrient conditions will be used. Grasses like vetiver will be used as they are found to be very effective in binding loose ash particles and reducing wind and water erosion.

13.4.3 During the 13th (Present) meeting of the EAC asked the PP to submit the point-wise replies on certain points raised during meeting. The PP submitted the following information sought by EAC vide letter dated 14th July, 2021:

1. Undertaking on Non-Judicial stamp paper that JPL will achieve 100% ash utilization in the FY 2021-22, no further raising of ash dyke will be proposed beyond RL 286m which is under the consideration of the MOEF&CC and reclamation of the ash dyke will be undertaken through afforestation, once the dyke is filled upto RL 286 m. The undertaking has been submitted on Non-Judicial stamp.
2. Compliance status to new standards for Thermal power plant-
 - a. JPL is in compliance to the PM and NOx emissions standards as evident from the data of online emissions monitoring system. The data has been submitted.
 - b. Water consumption is within the prescribed limits and the specific water consumption during the last quarter i.e. April-June 2021 has been submitted.
 - c. JPL has invited technical bids for FGD and few offers have been received. PP are under discussion with interested parties and are planning to complete the installation of FGD within the revised target of 31st December, 2024 applicable to the Tamnar site.

13.4.5 *The EAC after deliberations **recommended** the proposal for amendment in Environmental Clearance dated 8th June 2006 issued by Ministry to raise height of the existing ash dyke by 04 metres from 282m to 286m of 4x250 MW (Phase I & II) Thermal Power Plant of Jindal Power Ltd. by M/s Jindal Power Limited at Village and Tehsil Tamnar, District Raigarh, Chhattisgarh with the condition that no further raising of ash dyke shall be proposed beyond RL 286m , 100% ash utilization shall be carried out throughout the year, Disaster management plan shall be finalized and implemented after discussion with local authority.*

The meeting ended with vote of thanks to the Chair.

ATTENDANCE

S. No.	Name	Role	Attendance
1.	Shri Gururaj P. Kundargi	Chairman	P
2.	Dr. N. P Shukla	Member	P
3.	Shri SuramyaVora	Member	A
4.	Dr. Santosh Kumar	Member	P
5.	Dr. Umesh Jagannathrao Kahalekar	Member	P
6.	Shri K. B. Biswas	Member	P
7.	Dr. Nandini. N	Member	P
8.	Dr. Unmesh Patnaik	Member	A
9.	Shri Prasant Kumar Mohapatra	Member	A
10.	Shri M. P. Singh	Member (Representative of CEA)	A
11.	Prof. S. S. Rai	Member Representative of IIT/ISM Dhanbad	A
12.	Prof. R. K. Giri	Member (Representative of IMD)	A
13.	Representative from CPCB	Member	A
14.	Shri Yogendra Pal Singh	Member Secretary	P

APPROVAL OF THE CHAIRMAN

Fwd: draft MOM of 13th thermal EAC meeting held on 13.07.2021-reg.

Inbox x



Yogendra Pal Singh via nic.in
to me

11:08 AM (5 minutes ago) ☆ ↶ ⋮

From: gpkundargi@gmail.com
To: "Yogendra Pal Singh" <yogendra78@nic.in>
Sent: Tuesday, July 20, 2021 10:36:20 AM
Subject: Re: draft MOM of 13th thermal EAC meeting held on 13.07.2021-reg.

Dear Yogendra ji
Draft minutes are fine with me & Approved. You may take further necessary action.
Thank you
G P Kundargi

On Tue, 20 Jul, 2021, 10:22 am Yogendra Pal Singh, <yogendra78@nic.in> wrote:
Dear Sir,

As suggested necessary correction have been incorporated and the corrected MOM are attached herewith for approval please.

From: gpkundargi@gmail.com
To: "Yogendra Pal Singh" <yogendra78@nic.in>
Sent: Monday, July 19, 2021 6:50:16 PM
Subject: Fwd: draft MOM of 13th thermal EAC meeting held on 13.07.2021-reg.

----- Forwarded message -----
From: Gowrappan K <gowrapanmail@gmail.com>
Date: Mon, 19 Jul, 2021, 4:44 pm
Subject: Re: draft MOM of 13th thermal EAC meeting held on 13.07.2021-reg.
To: G.P. Kundargi <gpkundargi@gmail.com>

Sir,
I have made minor corrections and enclosed in case TSESCL.
Thanks.
Gowrappan.