MINUTES OF THE 3RD MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS HELD ON 30TH NOVEMBER, 2023

The 3rd 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 30th November, 2023 through video conference under the Chairmanship of Dr. Sharad Singh Negi. The list of Members participated in the meeting is at **Annexure**.

Agenda Item No.3.1: Confirmation of the Minutes of the 2nd EAC meeting held on 31st October, 2023 and 1st November, 2023

The Minutes of the 2nd EAC (Thermal Power) meeting held on 31st October, 2023 and 1st November, 2023 were confirmed in the meeting and recommended for deletion of additional/specific ToR mention at **Sub-clause xxv** of Clause [C] **Socio-economic Study** of Agenda Item No. Agenda Item No.2.2 Expansion of Coal Based Thermal Power Plant from 1x350 MW to 2X350 MW at Village Sahajbahal, Tehsil Lakhanpur, Dist Jharsuguda, Odisha by M/s Ind-Barath Energy (Utkal) Ltd (IBEUL) (subsidiary of JSW Energy Ltd.).

The EAC also recommended for recommended for deletion of additional/specific ToR mention at **Sub-clause xxix** of Clause [C] **Socio-economic Study** of Agenda Item No. 2.4 Expansion by addition of 1x350 MW Imported Coal based Thermal Power Plant (Phase-II) at village Kamalanga, Taluk Odapada, District Dhenkanal, Odisha by M/s GMR Kamalanga Energy Limited.

Agenda Item No.3.2

Expansion of Raghunathpur Thermal Power Station by installing 1320 (2x660) MW capacity Thermal Power plant (Phase-II) at village Raghunathpur, District Purulia (West Bengal) by M/s Damodar Valley Corporation - Environmental Clearance (EC) - reg.

[Proposal No. IA/WB/THE/451957/2023; F. No. J-13011/22/2007-IA.II (T)]

3.2.1 The proposal is for grant of environmental clearance to the project for expansion of Raghunathpur Thermal Power Station by installing 1320 (2x660) MW capacity Thermal Power plant (Phase-II) at village Raghunathpur, District Purulia (West Bengal) by M/s Damodar Valley Corporation.

3.2.2 The Project Proponent and the accredited Consultant M/s Envirotech East Pvt. Limited made a detailed presentation on the salient features of the project and informed that:

i. M/s Damodar Valley Corporation. proposes for Expansion of Raghunathpur Thermal Power Station by installing capacity 1320 (2x660) MW (Phase II) within existing land area.

ii. Raghunathpur Thermal Power Station (RTPS) is located in Raghunathpur Sub-Division of Purulia District of West Bengal. The Project is located at 38 Kmfrom District Hea dQuarters Purulia and is well connected by Purulia-Barakar State HighwaySH-5.

iii. The geographical co-ordinates of the project area is Latitude 23°36'6.90"N to l23°37'59.54"N and Longitude 86°38'51.12"E to 86°40'5.07"E with above mean sea level (AMSL) as 193 m. (633.20 ft).

iv. The existing Raghunathpur Thermal Power Station (RTPS) of DVC is located at village Raghunathpur, having total installed capacity of 1200 MW (2x600 MW) under Ph-1 to which MoEF&CC has granted Environmental Clearance vide letter dated 18.10.2007 to 1200 MW (2x600 MW). The commercial operation of the Phase 1 project i.e. 1200 MW (2x600 MW) has been started in March, 2016.

v. Earlier, Raghunathpur Thermal Power Station was accorded Environment Clearance on 23.05.2012 by MOEF&CC for 2x660 MW under Phase II. Public Hearing for this project was successfully conducted. However, due to one or more reasons, activities of Ph-II could not be taken up further and the project was dropped by DVC in 2014-15 and contracts for different packages were terminated. The validity of environmental clearance has expired on 22.05.2017.

vi. The MoEF&CC vide its letter dated 10.05.2023 has issued a ToR for conducting EIA study for expansion of Raghunathpur Thermal Power Station by installing 1320 (2x660) MW capacity Thermal Power plant (Phase-II) at village Raghunathpur, District Purulia (West Bengal) in favour of M/s Damodar Valley Corporation.

vii. Green Belt Development (RTPS):

Total Land For Green Belt	**Green Belt Area**		**Number Of Trees**		**Total**
	Existing	**Proposed**	**Existing**	**Proposed**	
222.983 Hectares (551 acres) of land (33% of 840.5 hactares / 2077 acres)	222.983 hectares (551 acres)	-	3,13,300Trees on 222.983 hectares. [@1405 trees per hectare]	1,88,420 (@ 845 number of trees per hectare for 222.97 hectares)	5,01,720 (3,13,300 + 1,88,420) number of trees on 222.983Ha i.e. (@ 2250 number trees per hectare

viii. Rs. 3 lakhs has been estimated for every 2250 no. of trees, therefore, budgetary estimate of Rs. 252 lakhs have been kept for the expansion proposal of RTPS.

ix. Public hearing was held on 17th August, 2023 at 12.00 hrs at Outside campus of Administrative Building Raghunathpur Thermal Power Station, vill - Dumdumi, PO - Nildih, PS - Raghunathpur, District -Purulia, PIN - 723133, West Bengal chaired by Mr. Rajesh Rathod, Additional District Magistrate (LA), Purulia. Details of advertisement given on 16thJuly, 2023 in Bengali newspaper "Ajkal", English newspaper "Millennium Post" and Hindi newspaper "Sanmarg".

x. The IRO, Kolkata visited the site on 9.10.2023 and submitted the compliance status of the existing EC dated 18.10.2007.

xi. Baseline Environmental Scenario: The area falling within the radius of 10 km around the proposed expansion of existing Steel Plant at Village: Raghunathpur, Dist.-Purulia in the state of West Bengal has been considered as study area. This chapter presents the detailed discussion on the field data for soil, meteorology, water quality, air quality, noise, ecology and socio-economic, which were generated during the period (1st December, 2022 – 28th February, 2023).

a. Ambient Air Quality

Ambient air quality was monitored at ten (10) locations in and around the project site. The overall mean values of PM10, PM2.5, SO2, NO2 and CO in the area (mean of all the 10 locations) were 65.9 µg/m3, 30.1 µg/m3, 9.3 µg/m3, 22.7 µg/m3 and 0.45 mg/m3 respectively.

b. Water Quality:

Water samples were collected and analyzed at ten (10) locations to assess the surface water quality in the study area. Water samples were collected from nine (9) locations to assess the baseline status of the ground water quality of the study area.

River Water

The pH values of the collected two water samples from the River Kelighai were found pH 6.83 - 7.33 Value of Dissolved Oxygen were observed (7.1- 7.2) mg/lit. Total Dissolved Solids were found (236 - 245) mg/lit while value of total Hardness (as CaCO3) & total Alkalinity (as CaCO3) were found (127 - 135) mg/lit & (132 - 140) mg/lit respectively. Calcium (as Ca) & Magnesium (as Mg) were found (34 - 36) mg/lit and (11 - 11) mg/lit respectively. Oil and grease was below detection limit (<1.4 mg/lit) in these sample. Sulphate (as SO4), Nitrate (as NO3) and Chloride (as Cl) were observed (25 - 27) mg/lit, (5.5 - 5.8) mg/lit and (36 - 39) mg/lit respectively. Iron (as Fe) contents were found (0.16 - 0.18) mg/lit and BOD were found (2 - 2) mg/lit respectively.

Heavy metals like Copper (as Cu), Lead (as Pb), Cadmium (as Cd), Chromium (as Cr), Manganese (as Mn), Arsenic (as As) and Mercury (as Hg) in these two (2) river water samples were below their respective detection limits.

Pond Water

The pH values of the collected pond water samples were found in the range of (7.02 – 7.82). Dissolved Oxygen was observed in the ranges of (6.08 – 7.19) mg/lit. Total Dissolved Solids were found in the ranges of (290 – 394) mg/lit while total Hardness (as CaCO3) & total Alkalinity (as CaCO3) were found (131 - 172) mg/lit & (109 - 119) mg/lit respectively. Calcium (as Ca) & Magnesium (as Mg) were found varying in the ranges of (30 – 52) mg/lit and (8 – 17) mg/lit respectively. Oil and grease was below detection limit (<1.4 mg/lit) in these samples. Sulphate (as SO4), Nitrate (as NO3) and Chloride (as Cl) were observed varying in the ranges of (13 – 36) mg/lit, (3.8 – 6.6) mg/lit and (64 – 112) mg/lit respectively. Values of Iron (as Fe) were found in the ranges of (0.16 – 0.25) mg/lit .

Heavy metals like Copper (as Cu), Lead (as Pb), Cadmium (as Cd), Chromium (as Cr), Manganese (as Mn), Arsenic (as As) and Mercury (as Hg) of these pond water samples were below their respective detection limits.

Ground Water

The pH values of collected ground water samples were found in the range of (6.6 – 7.5). Total Dissolved Solids (TDS) was found in the range of (336– 552) mg/lit, while Total Hardness (as CaCO3) was found in the ranges of (158 – 222) mg/lit. Alkalinity (as CaCO3) was found in the ranges of (135 – 251) mg/lit. Calcium (as Ca) and Magnesium (as Mg) were found varying in the ranges of (43 – 70) mg/lit and (8 – 16) mg/lit respectively. Sulphate (as SO4), Nitrate (as NO3) and Chloride (as Cl) were observed in the ranges of (10 – 38) mg/lit, (3.0 – 5.7) mg/lit and (778 – 145) mg/lit respectively. Iron (as Fe) content was found in the range of (0.23 – 0.43) mg/lit and Zinc (as Zn) content was found (0.08 – 0.11) mg/lit.
Other heavy metals like Copper (as Cu), Lead (as Pb), Cadmium (as Cd), Chromium (as Cr), Manganese (as Mn), Arsenic (as As) and Mercury (as Hg) were below their respective detection limits.

c. Noise
A total of 10 locations around the proposed project were selected for the measurement of ambient noise levels.
During the day time, the equivalent noise levels were found to vary in the range of (54.1 - 67.8) dB (A) while in the night time, the equivalent noise levels were observed to be varying in the range of (42.9 - 52.9) dB (A)

xii. The land use breakup of the project site has been presented in Table below.

Land use break-up

Sl. No.	Description	Area (in acre)	
		Existing	Proposed
1	Main Power House (Boiler + TG + ESP + Fans + Mills)	90	90
2	Coal Handling Plant	100	-
3	Switch yard	45	45
4	Lime storage & FGD etc.	15	15
5	Ash disposal area	300	-

6	Township (CISF Complex)	72	-
7	In plant water reservior, cooling towers etc.	250	-
8	Water Corridor	33	-
9	Corridor between ash pond and plant	22	-
10	Rail cum road corridor	340	-
11	Township (including approach road) for employee	70	-
12	Road widening (SH-5, Jharukhamar Ghutitara plant gate)	19	-
13	Plant area approach road & Free space	20	-
14	Green belt	551	-
	TOTAL	**1927**	**150**

xiii. The salient features of the project are as under: -

Project details:

Name of the Proposal	Proposed Expansion of Raghunathpur Thermal Power Station by installing capacity 1320 (2x660) MW (Phase - II)
Proposal No.	IA/WB/THE/451957/2023
Location	Village: Dumdumi, P.O. - Nildih, P.S.: Raghunathpur, District: Purulia, West Bengal
Company's Name	M/s Damodar Valley Corporation
Accredited Consultant and certificate no.	Envirotech East Pvt. Limited NABET/EIA/2225/RA 0279 VALIDITY – 12th September, 2025
Inter- state issue involved	No
Seismic zone	Zone-III

Category details:

Category of the project	"A"
Capacity	1320 (2x660) MW
Attracts the General Conditions (Yes/No)	No
Additional information (if any)	RTPS (PH-2) - 1320 (2x660) MW This proposal obtained Environmental Clearance obtained from MoEF&CC in 2012. Activities for implementation for Phase II were started after obtaining EC, but due to

	one or more reasons, activities of Ph-II could not be continued further. The validity of environmental clearance has expired on 22.05.2017. On the basis of approval from Ministry of Power, Govt. of India, DVC proposes RTPS-II Hence, This is revival of erstwhile Proposal (RTPS-II).

Project Details:

If expansion, the details of ECs (including amendments and extension of validity) of existing Units etc.

Sl. No.	Facility	Environmental Clearance	Consent to Operate	Remarks
RTPS - I				
1.	2 X 600 MW Thermal Power Plant	Letter No. J-13011 / 22 /2007-IA.II(T), dated 18.10.2007 Issued by MoEF&CC	Memo No. 2097-WPBA / Red (Prl)/ Cont(380)/2015, dated 30.10.2018. Valid Till Issued by WBPCB	
RTPS - II				
2.	2 X 660 MW Thermal Power Plant	Letter No. J-13012 /258/2007-IA.II(T) dated 23.05.2012 Issued by MoEF&CC Validity expired in 2017	-	Project was dropped by DVC in 2014-15
RTPS - II (Revival of erstwhile proposal)				
Board of DVC accorded approval for the revival of erstwhile Raghunathpur TPS Ph-II (2x660 MW) and in principle approval was accorded by Ministry of Power on 23.02.2022.				

Amendments granted, if Yes details	-
Expansion / Green Field (new):	Expansion

(IPP / Merchant / Captive):	

If expansion, the date of latest monitoring done by the Regional Office (R.O) of MoEF&CC for compliance of the conditions stipulated in the environmental and CRZ clearances of the previous phases. A certified copy of the latest R.O. monitoring report shall also be submitted.	09.10.2023 Certified copy of the latest R.O. monitoring report has been attached as Annexure I.
Specific webpage address where all EC related documents (including monitoring and compliance related reports/documents) of the specific project under consideration are/will be available. Also contact details of PP's officer responsible for updating this webpage/information.	Webpage address : https://www.dvc.gov.in Mr. ABHAIKUMAR SRIVASTAV Sr. GM 79039 88242
Co-ordinates of all four corners of TPP Site:	The four points on the boundary of the project site are as follows: 1. Latitude - 23°37'28.76"N & Longitude - 86°40'0.87"E (TRC) 2. Latitude - 23°37'59.54 N & Longitude - 86°38'51.12" E (TLC) 3. Latitude - 23°36'6.90"N & Longitude - 86°39'13.82"E (BLC) 4. Latitude - 22°36'8.71"N & Longitude - 86°40'5.07"E (BRC) (Where, T: Top, B: Bottom, L: Left, R: Right, C: Corner, M: Middle)
Average height of: (a) TPP site, (b) ash pond site etc. above MSL	Average height of: (a) TPP site : 193 m. (633.20 ft) (b) Ash pond site etc. above MSL : 176 m (577.42 ft)
Whether the project is in the Critically Polluted Area (CPA) or within 10 km of CPA. If so, the details thereof:	No

CRZ Clearance	-
Cost of the Project (As per EC and revised): Cost of the proposed activity in the amendment:	Rs. 11,554.29 Crores
Employment Potential for entire project/plant and employment potential for the proposed amendment (specify number of persons and quantitative information).	350 persons (both regular and contractual)
Benefits of the project (specify quantitative information)	Rs. 13,830 Crores (details given in Ch -9 of EIA Report)

Electricity generation capacity:

Capacity & Unit Configurations:	82.5 MW (Source : Captive)
Generation of Electricity Annually	2 X 600 MW : 1200 MW 2 X 660 MW : 1320 MW Total : 2520 MW

Details of fuel and Ash disposal

Fuel to be used	Coal
Quantity of Fuel required per annum	6.60 Million Metric Tonne per annum
Coal Linkage / Coal Block (If Block allotted, status of EC & FC of the Block)	Coal Linkage from Central Coalfield Limited (CCL) available. M/s Central Coalfields Limited (CCL) on 03.01.2011 issued a Letter of Assurance (LOA) for 4.69 MTPA of E-Grade Coal for Ph-II. DVC vide its letter ref. no- ED(Fuel)/ MOP/RTPS, Ph-II/2021-22/559 dated: 21.03.2022 to Ministry of Power has requested extension of validity of LOA for a further period of 4 years with effect from 31.03.2022 towards fuel security of RTPS Ph-II. Further, SLC-LT, in its meeting held on 08.08.2022, has recommended the grant of coal linkage under Para B (i) of SHAKTI

	Policy to Raghunathpur TPS Ph-II from Coal India Limited.
Fly Ash Disposal System proposed	The fly ash shall be extracted in dry form from the electrostatic precipitator hoppers. This dry ash is taken to buffer hoppers for its onward transportation in dry form to storage silos for utilization. In case of non-utilization, fly ash can be converted to slurry in wetting units/through feeder ejectors for its ultimate disposal in wet form to ash disposal area.

Ash Pond / Dyke (Area, location, & co-ordinates Average height of the area above MSL (m)	The geographical co-ordinates of the ash pond is Latitude 23°36'11.23"N to 23°37'12.74"N and Longitude 86°37'3.97"E to 86°38'4.73"E. Average height of the area 176m (577.42 ft.) above MSL
Quantity of a. Fly ash to be generated b. Bottom ash to be generated	 Fly ash - 23.76 Lakh Metric Tonne per Annum Bottom ash - 5.94 Lakh Metric Tonne per Annum
Fly ash utilisation details	Fly ash will be utilized in nearby Cement Plants & Brick manufacturing units
Stack height (m) & Type of flue	In the proposed (RTPS, Ph-II) project, Either, One twin flue stack of 220 M height Or, Two single flue stacks of 150 M height is envisaged.

Water Requirement:

Source of Water:	Panchet Dam of DVC
Quantity of water requirement:	95,049 Kilo Litres per Day (KLD)
Distance of source of water from Plant:	12 Km.
Whether barrage/ weir/ intake well/ jack well/ others proposed:	Barrage
Mode of conveyance of water:	Pipe line
Status of water linkage:	Damodar Valley Corporation is the Authority for drawl of water from Panchet Dam. Therefore, water linkage is not required.

(If source is Sea water) Desalination Plant Capacity	Not applicable
Mode / Management of Brine:	Not applicable
Cooling system	Water Cooling

Land Area Breakup:

Land Requirement: a) TPP Site b) Ash Pond c) Township d) Railway Siding & Others e) Raw Water Reservoir f) Green Belt g) others Total (if expansion state additional land requirement)	Land requirement for RTPS phase – II will be 150 acres, which is available within the existing project area of 840.53 Hectares (2077 acres), which is already acquired. Land of 507.480 acres (205.37 Ha.) for the existing Ash disposal system in RTPS (ph-1) comprising of Ash pond, ash pipeline corridor, green belt etc. will be utilised for RTPS (Ph-2) also. The ash dyke is about 3 Km from Plant premises.
Status of Land Acquisition:	Already acquired

Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/Environmental Sensitivity Zone	**Yes/No**	**Details of Certificate/letter/Remarks**
Reserve Forest/Protected Forest Land	No	No Environmentally Sensitive areas are present within the study area
National Park	No	
Wildlife Sanctuary	No	
Archaeological sites monuments/historical temples etc	No	
Names & distance of National parks, Wildlife sanctuaries, Biosphere reserves, Heritage sites Rivers, Tanks, Reserve Forests etc. Located within 10 Km from the plant boundary:	No	

Court case details:

Court Case	Original Application No. 104/2021/EZ
Court	Hon'ble NGT, Eastern Zone Bench, Finance Centre, Kolkata
Complaint	On receiving a reference from the West Bengal Human Rights Commission with reference to media report dated 9.7.2021 in Bengali Daily Newspaper "Gana Shakti". Media report was that effluents were being discharged by Raghunathpur Thermal Power Plant on agricultural lands in Villages Ghutitora, Lachhiara, Valdubi, Asta, Pathuriadanga and Khairabad in District Purulia, West Bengal resulting in damage to agricultural fields which were covered by the fly ash.
Present Status	Order Date: 10.04.2023 The application is disposed of.

3.2.3 The EAC during deliberations noted the following:

The proposal is for grant of Environmental Clearance to the project for expansion of Raghunathpur Thermal Power Station by installing 1320 (2x660) MW capacity Thermal Power plant (Phase-II) at village Raghunathpur, District Purulia (West Bengal) by M/s Damodar Valley Corporation.

The project/activity is covered under category A of item 1(d) 'Thermal Power Plants' of the Schedule to the Environmental Impact Assessment Notification, 2006 and requires appraisal at Central level.

Earlier, the Ministry had granted Environment Clearance vide letter dated 23.05.2012 to 2x660 MW under Phase II Raghunathpur Thermal Power Station. The project was dropped by DVC in 2014-15. The validity of environmental clearance had expired on 22.05.2017.

The MoEF&CC vide its letter dated 10.05.2023 has issued a ToR for conducting EIA study to the project for expansion of Raghunathpur Thermal Power Station by installing 1320 (2x660) MW capacity Thermal Power plant (Phase-II) at village Raghunathpur, District Purulia (West Bengal) in favour of M/s Damodar Valley Corporation.

The land area mentioned in the proposal is not matching with the earlier EC. It seems that the project proponent has changed the area mentioned in earlier EC without informing the Ministry. The EAC suggested to submit proposal for amendment in EC for change in land area from 1820 acre to 2076 acre.

EAC further noted that green belt has not been developed in a proper manner. The EAC also noted that ash utilization is very less and accordingly not complying with Ministry's Fly ash utilization norms i.e. 100% ash utilization. It was also noted that no stack emissions control equipments have not been installed due to which SOx and NOx emissions are beyond permissible limit.

The certified compliance report submitted by the IRO, Kolkata mentioned several major non-compliance of conditions mentioned in the EC letter dated 18.10.2007. The EAC observed that PP & consultant were not well prepared for presentation as they were unable to present the facts & future plan for ash utilization.

3.2.4 The EAC after detailed deliberation on the information submitted and as presented during the meeting decided to **defer** the proposal for want of following additional information:

i. Requisite amendment shall be obtained w.r.to change in land area.
ii. Action plan for development of 3 layer peripheral greenbelt with 90% survival rate for the empty spaces shall be submitted.
iii. Compliance of non-compliances noted by the IRO during site inspection shall be ensured and a compliance report duly certified by the IRO be submitted along with the present proposal.
iv. Fly ash utilization plan shall be submitted for proposed and existing unit for ensuring 100% Ash utilization shall be submitted as per extent rules and regulations of the Ministry.
v. Detailed Action plan with timelines for addressing the issues/activities raised during public hearing shall be submitted along with budget proposed for future issues/activities.
vi. Action plan for installation of emission control devices for existing unit as well as expansion unit to limit emissions level within as per extent rules and regulations of the Ministry.
vii. Air monitoring and stack emissions shall be carried out by third party. Latest data of continuous online air quality monitoring shall be submitted.

*The proposal is therefore **deferred** on the above lines.*

Agenda Item No. 3.3:
Setting up 120 MW of Combined Cycle Gas Turbine (CCGT) Power Plant located at village Manikyanagar (Rokhia), Tehsil Valuarchar, District Sepahijala (Tripura) by M/s Tripura State Electricity Corporation Limited - Terms of Reference - reg.

[Proposal No. IA/TR/THE/239146/2021; F. No. J-13012/3/2021-IA.I (T)]

3.3.1 The proposal is for grant of Terms of Reference for conducting EIA study to the proposed project for Setting up 120 MW of Combined Cycle Gas Turbine (CCGT) Power Plant in an area of 4.5 ha located at village Manikyanagar (Rokhia), Tehsil Valuarchar, District Sepahijala (Tripura) by M/s Tripura State Electricity Corporation Limited.

3.3.2 The Project Proponent and the accredited Consultant M/s. MITCON Consultancy & Engineering Services Ltd., made a detailed presentation on the salient features of the project and informed that:

i. M/s Tripura Power Generation Limited (TPGL) decided to set up technologically advanced power generation facility within its premises of Rokhia to provide reliable & quality power to the Customer.

ii. Earlier, the Ministry had granted EC vide its letter dated 06.11.2023 to the existing project i.e. 3x21 MW Gas based Thermal Power Station under violation category. As part of the conditions mentioned in the Environmental Clearance, TSECL has already submitted Bank Guarantee to TSPCB for a period of 5 years. However, as per condition of the EC, all works mentioned in Remediation Plan and Natural & Resource Augmentation Plans shall be completed within 3 years, as per budget allocation already provided.

iii. The Proposed 120 MW Combined Cycle Gas Turbine (CCGT) Project will be set up by TPGL (erstwhile Tripura State Electricity Corporation Ltd. or TSECL) at Rokhia, Tripura to augment their power generation capacity for energy security and meeting the increased power demand of the State and the North East Region, and to supply reliable power to its consumers.

iv. The Project has been approved by Dept. of Economic Affairs (DEA), Government of India. and will be funded by the Asian Development Bank (ADB). Based on 3 season data and 2 Public Consultation as per ADP SPS 2009, EIA report has been prepared by ADB and loan negotiations have been completed.

v. The Project location lies around 3.25 Km from the India - Bangladesh International Border, and hence as per application of General Condition the proposal needs to be appraised as a Category A project.

vi. The fuel of the power plant will be Natural Gas, which shall be sourced from ONGC / GAIL as per the existing agreements to provide 0.58 MMSCMD through underground pipeline. The existing plant, which currently uses the same fuel, shall be operated for 5 years till the construction of the proposed plant is completed, after which it will be completely decommissioned.

vii. The configuration of the CCGT Plant will consist of high efficiency state of the art gas turbine associated with Heat Recovery Steam Generator (HRSG) and Steam Turbine Generator, which will generate 120 MW electricity by using the same amount of fuel currently being used by three 21 MW units.

viii. The Power Plant will develop greenbelt in an area of 33 % i.e., 14930 m^2 out of total area of the project. The estimated project cost is Rs. 845.36 Crores. Total Employment will be 78 persons as direct & 20 persons indirect after construction. Industry proposes to allocate Rs. 8.45 Crores @ of 1 % towards CER (as per Ministry's OM dated 1st May, 2018).

ix. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger / Elephant Reserves, Wildlife Corridors etc, within 10 km distance from the project site. River Bijoy is flowing at a distance of 3.5 km in NNE direction.

x. Total water requirement is 560 m3/day of which fresh water requirement of 560 m3/day will be met from groundwater. Effluent of 5 m^3/hr quantity [HRSG blowdown @ 2.5 m^3/hr + effluent from DM plant (Neutralizing pit) @ 1 m^3/hr

(DM plant regeneration) + filter backwash @1 m^3/hr + floor drains (as applicable) @ 0.5m^3/hr] will be treated through 5 m^3/hr. capacity ETP.

xi. Status of Litigation Pending against the proposal, if any.

- Case No:- **CR(C) 93 of 2023** - Tripura State Pollution Control Board & Anr. Vs. TSECL & ors.
- Credible Action taken by TSPCB against TSECL regarding operation of 3×21 MW units (Violation case) without valid EC.

xii. The salient features of the project are given below**:**

<table>
<tr><td>Name of Consultant(s) who prepared the EIA/EMP</td><td>MITCON Consultancy & Engineering Services Ltd.</td></tr>
<tr><td>Capacity & Unit Configurations:</td><td>120 MW (Closed Cycle)</td></tr>
<tr><td>Land requirement:
a) TPP site
b) Ash Pond
c) Township
d) MGR etc.
(if expansion state additional land requirement)</td><td>
2.46 ha. (24600 m2)
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<tr><td>Location

(Including coordinates)</td><td>Village Manikyanagar, Taluk Veluarchar, District Sepahijala, Tripura – 799102
<table>
<tr><th>Point</th><th>Lat</th><th>Long</th></tr>
<tr><td>A</td><td>23°37'25.03" N</td><td>91°11'43.18" E</td></tr>
<tr><td>B</td><td>23°37'27.11" N</td><td>91°11'48.71" E</td></tr>
<tr><td>C</td><td>23°37'25.70" N</td><td>91°11'52.93" E</td></tr>
<tr><td>D</td><td>23°37'20.29" N</td><td>91°11'50.72" E</td></tr>
<tr><td>E</td><td>23°37'20.74" N</td><td>91°11'43.51" E</td></tr>
<tr><td>F</td><td>23°37'21.42" N</td><td>91°11'42.86" E</td></tr>
</table></td></tr>
<tr><td>Inter- state issue involved</td><td>No</td></tr>
<tr><td>Seismic zone</td><td>Zone V</td></tr>
<tr><td>Capacity / Cultural command area (CCA)</td><td>Not Applicable</td></tr>
<tr><td>Attracts the General Conditions (Yes/No)</td><td>Yes</td></tr>
<tr><td>Powerhouse Installed Capacity</td><td>-</td></tr>
<tr><td>Generation of Electricity Annually</td><td>900 MU (approx.)</td></tr>
<tr><td>No. of Units</td><td>1</td></tr>
<tr><td>Cost of project</td><td>Rs. 845.36 Crores</td></tr>
<tr><td>Total area of Project</td><td>4.50 Ha.</td></tr>
<tr><td>Project Benefits</td><td>Provides electricity to Tripura State</td></tr>
<tr><td>Status of other statutory clearances</td><td>Environmental Clearance obtained for existing 3×21 MW OCGT units with following details:</td></tr>
</table>

	EC Identification No. : EC23A004TR128265 File No. : J-13012/13/2019-IA.I(T) Project Type : New Category : A Project Activity (Schedule) : 1(d) Thermal Power Plants
R&R details	Not Applicable
Any litigation/Court case pertaining to the project	No
Is the proposal under any investigation? If so, details thereof.	No
Any violation case pertaining to the project:	No
Certified EC compliance report (if applicable)	Not Applicable
Status of Stage- I FC	Not Applicable
Is FRA (2006) done for FC-I	Not Applicable
Fuel to be used:	Natural Gas
Quantity of Fuel required per Annum:	0.58 MMSCMD
Stack Height (m) & Type of Flue	Bypass stack height – 30 m, HRSG stack height – 60 m, Type of Flue – Single flue
Source of Water:	Groundwater (permission for the same is acquired from Agartala Water Resource Dept. as well as CGWA) Alternate source: Water Tankers (Agreement with local vendors is drafted)
Quantity of water requirement:	• During Construction phase about 80 KLD water will be required (including Domestic and Construction uses) • In Operation phase, overall water requirement for the plant will be around 480 KLD (all inclusive) Additionally, about 96 KLD water will be required for greenbelt development / landscaping which will be taken from Treated water from the ETP.
Distance of source of water from Plant:	500 m approximately
Whether barrage/ weir/ intake well/ jack well/ others proposed:	Two bore wells will be drilled for the purpose. Necessary permissions (CGWA) are being sought)
Mode of conveyance of water:	Underground pipelines and Water Tankers
Cooling system	Plant will use Air cooled condenser for condensing turbine exhaust steam and DM CCW system with Fin Fan coolers will be

<table>
<tr><td></td><td colspan="4">used for cooling of GT, STG, GBC and BOP Auxiliaries</td></tr>
<tr><td>CRZ Clearance</td><td colspan="4">Not Required</td></tr>
<tr><td>Names & distance of National parks, Wildlife sanctuaries, Biosphere reserves, Heritage sites Rivers, Tanks, Reserve Forests etc. Located within 10 Km from the plant boundary:</td><td colspan="4">None</td></tr>
<tr><td>Any litigation/Court case pertaining to the project:</td><td colspan="4">None/ Not Applicable</td></tr>
<tr><td>Is the proposal under any investigation? If so, details thereof.</td><td colspan="4">None/ Not Applicable</td></tr>
<tr><td>Any violation case pertaining to the project:</td><td colspan="4">None/ Not Applicable</td></tr>
<tr><td>Cost of the Project (As per EC and revised):
Cost of the proposed activity in the amendment:</td><td colspan="4">Rs 845.36 (Crores)</td></tr>
<tr><td>Employment Potential for entire project/plant and employment potential for the proposed amendment (specify number of persons and quantitative information).</td><td>Phase</td><td>Temporary</td><td>Perma-nent</td><td>Total</td></tr>
<tr><td></td><td>Cons-truction</td><td>350 (EPC Contractor)</td><td>30 (TSECL)</td><td>380</td></tr>
<tr><td></td><td>Ope-ration</td><td>20 Vendor</td><td>78 (TSECL)</td><td>98</td></tr>
<tr><td></td><td>Total</td><td>370</td><td>108</td><td>478</td></tr>
<tr><td>Benefits of the project (specify quantitative information)</td><td colspan="4">Provide electricity to Tripura State</td></tr>
</table>

3.3.3 The EAC during deliberations noted the following:

The proposal is for grant of terms of reference to the project for Setting up 120 MW of Combined Cycle Gas Turbine (CCGT) Power Plant in an area of 4.5 ha located at village Manikyanagar (Rokhia), Tehsil Valuarchar, District Sepahijala (Tripura) by M/s Tripura State Electricity Corporation Limited.

The project/activity is covered under category B of item 1(d) ‘Thermal Power Plants’, however, due to applicability of general condition as the project location lies around 3.25 Km from the India - Bangladesh International Border, the proposal needs to be appraised as a Category A project as Central level.

Earlier the proposal was considered by the EAC in its 17th meeting held on 30th November, 2021. The observations of the EAC was as follows:

> *The EAC after detailed deliberations observed that the proposed project lies within the area of existing 3x21 MW Gas based Thermal Power Station, which has violated the provisions of the EIA Notification, 2006 and presently the same is under consideration for grant of TOR for regularization of Environmental Clearances under violation category. So, it need to be examined that whether, the present proposal can be considered as an independent/fresh proposal. Therefore, EAC recommended to seek comments of EIA policy sector of the Ministry in this regard.*

The MoEF&CC vide its letter dated 06.11.2023 granted Environmental Clearance to the existing 3x21 MW Gas based Thermal Power Station under violation category.

The EAC noted that PP during the meeting has informed that existing 3x21 MW plant will be decommissioned before the start of operation of proposed units. Both plants units will not be operational together. So, the present proposal for grant of TOR may be considered.

3.3.4 The EAC after detailed deliberation on the information submitted and as presented during the meeting recommended for grant of Standard ToR for conducting EIA study with Public Hearing to the project for setting up 120 MW of Combined Cycle Gas Turbine (CCGT) Power Plant in an area of 4.5 ha located at village Manikyanagar (Rokhia), Tehsil Valuarchar, District Sepahijala (Tripura) by M/s Tripura State Electricity Corporation Limited, under the provisions of the EIA Notification, 2006, as amended along with the following additional/specific ToR:

[A] Environmental Management and Biodiversity Conservation

i. Cumulative Environmental Impact Assessment study of all the existing and proposed projects in the 15-km radius of the proposed project shall be conducted.
ii. PCCF letter shall be obtained stating that no wildlife corridor is passing through the project boundary.
iii. Wildlife conservation plan shall be prepared, in consultation with State forest and wildlife department, with adequate fund for wildlife habitat management, preserving wildlife and its corridors and be submitted along with EIA/EMP report. Human-Wildlife Conflict issue shall be studied and such incidences reported in the study area during last 10 years shall be submitted. No provision for purchasing the vehicle shall be made in the wildlife conservation plan.
iv. Existing green plantation carried out by the project proponent along with its survival rate shall be submitted with a video clip of existing green belt and a plan shall be made to maintain survival rate upto 90%.
v. Detailed action plan shall be prepared for maintenance of air pollution control equipment.

vi. Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 5 km radius of the plant boundary be submitted.
vii. Baseline Study for Heavy metals in Ground water, Surface water and soil to be carried out and incorporated in EIA/EMP report.
viii. Details pertaining to water source, treatment and discharge should be provided.
ix. Zero Liquid Discharge plan shall be submitted.
x. Action plan for development of green belt (40% of total project cover area) along the periphery of the project boundary shall be provided. Plan shall be dully approved by the DFO.
xi. Enumeration of trees to be felled in the project areas in the forest land and non-forest land shall be submitted. Compensatory afforestation shall be planned to offset the carbon foot print.
xii. PP shall submit action plan for using treated Sewage/Domestic wastewater for its operations.
xiii. Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
xiv. An action plan shall be prepared for Water shed development within 10 km radius of the plant boundary in consultation with reputed government institution.
xv. A detailed plan need to be submitted for undertaking extensive green plantation within 10 km radius of the plant focusing on water reservoir, school, hospital and other institutional area and same need to be incorporated in EIA/EMP report.

[B] Disaster Management

xvi. Disaster Management Plan shall be prepared and incorporated in EIA/EMP report w.r.t. to high sensitivity of seismic zone of the proposed location.
xvii. Detailed plan for decommission the existing unit shall be submitted along with environment protection measures shall be submitted.

[C] Socio-economic Study

xxiv. Public Health Delivery Plan including the provisions of drinking water supply for local population shall be in the EIA/EMP Report. Status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the need of the labour force and local populace.
xxv. All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/ EMP report in the relevant chapter.
xxvi. Statement on the commitments (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 shall be submitted. Tentative no. of project affected families shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared.
xxvii. Details of settlement in 10 km area shall be submitted.

[D] Miscellaneous

xviii. Certified compliance report of previous EC to be submitted certified by Regional office of the MoEF&CC. IRO shall provide specific observations on the status of OCMS, ash utilization, green cover and emission control equipment of all units of the plant.
xix. The EIA report shall also include the proposed pipeline route from the terminal.
xx. PP shall submit details of court cases and its status for the project.
xxi. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
xxii. Aerial view video of project site shall be recorded through drone and be submitted.
xxiii. Time period for baseline data collection shall not be more than three years old.

The meeting ended with vote of thanks to the Chair.

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Annexure

ATTENDANCE

S. No.	Name & Address	Role	Attendance
1.	Dr. Sharad Singh Negi (I.F.S. Retd.)	Chairman	P
3.	Shri Inder Pal Singh Matharu, IFS (Retd.)	Member	P
3.	Shri Lalit Kapur	Member	P
4.	Dr. Umesh Jagannathrao Kahalekar	Member	P
5.	Dr. Santosh Kumar Hampannavar	Member	P
6.	Shri Savalge Chandrasekhar	Member	A
7.	Shri K. B. Biswas	Member	A
8.	Prof. Shyam Shanker Singh	Member	P
9.	Dr. Vinod Agrawal	Member	P
10.	Dr Nazimuddin, Scientist - F	Representative of Central Pollution Control Board	A
11.	Shri Mahi Pal Singh, Chief Engineer	Representative of Central Electricity Authority (CEA)	P
13.	Shri Harmeet Sahaney	Representative of Indian Meteorological Department (IMD)	P
13.	Prof. R M Bhattacharjee	Representative of IIT/ISM Dhanbad	P
14.	Shri Yogendra Pal Singh	Member Secretary	P

***

APPROVAL OF THE CHAIRMAN

----- Forwarded Message -----
From: sharadnegi1957@gmail.com
To: Yogendra Pal Singh <yogendra78@nic.in>
Sent: Wed, 20 Dec 2023 13:45:28 +0530 (IST)
Subject: Re: draft MOM of the EAC (Thermal Power projects) meeting held on 30.11.2023 -REG.

Ok, approved.
Dr S S Negi
Vice Chairman, Rural Development and Migration Commission, Uttarakhand
former Director General Forest and Special Secretary Govt of India
Address: 178 Subhash Road Dehradun
Mob 09411173194

On Tue, Dec 19, 2023 at 7:01 PM Yogendra Pal Singh <yogendra78@nic.in>
wrote:

> Dear Sir,
>
> The corrections as suggested by you have been incorporated. The corrected
> Draft Minutes of 3rd EAC (Thermal) meeting held on 30.11.2023 is attached
> herewith for approval please.