



सत्यमेव जयते

File No: J-13012/13/2019-IA.I(T)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Date **07/12/2024**



To,

Sh. Victor Jamatia
M/s Tripura State Electricity Corporation Limited (TSECL)
Bidyt Bhavan, North Banamalipur, Agartala, Tripura 799001
E-mail: rkhtgtps@gmail.com

Subject: Proposed 120 MW Closed Cycle Gas Turbine (CCGT) Power Plant by M/s. Tripura State Electricity Corporation Limited (TSECL) located at Village Manikyanagar (Rokhia), District Sepahijala, Tripura – Grant of Environmental Clearance – regarding

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/TR/THE/495581/2024 dated 02/10/2024 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24A0602TR5849879N
(ii) File No.	J-13012/13/2019-IA.I(T)
(iii) Clearance Type	Fresh EC
(iv) Category	B
(v) Project/Activity Included Schedule No.	1(d) Thermal Power Plants
(vi) Sector	Thermal Projects
(vii) Name of Project	Environmental Clearance of Proposed 120 MW CCGT Power Plant in an Area of 4.5 Ha. At Village Manikyanagar (Rokhia), District Sepahijala, Tripura – 799102.
(viii) Name of Company/Organization	M/s Tripura State Electricity Corporation Limited (TSECL)
(ix) Location of Project (District, State)	Sepahijala, TRIPURA
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	Yes

3. M/s. Tripura State Electricity Corporation Limited (TSECL) has made an online application vide proposal no. IA/TR/THE/495581/2024 dated 02/10/2024 along with copy of EIA/EMP report and Form seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above.

4. The proposed project activity is listed at item no. 1(d) Under Category “B” of the schedule of the EIA Notification, 2006. Due to the applicability of general condition as the project site is situated approximately 3.5 km from India – Bangladesh International border, the project is appraised as Central level as Category ‘A’ project.

5. The instant Proposal was considered by the EAC (Thermal) in its 14th meeting held on 4-5th November, 2024. The PP has submitted the written information on 11.11.2024. The MoM for the same may be seen using the following web link: <https://parivesh.nic.in>

Details submitted by the project proponent

6. Total land in possession of Tripura State Electricity Corporation Limited (TSECL) at Rokhia is 55.89 acres (22.62 ha.). Out of 22.62 Ha, TSECL is already operating 3x21 MW Gas based Thermal Power Station in an area of 7 Ha for which EC has been obtained from MoEF&CC under violation category vide letter no. J-13012/13/2019-IA.I(T) dated 6/11/2023.Compliance of existing EC included preparation of remediation plan as well as Natural and Community Resource Augmentation plan with a budget of Rs. 9.7 Cr. Bank Guarantee of the same has been submitted to TSPCB. Plan is being implemented in project area by the PP & status of the same is being furnished in the Post EC six monthly compliance report. Additionally, Rs 3.79 Cr. was paid as Environmental Damage Penalty to TSPCB.

7. The instant project of M/s. Tripura State Electricity Corporation Ltd. (TSECL) is for setting up of a new power plant with a capacity of 120 MW Closed Cycle Gas Turbine (CCGT) Power Plant in an area of 3.76 Ha (out of 22.62 Ha) is located at Manikyanagar Village, Veluarchar Tehsil, Sepahijala District, Tripura State. The existing project and instant proposed are not linked with each other. All utilities and environmental infrastructure are independently proposed.

8. The detail of the ToR obtained is furnished as below:

Proposal No. with date	Consideration	Details	Date of accord	ToR Validity
IA/TR/THE/239146/2021 dated 30/11/2023	3 rd meeting of EAC – Thermal held on 30/11/2023	Terms of Reference	07/02/2024	4 years

9. Environmental site settings:

S. No.	Particulars	Details	Remarks																											
1.	Total land	<p>Original 4.5ha.[Private:0ha;Govt.: 4.5 ha; Agriculture: 0 ha;]</p> <p>Revised 3.7ha.[Private:0ha;Govt.:3.7 ha; Agriculture: 0 ha;]</p>	Landuse: Industrial Project proponent has reduced the total land requirement for the above project to 3.76 ha. in place of 4.5 ha by excluding 0.74 Ha forest land																											
2.	Land use break up	<table><tr><th colspan="3">Land Use Break Up of Revised Project Plot Area:</th></tr><tr><th>Sr. No.</th><th>Description</th><th>Approximate area in Ha.</th></tr><tr><td>1.</td><td>Built-up area including Open areas</td><td>2.1</td></tr><tr><td>2.</td><td>Roads & Parking</td><td>0.42</td></tr><tr><td>3.</td><td>Green Belt area</td><td>1.24</td></tr><tr><td colspan="2">Total Plot Area</td><td>3.76</td></tr><tr><th colspan="3">Approximate area of Major Power Plant Components:</th></tr><tr><th>Sr. No.</th><th>Description of Major equipment /</th><th>Approximate</th></tr><tr><td colspan="3"></td></tr></table>	Land Use Break Up of Revised Project Plot Area:			Sr. No.	Description	Approximate area in Ha.	1.	Built-up area including Open areas	2.1	2.	Roads & Parking	0.42	3.	Green Belt area	1.24	Total Plot Area		3.76	Approximate area of Major Power Plant Components:			Sr. No.	Description of Major equipment /	Approximate				
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S. No.	Particulars	Details			Remarks
			components		area in Ha.
		1.	Gas Turbine & HRSG		0.28
		2.	STG area including Electrical & Control Building		0.218
		3.	BFP area		0.045
		4.	Gas Booster Comp.		0.054
		5.	Transformer Yard		0.077
		6.	Switch Yard		0.325
		7.	Plant Water area		0.175
		8.	DM Plant area		0.15
		9.	Acc. area		0.218
		10.	Workshop		0.037
			Total		1.579
3.	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014	Entire land under possession of TSECL			-
4.	Existence of habitation & involvement of R&R,if any.	Project site: Name of village (if any)			No R&R involved, as there is no habitation within plant boundary
		Study Area:			
		Habitation	Distance	Direction	
		Manikyanagar	1.1	S-SE	
5.	Latitude and Longitude of all corners of the project site.	A. Plant site			DSS
		Point	Latitude	Longitude	
		A	23°37'24.88"N	91°11'43.18"E	
		B	23°37'26.97"N	91°11'48.84"E	
		C	23°37'26.24"N	91°11'50.00"E	
		D	23°37'25.50"N	91°11'49.91"E	
		E	23°37'25.38"N	91°11'50.95"E	
		F	23°37'24.40"N	91°11'50.54"E	
		G	23°37'23.41"N	91°11'50.36"E	
		H	23°37'23.11"N	91°11'51.46"E	
		I	23°37'20.29"N	91°11'49.79"E	
		J	23°37'20.59"N	91°11'43.48"E	
		K	23°37'21.24"N	91°11'42.88"E	
		B. Ash Pond - NA			
6.	Elevation of the project site	Around 45m above MSL			
7.	Involvement of Forest land if any.	Nil			Project proponent has reduced the total land requirement for the above project to 3.76 ha. in place of 4.5 ha by excluding 0.74 Ha forest land. Kin view of this, there is no forest land is involved.
8.	Water body (Rivers, Lakes, Pond, Nallah)	Project site: None			

S. No.	Particulars	Details			Remarks
	Natural Drainage, Canal etc.) exists within the project site as well as Study area	Study area:			
		Waterbody	Distance	Direction	
		Bijoy (Salda) River	3.55 km	N-NE	
9.	Existence of ESZ / ESA / national park /wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve etc. if any within the study area	No ESZ / ESA / national park /wildlife sanctuary / biosphere reserve / tiger reserve / elephant reserve etc. exists within 10km radius of proposed project site. Two schedule I species namely Capped Langur and Common Pierrot observed in the study area. Wildlife conservation plan has been approved with a financial out lay of Rs. 425 lakhs.			
10.	Archaeological sites/monuments/ historical temples etc.	Boxanagar Stupa lies around 3.5 km towards NW of the project site			No significant impact on the same is envisaged as per the EIA study
11.	Involvement of Critically Polluted Area / Severely Polluted area as per 2018 CEPI Score	Nil			

10. The proposed plant will comprise of Gas Turbine Generator (GTG) – 77.39 MW, Heat Recovery Steam Generator (HRSG) and Steam Turbine Generator (STG) – 37.65 MW.

11. The details of the fuel requirement for the proposed project along with its source and mode of transportation is given as below:

Details	Fuel requirement (MTPA)	Source	Distance from site (Kms)	Mode of Transportation
Proposed TPP	Natural Gas (0.58 MMSCMD)	ONGC Gas Collecting Station	0.3	Underground Pipeline

12. The water requirement for the proposed project is estimated as 576 m³/day, out of which 480 m³/day of fresh water requirement will be obtained from the existing borewell and the remaining requirement of 96 m³/day will be met from Treated effluent from ETP. The permission for drawl of groundwater is being obtained from CGWA. The water will be transported to the plant site through underground pipeline. The specific water consumption for the power plant is 4 m³/MW_{hr}.

13. The power requirement for the proposed project is estimated as 1 MW, out of which 1 MW will be obtained from the National Grid and 2 nos. of 630 KVA DG Sets (only in case of power failure).

14. Baseline Environmental Studies: [Season 1: 1st October to 31st December 2020; Season 2: 1st January 2021 to 31st March 2021 Season 3: 1st April 2021 to 30th June 2021 and Season 4: 1st March 2024 to 31st May 2024]

Period	Details	Additional study (if any)
AAQ parameters at 9 Locations (min and max)	PM _{2.5} =11.3 To 28.6 µg/m ³ PM ₁₀ = 32.3 To 59.8 µg /m ³ SO ₂ = 11.7 to 26.5 µg/m ³ Nox = 12.0 To 29.5 µg/m ³ CO = 0.0 To 0.01 mg/m ³ (Below Detectable Limit)	-
Incremental GLC level	PM= Nil SO ₂ =Nil Nox =1.4µg/m ³ (Level at 0.55 km in S Direction)	-

Period	Details	Additional study (if any)
	CO=0.01 µg/m ³ (Level at 0.55 km in S Direction)	
Ground water quality at 12 locations	pH: 7.01 to 7.73, Total Hardness: 8.16 to 19.39 mg/l, Chlorides: < 5 to 9.85 mg/l, Fluoride: 0.0 to 0.1 mg/l, Heavy metals: < 0.05.	-
Surface water quality at 19 locations	pH: 7.23 to 7.84; DO: 4.2 to 6.2 mg/l BOD: < 3 mg/l. COD from 4 to 7 mg/l	Surface water monitoring included 10 locations within 2 km radius of the project as stipulated in granted ToR dated 07/02/2024
Effluent generation details and its treatment	Effluent generation from TPP: 169 m ³ /day Mode of treatment & reuse: ETP of suitable capacity (8 m ³ /day) will be installed. Treated water (about 112.5 m ³ /day) shall be used in landscaping & greenbelt development Domestic wastewater generation: 13 m ³ /day Mode of treatment & reuse: Domestic waste water shall be directed to ETP, and treated water shall be used in landscaping & greenbelt development	-
Noise levels Leq (Day and Night)	48.9 to 65.9 dBA for the Daytime and 39.2 to 53.8 dBA for the Night time.	Noise monitoring included 4 locations at immediate impact zone i.e. within 1 km radius of the project site

15. The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment/ Disposal	Remarks
1	Domestic waste during Construction phase	350 contract Workers and 30 TSECL staff	55.48	Handed over to authorized contractors/vendors of the Manikyanagar Gram Panchayat	
2	Domestic waste during Operation phase	20 vendors and 78 TSECL staff	14.235	Handed over to authorized contractors/vendors of the Manikyanagar Gram Panchayat	
3	Used Oil (5.1)	Industrial operations using oil as lubricant	0.1	Handed over to authorized contractors/vendors	
4	Wastes or residues containing oil (5.2)	Industrial operations using oil as lubricant	0.05	Handed over to authorized contractors/vendors	
5	C&D waste	Demolition of existing structures at the proposed project site	40	Used in site levelling activities	

16. Public Consultation:

Details of advertisement given	Daily Sambad 16.06.2024 Syandan Patrika dated 16.06.2024 Financial Express Mumbai dated 16.06.2024
Date of public consultation	15.07.2024
Venue	Geetanjali Multipurpose Community Hall, Manikyanagar, district Sepahijala, Tripura
Presiding Officer	Shri Subrata Majumdar,

	Additional District Magistrate & Collector, Sepahijala, Tripura
Major issues raised	<ul style="list-style-type: none"> · Demand of setting up a Fire Service / Station in Manikyanagar village. · Necessary action for proper management of the earth cuttings / top soil which will be generated during site clearance activities, so that no agricultural land gets damaged · Demand for development of roads in Manikyanagar GP area as well as surrounding areas, since the existing roads are bound to be damaged due to movement of heavy machinery & other activities during construction phase of the project · PP to take appropriate measures for control of Noise pollution · demand for local employment and requested TSECL officials to supply uninterrupted electricity supply to the area · management of solid, liquid and hazardous wastes and to ensure scientific disposal of the same · demanded free electricity connection for their families · people to extend their cooperation to TSECL to meet the objectives of the project
No. of people attended	149

Action plan as per MoEF&CC O.M. dated 30/09/2020

S. No	Name of the Activity	Physical Targets Action Plan (Activities undertaken as part of CER)	Financial Commitment by TSECL (in Rs. Lakhs)						
			1	2	3	4	5	Total Expenditure in Lakhs	Recurring Expenditure (Rs. In Crores)
1.	Fire service	Setting up of Fire service in Manikyanagar GP area	40	5	5	5	5	60	NA
		Tree plantation, including necessary maintenance of the plants to ensure at least 90% survival rate, as required in consultation with State Forest Department (Range Forest Officer - Boxanagar Range, Sonamura Forest Sub-division)	15	15	15	10	10	65	NA
2.	Construction / Improvement of roads	Construction / Improvement of roads in Manikyanagar GP area and other areas in Project vicinity, as required, in consultation with Public Works Department, Tripura	40	40	40	15	15	150	NA
3.	Employment	Local employment generation	10	10	10	10	10	50	NA
4.	Solar Panel	Solar Panels for Low-Income Households	10	10	10	10	10	50	NA

S. No	Name of the Activity	Physical Targets Action Plan (Activities undertaken as part of CER)	Financial Commitment by TSECL (in Rs. Lakhs)						
			1	2	3	4	5	Total Expenditure in Lakhs	Recurring Expenditure (Rs. In Crores)
		within immediate impact zone of the project, to ensure free electricity access							
5.	Nursery	Setting up of Nursery school in Manikyanagar-Veluarchar area	24	6	6	6	6	48	NA
	Total Public Hearing commitments by TSECL (in Rs. Lakh)		139	86	86	56	56	423	NA

17. The capital cost of the proposed project is Rs. 845.36 Crores and the capital cost for environmental protection measures is proposed as Rs. 3.24 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 30/- Lakhs. The employment generation from the proposed project during construction is 30 nos. and during operational is 78 nos. and the details of cost for environmental protection measures is as follows:

Item	Quantity	Estimated Cost (INR)
CONSTRUCTION PHASE		
TPGL Safeguard Unit during construction for 36 person months full-time	× 3 safeguard officers	54,00,000
PIC Safeguard Specialists	12 person months x 4 senior specialists plus logistics	24,00,000
	36 person months x 2.25 specialists full time on site	40,50,000
External Environmental Monitor 36 months construction	x 1 external expert plus logistics	1,60,000
ADB TA Consultant Support (Noise Expert, Air Quality Expert, ESMS Expert etc.)	4 person months input	60,00,000
Contractors Safeguard Officers for 36 person months	x 2 senior safeguard officers	5,00,000
	x 3 safeguard officers	3,00,000
Hydrogeological assessment	Once before approval of detailed design	60,000
Revised assessment for detailed design (noise, air quality etc.)	Once before approval of detailed design	30,000
Contractor's general EMP implementation cost (including PPE provision, blacktopping of access road etc.)	Estimated as 2.5% of the contractor's civil works ^[1]	4,50,000
Air quality mitigation	Increase in stack height above GOI requirements to meet SPS 2009 requirements	2,00,000
Noise mitigation	Additional design requirements to meet SPS 2009 requirements	2,00,000

Item	Quantity	Estimated Cost (INR)
Continuous stack emission monitoring system installation	HRSG and Bypass (when operated)	40,000
Continuous wastewater monitoring system installation	Process water and sanitary sewage effluent	40,000
Compensatory reforestation	249 to be felled. To replant 2490 (10:1)	24,90,000
Construction environmental monitoring/laboratory tests	36 months	45,90,000
Training and capacity building	Training program	25,00,000
Ongoing Consultation, GRM Implementation, including COVID-19 Precautions for Consultation or GRC Meetings to cover ad hoc cost of printing leaflets, purchasing masks and hand sanitizers for consultees, hire of venue or food purchase etc.	Estimated lump sum	50,000
Construction Sub Total		2,94,60,000
Contingency @ 10%		29,46,000
Total Budget		3,24,06,000
OPERATION PHASE (ANNUAL COST)		
TPGL Safeguard Unit during operation for 12 person months full-time (annual cost repeats)	x 2 safeguard officer	1,00,000
External Environmental Monitor	x 1 external expert	40,000
Operational environmental monitoring/laboratory tests (annual cost repeats)	12 months; quarterly	25,90,000
Operation Sub Total per Year of Operation		27,30,000
Contingency @ 10%		2,73,000
Total Budget per Year of Operation		30,03,000

18. Proposed greenbelt will be developed in 1.24 ha area which is about 33% of the total project area. A 3 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 3000 saplings will be planted and nurtured in 1.8 hectares in 5 years.

19. Summary of violation under EIA, 2006/court case/show cause/direction if any: Nil.

20. Name of the EIA Consultant: M/s MITCON Consultancy & Engineering Services Ltd. QCI NABET Accreditation No. – NABET/EIA/24-27/RA 0343; Valid up to: 05/02/2027.

21. The written submissions made during the meeting is as below:

i. As per the application submitted for grant of prior Environmental Clearance proponent mentioned that there was no forest land involved in the required project plot, due to some oversight. However, it was noticed that around 0.74 ha. forest land is involved out of the total 4.5 ha. area required for the project.

ii. It has been decided by M/s. TSECL to exclude the 0.74 ha. of forest land in the above proposal, under consideration in the Ministry for Forest area conservation. Accordingly, now the total land requirement for the above project will be 3.76 ha. in place of 4.5 ha. In this regard, the following is submitted for your kind consideration:

- a) Map of the changed Project plot area of 3.76 ha. along with revised geo-coordinates
- b) Land Use break-up of the revised project plot area of 3.76 ha.;
- c) Revised Plant Layout Plan
- d) Undertaking from M/s. TSECL stating that 0.74 ha. of Forest land will not be used for any project-related activity.

Observations and deliberation of the EAC

22. The Committee observed and noted the following:

- i. Total land in possession of TSECL is 55.89 acres (22.62 ha.). Out of 22.62 Ha, TSECL is already operating 3x21 MW Gas based Thermal Power Station in an area of 7 Ha for which EC has been obtained from MoEF&CC under violation category vide letter no. J-13012/13/2019-IA.I(T) dated 6/11/2023. Natural and Community Resource Augmentation plan is being implemented in project area by the PP & status of the same is being furnished in the Post EC six monthly compliance report. Additionally, Rs 3.79 Cr. was paid as Environmental Damage Penalty to TSPCB.
- ii. The instant project of TSECL is for setting up of a new power plant with a capacity of 120 MW Closed Cycle Gas Turbine (CCGT) Power Plant in an area of 3.76 Ha (out of 22.62 Ha) is located at Manikyanagar Village, Veluarchar Tehsil, Sepahijala District, Tripura State.
- iii. The existing project and instant proposed project is not linked with each other. All utilities and environmental infrastructure are independently proposed.
- iv. As per the proposal submitted by the proponent, total project area is 4.5 Ha which comprises of 0.74 Ha of forest land. However, M/s. TSECL excluded the 0.74 ha. of forest land in the above proposal for Forest area conservation. Accordingly, now the total land requirement for the above project will be 3.76 ha. in place of 4.5 ha. In this regard, PP has submitted the following before the EAC:
 - a) Map of the changed Project plot area of 3.76 ha. along with revised geo-coordinates
 - b) Land Use break-up of the revised project plot area of 3.76 ha.;
 - c) Revised Plant Layout Plan
 - d) Undertaking from M/s. TSECL stating that 0.74 ha. of Forest land will not be used for any project-related activity.
- v. The EAC also took into consideration the drone survey of the project site and kml file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH.
- vi. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site as ascertained from DSS.
- vii. The Committee deliberated on the baseline data and incremental GLC due to the proposed project and observed that AAQ levels are within NAAQS.
- viii. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components.
- ix. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

Recommendations of the Committee:

23. The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** for grant of Environmental Clearance to the proposed 120 MW Closed Cycle Gas Turbine (CCGT) Power Plant by **M/s. Tripura State Electricity Corporation Limited (TSECL)** located at Village Manikyanagar (Rokhia), District Sepahijala, Tripura, under the provisions of EIA Notification, 2006 subject to to uploading of written submission on PARIVESH Portal and stipulation of specific conditions and standard/general conditions (**Annexure 1**).

24. The MoEF&CC has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the EAC hereby accords Environmental Clearance to **M/s. Tripura State Electricity Corporation Limited** for proposed 120 MW Closed Cycle Gas Turbine (CCGT) Power Plant located at Village Manikyanagar (Rokhia), District Sepahijala, Tripura, subject to compliance of the Specific/General environmental conditions (**Annexure 1**).

25. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

26. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

27. The PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.

28. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

29. General Instructions:

(i) The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC website where it is displayed.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn must display the same for 30 days from the date of receipt.

(iii) The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.

(iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

(v) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(vi) The Regional Office of this MoEF&CC shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(vii) Validity of EC is as per the provision of EIA Notification, 2006 and its subsequent amendment.

30. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance

Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

31. This issue with an approval of the Competent Authority

Yours faithfully,

(Sundar Ramanathan)
Scientist 'E'/Additonal Director
Tel: 011- 20819378
Email- r.sundar@nic.in

Copy To

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Deputy Director General of Forests, Regional Office (NEZ), Law-U-Sib, Lumbatngen, Near MTC Workshop, Shillong.
3. The Principal Secretary, Department of Forests, Government of Tripura, New Secretariat Complex, Agartala- 799001.
4. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
5. The Chairman, Tripura State Pollution Control Board, Parivesh Bhawan, Pandit Nehru Complex, Gorkhabasti, P.O. Kunjaban Agartala, Tripura-799006.
6. District Collector, Sepahijala, Government of Tripura.
7. PARIVESH Portal

Annexure 1

Specific EC Conditions for (Thermal Power Plants)

1. A. Environment Management

S. No	EC Conditions
1.1	In case fuel for running the power plant is proposed to be changed from natural gas to other fuel (liquid or solid), the project proponent shall apply for such a change in environmental clearance along with necessary documents as required under EIA notification, 2006 (and its amendments).
1.2	Project proponent shall not disturb 0.74 Ha of forest land located adjacent to the project site as committed.
1.3	Hydro-geological study of the area shall be reviewed annually to assess the sustainability of the source of water particularly in lean season. The review report duly vetted by the concerned Department in the State Government and shall be submitted to the Regional Office of MoEF&CC. In case adverse impact on ground and surface water is observed, immediate mitigating steps to contain the same shall be undertaken.
1.4	A sewage treatment plant shall be established and the treated sewage shall be used for raising greenbelt/plantation.
1.5	A well designed rainwater harvesting plan be drawn in consultation to Central Ground Water Board within a period of three months from the date of issuance of clearance and details shall be furnished.

S. No	EC Conditions
	Status of implementation shall be submitted to the Regional Office of the MoEF&CC.
1.6	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Regional Office of the MoEF&CC.
1.7	Noise levels emanating from turbines shall be so controlled using noise attenuation devices so that the noise in the work zone is kept below 75 dBA at 1m distance from the source of noise. Workers in high noise area should be provided the requisite personal protective equipment like earplugs/ear muffs etc. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined and there audiometric record is maintained. Medical assistance for any hearing loss including shifting to non- noisy/less noisy areas should also to be done.
1.8	PP shall implement the protective measure proposed in Environment Management Plan (EMP) in a time-bound manner. The budget earmarked for the same is Rs 3.24 Crores (Capital) and Rs 0.30 crores (recurring) and should be kept in separate accounts and audited annually. The implementation status along with the amount spent with documentary proof shall be submitted to the concerned Regional Office for the activities carried out during the previous year.
1.9	As committed by the PP, Zero liquid discharge shall be adopted.
1.10	PP shall ensure that diesel operated vehicles will be switched over to E-Vehicles/ CNG vehicles in a time bound manner, replace the passenger vehicles to E-vehicle in phased manner.
1.11	Green belt shall be developed in an area of 1.24 ha (33 % of the total project area). Local and native species will be planted with a density of 2500 trees per hectare in a time frame of 02 years from the date of grant of EC in consultation with Forest department/ Gram Panchayat/. The budget earmarked for the green belt, plantation inside and outside the plant area, along the transportation route and Miyawaki Plantation area shall be kept in a separate account and audited annually. PP should annually submit the audited statement of expenditure along with proof of activities viz. photographs (before & after with geolocation date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC and on PARIVESH Portal as the case may be for the activities carried out during previous year.
1.12	Wildlife conservation plan as approved by the competent authority shall be implemented. The final Wildlife conservation plan duly approved by the CWLW shall be submitted to RO, MoEF&CC within a time frame of three months from the date of grant of EC and the budget approved by the concerned authority shall be deposited in government account.
1.13	24x7 online monitoring system for ambient air quality shall be established with its connectivity with SPCB and CPCB server. Stack monitoring shall be done through 24X7 online monitoring system. The real time data so generated from CAAQMS shall be uploaded on company website and linked it with website of CPCB &SPCB. Further, LED display of air quality (Continuous Online monitoring) shall be installed at prominent locations preferably outside the plant's main entrance for public viewing and in administrative complex. and maintenance of devices shall be done regularly.
1.14	Water Sprinkling on roads inside the plant area/ administrative/ residential areas and outside the plant area at least for 2KM on a regular basis to control the air pollution. A logbook shall be maintained for the activity and be in six-monthly compliance report.

S. No	EC Conditions
1.15	Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
1.16	Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
1.17	Monitoring of surface water quality and Ground Water quality shall also be regularly conducted in and around the project site and records to be maintained. 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. The monitored data shall be submitted regularly on PARIVESH portal as part of Half Yearly compliance report.
1.18	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
1.19	PP shall ensure that all types of plastic waste generated from the plant shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2016 (as amended). In pursuant to the Ministry's OM dated 18/07/2022. PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single Use Plastic (SUP) in order to ensure compliance of Ministry's Notification published by the Ministry on 12/08/2021. A report along with photograph on the measures taken shall also be included in the six monthly compliance report being submitted by PP.
1.20	PP is advised to implement the 'Ek Ped Maa Ke Naam' Campaign which was launched on 5th June 2024 on the occasion of the World Environment Day to increase the forest cover across the Country. This plantation drive is other than Green belt development. The action in this regard shall be submitted concerned RO in six monthly report.

2. B. Socio-economic

S. No	EC Conditions
2.1	A vision document comprising prospective plan for implementation of various CER activities, plantation programme outside the project cover area, rejuvenation and conservation of water bodies within 5km radius of the project cover area shall be prepared and submitted to the Regional Office of the Ministry within 6 months. Implementation status of the same shall be reported to the Regional office in 6 monthly compliance reports.
2.2	The budget proposed for PH is Rs 4.23 Crores. The budget proposed shall be kept in a separate account and audited annually. Project proponent shall implement the action plan to address the issues raised during public hearing within a time frame of 3 years from the date of grant of EC. PP shall submit the progress report regarding the implementation of action plan to concerned RO along with the six monthly compliance report. PP shall provide the health services and organize medical camps for residents of the surrounding villages as committed during the meeting. PP shall carry out the analysis of the data of medical camp and take all necessary steps so as to cover maximum number of persons.

S. No	EC Conditions
2.3	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
2.4	The establishment of a robust public grievance redressal mechanism to address concerns and complaints from local communities regarding the power plant's operations, environmental impacts, or social issues shall be developed. A Senior Officer shall review the functioning of the mechanism twice in a month.

3. C. Miscellaneous

S. No	EC Conditions
3.1	An Environmental Cell headed by the Environment Manger with postgraduate qualification in environmental science/environmental engineering, shall be created. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
3.2	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
3.3	All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.
3.4	PP shall install minimum 1 MW solar power generation facility within plant premises.

Standard EC Conditions for (Thermal Power Plants)

1. Statutory Compliance

S. No	EC Conditions
1.1	Emission Standards for Thermal Power Plants as per Ministry's Notification S.O. 3305(E) dated 7.12.2015, G.S.R.593(E) dated 28.6.2018 and as amended from time to time shall be complied.
1.2	Part C of Schedule II of Municipal Solid Wastes Rules, 2016 dated 08.04.2016 as amended from time to time shall be complied for power plants based on Municipal Solid Waste.
1.3	MoEF&CC Notifications on Water Consumption vide Notification No. S.O. 3305(E) dated 07.12.2015 read with G.S.R 593 (E) dated 28.6.2018 as amended from time to time shall be complied.
1.4	The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
1.5	No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.

S. No	EC Conditions
1.6	Groundwater shall not be drawn during construction of the project. In case, groundwater is drawn during construction, necessary permission be obtained from CGWA.

2. Air Quality Monitoring And Management

S. No	EC Conditions
2.1	Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NOX Burners with Over Fire Air (OFA) system shall be installed to achieve NOX emission standard of 100 mg/Nm ³ .
2.2	High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/Nm ³ .
2.3	Stacks of prescribed height 60 m shall be provided with continuous online monitoring instruments for SO ₂ , Nox and Particulate Matter as per extant rules.
2.4	Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.
2.5	Adequate dust extraction/suppression system shall be installed in storage yards and material transfer points to control fugitive emissions.
2.6	Appropriate Air Pollution Control measures (DEs/DSs) be provided at all the dust generating sources including sufficient water sprinkling arrangements at various locations viz., roads, excavation sites, crusher plants, transfer points, loading and unloading areas, etc.

3. Noise Pollution And Its Control Measures

S. No	EC Conditions
3.1	The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
3.2	Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
3.3	Periodical medical examination on hearing loss shall be carried out for all the workers and maintain audiometric record and for treatment of any hearing loss including rotating to non-noisy/less noisy areas.

4. Human Health Environment

S. No	EC Conditions
4.1	Bi-annual Health check-up of all the workers is to be conducted. The study shall take into account of chronic exposure to noise which may lead to adverse effects like increase in heart rate and blood

S. No	EC Conditions
	pressure, hypertension and peripheral vasoconstriction and thus increased peripheral vascular resistance. Similarly, the study shall also assess the health impacts due to air polluting agents.
4.2	Baseline health status within study area shall be assessed and report be prepared. Mitigation measures should be taken to address the endemic diseases.
4.3	Impact of operation of power plant on agricultural crops, large water bodies (as applicable) once in two years by engaging an institute of repute. The study shall also include impact due to heavy metals associated with emission from power plant.
4.4	Sewage Treatment Plant shall be provided for domestic wastewater.

5. Water Quality Monitoring And Management

S. No	EC Conditions
5.1	Induced/Natural draft closed cycle wet cooling system including cooling towers shall be set up with minimum Cycles of Concentration (COC) of 5.0 or above for power plants using fresh water to achieve specific water consumption of 2.5 m ³ /MWhr. (Or) Induced/Natural draft open cycle cooling system shall be set up with minimum Cycles of Concentration (COC) of 1.5 or above for power plants using sea water.
5.2	Rainwater harvesting in and around the plant area be taken up to reduce drawl of fresh water. If possible, recharge of groundwater to be undertaken to improve the ground water table in the area.
5.3	Records pertaining to measurements of daily water withdrawal and river flows (obtained from Irrigation Department/Water Resources Department) immediately upstream and downstream of withdrawal site shall be maintained.
5.4	In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120 consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant.
5.5	Regular (at least once in six months) monitoring of groundwater quality in and around the ash pond area including presence of heavy metals (Hg, Cr, As, Pb, etc.) shall be carried out as per CPCB guidelines. Surface water quality monitoring shall be undertaken for major surface water bodies as per the EMP. The data so obtained should be compared with the baseline data so as to ensure that the groundwater and surface water quality is not adversely impacted due to the project & its activities.
5.6	The treated effluents emanating from the different processes such as DM plant, boiler blow down, ash pond/dyke, sewage, etc. conforming to the prescribed standards shall be re-circulated and reused. Sludge/ rejects will be disposed in accordance with the Hazardous Waste Management Rules.
5.7	Hot water dispensed from the condenser should be adequately cooled to ensure the temperature of the released surface water is not more than 5 degrees Celsius above the temperature of the intake water.

S. No	EC Conditions
5.8	Wastewater generation of 169 m3 from various sources (viz. cooling tower blowdown, boiler blow down, etc) shall be treated to meet the standards of pH: 6.5-8.5; Total Suspended Solids: 100 mg/l; Oil & Grease: 20 mg/l; Copper: 1 mg/l; Iron:1 mg/l; Free Chlorine: 0.5; Zinc: 1.0 mg/l; Total Chromium: 0.2 mg/l; Phosphate: 5.0 mg/l;
5.9	Sewage generation of 13 m3 will be treated by setting up Sewage Treatment plant to maintain the treated sewage characteristics of pH: 6.5-9.0; Bio-Chemical Oxygen Demand (BOD): 30 mg/l; Total Suspended Solids: 100 mg/l; Fecal Coliforms (Most Probable Number):<1000 per 100 ml.

6. Risk Mitigation And Disaster Management

S. No	EC Conditions
6.1	Adequate safety measures and environmental safeguards shall be provided in the plant area to control spontaneous fires in storage yard, especially during dry and humid season.
6.2	Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made as per the extant rules in the plant area in accordance with the directives of Petroleum & Explosives Safety Organisation (PESO). Sulphur Content in the liquid fuel should not exceed 0.5%.
6.3	Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
6.4	Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
6.5	Regular mock drills for on-site emergency management plan and Integrated Emergency Response System shall be developed for all kind of possible disaster situations.

7. Green Belt And Biodiversity Conservation

S. No	EC Conditions
7.1	Green belt shall be developed in an area of 33% of the total project with indigenous native tree species in accordance with CPCB guidelines. The green belt shall inter-alia cover an entire periphery of the plant. Concurrent plantation shall be done and all the earmarked area shall be suitably planted with native species in three rows within the next 2 years.
7.2	In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.

8. Waste Management

S. No	EC Conditions
8.1	Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.

S. No	EC Conditions
8.2	Toxicity Characteristic Leachate Procedure (TCLP) test shall be conducted for any substance, potential of leaching heavy metals into the surrounding areas as well as into the groundwater.
8.3	In case of waste-to-energy plant, major problems related with environment are fire smog in MSW dump site, foul smell and impacts to the surrounding populations. Therefore, the following measures are required to be taken up: i) Water hydrant at all the dumpsites of MSW area to be provided so that the fire and smog could be controlled. ii) Sprayer like microbial consortia may be provided for arresting the foul smell emanating from MSW area.

9. Monitoring Of Compliance

S. No	EC Conditions
9.1	Environmental Audit of the project be taken up by the third party for preparation of Environmental Statement as per Form-V & Conditions stipulated in the EC and report be submitted to the Ministry.
9.2	Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
9.3	Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates.
9.4	Monitoring of Carbon Emissions from the existing power plant as well as for the proposed power project shall be carried out annually from a reputed institute and report be submitted to the Ministry's Regional Office.
9.5	Energy and Water Audit shall be conducted at least once in two years and recommendations arising out of the Report should be followed. A report in this regard shall be submitted to Ministry's Regional Office.
9.6	An Environmental Cell headed by the Environment Manager with postgraduate qualification in environmental science/environmental engineering, shall be created. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
9.7	<p>The project proponent shall (Post-EC Monitoring):</p> <ol style="list-style-type: none"> send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government; upload the clearance letter on the web site of the company as a part of information to the general public. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at http://parviesh.nic.in. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;

S. No	EC Conditions
	<p>e. monitor the criteria pollutants level namely; PM (PM10& PM2.5incase of ambient AAQ), SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;</p> <p>f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;</p> <p>g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;</p> <p>h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project and the date of commencement of the land development work.</p>

10. Corporate Environmental Responsibility (CER) Activities

S. No	EC Conditions
10.1	<p>CER activities will be carried out as per Ministry's OM F.No.22- 65/2017- IA.III dated 30th September, 2020 and 22-65/2017- IA.III dated 25.02.2021 or as proposed by the PP in reference to Public Hearing or as earmarked in the EIA/EMP report along with the detailed scheduled of implementation with appropriate budgeting. Statement on the commitments (activity-wise) made during public hearing to facilitate the discussion on the CER in compliance of the shall be submitted.</p>