



File No: J-13012/112/2010-IA.II(T)  
Government of India  
Ministry of Environment, Forest and  
Climate Change  
IA Division  
\*\*\*



Date 11/09/2025



To,

Sh. Toopran Vishal  
M/s. NTPC Limited  
NTPC Limited, NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi – 110003  
E-mail: environment.ntpc@gmail.com

**Subject:** Expansion of Telangana Super Thermal Power Project by adding 3x800MW (Phase II) in existing 2x800MW (Phase I) by M/s NTPC Limited located at village Ramagundam, District Peddapalli, Telangana -Environmental Clearance - regarding

Sir/Madam,

This is with reference to your online application vide proposal No. IA/TG/THE/544226/2025 dated 10.07.2025 along with written submission dated 26.08.2025 for seeking Environment Clearance under the provisions of the EIA Notification, 2006 for the project mentioned above.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25A0601TG5351881N
(ii) File No.	J-13012/112/2010-IA.II(T)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(d) Thermal Power Plants
(vi) Sector	Thermal Projects
(vii) Name of Project	Telangana Super Thermal Power Project, Phase-II (3x800MW)
(viii) Name of Company/Organization	M/s. NTPC Limited
(ix) Location of Project (District, State)	Peddapalli, Telangana
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. M/s. NTPC Limited has made an online application vide proposal no. IA/TG/THE/544226/2025 Dated 10.07.2025 along with copy of EIA/EMP report, Form-I (CAF, Part A, B & C) and Certified compliance report seeking Environment Clearance

(EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at item no. 1(d) – Thermal Power Plants under Category ‘A’ of the schedule of the EIA Notification, 2006 and appraised at Central Level.

4. The instant Proposal was considered by the EAC – Thermal in its 28th meeting held during 12-13th August, 2025. The proponent uploaded the written submissions through PARIVESH portal on 26/08/2025. The MoM for the same may be seen using the web link: <https://parivesh.nic.in>.

#### **Details submitted by the project proponent**

5. The project of Telangana Super Thermal Power Project, Phase-II (3x800MW) located at village Ramagundam, Kundanpalli, Ranapur etc. District Peddapalli, of Telangana State is for enhancement of power generation capacity from 1600 MW to 4000 MW with addition of 3 Units of 800 MW each based on Ultra Super Critical Technology & Air-Cooled Condenser.

6. The existing project was accorded environmental clearance vide Ir. No. J-13012/112/2010-IA. II(T) dated 20/01/2016 from MoEF&CC. The Environmental Clearance was amended vide letter dated 06.03.2017, 21.10.2020, & 08.08.2022. Consent to Operate for the existing Phase-I (2x800MW) Units was accorded by Telangana State Pollution Control Board (TSPCB), Hyderabad vide Consent Order No. 20234665654 dated 16.08.2023. The validity of CTO is up to 31.12.2028.

#### **7. Implementation status of the existing EC dated 20/01/2016**

S. N.	Configuration	Capacity (MW)	As per EC dated	Implementation Status as on date	Production as per CTO
1	2x800 MW	1600	20/01/2016	Both the units have been commissioned and are under Commercial Operation.	1600 MW

8. **Certified compliance report from Regional Office:** The Status of compliance of earlier EC was obtained from MoEF&CC Sub-Office, Hyderabad vide letter no. 1-53/2024/SO-HYD dated 31.12.2024 in the name of NTPC Limited Telangana. The Action taken report regarding the partially/non-complied conditions was submitted to Sub-Office, MoEF&CC-Hyderabad, Telangana vide letter no. 09/EMG/Telangana Phase-II/2025/231 dated 06.02.2025. MoEF&CC (RO), Sub-Office, Hyderabad evaluated the same and subsequent submissions and has issued verified compliance status and issued report on 27.06.2025.

**In addition to the above, Status of installation of Flue Gas Desulphurization is furnished as per the MoEF&CC Notification dated 11/07/2025:**

- i. Categorization details of TPP as per CPCB
  - C: Other than those included in Category A and B
- ii. Sulfur content of the coal to be fired in the boiler – 0.4- 0.6 %:
- iii. Status of FGD installation for existing unit:
  - FGD erection, Commissioning status: FGD Commissioned for Telangana Phase-I (Unit-I&II) and COD declared on 15.09.2024 & 30.09.2024 respectively.
  - FGD operational status: Operational
  - Emission Norms compliance status: Yes
  - Gypsum Disposal: Gypsum is being sold to cement industries through e-auction by NTPC Vidyut Vyapar Nigam Limited (NVVN).
- iv. Action plan for installation of new stack in compliance to the notification number GSR 742 (E) dated the 30/08/1990 for the proposed expansion: Installation of 275m high stacks envisaged for the proposed expansion project in compliance to the notification GSR 742(E) dated 30.08.1990 as per Notification dated 11/07/2025.

#### **9. The detail of the ToR is furnished as below:**

Proposal No. with Date	Consideration	Details	Date of accord	ToR Validity
IA/TG/THE/458070/2024 dated 14/02/2024	6 <sup>th</sup> EAC(Thermal) Meeting held on 27.02.2024.	Terms of Reference		09.04.2028

#### 10. Environmental site settings

S. No.	Particulars	Details				Remarks	
1.	Total land	738.5503 Ha				Land Use: Existing under possession land (491.6923 Ha) is Industrial Land, Proposed to be acquired land (246.8580 Ha) is Agricultural land.	
2.	Land use break up	Telangana STPP Land Break-up (in Ha.)				Out of total project area of 738.5503 Ha., an area of 246.8580 Ha. is proposed to be acquired for which Preliminary notification dated 05-09-2024 and demand letter dated 10.09.2024 has been issued by Revenue Dept.	
		Description		Area for Phase-I (in Ha.)	Area for Phase-II (in Ha.)		Total Area (Phase-I & II) (in Ha.)
		A	Main plant and associated facilities	94.9	127.88		222.78
		B	Ash Dyke Area	80.937	120		200.937
		C	Total area considered for Greenbelt calculation (A+B)	175.837	247.88		423.717
		D	Greenbelt Area	81.138	110.83		191.968
		E	Other Misc. Area	-	122.8653		122.8653
		F	Total Area (C+D+E)	256.975	481.5753		738.5503
3.	Land acquisition details as per MoEF&CC O.M. dated 07/10/2014 & 19/02/2025.	Out of total area of 738.5503 Ha., 491.6923 Ha area is under possession and 246.8580 Ha. proposed to be acquired for which preliminary notification is already issued by State Govt. Main Plant and Associated Facilities for the proposed expansion project is envisaged to be located within the existing plant premises on available area. Approx. 246.858 hectares of land is identified nearby ash pond area of Ramagundam STPS on the Western side from which new Ash Pond is proposed to be developed on 120 Ha.				Land Details for existing available land and proposed acquisition are available and submitted with EC Application.	
		Land Details		Phase-I, Ha.	Phase-II, Ha.		Total, Ha.
		Available Land, Ha.	Govt.	97.9150	149.5280		247.4430
			Pvt.	159.0600	85.1893		244.2493
			Forest	NIL	NIL		NIL
			Total	256.9750	234.7173		491.6923
		To be acquired Land, Ha.	Govt.	NIL	NIL		NIL
			Pvt.	NIL	246.8580		246.8580
			Forest	NIL	NIL		NIL
			Total	NIL	246.8580		246.8580
		Total, ha.		256.9750	481.5753		738.5503
		4.	Existence of habitation involvement	Project site: The land proposed to be acquired is purely agricultural land and no human habitation is involved. The land acquisition process has been initiated by the State Government, but the State Revenue has not proposed			

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	R&R, if any.	<div>any R&amp;R Plan at this stage.</div> <div>Study Area:</div> <div>Details of nearby villages are as per the following:</div> <table><tr><th>Habitation/Village Name</th><th>Distance (km)</th><th>Direction</th></tr><tr><td>Ramagundam Village</td><td>4.5 km</td><td>NWW</td></tr><tr><td>Godavarikhani Town</td><td>3.5 km</td><td>W</td></tr><tr><td>NTPC Township</td><td>2.0 km</td><td>W</td></tr><tr><td>Annapurna Colony</td><td>1.0 km</td><td>N</td></tr><tr><td>Matangi Colony</td><td>1.3 km</td><td>SE</td></tr><tr><td>Elkalpally Village</td><td>5.7 km</td><td>SSE</td></tr><tr><td>Ranapur Village</td><td>6.4 km</td><td>SSW</td></tr><tr><td>Malyalpalli Village</td><td>2.7 km</td><td>W</td></tr></table> <table><tr><th>School</th><th>Distance (km)</th><th>Direction</th></tr><tr><td>Zilla Parishad High School</td><td>0.9 km</td><td>NE</td></tr><tr><td>St. Claire High School</td><td>2.0 km</td><td>ENE</td></tr><tr><td>Kendriya Vidyalaya</td><td>2.3 km</td><td>NE</td></tr><tr><td>Sachdeva School</td><td>1.0 km</td><td>NE</td></tr><tr><td>Sri Chaitanya</td><td>1.6 km</td><td>NE</td></tr><tr><td>Rao's Techno School</td><td>1.2 km</td><td>NNE</td></tr><tr><td>St Mathews High School</td><td>1.4 km</td><td>N</td></tr><tr><td>Vishwa Shanthi High School</td><td>1.3 km</td><td>NNE</td></tr></table> <table><tr><th>Hospital</th><th>Distance (km)</th><th>Direction</th></tr><tr><td>ESI Clinic/ Dispensary</td><td>1.1</td><td>NNE</td></tr><tr><td>Dhanvantari Hospital</td><td>1.9</td><td>E</td></tr><tr><td>SIMS medical college</td><td>3.5 km</td><td>NE</td></tr></table> <div>Protection measures to be adopted are as follows:</div> <div>Control of Air Emissions: Provision of High Efficiency ESP, Low NOx Burner &amp; Over Fire Air System, Dust Extraction Dust Suppression, Dry Fog Dust Suppression, Fog Cannons, Water Sprinkling on Hauling Roads ·</div> <div>Noise: Acoustic Enclosures &amp; barriers</div> <div>Greenbelt Buffer: Development of dense greenbelt in the periphery of plant as well as towards the side of villages/ habitations, Afforestation/ Miyawaki Plantation on available land.</div> <div>Wastewater: ETP, STP, AWRS, Zero Liquid Discharge · Rainwater Harvesting, Watershed Development in the vicinity.</div> <div>Safety: Display signages, speed breakers, and crossing guards provision; optimization of heavy vehicle movement near villages, Disaster Management Plan &amp; Provisions.</div> <div>Health &amp; Awareness: Regular health camps, distribution of masks, and environmental awareness programs for surrounding community.</div> <div>A 25–50 m buffer from the Reserve Forests will be maintained.</div> <div>No project activity to encroach upon forest land.</div> <div>Wildlife crossings and signage will be provided based on biodiversity assessment.</div> <div>Native species greenbelt development along the forest boundary.</div> <div>Downcast, low-intensity lighting will be used near forest areas.</div> <div>Night-time construction near sensitive zones will be minimized.</div> <div>Awareness programs on forest and wildlife protection</div>	Habitation/Village Name	Distance (km)	Direction	Ramagundam Village	4.5 km	NWW	Godavarikhani Town	3.5 km	W	NTPC Township	2.0 km	W	Annapurna Colony	1.0 km	N	Matangi Colony	1.3 km	SE	Elkalpally Village	5.7 km	SSE	Ranapur Village	6.4 km	SSW	Malyalpalli Village	2.7 km	W	School	Distance (km)	Direction	Zilla Parishad High School	0.9 km	NE	St. Claire High School	2.0 km	ENE	Kendriya Vidyalaya	2.3 km	NE	Sachdeva School	1.0 km	NE	Sri Chaitanya	1.6 km	NE	Rao's Techno School	1.2 km	NNE	St Mathews High School	1.4 km	N	Vishwa Shanthi High School	1.3 km	NNE	Hospital	Distance (km)	Direction	ESI Clinic/ Dispensary	1.1	NNE	Dhanvantari Hospital	1.9	E	SIMS medical college	3.5 km	NE	
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5.	Latitude and Longitude of all corners of the project site.	<div>A. Main Plant</div> <table><thead><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr></thead><tbody><tr><td>A</td><td>18°45'05" N</td><td>79°28'30" E</td></tr><tr><td>B</td><td>18°44'55" N</td><td>79°28'26" E</td></tr><tr><td>C</td><td>18°45'01" N</td><td>79°28'07" E</td></tr><tr><td>D</td><td>18°45'06" N</td><td>79°28'05" E</td></tr><tr><td>E</td><td>18°45'12" N</td><td>79°28'08" E</td></tr></tbody></table> <div>B. Ash Pond: Existing</div> <table><thead><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr></thead><tbody><tr><td>A</td><td>18°43'22" N</td><td>79°29'11" E</td></tr><tr><td>B</td><td>18°43'08" N</td><td>79°29'10" E</td></tr><tr><td>C</td><td>18°42'36" N</td><td>79°28'25" E</td></tr><tr><td>D</td><td>18°43'05" N</td><td>79°28'24" E</td></tr></tbody></table> <div>C. Ash Pond: Proposed</div> <table><thead><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr></thead><tbody><tr><td>A</td><td>18°45'24" N</td><td>79°22'46" E</td></tr><tr><td>B</td><td>18°46'6" N</td><td>79°23'31" E</td></tr><tr><td>C</td><td>18°45'48" N</td><td>79°23'37" E</td></tr><tr><td>D</td><td>18°45'30" N</td><td>79°23'37" E</td></tr><tr><td>E</td><td>18°45'16" N</td><td>79°24'9" E</td></tr><tr><td>F</td><td>18°45'6" N</td><td>79°24'25" E</td></tr><tr><td>G</td><td>18°44'54" N</td><td>79°24'25" E</td></tr><tr><td>H</td><td>18°44'47" N</td><td>79°24'28" E</td></tr><tr><td>I</td><td>18°44'56" N</td><td>79°24'10" E</td></tr><tr><td>J</td><td>18°45'9" N</td><td>79°23'31" E</td></tr></tbody></table>	Point	Latitude	Longitude	A	18°45'05" N	79°28'30" E	B	18°44'55" N	79°28'26" E	C	18°45'01" N	79°28'07" E	D	18°45'06" N	79°28'05" E	E	18°45'12" N	79°28'08" E	Point	Latitude	Longitude	A	18°43'22" N	79°29'11" E	B	18°43'08" N	79°29'10" E	C	18°42'36" N	79°28'25" E	D	18°43'05" N	79°28'24" E	Point	Latitude	Longitude	A	18°45'24" N	79°22'46" E	B	18°46'6" N	79°23'31" E	C	18°45'48" N	79°23'37" E	D	18°45'30" N	79°23'37" E	E	18°45'16" N	79°24'9" E	F	18°45'6" N	79°24'25" E	G	18°44'54" N	79°24'25" E	H	18°44'47" N	79°24'28" E	I	18°44'56" N	79°24'10" E	J	18°45'9" N	79°23'31" E	
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6.	Elevation of the project site	The general surface elevation of the main plant area is 140-170 m and ash dyke is 200-210m.	---																																																																		
7.	Involvement of Forest land if any	Status of stage I Forest Clearance: Not Applicable Area of the forest land involved: NIL There is no Forest Land involved in the existing Phase-I and proposed Phase-II expansion Project.	---																																																																		
8.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	<div>Project site: NTPC Water Reservoir (Balancing Reservoir) Study area: 10 km radius from the project area.</div> <table><thead><tr><th>S.N.</th><th>Name</th><th>Distance in Km</th><th>Direction</th></tr></thead><tbody><tr><td colspan="4">Water Bodies</td></tr><tr><td>1</td><td>Godavari River</td><td>4.24</td><td>NE</td></tr><tr><td>2</td><td>NTPC Reservoir (Jyotisagar)</td><td>1.8</td><td>S</td></tr></tbody></table> <div>Plant site (at an elevation of 140-170 m) is higher than the HFL of Godavari River (139m MSL)</div>	S.N.	Name	Distance in Km	Direction	Water Bodies				1	Godavari River	4.24	NE	2	NTPC Reservoir (Jyotisagar)	1.8	S	As per the Irrigation and CAD Dept. letter dtd 06/02/2025, the observed maximum HFL of River Godavari is 139 m at Mancherla gauge station on 14.07.2022. The approx. distance of project site from HFL is 4km.																																																		
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9.	Existence of ESZ/	No Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere	Certificate ref. no.																																																																		

S. No.	Particulars	Details				Remarks
	ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area.	reserve/ tiger reserve/ elephant reserve etc. within the study area of 10 km. <b>List of Reserved and Protected Forests in study area:</b>				821/S4/ 2024(i) dated 29.03.2025 has been issued by Forest Dept.- Govt. of Telangana regarding distance from nearest protected area.
		<b>S.N.</b>	<b>Name</b>	<b>Distance in Km</b>	<b>Direction</b>	
		1	Ramagundam R.F.	0.7	NNW	
		2	Putnur R.F.	3.4	WSW	
		3	Raidandi R.F.	4.0	WNW	
		4	Indaram R.F.	4.0	WSW	
		5	Ramgir R.F.	8.99	S	
		6	Khanam Palli R.F.	7.1	W	
10.	Archaeological sites monuments / historical temples etc.	No Archaeological sites within 10 km of study area.				--
11.	Facility envisaged in CRZ area (Only for coastal power plant)	Not Applicable				--
12.	Involvement of Critically Polluted Area/ Severely Polluted area as per 2018 CEPI score.	No Involvement of Critically Polluted Area/ Severely Polluted area.				--

11. The unit configuration and capacity of existing and proposed project is given as below:

S. N.	Existing Power Plant configuration and capacity	Proposed power plant configuration and capacity	Total Capacity	Technology adopted
1.	Telangana STPP Phase-I 2x800 MW (1600 MW)	Telangana STPP Phase-II 3X800 MW (2400 MW)	4000 MW	<b>Phase-I:</b> Ultra Super Critical with Water-Cooled Condenser System <b>Phase-II:</b> Ultra Super Critical Technology with Air-Cooled Condenser System

12. The details of the fuel (coal/LDO) requirement for the proposed project/ expansion cum 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	Coal/LDO characteristics (Worst case scenario)	Linkage document
Existing TPP Phase-I (2x800 MW)	8 million TPA at 90% PLF	SCCL	15-300	Rail	Ash: 38-43(%) Sulphur: 0.4-0.6 (%) Moisture: 14 % GCV: 3300-3800 Kcal/Kg	Fuel Supply Agreement available with Singareni Collieries Company Limited.
LDO for Phase-I	8000 KL	BPCL, HPCL	590 KM	ROAD	Sulphur: 1.5 % Max. GCV: 9000-10000 Kcal/Kg (approx.) As per applicable IS: 15770:2008	Purchase Orders for Supply of LDO
Proposed	11.70 Million	SCCL	15-300	Rail	Ash: 38-43(%)	SLC (LT) in its meeting

TPP Phase-II (3x800 MW)	TPA at 90% PLF considering 3800 Kcal/kg				Sulphur: 0.4-0.6 (%) Moisture: 14 % GCV:3300-3800 Kcal/Kg	dated 03.01.2024, has recommended Coal supply from SCCL.
LDO for Phase-II	9000 KL	BPCL, HPCL	590 KM	ROAD	Sulphur:1.5 % Max. GCV: 9000-10000 Kcal/Kg (approx.) As per applicable IS: 15770:2008	-

13. **Water requirement:** Existing Water requirement is 1,15,200 m<sup>3</sup>/day which is obtained from Sreepada Yellampali Barrage on Godavari River and permission for the same has been obtained from Irrigation and CAD Dept. Govt of Telangana, vide letter no- G.O.Ms.No.54, dated 31.03.2015 (2.0 TMC Water Allocation given). The water requirement for the proposed for Phase-II project is estimated as 56,520 m<sup>3</sup>/day, which will be obtained from Sreepada Yellampali Barrage on Godavari River. The permission for drawl of 2.73 TMC (~2,11,794 m<sup>3</sup>/day) surface water is obtained from Irrigation and CAD Dept. Govt of Telangana, vide letter no- G.O.Ms.No.147, dated 09.10.2015. The water will be transported to the plant site through pipeline. The Specific water consumption for the power plant is less than 3.0 m<sup>3</sup>/MWhr.

14. **Power requirement:** Existing power requirement of 92MW is obtained from Telangana STPP Phase-I. The power requirement for the proposed project is estimated as 162 MW, which will be obtained from the own generation.

#### 15. Baseline Environmental Studies:

Period	From March 2024 to May 2024	Additional study (if any)
AAQ parameters at 10 locations (min. & max.)	<ul style="list-style-type: none"> <li>PM<sub>10</sub> = 48 - 90 µg/m<sup>3</sup></li> <li>PM<sub>2.5</sub> = 28 - 50 µg/m<sup>3</sup></li> <li>SO<sub>2</sub> = 5 - 17 µg/m<sup>3</sup></li> <li>NO<sub>x</sub> = 14 - 32 µg/m<sup>3</sup></li> <li>CO = 0.39 - 0.62 mg/m<sup>3</sup></li> </ul>	---
Incremental GLC Level	<p><b>PROPOSED TELANGANA PHASE-II PROJECT</b></p> <ul style="list-style-type: none"> <li>PM<sub>10</sub> = 0.566 µg/m<sup>3</sup> (Level at 1.25 km in NNW direction)</li> <li>PM<sub>2.5</sub> = 0.338 µg/m<sup>3</sup> (Level at 1.25 km in NNW direction)</li> <li>SO<sub>2</sub> = 24.4 µg/m<sup>3</sup> (Level at 1.25 km in NNW Direction)</li> <li>NO<sub>2</sub> = 1.88 µg/m<sup>3</sup> (Level at 1.25 km in NNW direction) (@100 mg/nm<sup>3</sup>)</li> <li>NO<sub>2</sub> = 9.44 µg/m<sup>3</sup> (Level at 1.25 km in NNW direction) (@300 mg/nm<sup>3</sup>)</li> </ul> <p><b>Proposed measures for monitoring and Control of Air Pollution:</b></p> <ul style="list-style-type: none"> <li>High efficiency Electrostatic Precipitator (ESP) to control PM emissions with 275 m high stack for wider dispersion.</li> <li>Use of Low-NOx burners and Over Fire Air to control NO emissions.</li> <li>Dust Suppression system in coal handling and ash handling areas.</li> <li>Regular maintenance of equipment to ensure efficient functioning.</li> <li>Continuous Emission &amp; Ambient Air Quality monitoring systems.</li> </ul>	---
Ground water quality at 6 locations	<p>pH: 7.05 to 7.51, Total Hardness: 316 to 436 mg/l, Chlorides: 680 to 142 mg/l, Fluoride: 0.14 to 0.26 mg/l.</p> <p>Heavy Metals:</p> <p>Fe: 0.154 to 0.254 mg/l, Cu: 0.005 to 0.025 mg/l, Zn: 0.025 to 0.442 mg/l, As :0.006 to 0.025 mg/l.</p>	---
Surface water Quality at 6 locations	pH: 7.15 to 7.52; DO: 5.2 to 7.9 mg/l and BOD: from 3.8 to 9.0 mg/l. COD: from 30 to 74 mg/l	
Effluent generation details and its	<p><b>Phase-I: Existing</b></p> <p>Plant Effluent generation: 62,400 KLD</p> <p>Wastewater Treatment / ETP Capacity: 31,200 KLD</p>	

Period	From March 2024 to May 2024	Additional study (if any)																																																
treatment	<p>Mode of treatment &amp; reuse: Neutralization for DM plant regeneration wastewater, Settling pit for Coal Settling, Oil Removal, Lamella clarifier/Tube settler for service water. Treated Wastewater utilization in Cooling water makeup, dust suppression, ash handling, horticulture etc. within the plant maintaining Zero Liquid discharge (ZLD). Rest of the effluents (31,200 KLD) shall be reused/recycled and Zero Liquid Discharge shall be maintained.</p> <p>Domestic Effluent Generation: 1,920 KLD</p> <p>STP Capacity: 3,500 KLD + 75 KLD STP additional</p> <p>Mode of treatment &amp; reuse: STP (MBBR Technology) and Tertiary Treatment and effluent recycling in horticulture maintaining Zero Liquid discharge (ZLD).</p> <p><b>Phase-II: Proposed</b></p> <p>Plant Effluent generation: 32,040 KLD</p> <p>Wastewater Treatment / ETP Capacity: 8,160 KLD</p> <p>Mode of treatment &amp; reuse: Neutralization for DM plant regeneration wastewater, Settling pit for Coal Settling, Oil Removal, Lamella clarifier/Tube settler for service water. Treated Wastewater utilization in Aux. Cooling water makeup, dust suppression, ash handling, horticulture etc. within the plant maintaining Zero Liquid discharge (ZLD). Rest of the effluents (23,880 KLD) shall be reused/recycled and Zero Liquid Discharge shall be maintained.</p> <p>Domestic Effluent Generation: 576 KLD</p> <p>STP Capacity: Existing 3,500 KLD + additional 75 KLD</p> <p>Mode of treatment &amp; reuse: STP with Tertiary Treatment and effluent recycling in horticulture maintaining Zero Liquid discharge (ZLD).</p>																																																	
Noise levels (Day and Night)	40.1 dB(A) to 52.5 dB(A) for the daytime and 35.4 dB(A) to 42.8 dB(A) for the Nighttime.																																																	
Traffic assessment study findings	<ul style="list-style-type: none"><li>• Transportation of raw material (coal) will be done 100 % by rail.</li><li>• Coal is being transported by rail for the existing units and same is envisaged for coal transportation for the expansion as well.</li><li>• Rail Loading Facility has been provided for Dry Ash Loading and transportation also.</li><li>• Due to increase in economic activities, the existing vehicular movements may slightly increase with the proposed expansion.</li><li>• However, there shall be no significant impact due to use of Rail Transportation for coal and direct road connectivity with SH-1 which is passing nearby the project site.</li></ul>																																																	
Soil Quality at 10 Locations	pH range 7.08 to 7.46; Electrical conductivity (EC): 328 to 396 $\mu$ hos/cm; Potassium: 96.3 to 100.5 mg/kg; Nitrogen: 141.8 to 144.9 mg/kg; Phosphorous: 6.6 to 8.4 mg/kg; Cation Exchange Capacity (CEC): 13.92 to 16.84 meq/100 gm.																																																	
Flora & Fauna	<p>List of schedules-I fauna and endangered Flora if any.: Yes</p> <p>List of schedules-I species within the study area is as given below:</p> <table><thead><tr><th>S. N.</th><th>Scientific Name</th><th>Common Name</th><th>IUCN</th></tr></thead><tbody><tr><td>1</td><td>Melursus ursinus</td><td>Sloth Bear</td><td>VU</td></tr><tr><td>2</td><td>Hystrix indica</td><td>Indian porcupine</td><td>LC</td></tr><tr><td>3</td><td>Panthera pardus</td><td>Common Leopard</td><td>VU</td></tr><tr><td>4</td><td>Panthera tigris</td><td>Tiger</td><td>EN</td></tr><tr><td>5</td><td>Herpestes edwardsii</td><td>Common mongoose</td><td>LC</td></tr><tr><td>6</td><td>Canis lupus</td><td>Indian Wolf</td><td>LC</td></tr><tr><td>7</td><td>Cuon alpinus</td><td>Indian wild Dog</td><td>EN</td></tr><tr><td>8</td><td>Canis aureus</td><td>Jackal</td><td>LC</td></tr><tr><td>9</td><td>Lutra lutra</td><td>Common Otter</td><td>NT</td></tr><tr><td>10</td><td>Ratufa indica</td><td>Indian Giant squirrel</td><td>LC</td></tr><tr><td>11</td><td>Rusa unicolor</td><td>Sambar</td><td>VU</td></tr></tbody></table>	S. N.	Scientific Name	Common Name	IUCN	1	Melursus ursinus	Sloth Bear	VU	2	Hystrix indica	Indian porcupine	LC	3	Panthera pardus	Common Leopard	VU	4	Panthera tigris	Tiger	EN	5	Herpestes edwardsii	Common mongoose	LC	6	Canis lupus	Indian Wolf	LC	7	Cuon alpinus	Indian wild Dog	EN	8	Canis aureus	Jackal	LC	9	Lutra lutra	Common Otter	NT	10	Ratufa indica	Indian Giant squirrel	LC	11	Rusa unicolor	Sambar	VU	<p>Wildlife conservation plan prepared by M/s. Mantec Consultants Pvt. Ltd. in consultation with State Forest Dept. and the same has been approved by PCCF, Telangana.</p>
S. N.	Scientific Name	Common Name	IUCN																																															
1	Melursus ursinus	Sloth Bear	VU																																															
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10	Ratufa indica	Indian Giant squirrel	LC																																															
11	Rusa unicolor	Sambar	VU																																															



Period	From March 2024 to May 2024				Additional study (if any)
	12	Tetracerus quadricornis	Four -Horned Antelope	VU	
	13	Naja naja	King Cobra	LC	
	14	Python molurus	Indian Python	VU	
	15	Crocodilus palustris	Crocodiles	VU	
	16	Vipera russellii	Russell's Viper	LC	
	17	Pavo cristatus	Peafowl	LC	
	18	Milvus migrans	Black Kite	LC	
	Wildlife Conservation Plan with budgetary provision of Rs.2.92 Crores has been prepared for Sch.-I species and it has been approved by Principal Chief Conservator of Forests (PCCF) vide letter ref. WL-1/WL07/32/2024-WLS dated 26.03.2025. Further, vide letter dated 12.08.2025, DFO-Peddapally clarified that the Tiger movement in 10 km study area is sporadic only and Indian Wolf & Indian Wild Dog are not sighted in last three years in 10 km study area.				
	Hydrogeology study	Recommendations of the Hydrogeology study:			
	S.N.	Study Recommendation	Proposed Action Plan	Estimated Expenditure & Target Date	
	1	Groundwater Quality Monitoring	Monitoring wells installation, Quarterly testing of water quality	13.4 Lakhs (0-6 months)	
	2	Development of Artificial Recharge Structures	Recharge wells, Recharge trenches, pond rehabilitation	28.0 (6-18 months)	
	3	Tree Plantation, Greenbelt Development	Tree Plantation & maintenance	45.00 (6-18 months)	
	4	Develop Monitoring systems	Equipments for monitoring, data management	10 (18-60 months)	
		Total Budgetary provision, Rs. Lakhs		96.40	
Impact study on biodiversity and aquatic ecology	<b>Impact on Terrestrial Ecology</b> The initial construction phase of the project entails clearing the land, which may disturb vegetation during the process, though the extent of this disturbance is deemed insignificant. The effects of construction will mainly be localized to the Phase-II site, which is relatively small. Earthwork activities like excavation and filling may generate fugitive dust emissions, potentially depositing on nearby vegetation's young, growing leaves and temporarily inhibiting photosynthesis. However, these effects are anticipated to be mostly limited to the early stages of construction and can be mitigated by implementing measures such as paving, surface treatment, water spraying, and tree planting initiatives. Furthermore, these impacts are expected to be contained within the plant's boundaries, resulting in marginal overall impact from the construction activities. <b>Impact on Aquatic Ecology</b> The drainage from construction sites can cause a temporary rise in suspended solids and a drop in dissolved oxygen levels near where it enters a body of water. This could result in a temporary reduction in the photosynthetic capacity of phytoplankton, an increase in anaerobic conditions, and alterations in the food chain due to the decrease in dissolved oxygen levels. The proposed expansion project is envisaged with water & wastewater treatment plants, sewage treatment plant and Zero Liquid Discharge system. Hence, there will be no discharge into the water bodies and there will be no negative impact on aquatic ecology.				Consultant details: Mantec Consultants Pvt. Ltd.
Risk assessment study	Recommendations of Risk assessment report with mitigation measures: 1. Ensure that the facilities should have necessary fire and gas detection system in the Plant as per applicable guidelines. Operators should be well trained about the detection system.				Consultant details: Mantec

Period	From March 2024 to May 2024	Additional study (if any)
	<p>2. Mock drills to be well rehearsed to ensure readiness to handle emergency.</p> <p>3. All the valves and pipeline should be periodically maintained and inspected to prevent the failures.</p> <p>4. Calibration of all instruments to be ensure periodically.</p> <p>5. The company shall train all employees in Emergency Response, Fire Fighting and First Aid.</p> <p>6. Proper lighting arrangements and CCTV as per applicable OISD guidelines should be provided at Plant.</p> <p>7. HCl, H<sub>2</sub>SO<sub>4</sub> and Alkali (NaOH) are used for water treatment. These acids and alkali are stored in storage vessels at atmospheric conditions. The noteworthy safety features involved are detailed below:</p> <ul style="list-style-type: none"> <li>· The vessels for alkali and acid storages are provided with the rubber lining of proper material.</li> <li>· All the storage vessels have been provided with dike for the containment of spillage from the storage vessels. The dike and the handling area are provided with acid/ alkali proof brick linings.</li> <li>· Eye wash and safety showers are available in the vicinity of these storage vessels.</li> <li>· The workers have been provided with the required type of PPE, Chemical Protective Clothing, Splash Goggles, Boots, safety Shoes, Gloves, etc.</li> <li>· There is provision of sampling for each lot of acid /alkali before it is unloaded or used in the plant premises. It ensures the safety to equipment and the plant personnel.</li> </ul>	Consultants Pvt. Ltd.
Marine impact assessment study. (Only for coastal based TPPs)	Not Applicable	-

**16. Solid and hazardous waste management:** The details of solid and hazardous waste generation along with its mode of treatment/disposal are furnished as below:

**Estimated waste generation w.r.t Proposed Telangana Phase-II (3x800 MW)**

S.N.	Type of Waste	Source	Estimated Quantity, MTPA	Mode of Treatment	Mode of Disposal	Remarks
<b>Hazardous Waste</b>						
1	Toxic metal containing residue from used ion exchange material in water purification	Water Treatment Plant	4.5 MT	NIL	Co-processing at Cement Industry / Incineration at TSDF/ AFR Facility	
2	Used Resin	Water Treatment Plant	3.75 KL	NIL	Authorized TSDF	
3	Oil Soaked fuller's earth	Maintenance Activities	3.0 MT	NIL	Authorized TSDF/ Co-processing at Cement Industry	
4	Filters contaminated with oil (Used oil filters / Used Air filters)	Maintenance Activities	300 Nos	NIL	Authorized TSDF	
5	Contaminated cotton rags or other cleaning Materials	Maintenance Activities	5 MT	NIL	Co-processing at Cement Industry/ AFR Facility for preprocessing	

S.N.	Type of Waste	Source	Estimated Quantity, MTPA	Mode of Treatment	Mode of Disposal	Remarks
					/TSDF	
6	Spent Activated Carbon	Water Treatment Plant	4.5 MT	NIL	Co-processing at Cement Industry/ AFR Facility for preprocessing / TSDF	
7	Used Insulation Material (Glass Wool / Mineral Wool)	Maintenance Activities	300 MT	NIL	Authorized TSDF	
8	Silica Gel	O&M activities	1.5 MT	NIL		
9	Spent of Hydraulic Oil- transformer Oil, Used lube Oil.	O&M activities	225 KL	NIL	Authorized Re-Processors/ Recyclers	
10	Detoxified containers & container liners of Hazardous waste and hazardous chemicals.	Chemical Treatment	450 Nos./Month	NIL	Authorized Recycler	
11	Used oil grease drums	O&M activities	750 Nos./Month	NIL	Authorized Recycler	
12	Waste Oil	O&M activities	150 KL	NIL	Authorized Re-Processors/ Recyclers / TSDF	
13	Oil tank sludge	O&M activities	1.5 MT	NIL	Authorized Re-processors/TSDF	
Non-Hazardous Waste						
S.N.	Type of Waste	Source	Estimated Quantity, MT	Mode of Treatment	Mode of Disposal	Remarks
1	Ferrous Scrap	O&M activities	835.5	NIL	Disposed through e-auction by MSTC	The quantity estimated based on annual waste generation during FY 2024-25.
2	Non-Ferrous Scrap	O&M activities	8.85	NIL	Disposed through e-auction by MSTC	
Municipal Solid Waste						
S.N.	Type of Waste	Source	Estimated Quantity, MT	Mode of Treatment	Mode of Disposal	Remarks
1	Biodegradable Waste	Domestic Waste	39	NIL	Bio-methanation Plant, Vermi-composting / Conventional composting	The quantity is based on the waste generated during FY 2024-25 from the Townships at NTPC Ramagundam, Telangana.
2	Non-Biodegradable Waste	Domestic Waste	23	NIL	Waste to Energy Plant /Recyclers	
Biomedical Waste						
S.N.	Type of Waste	Source	Quantity Generated, MT	Mode of Treatment	Mode of Disposal	Remarks
1	Biomedical Waste	Hospital in NTPC	0.0850	NIL	Disposed through authorized Recycler	The Hospital, situated in the NTPC

S.N.	Type of Waste	Source	Estimated Quantity, MTPA	Mode of Treatment	Mode of Disposal	Remarks
		Township				Township, is a common facility for NTPC Ramagundam & Telangana Power Stations.
<b>E-Waste</b>						
S.N.	Type of Waste	Source	Quantity Generated, MT	Mode of Treatment	Mode of Disposal	Remarks
1	E-Waste	Office	5.59	NIL	Disposed through authorized Recycler/ TSDF	

#### 17. Public Consultation

Details of advertisement given	Enadu Telugu News Paper 23.10.2024, 02.12.2024, 08.01.2025 Deccan Chronicle English News Paper 23.10.2024, 02.12.2024, 08.01.2025
Date of public consultation	28.01.2025 at 11:00 A.M.
Venue	Zila Parishad High School, NTPC-Jyotinagar, Ramagundam Mandal, District- Peddapalli
Presiding Officer	1. Sri K. Sree Harsha-Collector & District Magistrate, Peddapalli District 2. Sri B. Bhikashapathi Environmental Engineer, Telangana Pollution Control Board, Regional Office, Ramagundam
Major issues raised	Provision of Employment to locals, increase CSR works, road and school infrastructure, pollution due to power plant, skill development training
No. of people attended	288 Nos. (as per signature taken by TGPCB) Actual attendees > 1000 nos.

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

S. No.	Key Area Identification for Activities Based on Public Needs Highlighted During Environmental Public Hearing	Year-wise Proposed Expenditures (Rs. In Crores)					Total Proposed Expenditure (Rs. In Crores)	Physical Targets
		1st	2nd	3rd	4th	5th		
<b>A</b>	<b>Educational Initiatives</b>							
1	Rehabilitation of mentally handicapped children of Manochaithanya.	0.10	0.10	0.15	0.15	-	<b>0.50</b>	Financial support to Manochaithanya for rehabilitation of mentally handicapped children and Tie-up for utilization of products made by Manochaithanya as per the proposal.
2	Support rural primary education for weaker sections.	0.40	0.20	0.20	0.20	0.20	<b>1.20</b>	Distribution of water coolers, Smart classrooms systems, Books, cycles to schools of Anthergaon area, Rompikunta, Jangaon, manthani areas.



S. No.	Key Area Identification for Activities Based on Public Needs Highlighted During Environmental Public Hearing	Year-wise Proposed Expenditures (Rs. In Crores)					Total Proposed Expenditure (Rs. In Crores)	Physical Targets
		1st	2nd	3rd	4th	5th		
3	School facility in Elkalapalli	-	-	0.20	0.80	-	1.00	Additional 4 rooms in existing school building in Elkalapalli.
	Sub Total	0.50	0.30	0.55	1.15	0.20	2.70	
<b>B Community Health Initiatives</b>								
4	Aids for Primary health centre & Veterinary hospital in Elkalapalli and other area	0.30	0.30	0.30	0.30	0.30	1.50	Health equipment's will be provided to Govt. PHC & Govt. veterinary hospital as per requirement near project vicinity.
5	Medical Facilities	1.00	1.00	1.00	1.00	1.00	5.00	Medical camps will be conducted through Mobile Medical Unit with two doctors (including 01 lady doctor) for general health check-up, ANC & PNC check-up etc in all the project affected villages. Free Medicines distribution during medical camps. Other than this, oral cancer detection camp, dental camp will be conducted for children and others.
	Sub Total	1.30	1.30	1.30	1.30	1.30	6.50	
<b>C Sustainable Livelihood and Women Empowerment</b>								
6	Women welfare and other development activities.	0.50	0.50	0.50	0.50	0.50	2.50	Development of infrastructure & training of local women for dairy farms, poultry, agriculture, food processing, plastic moulding
		0.50	0.50	0.50	0.50	0.50	2.50	Vocational training to local women for skill development
	Sub Total	1.0	1.0	1.0	1.0	1.0	5.00	
<b>D Community Rural Infrastructure Development</b>								
7	Road works in Malkapur village.	-	0.50	0.50	0.50	1.00	2.50	CC road laying 3 Kms approx.
8	Infrastructure facilities at Ramagundam.	4.00	4.00	5.00	5.00	2.00	20.00	Medipalli Crossroad to Medipalli village:CC/BT Road from Greenery, Central lighting &

S. No.	Key Area Identification for Activities Based on Public Needs Highlighted During Environmental Public Hearing	Year-wise Proposed Expenditures (Rs. In Crores)					Total Proposed Expenditure (Rs. In Crores)	Physical Targets
		1st	2nd	3rd	4th	5th		
								Dividers Internal CC roads, storm water drains & Underground drains in Annapurna colony, Auto nagar, Shalapally, poratpalli, CP office, Malkapur, nallah channelisation works in medipally area. Desilting at Ramagundam Cheruvu & Park development in Malkapur area.
9	Laying of CC Roads (2 Kms approx) in Penchikalpet.	0.50	0.50	-	-	-	1.00	CC road will be constructed in Penchikalpet village as per proposal.
10	CC Road laying Road along with Side drain works from Penchikalpet to Repallewada.	0.50	1.00	0.50	-	-	2.00	CC road will be constructed in Penchikalpet to Repallewada village as per proposal.
11	Laying of CC Road Errakunta at Laxmipur lake way Road.	0.50	1.00	0.50	-	-	2.00	CC road will be constructed in Errakunta at Laxmipur village as per proposal.
	Sub Total	5.50	7.00	6.50	5.50	3.00	27.50	
<b>E</b>	<b>Development of Playgrounds for Sports</b>							
12	Conducting Rural sports Programs in every year in all PAV's.	0.20	0.20	0.20	0.20	0.20	1.00	Rural sports will be conducted for school children of govt school in the nearby area and promoting local sport with sponsorship.
	Sub Total	0.20	0.20	0.20	0.20	0.20	1.00	
<b>F</b>	<b>Development of local youth &amp; women for various activities at village level</b>							
13	Distribution of agriculture implements in Elkalapalli and others.	0.20	0.20	0.20	0.20	0.20	1.00	Distribution of agricultural implements & seeds. Training will be provided for using new technologies such as solar pump in agriculture and providing equipment.
14	Avenue plantation in Penchikalpet.	0.20	-	-	-	-	0.20	Raising of Avenue plantation through self-help groups. Distribution

S. No.	Key Area Identification for Activities Based on Public Needs Highlighted During Environmental Public Hearing	Year-wise Proposed Expenditures (Rs. In Crores)					Total Proposed Expenditure (Rs. In Crores)	Physical Targets
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>		
								of fruit yielding saplings.
15	Skill development programs in Elkalapalli.	0.30	0.30	0.30	-	-	0.90	Training programs for professional services, competitive exams, physical fitness for police recruitment, plastic moulds, Tailoring etc for local youth in Elkalapalli.
	Sub Total	0.70	0.50	0.50	0.20	0.20	2.10	
<b>G</b>	<b>Providing water facilities to PAV's</b>							
16	Drinking Water supply arrangement in Kundanpalli village.	0.50	0.25	0.25	-	-	1.00	Pump house readiness, Pipeline laying till OH tank, Distribution lines connection.
17	Drinking Water supply arrangement in Moghalpad village.	0.30	0.70	-	-	-	1.00	Extension of lines from pump house till Moghalpad Distribution lines connection.
18	RO Drinking Water plants at various villages.	0.25	0.50	0.50	0.25	-	1.50	New RO plant in Palakurthy, anthergaon and uplifting of existing 33 nos. RO plants at other villages.
19	Providing New RO plant at Mathangi colony.	0.20	0.10	-	-	-	0.30	RO plant will be provided to Mathangi Colony.
20	Desilting/Dredging of Chinthala water tank.	0.10	0.10	0.10	-	-	0.30	Desilting/ Dredging of Chinthala water tank.
	Sub Total	1.35	1.65	0.85	0.25	-	4.10	
<b>H</b>	<b>Sanitation</b>							
21	Drainage system development in Mathangi Colony.	0.50	-	-	-	-	0.50	Drainage system development in Mathangi Colony.
	Sub Total	0.50					0.50	
	<b>Total (A+B+C+D+E+F+G+H)</b>	<b>11.05</b>	<b>11.95</b>	<b>10.90</b>	<b>9.60</b>	<b>5.90</b>	<b>49.4</b>	

\*The amount and year-wise phasing is tentative which shall be finalized after consultation with stakeholders and District Administration.

**18. Cost of project:** Existing capital cost of project was Rs.13,708.00 Crores. The capital cost of the proposed project is Rs.27,683.29 Crores and the capital cost for environmental protection measures is proposed as Rs. 2,510.95 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 50.11 Crores. The employment generation from the proposed project / expansion is approx. 96 nos. & 216 nos. permanent employment during construction and operation phases respectively and approx. 3500 nos. & 1500 nos. contractual employment during construction and operation phases respectively. The details of cost for environmental protection measures are as follows:

S. No.	Item Description	Capital Cost, Rs. in Crores	Recurring Cost, Rs. in Crores
1.	Electrostatic Precipitator	605.72	12.11
2.	Chimney	228.00	4.56
3.	Aux. Cooling Towers incl. Civil Works	35.44	0.71
4.	Ash Handling System	1096.45	21.93
5.	Ash Dyke	150.00	3.0
6.	Ash Water Recirculation incl. ETP	311.73	6.23
7.	Dust extraction & suppression System	8.00	0.16
8.	DM plant, Waste Treatment systems	5.00	0.10
9.	Sewerage collection, treatment & disposal	2.00	0.04
10.	Rainwater Harvesting	0.64	0.01
11.	Green Belt, Afforestation & Landscaping	55.97	1.12
12.	Environmental Lab Equipment	0.50	0.01
13.	Environmental Monitoring Systems	6.40	0.13
15.	<b>Provision for Implementation of study recommendation</b>		
a.	Wildlife Conservation through Forest Dept.	2.92	--
b.	Watershed Development Plan	0.96	--
c.	Hydrogeology Study Recommendation	1.22	--
	<b>TOTAL</b>	<b>2,510.95</b>	<b>50.11</b>
1	Addressal of Public Consultation issues	49.4	--

**19. Green belt development:** Existing green belt has been developed in 125.95 ha area which is about 29.72 % of the total plant area of 423.717 ha with total sapling of 3.10 lakh Trees. Proposed greenbelt will be developed in 66.03 ha which is about 15.5 % of the total plant area of 423.717 ha. Thus, total of 191.968 ha area (45.3% of total plant area 423.717ha) will be developed as greenbelt. A 5 m - 50 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 2,67,200 saplings will be planted and nurtured in 66 hectares in 6-7 years.

**20. Ash management (for last three years)**

Year	Quantity Generated (MT)	Quantity utilized (MT)	% Utilization	Balance Quantity (MT)	No of storage silos with capacity
2022-23	--	--	--	--	HCSD Silo: 700 MT x 3 Nos.
2023-24	6,81,000	0	0	6,81,000	Fly Ash Silo: 1180 MT x 4 Nos.
2024-25	27,35,982	7,46,785	27.29	26,70,197	

**A. Fly ash details for last 3 years: 7,46,785 TPA (For FY 2024-25)**

S. No.	Activity (as applicable)	Quantity Utilized, MT	Percentage of Total Fly Ash	Remarks (Prior approval of SPCB details to be mentioned)
1	Fly ash-based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels)	4,61,169	16.85	NA
2.	Cement manufacturing	2,38,043	8.70	NA
3.	Ready mix concrete	44,523	1.63	NA
4.	Construction of dams	3,050	0.11	NA
	<b>Total</b>	<b>7,46,785</b>	<b>27.29</b>	

**B. Bottom Ash details for last 3 years: Nil**

**C. Legacy ash details:**

All the two ash lagoons are operational since 2023-24, hence there is no legacy ash.

Unutilized Ash available in current compliance cycle is 26,70,197 MT at the end of 2024-25 which shall be utilized in subsequent years by 2025-28 as per the compliance cycle timeline.

**D. Ash Pond Details: - Phase-I (Existing Ash Pond)**



S.No	Details of Ash Pond	Ash Pond 2	Ash Pond 3	Total
1.	Status of ash pond (Active/Exhausted, yet to be reclaimed/ Reclaimed)	Active	Active	
2.	Area (Ha)	38.46	38.46	80.97 (incl. 4.05 Ha. for OFL) Active Ash Ponds
3.	Dyke height (m)	6 - 12 mtrs	2 - 13 mtrs	The dyke height varies as per Topography
4.	Volume (Lac M <sup>3</sup> & Lac MT)	24.50	20.50	
5.	Quantity of ash disposed (Metric Tons)	6.20	20.50	4.65 LMT/20.50 LMT lifted from dyke
6.	Available volume in percentage and quantity of ash can be further disposed (Metric Tons)	74.6% (18.30MT)	22.68% (4.65MT)	In ash utilization pits
7.	Expected life of ash pond (number of years and months)	9 Months	2 Months	Considering Nil ash utilization
8.	Type lining carried in ash pond: HDPE lining of LDPE Inning or clay Inning or No lining	HDPE	HDPE	
9.	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	Wet (HCSD)	Wet (HCSD)	Bottom ash and HCSD are discharging in two separate places in same lagoon
10.	Ratio of ash: water in slurry mix (1:..)	65%:35%	65%:35%	
11.	Ash water recycling system (AWRS) installed and functioning: Yes or No	Yes	Yes	AWRS available and functioning
12.	Quantity of wastewater from ash pond discharged into land or water body (m <sup>3</sup> )	NA	NA	Seepage water in toe drains pumped back to OFL through 2 Nos. seepage water pump houses
13.	Last date when the dyke stability study was conducted and name of organization who conducted the study:	21.11.2024 by NIT Warangal		Safe & Stable
14.	Last date when the audit was conducted and name of the organization who conducted the audit:	17 – 19 Oct'2024 by NIT Warangal		No abnormality found

#### E. Proposed ash utilization plan for expansion project:

Details	Existing generation (MTPA)	Proposed generation (MTPA)	Total (MTPA)	Utilization (MTPA)	% of utilization	Balance quantity (MTPA)	No. of storage silos with capacity
Ash (Fly & Bottom)	27.35	41.02	68.37	68.37	100	NIL	<b>Dry Fly Ash Silos:</b> Main Silos: 5 x 2500 MT + 1 x 2000 MT with truck and Wagon loading facilities. HCSD Silos: 3 x 700 MT with truck loading facility only. <b>Bottom Ash Silos:</b> Main Bottom Ash Silos: 3 x 1500 MT with truck and wagon loading facilities. Bottom Ash Intermediate Silo: 3 x 500 MT with truck

Details	Existing generation (MTPA)	Proposed generation (MTPA)	Total (MTPA)	Utilization (MTPA)	% of utilization	Balance quantity (MTPA)	No. of storage silos with capacity
							loading facility only.

**Ash Pond details:** If existing ash pond is to be utilized details may be mentioned. If not, new ash pond details may be provided as below:

**Ash Pond details:** For Proposed ash pond

S. N.	Details of Ash Pond	Ash Pond
1.	Area (Ha)	120 Ha (including space required for ash disposal, decanted area, overflow lagoon, dyke embankment, toe drains, peripheral roads, ash pipe corridor, AWRS pump house and other facilities etc.).
2.	Dyke height (m)	One HCSD Lagoon: 12.0 M (avg) Starter dyke and two Raising of 3.0 M height. One BA Lagoon: 12.0 M (avg) Starter dyke and two Raisings of 3.0 M height each
3.	Volume (m <sup>3</sup> )	Approx. 12 million m <sup>3</sup> (Ash disposition)
4.	Quantity of ash to be disposed (Metric Tons)	Approx. 12 million Metric Tons (Considering density as 1.0 T/cum)
5.	Expected life of ash pond (number of years and months)	02 years and 06 months (considering nil ash utilization) Originally ash pond area of 246.858Ha was envisaged considering proposed plant requirements due to uncertainties in 100% ash utilisation and was in line with MoEF&CC Notification dated 31.12.2021. However, as per direction given by Chairman EAC during EAC Meeting for optimization of new ash dyke area of Phase-II, the same is reduced from 246.858 Ha to 120 Ha. In the permitted 120 Ha ash pond, combined ash storage capacity of 01 HCSD lagoon and 01 BA lagoons is 12 million Metric Tons (approx.). Expected ash storage life of ash pond is approximately 2 years and 6 months (considering yearly ash generation of approx. 5 million Metric tons).
6.	Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining	Suitable impervious lining as per actual site conditions meeting the imperviousness requirements as per standard “Guidelines for Design, Construction, O&M and Annual certification of Coal Ash Ponds-June 2023” to be provided. Accordingly, HDPE lining system is envisaged in OFL and Bentonite blended lining in all ash storage lagoons.
7.	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	Wet Slurry Disposal for Bottom Ash (LCSD) & High Concentration Slurry Disposal (HCSD) system for Fly Ash.
8.	Ratio of ash: water in slurry mix	Maximum 25% ash on dry ash basis, rest is water for LCSD Slurry, 55% to 65% (Average-60%) of ash on dry ash basis, rest is water for HCSD slurry.
9.	Ash water recycling system (AWRS):	Ash water recycling system has been envisaged for the proposed project.
10.	Quantity of wastewater from ash pond to be discharged into land or water body (m3)	Ash Water Recirculation System and Zero Liquid Discharge system envisaged for the proposed expansion project. No wastewater discharge is envisaged.
11.	Details regarding dyke stability study and name of the organization who conducted the study.	As already done in all past ash dyke stability design, this will also be done by NTPC, (in-house design) in line with “CEA and CPCB Guidelines for Design, Construction, O&M and Annual certification of Coal Ash Ponds”.

#### Proposed Ash Utilization Plan

MoEF&CC Compliance Cycle	Year	Ash Generation (LMT)**	Backlog ash (LMT)	Ash Development (LMT)	Outside Bricks (in MT)	Own Brick Plant (LMT)	Cement & Other Industries (LMT)	Roads Construction (LMT)	Ash Based Products (LMT)	Mines filling (LMT)	Total Ash Utilized (LMT)	Ash Utilization (%)
<b>Operation from Existing 2x800MW</b>												
<b>First</b>	FY 2023-24	6.81		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FY 2024-25	27.36		0.00	3.72	0.89	2.83	0.00	0.03	0.00	7.47	27.30
	FY 2025-26	27.35	4*	0.00	7.35	0.00	14	10.00	0.00	0.00	31.35	112
	FY 2026-27	27.35	4.34*	0.00	6.69	0.00	20.00	5.00	0.00	0.00	31.69	113
	FY 2027-28	27.35	5.00*	0.00	7.35	0.00	20.00	5.00	0.00	0.00	32.35	118
<b>Second</b>	FY 2028-29	27.35		0.00	7.35	0.00	20.00	0.00	0.00	0.00	27.35	100.00
	<b>With commissioning of Phase-II (Unit-I) in 2029: Operation from 2x800MW + 1x800MW</b>											
	FY 2029-30	41.02		0.00	8.00	0.50	23.00	4.52	0.00	0.00	36.02	87.81
	<b>With commissioning of Phase-II (Unit-II) in 2030: Operation from 2x800MW + 2x800MW</b>											
<b>Third</b>	FY 2030-31	54.70		0.00	13.00	1.67	32.00	13.03	0.00	0.00	59.70	109.14
	<b>With commissioning of Phase-II (Unit-III) in 2031: Operation from 2x800MW + 3x800MW</b>											
	FY 2031-32	68.37		0.00	12.00	0.83	35.00	20.54	0.00	0.00	68.37	100.00
	FY 2032-33	68.37		0.00	13.00	0.83	40.00	14.54	0.00	0.00	68.37	100.00
<b>Third</b>	FY 2033-34	68.37		0.00	14.00	0.83	45.00	8.54	0.00	0.00	68.37	100.00
*Out of unutilized ash mentioned at 17© above, quantity of 13.22 LMT of pond ash is non excavatable considering dyke safety and stability.												
** Ash generation is calculated considering 80% PLF and 40% ash in coal												

21. Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration.

**A. Summary of court cases:** The details of litigation/Court cases pertaining to Telangana STPP are as follows:

S.N.	Case Number / Title	Name of the Court	Brief summary of the case	Last date of hearing	Next date of hearing	Direction/ Action taken by the PP
1	Appeal No. 6 of 2023	NGT	The EC order for Telangana STPP Phase-I was challenged in NGT. NGT issued the directions to MoEF&CC to direct NTPC for fresh studies and then direct the EAC to appraise the same and issue necessary amendment to the EC dated 20.01.2016 by incorporating additional conditions for the purpose. The case was disposed by NGT vide order dated 27.05.2021. Based on the additional studies and their outcome, EAC recommended MoEF&CC for grant of amendment in EC with additional conditions. Subsequently, the EC amendment dated 08.08.2022 was issued	Disposed of	Disposed of	Original Case (Appeal 46 of 2016) was disposed of vide NGT Order dtd. 27.05.2021. Appeal was dismissed by NGT order dated 05.07.2023.

S.N.	Case Number / Title	Name of the Court	Brief summary of the case	Last date of hearing	Next date of hearing	Direction/ Action taken by the PP
			by MoEF&CC. An appeal was filed to condone the delay in filing the appeal which challenges the Environmental Clearance (for short "EC") granted on 08.08.2022. The appeal for condonation of delay was dismissed.			
2	Arbitration FAO(OS) (Comm) No 280 of 2023	Delhi High Court	Arbitration matter Award was passed by the Tribunal on 14.09.2022 allowing all the claims of the TPL and also 75% cost of arbitration to TPL. The financial implication of the award is Rs. 89,67,37,204.00 on NTPC Ltd. NTPC had challenged the award before Delhi High Court under section 34 of Arbitration Act for Setting Aside the Award in which Judgment was pronounced on 31.07.2023 upholding the award in toto. Against the Judgement, NTPC has filed Section 37 Petition (appeal) before Divisional bench Delhi High Court on 27.09.2023.	11.08.2025	11.09.2025	Pending

#### B. Summary of Show Cause Notices:

S.N.	Issuing authority	Date	*Reasons for issuance of SCN	Status of reply to submission	Present status
1	Telangana State Pollution Control Board (TGPCB)	22.05.2024	Excursion of online environmental parameters during April 2024.	Reply submitted vide Letter dtd. 18.06.2024	
2.		18.06.2024	Excursion of online environmental parameters during May 2024.	Reply submitted vide Letter dtd. 04.07.2024	
3.		06.07.2024	Excursion of online environmental parameters during June 2024.	Reply submitted vide Letter dtd. 22.07.2024	
4.		21.08.2024	Excursion of online environmental parameters during July 2024.	Reply submitted vide Letter dtd. 07.09.2024	
5.		13.09.2024	Excursion of online environmental parameters during August 2024.	Reply submitted vide Letter dtd. 03.10.2024	
6.		24.12.2024	Excursion of online environmental parameters during November 2024.	Reply submitted vide Letter dtd. 10.01.2025	
7.		17.01.2025	Excursion of online environmental parameters during Dec 2024.	Reply submitted vide Letter dtd. 04.02.2025	
8.		08.02.2025	Excursion of online environmental parameters during January 2025.	Reply submitted vide Letter dtd. 27.02.2025	
9.		13.03.2025	Excursion of online environmental parameters during February 2025	Reply submitted vide Letter dtd. 01.04.2025	
10.		30.04.2025	Notice on observations raised during site inspection by RO, Ramagundam, on 10-11 April 2025. The observation was mostly regarding fugitive emissions from ash dyke and haul roads.	Reply submitted vide Letter Dtd. 09.05.2025 addressing all observations.	

**\* Show Cause Notices received from TGPCB were mostly related to exceedances in NOx values. Necessary corrective actions such as Low-NOx burners and Over Fire Air system are being taken by NTPC to achieve prescribed emission**



S.N.	Issuing authority	Date	*Reasons for issuance of SCN	Status of reply to submission	Present status
norms.					

**C. Summary of violation:** There is no violation case pertaining to the project under the Environment Protection Act, 1986; Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980; the Wildlife (Protection) Act, 1972.

#### Written submissions

22. The proponent vide letter dated 14th August 2025 has submitted the following written submission as suggested by the EAC during the meeting.

#### 1. Brief Summary of NGT issue pertaining to Telangana STPP Phase-I (2x800MW)

- EC for Telangana Phase-I (2x800 MW) was accorded by MoEF&CC vide letter ref. J-13012/112/2010.IA.II(T) dated 20.01.2016 which was challenged in National Green Tribunal (NGT) South Zone Bench-Chennai mainly on the grounds of cumulative impact assessment not covering 15 km radius area, quality of baseline study, concerns regarding air and water pollution, no CSR fund provision, coal linkage & radioactivity study and improper appraisal by EAC etc.
- NGT issued the directions to MoEF&CC to direct NTPC for fresh studies and then direct the EAC to appraise the same and issue necessary amendment to the EC dated 20.01.2016 by incorporating additional conditions for the purpose. The case was disposed by NGT vide order dated 27.05.2021.
- Based on the additional studies and their outcome, EAC recommended MoEF&CC for grant of amendment in EC with additional conditions. MoEF&CC vide letter dated 08.08.2022, issued amended EC.
- Additional Conditions given in EC and its compliance status is as given below:

S. N.	Condition as per EC amendment dated 08.08.2022	Compliance Status
(i)	Area of Ash Pond shall be reduced by 50%. Reduced area (200Acre) of Ash Pond shall be used for Greenbelt development, out of which 30 acres land (50m width) shall be used for creating plantation barrier between water storage area and ash pond so as to avoid mixing pollutants in the water body. Plantation shall be done by Miyawaki technique with 90% survival rate.	Area of Ash Pond is reduced to 50% by abandoning Lagoon-I which is of 200 acres. During the period of 2023-24, 71200 plantations by Miyawaki method was done between the reservoir and ash dyke for creating plantation barrier between water storage area and ash pond area and >90% survival rate is maintained. For the financial year 2024-25, plantation of 33,000 plants has been done at Ash Pond in consultation with TGFDC.
(ii)	HDPE lining shall be provided to the Ash Pond and the height of the Ash Pond shall not increase beyond 16m.	HDPE lining in Ash Pond Area is completed. Current height of the bund at the lowest point is 6m (including 1.5m of free board) and 2m at highest point (including 1.5m of free board). In future 3 raising of 3mts each will be carried. At the lowest point in the ash pond the height of the bund will be 6+9=15m and at the highest point height of the bund will be 2+9=11m.
(iii)	All other condition mentioned in EC dated 20.01.2016 shall remain unchanged.	Noted and being complied

#### 2. Reduction in Ash Pond area for proposed expansion project and revision of land use break-up

In line with the directions given by Chairman & members of the Expert Appraisal Committee during EAC Meeting dated 13.08.2025, optimization of area for proposed ash dyke under Telangana STPP Phase-II has been considered reducing the original proposed area from 246.858 Ha. to 120 Ha.

The revised land-use and area break-up for Telangana STPP (Phase-I & Phase-II) is as given below:

Telangana STPP Land Break-up (in Ha.)				
Description		Area for Phase-I (in Ha.)	Area for Phase-II (in Ha.)	Total Area (Phase-I & II) (in Ha.)
A	Main plant and associated facilities	94.9	127.88	222.78
B	Ash Dyke Area	80.937	120	200.937

Telangana STPP Land Break-up (in Ha.)				
Description		Area for Phase-I (in Ha.)	Area for Phase-II (in Ha.)	Total Area (Phase-I & II) (in Ha.)
<b>C</b>	<b>Total area considered for Greenbelt calculation (A+B)</b>	175.837	247.88	423.717
<b>D</b>	<b>Greenbelt Area</b>	81.138	110.83	191.968
<b>E</b>	<b>Other Misc. Area</b>	-	122.8653	122.8653
<b>F</b>	<b>Total Area (C+D)</b>	<b>256.975</b>	<b>481.5753</b>	<b>738.5503</b>

**3. Revised details for increasing budget provision for Greenbelt Development:** The budget provision for Greenbelt Development has been increased to Rs.50.11 Crores under the proposed Telangana STPP Phase-II (3x800MW). Revised Greenbelt Development Action Plan with budgetary provisions is as given below:

Year	Plantation		Location of Plantation	Approx Cost, Crores	Plant Species
	Nos.	Area, Ha.			
2024-25	10000 *	4.01	Railway siding Phase-1	2.28	Banyan, Peepal, Neem, Jamun, Amla, Arjun, Kadamba, Sandalwood, Tamarind, Indian Almond, Teak, Indian Beech (Pongamia pinnata) etc.
	23000 #	9.31	Area between Phase 1 Ash Pond and South Plant Boundary	5.26	
2025-26	48000	4.8	Area between Balancing Reservoir & Phase 1 Ash Pond	7.2	
2026-27	46000	4	Area between Balancing Reservoir & Phase 1 Ash Pond	6.9	
2027-28	35975	14.39	Inside Lagoon-1	7.91	
2028-29	37500	15.03	Inside Lagoon-1	8.25	
2029-30	20025	8.01	Area between Ash pipeline and Track Hoppe	4.45	
2031-32	6200	2.48	North side of project near highway	1.36	
2032-33	40500	4	Around the Proposed Ash Dyke	6.5	
<b>Total</b>	<b>267200</b>	<b>66.03</b>		<b>50.11</b>	
<b>Gap Filling Plantation</b>					
2025-26	1000	0.5	Between Ash Pond & Plant Boundary	0.22	
2026-27	500	0.2	Between Reservoir & Ash Pond	0.1	
2027-28	500	0.2	Between Reservoir & Ash Pond	0.1	
2028-29	1000	1	Inside Lagoon-1	0.22	
2029-30	1000	1	Inside Lagoon-1	0.22	
2030-31	800	0.4	Area between Ash pipe and Track Hopper	0.18	
<b>Total</b>	<b>4800</b>	<b>3.3</b>		<b>1.04</b>	

#: Completed, \*: In progress

In addition to the above, budget provision of Rs. 5.86 Crores has been envisaged for Carbon Sink Plantation on approx. 55 Ha. Degraded Forest Land in consultation with State Forest Dept.

**4. Revised cost provisions for Environmental Measures:** Cost provisions for the Environmental Measures has been revised as given below:

S. N.	Item Description	Capital Cost, Rs. in Crores	Recurring Cost, Rs. in Crores
1.	Electrostatic Precipitator	605.72	12.11
2.	Chimney	228	4.56
3.	Aux. Cooling Towers incl. Civil Works	35.44	0.71
4.	Ash Handling System	1096.45	21.93
5.	Ash Dyke	150	3

S. N.	Item Description	Capital Cost, Rs. in Crores	Recurring Cost, Rs. in Crores
6.	Ash Water Recirculation incl. ETP	311.73	6.23
7.	Dust extraction & suppression System	8	0.16
8.	DM plant, Waste treatment systems	5	0.1
9.	Sewerage collection, treatment & disposal	2	0.04
10.	Rainwater Harvesting	0.64	0.01
11.	Green Belt, Afforestation & Landscaping	55.97	1.12
12.	Environmental Lab Equipment	0.5	0.01
13.	Environmental Monitoring Systems	6.4	0.13
14.	Implementation of Wildlife Conservation plan	2.92	--
15.	Implementation of Hydrogeology Study recommendation	0.96	--
16.	Implementation of Watershed Development Plan	1.22	--
	<b>Total</b>	<b>2510.95</b>	<b>50.11</b>
i	Cost provisions for addressing the issues raised in Environmental Public Hearing as per timebound action plan	49.4	--

## 5. Revised Action Plan for Watershed and Hydrogeology Study

Revised Action Plan with respect to recommendations of Watershed Development Study

### Phase 1: Preparatory Stage

Activity	Timeline	Budget (Rs. Lakhs)	Responsible Agency	Expected Impact
1.1 Institutional Setup and Capacity Building	3 months	5.00	NTPC, District Administration, Society for Elimination of Rural Poverty (SERP)	Governance structure establishment
Set up Project Management Unit (PMU)				
1.2 Critical Infrastructure Assessment	2 months	6.00	Technical teams, local engineers	Infrastructure assessment completed
<b>Total</b>		<b>11.00</b>		
- Survey and map canal blockages in Sri Ram Sagar Project (SRSP) system				
- Assess farm wells for rejuvenation, identification of check dams, gully plugging sites, farm bunding and contour bunding sites and well rejuvenation sites.				
- Identify critical erosion sites				
- Conduct structural assessment of drainage channels				

### Phase 2: Water Conservation and Management (6-36 months)

Activity	No. of Structures/ Area	Unit Rate (in Rs.)	Budget (Rs. Lakhs)
Check Dam (Gabion Types (4-10m in length and 1-2m wide)	9 No.	70,000/-	6.30
Farm Ponds 20mX20x3m	10 No.	2,50,000/-	25.00
Loose Boulder Structures (3x1x1m)	8 No.	15,000	1.20
Contour Bunding	75 ha	40,000/ha	30.00
Block Plantation/Agro Forestry	9 ha	30,00,000	30.00
Gully Plugging	13		
Farm Well Rejuvenation	3		
Farm Bunding	4 ha		
Canal Cleaning	3 Km		
Pond Rejuvenation	5 Nos.		
<b>Total</b>			<b>92.50</b>

### Phase 3: Livelihood Enhancement and Community Development (36-48 months)

Activity	Timeline	Budget (Rs. Lakhs)	Expected Impact
3.1 Agricultural Productivity Enhancement	36 months	5.00	Increase in crop productivity
<b>Total</b>		<b>5.00</b>	
Promote climate-resilient crop varieties			
Establish demonstration plots for best practices			
Support for organic farming initiatives			

#### Phase 4: Monitoring and Evaluation (Ongoing)

Activity	Timeline	Budget (Rs. Lakhs)	Frequency
<b>4.1 Environmental Monitoring</b>	Throughout project	9.20	Quarterly reporting
Groundwater monitoring from 10 wells		1.60	Quarterly
Surface water quality testing (10 locations)		1.60	Quarterly
Monitor soil erosion rates (10 locations)		1.00	Periodic
Track biodiversity changes		5.00	Once in five years
<b>4.2 Socio-Economic Impact Assessment</b>	-	5.00	As per policy
Conduct household surveys		-	As per policy
Track changes in agricultural productivity		-	As per policy
Assess improvement in water availability		-	As per policy
Evaluate community participation levels		-	As per policy
<b>Total Phase-4</b>		<b>14.2</b>	
<b>Total Budget for Phase 1+2+3+4</b>		<b>122.70 Lakh</b>	-

#### Revised Action Plan with respect to recommendations of Hydrogeology Study

##### Phase 1: Immediate Actions (0-6 months)

Component	Activity	Quantity	Unit Cost in Rs.	Total Cost (Rs.)
Groundwater Quality Monitoring				
Monitoring wells installation	Monitoring wells installation 10 wells (3 up gradient, 5 down gradients, 2 lateral)	10	1,20,000	12,00,000
Laboratory testing (outsourced)	Quarterly testing for 1 year	4 cycles	35,000	1,40,000
<b>Phase I Total</b>				<b>13,40,000</b>

##### Phase 2: Short-term Implementation (6-18 months)

Component	Activity	Quantity	Unit Cost in Rs.	Total Cost (Rs.)
<b>2.1 Artificial Recharge Structures</b>				
Recharge wells	Priority locations	10	20,000	2,00,000
Recharge trenches	Development	10	50,000	5,00,000
Existing pond rehabilitation	De-silting	20	50,000	10,00,000
<b>Miscellaneous works</b>		<b>20</b>	<b>55,000</b>	<b>11,00,000</b>
<b>Sub-total 2.1</b>				<b>28,00,000</b>
<b>2.2 Green Belt Development</b>				
Land preparation	Clearing, pit, digging, Manuring	3,000 trees	1500	45,00,000
Tree plantation	Local species			
Irrigation & maintenance	3 years maintenance			
<b>Subtotal 2.2</b>				<b>45,00,000</b>
<b>Phase 2 Total</b>				<b>Rs.73,00,000</b>



**Phase 3: Long-term Sustainability (18-60 months)**

Component	Activity	Quantity	Unit Cost in Rs.	Total Cost (Rs.)
Basic monitoring equipment	Automated systems	10 stations	30,000	3,00,000
Data management system	Simple setup	1	50,000	50,000
Administrative costs	3 years	-	-	50,000
Operational costs	3 years	-	2,00,000/year	6,00,000
<b>Phase 3 Total</b>				<b>Rs.10,00,000</b>
<b>Total Budget for Phase 1+2+3</b>				<b>Rs.96,40,000/</b>

**6. Revised Action Plan for Solar PV installation:** Solar PV capacity has been increased and revised to more than 5 MW capacity. Details of Solar PV capacity installation under existing Phase-I and revised capacity under proposed expansion has been given below:

S. N.	Location	Capacity, kw	Status
1	Rooftop of TG Hall, DM Plant, Switch yard etc. buildings in Phase-I	1253	Implemented
2	Rooftop of TG Hall, DM Plant, Switch yard etc. buildings in Phase-II	1500	To be installed under proposed Phase-II
3	Solar PV installations at various location	2500	
	<b>Total</b>	<b>5253</b>	

**7. Additional mitigation measures for Monitoring and Control of Air Pollution:** Following measures have been envisaged for monitoring and control of Air Pollution:

- High efficiency Electrostatic Precipitator (ESP) to control PM emissions in compliance with MoEF&CC norms
- 275 m high stack for wider dispersion as per MoEF&CC Norms
- Low-NOx burners
- Over Fire Air system
- Dry Fog Dust Suppression
- Dust Suppression Dust Extraction System
- Dust Suppression system like water sprinklers and fog cannons in ash handling areas
- Water Sprinkling on Ash Transportation hauling roads
- Installation of Continuous Emission Monitoring System (CEMS)
- Regular operation & maintenance of equipment ensuring efficient functioning
- Continuous Ambient Air Quality monitoring systems (CAAQMS)
- Dense plantation & greenbelt provision around the plant premises
- Dense plantation towards nearby villages, schools, hospitals etc.
- Carbon Sink Plantation on approx. 55 Ha. Degraded Forest Land in consultation with State Forest Dept.

**8. Ash Utilization Plan as per compliance cycle given in Ash Utilization Notification**

MoEF&CC Compliance Cycle	Year	Ash Generation (LMT)**	Backlog ash (LMT)	Ash Development (LMT)	Outside Bricks (in MT)	Own Brick Plant (LMT)	Cement & Other Industries (LMT)	Roads Construction (LMT)	Ash Based Products (LMT)	Mines filling (LMT)	Total Ash Utilized (LMT)	Ash Utilization (%)
Operation from Existing 2x800MW												
First	FY 2023-24	6.81		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	FY 2024-25	27.36		0.00	3.72	0.89	2.83	0.00	0.03	0.00	7.47	27.30
	FY	27.35	4*	0.00	7.35	0.00	14	10.00	0.00	0.00	31.35	112

	2025-26											
	FY 2026-27	27.35	4.34*	0.00	6.69	0.00	20.00	5.00	0.00	0.00	31.69	113
	FY 2027-28	27.35	5.00*	0.00	7.35	0.00	20.00	5.00	0.00	0.00	32.35	118
Second	FY 2028-29	27.35		0.00	7.35	0.00	20.00	0.00	0.00	0.00	27.35	100.00
	With commissioning of Phase-II (Unit-I) in 2029: Operation from 2x800MW + 1x800MW											
	FY 2029-30	41.02		0.00	8.00	0.50	23.00	4.52	0.00	0.00	36.02	87.81
	With commissioning of Phase-II (Unit-II) in 2030: Operation from 2x800MW + 2x800MW											
	FY 2030-31	54.70		0.00	13.00	1.67	32.00	13.03	0.00	0.00	59.70	109.14
Third	With commissioning of Phase-II (Unit-III) in 2031: Operation from 2x800MW + 3x800MW											
	FY 2031-32	68.37		0.00	12.00	0.83	35.00	20.54	0.00	0.00	68.37	100.00
	FY 2032-33	68.37		0.00	13.00	0.83	40.00	14.54	0.00	0.00	68.37	100.00
	FY 2033-34	68.37		0.00	14.00	0.83	45.00	8.54	0.00	0.00	68.37	100.00
*Quantity of 13.22 LMT of pond ash is non excavatable considering dyke safety and stability, ** Ash generation is calculated considering 80% PLF and 40% ash in coal												

- The above data is tentative and the actual ash generation as well as utilization shall depend upon a number of factors such as PLF, ash content of coal, demand of ash etc.
- Unutilized Ash at the end of 2024-25 has been envisaged to be utilized in FY 2025-26 & 2027-28 as indicated above.

### Observation and deliberation of the EAC

23. The Committee observed and noted the following:

- The instant proposal is for seeking Environment clearance for Expansion of Telangana Super Thermal Power Project by adding 3x800MW (Phase II) in existing 2x800MW (Phase I) by M/s NTPC Limited.
- The existing Phase-I (2x800MW) project was accorded environmental clearance vide Ir. No. J-13012/112/2010-IA. II(T) dated 20/01/2016 from the Ministry of Environment and Forest, New Delhi. The Environmental Clearance was amended vide letter dated 06.03.2017, 21.10.2020, & 08.08.2022. Consent to operate (CTO) for the existing Phase-I (2x800MW) Units was accorded by Telangana State Pollution Control Board (TSPCB), Hyderabad vide Consent order no. 20234665654 dated 16.08.2023. The validity of CTO is up to 31.12.2028. Both the existing units have been commissioned and are under Commercial Operation.
- Installation of flue gas desulfurization (FGD) Plant has been commissioned and is operational for Phase-I (Unit-I&II). Commercial Operation Declaration (COD) declared on 15.09.2024 & 30.09.2024 respectively. NTPC Vidyut Vyapar Nigam Limited (NVVN) is selling gypsum produced as a byproduct of FGD processes to cement industries through e-auction.

- iv. Installation of 275m high stacks shall be envisaged for the proposed expansion project in compliance to the notification G.S.R 465 (E) dated 11/07/2025 related to FGD.
- v. Out of total project area of 738.5503 Ha, 491.6923 Ha area is under possession and 246.8580 Ha area is proposed to be acquired for which Preliminary notification dated 05-09-2024 and demand letter dated 10.09.2024 has been issued by the Revenue Dept.
- vi. 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 portal.
- vii. There are no ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. within the study area of 10 km distance from the project site as ascertained from DSS.
- viii. There is no Forest Land involved in the existing Phase-I and proposed Phase-II expansion Project. There are Reserve Forest and Protected Forest within 10 km distance from the project site as ascertained from DSS. PP has obtained a Certificate from Forest department, Govt. of Telangana vide letter no. no. 821/S4/ 2024(i) dated 29.03.2025 regarding distance from nearest protected area.
- ix. The project site is not located within the Critically Polluted Area (CPA) / Severally Polluted Area (SPA) as per CEPI assessment 2018 of CPCB.
- x. The Status of compliance of earlier EC was obtained from MoEF&CC Sub-Office, Hyderabad vide letter no. 1-53/2024/SO-HYD dated 31.12.2024. The Action taken report regarding the partially/non-complied conditions has been submitted to Sub-Office, MoEF&CC-Hyderabad, Telangana vide letter dated 06.02.2025. The report has been deliberated by the committee and found it satisfactory.
- xi. The ToR for the proposed Phase-II project was accorded on 10.04.2024 with a validity up to 09.04.2028. Public consultation was done in the presence of Collector & District Magistrate, Pedaapalli, Telangana. An amount of Rs. 49.4 Cr has been allocated to address the public needs highlighted during the public hearing held on 28.01.2025 for Phase-II project.
- xii. The water requirement for the proposed Phase-II project is estimated as 56,520 m<sup>3</sup>/day, which will be obtained from Sreepada Yellampali Barrage on Godavari River. The permission for drawl of 2.73 TMC (~2,11,794 m<sup>3</sup>/day) surface water is obtained from Irrigation and CAD Dept. Govt of Telangana, vide letter no- G.O.Ms.No.147, dated 09.10.2015. The water will be transported to the plant site through pipeline. The Specific water consumption for the power plant is less than 3.0 m<sup>3</sup>/MWhr.
- xiii. Existing power requirement of 92MW is obtained from Telangana STPP Phase-I. The power requirement for the proposed project is estimated as 162 MW, which will be obtained from the own generation.
- xiv. Existing capital cost of project was Rs.13,708.00 Crores. The capital cost of the proposed project is Rs.27,683.29 Crores and the capital cost for environmental protection measures is proposed as Rs. 2,510.95 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 50.11 Crores.
- xv. Existing green belt has been developed in 125.95 ha area which is about 29.72 % of the total plant area of 423.717 ha with total sapling of 3.10 lakh Trees. Proposed greenbelt will be developed in 66.03 ha which is about 15.5 % of the total plant area of 423.717 ha. Thus, total of 191.968 ha area (45.3% of total plant area 423.717ha) will be developed as greenbelt. A 5 m - 50 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 2,67,200 saplings will be planted and nurtured in 66 hectares in 6-7 years.
- xvi. As per the revised categorization given in the Wildlife (Protection) Amendment Act, 2022, total 18 Schedule I Species found in the study area. A wildlife Conservation Plan with budgetary provision of Rs.2.92 Crores has been prepared for Sch.-I species and it has been approved by Principal Chief Conservator of Forests (PCCF) vide letter ref. WL-1/WL07/32/2024-WLS dated 26.03.2025..

xvii. Godavari River is located at 4.24 km from the project boundary. As per the Irrigation and CAD Dept. letter dated 06/02/2025, the observed maximum HFL of River Godavari is 139 m at Mancherla gauge station on 14.07.2022. The approx. distance of project site from HFL is 4 Km.

xviii. Coal requirement for the proposed project is estimated to be 11.7 MTPA at corresponding 90% PLF considering GCV of 3800 Kcal/Kg.

xix. The Fly Ash will be collected in dry form in silos for further utilization/transportation through rail wagons / closed trucks to adjacent Cement Plants. 100% Ash will be utilised in Cement Industries, reclamation of abandoned mines, manufacturing of bricks, road construction, and aggregate replacement in concrete, etc. as per Fly Ash Notification, 31st December'2021. Provision will be made for disposal of un-utilized ash in high concentration slurry form to ash dyke.

xx. Baseline data were collected during March to May 2024. The Committee deliberated on the baseline data and incremental GLC due to the proposed project. The committee noted that the proponent is providing high efficiency Electrostatic Precipitator (ESP), Low Nox Burner, Dust Suppression System to control the emission of Particulate matter and NOx and also stack with a height of 275 m will be provided to control & regulate the air emission from the proposed project.

xxi. The committee noted that with respect to water pollution control, proponent shall use Sewage treatment plant and treated sewage water shall be utilized for horticulture purpose. Effluent will be treated in ETP. There will be no effluent discharge from the premises, hence the ZLD will be maintained. A state-of-the-art roof top rain water harvesting system will be provided to collect the run -off for ground water recharging.

xxii. The Committee noted that the EIA reports are in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components.

xxiii. EAC deliberated that the budget provision for hydrogeology study and watershed management plan is not adequate. PP was asked to submit the revised budget provision for the same. Accordingly, PP submitted the revised action plan of Hydrogeology study and watershed management plan. Committee deliberated on the revised action plan of Hydrogeology study/watershed management plan and found it satisfactory.

xxiv. EAC also suggested to install additional solar panel and increase the Solar capacity up to 5 MW. PP submitted the revised Action Plan for Solar photovoltaic (PV) installation which has been increased and revised to more than 5 MW capacity. Committee deliberated on the revised Action Plan for Solar photovoltaic (PV) installation found it satisfactory.

xxv. EAC noted that PP has calculated the 33% green belt plantation in 423.717 ha land which include plant site and ash dyke area. EAC suggested to reduce the proposed ash disposal area and increase the green belt provision. EAC also suggested for plantation in nearby ETP area.

xxvi. EAC observed that the PM10 predicted value was on higher (90 ug/m<sup>3</sup>) in study area. PP was directed to install high efficiency ESP along with additional control measures to reduce the particulate matter in ambient air.

xxvii. PP needs to explore advance technology for dry ash handling system and new avenues of ash utilization to reduce the area of ash pond.

xxviii. EAC suggested for deepening of the ash pond to reduce the ash pond area upto 120 ha. In line with the same, optimization of area for proposed ash dyke under Telangana STPP Phase-II has been considered reducing the original proposed area from 246.858 ha to 120 ha.

xxix. PP needs to estimate the total green house gas emission and percentage of its sequestration in the proposed plant. PP has to adopt additional measures to reduce the stack emission to cure the air pollution.

xxx. There are 04 CAAQMS are installed in the Telangana STPP project. PP needs to establish one additional CAAQMS in the ash pond area.

xxxi. PP was asked to explore the use of nearby Municipal Corporation STP treated water.



xxxii. There are 10 show cause notices issued by TSPCB for non-adherence to the NOx norms. Proponent has taken necessary action to achieve the prescribed emission norms.

xxxiii. The EAC also deliberated on the written submissions of the project proponent and found it satisfactory.

xxxiv. 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:**

24. The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** for grant of Environmental Clearance to the proposed “*Expansion of Telangana Super Thermal Power Project by adding 3x800MW (Phase II) in existing 2x800MW (Phase I) by M/s NTPC Limited located at village Ramagundam, District Peddapalli, Telangana*”, under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and standard/general conditions (**Annexure 1**).

25. 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. NTPC Limited** for “*Expansion of Telangana Super Thermal Power Project by adding 3x800MW (Phase II) in existing 2x800MW (Phase I) at village Ramagundam, District Peddapalli, Telangana*” subject to compliance of the Specific/General environmental conditions (**Annexure 1**).

26. 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.

27. 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.

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

29. 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.

#### **30. 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.

31. 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.

32. This issue with an approval of the Competent Authority

Yours faithfully,

(Sundar Ramanathan)  
Scientist 'F'

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 Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, 3rd Floor, Room No. 309, Aranya Bhawan, Opp. RBI, Safiabab – 500004, Hyderabad, Telangana
4. The Chairman, Telangana State Pollution Control Board, A-3, Paryavaran Bhavan, Sanath Nagar Rd, Sanath Nagar Industrial Estate, Sanath Nagar, Hyderabad, Telangana 500018.
5. The Member Secretary, Telangana State Pollution Control Board, A-3, Paryavaran Bhavan, Sanath Nagar Rd, Sanath Nagar Industrial Estate, Sanath Nagar, Hyderabad, Telangana 500018
6. The District Collector, Peddapalli , State Government of Telangana
7. Guard file/Monitoring file/PARIVESH Portal

**Annexure 1**

#### **Specific EC Conditions for (Thermal Power Plants)**

##### **1. [A] Environmental Management**

S. No	EC Conditions
1.1	Project proponent shall ensure that 100% utilization of ash generated from phase II(3x800MW) in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendments. Area for the additional ash pond proposed for phase II (3x800 MW) shall not exceed 120 Ha as committed.

S. No	EC Conditions
1.2	In addition to the existing 4 Continuous Ambient Air Quality Monitoring Stations (CAAQMS), Project proponent shall install additional one continuous ambient air quality monitoring at suitable locations (preferably near proposed ash dyke area) in consultation with TGPCB within three months from the date of establishment of proposed ash dyke.
1.3	Project proponent shall comply with the recommendations made in the Watershed development and Hydrogeology study in a time bound manner. Compliance status in this regard shall be submitted to the Regional Office of MoEF&CC along with the six-monthly compliance report.
1.4	The water requirement for phase II is estimated as 56,520 m <sup>3</sup> /day and the same shall be met from Sreepada Yellampali Barrage on Godavari River. The specific water consumption for phase II (3x800MW) shall be less than 3.0 m <sup>3</sup> /MWhr.
1.5	The entire coal requirement for phase I(2x800MW) and phase II(3x800MW) shall be transported by Rail network only and no road transportation is permitted.
1.6	Project proponent shall store harvested rainwater in the project boundary and utilize the same for plantation, recharging water in the pond and domestic utilization in colonies. A record shall be maintained of water collected through rainwater and its supply system. PP shall get the water audit done every year to optimize the water requirement.
1.7	Project proponent shall implement the protective measure proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs. 2,510.95 Crores 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.
1.8	Project proponent shall assess the carbon footprint of the project and develop carbon sink/carbon sequestration resources using modern technologies. The implementation report shall be submitted to the concerned Regional Office of the MoEF&CC.
1.9	Project proponent shall ensure that diesel operated vehicles will be switched over to E-Vehicles/CNG/LNG vehicles in a time bound manner, replace the passenger vehicles to E-vehicle in phased manner. Further, for local movement of officials, Contract of Vehicles deployment shall be awarded to Project affected people and all efforts for adopting heavy E-vehicles/CNG/LNG vehicles like Bulkers for ash transportation for short distance subject to availability of such E-vehicle and adequate charging infrastructure in the surrounding area shall be provided. PP shall submit the action taken report to concerned RO with amount spent, photographs (before & after), number of such non diesel vehicles deployed etc. in six monthly compliance report.
1.10	Project proponent shall take all necessary steps to control the Air Quality and take additional mitigation measures for proposed TPP to maintain the Ambient Air Quality values within the NAAQS norms.
1.11	Project proponent shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages.
1.12	Effluent of 32040 KLD will be treated through Effluent Treatment Plant (ETP). As committed by the Project proponent, zero liquid discharge shall be adopted for the existing and the proposed plant. No wastewater will be discharged outside the project site.

S. No	EC Conditions
1.13	PP shall implement the concurrent plantation plan in a time bound manner. Total of 191.968 ha area (45.32% of total plant area of 423.717ha) will be developed as greenbelt. A 5 m - 50 m wide (min 25 m) greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB guidelines within 3 years. PP should annually submit the audited statement of expenditure along with proof of activities viz. geo-tagged photographs (before & after with 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.
1.14	Project proponent shall carry out community plantation with incentive scheme by distributing 50,000 saplings per year for a period of five years. Further, PP shall provide basic facilities to the nearby schools such as drinking water, sanitation facilities (sanitary napkin vending machines) and shall also develop green belt around the nearby schools. Further, PP shall organize quarterly awareness programs for school students to educate them on the significance and preservation of trees.
1.15	Wildlife conservation plan as approved by the competent authority shall be implemented. Additional, budget shall be added in the plan, in case additional measures suggested by state wildlife department. 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 a government account.
1.16	Project proponent shall install LED display of air quality (Continuous AAQ monitoring) and stack emission (Continuous emission monitoring) 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.
1.17	Project proponent shall carry out Water Sprinkling on roads inside the plant area/ administrative/ residential areas and outside the plant area at least for 2 KM on a regular basis to control the air pollution. A logbook shall be maintained for the activity and be in six-monthly compliance report.
1.18	PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM.
1.19	Environment Audit of plant shall be done annually, and report shall be submitted to Regional office of the Ministry.
1.20	A detailed action plan regarding leachate handling shall be prepared and implemented in consultation with SPCB and the same shall be submitted to the Regional Office of the Ministry. Leachate shall be treated and reused. No treated leachate shall be discharged in any circumstances. Characteristics of Leachate and the treated leachate shall be monitored once in quarter and records shall be maintained.
1.21	Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
1.22	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.



S. No	EC Conditions
1.23	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.
1.24	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 submitted by PP.
1.25	PP shall install additional solar panel and increase the Solar capacity up to 5 MW as committed.
1.26	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 reports.

## 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 5 km 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 report.
2.2	Epidemiological Study among population within 5 km radius of project cover area shall be carried out on regular interval (Once in two year) through independent agency. Necessary measures shall be taken as per findings of study in consultation with district administration. Action taken report shall be submitted to the Regional Office of the Ministry.
2.3	The budget proposed for PH is Rs. 49.4 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. In addition to this, PP shall strengthen the existing Primary Health Center (PHC) & Community Health Center (CHC) in the study area for better public health as committed. Compliance status in this regard shall be submitted along with the six-monthly compliance to the concerned Regional Office of MoEF&CC.
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 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.
3.2	Consent 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.

#### 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.

### 2. Ash Content/mode Of Transportation Of Coal

S. No	EC Conditions
2.1	MoEF&CC Notification issued vide S.O. 1561 (E) dated 21.05.2020 and as amended from time to time shall be complied which inter-alia include use of coal by Thermal Power Plants, without stipulations as regards ash content or distance, shall be permitted subject to compliance of conditions prescribed under (1) Setting Up Technology Solution for emission norms, (2) Management of Ash Ponds and (3) Transportation.

### 3. Air Quality Monitoring And Management

S. No	EC Conditions
3.1	Project proponent shall abide by the provisions of the notification number G.S.R 465(E) dated

S. No	EC Conditions
	11/07/2025 related to FGD.
3.2	Low NOX Burners with Over Fire Air (OFA) system shall be installed to achieve NOX emission standard of 100 mg/Nm <sup>3</sup> .
3.3	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 <sup>3</sup> .
3.4	Stack with a height of 275 meters shall be provided with continuous online monitoring instruments for SO <sub>2</sub> , Nox and Particulate Matter as per extant rules.
3.5	Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.
3.6	Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NOX within the plant area at least at one location. The monitoring of other locations (at least three locations outside the plant area covering upwind and downwind directions at an angle of 120° each) shall be carried out manually.
3.7	Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
3.8	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.

#### 4. Noise Pollution And Its Control Measures

S. No	EC Conditions
4.1	The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
4.2	Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
4.3	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.

#### 5. Human Health Environment

S. No	EC Conditions
5.1	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 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.

S. No	EC Conditions
5.2	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.

## 6. Water Quality Monitoring And Management

S. No	EC Conditions
6.1	Air-Cooled Condenser cooling system shall be installed to reduce the specific water consumption below 3.0 m <sup>3</sup> /MWh
6.2	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.
6.3	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.
6.4	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.
6.5	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.
6.6	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.
6.7	Wastewater generation of 32040 KLD from various sources (viz. cooling tower blowdown, boiler blow down, wastewater from ash handling, 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.
6.8	Sewage generation of 576 KLD 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).
6.9	Action plan by the TPPs located within 50 km of a municipality or any Urban Local Body (ULB) to use the treated sewage water produced by the municipality/Urban Local Body(ULB) to reduce fresh water consumption shall be submitted.

## 7. Risk Mitigation And Disaster Management



S. No	EC Conditions
7.1	Adequate safety measures and environmental safeguards shall be provided in the plant area to control spontaneous fires in coal yard, especially during dry and humid season.
7.2	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%.
7.3	Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
7.4	Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
7.5	Regular mock drills for on-site emergency management plan and Integrated Emergency Response System shall be developed for all kind of possible disaster situations.

## 8. Green Belt And Biodiversity Conservation

S. No	EC Conditions
8.1	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.
8.2	In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.

## 9. Waste Management

S. No	EC Conditions
9.1	Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
9.2	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.
9.3	Ash pond shall be lined with impervious liner as per the soil conditions. Adequate dam/dyke safety measures shall also be implemented to protect the ash dyke from getting breached.
9.4	Fly ash shall be collected in dry form and ash generated shall be used in phased manner as per provisions of the Notification on Ash Utilization issued by the Ministry S.O. 5481 dated 31.12.2021, S.O.6169 (E) dated 30.12.2021, S.O.05 (E) dated 01.01.2024 and amendment thereto.
9.5	Unutilized ash if any shall be disposed off in the ash pond in the form of High Concentration Slurry method.

## 10. Monitoring Of Compliance

S. No	EC Conditions
10.1	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.
10.2	Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
10.3	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.
10.4	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.
10.5	<p>The project proponent shall (Post-EC Monitoring):</p> <ol style="list-style-type: none"> <li>send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;</li> <li>upload the clearance letter on the web site of the company as a part of information to the general public.</li> <li>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&amp;CC) at <a href="http://parviesh.nic.in">http://parviesh.nic.in</a>.</li> <li>upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;</li> <li>monitor the criteria pollutants level namely; PM (PM10&amp; PM2.5 in case of ambient AAQ), SO<sub>2</sub>, NO<sub>x</sub> (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;</li> <li>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&amp;CC, the respective Zonal Office of CPCB and the SPCB;</li> <li>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;</li> <li>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.</li> </ol>

#### 11. Corporate Environmental Responsibility (CER) Activities

S. No	EC Conditions
11.1	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 schedule of implementation with appropriate budgeting.