



सत्यमेव जयते

**Government of India**  
**Ministry of Environment, Forest and Climate Change**  
**IA Division**  
**(Thermal Projects)**

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**Minutes of AGENDA FOR 13TH MEETING OF THE EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL POWER PROJECTS) TO BE HELD ON 1ST OCTOBER, 2024 meeting Thermal Projects held from 01/10/2024 to 01/10/2024** **Date:** 10/10/2024

**MoM ID:** EC/MOM/EAC/987747/9/2024  
**Agenda ID:** EC/AGENDA/EAC/987747/9/2024  
**Meeting Venue:** N/A  
**Meeting Mode:** Virtual  
**Date & Time:**

01/10/2024	10:30 AM	05:30 PM
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**1. Opening remarks**

At the outset, the Chairman welcomed the Expert members & other participants and requested to start the proceeding as per the agenda listed for this meeting. The list of members who participated in the meeting is at **Annexure – I**. The Standard/Generic ToR conditions shall be system generated through the PARIVESH Portal.

**2. Confirmation of the minutes of previous meeting**

Confirmation of the Minutes of the 12<sup>th</sup> Meeting of the EAC (Thermal): The minutes of the 12<sup>th</sup> meeting of the EAC (Thermal) held during 29<sup>th</sup> August,2024 has been confirmed by the EAC.

**3. Details of proposals considered by the committee**

**Day 1 -01/10/2024**

**3.1. Agenda Item No 1:**

**3.1.1. Details of the proposal**

<b>Proposed Expansion of Raipur Thermal Power Plant by adding 1600 (2x800) MW Ultra Super-Critical to existing 1370 (2x685) MW in CSIDC Industrial Area, at Village Raikheda, Gaitara &amp; Chicholi, Tilda Block, Raipur District, Chhattisgarh by Adani Power Limited by Adani Power Limited located at RAIPUR, CHHATTISGARH</b>			
<b>Proposal For</b>		Fresh EC	
<b>Proposal No</b>	<b>File No</b>	<b>Submission Date</b>	<b>Activity (Schedule Item)</b>

<a href="#">IA/CG/THE/490693/2024</a>	J-13012/62/2008-IA. II(T)	17/09/2024	Thermal Power Plants (1(d))
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### 3.1.2. Project Salient Features

#### **Agenda No 13.1**

Proposed expansion of Raipur Thermal Power Plant by adding 1600 (2x800) MW Ultra-Super Critical to existing capacity of 1370 (2x685) MW in an area of 358.15 Ha by **M/s. Adani Power Limited, Raipur (APL)** located at CSIDC industrial area in Tilda Block, Raipur District, Chhattisgarh - **Environmental Clearance-reg.**

**[Proposal No. IA/CG/THE/490693/2024; F. No. J-13012/62/2008-IA. II (T)]**

**13.1.1:** M/s. Adani Power Limited has made an online application vide proposal no. IA/CG/THE/490693/2024 dated 17/09/2024 along with copy of EIA/EMP report, Forms (CAF, Part A, B and C) and certified compliance report seeking environmental clearance under the provisions of 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 the Central Level.

**13.1.2:** Name of the EIA consultant: M/s. Gaurang Environmental Solutions Private Limited Jaipur Rajasthan. [List of ACOs with their Certificate / Extension Letter no.: NABET / EIA / 23-26/RA 0338, valid up to 07.12.2026].

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**13.1.3:** The proposal is for seeking EC for the proposed expansion project of Raipur Thermal Power Plant by adding 1600 (2x800) MW Ultra-Super Critical to the existing capacity of 1370 (2x685) MW in an existing area of 358.15 Ha located at CSIDC industrial area in Tilda Block, Raipur District, Chhattisgarh by M/s. Adani Power Limited (APL), Raipur.

**13.1.4:** Ministry had issued EC earlier for the project site as mentioned above vide letter no. J-13012/62/2008-IA. II (T) dated 09.05.2011 and subsequent amendments dated 13.06.2013, 18.11.2014, 04.02.2015 & 09.12.2015 to the existing project i.e. 1370 (2x685) MW in favour of M/s. GMR Chhattisgarh Energy Ltd (GCEL). The EC was transferred to M/s. Raipur Energen Limited (REL) dated 05.11.2019 (GCEL to REL) & subsequently to M/s Adani Power Limited (APL) dated 24.04.2023 (REL to APL).

**13.1.5** Implementation of the EC dated 9/5/2011

S. No.	Facilities	Units	Power generation capacity	Implementation Status as on 01.10.2024	Production as per CTO
1.	2x685	MW	1370 MW	2x685 MW	2x685 MW

**13.1.6: Certified compliance report submitted by RO, MoEF&CC:** Regional Office of MoEF&CC at Raipur, Chandigarh has submitted certified EC compliance status report vide letter no. 4-11/2013(Env)/125 dated: 16.08.2024 & updated CCR vide no. 4-11/2013(Env)/135 dated: 13.09.2024. The details of the observations made by RO in the report dated 13/09/2024 and ATR submitted by M/s. APL is given below:

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the P P
1	PA shall get an appropriate amendment on the conditions which are not applicable or repugnant to the statutory provisions or Ministry may consider issuance of EC, superseding the existing EC and amendments accorded.	Not complied	specific condition No.(iv) in letter dated 09.05.2011	<p>PA has not submitted any reply in this regard. Ministry may examine and take appropriate view.</p> <p>As per IRO Certified Compliance Report (CCR) dated 16/08/2024</p> <p>“It appears that in the EC condition inadvertently stipulated the parameters of PM2.5 &amp; PM10 for monitoring the particulate emission from the Stack. PA should get appropriate amendment in the condition from the Ministry”</p>	<p>Raipur TPP has already installed Online Continuous Emission Monitoring System (CEMS) in Stack for monitoring the parameters of PM, SO<sub>2</sub> &amp; NO<sub>x</sub> and the real-time monitored data has been linked to the servers of CPCB and CECB.</p> <p>In the Stack Monitoring as per CPCB &amp; SPCB only PM (dust) monitoring is required which is being carried out on regular basis.</p> <p>PP will submit the EC amendment application for amendment of Specific condition No.(iv) in Environmental Clearance.</p>
2	Details of the Public hearing commitments and its implementation status have not been made available	Not complied	-	<p>PA has not submitted any reply/document in this regard and thus no comments are offered by this Sub-Office.</p>	<p>Adani Power Limited, Raipur has approached to CECB (Chhattisgarh Environment Conservation Board) for providing public hearing documents (2009).</p> <p>Action Plan has been prepared as suggested by CECB Officials on public hearing issues. It was suggested that in Public Hearing of Raipur area common issues/opinion are Employment Education, Health, Sustainable livelihood and Community infrastructure development.</p> <p>APL, Raipur is already undertaking CSR activities within 10 km radius area with focus on nearby 16 Villages located around the plant boundary. The development work in these villages is in progress and up to the satisfaction of the villagers. Further, PP has earmarked (allocated) CSR budget of about 50 Crores to be implemented on need based covering EC conditions, public needs as sought during the public hearing.</p>

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the P P
					<p>g.</p> <p>Raipur TPP has conducted the Need based Assessment study, Social Impact Assessment study with community engagement plan in consultation with villagers, stakeholder as Pollution control board to address those point which are the need of villagers to fulfil their requirement and as suggested by stakeholder.</p> <p><b>The above reports have been prepared by Reputed Government Institute. IISWBM, Kolkata. IISWBM (Calcutta University) is renowned for conducting such type of studies.</b></p> <p>CSR activities progress report is submitted along with Six Monthly EC compliance report to MoEFCC, CPCB &amp; SPCB on regular basis with Year wise CSR expenditures.</p>
3	Average ash content in the coal being used is higher than 34%. As per the coal proximate analysis report, average ash content of the domestic coal used is 39.5% and GCV of the domestic coal used is less than 4911 Kcal/kg.	Not complied	<p>specific condition No.(vii), No.(xxx i),</p> <p>additional condition No.2(i) of letter dated 04/02/2015 and additional condition No.2(i) of letter dated 09/12/2015</p>	<p>In the said EC condition, it has been expressly mentioned that in case of variation of coal quality at any point of time fresh reference shall be made to the MoEF&amp;CC for suitable amendments to environmental clearance condition wherever necessary.</p> <p><b>It has been observed that PA rely upon the O.M. dated 11/11/2020 of MoEFCC and its amendment dated 06.12.2023 regarding change of Coal Source without amendment in the EC. The observed non-compliance is relevant to the average ash content (around 39.5%) in the coal used is higher than the condition stipulated (34%).</b></p> <p>Perusal of six-monthly co</p>	<p>Being complied &amp; maintained as per the O.M. dated 11/11/2020 of MoEFCC and its amendment dated 06.12.2023 regarding change of Coal Source without amendment in the EC and same is being submitted along with EC compliance report / quarterly ash % report on regular basis.</p>

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the P P
				<p>compliance report submitted to this Office, it has been observed that PA has not mentioned the ash content in the coal used rather PA has mentioned the above O. M. and submitted the compliance status of the conditions mentioned in the above O.M. However, quarterly report of average ash content in the Coal used has been received in this office. According to the report for the period January-March 2024 average ash content in Coal is 41.13%. Further, PA has submitted annual fly ash implementation report for the period April 2023 – March'2024.</p> <p>In view of the above Ministry may consider the submissions of PA.</p>	
4	<p>The proponent shall sponsor a detailed study regarding water availability in Mahanadi River for all competing sources such as drinking, agriculture, industrial, minimum flow of water in the river during the lean season etc. through institutions like IIT, Delhi /IIT Roorkee. The draft terms of reference shall be submitted within three months which shall be fi</p>	<p>Not complied. Details are not made available regarding compliance of the condition.</p>	<p>specific condition No.(x).</p>	<p>No documents are made available in support of the compliance of the stipulated condition as above. However, PA has made available a copy of the report titled on "Source Sustainability Study for Withdrawal of Water from River Mahanadi for Proposed Expansion of TPP (2x800 MW) of Adani Power Ltd. Raipur".</p> <p>The said study has been executed in the year 2023-2024 through the Academy of Water Technology &amp; Environment Management in Association with IISWBM, Kolkata &amp; CSIR-CGCRI, Kolkata. Ministry/EAC may take appropriate view in this regard.</p>	<p>The said study has been executed in the year 2023-2024 under the proposed expansion project through the Academy of Water Technology &amp; Environment Management in Association with IISWBM, Kolkata &amp; CSIR-CGCRI, Kolkata, the detailed study report has already been submitted along with Action Taken Report and same will be followed during the plant operation.</p>

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the P P
	<p>nalized by the Expert Appraisal Committee. The preliminary report on the above study shall be submitted within one year.</p>				
5	<p>Details are not made available regarding consultation held in this regard with Central Groundwater Authority / Board for finalization of appropriate rainwater harvesting technology / design within a period of three months from the date of this clearance.</p>	Not complied	specific condition No.(xi).	<p>PA has already constructed rainwater harvesting ponds. However, the observed non-compliance is regarding consultation held in this regard with CGWA for finalization of appropriate rainwater harvesting technology / design within a period of three months from the date of this clearance.</p> <p><b>PA in their reply reported that detailed report of rainwater harvesting technique and approval letter of CGWA has been submitted to the Regional Office of MoEF&amp;CC and CECB vide their letter no. GMR/CTPP/MOEF/2012- 13/269 dated 13/06/2012 by M/s GMR Chhattisgarh Energy Ltd. But, copy of the same has not been made available along with their reply. The said communication is also not available in the relevant project file available in the Sub-Office. Ministry may consider the submission of PA, as the rainwater harvesting ponds have already been constructed.</b></p>	<p>The report of rainwater harvesting technique and approval letter of CGWA has been submitted to the Regional Office of MoEFCC and CECB vide their letter no. GMR/CTPP/MOEF/2012- 13/269 dated 13/06/2012 by M/s GMR Chhattisgarh Energy Ltd.</p> <p>Hydrogeology &amp; Rainwater Harvesting Study Report shall be submitted to CGWA for further implementation/suggestion.</p>
6	<p>Though the CSR activities are being reportedly implemented, no</p>	Not complied	specific condition	<p>PA is reportedly undertaking CSR activities. No documents are made available in support of three villages adopted and time bound i</p>	<p>After the acquisition through NCLT, APL has given utmost priority to strengthen the CSR activities that are already being implemented.</p>

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the P P
	<p>documents are made available in support of the claim that three villages have been adopted as stipulated. Details regarding time bound implementation of the CSR formulated within six months and its submission to the Ministry have not been made available.</p>			<p>Implementation of the CSR formulated within six months and its submission to the Ministry. However, the activities undertaken under CSR and the expenditure incurred in this regard during the past five years is already made available by the PA and the same has been incorporated in the monitoring report.</p> <p>Ministry may take appropriate view.</p>	<p>APL, Raipur is undertaking CSR activities within 10 km radius area with focus on nearby 16 Villages located around the plant boundary. The development work in these villages is in progress and up to the satisfaction of the villagers. Further, we have earmarked (allocated) CSR budget of about 50 Crores to be implemented on need based covering EC conditions, public needs as sought during the public hearing.</p> <p>Raipur TPP has conducted the Need based Assessment study, Social Impact Assessment study with community engagement plan in consultation with villagers, stakeholder as Pollution control board to address those point which are the need of villagers to fulfil their requirement and as suggested by stakeholder.</p> <p><b>The above reports have been prepared by Reputed Government Institute. IISWBM, Kolkata. IISWBM (Calcutta University) is renowned for conducting such type of studies.</b></p> <p>CSR activities progress report is submitted along with Six Monthly EC compliance report to MoEFCC, CPCB &amp; SPCB on regular basis with Year wise CSR expenditure.</p>
7	<p>Though PA is implementing CSR activities, details are not made available regarding compliance of one-time capital cost of Rs 33.16 Crores earmarked and r</p>	Not complied	specific condition No.(xxix)	<p>PA submitted in their reply that the condition has been implemented by the previous management during the construction phase. No comments are offered by this Sub-Office, since no supporting documents are made available in respect of one time capital cost of Rs.33.16 Crores earmarked and its utilization.</p>	<p>APL, Raipur is undertaking CSR activities within 10 km radius area with focus on nearby 16 Villages located around the plant boundary. The development work in these villages is in progress and up to the satisfaction of the villagers.</p> <p>APL has given utmost priority to strengthen the CSR activities that are already being imple</p>

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the P P
	occurring expenditure of Rs 6.63 Crores per annum.				mented & Year wise CSR expenditures is being submitted along with EC compliance report.
8	<p>Details are not made available regarding in-built continuous monitoring mechanism in place for radio activity and heavy metals in coal and fly ash (including bottom ash)</p>	Not complied	specific condition No.(xxxii) & (xxxiii).	<p>Radioactivity (U238 &amp; Th 232) analysis in coal and ash is being carried out from the Department of Atomic Energy, Board of Radiation and Isotope Technology (BRIT) Government of India. However, details are not made available regarding in-built continuous monitoring mechanism in place for radio activity and heavy metals in coal and fly ash (including bottom ash). PA in their reply submitted that the technology and monitoring instrument is not available with the suppliers in the country and is not feasible to implement in-built continuous monitoring mechanism as stipulated.</p> <p>In view of the above submissions, Ministry may take appropriate view.</p>	For provision of In-built mechanism continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash), the technology and monitoring instruments not available with the suppliers in the country and is not feasible to monitor in this mechanism. APL will submit the EC amendment application for amendment in specific condition No.(xxxii) & (xxxiii) of environmental clearance.
9	Details regarding name of the newspaper published have not been made available.	Not complied	<p>general condition No.(ix), additional condition No.(iv) of letter dated 18/11/2014, additional condition No.2.(ii) of letter dated 04/02/2015</p>	<p>PA in their reply submitted a copy of the newspaper advertisements dated 28/12/2015 regarding the EC amendment dated 09/12/2015 and 18/11/2014.</p> <p>Newspaper advertisements details regarding general condition No.(ix), additional condition No.(iv) of letter dated 18/11/2014, additional condition No.2.(ii) of letter dated 04/02/2015 have not been made available. It appears that the Unit has been taken over through NCLT from previous management. Corrective action for this condition may not be</p>	Newspaper cuttings is submitted along with ATR.



S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the P P
				re taken at this stage. Ministry may take appropriate view.	
10	Solar power within the premises of the plant particularly at available rooftops have not been installed as stipulated	Not complied	additional condition No. (xxxiv).	Project Authority has reportedly installed 10KWH solar power unit for internal use. Further, feasibility study has been done & the work has been awarded to M/s Mundra Solar PV Limited (MSPVL). PA shall comply the same as committed within specified timeline, since sufficient open space is available within the Thermal Power Plant. Ministry may consider the submissions of PA.	Implementation of solar harnessing power is being prioritized and service order has already been awarded to MSPVL group company which will be implemented by 2025. Capacity of more than 3000 KVA Solar Panels will be installed within plant premises.
11	The details of quantity and quality of coal transported, source, mode of transportation, electricity units generated and plant Load factor have not been submitted along with six-monthly compliance report.	Not complied	additional condition No. 5(ii).	PA in their action taken report submitted the requisite details as Annexure-IX and assured to submit the same in the six-monthly compliance report in future. Ministry may take appropriate view.	Requisite details has been submitted. Information will be submitted along with six monthly EC Compliance Report on regular basis as & when needed.

**13.1.7: ToR Status:** The details of the ToR are furnished as below:

Proposal No/ Date of application	Consideration by the EAC	Date of accord	ToR validity
		10.09.2023	09/09/2027

**13.1.8: Location of the project site**

Location of TPP Village: Taluk: District: State:	Raikheda, Gaitara & Chicholi Tilda Raipur Chhattisgarh Coordinates of TPP site including Ash Pond
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Co-ordinates of all four corners:

- a) TPP site;
- b) Ash pond site;
- c) township etc.

S.NO.	LATITUDE	LONGITUDE
1	21°27'16.93"N	81°52'5.32"E
2	21°27'5.66"N	81°52'11.12"E
3	21°27'2.23"N	81°52'6.66"E
4	21°26'53.45"N	81°52'5.59"E
5	21°26'39.41"N	81°51'53.99"E
6	21°26'35.53"N	81°51'50.97"E
7	21°26'27.93"N	81°51'45.99"E
8	21°26'22.65"N	81°51'32.72"E
9	21°26'38.64"N	81°51'24.60"E
10	21°26'37.05"N	81°51'9.59"E
11	21°26'34.69"N	81°50'58.19"E
12	21°26'25.62"N	81°50'48.16"E
13	21°26'45.32"N	81°50'48.42"E
14	21°26'49.55"N	81°50'53.63"E
15	21°26'52.42"N	81°50'44.48"E
16	21°26'58.32"N	81°50'49.59"E
17	21°27'0.07"N	81°50'41.39"E
18	21°27'3.98"N	81°50'39.90"E
19	21°27'5.50"N	81°50'42.05"E
20	21°27'17.06"N	81°50'40.90"E
21	21°27'15.28"N	81°50'35.33"E
22	21°27'18.24"N	81°50'33.10"E
23	21°27'21.92"N	81°50'31.90"E
24	21°27'23.03"N	81°50'34.26"E
25	21°27'21.16"N	81°50'38.28"E
26	21°27'27.07"N	81°50'36.24"E
27	21°27'26.95"N	81°50'39.03"E
28	21°27'19.29"N	81°50'49.49"E
29	21°27'17.33"N	81°51'0.22"E
30	21°27'14.74"N	81°51'6.38"E
31	21°27'21.92"N	81°51'8.22"E
32	21°27'25.57"N	81°51'9.49"E
33	21°27'27.95"N	81°51'10.09"E
34	21°27'27.85"N	81°51'5.37"E
35	21°27'23.29"N	81°50'59.62"E
36	21°27'21.39"N	81°51'0.25"E
37	21°27'21.35"N	81°50'57.96"E
38	21°27'26.86"N	81°50'56.62"E
39	21°27'28.19"N	81°50'57.76"E
40	21°27'31.61"N	81°51'3.27"E
41	21°27'35.06"N	81°51'0.11"E
42	21°27'36.97"N	81°50'58.77"E
43	21°27'39.89"N	81°51'0.07"E
44	21°27'41.30"N	81°51'1.21"E
45	21°27'41.42"N	81°51'4.19"E
46	21°27'40.28"N	81°51'5.18"E
47	21°27'39.32"N	81°51'7.44"E
48	21°27'39.57"N	81°51'8.66"E
49	21°27'37.79"N	81°51'13.86"E
50	21°27'33.76"N	81°51'17.53"E
51	21°27'35.36"N	81°51'20.67"E
52	21°27'37.60"N	81°51'17.76"E

	53	21°27'41.49"N	81°51'19.66"E
	54	21°27'41.95"N	81°51'21.77"E
	55	21°27'41.49"N	81°51'26.43"E
	56	21°27'42.82"N	81°51'30.80"E
	57	21°27'42.33"N	81°51'34.72"E
	58	21°27'40.43"N	81°51'37.59"E
	59	21°27'45.22"N	81°51'37.78"E
	60	21°27'43.75"N	81°51'44.16"E
	61	21°27'46.01"N	81°51'45.01"E
	62	21°27'45.96"N	81°51'51.76"E
	63	21°27'44.64"N	81°51'53.49"E
	64	21°27'41.09"N	81°51'52.27"E
	65	21°27'38.17"N	81°51'57.16"E
	66	21°27'35.82"N	81°51'57.20"E
	67	21°27'31.84"N	81°51'52.50"E
	68	21°27'28.95"N	81°51'50.42"E
	69	21°27'26.69"N	81°51'44.88"E
	70	21°27'23.75"N	81°51'41.59"E
	71	21°27'21.98"N	81°51'44.88"E
	72	21°27'19.90"N	81°51'36.66"E
	73	21°27'18.02"N	81°51'33.26"E
	74	21°27'18.19"N	81°51'28.34"E
	75	21°27'20.50"N	81°51'24.01"E
	76	21°27'26.23"N	81°51'18.13"E
	77	21°27'15.35"N	81°51'20.82"E
	78	21°27'1.81"N	81°51'20.26"E
	79	21°27'0.76"N	81°51'33.41"E
	80	21°27'8.98"N	81°51'44.09"E
	81	21°27'10.68"N	81°51'34.93"E
	82	21°27'10.88"N	81°51'30.33"E
	83	21°27'13.26"N	81°51'30.50"E
	84	21°27'12.16"N	81°51'56.93"E
	85	21°27'16.86"N	81°51'57.80"E
Average height of (a) TPP site, (b) ash pond site etc above MSL (m)	TPP site : 306 – 329 m Ash pond site :308 - 321 m		
Inter- state issue involved	No		
Seismic zone	Seismic Zone II- low damage risk zone (MSK VI or less) as per IS 1893: 2002		

**13.1.9: Land Area Breakup:** The proposed expansion will be carried out entirely within the existing area of 358.15 ha which is already under possession of Adani Power Limited. The land use break up is given as below:

Land Requirement(Ha):	34.39
a) TPP Site	60.70
b) Ash Pond	-
c) Township	33.59
d) Railway Siding & Others(Coal & Ash Fac	50.59

ility) e) Raw Water Reservoir f) Green Belt g) Others Total (if expansion state additional land requirement)	142.85 36.03 (16.18 + 19.85) 358.15 Ha. (885 Acres) No additional land is required for the proposed expansion.
Status of Land Acquisition:	The proposed expansion is within the land that is already under possession with Adani Power Limited.
Break-Up of land-use of TPP site: a. Total land required for project components b. Private land c. Government land d. Forest Land	358.15 ha - 358.15 ha -
CRZ Clearance	Not Applicable
Whether the project is in the Critically Polluted Area (CPA)/Severely Polluted Area (SPA) or within 10 km of CPA. If so, the details thereof:	The project area does not falls within 10 km of CPA does not fall under any Critically or Severely Polluted Areas as per the CEPI Assessment, 2018 of CPCB.

### 13.1.10: Environmental sensitivity of the study area

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter/Remarks
Reserve Forest/Protected ForestL and	Yes	Mohrenga P.F is Adjacent to Plant Boundary. Khaulidabri P.F (Nature safari) is about 2.9 km in ESE direction. No National Park, Wildlife Sanctuary, Elephant/Tiger Reserve exists within 15 km of the power station.
National Park	No	
Wildlife Sanctuary	No	
Archaeological sites monument s/historical temples etc	No	
Names & distance of National parks, Wildlife sanctuaries, Biosphere reserves, Heritage sites Rivers, Tanks, Reserve Forests etc. Located within 10 Km from the plant boundary:	No	
Availability of Schedule-I species in study area	No	-
Additional information (if any)	-	-

**13.1.11: Salient features of the expansion proposal****• Project Description:**

Expansion / Green Field (new) : (I P / Merchant / Captive) :	Expansion (IPP)
Cost of the project (As per EC and revised) : Cost of the proposed activity in the amend ment :	Existing 1370 (2x685) MW units – Rs. 8290 Crores Proposed 1600 (2x800) MW unit – Rs. 13,600 Crores
Employment potential for entire project / p lant and employment potential for the prop osed amendment (specify number of perso ns and quantitative information).	During the operative phase about 276 additional no. of persons will be employed for the expansion project. At present 238 people are employed in the unit. Therefor e, after the proposed expansion, the total manpower of the unit will be 514 Nos.
Benefits of the project (Specify quantitativ e information).	Social benefits: Generation of employment, developm ent of peripheral infrastructure and upliftment of nearb y villages due to socio-economic developmental activit ies. Financial benefits: Revenue generation for State and C entral exchequer.
Status of other statutory clearances	NA
R&R details	Not Applicable
Power requirement	Power requirement after expansion will be 356400 KV A including existing 164400 KVA and will be met fro m self-generation. i.e AUX consumption. Existing unit has no DG sets, additionally no DG sets are used as sta ndby during power failure.
Water requirement	Water consumption for thermal power plants as per M oEFCC vide Notification S.O. 3305 (E) dated 07.12.20 15 for all existing CT based plants reduce specific wat er consumption up to maximum of 3.5 m <sup>3</sup> /MWh and a s per MoEFCC stipulated norms vide Notification GS R 593 (E) dated 28.06.2018 water allocated to the ther mal power plant is 3 m <sup>3</sup> /MWhr for new plants installe d after the 1st January, 2017. The total water requirem ent for the project is 2.56 m <sup>3</sup> /MWh, which will be well within the stipulated norms of Notification dated 07.1 2.2015/28.06.2018.

**• Electricity generation capacity:**

Capacity & Unit Configurations:	1600 MW, Configured as 2x800 MW
Generation of Electricity Annually	1600 MWh

• **Details of Fuel and Ash disposal**

Fuel to be used:	Coal and Auxiliary Fuel																								
Quantity of Fuel required per Annum:	For the Proposed expansion Project of 1600 MW, the annual fuel requirement is estimated at 6.6 MTPA at 85% plant load factor with Coal GCV of 3200 KCal/kg. Auxiliary liquid fuels, viz. LDO/HSD requirement per annum: 2500 kilo liters per annum. Existing coal requirement = 6.77 MTPA																								
Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)	Quantity and details of Linkage Available: 4.0 Million MTPA & Gondulpara Coal mines in Hazaribagh, Jharkhand and e-auction. The method of obtaining remaining coal: MoU/MoA & E auction Ash content in coal 42 (%) Sulphur in coal 0.50 (%) Moisture 17 (%) GCV in coal 3200 Kcal/Kg																								
Details of mode of transportation of coal from coal source to the plant premises along with distances	Total distance from the source to Rail: 670 km (from Gondulpara coal mines in Hazaribagh To TPP)																								
Fly Ash Disposal System Proposed	High / Medium concentration slurry. Ratio of water and ash – 35-45% (If expansion project state additional area required for ash pond) – not required																								
Quantity of a. Fly Ash to be generated b. Bottom Ash to be generated:	Coal requirement: 6.6 MTPA 9064 T/day 2266 T/day																								
Fly Ash utilization percentage with details in last 5 years from the existing 1370 MW TPP	<table border="1"> <thead> <tr> <th>Year</th> <th>Quantity Generated (LMT)</th> <th>Quantity Utilization (LMT)</th> <th>Utilization (%)</th> </tr> </thead> <tbody> <tr> <td>2019-20</td> <td>13.08</td> <td>13.10</td> <td>100.16</td> </tr> <tr> <td>2020-21</td> <td>16.02</td> <td>16.65</td> <td>103.98</td> </tr> <tr> <td>2021-22</td> <td>20.41</td> <td>20.01</td> <td>98.06</td> </tr> <tr> <td>2022-23</td> <td>20.26</td> <td>20.28</td> <td>100.06</td> </tr> <tr> <td>2023-24</td> <td>23.17</td> <td>23.19</td> <td>100.09</td> </tr> </tbody> </table> <p><b>Ash Stock (Legacy ash) in operational Ash Pond as on 31.03.2024 – 1.64 LMT</b> <b>Note:</b> Efforts will be made to achieve 100% Ash utilization from commissioning of the plant and</p>	Year	Quantity Generated (LMT)	Quantity Utilization (LMT)	Utilization (%)	2019-20	13.08	13.10	100.16	2020-21	16.02	16.65	103.98	2021-22	20.41	20.01	98.06	2022-23	20.26	20.28	100.06	2023-24	23.17	23.19	100.09
Year	Quantity Generated (LMT)	Quantity Utilization (LMT)	Utilization (%)																						
2019-20	13.08	13.10	100.16																						
2020-21	16.02	16.65	103.98																						
2021-22	20.41	20.01	98.06																						
2022-23	20.26	20.28	100.06																						
2023-24	23.17	23.19	100.09																						

	will follow fly ash utilization as per MoEF&C C Notification dated 31.12.2021.
Stack Height (m) & Type of Flue	120 (m) (new) Bi Flue with FGD

• **Water Requirement:**

Source of Water:	Existing Samoda Dam at Mahanadi River approx. at 35 km from Plant Site.
Quantity of water requirement:	36 MCM (Expansion) 25 MCM (Existing) Total: 61 MCM per annum
Distance of source of water from Plant:	35 Km (from existing intake point)
Whether barrage/ weir/ intake well/ jackwell/ others proposed:	No
Mode of conveyance of water:	Existing Pipeline
Status of water linkage:	15.03.2024
(If source is Sea water) Desalination Plant Capacity	NA
Mode / Management of Brine:	NA
Cooling system	Induced draft

**13.1.12: Details of Solid waste/ Hazardous waste generation and its management are given in presentation.**

S.No	Particular	Quantity	Management & disposal
	Municipal Solid waste	90 TPA	MSW anticipated will be collected; segregated using color coded waste bin collection system and handed over for final disposal to municipal corporation waste disposal site. Organic component of MSW will be converted to compost using Organic waste converters & used as manure for landscaping within plant premises.
	Fly Ash & Bottom Ash	3.68 Million MTPA	Efforts will be made to utilize 100% bottom ash as per MoEFCC guidelines. Bottom ash shall be disposed through lean slurry to Ash dyke in case of exigencies.
	Construction Waste	350000 Tonnes	Inert component of Construction waste shall be reused in grading & levelling of within premises. Remaining Construction waste will be handed over to contractor for disposal as per C&D Waste rules 2016.
	Hazardous waste Used / S	125 TPA	These are collected & stored on a designated store /

S.No	Particular	Quantity	Management & disposal
	pent Oil (Cat. 5.1); Waste or residues containing oil (Cat. 5.2); Empty Barrels/ c ontainers/ liners contamin ated with hazardous chemi cals/ wastes (Cat. 33.1) & Spent ion exchange resin c ontaining toxic metals (Ca t. 35.2)		yard with proper shed & impermeable flooring. Hazardous Waste will be send to authorised recycler s as per the Hazardous And Other Wastes (Manage ment and Transboundary Movement) Rules, 2016.
	E waste	3.5 TPA	Handed over to the CPCB/SPCB authorised recycler s.
	Battery waste	7 TPA	Handed over to the CPCB/SPCB authorised recycler s.
	Bio-medical waste	0.12 TPA	Disposed as per the Bio Medical Waste Managemen t Rules, 2016.

### 13.1.13: Baseline Environmental Scenario:

**Period : From 01.10.2024 to 30.12.2024**

AAQ parameters at – locatio ns (min. & Max.)	<p>PM<sub>10</sub>: 72.59 µg/m<sup>3</sup> - 41.15 µg/m<sup>3</sup>.            PM<sub>2.5</sub>: 42.70 µg/m<sup>3</sup> - 28.41 µg/m<sup>3</sup>.            SO<sub>2</sub>: 13.45 µg/m<sup>3</sup> - 7.43 µg/m<sup>3</sup>.            NO<sub>x</sub>: 21.35 µg/m<sup>3</sup> - 11.80 µg/m<sup>3</sup>.            CO: 670 µg/m<sup>3</sup> - 450 µg/m<sup>3</sup>.            Hg: BLQ (**LOQ-0.15).</p>
Incremental GLC Level for cumulative AAQ modelling	<p>PM<sub>10</sub> = Max. GLC: 1.19 µg/m<sup>3</sup>            PM<sub>2.5</sub> = Max. GLC: 0.395 µg/m<sup>3</sup>            SO<sub>2</sub> = Max GLC: 1.146 µg/m<sup>3</sup>            NO<sub>x</sub> = Max GLC: 1.039 µg/m<sup>3</sup></p>
Pond water and River water samples (08 samples) Pond water	<p>pH 6.98 to 7.98, Dissolved Oxygen: 4.5 to 6.6 mg/lit; Total Dissolved Solids: 402 to 590 mg/lit; Total Hardness (as CaCO<sub>3</sub>): 130 to 310 mg/lit &amp; total Alkalinity (asCaCO<sub>3</sub>): 170 to 360 mg/lit; Calcium (as Ca): 40.1 to 92.3 mg/lit; Magnesium (as Mg) : 2.42 to 20.0 mg/lit ; Sulphate (as SO<sub>4</sub>): 41.3 to 74.8 mg/lit , Nitrate (asNO<sub>3</sub>) : 83 to 18.2 mg/lit; Chloride (as Cl) : 68.7 to 89.4 mg/lit; Iron (as Fe): 0.16 to 0.24 mg/lit; BOD 7.2 to 10.3 mg/lit;            Heavy metals like Copper (as Cu), Lead (as Pb)- BLQ(**LOQ-0.005), Cadmium(as Cd)- BLQ(**LOQ-0.002), Chromium (as Cr)- BLQ(**LOQ-0.02), Arsenic (as As)- BLQ(**LOQ-0.005) and Mercury(as Hg)- BLQ(**LOQ-0.001).</p>
Ground Water samples at 15 locations	<p>pH: 7.02 to 8.02, Total Dissolved Solids: 330 to 610 mg/lit; total Hardness (as CaCO<sub>3</sub>): 170 to 490 mg/lit; Total Alkalinity(asCaCO<sub>3</sub>): ---to --- mg/lit; Calcium (as Ca): 130 to 410 mg/lit; Magnesium (as Mg): 15.27 to 51.17 mg/lit; Sulphate (asSO<sub>4</sub>): 64 to 94.2 mg/lit, Chloride (as Cl): 41 to 81 mg/lit; Iron (as Fe): 29 to 52 mg/lit;            Heavy metals like Copper (as Cu), Lead (as Pb)- BLQ(**LOQ-0.005), Cadmium(as Cd)- BLQ(**LOQ-0.002), Chromium (as Cr)- BLQ(**LOQ-0.02), Arsenic (as As)- BLQ(**LOQ-0.005) and Mercury(as Hg)- BLQ(**LOQ-0.001).</p>
Noise levels Leq	The Leq values for day time was observed to be 48.2 to 60.7 dB (A) in resident



(Day & Night) at -12 locations	ial area, while during night time 39.4 to 47.1 dB (A).
Soil Quality at 12 Locations	Bulk density: 1.26 to 1.37 gm/cc; pH range 7.38 to 7.71; Electrical conductivity (EC); 0.310 to 0.358 µmhos/cm; calcium content: ---to --- mg/kg; sodium: 30 to 95 mg/kg; potassium: 91.91 to 129.00 kg/hect; Nitrogen: 92.13 to 220.13 kg/hect; Phosphorous: 23.16 to 35.10 kg/hect; Magnesium: 76 to 93 mg/kg; Organic Matter: 0.52% to 0.70%.
Flora & Fauna	No schedule I species observed during field survey.

### 13.1.14: Public Hearing

i. Advertisement for PH with date ii. Details of newspaper published	22/05/2024 Dainik Bhaskar (Hindi), The Indian Express (English) dated 22.05.2024
Date of PH	22.06.2024
Venue	Playground, Near Government High School, Village Tarashiv, Tehsil - Tilda, District - Raipur, Chhattisgarh (2.7km from the project site)
Chaired by	Sri Devendra Patel, Additional District Magistrate, Raipur
Main issues raised during PH	Employment to the locals and development of nearby villages.
No. of people attended	120

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

S. No.	Key Area Identification under CSR activities with addressing public need sought during Public Hearing	Time bound (Year wise) budget allocation (Rs. In Crores)					(Budget Rs. In Crores)
		1st	2nd	3rd	4th	5th	
<b>A</b>	<b>Educational Initiatives</b>						
	Modernization and necessary construction of Higher Secondary School (Kg to XII Class),	0.5	0.9	0.9	0.7	1.5	4.5
	Distribution of drinking water filter/Drinking water coolers in schools.	0.1	0.2	0.2	1.75	1.25	3.5
	Basic teaching and learning infrastructure support to Govt.						

S. No.	Key Area Identification under CSR activities with addressing public need sought during Public Hearing	Time bound (Year wise) budget allocation (Rs. In Crores)					(Budget Rs. In Crores)
		1st	2nd	3rd	4th	5th	
	Schools, Supporting in creation of assembly halls, prayer halls, classrooms, computer room, space for mid-day meals,	0.5	0.8	0.8	1.65	1.0	4.75
	playground, school boundary walls etc. for government school.						
	Educational Vocational Guidance fair (EVGF) for career talk.						
	Conducting Quiz competition for Students, Preparatory	0.10	0.20	0.20	1.5	1.25	3.25
	Coaching Classes for Navodaya Entrance Examination.						
	Community to provide awareness about education, health, hygiene, and good practices.	0.05	0.10	0.10	1.25	1.0	2.5
	Program for skill improvements of teaching staffs in govt. school.	0.05	0.10	0.10	0.75	0.5	1.5
	<b>Sub Total</b>	<b>1.3</b>	<b>2.3</b>	<b>2.3</b>	<b>7.6</b>	<b>6.5</b>	<b>20</b>
<b>B</b>	<b>Community Health Initiatives</b>						
	Operation of Primary Health Centre at Raikheda.	1.1	1.1	1.1	1.1	1.1	5.5
	Rural Medical Camps through Medical Team of Primary Health Centre @ 4 Nos. of camps per month (@ 60 patients per camp), Safe Menstrual Hygiene Management Awareness,	0.5	0.5	0.5	0.5	0.5	2.5

S. No.	Key Area Identification under CSR activities with addressing public need sought during Public Hearing	Time bound (Year wise) budget allocation (Rs. In Crores)					(Budget Rs. In Crores)
		1st	2nd	3rd	4th	5th	
	Mega Health Camp, Cataract Screening & Operation.						
	Promotion of awareness of malnutrition and anemia.	0.15	0.15	0.15	0.15	0.15	0.75
	Promotion of Poshan Vati ka at backyard of villagers & Project Suposhan.	0.15	0.15	0.15	0.15	0.15	0.75
	<b>Sub Total</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>9.5</b>
<b>C</b>	<b>Sustainable Livelihood and Women Empowerment</b>						
	Skill Development Centre (SDC) to make the youth for achieving their Goals in life by becoming Skilled Professionals.	0.3	0.3	0.3	0.3	0.3	1.8
	Development & Support for Drip irrigation in core zone Villages & Organic farming and support to SHG/ FPO	0.2	0.2	0.2	0.2	0.2	0.9
	<b>Sub Total</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>2.2</b>
<b>D</b>	<b>Community Rural Infrastructure Development</b>						
	Repairing, widening & Maintenance of Existing roads in consultation with Gram Panchayats	0.7	0.7	0.7	0.7	0.7	3.5
	To provide facility for potable drinking water, RO Plants and water supply system through overhead tank in village	0.5	0.9	0.4	0.4	0.3	2.5

S. No.	Key Area Identification under CSR activities with addressing public need sought during Public Hearing	Time bound (Year wise) budget allocation (Rs. In Crores)					(Budget Rs. In Crores)
		1st	2nd	3rd	4th	5th	
	s.						
	Creation of clean and hygienic environment by proper drainage systems, community sanitation campaign etc.	0.5	0.5	0.5	0.35	0.15	2
	Upgradation & Renovation of primary health centers with toilet facilities etc.	0.7	0.7	0.7	0.7	0.7	3.5
	Provision of solar street lighting, green nurturing programs, implementation of Swachh Bharat initiatives.	1.0	0.65	0.65	0.5	0.7	3.5
	<b>Sub Total</b>	<b>3.4</b>	<b>3.45</b>	<b>2.95</b>	<b>2.65</b>	<b>2.55</b>	<b>15</b>
<b>E</b>	<b>Sports &amp; Culture Development</b>						
	Promotion of sports for youths and women	0.1	0.1	0.1	0.05	0.05	0.4
	Cultural activities for villagers	0.1	0.1	0.1	0.2	0.05	0.55
	<b>Sub Total</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.25</b>	<b>0.1</b>	<b>0.95</b>
<b>F</b>	<b>Development of local youth &amp; women for management &amp; administration</b>						
	Team/ Leaders development at village level as coordinator for various program and activities.	0.4	0.4	0.4	0.4	0.4	2.0
	Vehicles for emergency purpose for local villagers including private ambulances as per requirement	0.1	0.1	0.1	0.1	0.1	0.5

S. No.	Key Area Identification under CSR activities with addressing public need sought during Public Hearing	Time bound (Year wise) budget allocation (Rs. In Crores)					(Budget Rs. In Crores)
		1st	2nd	3rd	4th	5th	
	<b>Sub Total</b>	0.5	0.5	0.5	0.5	0.5	<b>2.5</b>
	<b>Total (A+B+C+D+E+F+G)</b>	<b>7.8</b>	<b>8.85</b>	<b>8.35</b>	<b>13.4</b>	<b>11.75</b>	<b>50.15</b>

S. No.	Item Description	Cost (Rs. in Crores)	Recurring cost (Rs. in Crores)
1	Electrostatic Precipitator	332.73	35
2	Chimney	69.32	5
3	Cooling Tower	180.23	18
4	Ash Handling including ash water recirculation	120.0	12
5	Ash disposal civil work	50.0	5
6	Dust extraction & suppression system	6.93	0.5
7	DM Plant Waste Treatment System	6.93	0.7
8	Sewerage collection, treatment & disposal	1.39	0.2
10	Green Belt & landscaping	6.93	0.6
11	FGD and SCR	1280.0	125
12	Rainwater harvesting	5.55	0.55

S. No.	Item Description	Cost (Rs. in Crores)	Recurring cost (Rs. in Crores)
13	Solar power harnessing	8.32	0.7
14	Environmental Laboratory & Environmental Monitoring (Capital + Recurring)	8.5	0.5
15	CEMS, CAAQMS, EQMS monitoring system & Main gate display board	3.5	0.30
16	Wind Breaking Wall, Dry Fog System & RCC Flooring in Coal Storage Area.	30.0	2.5
<b>Total in Rs. in Crores</b>		<b>2110.33 Crores.</b>	<b>206.55</b>

#### Budget Allocation for Greenbelt Development

No. of trees to be planted	Green area/Plantation	Fund allocation for proposed plantation in lakhs
68,500 nos.	142.85 Ha (39.88%)	Rs 693 Lacs

#### 13.1.17: Summary of court cases as on September, 2024

S. No	Case No/ 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	DFR 2313 of 2019 Appeal No. 448 OF 2019 REL vs PGCIL & Ors(LTA Relinquishment)	APTEL	IA for name change from REL to APTEL was allowed by APTEL on 02.06.2023.	02.06.2023	Awaited	On 07.09.2021, pleadings completed

S. No	Case No/ Title	Name of the Court	Brief summary of the case	Last date of hearing	Next date of hearing	Direction/ Action taken by the PP
2	DFR No. 176 of 2020 Appeal 39 of 2023 REL vs CERC & PGCIL	APTEL	IA for name change from REL to AP L was allowed by APTEL on 02.06.2023.	02.06.2023	Awaited	On 20.10.2021, pleadings completed
3	92/2023	CSERC	Determination of Energy Charge Rate for FY 20-21, FY 21-22, FY 22-23 towards supply of 5% power to CSP DCL.	Date of filing: 29/11/2023	Awaited	Pleadings incomplete
4	SLP (C) No. 13112 of 2019	Supreme Court	(matter directed to be tagged with SLP(C) No. 11998/2019) GCEL Vs Union of India (Coal Mine Matters)	01.04.2024	Awaited	Motion Hearing
5	SLP (C) No. 13151 of 2019 (matter directed to be tagged with SLP(C) No. 11998/2019) GCEL Vs Union of India	Supreme Court	(Coal Mines Matter)	01.04.2024	Awaited	-
6	LPA- 338/2015 GCEL vs Union of India (through the Railway Board)	Delhi High Court	(Rail Transport Clearance case)	06.03.2020	Awaited	-
7	W.P.(C) 12296/2022 Raipur Energen Limited Vs Union Of India & Ors.	Delhi High Court	Ratan India Petition was tagged, and counsel for Ratan India sought adjournment. Respondents did not object, and CIL and MCL sought to file comments on the rejoinder.	08.11.2023	16,07.2024	In a similar case, the Delhi High Court restraining respondents from coercive actions against GMR Kamlanga Energy Limited, and the company filed a name change application without objections.
8	Writ Petition (Civil) 1801/2017	High Court, Orissa	GCEL vs Regional Commissioner, Regional Coal mines office	Hon'ble Court vide order dt. 22.02.2017 has stayed the operation of the demand	Awaited	There is likelihood of a favorable order

S. No	Case No/ Title	Name of the Court	Brief summary of the case	Last date of hearing	Next date of hearing	Direction/ Action taken by the PP
				d from the Regional Commissioner		
9	W.P.PIL 87/2016	High Court, Chhattisgarh	(Suo motu petition) Court on its own motion vs State of CG and Others	The matter was listed on 15.06.2022 after a gap of more than 2 years & 3 months. The Court has directed the Deputy 2. The case was listed on 15.06.2022, heard on 19.07.2023, appointed several lawyers as Court Commissioners, but reports were not provided to private respondents' counsel	15.07.2024	On 04.12.2023, W.P.PIL 87/2016, (Suo moto petition by the High Court of Chhattisgarh) was heard for placing the reports in compliance of the order 19.07.2023.
10	W.A. No. 1377 of 2022	High Court, Orissa	Raipur Enenrgen Limited vs Hindalco Industries & Ors	16.10.2023	Awaited	For orders
11	WPC No. 2328/2019 Girdhar Vs State Chhattisgarh & 3 ors. (REL is Respdt. No. 4)	High Court, Bilaspur	The court ordered a notice to M/s GEL, listed the matter, and granted two weeks' time for an amendment in the cause title. The matter was listed again on 20.09.2021	20.09.2021	Awaited.	Likelihood of favorable order in the matter.
12	Case No. 47/13 Dy. Director- Industrial Health & Safety / Factory Inspector vs Rajkumar & Anr.	Judicial Magistrate, First Class, Labour Court, Raipur	Case against the Factory Manager has been disposed of on 06.05.2015, while against occupier it is still pending.	06.05.2015	No next date given. The matter will be taken up on the appearance of the occupier.	Listed for hearing on 03.04.2021 but for COVID-19, regular hearing suspended and hence the matter could not be taken up. The matter is pending in District Court, at Raipur on the issue of deposition of Court fees. Meanwhile an application for change of name from GCEL to Raipur Energen Limited



S. No	Case No/ Title	Name of the Court	Brief summary of the case	Last date of hearing	Next date of hearing	Direction/ Action taken by the PP
						ed has been filed.
13	752 of 2015Rakesh Kr. Agrawal v/s GCEL & OthersCase not yet registered as the issue of payment of Court fees is still pending	District Court, Raipur	Listed for hearing on 16.10.2022. The matter is pending in District Court, at Raipur on the issue of deposition of Court fees. Meanwhile an application for change of name from GCEL to Raipur Energen Limited has been filed.	16.10.2022	Awaited	Likelihood of favourable order in the matter as the petitioner has not yet paid the court fee.
14	WPC No. 1284/2023	Chhatisgarh High Court		20.02.2024	Awaited	
15	MSME online Application No. - UDYAM-TN-02-0161824/M/00001 dtd. M/s Valtech Technical Services Vs M/s Raipur Energen Limited	The micro and small enterprises facilitation council - Chennai		15.06.2023	Awaited	The MSEF Council will intimate the next date by email.

PP informed that out of 15 court cases listed above there is no any litigation in respect of the subject matters pertaining to the Environment & Forests.

### Written submission

**13.1.18:** PP has submitted the following written submission:

S. No.	Written submissions	Details
	Submit an Action Plan to address the issues/non-compliance mentioned in Certified EC Compliance Report.	PP submitted action plan to address the issues mentioned in updated CCR issued by IRO, Raipur vide letter dated 13.09.2024. The Action Plan is furnished at para 13.1.6 PP submitted undertaking to comply all the conditions stipulated in the previous EC and public hearing conducted dated <b>12.06.2024</b> . PP has enhanced the CSR (CER) budget under 5 years plan. Accordingly, the budget has been increased to <b>50.15 crores</b> .
	Submit details of Public Hearing (2009) for existing (2x685) MW TPP and CSR implementation during the period.	Raipur TPP has approached to CECB for providing public hearing details (2009). Requisite documents are not available, however as per the information collected the PH was held on dated: 15.01.2009. Adani Foundation (CSR arm of Adani Group) under the guidance of APL, Raipur TPP is continuously engaged in CSR activities since 2019 after the GMR group. Identify

S. No.	Written submissions	Details
		<p>d core areas of working in the field of Education (INR 22 0 Cr), Community Health (INR 254.74 Cr), Sustainable Livelihood Development (INR 92.15 Cr), Community Infrastructure Development &amp; Climate Action (INR 123.11 Cr), General Management &amp; Administration (INR 190.5 1 Cr) within 10 km radius area with focus on nearby 16 Villages located around the plant boundary.</p> <p>The development work in those villages is already implemented and up to the satisfaction of the Villagers.</p> <p>APL Raipur hereby submits the undertaking &amp; commitments to comply all the conditions stipulated in the previous EC, public hearing (2009) and public hearing conducted dated 12.06.2024.</p> <p>Further, PP has earmarked (allocated) CSR budget of about 50 Crores to be implemented on need based covering EC conditions, public needs as sought during the public hearing.</p> <p>Raipur TPP has conducted the Need based Assessment study, Social Impact Assessment study with community engagement plan in consultation with villagers, stakeholder as Pollution control board to address those point which are the need of villagers to fulfill their requirement and as suggested by stakeholder.</p> <p>The report has been prepared by Reputed Government Institute, IISWBM, Kolkata.</p> <p>Study report has been submitted.</p>
	<p>Radioactive Monitoring as mentioned in EC Condition, - Either apply for EC Amendment or approach to MoEF&amp;CC to address the issue.</p>	<p>For provision of Inbuilt mechanism for continuous monitoring for radioactivity and heavy metals in coal and fly ash (including bottom ash), the technology and monitoring instrument is not available with the suppliers in the Country and is also technically not feasible to monitor in this mechanism. PP will submit the EC amendment application for amendment in specific condition No.(xxxii) &amp; (xxxiii) of environmental clearance within the month.</p>
	<p>Photographs of Fly ash dumping site along with the permission from CECB shall be provided.</p> <p>Area of ash pond shall be minimized, and the remaining area must be utilized to install solar panels.</p>	<p>PP submitted that they are complying with the condition laid down in NOC by CECB. The Ash generation &amp; utilization detail, photographs of disposal area/abandoned stone quarries and CECB NOC are enclosed.</p> <p>APL has proposed expansion of existing plant of 1370 MW by addition of 1600MW, but <b>not proposed any new ash pond for Phase -II</b> expansion project, so it has been already optimized. Further PP assured that they will install Solar panels within the plant boundary.</p> <p>Ash dyke is required for emergency purpose, Rainy season or in case of any pandemic situation.</p>
	<p>CSR budget for Public Hearing commitments shall be increased.</p>	<p>PP has enhanced the <b>CSR (CER)</b> budget under the 5 year plan. Accordingly, the budget has been increased to 50.15 crores.</p>
	<p>Commitment shall be provided to install FGD by Dec' 2025.</p>	<p>APL, Raipur has awarded service order to Power Mech Projects Limited and APL will implement the FGD <b>before 31 March 2026</b> as per the MoEFCC timeline. Power Mech Projects Limited is already awarded service order for implementation of FGD on priority basis &amp; will complete</p>

S. No.	Written submissions	Details
		the work as per terms & conditions, timeline. The copy of Service order is enclosed.
	Solar power capacity shall be enhanced.	APL is committed to install roof top Solar Panels and available land in the premises with capacity of > <b>5000 KVA</b> as suggested by Hon'ble EAC members during the meeting.
	Assess the feasibility to install Air Cooling condenser for Cooling towers.	APL has already completed feasibility study and WRD office has also ensured for sufficient water availability. There is sufficient water available in Chhattisgarh, therefore WCC has been proposed. However, Feasibility to install all Air Cooling condenser has been evaluated & found, there are space constraints for installation of ACC as the expansion Project is accommodated in the existing plant area. Moreover, installing ACC will further increase the CAPEX & OPEX for the project which will make it technically non-viable.
	Hydrogeology report shall be revalidated by a reputed institute.	Hydrogeology study report will be revalidated by Reputed Institute, PP has already approached on the subject and the report will be submitted to MoEFCC within the month, undertaking is enclosed.
	Plan for strengthening the Environmental Laboratory shall be submitted.	PP planned to expand the environmental laboratory with well qualified staff to carry out regular monitoring. Analysis & surveillance for implementation of stipulated environmental safeguards with facility of stack emission, ambient air quality. Noise levels, etc. to meet all the necessary monitoring parameters required for a Thermal Power Plant. PP has already established Environment Cell for existing units and planned to expand the environmental laboratory. Well qualified Engineers, Chemist & Officers are already working to carry out regular surveillance for implementation of stipulated environmental safeguards. PP is in the process of strengthening the environmental laboratory with all necessary facilities to monitor environmental parameters by March 2027 before COD of TPP.

### 3.1.3. Deliberations by the committee in previous meetings

N/A

### 3.1.4. Deliberations by the EAC in current meetings

#### Observations and deliberation of the EAC

**13.1.18:** The Committee observed and noted the following:

#### Recommendations of the Committee:

**13.1.19:** In view of the foregoing and after detailed deliberations, the committee *recommended* the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to uploading of written submission on PARIVESH Portal and stipulation of the

following specific conditions and general conditions based on project specific requirements:

### 3.1.5. Recommendation of EAC

Recommended

### 3.1.6. Details of Environment Conditions

#### 3.1.6.1. Specific

<b>[A] Environmental Management</b>	
1.	The PP adopt 100% utilization of ash generated as a result of the expansion project in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendment. No additional ash pond is permitted for the expansion project. In case of exigencies, ash generated from existing and proposed power plant shall be disposed to existing ash bund through high concentration slurry disposal (HCSD) system only.
2.	PP shall obtain amendment in the condition no. iv, xxxii and xxxiii of the existing EC dated 9/5/2011 and its subsequent amendments as committed within the time frame of three months from the date of grant of EC. A fresh CCR report will be submitted at the time of seeking this amendment.
3.	PP shall complete the FGD installation for the existing 1370 MW power plant by March, 2026 and for the proposed 1600 MW TPP by June, 2026.
4.	
5.	PP shall explore the possibility of use of rainwater as drinking water in consultation with Public Health Engineering Department Chhattisgarh, respective Gram Panchayat and District administration wherever feasible. PP shall store rain water 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 rain water and its supply system. PP shall get the water audit done every year to optimize the water requirement.
6.	PP shall implement the protective measure proposed in Environment Management Plan (EMP) in a time-bound manner. The budget earmarked for the same is Rs 2110.33 Crores (Capital) and Rs 206.55 crores (recurring) and should be kept in separate accounts and audited annually. The implementation status along with the amount spent with documentary proof shall be submitted to the concerned Regional Office for the activities carried out during the previous year. In addition to this, PP shall install two continuous ambient air quality monitoring station near ash pond area at suitable locations preferably the village side in consultation of CECB within 6 months from the date of grant of EC.
7.	Ash pond area and fly ash utilization shall be as per Fly Ash Notification issued by Ministry/ CPCB from time to time.
8.	PP shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages.
9.	PP shall install solar power plant on roof top and also road side poles within the project site will be lighting through solar power. Implementation status of solar plant shall be specifically submit in six monthly compliance report. PP has to enhance the Solar power capacity in the project area to 5000 KVA by December, 2025.
10.	As committed by the PP, Zero liquid discharge shall be adopted.
11.	PP shall ensure that diesel operated vehicles will be switched over to E-Vehicles/ CNG vehicles in a time bound manner, replace the passenger vehicles to E-vehicle in phased manner. 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 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 2.	PP shall implement the concurrent plantation plan in a time bound manner. The gap plantation shall be completed in the identified 118 Ha land within Plant, residential and administrative areas and around Ash Pond by the planting 2.0 Lakh saplings during 2024-2025. Further, three tier green belt shall be developed in an area of 24.85 ha in a time frame of two years from the date of grant of EC in consultation with Forest department/ Gram Panchayat/District Administration. The budget earmarked for the green belt, plantation inside and outside the plant area, along the transportation route and Miyawaki Plantation area shall be kept in a separate account and audited annually. PP should annually submit the audited statement of expenditure along with proof of activities viz. photographs (before & after with geolocation date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC and on PARIVESH Portal as the case may be for the activities carried out during previous year.
1 3.	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 government account.
1 4.	24x7 online monitoring system for ambient air quality shall be established with its connectivity with SPCB and CPCB server. Stack monitoring shall be done through 24X7 online monitoring system. The real time data so generated from CAQMS shall be uploaded on company website and linked it with website of CPCB &SPCB. Further, LED display of air quality (Continuous Online monitoring) shall be installed at prominent locations preferably outside the plant's main entrance for public viewing and in administrative complex. and maintenance of devices shall be done regularly.
1 5.	Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as waste delivery points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system. Water Sprinkling on roads inside the plant area/ administrative/ residential areas and outside the plant area at least for 2KM on a regular basis to control the air pollution. A logbook shall be maintained for the activity and be in six-monthly compliance report.
1 6.	Coal for the proposed power plant shall be received at plant through Railway siding only from Gondulpara Coal Mine & e- auction. Transportation of coal by road is not permitted.
1 7.	PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM.
1 8.	Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
1 9.	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.
2 0.	Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
2 1.	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
2 2.	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.
2 3.	PP shall ensure that all types of plastic waste generated from the plant shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2016 (as amended). In pursuant to the Ministry's OM dated 18/07/2022. PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single Use Plastic (SUP) in order to ensure compliance of Ministry's Notification published by the Ministry on 12/08/2021. A report along with photograph on the measures taken shall also be included in the six monthly compliance report being submitted by PP.
2 4.	PP is advised to implement the 'Ek Ped Maa Ke Naam' Campaign which was launched on 5th June 2024 on the occasion of the World Environment Day to increase the forest cover across the Country. This plantation drive is other than Green belt development. The action in this regard shall be submitted concerned RO in six monthly report.
<b>[B] Socio-economic</b>	
1.	A vision document comprising prospective plan for implementation of various CER activities, plantation programme outside the project cover area, rejuvenation and conservation of water bodies within 5km radius of the project cover area shall be prepared and submitted to the Regional Office of the Ministry within 6 months. Implementation status of the same shall be reported to the Regional office in 6 monthly compliance reports.
2.	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.
3.	The budget proposed for PH is Rs 50.15 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 5 years from the date of grant of EC. PP shall submit the progress report regarding the implementation of action plan to concerned RO along with the six monthly compliance report. PP shall provide the health services and organize medical camps for residents of the surrounding villages as committed during the meeting. PP shall carry out the analysis of the data of medical camp and take all necessary steps so as to cover maximum number of persons.
4.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
5.	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.
<b>[C] Miscellaneous</b>	
1.	An Environmental Cell headed by the Environment Manger with postgraduate qualification in environmental science/environmental engineering, shall be created. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
2.	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
3.	All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.

### 3.1.6.2. Standard

1(d)	<b>Thermal Power Plants</b>
<b>Statutory compliance</b>	
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.
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.
3.	MoEF&CC Notification G.S.R 02(E) dated 2.1.2014 as amended time to time regarding use of raw or blended or beneficiated/washed coal with ash content not exceeding 34% shall be complied with, as applicable.
4.	MoEF&CC Notifications on Ash Utilization S.O. 5481(E) dated 31/12/2021 as amended from time to time shall be complied.
5.	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.
6.	The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
7.	No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.
8.	Groundwater shall not be drawn during construction of the project. In case, groundwater is drawn during construction, necessary permission be obtained from CGWA.
<b>Ash content/mode of transportation of coal</b>	
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.
<b>Air quality monitoring and Management</b>	
1.	Flue Gas Desulphurisation System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO <sub>2</sub> emissions standard as per G.S.R. 243 ( E ) dated 31.03.2021 read with G.S.R. 682 ( E ) dated 05.09.2022 and amended from time to time.
2.	Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NO <sub>x</sub> Burners with Over Fire Air (OFA) system shall be installed to achieve NO <sub>x</sub> emission standard of 100 mg/Nm <sup>3</sup> .
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> .
4.	Stacks of prescribed height 120 m shall be provided with continuous online monitoring instruments for SO <sub>2</sub> , No <sub>x</sub> and Particulate Matter as per extant rules.

5.	Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.
6.	Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM10, PM2.5, SO2, NOX within the plant area. 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.
7.	Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
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.
<b>Noise pollution and its control measures</b>	
1.	The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
2.	Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
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.
<b>Human Health Environment</b>	
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.
2.	Baseline health status within study area shall be assessed and report be prepared. Mitigation measures should be taken to address the endemic diseases.
3.	Impact of operation of power plant on agricultural crops, large water bodies (as applicable) once in two years by engaging an institute of repute. The study shall also include impact due to heavy metals associated with emission from power plant.
4.	Sewage Treatment Plant shall be provided for domestic wastewater.
<b>Water quality monitoring and Management</b>	
1.	Induced/Natural draft closed cycle wet cooling system including cooling towers shall be set up with minimum Cycles of Concentration (COC) of 5.0 or above for power plants using fresh water to achieve specific water consumption of 3.0 m3/MWhr. (Or) Induced/Natural draft open cycle cooling system shall be set up with minimum Cycles of Concentration (COC) of 1.5.
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.
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.



4.	Rainwater harvesting in and around the plant area be taken up to reduce drawl of fresh water. If possible, recharge of groundwater to be undertaken to improve the ground water table in the area.
5.	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.	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.
7.	Hot water dispensed from the condenser should be adequately cooled to ensure the temperature of the released surface water is not more than 5 degrees Celsius above the temperature of the intake water.
8.	Based on the commitment made by the Project Proponent, Sewage Treatment Plants within the radius of 50 km from proposed project shall be used as an alternative to the fresh water source to minimize the fresh water drawl from surface water bodies
9.	Wastewater generation of 6000 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;
10.	Sewage generation of 44 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):<1000 per 100 ml.
<b>Risk Mitigation and Disaster Management</b>	
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.
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%.
3.	Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
4.	Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
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.
<b>Green belt and Biodiversity conservation</b>	
1.	Green belt shall be developed in an area of 39.88% of the total project with indigenous native tree species in accordance with CPCB guidelines. The green belt shall inter-alia cover an entire periphery of the plant. Concurrent plantation shall be done and all the earmarked area shall be suitably planted with native species in three rows within the next 2 years.
2.	In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.

<b>Waste management</b>	
1.	Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
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.
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.
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 Fly Ash Utilization issued by the Ministry S.O. 5481 (E) dated 31.12.2021, S.O.6169 (E) dated 30.12.2022, S.O.0 5 (E) dated 01.01.2024 and amendment thereto.
5.	Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry/Medium Concentration Slurry/Lean Concentration Slurry method. Ash water recycling system shall be set up to recover supernatant water.
6.	In case of waste-to-energy plant, major problems related with environment are fire smog in MSW dump site, foul smell and impacts to the surrounding populations. Therefore, the following measures are required to be taken up: i) Water hydrant at all the dumpsites of MSW area to be provided so that the fire and smog could be controlled. ii) Sprayer like microbial consortia may be provided for arresting the foul smell emanating from MSW area.
<b>Monitoring of compliance</b>	
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.
2.	Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
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.
4.	Monitoring of Carbon Emissions from the existing power plant as well as for the proposed power project shall be carried out annually from a reputed institute and report be submitted to the Ministry's Regional Office.
5.	Energy and Water Audit shall be conducted at least once in two years and recommendations arising out of the Report should be followed. A report in this regard shall be submitted to Ministry's Regional Office.
6.	The project proponent shall (Post-EC Monitoring): a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government; b. upload the clearance letter on the web site of the company as a part of information to the general public. c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at <a href="http://parviesh.nic.in">http://parviesh.nic.in</a> . d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically; e. monitor the criteria pollutants level namely; PM (PM10& PM2.5 incase of ambient AAQ), SO2, Nox (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company; f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;

	<p>g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;</p> <p>h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project and the date of commencement of the land development work.</p>
<b>Corporate Environmental Responsibility (CER) activities</b>	
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 scheduled of implementation with appropriate budgeting. Statement on the commitments (activity-wise) made during public hearing to facilitate the discussion on the CER in compliance of the shall be submitted.

### 3.2. Agenda Item No 2:

#### 3.2.1. Details of the proposal

<b>Proposed 4x800 MW Coal Based Ultra Super Critical Thermal Power Plant (USCTPP) at Villages Chhatai, Majhtoliya &amp; Umarda, Tehsil Kotma, District Anuppur, Madhya Pradesh by ANUPPUR THERMAL ENERGY (M P) PRIVATE LIMITED by Adani Power Limited located at ANUPPUR, MADHYA PRADESH</b>			
<b>Proposal For</b>		Fresh ToR	
<b>Proposal No</b>	<b>File No</b>	<b>Submission Date</b>	<b>Activity (Schedule Item)</b>
<a href="#">IA/MP/THE/495356/2024</a>	J-13012/144/2010-IA-II(T)	19/09/2024	Thermal Power Plants (1(d))

#### 3.2.2. Project Salient Features

<p><b>Agenda No: 13.2</b></p> <p><b>13.2:</b> Proposed 4x800 MW Coal Based Ultra-Super Critical Thermal Power Plant (USCTPP) by <b>M/s Anuppur Thermal Energy (MP) Private Ltd.</b> at Village Chhatai, Majhtoliya and Umarda, Tehsil Kotma, District Anuppur, Madhya Pradesh – <b>Consideration for grant of Terms of Reference (ToR) – reg.</b></p> <p>[Proposal No. IA/MP/THE/495356/2024; F. No. J-13012/144/2010-IA-II(T)]</p> <p><b>13.2.1:</b> M/s Anuppur Thermal Energy (MP) Private Limited has made an application online vide proposal no. IA/MP/THE/495356/2024 dated 19/09/2024 along with the application in prescribed format (CAF, Form – I Part A &amp; B), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed under category A of item 1(d) 'Thermal Power Plants' of EIA Notification 2006 (as amended) as the power generation capacity of the proposed project is beyond the threshold capacity of 500MW i.e. 3200 MW and requires appraisal at Central level. The interstate boundary (Madhya Pradesh-Chhattisgarh) is 0.7 km towards North from the project boundary.</p> <p><b>13.2.2:</b> Name of the EIA consultant: M/s. Gaurang Environmental Solutions Private Limited Jaipur RJ; [List of ACOs with their Certificate / Extension Letter no.: NABET / EIA / 23-26/RA 0338, valid up to 07.12.2026].</p> <p><b>Details of the proposal, as ascertained from the proposal documents and as revealed from the discussion held during the meeting, are given as under:</b></p>
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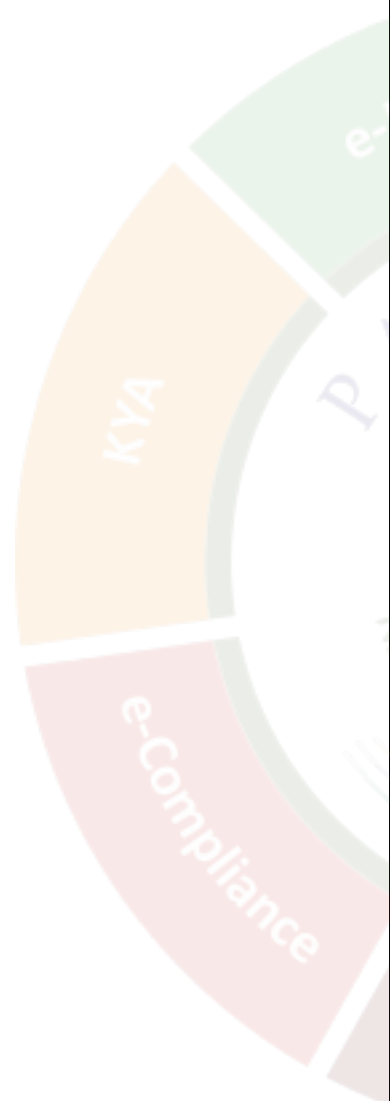
**13.2.3:** The instant proposal is for grant of Terms of Reference for Proposed 4x800 MW Coal Based Ultra-Super Critical Thermal Power Plant (USCTPP) at Village Chhatai, Majhtoliya and Umarda, Tehsil Kotma, District Anuppur, Madhya Pradesh by M/s Anuppur Thermal Energy (MP) Private Limited.

**13.2.4:** Previously, Environmental Clearance (EC) was granted by the MoEF&CC, New Delhi vide File no. J 13012/144/2010-IA. II (T) dated 27.11.2012 to M/s Welspun Energy Anuppur Pvt. Ltd. for 1320 (2x660) MW Thermal Power Plant. Subsequently, M/s Welspun Energy Anuppur Pvt. Ltd. had obtained Consent to Establish (CTE) from Madhya Pradesh Pollution Control Board (MPPCB) vide letter dated 18.07.2013. Further, the MoEF&CC issued Transfer of Environmental Clearance to Anuppur Thermal Energy (MP) Private Ltd (ATEMPPL) & validity extension up to 26.11.2022, New Delhi vide letter No. F. No: J-13012/144/2010-IA. II(T) dated 07.01.2020. There is no activity undertaken at the site except the boundary wall construction. The validity of the EC lapsed on 26/11/2023. Now the configuration has changed from 2x660 MW to 4x800 MW in an area of 371 ha and a new reference (de novo) has been made through this fresh application for grant of ToR.

**13.2.5: Environmental site settings**

	<table border="1"> <thead> <tr> <th>Description</th> <th>Area in Ha</th> </tr> </thead> <tbody> <tr> <td>TPP Site</td> <td>85</td> </tr> <tr> <td>Ash Dyke</td> <td>47</td> </tr> <tr> <td>Township</td> <td>13</td> </tr> <tr> <td>Raw Water Reservoir</td> <td>30</td> </tr> <tr> <td>Green Belt</td> <td>123</td> </tr> <tr> <td>Others (Coal stack yard)</td> <td>73</td> </tr> <tr> <td><b>Total</b></td> <td><b>371</b></td> </tr> </tbody> </table>	Description	Area in Ha	TPP Site	85	Ash Dyke	47	Township	13	Raw Water Reservoir	30	Green Belt	123	Others (Coal stack yard)	73	<b>Total</b>	<b>371</b>																														
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15	23°22'12.24"N	82° 2'44.21"E
16	23°22'15.22"N	82° 2'48.91"E
17	23°22'15.91"N	82° 2'49.28"E
18	23°22'15.64"N	82° 2'50.28"E
19	23°22'20.34"N	82° 2'52.56"E
20	23°22'5.23"N	82° 3'34.52"E
21	23°22'3.48"N	82° 3'34.48"E
22	23°22'0.29"N	82° 3'32.98"E
23	23°21'56.30"N	82° 3'32.35"E
24	23°21'55.70"N	82° 3'33.77"E
25	23°21'54.47"N	82° 3'33.76"E
26	23°21'54.53"N	82° 3'33.15"E
27	23°21'51.71"N	82° 3'32.75"E
28	23°21'51.61"N	82° 3'31.76"E
29	23°21'51.82"N	82° 3'30.40"E
30	23°21'49.22"N	82° 3'29.72"E
31	23°21'48.72"N	82° 3'30.55"E
32	23°21'42.81"N	82° 3'27.66"E
33	23°21'40.89"N	82° 3'29.54"E
34	23°21'39.63"N	82° 3'28.83"E
35	23°21'41.37"N	82° 3'25.84"E
36	23°21'38.58"N	82° 3'24.36"E
37	23°21'37.44"N	82° 3'27.10"E
38	23°21'36.93"N	82° 3'26.95"E
39	23°21'36.83"N	82° 3'27.15"E
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47	23°21'31.32"N	82° 3'12.93"E
48	23°21'31.88"N	82° 3'11.90"E
49	23°21'30.46"N	82° 3'10.80"E
50	23°21'30.24"N	82° 3'11.27"E
51	23°21'28.12"N	82° 3'10.50"E
52	23°21'26.05"N	82° 3'13.76"E
53	23°21'20.90"N	82° 3'8.64"E
54	23°21'20.65"N	82° 3'6.57"E
55	23°21'21.91"N	82° 3'1.50"E
56	23°21'19.82"N	82° 3'0.83"E
57	23°21'20.19"N	82° 2'56.99"E
58	23°21'19.89"N	82° 2'56.84"E
59	23°21'20.21"N	82° 2'55.86"E
60	23°21'19.94"N	82° 2'55.24"E
61	23°21'20.16"N	82° 2'53.46"E
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114	23°22'17.63"N	82° 1'52.58"E

TPP Site: 562 m ; Ash Pond Site: 565 m

Involvement of Forest land if any

Sr. No.	Particulars	Distance (KM)	Direction
Reserve Forest (RF) & Protected Forest (PF)			
1	Nandlal Patera R. F.	1.1	E
2	Gundur P. F.	3.65	ENE
3	Dehuli R.F.	5.65	NNE
4	Mahora R. F.	7.6	WSW
5	Rukra R.F.	7.7	E
6	Kelhari P.F.	7.9	N
7	Belgaon R.F.	11.75	ESE
8	Mahai R.F.	12	ESE
9	Khurma P.F.	12.1	N
10	Biharpur R.F.	12.7	ENE
11	Pairichua P.F.	13.7	SSW
12	Malga R.F.	14.3	SSE

**13.2.6: Baseline Environmental data:** The proposal is for obtaining ToR. Baseline monitoring will be carried out during Post monsoon season from October' 2024 to December' 2024.

**13.2.7: Project cost:** The estimated total project cost is Rs. 36,600 Crores. Total capital cost earmarked towards Environmental Pollution Control measures is Rs. 5,993 Crores.

**13.2.8: Employment:** Total Employment will be 550 persons as direct & 50 persons indirect during operation phase. Industry proposes to allocate Rs. 100.00 Crore towards CER (as per Ministry's OM dated 30.09.2020). The details are as below:

Employment Potential	Construction phase	Operation phase
Permanent	350	550
Contractual	250	50
<b>Total</b>	<b>600</b>	<b>600</b>

**13.2.9: Power requirement:** Power requirement for the project will be 7.5 MW and during operation will be met from nearby sub stations from the project site during construction phase and during operation phase power requirement will be met from self-generation, i.e. Aux consumption. 3nos. of DG sets will be used as standby during power failure. Stack (height 30m) will be provided as per CPCB norms to the proposed DG sets.

**13.2.10: Water Requirement:** Water consumption for thermal power plants as per MoEF&CC vide Notification S.O. 3305 (E) dated 07.12.2015 for all existing CT based plants reduce specific water consumption up to maximum of 3.5 m<sup>3</sup>/MWh and as per MoEF&CC stipulated norms vide Notification GSR 593 (E) dated 28.06.2018 water allocated to the thermal power plant is 3 m<sup>3</sup>/MWh for new plants installed after the 1<sup>st</sup> January, 2017. The total water requirement for the proposed project is 2 m<sup>3</sup>/MWh, which is well within the stipulated norms of Notification

dated 28.06.2018.

Source of Water:	Sone River
Quantity of water requirement:	(6400 KL/hr) 56 MCM/year
Distance of source of water from Plant:	60 Km (from intake point)
Whether barrage/ weir/ intake well/ jackwell/ others proposed:	Yes, Intake Well proposed
Mode of conveyance of water:	Pipeline
Status of water linkage:	Permission from WRD Madhya Pradesh for 40 MCM/Year vide letter no. MPCB/SL/225/2010/744 dated 06.07.2011 has already been obtained for 2x660 MW TPP. The application to enhance the water allocation to 56 MCM /annum has been submitted vide letter dated 22.07.2024
(If source is Sea water) Desalination Plant Capacity	Not Applicable
Mode / Management of Brine:	Not Applicable
Cooling system	Induced draft cooling towers

**13.2.11:** The water drawl permission from WRD Madhya Pradesh for 40 MCM/Year vide letter no. MPCB/SL/225/2010/744 dated 06.07.2011 has already been obtained for 2x660 MW TPP. The application to enhance the water allocation to 56 MCM /annum has been submitted by the proponent vide letter dated 22.07.2024 and the same is yet to be obtained.

**13.2.12: Solid/ Hazardous waste generation and its management:**

1.		
2.		Bottom ash: Extraction in wet form and collection in hydrobins for disposal by closed trucks. Efforts will be made to utilize 100% bottom ash as per Mo EFCC guidelines. Bottom ash shall be disposed through lean slurry to Ash dyke in case of exigencies.
3.		
4.		
5.		
6.		
7.		

**13.2.13:** Effluent of quantity 2125 KLD will be generated. The domestic sewage to the tune of 25 KLD will be treated through STP & industrial effluent to the tune 2100 KLD will be treated in ETP. The plant will be based on Zero Liquid discharge system.



**13.2.14:** In the proposed unit, 585 tonnes per hour (TPH) of each coal-fired boiler will be installed. Electrostatic precipitator (ESP) with a stack of height of 120 m will be installed for controlling the particulate emissions within the statutory limit of 30 mg/Nm<sup>3</sup> for the proposed boilers.

**13.2.15: Ash Pond area:** As per MoEF&CC Notification S.O. 5481(E), dated 31.12.2021 and amendments stipulated ash pond area for thermal power plant is 0.1 hectare per Mega Watt (MW). The ash pond area proposed for power plant is 47 ha i.e. 12.67 % of the total project area 371 ha. Total ash pond area is required for the proposed plant is within the stipulated norms dated 31.12.2021.

**13.2.16: Details of Coal Linkage:** The total coal requirement for the project is about 13.3 million MTPA. The coal linkage of proposed thermal power plant is sourced from coal mines of Gondbahera Ujheni East Coal Mine & Mara II Mahan Coal Mine. Coal Supply Agreement for 7.0 million MTPA (cumulative) of coal has been obtained from Mahan Energen Limited (5.0 million MTPA) and MP Natural Resource Private (2.0 million MTPA) vide letter no. dated 5.09.2024. The remaining coal requirement of 6.3 million MTPA will be procured through E-Auction.

**12.2.17: Electricity generation capacity:** Electric generation capacity of the proposed project is as below:

Capacity & Unit Configurations	3200 MW, Configured as 4 x 800 MW
Generation of Electricity Annually	25344000 MW (considering 330 operating days)

**13.2.18: Details of fuel and Ash disposal:**

Fuel to be used:	Coal and Auxiliary Fuel
Quantity of Fuel required per Annum:	For the Proposed Project of 3200 MW, the annual fuel requirement is estimated at 13.3 million MTPA at 85% plant load factor with Design Coal GCV of 3200-4300 KCal/kg. Auxiliary liquid fuels, viz. LDO/HSD requirement per annum: 15000 kilo litres.
Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of theBlock)	Quantity and details of Linkageavailable: 7 million MTPA Name of Block: Gondbahera Ujheni East Coal Mine & Mara II Mahan Coal Mine The method of obtaining remainingcoal: 6.3 million MTPA from (E-auction) Ash content in coal: 34-42 (%) Sulphur in coal: 0.4-0.5 (%) Moisture: 11-15 (%) GCV in coal: 3200-4300 Kcal/Kg
Details of mode of transportation of coal from coal source to the plant premises along with distances	Mode of transportation is through Rail Total distance from the source to Rail: 500 km (from Gondbahera Ujheni East Coal mine, Mara II Mahan Coal Mine To TPP)
Fly Ash Disposal System Proposed	Medium concentration slurry. Ratio of water and ash – 35-45%

a. Ash Pond / Dyke: (Area, Location & Co-ordinates) Average height of area above MSL (m) Space left in ash dyke area	Area of proposed Ash Dyke- 47 ha Location: 23°22'4.42"N, 82° 1'50.62"E Average height of area above MSL: 565m
Quantity of a. Fly Ash to be generated b. Bottom Ash to be generated:	6.44 million MTPA 16,612 T/day 4,153 T/day
Stack Height (m) & Type of Flue	120 m Bi flue with FGD

**13.2.19: Status of Pending Litigation/court case:** Details of pending litigation/court case is as follows:

1.		Jabalpur High Court	06.03.2024		No next date has been updated yet.	(Inputs given to Advocate regarding reply.) For change the name of the company, it is necessary to file a new Vakalatnama and the company's reply.
2.		Jabalpur High Court	06.03.2024		No next date has been updated yet.	(Inputs given to Advocate regarding reply.) For change the name of the company, it is necessary to file a new Vakalatnama and the company's reply.
3.						
4.						
5.						
6.						
	Review0164/2019/ Anuppur/Land revenue.					
	RCS A/0000014 / 2020					

PP informed that out of 8 court cases listed above there is no any litigation in respect of the subject matters pertaining to the Environment & Forests.

**13.2.20: Benefits of the project:** The proposed project will improve the power supply position in the state as well as in India, which is vital for economic growth as well as improving the quality of life. The setting up of the proposed project will lead to generation of direct and indirect employment and benefits to the overall socio-economic development of the region. Skill

development and capacity building like vocational training, income generation programs and entrepreneurship development program shall also be conducted. The project will also attract the high-income groups to invest in the region and thus bring about economic growth of the region.

**13.2.21:** EAC members and Ministry was in receipt of a representation on the project mentioned above. The said representation was deliberated by the EAC and also made available to the project proponent. The issues stated in the representation and submissions made by the proponent are as below:

SIN o.	Points stated in the representation	Submission by PP
	<p>At the outset, we would like to request the committee members to direct the project proponent to submit the Need assessment and cost-benefit analysis for the power plant, its ancillary activities, and their expansion, given the Hon'ble Prime Minister's announcement at COP26 that, Ministry of New and Renewable Energy is committed to achieving 500 GW of installed electricity capacity from non-fossil fuel sources by 2030. After which many of the existing coal-fired thermal power plants may not be required.</p>	<p>As per the National Electricity Plan (NEP) published by the Central Electricity Authority, MoP in March-2023, India's Peak Electricity Demand is likely to increase to around 366 GW in FY 2031-32 from the current Peak Demand of around 216 GW in FY 2022-23. The Base Demand is also expected to increase to 247.3 BU by FY 2031-32. CEA also predicts that India's likely Installed Capacity by the end of FY 2031-32 will be around 900 GW, up by around 484 GW as compared to the present Installed Capacity.</p> <p>Similarly, the current installed capacity of MP State is around 25,337 MW. Over 63% of the capacity is through coal-based sources. The proposed project can help in meeting the growing power demand and requirement of the country &amp; improve Gross State Domestic Product (GSDP). It not only ensures a reliable power supply for the region but also supports economic growth, thereby strengthening the overall energy landscape in Madhya Pradesh.</p>
	<p>The necessity for the new Thermal Power Plant depending upon the demand for electricity has to be considered especially when there are other power plants functioning in the State of Madhya Pradesh which are sufficient for the purpose of meeting the need and even the electricity generated in those units is not properly utilized.</p>	<p>The proposed power plant in Madhya Pradesh holds significant regional importance by addressing the surging power demand in the state. The current installed capacity of MP State is around 25,337 MW. Over 63% of the capacity is through coal-based sources. The proposed expansion of project can help in meeting the growing power demand and requirement of the country &amp; improve Gross State Domestic Product (GSDP). It not only ensures a reliable power supply for the region but also supports economic growth, thereby strengthening the overall energy landscape in Madhya Pradesh.</p>
	<p>Further, lot of other reusable energy generation systems are being adopted for the purpose of reducing the exploitation of natural resources for production of electricity and this is being considered by the Central Government and if that is properly implemented, there will not be any necessity for a new power plant in the State of Madhya Pradesh.</p>	<p>The Renewable power is not available on round the clock basis due to its inherent intermittent nature and Hydro power capacity majorly depends on the rainfall which is uncertain. This makes coal-based power plant very essential for India to meet the demand continuously and reliably. Moreover, the coal-based power will continue to play a significant role for base load.</p>

SIN o.	Points stated in the representation	Submission by PP
	h.	d requirement.
	As per the toposheet provided under Form I along with project boundary superimposed on it, the proposed project is abutting Kewai River. The map also shows presence of Dehuli Reserved Forest, Gundru Protected Forest, Rukra Reserved Forest, and Nandla Patera Protected Forest within 5 Km radius from the proposed project site.	The Kewai river is about 40.0 m away from the project boundary which is shown in clearly earmarked in the submitted proposal. The plant is more than 500 m from the river. Moreover, a thick green belt (>100 m) will be developed in the area which is nearing river boundary. All the necessary measures will be taken to avoid impact on the river, which will be detailed during EIA studies. The project envisages use of the best environmental safeguard practices such as high efficiency ESP, FGD, SCR for ensuring minimal / negligible impact from the proposed project. The quantification of the impact will be enumerated and presented in the EIA studies.
	The proposed project site also falls in the wildlife corridor of Bandhavgarh Tiger Reserve, Kanha National Park, Phen Wildlife Sanctuary, Sanjay Dubri Wildlife Sanctuary in Madhya Pradesh and Achanakmar Wildlife Sanctuary, Sanjay National Park, Tamoringla Wildlife Sanctuary in Chhattisgarh.	As per “Connecting Tiger Populations for Long-Term Conservation” report by National Tiger Conservation Authority & Wildlife Institute of India, Dehradun, <u>there is no wildlife corridor or within 15 km radius of the project site.</u> Map showing project boundary vis-à-vis the tiger corridor is enclosed.
	As per the report titled ‘A Policy Framework for Connectivity Conservation and Smart Green Linear Infrastructure in the Central Indian and Eastern Ghats Tiger Landscape’ published by Wildlife Conservation Trust, the proposed project area falls under medium to high tiger connectivity area.	As per “Connecting Tiger Populations for Long-Term Conservation” report by National Tiger Conservation Authority & Wildlife Institute of India, Dehradun, there is no wildlife corridor or within 15 km radius of the project site.
	Section 38-O (g) of the Wildlife Protection Act, 1972 will be applicable to the proposed project. Section 38-O (g) states that ‘ <i>Ensure that tiger reserves and areas linking on the PA or Tiger Reserve with another PA or Tiger Reserve are not diverted for ecologically unsustainable uses, except in public interest and the approval of the NBWL and on the advice of the NTCA</i> ’.	As per “Connecting Tiger Populations for Long-Term Conservation” report by National Tiger Conservation Authority & Wildlife Institute of India, Dehradun, there is no wildlife corridor or within 15 km radius of the project site. Clearance from NBWL is not required since the project does not fall wholly/ partly within ESZ/ 10 kms radius of any National Park/ Wildlife Sanctuary / Notified Conservation Reserve
	The Form-I submitted by the project proponent states that the proposal does not involve approval/clearance under the wildlife (protection) act, 1972.	Clearance from NBWL is not required since the project does not fall wholly/ partly within ESZ/ 10 kms radius of any National Park/ Wildlife Sanctuary / Notified Conservation Reserve.

SIN o.	Points stated in the representation	Submission by PP
	The Form-I also fails to mention the wildlife corridor. The project proponent is trying to misguide the ministry by providing wrong/insufficient information in Form-I.	As detailed earlier there is no wildlife corridor in 10 kms radius of the project site.
	We request the committee to direct the project proponent to submit the proposal to National Tiger Conservation Authority (NTCA) and National Board for Wildlife for obtaining wildlife clearances.	The same is not applicable as there is no National Park, Wildlife Sanctuary, wildlife corridor within 15 km radius of the project site.
	The wildlife corridor needs to be protected for the free movement of Tigers and other large mammals to establish a healthy population.	The contents of para 11 are not applicable. Further, with the thick green belt which will be developed within the project area and outside of the project area as a part of CSR/ CER activity will have a positive impact on the biodiversity.
	The proposed project if allowed will have a negative impact on important wildlife corridor impacting the movement of wildlife. It may also lead to an increase in Human-Wildlife Conflict in the area.	As detailed earlier, the project is not lying in the tiger wildlife corridor. We would like to humbly submit that the project is planned to integrate the best environmental practices to minimize the impact on the baseline environment. The implementation of the project will have positive long-term impacts.
	We urge the committee to kindly consider the importance of wildlife corridors. The proposal, if permitted, will disturb the already fragmented wildlife corridor. Efforts should be undertaken by the respective authorities to restore the fragmented corridor as it will help in creating a diverse gene pool.	As detailed earlier there is no wildlife corridor in 10 kms radius of the project site.
	There are already existing coal mines in the study area and Thermal Power Project Units. The proposed project if permitted will further aggravate the situation. The cumulative impact assessment of all the mines along with their ancillary activities should be carried out. A good example to follow can be found at <a href="https://apps.ecology.wa.gov/publications/SummaryPages/1706013.html">https://apps.ecology.wa.gov/publications/SummaryPages/1706013.html</a>	The proposed TPP area is earlier obtained EC (2012) & Consent order (2013). Details will be submitted along with EIA-EMP report, if any
	We request the authority to direct the project proponent to submit all the details of the proposed ancillary activities including details of sources of coal for the proposed power plant including any new or expansion of the existing road and rail network and transmission lines.	The coal will be sourced from Gondbahera Ujheni East Coal mine, Mara II Mahan Coal Mine and E-Auction. The Nearest Railway Siding 'Bahiatola' is about 14 km from project site. The route map of the same is available.

SI No.	Points stated in the representation	Submission by PP
	We urge the committee to kindly consider the importance of wildlife corridors before taking any decision for the proposed project.	PP clarify that there are no designated wildlife corridors within 10 kms radius of the proposed project. We will continue to assess the potential effects on local wildlife and habitats, and we are open to implementing measures that could support biodiversity in the area.
	Efforts should be undertaken by the respective authorities to restore the fragmented corridor as it will help in creating a diverse gene pool.	As detailed earlier there is no wildlife corridor in 10 kms radius of the project site.

### 3.2.3. Deliberations by the committee in previous meetings

N/A
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### 3.2.4. Deliberations by the EAC in current meetings

<p><b><u>Observations and Deliberations of the Committee</u></b></p> <p><b>13.2.22:</b> The Committee noted the following:</p> <ul style="list-style-type: none"> <li>iv. The EAC 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.</li> <li>v. Total land is 371 ha (Private land: 312 ha + Govt. land 59 ha). Land is already acquired.</li> <li>vi. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site as ascertained from DSS.</li> <li>vii. The project site is not located within the Critically Polluted Area (CPA) / Severally Polluted Area (SPA) as per CEPI assessment 2018 of CPCB.</li> <li>viii. River Kewai is flowing at 0.04 km in West direction. The EAC is of the opinion that PP shall furnish the aquatic biodiversity study of Kawai River and water source for the plant along with biodiversity conservation plan. EAC suggested that Green belt to be developed along River. EAC is of the opinion to conduct a Hydrology/Hydrogeological study from the reputed govt. institutions/organizations.</li> <li>ix. PP submitted that Green belt shall be developed in 123 ha (33.15% of the total plant area) area. Total 2400 lakhs has been allocated for greenbelt development. EAC suggested for Concurrent plantation with native species.</li> <li>x. The total water requirement for the proposed project is 2m<sup>3</sup>/MWh, which is well within the stipulated norms of Notification dated 28.06.2018. The water shall be sourced from the Sone River through pipeline. The water drawl permission has already been obtained for 2x660 MW TPP and the application to enhance the water allocation to 56 MCM /annum has been submitted vide letter dated 22.07.2024.</li> <li>xi. The proposed power plant has total ash pond area 47 ha i.e. 12.67 % of the total project area 371 ha. The EAC is of the opinion that Ash pond shall not be situated in the vicinity of the river side. EAC also suggested to submit the Plan for dry ash collection system for fly and bottom ash.</li> <li>xii. Transportation of coal from coal source to the plant premises shall be through Rail.</li> <li>xiii. The estimated total project cost is Rs. 36,600 Crores. Total capital cost earmarked towards</li> </ul>
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Environmental Pollution Control measures is Rs. 5,993 Crores.

- xiv. Zero Liquid Discharge (ZLD) System shall be implemented for the proposed project.
- xv. The committee noted that as reported by PP there is no forest land involved in the project.
- xvi. EAC noted that 08 cases are pending pertaining to Land acquisition and other issues.
- xvii. EAC opined that a site visit should be conducted by the Sub-committee of EAC to see the various issues pertaining to the instant project before consideration of EC proposal. The findings of the subcommittee report shall be incorporated in the final EIA/EMP report and the same shall be reported along with the ToR compliance.

#### **Recommendations of the Committee**

**13.2.22:** The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** the proposal for grant of ToR for conducting an EIA study with Public Consultation to the project for Proposed 4x800 MW Coal Based Ultra-Super Critical Thermal Power Plant (USCTPP) at Village Chhatai, Majhtoliya and Umarda, Tehsil Kotma, District Anuppur, Madhya Pradesh by M/s Anuppur Thermal Energy (MP) Private Ltd, under the provisions of the EIA Notification, 2006, as amended subject to uploading of written submissions on Parivesh portal along with the following specific ToR in addition to the generic ToRs.

#### **3.2.5. Recommendation of EAC**

Recommended

#### **3.2.6. Details of Terms of Reference**

##### **3.2.6.1. Specific**

#### **[A] Environmental Management and Biodiversity Conservation**

1.	All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent.
2.	A Cumulative Environmental Impact Assessment study of all the existing and proposed projects in the 10-km radius of the proposed project shall be conducted and the same shall be included in the EIA/EMP report. Details of industrial units present in 10 Km radius of the power plant shall be earmarked in map and submitted.
3.	EIA/EMP study shall take into consideration the different scenarios arising due to change of coal source, impact on environmental attributes due to change of coal source along with corresponding mitigation measures with EMP budget shall be submitted.
4.	Impact of release of cooling tower water on aquatic life need to be studied by a reputed govt. institute and action plan for complying with the mitigation measures shall be submitted.
5.	Project proponent shall commission a study on Hydrology and Hydrogeology of the project site as well as the study area of the project site through a reputed institute/Government organization. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.
6.	Radioactivity studies along with coal analysis to be provided (sulphur, ash percentage and heavy metals including Pb, Cr, As and Hg). Details of auxiliary fuel, if any including its quantity, quality, storage, etc should also be given.

7.	A comparative chart shall be prepared with changes observed from the previous baseline study and present baseline study.
8.	PP should submit the detailed plan in tabular format (year-wise for the life of the project) for concurrent afforestation and green belt development in and around the project site. The PP should submit the number of saplings to be planted, names of native species, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this, PP should show on a surface plan (5- year interval for life of project) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. In addition to this, plantation in the safety zone at project boundary the plantation should be planned in such a way that it should be completed within 2 years only.
9.	Action plan for development of three tier plantation programme (33 % of total project cover area) along the periphery of the project boundary including on the Kewai river side shall be provided. Plan shall be dully approved by the local forest department. PP shall submit concurrent plantation plan.
10.	Biodiversity analysis of the surrounding area to be done through any reputed Government institutions. A certificate from PCCF, wild-life to be submitted with respect to wildlife corridor, if any, passing adjacent to the project boundary.
11.	Detailed action plan shall be prepared for maintenance of air pollution control equipment for proposed units and shall be incorporated in EIA/EMP report.
12.	Details of Ash management plan as per MoEF&CC notification dated 31/12/2021 & its subsequent amendment for the proposed project shall be submitted. MoU signed for ash utilization with companies shall be submitted.
13.	Action plan for dry ash collection system shall be submitted.
14.	Action plan for disposal of ash through High Concentration Slurry Disposal shall be submitted.
15.	HFL data for Kewai River duly certified by the Irrigation department of the State Government as per the Ministry O.M. dated 14/02/2022 pertaining to siting of industries in close proximity to the river along with the action plan for conservation of the same shall be submitted as the said River is flowing at a distance of 0.04 km in West direction of the project site.
16.	Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body (minimum 60 meters) etc. shall be planned to reduce the possibility of mixing leachate with any freshwater body for ash pond. A high-density Slurry disposal plan shall be prepared. No additional ash dyke area beyond the earmarked area of 47 ha is permitted.
17.	Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 2 km radius of the plant boundary be submitted. Baseline Study for Heavy metals in Groundwater, Surface water and soil to be carried out and incorporated in EIA/EMP report.
18.	Details pertaining to water source, treatment and discharge should be provided.
19.	PP shall submit action plan for using treated Sewage/Domestic wastewater for its operations.



20.	Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
21.	An action plan shall be prepared for Water shed development within 10 km radius of the plant boundary in consultation with reputed government institution and incorporated in EIA/EMP report.
22.	PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total material handled) and steps to be taken for reduction of the same. The year-wise target for reduction in the specific diesel consumption needs to be submitted. PP shall also explore the possibility of using e-vehicles/LNG/CNG-based machinery and trucks for the operation and transportation of Coal and ash and submit an implementation strategy.
23.	PP shall provide the details of transportation of flyash from the plant, transportation route etc. Further, carry out a traffic study for at least one month and provide the impact of transportation along with the mitigation measures.
24.	PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2016 and to adhere Ministry's OM dated 18/07/2022.
25.	Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted.
26.	PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget.
27.	The input parameters for the AAQ modelling and the influence of various combinations of these on the AAQ must be reported in the EIA/EMP Report. In addition to the Wind Rose diagram collected for one season during the preparation of the E.I.A., wind rose diagram for all seasons must be provided using secondary data from sources such as IMD/CPCB etc.
28.	PP 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 limits.
29.	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. An action plan in this regard shall be submitted.
<b>[B] Disaster Management</b>	
1.	
<b>[C] Socio-economic Study</b>	
1.	The Public Health Delivery Plan including the provisions for drinking water supply for the local population shall be in the EIA/EMP Report. The status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the needs of the labour force and local populace.
2.	Public consultation (Public Hearing and Written submission) shall be conducted as per the provisions of EIA Notification, 2006 and as amended. As per the Ministry's OM dated 30.09.2020, to address the concern raised during the Public Hearing, the Project Proponent is required to submit the detailed activities proposed with year-wise budgetary provision (Capital and recurring) for 10 years. Activities proposed shall be part of EMP. Tentative no. of project affected families (if any) shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared. The recommendation Socio-economic study may also be considered while

	planning the activities & budget.
3.	A need based Social Impact Assessment Study shall also be carried out and an action plan on its recommendations may also be submitted with budgetary provisions.
4.	Demographic details and land use change details in 10 km area shall be submitted.
<b>[D] Miscellaneous</b>	
1.	Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study. The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind. A mathematical model shall be developed for the local site rather than using the standard model available in software for both air & water quality modelling.
2.	PP shall align its activities to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050. PPs shall update the same to the EAC.
3.	PP shall submit the EIA/EMP report after the plagiarism check using authenticated plagiarism software.
4.	Detailed description of all the court cases including all directions given by the apex and current status of them shall submit.
5.	PP should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after grant of EC.
6.	The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
7.	PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of persons to be engaged for the implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.
8.	PP should submit the year-wise, activity wise and time-bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during Public Hearing. The capital and recurring expenditure to be incurred needs to be submitted.
9.	Activities shall be prepared based on the issues arise during public hearing conducted and fresh written submission with defined timeline and budgetary provisions.
10.	Aerial view video of project site and transportation route proposed for this project shall be recorded through drone and be submitted.
11.	The PP should ensure that only NABET-accredited consultants shall be engaged for the preparation of EIA/EMP Reports. PP shall ensure that the accreditation of the consultant is valid during the collection of baseline data, preparation of EIA/EMP report and the appraisal process. The PP and consultant should submit an undertaking the information and data provided in the EIA Report and submitted to the Ministry are factually correct and the PP and consultant are fully accountable for the same.
12.	PP should provide in the EIA Report details of the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after the grant of EC.

1 3.	The budget to be earmarked for the various activities shall be decided after perusal of the Standard EC Conditions published by the Ministry.
1 4.	All the certificates viz. Involvement of Forest land, distance from the protected area, and list of flora & fauna should be duly authenticated by the Forest Department. The Certificate should bear the name, designation, official seal of the person signing the certificate and dispatch number.
1 5.	A site visit of the EAC sub committee shall be conducted and its recommendations will form part of the TOR.

### 3.2.6.2. Standard

1( d)	<b>Thermal Power Plants</b>
<b>Statutory compliance</b>	
1.	The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.
2.	Vision document specifying prospective long term plan of the project shall be formulated and submitted.
3.	Latest compliance report duly certified by the Regional Office of MoEF&CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.
<b>Details of the Project and Site</b>	
1.	Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.
2.	Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.
3.	The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.
4.	Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.
5.	Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.
6.	Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.
7.	If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents.
8.	The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.

9.	Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
10.	Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.
<b>Ecology biodiversity and Environment</b>	
1.	A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.
2.	Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.
3.	A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.
4.	The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re- circulation of effluents.
5.	Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.
6.	It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.
7.	Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted
8.	Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.
9.	Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.
10.	Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished. In addition, wherever ground water is drawn, PP shall submit detailed plan of Water charging activity to be undertaken.
11.	Feasibility of near zero discharge concept shall be critically examined and its details submitted.

1 2.	Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified.
1 3.	Plan for recirculation of ash pond water and its implementation shall be submitted.
1 4.	Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.
1 5.	Hazards Characterization: Past incidents of hazard events within 10km radius of project area with detailed analysis of causes and probability of reoccurrence
<b>Environmental Baseline study and mitigation measures</b>	
1.	One complete season (critical season) site specific meteorological and AAQ data (except monsoon season) as per latest MoEF&CC Notification shall be collected along with past three year's meteorological data for that particular season for wins speed analysis and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM10, PM2.5, SO2, NOx, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.
2.	In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs).
3.	A list of industries existing and proposed in the study area shall be furnished.
4.	Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modelling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics.
5.	Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
6.	Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
7.	Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted
8.	Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.
9.	For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.

10.	Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.
<b>Environmental Management Plan</b>	
1.	EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
2.	A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be prepared. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Provision for mock drills shall be suitably incorporated to check the efficiency of the plans drawn.
3.	The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/ Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.
4.	Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash along with monitoring mechanism.
<b>Green belt development</b>	
1.	Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary not less than 2000 tree per ha with survival rate of more than 85% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO <sub>2</sub> and other gaseous pollutants and hence a stratified green belt should be developed.
2.	Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months
<b>Socio-economic activities</b>	
1.	Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.
2.	Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
3.	If the area has tribal population, it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
4.	A detailed CER plan along with activities wise break up of financial commitment shall be prepared in terms of the provisions OM No. 22-65/2017-IA.III dated 30.09.2020. CER component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified.
5.	While formulating CER schemes it shall be ensured that an in-built monitoring mechanism for the schemes

	identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CER details done in the past should be clearly spelt out in case of expansion projects.
6.	R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.
7.	Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.
8.	Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conductive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required.
<b>Corporate Environment Policy</b>	
1.	Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.
2.	Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.
3.	What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.
4.	Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report.
<b>Miscellaneous</b>	
1.	All the above details should be adequately brought out in the EIA report and in the presentation to the Committee.
2.	Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished.
3.	In case any dismantling of old plants are envisaged, the planned land use & land reclamation of dismantled area to be furnished.

### 3.3. Agenda Item No 3:

#### 3.3.1. Details of the proposal

**Amendment in EC of 4X600 MW Thermal Power Plant of M/s Jindal Power Ltd. at Village Tamnar, Taluk Gharghoda, District Raigarh (Chhattisgarh) by JINDAL POWER LIMITED located at RAIGARH, CHHATTISGARH**

<b>Proposal For</b>		Amendment in EC	
<b>Proposal No</b>	<b>File No</b>	<b>Submission Date</b>	<b>Activity (Schedule Item)</b>
<a href="#">IA/CG/THE/472414/2024</a>	J-13012/117/2008-IA.II(T)	14/06/2024	Thermal Power Plants (1(d))

### 3.3.2. Project Salient Features

#### **Agenda No 13.3**

4x600 MW unit Coal based Thermal Power Plant by **M/s Jindal Power Limited (JPL)** located at Village Tamnar, Taluk Gharghoda, District Raigarh, Chhattisgarh – **Amendment in EC – regarding.**

**[Proposal No. IA/CG/THE/472414/2024; F. No. J-13012/117/2008-IA. II(T)]**

**13.3.1:**The instant proposal (No. IA/CG/THE/472414/2024 dated 14/06/2024) is for seeking amendment in Environmental Clearance dated 18.03.2011 and its subsequent amendment granted therein for the project namely “4x600 MW unit Coal based Thermal Power Plant located at Village Tamnar, Taluk Gharghoda, District Raigarh, Chhattisgarh by M/s Jindal Power Limited (JPL) for utilization of existing ash dyke for 4x600 MW TPP till construction of new dyke & change in coal source from imported to domestic, change in location of proposed dyke.

**13.3.2 Details of proposal, as ascertained from the documents and as revealed from the discussion held during the meeting, are given as under:**

S No	Units	EC date	COD
1.	2x250 MW (Phase I)	24.09.1997	08.12.2007 & 15.06.2007
2.	2x250 MW (Phase II)	08.06.2006	16.04.2008 & 05.09.2008
3.	2x600 MW (Units#1&2)	18.03.2011	27.08.2014 & 09.11.2014
4.	2x600 MW (Units#3&4)	04.11.2011	

S. no	Para of EC issued by MoE F&CC	Details as per the TOR/ EC	To be revised/ read as	Justification/ reason
	Para no 3, 4 & 5 EC amendment granted vide letter no. J-13012/117/2008-IA.II(T) dated 24.02.2023.	Permission to use existing ash dyke of 4x250 MW for unutilized ash/ bottom ash of 4x600 MW has been granted till June 2024.	Permission to continue use existing ash dyke of 4x250 MW for unutilized ash of 4x600 MW permanently	<ul style="list-style-type: none"> <li>To conserve the land and maximize ash utilization, the Company has planned to not construct the new ash dyke for 4X600 MW on an area of 236 ha which was permitted by MoEF&amp;CC.</li> <li>As the Company is utilizing about 100% ash in coal mine backfilling along with Overburden, road making, cement, fly ash brick making etc., the existing ash dyke volume will be adequate to continue bottom ash disposal from 4x250 MW and 4x600 MW TPPs.</li> </ul>

			Sent to authorized	



				vendors
				Sent to authorized vendors
				By road
				Sent to authorized vendors
				By road
				By road
Court Name	Bench	Case Category	Status	Order direction
NGT	Central bench	OA No. 70/2023 (CZ)	Pending	Matter is at the stage of completion of pleadings
S No	EC/EC amendment Date	Remarks		
1.	18.03.2011	EC granted for 2x600 MW (Unit#1 & Unit#2)		
2.	04.11.2011	EC granted for 2x600 MW (Unit#3 & Unit#4)		
3.	10.01.2014	Amendment in EC w.r.t. transportation of coal, utilization of existing ash dyke of 4x250 MW for 4x600 MW TPP for 03 years.		
4.	26.04.2017	Amendment in EC w.r.t. transportation of coal, utilization of existing ash dyke for 4x600 MW TPP for 02 more years till construction of new dyke & change in coal source from imported to domestic, change in location of proposed dyke.		
5.	28.08.2020	Amendment in EC for extension of permission for transportation of coal, utilization of existing ash dyke for 4x600 MW TPP till October, 2021.		
6.	28.10.2021	Amendment in EC for extension of permission utilization of existing ash dyke for 4x600 MW TPP till December, 2022.		
7.	24.02.2023	Amendment in EC for extension of permission utilization of existing ash dyke for 4x600 MW TPP till June 2024.		

**13.3.3:** The above proposal was earlier considered by the EAC – Thermal in its 11<sup>th</sup> meeting held on 27-28<sup>th</sup> June, 2024 and recommended the following subject to compliance of the following additional specific environmental safeguard conditions:

Paragraphs of EC amendment letter dated 24/02/2023	Details as per EC amendment dated 24/02/2023	Amendment sought by the project proponent	Recommendations of EAC as per MoM
Para no 3, 4 & 5 of EC amendment dated 24.02.2023	Permission to use existing ash dyke of 4x250 MW for unutilized ash/ bottom ash of 4x600 MW has been granted till June 2024.	Permission to continue use existing ash dyke of 4x250 MW for unutilized ash of 4x600 MW permanently	Permission to use existing ash dyke of 4x250 MW for 4x600 MW TPP for 1 year i.e. till 30.06.2025 subject to compliance of the additional specific environmental safeguards.

**13.3.4:** The aforesaid EAC recommendations have been considered in the Ministry and the proposal has been again referred back to the EAC with an observation that Whether EAC has taken into consideration scheduled action plan and asked for any inspection. Accordingly, the proposal was again considered by the EAC.

### 3.3.3. Deliberations by the committee in previous meetings

**Date of EAC 1 :** 27/06/2024

**Deliberations of EAC 1 :**

### 3.3.4. Deliberations by the EAC in current meetings

#### Observations and deliberations of the Committee:

#### 13.3.5: The EAC noted the following:

- i. As per EC dated 18.03.2011, a separate ash dyke near Rodapali village was to be constructed for 4x 600 MW. However, the Ash dyke could not be constructed as the land for the proposed ash dyke area became part of a coal block. Based upon the request of JPL, MoEF&CC vide letter dated 26.04.2017 granted permission to construct the ash dyke on 236 ha land at an alternate location near village Dolesera. Consent to Establish (CTE) for the same was granted by Chhattisgarh Environment Conservation Board (CECB) vide letter dated 27.04.2022. The present proposal of project proponent is not to construct the ash dyke in the 236 Ha and use the existing ash dyke developed for 4 x250 MW.
- ii. The Committee noted that proponent has obtained amendment in the existing EC with respect to use of existing ash dyke of 4x250 MW for unutilized ash of 4x600 MW on 10/01/2014, 26/04/2017, 28/08/2020, 28/10/2021 and 24/02/2023.
- iii. With respect to ash utilization for the existing 3400 MW TPP, the Committee noted that the ash is being utilized for filling of low lying areas reportedly with prior permission from CECB. However, the quantity of ash disposal in low lying areas and compliance to the stipulated conditions have not made available by the project proponent.
- iv. The committee opined that in order to take considered view in the matter, it is necessary ascertain the compliance status to the prescribed EC conditions inter-alia present generation, utilization and disposal of ash in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendments.
- v. A court case is pending before the NGT, CZ Bhopal [No. Original Application No.70/2023(CZ)] arising out of News report published in the Newspaper named Indian Express, Daily News Paper dated 4th February, 2022, Kolkata, Late City Edition titled "Noncompliance of EC conditions by

different units inter-alia Tamnar Thermal Plant of M/s. Jindal Power Limited, Chhattisgarh.

**Recommendations of the Committee:**

**13.3.6:** In view of the foregoing and after detailed deliberations, the Committee **deferred** the proposal for amendment in EC and sought for following additional information for further consideration:

- i. Present status of 236 Ha land along with photographs and intended purpose of the said land in place of new ash dyke.
- ii. Quantum of ash generation, disposal and utilization as per the ash utilization notification dated 31/12/2021 and its subsequent amendments shall be submitted. Further, the quantum of legacy ash utilization shall also be furnished.
- iii. Action plan for reduction in existing ash pond area shall be submitted.
- iv. Project proponent shall submit a certified compliance report from the concerned Regional Office of the Ministry regarding the compliance of all the stipulated conditions in the existing ECs and its subsequent amendments.
- v. Compliance report from CECB regarding adherence to the terms and conditions by the proponent for disposal of ash in low lying area shall be submitted.
- vi. Action plan for adopting dry bottom ash collection system shall be submitted.
- vii. Detailed status of court case i.e., Original Application No.70/2023 pending before the NGT, CZ Bhopal regarding “Noncompliance of EC conditions by different units inter-alia Tamnar Thermal Plant of M/s. Jindal Power Limited, Chhattisgarh shall be submitted.

**3.3.5. Recommendation of EAC**

Deferred for ADS

**4. Any Other Item(s)**

N/A

**5. List of Attendees**

Sr. No.	Name	Designation	Email ID	Remarks
1	Dr Sharad Singh Negi	Chairman, EAC	sha*****@gmail.com	Present
2	Dr Santoshkumar Hampannavar	Member (EAC)	san*****@yahoo.com	Present
3	Dr Umesh Jagannathrao Kahalekar	Member (EAC)	uka*****@rediffmail.com	Present
4	Shri K B Biswas	Member (EAC)	bis*****@gmail.com	Present
5	Dr Nazimuddin	Member (EAC)	naz*****@nic.in	Absent
6	Shri Mahi Pal Singh	Member (EAC)	mps*****@nic.in	Present
7	Sundar Ramanathan	Scientist E	r.s*****@nic.in	Present
8	Sh Inder Pal Singh Matharu IFS	Member (EAC)	mat*****@gmail.com	Present

9	Sh Lalit Kapur	Member (EAC)	lka*****@yahoo.com	Present
10	Dr Umesh Jagannathrao Kahalekar	Member (EAC)	uka*****@gmail.com	Present
11	Sh Savalge Chandrasekhar	Member (EAC)	sav*****@gmail.com	Present
12	Prof Shyam Shanker Singh	Member (EAC)	sin*****@gmail.com	Present
13	Dr Vinod Agrawal	Member (EAC)	vin*****@yahoo.com	Present
14	Shri Harmeet Sahaney	Member (EAC)	har*****@imd.gov.in	Absent
15	Prof R M Bhattacharjee	Member (EAC)	rmb*****@iitism.ac.in	Absent



**Ministry of Environment, Forest and Climate Change  
Impact Assessment Division  
(Thermal sector)**

**Date of zero draft MoM sent to Chairman: 05/10/2024**

**Approval by Chairman: 10/10/2024**

**Uploading on PARIVESH: 10/10/2024**

**SUMMARY RECORD OF THE THIRTEENTH (13<sup>TH</sup>) MEETING OF EXPERT APPRAISAL COMMITTEE (EAC) HELD ON 01 OCTOBER 2024 FOR ENVIRONMENT APPRAISAL OF THERMAL SECTOR PROJECTS THROUGH VIRTUAL MODE.**

**01<sup>st</sup> OCTOBER, 2024 [TUESDAY]**

At the outset, the Chairman welcomed the Expert members & other participants and requested to start the proceeding as per the agenda listed for this meeting. The list of members who participated in the meeting is at **Annexure – I**. The Standard/Generic ToR conditions shall be system generated through the PARIVESH Portal.

Confirmation of the Minutes of the 12<sup>th</sup> Meeting of the EAC (Thermal): The minutes of the 12<sup>th</sup> meeting of the EAC (Thermal) held during 29<sup>th</sup> August, 2024 has been confirmed by the EAC.

**Agenda No 13.1**

Proposed expansion of Raipur Thermal Power Plant by adding 1600 (2x800) MW Ultra-Super Critical to existing capacity of 1370 (2x685) MW in an area of 358.15 Ha by **M/s. Adani Power Limited**, Raipur (APL) located at CSIDC industrial area in Tilda Block, Raipur District, Chhattisgarh - **Environmental Clearance–reg.**

**[Proposal No. IA/CG/THE/490693/2024; F. No. J-13012/62/2008-IA. II (T)]**

**13.1.1:** M/s. Adani Power Limited has made an online application vide proposal no. IA/CG/THE/490693/2024 dated 17/09/2024 along with copy of EIA/EMP report, Forms (CAF, Part A, B and C) and certified compliance report seeking environmental clearance under the provisions of 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 the Central Level.

**13.1.2:** Name of the EIA consultant: M/s. Gaurang Environmental Solutions Private Limited Jaipur Rajasthan. [List of ACOs with their Certificate / Extension Letter no.: NABET / EIA / 23-26/RA 0338, valid up to 07.12.2026].

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**13.1.3:** The proposal is for seeking EC for the proposed expansion project of Raipur Thermal Power Plant by adding 1600 (2x800) MW Ultra-Super Critical to the existing capacity

of 1370 (2x685) MW in an existing area of 358.15 Ha located at CSIDC industrial area in Tilda Block, Raipur District, Chhattisgarh by M/s. Adani Power Limited (APL), Raipur.

**13.1.4:** Ministry had issued EC earlier for the project site as mentioned above vide letter no. J-13012/62/2008-IA. II (T) dated 09.05.2011 and subsequent amendments dated 13.06.2013, 18.11.2014, 04.02.2015 & 09.12.2015 to the existing project i.e. 1370 (2x685) MW in favour of M/s. GMR Chhattisgarh Energy Ltd (GCEL). The EC was transferred to M/s. Raipur Energen Limited (REL) dated 05.11.2019 (GCEL to REL) & subsequently to M/s Adani Power Limited (APL) dated 24.04.2023 (REL to APL).

**13.1.5** Implementation of the EC dated 9/5/2011

S. No.	Facilities	Units	Power generation capacity	Implementation Status as on 01.10.2024	Production as per CTO
1.	2x685	MW	1370 MW	2x685 MW	2x685 MW

**13.1.6:** **Certified compliance report submitted by RO, MoEF&CC:** Regional Office of MoEF&CC at Raipur, Chandigarh has submitted certified EC compliance status report vide letter no. 4-11/2013(Env)/125 dated: 16.08.2024 & updated CCR vide no. 4-11/2013(Env)/135 dated: 13.09.2024. The details of the observations made by RO in the report dated 13/09/2024 and ATR submitted by M/s. APL is given below:

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
1	PA shall get an appropriate amendment on the conditions which are not applicable or repugnant to the statutory provisions or Ministry may consider issuance of EC, superseding the existing EC and amendments accorded.	Not complied	specific condition No.(iv) in letter dated 09.05.2011	PA has not submitted any reply in this regard. Ministry may examine and take appropriate view.  As per IRO Certified Compliance Report (CCR) dated 16/08/2024  “It appears that in the EC condition inadvertently stipulated the parameters of PM2.5 & PM10 for monitoring the particulate emission from the Stack. PA should get appropriate amendment in the condition from the Ministry”	Raipur TPP has already installed Online Continuous Emission Monitoring System (CEMS) in Stack for monitoring the parameters of PM, SO <sub>2</sub> & NO <sub>x</sub> and the real-time monitored data has been linked to the servers of CPCB and CECB.  In the Stack Monitoring as per CPCB & SPCB only PM (dust) monitoring is required which is being carried out on regular basis.  PP will submit the EC amendment application for amendment of Specific condition No.(iv) in Environmental Clearance.

MoM of 13<sup>th</sup> meeting of the EAC for Thermal sector held on 01<sup>st</sup> October, 2024

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
2	Details of the Public hearing commitments and its implementation status have not been made available	Not complied	-	PA has not submitted any reply/document in this regard and thus no comments are offered by this Sub-Office.	<p>Adani Power Limited, Raipur has approached to CECB (Chhattisgarh Environment Conservation Board) for providing public hearing documents (2009).</p> <p>Action Plan has been prepared as suggested by CECB Officials on public hearing issues. It was suggested that in Public Hearing of Raipur area common issues/opinion are Employment Education, Health, Sustainable livelihood and Community infrastructure development.</p> <p>APL, Raipur is already undertaking CSR activities within 10 km radius area with focus on nearby 16 Villages located around the plant boundary. The development work in these villages is in progress and up to the satisfaction of the villagers. Further, PP has earmarked (allocated) CSR budget of about 50 Crores to be implemented on need based covering EC conditions, public needs as sought during the public hearing.</p> <p>Raipur TPP has conducted the Need based Assessment study, Social Impact Assessment study with community engagement plan in consultation with villagers, stakeholder as Pollution control board to address those point which are the need of villagers to fulfil their requirement and</p>

MoM of 13<sup>th</sup> meeting of the EAC for Thermal sector held on 01<sup>st</sup> October, 2024

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
					<p>as suggested by stakeholder.</p> <p><b>The above reports have been prepared by Reputed Government Institute. IISWBM, Kolkata. IISWBM (Calcutta University) is renowned for conducting such type of studies.</b></p> <p>CSR activities progress report is submitted along with Six Monthly EC compliance report to MoEFCC, CPCB &amp; SPCB on regular basis with Year wise CSR expenditures.</p>
3	Average ash content in the coal being used is higher than 34%. As per the coal proximate analysis report, average ash content of the domestic coal used is 39.5% and GCV of the domestic coal used is less than 4911 Kcal/kg.	Not complied	specific condition No.(vii), No.(xxxi), additional condition No.2(i) of letter dated 04/02/2015 and additional condition No.2(i) of letter dated 09/12/2015	<p>In the said EC condition, it has been expressly mentioned that in case of variation of coal quality at any point of time fresh reference shall be made to the MoEF&amp;CC for suitable amendments to environmental clearance condition wherever necessary.</p> <p><b>It has been observed that PA rely upon the O.M. dated 11/11/2020 of MoEFCC and its amendment dated 06.12.2023 regarding change of Coal Source without amendment in the EC. The observed non-compliance is relevant to the average ash content (around 39.5%) in the coal used is higher than the condition stipulated (34%).</b></p> <p>Perusal of six-monthly compliance report submitted to this Office, it has been observed that PA has not mentioned the ash content</p>	<p>Being complied &amp; maintained as per the O.M. dated 11/11/2020 of MoEFCC and its amendment dated 06.12.2023 regarding change of Coal Source without amendment in the EC and same is being submitted along with EC compliance report / quarterly ash % report on regular basis.</p>



MoM of 13<sup>th</sup> meeting of the EAC for Thermal sector held on 01<sup>st</sup> October, 2024

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
				<p>in the coal used rather PA has mentioned the above O.M. and submitted the compliance status of the conditions mentioned in the above O.M. However, quarterly report of average ash content in the Coal used has been received in this office. According to the report for the period January-March 2024 average ash content in Coal is 41.13%. Further, PA has submitted annual fly ash implementation report for the period April 2023 – March'2024.</p> <p>In view of the above Ministry may consider the submissions of PA.</p>	
4	<p>The proponent shall sponsor a detailed study regarding water availability in Mahanadi River for all competing sources such as drinking, agriculture, industrial, minimum flow of water in the river during the lean season etc. through institutions like IIT, Delhi /IIT Roorkee. The draft terms of reference shall be submitted within three months which shall be</p>	<p>Not complied. Details are not made available regarding compliance of the condition.</p>	<p>specific condition No.(x).</p>	<p>No documents are made available in support of the compliance of the stipulated condition as above. However, PA has made available a copy of the report titled on “Source Sustainability Study for Withdrawal of Water from River Mahanadi for Proposed Expansion of TPP (2x800 MW) of Adani Power Ltd. Raipur”.</p> <p>The said study has been executed in the year 2023-2024 through the Academy of Water Technology &amp; Environment Management in Association with IISWBM, Kolkata &amp; CSIR-CGCRI, Kolkata. Ministry/EAC may take appropriate view in this regard.</p>	<p>The said study has been executed in the year 2023-2024 under the proposed expansion project through the Academy of Water Technology &amp; Environment Management in Association with IISWBM, Kolkata &amp; CSIR-CGCRI, Kolkata, the detailed study report has already been submitted along with Action Taken Report and same will be followed during the plant operation.</p>

MoM of 13<sup>th</sup> meeting of the EAC for Thermal sector held on 01<sup>st</sup> October, 2024

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
	finalized by the Expert Appraisal Committee. The preliminary report on the above study shall be submitted within one year.				
5	Details are not made available regarding consultation held in this regard with Central Groundwater Authority / Board for finalization of appropriate rainwater harvesting technology / design within a period of three months from the date of this clearance.	Not complied	specific condition No.(xi).	<p>PA has already constructed rainwater harvesting ponds. However, the observed non-compliance is regarding consultation held in this regard with CGWA for finalization of appropriate rainwater harvesting technology / design within a period of three months from the date of this clearance.</p> <p><b>PA in their reply reported that detailed report of rainwater harvesting technique and approval letter of CGWA has been submitted to the Regional Office of MoEF&amp;CC and CECB vide their letter no. GMR/CTPP/MOEF/2012-13/269 dated 13/06/2012 by M/s GMR Chhattisgarh Energy Ltd. But, copy of the same has not been made available along with their reply. The said communication is also not available in the relevant project file available in the Sub-Office. Ministry may consider the submission of PA, as the rainwater harvesting ponds have already been constructed.</b></p>	<p>The report of rainwater harvesting technique and approval letter of CGWA has been submitted to the Regional Office of MoEF&amp;CC and CECB vide their letter no. GMR/CTPP/MOEF/2012-13/269 dated 13/06/ 2012 by M/s GMR Chhattisgarh Energy Ltd.</p> <p>Hydrogeology &amp; Rainwater Harvesting Study Report shall be submitted to CGWA for further implementation/suggestion.</p>

MoM of 13<sup>th</sup> meeting of the EAC for Thermal sector held on 01<sup>st</sup> October, 2024

S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
6	Though the CSR activities are being reportedly implemented, no documents are made available in support of the claim that three villages have been adopted as stipulated. Details regarding time bound implementation of the CSR formulated within six months and its submission to the Ministry have not been made available.	Not complied	specific condition No.(xxvi), (xxvii) & (xxviii).	PA is reportedly undertaking CSR activities. No documents are made available in support of three villages adopted and time bound implementation of the CSR formulated within six months and its submission to the Ministry. However, the activities undertaken under CSR and the expenditure incurred in this regard during the past five years is already made available by the PA and the same has been incorporated in the monitoring report.  Ministry may take appropriate view.	<p>After the acquisition through NCLT, APL has given utmost priority to strengthen the CSR activities that are already being implemented.</p> <p>APL, Raipur is undertaking CSR activities within 10 km radius area with focus on nearby 16 Villages located around the plant boundary. The development work in these villages is in progress and up to the satisfaction of the villagers. Further, we have earmarked (allocated) CSR budget of about 50 Crores to be implemented on need based covering EC conditions, public needs as sought during the public hearing.</p> <p>Raipur TPP has conducted the Need based Assessment study, Social Impact Assessment study with community engagement plan in consultation with villagers, stakeholder as Pollution control board to address those point which are the need of villagers to fulfil their requirement and as suggested by stakeholder.</p> <p><b>The above reports have been prepared by Reputed Government Institute. IISWBM, Kolkata. IISWBM (Calcutta University) is renowned for conducting such type of studies.</b></p> <p>CSR activities progress report is submitted along with Six Monthly EC compliance report to MoEFCC, CPCB &amp; SPCB on regular basis with Year wise CSR expenditure.</p>

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S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
7	Though PA is implementing CSR activities, details are not made available regarding compliance of one-time capital cost of Rs 33.16 Crores earmarked and recurring expenditure of Rs 6.63 Crores per annum.	Not complied	specific condition No.(xxix)	PA submitted in their reply that the condition has been implemented by the previous management during the construction phase. No comments are offered by this Sub-Office, since no supporting documents are made available in respect of one time capital cost of Rs.33.16 Crores earmarked and its utilization.	APL, Raipur is undertaking CSR activities within 10 km radius area with focus on nearby 16 Villages located around the plant boundary. The development work in these villages is in progress and up to the satisfaction of the villagers.  APL has given utmost priority to strengthen the CSR activities that are already being implemented & Year wise CSR expenditures is being submitted along with EC compliance report.
8	Details are not made available regarding in-built continuous monitoring mechanism in place for radio activity and heavy metals in coal and fly ash (including bottom ash)	Not complied	specific condition No.(xxxii) & (xxxiii).	Radioactivity (U238 & Th232) analysis in coal and ash is being carried out from the Department of Atomic Energy, Board of Radiation and Isotope Technology (BRIT) Government of India. However, details are not made available regarding in-built continuous monitoring mechanism in place for radio activity and heavy metals in coal and fly ash (including bottom ash). PA in their reply submitted that the technology and monitoring instrument is not available with the suppliers in the country and is not feasible to implement in-built continuous monitoring mechanism as stipulated.  In view of the above submissions, Ministry may take appropriate view.	For provision of In-built mechanism continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash), the technology and monitoring instrument is not available with the suppliers in the country and is not feasible to monitor in this mechanism. APL will submit the EC amendment application for amendment in specific condition No.(xxxii) & (xxxiii) of environmental clearance.
9	Details regarding name	Not	general condition	PA in their reply submitted a copy of the newspaper	Newspaper cuttings is

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S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
	of the newspaper published have not been made available.	complied	No.(ix), additional condition No.(iv) of letter dated 18/11/2014, additional condition No.2.(ii) of letter dated 04/02/2015	advertisements dated 28/12/2015 regarding the EC amendment dated 09/12/2015 and 18/11/2014.  Newspaper advertisements details regarding general condition No.(ix), additional condition No.(iv) of letter dated 18/11/2014, additional condition No.2.(ii) of letter dated 04/02/2015 have not been made available. It appears that the Unit has been taken over through NCLT from previous management. Corrective action for this condition may not be taken at this stage. Ministry may take appropriate view.	submitted along with ATR.
10	Solar power within the premises of the plant particularly at available rooftops have not been installed as stipulated	Not complied	additional condition No. (xxxiv).	Project Authority has reportedly installed 10KWH solar power unit for internal use. Further, feasibility study has been done & the work has been awarded to M/s Mundra Solar PV Limited (MSPVL). PA shall comply the same as committed within specified timeline, since sufficient open space is available within the Thermal Power Plant. Ministry may consider the submissions of PA.	Implementation of solar harnessing power is being prioritized and service order has already been awarded to MSPVL group company which will be implemented by 2025. Capacity of more than 3000 KVA Solar Panels will be installed within plant premises.
11	The details of quantity and quality of coal transported, source, mode of transportation, electricity units generated and plant Load factor have not	Not complied	additional condition No. 5(ii).	PA in their action taken report submitted the requisite details as Annexure-IX and assured to submit the same in the six-monthly compliance report in future. Ministry may take appropriate view.	Requisite details has been submitted. Information will be submitted along with six monthly EC Compliance Report on regular basis as & when needed.

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S. No	Non-Compliance Details	Observation of RO (abridged)	Condition No	Re- assessment by RO	Action taken report by the PP
	been submitted along with six-monthly compliance report.				

13.1.7: ToR Status: The details of the ToR are furnished as below:

Proposal No/ Date of application	Consideration by the EAC	Date of accord	ToR validity
IA/CG/THE/435583/2023 07/07/2023	44th meeting held during '20 July'2023'	10.09.2023	09/09/2027

13.1.8: Location of the project site

<p>Location of TPP Village: Taluk: District: State:</p> <p>Co-ordinates of all four corners: a) TPP site; b) Ash pond site; c) township etc.</p>	<p>Raikheda, Gaitara &amp; Chicholi Tilda Raipur Chhattisgarh</p> <p>Coordinates of TPP site including Ash Pond</p> <table border="1"> <thead> <tr> <th>S.NO.</th> <th>LATITUDE</th> <th>LONGITUDE</th> </tr> </thead> <tbody> <tr><td>1</td><td>21°27'16.93"N</td><td>81°52'5.32"E</td></tr> <tr><td>2</td><td>21°27'5.66"N</td><td>81°52'11.12"E</td></tr> <tr><td>3</td><td>21°27'2.23"N</td><td>81°52'6.66"E</td></tr> <tr><td>4</td><td>21°26'53.45"N</td><td>81°52'5.59"E</td></tr> <tr><td>5</td><td>21°26'39.41"N</td><td>81°51'53.99"E</td></tr> <tr><td>6</td><td>21°26'35.53"N</td><td>81°51'50.97"E</td></tr> <tr><td>7</td><td>21°26'27.93"N</td><td>81°51'45.99"E</td></tr> <tr><td>8</td><td>21°26'22.65"N</td><td>81°51'32.72"E</td></tr> <tr><td>9</td><td>21°26'38.64"N</td><td>81°51'24.60"E</td></tr> <tr><td>10</td><td>21°26'37.05"N</td><td>81°51'9.59"E</td></tr> <tr><td>11</td><td>21°26'34.69"N</td><td>81°50'58.19"E</td></tr> <tr><td>12</td><td>21°26'25.62"N</td><td>81°50'48.16"E</td></tr> <tr><td>13</td><td>21°26'45.32"N</td><td>81°50'48.42"E</td></tr> <tr><td>14</td><td>21°26'49.55"N</td><td>81°50'53.63"E</td></tr> <tr><td>15</td><td>21°26'52.42"N</td><td>81°50'44.48"E</td></tr> <tr><td>16</td><td>21°26'58.32"N</td><td>81°50'49.59"E</td></tr> <tr><td>17</td><td>21°27'0.07"N</td><td>81°50'41.39"E</td></tr> <tr><td>18</td><td>21°27'3.98"N</td><td>81°50'39.90"E</td></tr> <tr><td>19</td><td>21°27'5.50"N</td><td>81°50'42.05"E</td></tr> </tbody> </table>	S.NO.	LATITUDE	LONGITUDE	1	21°27'16.93"N	81°52'5.32"E	2	21°27'5.66"N	81°52'11.12"E	3	21°27'2.23"N	81°52'6.66"E	4	21°26'53.45"N	81°52'5.59"E	5	21°26'39.41"N	81°51'53.99"E	6	21°26'35.53"N	81°51'50.97"E	7	21°26'27.93"N	81°51'45.99"E	8	21°26'22.65"N	81°51'32.72"E	9	21°26'38.64"N	81°51'24.60"E	10	21°26'37.05"N	81°51'9.59"E	11	21°26'34.69"N	81°50'58.19"E	12	21°26'25.62"N	81°50'48.16"E	13	21°26'45.32"N	81°50'48.42"E	14	21°26'49.55"N	81°50'53.63"E	15	21°26'52.42"N	81°50'44.48"E	16	21°26'58.32"N	81°50'49.59"E	17	21°27'0.07"N	81°50'41.39"E	18	21°27'3.98"N	81°50'39.90"E	19	21°27'5.50"N	81°50'42.05"E
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20	21°27'17.06"N	81°50'40.90"E
21	21°27'15.28"N	81°50'35.33"E
22	21°27'18.24"N	81°50'33.10"E
23	21°27'21.92"N	81°50'31.90"E
24	21°27'23.03"N	81°50'34.26"E
25	21°27'21.16"N	81°50'38.28"E
26	21°27'27.07"N	81°50'36.24"E
27	21°27'26.95"N	81°50'39.03"E
28	21°27'19.29"N	81°50'49.49"E
29	21°27'17.33"N	81°51'0.22"E
30	21°27'14.74"N	81°51'6.38"E
31	21°27'21.92"N	81°51'8.22"E
32	21°27'25.57"N	81°51'9.49"E
33	21°27'27.95"N	81°51'10.09"E
34	21°27'27.85"N	81°51'5.37"E
35	21°27'23.29"N	81°50'59.62"E
36	21°27'21.39"N	81°51'0.25"E
37	21°27'21.35"N	81°50'57.96"E
38	21°27'26.86"N	81°50'56.62"E
39	21°27'28.19"N	81°50'57.76"E
40	21°27'31.61"N	81°51'3.27"E
41	21°27'35.06"N	81°51'0.11"E
42	21°27'36.97"N	81°50'58.77"E
43	21°27'39.89"N	81°51'0.07"E
44	21°27'41.30"N	81°51'1.21"E
45	21°27'41.42"N	81°51'4.19"E
46	21°27'40.28"N	81°51'5.18"E
47	21°27'39.32"N	81°51'7.44"E
48	21°27'39.57"N	81°51'8.66"E
49	21°27'37.79"N	81°51'13.86"E
50	21°27'33.76"N	81°51'17.53"E
51	21°27'35.36"N	81°51'20.67"E
52	21°27'37.60"N	81°51'17.76"E
53	21°27'41.49"N	81°51'19.66"E
54	21°27'41.95"N	81°51'21.77"E
55	21°27'41.49"N	81°51'26.43"E
56	21°27'42.82"N	81°51'30.80"E
57	21°27'42.33"N	81°51'34.72"E
58	21°27'40.43"N	81°51'37.59"E
59	21°27'45.22"N	81°51'37.78"E
60	21°27'43.75"N	81°51'44.16"E
61	21°27'46.01"N	81°51'45.01"E
62	21°27'45.96"N	81°51'51.76"E
63	21°27'44.64"N	81°51'53.49"E
64	21°27'41.09"N	81°51'52.27"E
65	21°27'38.17"N	81°51'57.16"E
66	21°27'35.82"N	81°51'57.20"E
67	21°27'31.84"N	81°51'52.50"E

	68	21°27'28.95"N	81°51'50.42"E
	69	21°27'26.69"N	81°51'44.88"E
	70	21°27'23.75"N	81°51'41.59"E
	71	21°27'21.98"N	81°51'44.88"E
	72	21°27'19.90"N	81°51'36.66"E
	73	21°27'18.02"N	81°51'33.26"E
	74	21°27'18.19"N	81°51'28.34"E
	75	21°27'20.50"N	81°51'24.01"E
	76	21°27'26.23"N	81°51'18.13"E
	77	21°27'15.35"N	81°51'20.82"E
	78	21°27'1.81"N	81°51'20.26"E
	79	21°27'0.76"N	81°51'33.41"E
	80	21°27'8.98"N	81°51'44.09"E
	81	21°27'10.68"N	81°51'34.93"E
	82	21°27'10.88"N	81°51'30.33"E
	83	21°27'13.26"N	81°51'30.50"E
	84	21°27'12.16"N	81°51'56.93"E
	85	21°27'16.86"N	81°51'57.80"E
Average height of (a) TPP site, (b) ash pond site etc above MSL (m)	TPP site : 306 – 329 m Ash pond site :308 - 321 m		
Inter- state issue involved	No		
Seismic zone	Seismic Zone II- low damage risk zone (MSK VI or less) as per IS 1893: 2002		

**13.1.9:** Land Area Breakup: The proposed expansion will be carried out entirely within the existing area of 358.15 ha which is already under possession of Adani Power Limited. The land use break up is given as below:

<b>Land Requirement(Ha):</b>	
a) TPP Site	34.39
b) Ash Pond	60.70
c) Township	-
d) Railway Siding & Others(Coal & Ash Facility)	33.59
e) Raw Water Reservoir	50.59
f) Green Belt	142.85
g) Others	36.03 (16.18 + 19.85)
	358.15 Ha. (885 Acres)
Total (if expansion state additional landrequirement)	No additional land is required for the proposed expansion.
Status of Land Acquisition:	The proposed expansion is within the land that is already under possession with Adani



	Power Limited.
Break-Up of land-use of TPP site:	
a. Total land required for project components	358.15 ha
b. Private land	-
c. Government land	358.15 ha
d. Forest Land	-
CRZ Clearance	Not Applicable
Whether the project is in the Critically Polluted Area (CPA)/Severally Polluted Area (SPA) or within 10 km of CPA. If so, the details thereof:	The project area does not falls within 10 km of CPA does not fall under any Critically or Severely Polluted Areas as per the CEPI Assessment, 2018 of CPCB.

**13.1.10: Environmental sensitivity of the study area**

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter/Remarks
Reserve Forest/Protected Forest Land	Yes	Mohrenga P.F is Adjacent to Plant Boundary. Khaulidabri P.F (Nature safari) is about 2.9 km in ESE direction.
National Park	No	
Wildlife Sanctuary	No	No National Park, Wildlife Sanctuary, Elephant/Tiger Reserve exists within 15 km of the power station.
Archaeological sites monuments/historical temples etc	No	
Names & distance of National parks, Wildlife sanctuaries, Biosphere reserves, Heritage sites Rivers, Tanks, Reserve Forests etc. Located within 10 Km from the plant boundary:	No	
Availability of Schedule-I species in study area	No	-
Additional information (if any)	-	-

**13.1.11: Salient features of the expansion proposal**

• **Project Description:**

Expansion / Green Field (new) : (I P / Merchant / Captive) :	Expansion (IPP)
Cost of the project (As per EC and revised) :	Existing 1370 (2x685) MW units – Rs. 8290 Crores
Cost of the proposed activity in the amendment :	Proposed 1600 (2x800) MW unit – Rs. 13,600 Crores
Employment potential for entire project / plant and employment potential for the proposed amendment (specify number of persons and quantitative information).	During the operative phase about 276 additional no. of persons will be employed for the expansion project. At present 238 people are employed in the unit. Therefore, after the proposed expansion, the total manpower of the unit will be 514 Nos.
Benefits of the project (Specify quantitative information).	Social benefits: Generation of employment, development of peripheral infrastructure and upliftment of nearby villages due to socio-economic developmental activities. Financial benefits: Revenue generation for State and Central exchequer.
Status of other statutory clearances	NA
R&R details	Not Applicable
Power requirement	Power requirement after expansion will be 356400 KVA including existing 164400 KVA and will be met from self-generation. i.e AUX consumption. Existing unit has no DG sets, additionally no DG sets are used as standby during power failure.
Water requirement	Water consumption for thermal power plants as per MoEFCC vide Notification S.O. 3305 (E) dated 07.12.2015 for all existing CT based plants reduce specific water consumption up to maximum of 3.5 m <sup>3</sup> /MWh and as per MoEFCC stipulated norms vide Notification GSR 593 (E) dated 28.06.2018 water allocated to the thermal power plant is 3 m <sup>3</sup> /MWhr for new plants installed after the 1st January, 2017. The total water requirement for the project is 2.56

	m <sup>3</sup> /MWh, which will be well within the stipulated norms of Notification dated 07.12.2015/28.06.2018.
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- **Electricity generation capacity:**

Capacity & Unit Configurations:	1600 MW, Configured as 2x800 MW
Generation of Electricity Annually	1600 MWh

- **Details of Fuel and Ash disposal**

Fuel to be used:	Coal and Auxiliary Fuel
Quantity of Fuel required per Annum:	For the Proposed expansion Project of 1600 MW, the annual fuel requirement is estimated at 6.6 MTPA at 85% plant load factor with Coal GCV of 3200 KCal/kg. Auxiliary liquid fuels, viz. LDO/HSD requirement per annum: 2500 kilo liters per annum.  Existing coal requirement = 6.77 MTPA
Coal Linkage / Coal Block:  (If Block allotted, status of EC & FC of theBlock)	Quantity and details of Linkage Available: 4.0 Million MTPA & Gondulpara Coal mines in Hazaribagh, Jharkhand and e-auction. The method of obtaining remaining coal: MoU/MoA & E auction Ash content in coal 42 (%) Sulphur in coal 0.50 (%) Moisture 17 (%) GCV in coal 3200 Kcal/Kg
Details of mode of transportation of coal from coal source to the plant premises along with distances	Total distance from the source to Rail: 670 km (from Gondulpara coal mines in Hazaribagh To TPP)
Fly Ash Disposal System Proposed	High / Medium concentration slurry. Ratio of water and ash – 35-45% (If expansion project state additional area required for ash pond) – not required

Quantity of a. Fly Ash to be generated b. Bottom Ash to be generated:	Coal requirement: 6.6 MMTPA  9064 T/day 2266 T/day			
Fly Ash utilization percentage with details in last 5 years from the existing 1370 MW TPP	Year	Quantity Generated (LMT)	Quantity Utilization (LMT)	Utilization (%)
	2019-20	13.08	13.10	100.16
	2020-21	16.02	16.65	103.98
	2021-22	20.41	20.01	98.06
	2022-23	20.26	20.28	100.06
	2023-24	23.17	23.19	100.09
	<b>Ash Stock (Legacy ash) in operational Ash Pond as on 31.03.2024 – 1.64 LMT</b> <b>Note:</b> Efforts will be made to achieve 100% Ash utilization from commissioning of the plant and will follow fly ash utilization as per MoEF&CC Notification dated 31.12.2021.			
Stack Height (m) & Type of Flue	120 (m) (new) Bi Flue with FGD			

• **Water Requirement:**

Source of Water:	Existing Samoda Dam at Mahanadi River approx. at 35 km from Plant Site.
Quantity of water requirement:	36 MCM (Expansion) 25 MCM (Existing) Total: 61 MCM per annum
Distance of source of water from Plant:	35 Km (from existing intake point)
Whether barrage/ weir/ intake well/ jack well/ others proposed:	No
Mode of conveyance of water:	Existing Pipeline
Status of water linkage:	15.03.2024
(If source is Sea water) Desalination Plant Capacity	NA
Mode / Management of Brine:	NA

Cooling system	Induced draft
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**13.1.12: Details of Solid waste/ Hazardous waste generation and its management are given in presentation.**

S.No	Particular	Quantity	Management & disposal
1.	Municipal Solid waste	90 TPA	MSW anticipated will be collected; segregated using color coded waste bin collection system and handed over for final disposal to municipal corporation waste disposal site.  Organic component of MSW will be converted to compost using Organic waste converters & used as manure for landscaping within plant premises.
2.	Fly Ash & Bottom Ash	3.68 Million MTPA	Efforts will be made to utilize 100% bottom ash as per MoEFCC guidelines. Bottom ash shall be disposed through lean slurry to Ash dyke in case of exigencies.
3.	Construction Waste	350000 Tonnes	Inert component of Construction waste shall be reused in grading & levelling of within premises.  Remaining Construction waste will be handed over to contractor for disposal as per C&D Waste rules 2016.
4.	Hazardous waste Used / Spent Oil (Cat. 5.1); Waste or residues containing oil (Cat. 5.2); Empty Barrels/containers/ liners contaminated with hazardous chemicals/wastes (Cat. 33.1) & Spent ion exchange resin containing toxic metals (Cat. 35.2)	125 TPA	These are collected & stored on a designated store / yard with proper shed & impermeable flooring.  Hazardous Waste will be send to authorised recyclers as per the Hazardous And Other Wastes (Management and Transboundary Movement) Rules, 2016.
5.	E waste	3.5 TPA	Handed over to the CPCB/SPCB authorised recyclers.
6.	Battery waste	7 TPA	Handed over to the CPCB/SPCB authorised recyclers.
7.	Bio-medical waste	0.12 TPA	Disposed as per the Bio Medical Waste Management Rules, 2016.

**13.1.13: Baseline Environmental Scenario:**

<b>Period : From 01.10.2024 to 30.12.2024</b>	
AAQ parameters at – locations (min. & Max.)	PM <sub>10</sub> : 72.59 µg/m <sup>3</sup> - 41.15 µg/m <sup>3</sup> . PM <sub>2.5</sub> : 42.70 µg/m <sup>3</sup> - 28.41 µg/m <sup>3</sup> . SO <sub>2</sub> : 13.45 µg/m <sup>3</sup> - 7.43 µg/m <sup>3</sup> . NO <sub>x</sub> : 21.35 µg/m <sup>3</sup> - 11.80 µg/m <sup>3</sup> . CO: 670 µg/m <sup>3</sup> - 450 µg/m <sup>3</sup> . Hg: BLQ (**LOQ-0.15).
Incremental GLC Level for cumulative AAQ modelling	PM <sub>10</sub> = Max. GLC: 1.19 µg/m <sup>3</sup> PM <sub>2.5</sub> = Max. GLC: 0.395 µg/m <sup>3</sup> SO <sub>2</sub> = Max GLC: 1.146 µg/m <sup>3</sup> NO <sub>x</sub> = Max GLC: 1.039 µg/m <sup>3</sup>
Pond water and River water samples (08 samples) Pond water	pH 6.98 to 7.98, Dissolved Oxygen: 4.5 to 6.6 mg/lit; Total Dissolved Solids: 402 to 590 mg/lit; Total Hardness (as CaCO <sub>3</sub> ): 130 to 310 mg/lit & total Alkalinity (asCaCO <sub>3</sub> ): 170 to 360 mg/lit; Calcium (as Ca): 40.1 to 92.3 mg/lit; Magnesium (as Mg) : 2.42 to 20.0 mg/lit ; Sulphate (as SO <sub>4</sub> ): 41.3 to 74.8 mg/lit , Nitrate (asNO <sub>3</sub> ) : 83 to 18.2 mg/lit; Chloride (as Cl) : 68.7 to 89.4 mg/lit; Iron (as Fe): 0.16 to 0.24 mg/lit; BOD 7.2 to 10.3 mg/lit; Heavy metals like Copper (as Cu), Lead (as Pb)- BLQ(**LOQ-0.005), Cadmium(as Cd)- BLQ(**LOQ-0.002), Chromium (as Cr)-BLQ(**LOQ-0.02), Arsenic (as As)- BLQ(**LOQ-0.005) and Mercury(as Hg)- BLQ(**LOQ-0.001).
Ground Water samples at 15 locations	pH: 7.02 to 8.02, Total Dissolved Solids: 330 to 610 mg/lit; total Hardness (as CaCO <sub>3</sub> ): 170 to 490 mg/lit; Total Alkalinity(asCaCO <sub>3</sub> ): --- to --- mg/lit; Calcium (as Ca): 130 to 410 mg/lit; Magnesium (as Mg): 15.27 to 51.17 mg/lit; Sulphate (asSO <sub>4</sub> ): 64 to 94.2 mg/lit, Chloride (as Cl): 41 to 81 mg/lit; Iron (as Fe): 29 to 52 mg/lit; Heavy metals like Copper (as Cu), Lead (as Pb)- BLQ(**LOQ-0.005), Cadmium(as Cd)- BLQ(**LOQ-0.002), Chromium (as Cr)-BLQ(**LOQ-0.02), Arsenic (as As)- BLQ(**LOQ-0.005) and Mercury(as Hg)- BLQ(**LOQ-0.001).
Noise levels Leq (Day & Night) at -12 locations	The Leq values for day time was observed to be 48.2 to 60.7 dB (A) in residential area, while during night time 39.4 to 47.1 dB (A).
Soil Quality at 12 Locations	Bulk density: 1.26 to 1.37 gm/cc; pH range 7.38 to 7.71; Electrical conductivity (EC); 0.310 to 0.358 µmhos/cm; calcium content: ---to --- mg/kg; sodium: 30 to 95 mg/kg; potassium: 91.91 to 129.00 kg/hect; Nitrogen: 92.13 to 220.13 kg/hect; Phosphorous: 23.16 to 35.10 kg/hect; Magnesium: 76 to 93 mg/kg; Organic Matter: 0.52% to 0.70%.
Flora & Fauna	No schedule I species observed during field survey.

**13.1.14: Public Hearing**

i. Advertisement for PH with date ii. Details of newspaper published	22/05/2024 Dainik Bhaskar (Hindi), The Indian Express (English) dated 22.05.2024
Date of PH	22.06.2024
Venue	Playground, Near Government High School, Village Tarashiv, Tehsil - Tilda, District - Raipur, Chhattisgarh (2.7km from the project site)
Chaired by	Sri Devendra Patel, Additional District Magistrate, Raipur
Main issues raised during PH	Employment to the locals and development of nearby villages.
No. of people attended	120

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

S. No.	Key Area Identification under CSR activities with addressing public need sought during Public Hearing	Time bound (Year wise) budget allocation (Rs. In Crores)					(Budget Rs. In Crores)
		1st	2nd	3rd	4th	5th	
<b>A</b>	<b>Educational Initiatives</b>						
	Modernization and necessary construction of Higher Secondary School (Kg to XII Class),	0.5	0.9	0.9	0.7	1.5	<b>4.5</b>
	Distribution of drinking water filter/Drinking water coolers in schools.	0.1	0.2	0.2	1.75	1.25	<b>3.5</b>
	Basic teaching and learning infrastructure support to Govt. Schools, Supporting in creation of assembly halls, prayer halls, classrooms, computer room, space for mid-day meals, playground, school boundary walls etc. for government school.	0.5	0.8	0.8	1.65	1.0	<b>4.75</b>
	Educational Vocational Guidance fair (EVGf) for career talk.						
	Conducting Quiz competition for Students, Preparatory	0.10	0.20	0.20	1.5	1.25	<b>3.25</b>
	Coaching Classes for Navodaya Entrance Examination.						

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S. No.	Key Area Identification under CSR activities with addressing public need sought during Public Hearing	Time bound (Year wise) budget allocation (Rs. In Crores)					(Budget Rs. In Crores)
		1st	2nd	3rd	4th	5 <sup>th</sup>	
	Community to provide awareness about education, health, hygiene, and good practices.	0.05	0.10	0.10	1.25	1.0	2.5
	Program for skill improvements of teaching staffs in govt. school.	0.05	0.10	0.10	0.75	0.5	1.5
	<b>Sub Total</b>	<b>1.3</b>	<b>2.3</b>	<b>2.3</b>	<b>7.6</b>	<b>6.5</b>	<b>20</b>
<b>B Community Health Initiatives</b>							
	Operation of Primary Health Centre at Raikheda.	1.1	1.1	1.1	1.1	1.1	5.5
	Rural Medical Camps through Medical Team of Primary Health Centre @ 4 Nos. of camps per month (@ 60 patients per camp), Safe Menstrual Hygiene Management Awareness, Mega Health Camp, Cataract Screening & Operation.	0.5	0.5	0.5	0.5	0.5	2.5
	Promotion of awareness of malnutrition and anemia.	0.15	0.15	0.15	0.15	0.15	0.75
	Promotion of Poshan Vatika at backyard of villagers & Project Suposhan.	0.15	0.15	0.15	0.15	0.15	0.75
	<b>Sub Total</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>9.5</b>
<b>C Sustainable Livelihood and Women Empowerment</b>							
	Skill Development Centre (SDC) to make the youth for achieving their Goals in life by becoming Skilled Professionals.	0.3	0.3	0.3	0.3	0.1	1.3
	Development & Support for Drip irrigation in core zone Villages & Organic farming and support to SHG/ FPO	0.2	0.2	0.2	0.2	0.1	0.9
	<b>Sub Total</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.2</b>	<b>2.2</b>
<b>D Community Rural Infrastructure Development</b>							
	Repairing, widening & Maintenance of Existing roads in consultation with Gram Panchayats	0.7	0.7	0.7	0.7	0.7	3.5



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S. No.	Key Area Identification under CSR activities with addressing public need sought during Public Hearing	Time bound (Year wise) budget allocation (Rs. In Crores)					(Budget Rs. In Crores)
		1st	2nd	3rd	4th	5 <sup>th</sup>	
	To provide facility for potable drinking water, RO Plants and water supply system through overhead tank in villages.	0.5	0.9	0.4	0.4	0.3	2.5
	Creation of clean and hygienic environment by proper drainage systems, community sanitation campaign etc.	0.5	0.5	0.5	0.35	0.15	2
	Upgradation & Renovation of primary health centers with toilet facilities etc.	0.7	0.7	0.7	0.7	0.7	3.5
	Provision of solar street lighting, green nurturing programs, implementation of Swachchh Bharat initiatives.	1.0	0.65	0.65	0.5	0.7	3.5
	<b>Sub Total</b>	<b>3.4</b>	<b>3.45</b>	<b>2.95</b>	<b>2.65</b>	<b>2.55</b>	<b>15</b>
<b>E</b>	<b>Sports &amp; Culture Development</b>						
	Promotion of sports for youths and women	0.1	0.1	0.1	0.05	0.05	0.4
	Cultural activities for villagers	0.1	0.1	0.1	0.2	0.05	0.55
	<b>Sub Total</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.25</b>	<b>0.1</b>	<b>0.95</b>
<b>F</b>	<b>Development of local youth &amp; women for management &amp; administration</b>						
	Team/ Leaders development at village level as coordinator for various program and activities.	0.4	0.4	0.4	0.4	0.4	2.0
	Vehicles for emergency purpose for local villagers including private ambulances as per requirement	0.1	0.1	0.1	0.1	0.1	0.5
	<b>Sub Total</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>0.5</b>	<b>2.5</b>
	<b>Total (A+B+C+D+E+F+G)</b>	<b>7.8</b>	<b>8.85</b>	<b>8.35</b>	<b>13.4</b>	<b>11.75</b>	<b>50.15</b>

**13.1.15: Environment Management Plan**

The capital cost for environmental protection measures is proposed as Rs.2110.33 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.206.55 Crores per annum. The details of cost for environmental protection measures is as follows:

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S. No.	Item Description	Cost (Rs. in Crores)	Recurring cost (Rs. in Crores)
1	Electrostatic Precipitator	332.73	35
2	Chimney	69.32	5
3	Cooling Tower	180.23	18
4	Ash Handling including ash water recirculation	120.0	12
5	Ash disposal civil work	50.0	5
6	Dust extraction & suppression system	6.93	0.5
7	DM Plant Waste Treatment System	6.93	0.7
8	Sewerage collection, treatment & disposal	1.39	0.2
10	Green Belt & landscaping	6.93	0.6
11	FGD and SCR	1280.0	125
12	Rainwater harvesting	5.55	0.55
13	Solar power harnessing	8.32	0.7
14	Environmental Laboratory & Environmental Monitoring (Capital + Recurring)	8.5	0.5
15	CEMS, CAAQMS, EQMS monitoring system & Main gate display board	3.5	0.30
16	Wind Breaking Wall, Dry Fog System & RCC Flooring in Coal Storage Area.	30.0	2.5
<b>Total in Rs. in Crores</b>		<b>2110.33 Cr.</b>	<b>206.55</b>

**13.1.16:** Green belt development

A total of 142.85 ha (i.e. 353 acres) area which is 39.88% of total project area, will be covered under green belt, out of which 118 ha area is already developed and remaining 24.85 ha area will be developed as per the CPCB guidelines with densification of existing greenbelt. The greenbelt shall be developed as per the CPCB guidelines.

Details of green area development plan:		
Total Plot area	:	358.15 Ha
Total Plantation Area	:	142.85 Ha (39.88%)
Existing planted trees	:	217762 Nos

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Total tree After Expansion	:	217762 + 68500 = 286262 Nos.
Proposed Tree to be planted	:	68,500 Nos.

<b>Budget Allocation for Greenbelt Development</b>		
<b>No. of trees to be planted</b>	<b>Green area/Plantation</b>	<b>Fund allocation for proposed plantation in lakhs</b>
68,500 nos.	142.85 Ha (39.88%)	Rs 693 Lacs

**13.1.17: Summary of court cases as on September, 2024**

<b>S. No</b>	<b>Case No/ Title</b>	<b>Name of the Court</b>	<b>Brief summary of the case</b>	<b>Last date of hearing</b>	<b>Next date of hearing</b>	<b>Direction/ Action taken by the PP</b>
1	DFR 2313 of 2019 Appeal No. 448 OF 2019 REL vs PGCIL & Ors (LTA Relinquishment)	APTEL	IA for name change from REL to APL was allowed by APTEL on 02.06.2023.	02.06.2023	Awaited	On 07.09.2021, pleadings completed
2	DFR No. 176 of 2020 Appeal 39 of 2023 REL vs CERC & PGCIL	APTEL	IA for name change from REL to APL was allowed by APTEL on 02.06.2023.	02.06.2023	Awaited	On 20.10.2021, pleadings completed
3	92/2023	CSERC	Determination of Energy Charge Rate for FY 20-21, FY 21-22, FY 22-23 towards supply of 5% power to CSPDCL.	Date of filling: 29/11/2023	Awaited	Pleadings incomplete
4	SLP (C) No. 13112 of 2019	Supreme Court	(matter directed to be tagged with SLP(C) No. 11998/2019) GCEL Vs Union of India (Coal Mine Matters)	01.04.2024	Awaited	Motion Hearing
5	SLP (C) No. 13151 of 2019 (matter directed to be tagged with SLP(C) No. 11998/2019) GCEL Vs Union of India	Supreme Court	(Coal Mines Matter)	01.04.2024	Awaited	-
6	LPA-338/2015 GCEL vs Union of India (through the Railway Board)	Delhi High Court	(Rail Transport Clearance case)	06.03.2020	Awaited	-
7	W.P.(C) 12296/2022 Raipur Energen Limited Vs Union Of India & Ors.	Delhi High Court	Ratan India Petition was tagged, and counsel for Ratan India sought adjournment. Respondents did not object, and CIL and MCL sought to file comments on the	08.11.2023	16.07.2024	In a similar case, the Delhi High Court restraining respondents from coercive actions against GMR Kamlanga Energy Limited, and the company filed a name

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S. No	Case No/ Title	Name of the Court	Brief summary of the case	Last date of hearing	Next date of hearing	Direction/ Action taken by the PP
			rejoinder.			change application without objections.
8	Writ Petition (Civil)1801/2017	High Court, Orissa	GCEL vs Regional Commissioner, Regional Coal mines office	Hon'ble Court vide order dt. 22.02.2017 has stayed the operation of the demand from the Regional Commissioner	Awaited	There is likelihood of a favorable order
9	W.P.PIL 87/2016	High Court, Chhattisgarh	(Suo motu petition)Court on its own motion vs State of CG and Others	The matter was listed on 15.06.2022 after a gap of more than 2 years & 3 months. The Court has directed the Deputy 2. The case was listed on 15.06.2022, heard on 19.07.2023, appointed several lawyers as Court Commissioners, but reports were not provided to private respondents' counsel	15.07.2024	On 04.12.2023, W.P.PIL 87/2016, (Suo moto petition by the High Court of Chhattisgarh) was heard for placing the reports in compliance of the order 19.07.2023.
10	W.A. No. 1377 of 2022	High Court, Orissa	Raipur Eneerngen Limited vs Hindalco Industries & Ors	16.10.2023	Awaited	For orders
11	WPC No. 2328/2019 Girdhar V/s State Chhattisgarh & 3 ors. (REL is Respdt. No. 4)	High Court, Bilaspur	The court ordered a notice to M/s GEL, listed the matter, and granted two weeks' time for an amendment in the cause title. The matter was listed again on 20.09.2021	20.09.2021	Awaited.	Likelihood of favorable order in the matter.
12	Case No. 47/13Dy. Director- Industrial Health & Safety / Factory Inspector vs Rajkumar & Anr.	Judicial Magistrate, First Class, Labour Court, Raipur	Case against the Factory Manager has been disposed of on 06.05.2015, while against occupier it is still pending.	06.05.2015	No next date given. The matter will be taken up on the appearance of the occupier.	Listed for hearing on 03.04.2021 but for COVID-19, regular hearing suspended and hence the matter could not be taken up. The matter is pending in District Court, at Raipur on the issue of deposition of Court fees. Meanwhile an application for change of name from GCEL to Raipur Energen Limited has been filed.
13	752 of 2015Rakesh Kr. Agrawal v/s GCEL & OthersCase not yet registered as the	District Court, Raipur	Listed for hearing on 16.10.2022. The matter is pending in District Court, at Raipur on the issue of deposition of	16.10.2022	Awaited	Likelihood of favourable order in the matter as the petitioner has not yet paid the court fee.

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S. No	Case No/ Title	Name of the Court	Brief summary of the case	Last date of hearing	Next date of hearing	Direction/ Action taken by the PP
	issue of payment of Court fees is still pending		Court fees. Meanwhile an application for change of name from GCEL to Raipur Energen Limited has been filed.			
14	WPC No. 1284/2023	Chhatisgarh High Court		20.02.2024	Awaited	
15	MSME online Application No. - UDYAM-TN-02-0161824/M/00001 dtd. M/s Valtech Technical Services VsM/s Raipur Energen Limited	The micro and small enterprises facilitation council - chennai		15.06.2023	Awaited	The MSEF Council will intimate the next date by email.

PP informed that out of 15 court cases listed above there is no any litigation in respect of the subject matters pertaining to the Environment & Forests.

**Written submission**

**13.1.18:** PP has submitted the following written submission:

S. No.	Written submissions	Details
i.	Submit an Action Plan to address the issues/non-compliance mentioned in Certified EC Compliance Report.	<p>PP submitted action plan to address the issues mentioned in updated CCR issued by IRO, Raipur vide letter dated 13.09.2024.</p> <p>The Action Plan is furnished at para 13.1.6</p> <p>PP submitted undertaking to comply all the conditions stipulated in the previous EC and public hearing conducted dated <b>12.06.2024</b>.</p> <p>PP has enhanced the CSR (CER) budget under 5 years plan. Accordingly, the budget has been increased to <b>50.15 crores</b>.</p>
ii.	Submit details of Public Hearing (2009) for existing (2x685) MW TPP and CSR implementation during the period.	<p>Raipur TPP has approached to CECB for providing public hearing details (2009). Requisite documents are not available, however as per the information collected the PH was held on dated: 15.01.2009.</p> <p>Adani Foundation (CSR arm of Adani Group) under the guidance of APL, Raipur TPP is continuously</p>

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S. No.	Written submissions	Details
		<p>engaged in CSR activities since 2019 after the GMR group. Identified core areas of working in the field of Education (INR 220 Cr), Community Health (INR 254.74 Cr), Sustainable Livelihood Development (INR 92.15 Cr), Community Infrastructure Development &amp; Climate Action (INR 123.11 Cr), General Management &amp; Administration (INR 190.51 Cr) within 10 km radius area with focus on nearby 16 Villages located around the plant boundary.</p> <p>The development work in those villages is already implemented and up to the satisfaction of the Villagers.</p> <p>APL Raipur hereby submits the undertaking &amp; commitments to comply all the conditions stipulated in the previous EC, public hearing (2009) and public hearing conducted dated 12.06.2024.</p> <p>Further, PP has earmarked (allocated) CSR budget of about 50 Crores to be implemented on need based covering EC conditions, public needs as sought during the public hearing.</p> <p>Raipur TPP has conducted the Need based Assessment study, Social Impact Assessment study with community engagement plan in consultation with villagers, stakeholder as Pollution control board to address those point which are the need of villagers to fulfill their requirement and as suggested by stakeholder.</p> <p>The report has been prepared by Reputed Government Institute, IISWBM, Kolkata.</p> <p>Study report has been submitted.</p>
iii.	Radioactive Monitoring as mentioned in EC Condition, - Either apply for EC Amendment or approach to MoEF&CC to address the issue.	For provision of Inbuilt mechanism for continuous monitoring for radioactivity and heavy metals in coal and fly ash (including bottom ash), the technology and monitoring instrument is not available with the suppliers in the Country and is also technically not feasible to monitor in this mechanism. PP will submit the EC amendment application for amendment in specific condition No.(xxxii) & (xxxiii) of environmental clearance within the month.

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S. No.	Written submissions	Details
iv.	<p>Photographs of Fly ash dumping site along with the permission from CECB shall be provided.</p> <p>Area of ash pond shall be minimized, and the remaining area must be utilized to install solar panels.</p>	<p>PP submitted that they are complying with the condition laid down in NOC by CECB. The Ash generation &amp; utilization detail, photographs of disposal area/abandoned stone quarries and CECB NOC are enclosed.</p> <p>APL has proposed expansion of existing plant of 1370 MW by addition of 1600MW, but <b>not proposed any new ash pond for Phase -II</b> expansion project, so it has been already optimized. Further PP assured that they will install Solar panels within the plant boundary.</p> <p>Ash dyke is required for emergency purpose, Rainy season or in case of any pandemic situation.</p>
v.	<p>CSR budget for Public Hearing commitments shall be increased.</p>	<p>PP has enhanced the <b>CSR (CER)</b> budget under the 5 years plan. Accordingly, the budget has been increased to 50.15 crores.</p>
vi.	<p>Commitment shall be provided to install FGD by Dec' 2025.</p>	<p>APL, Raipur has awarded service order to Power Mech Projects Limited and APL will implement the FGD <b>before 31 March 2026</b> as per the MoEFCC timeline. Power Mech Projects Limited is already awarded service order for implementation of FGD on priority basis &amp; will complete the work as per terms &amp; conditions, timeline. The copy of Service order is enclosed.</p>
vii.	<p>Solar power capacity shall be enhanced.</p>	<p>APL is committed to install roof top Solar Panels and available land in the premises with capacity of &gt; <b>5000 KVA</b> as suggested by Hon'ble EAC members during the meeting.</p>
viii.	<p>Assess the feasibility to install Air Cooling condenser for Cooling towers.</p>	<p>APL has already completed feasibility study and WRD office has also ensured for sufficient water availability. There is sufficient water available in Chhattisgarh, therefore WCC has been proposed. However, Feasibility to install Air Cooling condenser has been evaluated &amp; found, there are space constraints for installation of ACC as the expansion Project is accommodated in the existing plant area. Moreover, installing ACC will further increase the CAPEX &amp; OPEX for the project which will make it techno</p>

S. No.	Written submissions	Details
		economically non-viable.
ix.	Hydrogeology report shall be revalidated by a reputed institute.	Hydrogeology study report will be revalidated by Reputed Institute, PP has already approached on the subject and the report will be submitted to MoEFCC within the month, undertaking is enclosed.
x.	Plan for strengthening the Environmental Laboratory shall be submitted.	<p>PP planned to expand the environmental laboratory with well qualified staff to carry out regular monitoring. Analysis &amp; surveillance for implementation of stipulated environmental safeguards with facility of stack emission, ambient air quality. Noise levels, etc. to meet all the necessary monitoring parameters required for a Thermal Power Plant.</p> <p>PP has already established Environment Cell for existing units and planned to expand the environmental laboratory. Well qualified Engineers, Chemist &amp; Officers are already working to carry out regular surveillance for implementation of stipulated environmental safeguards.</p> <p>PP is in the process of strengthen the environmental laboratory with all necessary facilities to monitor environmental parameters by March 2027 before COD of TPP.</p>

### Observations and deliberation of the EAC

#### 13.1.19: The Committee observed and noted the following:

- i. Instant proposal is for Expansion of Raipur Thermal Power Plant by adding 1600 (2x800) MW Ultra-Super Critical to existing capacity of 1370 (2x685) MW in an area of 358.15 Ha located at CSIDC industrial area in Tilda Block, Raipur District, Chhattisgarh by Adani Power Limited, Raipur (APL).
- ii. Ministry had issued EC earlier vide letter no. J-13012/62/2008-IA. II (T) dated 09.05.2011 and subsequent amendments dated 13.06.2013, 18.11.2014, 04.02.2015 & 09.12.2015 to the existing project i.e. 1370 (2x685) MW in favour of GMR Chhattisgarh Energy Ltd (GCEL). The EC was transferred to Raipur Energen Limited (REL) dated 05.11.2019 (GCEL to REL) & subsequently to Adani Power Limited (APL) dated 24.04.2023 (REL to APL).



- iii. A total area of 358.15 ha will be required for the proposed expansion, which is within the existing project boundary of 358.15 ha. The entire area of 358.15 ha. is already under possession of Adani Power Limited. No additional land is proposed to be acquired.
- iv. The Committee deliberated on the certified compliance report of Regional Office along with the action taken report of the project proponent and found it satisfactory. Requisite amendment in the existing EC conditions shall be obtained by the PP within a time frame of three months.
- v. FGD installation in the existing power plant shall be completed by March, 2026.
- vi. The hydrogeology study report done by the proponent shall be vetted by an reputed institute/Government organization. The recommendations to be made in this regard shall be complied by the proponent in a time bound manner.
- vii. The estimated project cost is Rs. 13,600 Cr. including existing investment of Rs. 8,290 Cr. Total capital cost earmarked towards environmental pollution control measures is Rs. 2,110.33 Cr. and the Recurring cost (operation and maintenance) will be about Rs 206.55 Cr. per annum.
- viii. 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.
- ix. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site as ascertained from DSS. River Jamuniya Nadi is flowing at a distance of 2.00 km in North direction.
- x. The project site is not located within the Critically Polluted Area (CPA) / Severally Polluted Area (SPA) as per CEPI assessment 2018 of CPCB.
- xi. The Committee deliberated on the baseline data and incremental GLC due to the proposed project and observed that AAQ levels are within NAAQS.
- xii. Public hearing for the project was held on 22/06/2024. The Committee looked in to the videography of the public hearing proceedings, deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory. The committee advised the PP to implement the PH action plan in a time bound manner.
- xiii. 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.
- xiv. Effluent of 6000 KLD will be treated in ETP and Domestic waste water of 44 KLD will be treated through STP and reused. The plant will be based on Zero Liquid discharge system.
- xv. Existing unit has 493 TPH coal fired each boiler. Additionally, 585 TPH coal fired each boiler will be installed. Electrostatic precipitator, NOX Control System & Flue Gas desulphurization system (FGD) with a stack of height of 120 m will be installed for

controlling the particulate emissions within the statutory limit of 30 mg/Nm<sup>3</sup> for the proposed boilers.

- xvi. The proposed power plant does not require additional ash pond as existing ash pond will be used.
- xvii. The total water requirement for the project is 2.56 m<sup>3</sup>/MWh. The water drawl permission of 36 MCM has been obtained from Rajya Nivesh Prothsahan Board (Chhattisgarh Govt.) vide letter dated 15.03.2024.
- xviii. The present coal linkage of proposed thermal power plant is from Gondulpara coal mines in Hazaribagh, Jharkhand. MOU /permission for 4.0 million MTPA of coal has been obtained and rest quantity will be met through e-auction.
- xix. Green belt is proposed to be developed in an area of 39.88 % of the total area.
- xx. No schedule – I species reported in the study area of the project. However, project proponent has prepared the wildlife conservation plan.
- xxi. EAC observed that 15 court cases are pending against the proposed project. Out of 15 court cases, no any litigation in respect of the subject matters pertaining to the Environment & Forests. There are no show cause notice pending against the project.
- xxii. 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.
- xxiii. The EAC also deliberated on the written submission of the project proponent and found it satisfactory.

#### **Recommendations of the Committee:**

**13.1.20:** In view of the foregoing and after detailed deliberations, the committee *recommended* the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 subject to uploading of written submission on PARIVESH Portal and stipulation of the following specific conditions and general conditions based on project specific requirements:

#### **A. Specific conditions**

##### **[A] Environmental Management**

- 1) The PP adopt 100% utilization of ash generated as a result of the expansion project in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendment. No additional ash pond is permitted for the expansion project. In case of exigencies, ash generated from existing and proposed power plant shall be disposed to existing ash bund through high concentration slurry disposal (HCSD) system only.
- 2) PP shall obtain amendment in the condition no. iv, xxxii and xxxiii of the existing EC dated 9/5/2011 and its subsequent amendments as committed within the time frame of three months from the date of grant of EC. A fresh CCR report will be submitted at the

time of seeking this amendment.

- 3) PP shall complete the FGD installation for the existing 1370 MW power plant by March, 2026 and for the proposed 1600 MW TPP by June, 2026.
- 4) The hydrogeology study report done by the proponent shall be vetted by a reputed institute/Government organization. The vetted report along with the recommendations to be made in this regard shall be submitted to the Ministry within one month from date of grant of EC and the recommendations of the study report shall be complied by the proponent in a time bound manner. Compliance status in this regard shall be submitted to concerned Regional Office of the Ministry along with the six monthly compliance report.
- 5) PP shall explore the possibility of use of rainwater as drinking water in consultation with Public Health Engineering Department Chhattisgarh, respective Gram Panchayat and District administration wherever feasible. PP shall store rain water 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 rain water and its supply system. PP shall get the water audit done every year to optimize the water requirement.
- 6) PP shall implement the protective measure proposed in Environment Management Plan (EMP) in a time-bound manner. The budget earmarked for the same is Rs 2110.33 Crores (Capital) and Rs 206.55 crores (recurring) and should be kept in separate accounts and audited annually. The implementation status along with the amount spent with documentary proof shall be submitted to the concerned Regional Office for the activities carried out during the previous year. In addition to this, PP shall install two continuous ambient air quality monitoring station near ash pond area at suitable locations preferably the village side in consultation of CECB within 6 months from the date of grant of EC.
- 7) Ash pond area and fly ash utilization shall be as per Fly Ash Notification issued by Ministry/ CPCB from time to time.
- 8) PP shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages.
- 9) PP shall install solar power plant on roof top and also road side poles within the project site will be lighting through solar power. Implementation status of solar plant shall be specifically submit in six monthly compliance report. PP has to enhance the Solar power capacity in the project area to 5000 KVA by December, 2025.
- 10) As committed by the PP, Zero liquid discharge shall be adopted.
- 11) PP shall ensure that diesel operated vehicles will be switched over to E-Vehicles/ CNG vehicles in a time bound manner, replace the passenger vehicles to E-vehicle in phased manner. 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 vehicles like Bulklers 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.

- 12) PP shall implement the concurrent plantation plan in a time bound manner. The gap plantation shall be completed in the identified 118 Ha land within Plant, residential and administrative areas and around Ash Pond by the planting 2.0 Lakh saplings during 2024-2025. Further, three tier green belt shall be developed in an area of 24.85 ha in a time frame of two years from the date of grant of EC in consultation with Forest department/ Gram Panchayat/District Administration. The budget earmarked for the green belt, plantation inside and outside the plant area, along the transportation route and Miyawaki Plantation area shall be kept in a separate account and audited annually. PP should annually submit the audited statement of expenditure along with proof of activities viz. photographs (before & after with geolocation date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC and on PARIVESH Portal as the case may be for the activities carried out during previous year.
- 13) 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 government account.
- 14) 24x7 online monitoring system for ambient air quality shall be established with its connectivity with SPCB and CPCB server. Stack monitoring shall be done through 24X7 online monitoring system. The real time data so generated from CAQMS shall be uploaded on company website and linked it with website of CPCB & SPCB. Further, LED display of air quality (Continuous Online monitoring) shall be installed at prominent locations preferably outside the plant's main entrance for public viewing and in administrative complex. and maintenance of devices shall be done regularly.
- 15) Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as waste delivery points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system. Water Sprinkling on roads inside the plant area/ administrative/ residential areas and outside the plant area at least for 2KM on a regular basis to control the air pollution. A logbook shall be maintained for the activity and be in six-monthly compliance report.
- 16) Coal for the proposed power plant shall be received at plant through Railway siding only from Gondulpara Coal Mine & e- auction. Transportation of coal by road is not permitted.
- 17) PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM.
- 18) Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
- 19) 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.

- 20) Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
- 21) 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
- 22) 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.
- 23) PP shall ensure that all types of plastic waste generated from the plant shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2016 (as amended). In pursuant to the Ministry's OM dated 18/07/2022. PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single Use Plastic (SUP) in order to ensure compliance of Ministry's Notification published by the Ministry on 12/08/2021. A report along with photograph on the measures taken shall also be included in the six monthly compliance report being submitted by PP.
- 24) PP is advised to implement the 'Ek Ped Maa Ke Naam' Campaign which was launched on 5th June 2024 on the occasion of the World Environment Day to increase the forest cover across the Country. This plantation drive is other than Green belt development. The action in this regard shall be submitted concerned RO in six monthly report.

**[B] Socio-economic**

- 1) A vision document comprising prospective plan for implementation of various CER activities, plantation programme outside the project cover area, rejuvenation and conservation of water bodies within 5km radius of the project cover area shall be prepared and submitted to the Regional Office of the Ministry within 6 months. Implementation status of the same shall be reported to the Regional office in 6 monthly compliance reports.
- 2) 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.
- 3) The budget proposed for PH is Rs 50.15 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 5 years from the date of grant of EC. PP shall submit the progress report regarding the implementation of action plan to concerned RO along with the six monthly compliance report. PP shall provide the health services and organize medical camps for residents of the surrounding villages as committed during the meeting. PP shall carry out the analysis of the data of medical camp and take all necessary steps so as to cover maximum number of persons.

- 4) Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- 5) 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.

**[C] Miscellaneous**

- 1) An Environmental Cell headed by the Environment Manger with postgraduate qualification in environmental science/environmental engineering, shall be created. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
- 2) Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- 3) All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.

**B. General conditions**

**A. Statutory compliance:**

1. Emission Standards for Thermal Power Plants as per Ministry's Notification S.O. 3305€ dated 7.12.2015, G.S.R.593 (E) dated 28.6.2018 and as amended from time to time shall be complied.
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.
3. MoEF&CC Notification G.S.R 02 (E ) dated 2.1.2014 as amended time to time regarding use of raw or blended or beneficiated/washed coal with ash content not exceeding 34% shall be complied with, as applicable.
4. MoEF&CC Notifications on Ash Utilization S.O. 5481(E) dated 31/12/2021 as amended from time to time shall be complied.

5. 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.
6. The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
7. No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.
8. Groundwater shall not be drawn during construction of the project. In case, groundwater is drawn during construction, necessary permission be obtained from CGWA.

**B. Ash content/ mode of transportation of coal:**

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.

**C. Air quality monitoring and Management:**

1. Flue Gas Desulphurisation System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO<sub>2</sub> emissions standard as per G.S.R. 243 (E ) dated 31.03.2021 read with G.S.R. 682 (E ) dated 05.09.2022 and amended from time to time.
2. Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NO<sub>x</sub> Burners with Over Fire Air (OFA) system shall be installed to achieve NO<sub>x</sub> emission standard of 100 mg/Nm<sup>3</sup>.
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>.
4. Stacks of prescribed height 120 m shall be provided with continuous online monitoring instruments for SO<sub>2</sub>, Nox and Particulate Matter as per extant rules.
5. Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.
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>, NO<sub>x</sub> within the plant area. 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.
7. Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
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.

**D. Noise pollution and its control measures:**

1. The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
2. Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
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.

**E. Human Health Environment:**

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.
2. Baseline health status within study area shall be assessed and report be prepared. Mitigation measures should be taken to address the endemic diseases.
3. Impact of operation of power plant on agricultural crops, large water bodies (as applicable) once in two years by engaging an institute of repute. The study shall also include impact due to heavy metals associated with emission from power plant.
4. Sewage Treatment Plant shall be provided for domestic wastewater.

**F. Water quality monitoring and Management:**

1. Induced/Natural draft closed cycle wet cooling system including cooling towers shall be set up with minimum Cycles of Concentration (COC) of 5.0 or above for power plants using fresh water to achieve specific water consumption of 3.0 m<sup>3</sup>/MWhr. (Or) Induced/Natural draft open cycle cooling system shall be set up with minimum Cycles of Concentration (COC) of 1.5.
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.
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.
4. Rainwater harvesting in and around the plant area be taken up to reduce drawl of fresh water. If possible, recharge of groundwater to be undertaken to improve the ground water table in the area.
5. 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. 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.

7. Hot water dispensed from the condenser should be adequately cooled to ensure the temperature of the released surface water is not more than 5 degrees Celsius above the temperature of the intake water.
8. Based on the commitment made by the Project Proponent, Sewage Treatment Plants within the radius of 50 km from proposed project shall be used as an alternative to the fresh water source to minimize the fresh water drawl from surface water bodies
9. Wastewater generation of 6000 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;
10. Sewage generation of 44 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):<1000 per 100 ml.

#### **G. Risk Mitigation and Disaster Management:**

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.
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%.
3. Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
4. Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
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.

#### **H. Green belt and Biodiversity conservation:**

1. Green belt shall be developed in an area of 39.88% of the total project with indigenous native tree species in accordance with CPCB guidelines. The green belt shall inter-alia cover an entire periphery of the plant. Concurrent plantation shall be done and all the earmarked area shall be suitably planted with native species in three rows within the next 2 years.
2. In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.

#### **I. Waste management:**

1. Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.

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.
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.
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 Fly Ash Utilization issued by the Ministry S.O. 5481 (E) dated 31.12.2021, S.O.6169 (E) dated 30.12.2022, S.O.0 5 (E) dated 01.01.2024 and amendment thereto.
5. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry method. Ash water recycling system shall be set up to recover supernatant water.
6. In case of waste-to-energy plant, major problems related with environment are fire smog in MSW dump site, foul smell and impacts to the surrounding populations. Therefore, the following measures are required to be taken up:
  - i) Water hydrant at all the dumpsites of MSW area to be provided so that the fire and smog could be controlled.
  - ii) Sprayer like microbial consortia may be provided for arresting the foul smell emanating from MSW area.

**J. Monitoring of compliance:**

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.
2. Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
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.
4. Monitoring of Carbon Emissions from the existing power plant as well as for the proposed power project shall be carried out annually from a reputed institute and report be submitted to the Ministry's Regional Office.
5. Energy and Water Audit shall be conducted at least once in two years and recommendations arising out of the Report should be followed. A report in this regard shall be submitted to Ministry's Regional Office.
6. An Environmental Cell headed by the Environment Manger with postgraduate qualification in environmental science/environmental engineering, shall be created. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
7. The project proponent shall (Post-EC Monitoring):
  - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;

- b. upload the clearance letter on the web site of the company as a part of information to the general public.
- c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at <http://parviesh.nic.in>.
- d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
- e. monitor the criteria pollutants level namely; PM (PM<sub>10</sub>& PM<sub>2.5</sub> incase of ambient AAQ), SO<sub>2</sub>, Nox (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
- f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
- g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
- h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project and the date of commencement of the land development work.

**K. Corporate Environmental Responsibility (CER) activities:**

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

**Agenda No: 13.2**

**13.2:** Proposed 4x800 MW Coal Based Ultra-Super Critical Thermal Power Plant (USCTPP) by **M/s Anuppur Thermal Energy (MP) Private Ltd.** at Village Chhatai, Majhtoliya and Umarda, Tehsil Kotma, District Anuppur, Madhya Pradesh – **Consideration for grant of Terms of Reference (ToR) – reg.**

[Proposal No. IA/MP/THE/495356/2024; F. No. J-13012/144/2010-IA-II(T)]

**13.2.1:** M/s Anuppur Thermal Energy (MP) Private Limited has made an application online vide proposal no. IA/MP/THE/495356/2024 dated 19/09/2024 along with the application in prescribed format (CAF, Form – I Part A & B), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed under category A of item 1(d) ‘Thermal Power Plants’ of EIA Notification 2006 (as amended) as the power generation capacity of the proposed project is beyond the threshold capacity of 500MW i.e. 3200 MW and requires appraisal at Central level. The interstate boundary (Madhya Pradesh- Chhattisgarh) is 0.7 km towards North from the project boundary.

**13.2.2:** Name of the EIA consultant: M/s. Gaurang Environmental Solutions Private Limited Jaipur RJ; [List of ACOs with their Certificate / Extension Letter no.: NABET / EIA / 23-26/RA 0338, valid up to 07.12.2026].

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussion held during the meeting, are given as under:**

**13.2.3:** The instant proposal is for grant of Terms of Reference for Proposed 4x800 MW Coal Based Ultra-Super Critical Thermal Power Plant (USCTPP) at Village Chhatai, Majhtoliya and Umarda, Tehsil Kotma, District Anuppur, Madhya Pradesh by M/s Anuppur Thermal Energy (MP) Private Limited.

**13.2.4:** Previously, Environmental Clearance (EC) was granted by the MoEF&CC, New Delhi vide File no. J 13012/144/2010-IA. II (T) dated 27.11.2012 to M/s Welspun Energy Anuppur Pvt. Ltd. for 1320 (2x660) MW Thermal Power Plant. Subsequently, M/s Welspun Energy Anuppur Pvt. Ltd. had obtained Consent to Establish (CTE) from Madhya Pradesh Pollution Control Board (MPPCB) vide letter dated 18.07.2013. Further, the MoEF&CC issued Transfer of Environmental Clearance to Anuppur Thermal Energy (MP) Private Ltd (ATEMPPL) & validity extension up to 26.11.2022, New Delhi vide letter No. F. No: J-13012/144/2010-IA. II(T) dated 07.01.2020. There is no activity undertaken at the site except the boundary wall construction. The validity of the EC lapsed on 26/11/2023. Now the configuration has changed from 2x660 MW to 4x800 MW in an area of 371 ha and a new reference (de novo) has been made through this fresh application for grant of ToR.

**13.2.5: Environmental site settings**

S. No.	Particulars	Details	Remarks																																																																								
i.	Total land	371 ha [Private land: 312 ha + Govt. land 59 ha]  <table border="1"> <thead> <tr> <th>Description</th> <th>Area in Ha</th> </tr> </thead> <tbody> <tr> <td>TPP Site</td> <td>85</td> </tr> <tr> <td>Ash Dyke</td> <td>47</td> </tr> <tr> <td>Township</td> <td>13</td> </tr> <tr> <td>Raw Water Reservoir</td> <td>30</td> </tr> <tr> <td>Green Belt</td> <td>123</td> </tr> <tr> <td>Others (Coal stack yard)</td> <td>73</td> </tr> <tr> <td><b>Total</b></td> <td><b>371</b></td> </tr> </tbody> </table>	Description	Area in Ha	TPP Site	85	Ash Dyke	47	Township	13	Raw Water Reservoir	30	Green Belt	123	Others (Coal stack yard)	73	<b>Total</b>	<b>371</b>	--																																																								
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ii.	Status of Land Acquisition	The land for the proposed project is already in possession with Anuppur Thermal Power Project.	--																																																																								
iii.	Location	Village: Chhatai, Majhtoliya and Umarda Taluk: Kotma District: Anuppur State: Madhya Pradesh	--																																																																								
iv.	Existence of habitation & involvement of R&R, if any.	No R&R Issue is involved.	R & R not required.																																																																								
v.	Latitude and Longitude of all corners of the project site.	The geographical co-ordinates of the site are as follows:  <table border="1"> <thead> <tr> <th>S. No.</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr><td>1</td><td>23°22'19.89"N</td><td>82° 1'53.98"E</td></tr> <tr><td>2</td><td>23°22'18.06"N</td><td>82° 2'0.52"E</td></tr> <tr><td>3</td><td>23°22'12.97"N</td><td>82° 2'0.45"E</td></tr> <tr><td>4</td><td>23°22'13.67"N</td><td>82° 2'4.48"E</td></tr> <tr><td>5</td><td>23°22'8.45"N</td><td>82° 2'12.47"E</td></tr> <tr><td>6</td><td>23°22'4.50"N</td><td>82° 2'17.58"E</td></tr> <tr><td>7</td><td>23°22'8.82"N</td><td>82° 2'20.22"E</td></tr> <tr><td>8</td><td>23°22'8.77"N</td><td>82° 2'21.31"E</td></tr> <tr><td>9</td><td>23°22'5.89"N</td><td>82° 2'29.35"E</td></tr> <tr><td>10</td><td>23°22'4.47"N</td><td>82° 2'36.33"E</td></tr> <tr><td>11</td><td>23°22'5.47"N</td><td>82° 2'37.69"E</td></tr> <tr><td>12</td><td>23°22'5.68"N</td><td>82° 2'38.70"E</td></tr> <tr><td>13</td><td>23°22'7.07"N</td><td>82° 2'38.80"E</td></tr> <tr><td>14</td><td>23°22'8.22"N</td><td>82° 2'42.45"E</td></tr> <tr><td>15</td><td>23°22'12.24"N</td><td>82° 2'44.21"E</td></tr> <tr><td>16</td><td>23°22'15.22"N</td><td>82° 2'48.91"E</td></tr> <tr><td>17</td><td>23°22'15.91"N</td><td>82° 2'49.28"E</td></tr> <tr><td>18</td><td>23°22'15.64"N</td><td>82° 2'50.28"E</td></tr> <tr><td>19</td><td>23°22'20.34"N</td><td>82° 2'52.56"E</td></tr> <tr><td>20</td><td>23°22'5.23"N</td><td>82° 3'34.52"E</td></tr> <tr><td>21</td><td>23°22'3.48"N</td><td>82° 3'34.48"E</td></tr> <tr><td>22</td><td>23°22'0.29"N</td><td>82° 3'32.98"E</td></tr> <tr><td>23</td><td>23°21'56.30"N</td><td>82° 3'32.35"E</td></tr> </tbody> </table>	S. No.	Latitude	Longitude	1	23°22'19.89"N	82° 1'53.98"E	2	23°22'18.06"N	82° 2'0.52"E	3	23°22'12.97"N	82° 2'0.45"E	4	23°22'13.67"N	82° 2'4.48"E	5	23°22'8.45"N	82° 2'12.47"E	6	23°22'4.50"N	82° 2'17.58"E	7	23°22'8.82"N	82° 2'20.22"E	8	23°22'8.77"N	82° 2'21.31"E	9	23°22'5.89"N	82° 2'29.35"E	10	23°22'4.47"N	82° 2'36.33"E	11	23°22'5.47"N	82° 2'37.69"E	12	23°22'5.68"N	82° 2'38.70"E	13	23°22'7.07"N	82° 2'38.80"E	14	23°22'8.22"N	82° 2'42.45"E	15	23°22'12.24"N	82° 2'44.21"E	16	23°22'15.22"N	82° 2'48.91"E	17	23°22'15.91"N	82° 2'49.28"E	18	23°22'15.64"N	82° 2'50.28"E	19	23°22'20.34"N	82° 2'52.56"E	20	23°22'5.23"N	82° 3'34.52"E	21	23°22'3.48"N	82° 3'34.48"E	22	23°22'0.29"N	82° 3'32.98"E	23	23°21'56.30"N	82° 3'32.35"E	--
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MoM of 13<sup>th</sup> meeting of the EAC for Thermal sector held on 01<sup>st</sup> October, 2024

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		24	23°21'55.70"N	82° 3'33.77"E	
		25	23°21'54.47"N	82° 3'33.76"E	
		26	23°21'54.53"N	82° 3'33.15"E	
		27	23°21'51.71"N	82° 3'32.75"E	
		28	23°21'51.61"N	82° 3'31.76"E	
		29	23°21'51.82"N	82° 3'30.40"E	
		30	23°21'49.22"N	82° 3'29.72"E	
		31	23°21'48.72"N	82° 3'30.55"E	
		32	23°21'42.81"N	82° 3'27.66"E	
		33	23°21'40.89"N	82° 3'29.54"E	
		34	23°21'39.63"N	82° 3'28.83"E	
		35	23°21'41.37"N	82° 3'25.84"E	
		36	23°21'38.58"N	82° 3'24.36"E	
		37	23°21'37.44"N	82° 3'27.10"E	
		38	23°21'36.93"N	82° 3'26.95"E	
		39	23°21'36.83"N	82° 3'27.15"E	
		40	23°21'32.43"N	82° 3'26.01"E	
		41	23°21'32.22"N	82° 3'26.80"E	
		42	23°21'31.91"N	82° 3'26.71"E	
		43	23°21'33.07"N	82° 3'22.52"E	
		44	23°21'33.25"N	82° 3'14.24"E	
		45	23°21'31.80"N	82° 3'13.50"E	
		46	23°21'31.88"N	82° 3'13.28"E	
		47	23°21'31.32"N	82° 3'12.93"E	
		48	23°21'31.88"N	82° 3'11.90"E	
		49	23°21'30.46"N	82° 3'10.80"E	
		50	23°21'30.24"N	82° 3'11.27"E	
		51	23°21'28.12"N	82° 3'10.50"E	
		52	23°21'26.05"N	82° 3'13.76"E	
		53	23°21'20.90"N	82° 3'8.64"E	
		54	23°21'20.65"N	82° 3'6.57"E	
		55	23°21'21.91"N	82° 3'1.50"E	
		56	23°21'19.82"N	82° 3'0.83"E	
		57	23°21'20.19"N	82° 2'56.99"E	
		58	23°21'19.89"N	82° 2'56.84"E	
		59	23°21'20.21"N	82° 2'55.86"E	
		60	23°21'19.94"N	82° 2'55.24"E	
		61	23°21'20.16"N	82° 2'53.46"E	
		62	23°21'21.78"N	82° 2'49.36"E	
		63	23°21'20.28"N	82° 2'46.78"E	
		64	23°21'22.93"N	82° 2'46.03"E	
		65	23°21'22.44"N	82° 2'44.66"E	
		66	23°21'24.60"N	82° 2'43.06"E	
		67	23°21'26.67"N	82° 2'44.74"E	
		68	23°21'27.33"N	82° 2'39.68"E	
		69	23°21'29.96"N	82° 2'37.04"E	
		70	23°21'31.14"N	82° 2'33.79"E	
		71	23°21'33.86"N	82° 2'29.44"E	
		72	23°21'35.33"N	82° 2'23.91"E	
		73	23°21'34.04"N	82° 2'17.00"E	
		74	23°21'34.90"N	82° 2'12.77"E	

MoM of 13<sup>th</sup> meeting of the EAC for Thermal sector held on 01<sup>st</sup> October, 2024

S. No.	Particulars	Details	Remarks
		75 23°21'40.38"N 82° 2'11.95"E	
		76 23°21'42.33"N 82° 2'7.24"E	
		77 23°21'44.50"N 82° 2'8.44"E	
		78 23°21'45.08"N 82° 2'7.30"E	
		79 23°21'44.16"N 82° 2'6.23"E	
		80 23°21'45.19"N 82° 2'4.18"E	
		81 23°21'48.04"N 82° 2'5.49"E	
		82 23°21'49.00"N 82° 2'4.86"E	
		83 23°21'47.49"N 82° 2'3.08"E	
		84 23°21'49.11"N 82° 2'2.37"E	
		85 23°21'48.80"N 82° 2'1.83"E	
		86 23°21'49.86"N 82° 2'1.59"E	
		87 23°21'53.00"N 82° 1'52.86"E	
		88 23°21'42.58"N 82° 1'48.69"E	
		89 23°21'53.85"N 82° 1'31.53"E	
		90 23°21'55.12"N 82° 1'32.50"E	
		91 23°21'54.15"N 82° 1'36.08"E	
		92 23°21'52.21"N 82° 1'36.17"E	
		93 23°21'48.90"N 82° 1'39.79"E	
		94 23°21'47.74"N 82° 1'41.95"E	
		95 23°21'49.86"N 82° 1'44.35"E	
		96 23°21'51.56"N 82° 1'39.11"E	
		97 23°21'54.19"N 82° 1'39.55"E	
		98 23°21'56.92"N 82° 1'44.14"E	
		99 23°22'0.54"N 82° 1'45.80"E	
		100 23°22'1.50"N 82° 1'43.22"E	
		101 23°22'1.21"N 82° 1'42.99"E	
		102 23°22'4.81"N 82° 1'31.83"E	
		103 23°22'10.46"N 82° 1'35.06"E	
		104 23°22'13.91"N 82° 1'35.80"E	
		105 23°22'13.16"N 82° 1'36.86"E	
		106 23°22'14.27"N 82° 1'37.84"E	
		107 23°22'11.44"N 82° 1'41.35"E	
		108 23°22'14.90"N 82° 1'44.12"E	
		109 23°22'14.29"N 82° 1'45.66"E	
		110 23°22'10.30"N 82° 1'42.41"E	
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		113 23°22'13.88"N 82° 1'48.76"E	
		114 23°22'17.63"N 82° 1'52.58"E	
vi.	Elevation of the project site above mean sea level (AMSL)	TPP Site: 562 m ; Ash Pond Site: 565 m	--
vii.	Involvement of Forest land if any	No, project does not involved forestland.	--
viii.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	River Kewai is flowing at 0.04 km in W direction.	--

S. No.	Particulars	Details	Remarks																																																								
ix.	Existence of ESZ / ESA / National Park / Wildlife Sanctuary / Biosphere Reserve / Tiger Reserve / Elephant Reserve etc. if any within the study area	There are no. national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors, etc. within 10 km distance from the project site.	--																																																								
x.	Reserve Forest/ Protected Forest Land	<table border="1"> <thead> <tr> <th>Sr. No.</th> <th>Particulars</th> <th>Distance (KM)</th> <th>Direction</th> </tr> </thead> <tbody> <tr> <td colspan="4">Reserve Forest (RF) &amp; Protected Forest (PF)</td> </tr> <tr> <td>1</td> <td>Nandlal Patera R. F.</td> <td>1.1</td> <td>E</td> </tr> <tr> <td>2</td> <td>Gundur P. F.</td> <td>3.65</td> <td>ENE</td> </tr> <tr> <td>3</td> <td>Dehuli R.F.</td> <td>5.65</td> <td>NNE</td> </tr> <tr> <td>4</td> <td>Mahora R. F.</td> <td>7.6</td> <td>WSW</td> </tr> <tr> <td>5</td> <td>Rukra R.F.</td> <td>7.7</td> <td>E</td> </tr> <tr> <td>6</td> <td>Kelhari P.F.</td> <td>7.9</td> <td>N</td> </tr> <tr> <td>7</td> <td>Belgaon R.F.</td> <td>11.75</td> <td>ESE</td> </tr> <tr> <td>8</td> <td>Mahai R.F.</td> <td>12</td> <td>ESE</td> </tr> <tr> <td>9</td> <td>Khurma P.F.</td> <td>12.1</td> <td>N</td> </tr> <tr> <td>10</td> <td>Biharpur R.F.</td> <td>12.7</td> <td>ENE</td> </tr> <tr> <td>11</td> <td>Pairichua P.F.</td> <td>13.7</td> <td>SSW</td> </tr> <tr> <td>12</td> <td>Malga R.F.</td> <td>14.3</td> <td>SSE</td> </tr> </tbody> </table>	Sr. No.	Particulars	Distance (KM)	Direction	Reserve Forest (RF) & Protected Forest (PF)				1	Nandlal Patera R. F.	1.1	E	2	Gundur P. F.	3.65	ENE	3	Dehuli R.F.	5.65	NNE	4	Mahora R. F.	7.6	WSW	5	Rukra R.F.	7.7	E	6	Kelhari P.F.	7.9	N	7	Belgaon R.F.	11.75	ESE	8	Mahai R.F.	12	ESE	9	Khurma P.F.	12.1	N	10	Biharpur R.F.	12.7	ENE	11	Pairichua P.F.	13.7	SSW	12	Malga R.F.	14.3	SSE	--
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xi.	Archaeological sites monuments/ historical temples etc.	No	--																																																								
xii.	Whether the project is in the Critically Polluted Area (CPA)/ Severely Polluted Area (SPA) or within 10 km of CPA/SPA.	No The project area does not fall in the Critically Polluted Area (CPA)/ Severely Polluted Area (SPA) or within 10 km of CPA/SPA.	--																																																								
xiii.	Availability of Schedule-I species in study area	Details shall be submitted with EIA/EMP report	--																																																								
xiv.	Seismic zone	Zone-II as per IS 1893.	--																																																								

**13.2.6: Baseline Environmental data:** The proposal is for obtaining ToR. Baseline monitoring will be carried out during Post monsoon season from October' 2024 to December' 2024.

**13.2.7: Project cost:** The estimated total project cost is Rs. 36,600 Crores. Total capital cost earmarked towards Environmental Pollution Control measures is Rs. 5,993 Crores.



- 13.2.8: Employment:** Total Employment will be 550 persons as direct & 50 persons indirect during operation phase. Industry proposes to allocate Rs. 100.00 Crore towards CER (as per Ministry's OM dated 30.09.2020). The details are as below:

Employment Potential	Construction phase	Operation phase
Permanent	350	550
Contractual	250	50
<b>Total</b>	<b>600</b>	<b>600</b>

- 13.2.9: Power requirement:** Power requirement for the project will be 7.5 MW and during operation will be met from nearby sub stations from the project site during construction phase and during operation phase power requirement will be met from self-generation, i.e. Aux consumption. 3nos. of DG sets will be used as standby during power failure. Stack (height 30m) will be provided as per CPCB norms to the proposed DG sets.

- 13.2.10: Water Requirement:** Water consumption for thermal power plants as per MoEF&CC vide Notification S.O. 3305 (E) dated 07.12.2015 for all existing CT based plants reduce specific water consumption up to maximum of 3.5 m<sup>3</sup>/MWh and as per MoEF&CC stipulated norms vide Notification GSR 593 (E) dated 28.06.2018 water allocated to the thermal power plant is 3 m<sup>3</sup>/MWh for new plants installed after the 1<sup>st</sup> January, 2017. The total water requirement for the proposed project is 2 m<sup>3</sup>/MWh, which is well within the stipulated norms of Notification dated 28.06.2018.

Source of Water:	Sone River
Quantity of water requirement:	(6400 KL/hr) 56 MCM/year
Distance of source of water from Plant:	60 Km (from intake point)
Whether barrage/ weir/ intake well/ jackwell/ others proposed:	Yes, Intake Well proposed
Mode of conveyance of water:	Pipeline
Status of water linkage:	Permission from WRD Madhya Pradesh for 40 MCM/Year vide letter no. MPCB/SL/225/2010/744 dated 06.07.2011 has already been obtained for 2x660 MW TPP. The application to enhance the water allocation to 56 MCM /annum has been submitted vide letter dated 22.07.2024
(If source is Sea water) Desalination PlantCapacity	Not Applicable
Mode / Management of Brine:	Not Applicable
Cooling system	Induced draft cooling towers

**13.2.11:** The water drawl permission from WRD Madhya Pradesh for 40 MCM/Year vide letter no. MPCB/SL/225/2010/744 dated 06.07.2011 has already been obtained for 2x660 MW TPP. The application to enhance the water allocation to 56 MCM /annum has been submitted by the proponent vide letter dated 22.07.2024 and the same is yet to be obtained.

**13.2.12: Solid/ Hazardous waste generation and its management:**

S. No	Particular	Quantity	Management & disposal
1.	Municipal Solid waste (MSW)	90 TPA	MSW anticipated will be collected; segregated using color coded waste bin collection system and handed over for final disposal to municipal corporation waste disposal site.  Organic component of MSW will be converted to compost using Organic waste converters & used as manure for landscaping within plant premises.
2.	Fly Ash & Bottom Ash	6440000 TPA	Fly ash: Evacuation in dry form through vacuum & pressurised air conveying to fly ash storage silos for ultimate disposal by truck/rail wagons for cement and brick manufacturing, filling mines etc. Provision for disposal by Medium Concentration Slurry Disposal system along with bottom ash from a dedicated MCSD silo to Ash Pond during emergency. Bottom ash: Extraction in wet form and collection in hydrobins for disposal by closed trucks. Efforts will be made to utilize 100% bottom ash as per MoEFCC guidelines. Bottom ash shall be disposed through lean slurry to Ash dyke in case of exigencies.
3.	Construction Waste	350000 Tonnes	Inert component of Construction waste shall be reused in grading & levelling of within premises. Remaining Construction waste will be handed over to contractor for disposal as per C&D Waste rules 2016.
4.	Hazardous waste Used / Spent Oil (Cat. 5.1); Waste or residues containing oil (Cat. 5.2); Empty Barrels/containers/ liners contaminated with hazardous chemicals/ wastes (Cat. 33.1) & Spent ion exchange resin containing toxic metals (Cat. 35.2)	125 TPA	These are collected & stored on a designated store / yard with proper shed & impermeable flooring. Hazardous Waste will be disposed off in timely manner as per the Hazardous And Other Wastes (Management and Transboundary Movement) Rules, 2016.
5.	E-waste	3.5 TPA	Handed over to the CPCB/SPCB authorised recyclers.
6.	Battery waste	7 TPA	Handed over to the CPCB/SPCB authorised

S. No	Particular	Quantity	Management & disposal
			recyclers.
7.	Bio-medical waste	0.12 TPA	Disposed as per the Bio Medical Waste Management Rules, 2016.

**13.2.13:** Effluent of quantity 2125 KLD will be generated. The domestic sewage to the tune of 25 KLD will be treated through STP & industrial effluent to the tune 2100 KLD will be treated in ETP. The plant will be based on Zero Liquid discharge system.

**13.2.14:** In the proposed unit, 585 tonnes per hour (TPH) of each coal-fired boiler will be installed. Electrostatic precipitator (ESP) with a stack of height of 120 m will be installed for controlling the particulate emissions within the statutory limit of 30 mg/Nm<sup>3</sup> for the proposed boilers.

**13.2.15: Ash Pond area:** As per MoEF&CC Notification S.O. 5481(E), dated 31.12.2021 and amendments stipulated ash pond area for thermal power plant is 0.1 hectare per Mega Watt (MW). The ash pond area proposed for power plant is 47 ha i.e. 12.67 % of the total project area 371 ha. Total ash pond area is required for the proposed plant is within the stipulated norms dated 31.12.2021.

**13.2.16: Details of Coal Linkage:** The total coal requirement for the project is about 13.3 million MTPA. The coal linkage of proposed thermal power plant is sourced from coal mines of Gondbahera Ujheni East Coal Mine & Mara II Mahan Coal Mine. Coal Supply Agreement for 7.0 million MTPA (cumulative) of coal has been obtained from Mahan Energen Limited (5.0 million MTPA) and MP Natural Resource Private (2.0 million MTPA) vide letter no. dated 5.09.2024. The remaining coal requirement of 6.3 million MTPA will be procured through E-Auction.

**12.2.17: Electricity generation capacity:** Electric generation capacity of the proposed project is as below:

Capacity & Unit Configurations	3200 MW, Configured as 4 x 800 MW
Generation of Electricity Annually	25344000 MW (considering 330 operating days)

**13.2.18: Details of fuel and Ash disposal:**

Fuel to be used:	Coal and Auxiliary Fuel
Quantity of Fuel required per Annum:	For the Proposed Project of 3200 MW, the annual fuel requirement is estimated at 13.3 million MTPA at 85% plant load factor with Design Coal GCV of 3200-4300 KCal/kg. Auxiliary liquid fuels, viz. LDO/HSD requirement per annum: 15000 kilo litres.

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Coal Linkage / Coal Block:  (If Block allotted, status of EC & FC of theBlock)	Quantity and details of Linkage available: 7 million MTPA  Name of Block: Gondbahera Ujheni East Coal Mine & Mara II Mahan Coal Mine  The method of obtaining remaining coal: 6.3 million MTPA from (E-auction)  Ash content in coal: 34-42 (%)  Sulphur in coal: 0.4-0.5 (%)  Moisture: 11-15 (%)  GCV in coal: 3200-4300 Kcal/Kg
Details of mode of transportation of coal from coal source to the plant premises along with distances	Mode of transportation is through Rail  Total distance from the source to Rail: 500 km (from Gondbahera Ujheni East Coal mine, Mara II Mahan Coal Mine To TPP)
Fly Ash Disposal System Proposed	Medium concentration slurry. Ratio of water and ash – 35-45%
a. Ash Pond / Dyke: (Area, Location & Co-ordinates) Average height of area above MSL (m) Space left in ash dyke area	Area of proposed Ash Dyke- 47 ha Location: 23°22'4.42"N, 82° 1'50.62"E Average height of area above MSL: 565m
Quantity of c. Fly Ash to be generated d. Bottom Ash to be generated:	6.44 million MTPA 16,612 T/day 4,153 T/day
Stack Height (m) & Type of Flue	120 m Bi flue with FGD

**13.2.19: Status of Pending Litigation/court case:** Details of pending litigation/court case is as follows:

S. No.	Case no./Title	Court Details	Last date of Hearing	Brief Summary of the Case/Subject matter	Next Date/ Order Passed	Action taken by PP
1.	WP 20264/2011	Jabalpur High Court	06.03.2024	Violation of Art. 244 & Schedule 5 of Indian Constitution. Legality of Sec. 5(a) of Land Acquisition Act. Challenging MoU.	No next date has been updated yet.	(Inputs given to Advocate regarding reply.) For change the name of the company, it is necessary to file a new Vakalatnama and the company's reply.

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S. No.	Case no./Title	Court Details	Last date of Hearing	Brief Summary of the Case/Subject matter	Next Date/ Order Passed	Action taken by PP
2.	WP 18682/2011	Jabalpur High Court	06.03.2024	Violation of Art. 244 & Schedule 5 of Indian Constitution and ignorance of provision of sec 165 of MPLRC and even without inviting objection under sec 5-A	No next date has been updated yet.	(Inputs given to Advocate regarding reply.) For change the name of the company, it is necessary to file a new Vakalatnama and the company's reply.
3.	WP 4739/2012	Jabalpur High Court	04.05.2020	Land Acquisition Act Challenging/Objection to Notification/Procedural Irregularity	No next date has been updated yet.	(Inputs given to Advocate regarding reply.) For change the name of the company, it is necessary to file a new Vakalatnama and the company's reply.
4.	Revision/55/2019-2020	Anuppur District court (Additional commissioner court.Sahdol)	04.05.2020	Land area dispute due to "Chakbandi (Bandobast) 1965 66"	14.06.2024	
5.	Review 0162/2019/Anuppur/Land revenue	Anuppur District court (Revenue Board, Gwalior/Before the board member- Sh-Rajesh Bahuguna )	28.10.2022	Diversion Fee (Panchayat Upkar) dispute	No next date has been fixed yet	Review filed against the order dated-29/10/20181 Documents / files of the lower court have been hired. 2- Stay order dated 13.12.2019 was passed in favor of the company. But it has not been extended for the dates beyond the year 2020.The company's lawyer has filed an application in the court that the matter should be heard soon. According to the amendment of Section 59(12) of Madhya Pradesh Revenue Code, the case has been abated, hence this case should be closed and returned to the sub divisional officer for fresh proceedings.
6.	Review 0163/2019/Anuppur/Land	Anuppur District court (Revenue Board,	28.10.2022	Diversion Fee (Panchayat Upkar) dispute	No next date has been fixed yet.	Review filed against the order dated-29/10/20181 Documents / files of the lower court have been hired. 2- Stay order dated 13.12.2019 was passed in favor of

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S. No.	Case no./Title	Court Details	Last date of Hearing	Brief Summary of the Case/Subject matter	Next Date/ Order Passed	Action taken by PP
	revenue .	Gwalior/Before the board member- Sh-Rajesh Bahuguna)				the company. But it has not been extended for the dates beyond the year 2020.The company's lawyer has filed an application in the court that the matter should be heard soon. According to the amendment of Section 59(12) of Madhya Pradesh Revenue Code, the case has been abated, hence this case should be closed and returned to the sub divisional officer for fresh proceedings.
7.	Review 0164/2019/ Anuppur/Land revenue .	Anuppur District court (Revenue Board, Gwalior/ Before the board member- Sh.Rajesh Bahuguna)	28.10.2022	Diversion Fee (Panchayat Upkar) dispute	Diversion Fee (Panchayat Upkar) dispute	Review filed against the order dated-29/10/20181 Documents / files of the lower court have been hired. 2- Stay order dated 13.12.2019 was passed in favor of the company. But it has not been extended for the dates beyond the year 2020.The company's lawyer has filed an application in the court that the matter should be heard soon. According to the amendment of Section 59(12) of Madhya Pradesh Revenue Code, the case has been abated, hence this case should be closed and returned to the sub divisional officer for fresh proceedings.
8.	RCS A/000014 /2020	Anuppur District court (Civil Judge Class 2 Court, Kotma)	11.05.2024	Civil suit is for Declaration, partition and permanent Injunction	The proceedings have been closed	In this case, a settlement has been reached between both parties. Based on the settlement, the case has been settled by the order of the Lok Adalat dated 11/05/2024. The proceedings of the said case have finally ended.

PP informed that out of 8 court cases listed above there is no any litigation in respect of the subject matters pertaining to the Environment & Forests.

**13.2.20: Benefits of the project:** The proposed project will improve the power supply position in the state as well as in India, which is vital for economic growth as well as improving the quality of life. The setting up of the proposed project will lead to generation of direct and indirect employment and benefits to the overall socio-economic development of the region. Skill development and capacity building like vocational training, income generation programs and entrepreneurship development

program shall also be conducted. The project will also attract the high-income groups to invest in the region and thus bring about economic growth of the region.

**13.2.21:** EAC members and Ministry was in receipt of a representation on the project mentioned above. The said representation was deliberated by the EAC and also made available to the project proponent. The issues stated in the representation and submissions made by the proponent are as below:

Sl No.	Points stated in the representation	Submission by PP
1.	At the outset, we would like to request the committee members to direct the project proponent to submit the Need assessment and cost-benefit analysis for the power plant, its ancillary activities, and their expansion, given the Hon'ble Prime Minister's announcement at COP26 that, Ministry of New and Renewable Energy is committed to achieving 500 GW of installed electricity capacity from non-fossil fuel sources by 2030. After which many of the existing coal-fired thermal power plants may not be required.	<p>As per the National Electricity Plan (NEP) published by the Central Electricity Authority, MoP in March-2023, India's Peak Electricity Demand is likely to increase to around 366 GW in FY 2031-32 from the current Peak Demand of around 216 GW in FY 2022-23. The Base Demand is also expected to increase to 2473 BU by FY 2031-32. CEA also predicts that India's likely Installed Capacity by the end of FY 2031-32 will be around 900 GW, up by around 484 GW as compared to the present Installed Capacity.</p> <p>Similarly, the current installed capacity of MP State is around 25,337 MW. Over 63% of the capacity is through coal-based sources. The proposed project can help in meeting the growing power demand and requirement of the country &amp; improve Gross State Domestic Product (GSDP). It not only ensures a reliable power supply for the region but also supports economic growth, thereby strengthening the overall energy landscape in Madhya Pradesh.</p>
2.	The necessity for the new Thermal Power Plant depending upon the demand for electricity has to be considered especially when there are other power plants functioning in the State of Madhya Pradesh which are sufficient for the purpose of meeting the need and even the electricity generated in those units is not properly utilized.	The proposed power plant in Madhya Pradesh holds significant regional importance by addressing the surging power demand in the state. The current installed capacity of MP State is around 25,337 MW. Over 63% of the capacity is through coal-based sources. The proposed expansion of project can help in meeting the growing power demand and requirement of the country & improve Gross

SI No.	Points stated in the representation	Submission by PP
		State Domestic Product (GSDP). It not only ensures a reliable power supply for the region but also supports economic growth, thereby strengthening the overall energy landscape in Madhya Pradesh.
3.	Further, lot of other reusable energy generation systems are being adopted for the purpose of reducing the exploitation of natural resources for production of electricity and this is being considered by the Central Government and if that is properly implemented, there will not be any necessity for a new power plant in the State of Madhya Pradesh.	The Renewable power is not available on round the clock basis due to its inherent intermittent nature and Hydro power capacity majorly depends on the rainfall which is uncertain. This makes coal-based power plant very essential for India to meet the demand continuously and reliably. Moreover, the coal-based power will continue to play a significant role for base load requirement.
4.	As per the toposheet provided under Form I along with project boundary superimposed on it, the proposed project is abutting Kewai River. The map also shows presence of Dehuli Reserved Forest, Gundru Protected Forest, Rukra Reserved Forest, and Nandalal Patara Protected Forest within 5 Km radius from the proposed project site.	<p>The Kewai river is about 40.0 m away from the project boundary which is shown in clearly earmarked in the submitted proposal. The plant is more than 500 m from the river. Moreover, a thick green belt (&gt;100 m) will be developed in the area which is nearing river boundary. All the necessary measures will be taken to avoid impact on the river, which will be detailed during EIA studies.</p> <p>The project envisages use of the best environmental safeguard practices such as high efficiency ESP, FGD, SCR for ensuring minimal / negligible impact from the proposed project. The quantification of the impact will be enumerated and presented in the EIA studies.</p>
5.	The proposed project site also falls in the wildlife corridor of Bandhavgarh Tiger Reserve, Kanha National Park, Phen Wildlife Sanctuary, Sanjay Dubri Wildlife Sanctuary in Madhya Pradesh and Achanakmar Wildlife Sanctuary, Sanjay National Park, Tamoripingla Wildlife Sanctuary in Chhattisgarh.	As per “Connecting Tiger Populations for Long-Term Conservation” report by National Tiger Conservation Authority & Wildlife Institute of India, Dehradun, <u>there is no wildlife corridor within 15 km radius of the project site</u> . Map showing project boundary vis-à-vis the tiger corridor is enclosed.



SI No.	Points stated in the representation	Submission by PP
6.	As per the report titled 'A Policy Framework for Connectivity Conservation and Smart Green Linear Infrastructure in the Central Indian and Eastern Ghats Tiger Landscape' published by Wildlife Conservation Trust, the proposed project area falls under medium to high tiger connectivity area.	As per "Connecting Tiger Populations for Long-Term Conservation" report by National Tiger Conservation Authority & Wildlife Institute of India, Dehradun, there is no wildlife corridor within 15 km radius of the project site.
7.	Section 38-O (g) of the Wildlife Protection Act, 1972 will be applicable to the proposed project. Section 38-O (g) states that ' <i>Ensure that tiger reserves and areas linking one PA or Tiger Reserve with another PA or Tiger Reserve are not diverted for ecologically unsustainable uses, except in public interest and the approval of the NBWL and on the advice of the NTCA</i> '.	As per "Connecting Tiger Populations for Long-Term Conservation" report by National Tiger Conservation Authority & Wildlife Institute of India, Dehradun, there is no wildlife corridor within 15 km radius of the project site.  Clearance from NBWL is not required since the project does not fall wholly/ partly within ESZ/ 10 kms radius of any National Park/ Wildlife Sanctuary / Notified Conservation Reserve
8.	The Form-I submitted by the project proponent states that the proposal does not involve approval/clearance under the wildlife (protection) act, 1972.	Clearance from NBWL is not required since the project does not fall wholly/ partly within ESZ/ 10 kms radius of any National Park/ Wildlife Sanctuary / Notified Conservation Reserve.
9.	The Form-I also fails to mention the wildlife corridor. The project proponent is trying to misguide the ministry by providing wrong/insufficient information in Form-I.	As detailed earlier there is no wildlife corridor in 10 kms radius of the project site.
10	We request the committee to direct the project proponent to submit the proposal to National Tiger Conservation Authority (NTCA) and National Board for Wildlife for obtaining wildlife clearances.	The same is not applicable as there is no National Park, Wildlife Sanctuary, wildlife corridor within 15 km radius of the project site.
11	The wildlife corridor needs to be protected for the free movement of Tigers and other large mammals to establish a healthy population.	The contents of para 11 are not applicable. Further, with the thick green belt which will be developed within the project area and outside of the project area as a part of CSR/ CER activity will have a positive impact on

SI No.	Points stated in the representation	Submission by PP
		the biodiversity.
12	The proposed project if allowed will have a negative impact on important wildlife corridor impacting the movement of wildlife. It may also lead to an increase in Human-Wildlife Conflict in the area.	As detailed earlier, the project is not lying in the tiger wildlife corridor. We would like to humbly submit that the project is planned to integrate the best environmental practices to minimize the impact on the baseline environment. The implementation of the project will have positive long-term impacts.
13	We urge the committee to kindly consider the importance of wildlife corridors. The proposal, if permitted, will disturb the already fragmented wildlife corridor. Efforts should be undertaken by the respective authorities to restore the fragmented corridor as it will help in creating a diverse gene pool.	As detailed earlier there is no wildlife corridor in 10 kms radius of the project site.
14	There are already existing coal mines in the study area and Thermal Power Project Units. The proposed project if permitted will further aggravate the situation. The cumulative impact assessment of all the mines along with their ancillary activities should be carried out. A good example to follow can be found at <a href="https://apps.ecology.wa.gov/publications/SummaryPages/1706013.html">https://apps.ecology.wa.gov/publications/SummaryPages/1706013.html</a>	The proposed TPP area is earlier obtained EC (2012) & Consent order (2013). Details will be submitted along with EIA-EMP report, if any
15	We request the authority to direct the project proponent to submit all the details of the proposed ancillary activities including details of sources of coal for the proposed power plant including any new or expansion of the existing road and rail network and transmission lines.	The coal will be sourced from Gondbahera Ujheni East Coal mine, Mara II Mahan Coal Mine and E-Auction. The Nearest Railway Siding 'Bahiatola' is about 14 km from project site. The route map of the same is available.
16	We urge the committee to kindly consider the importance of wildlife corridors before taking any decision for the proposed project.	PP clarify that there are no designated wildlife corridors within 10 kms radius of the proposed project. We will continue to assess the potential effects on local wildlife and habitats, and we are open to implementing measures that could support biodiversity in

SI No.	Points stated in the representation	Submission by PP
		the area.
17	Efforts should be undertaken by the respective authorities to restore the fragmented corridor as it will help in creating a diverse gene pool.	As detailed earlier there is no wildlife corridor in 10 kms radius of the project site.

### **Observations and Deliberations of the Committee**

**13.2.22:** The Committee noted the following:

- i. The proposal is for 4x800 MW Coal Based Ultra-Super Critical Thermal Power Plant (USCTPP) at Village Chhatai, Majhtoliya and Umarda, Tehsil Kotma, District Anuppur, Madhya Pradesh by M/s Anuppur Thermal Energy (MP) Private Ltd.
- ii. Earlier, the EC was granted by the Ministry for the above project site vide letter no. J 13012/144/2010-IA. II (T) dated 27.11.2012 to Welspun Energy Anuppur Pvt. Ltd for 2x660 MW. Subsequently, Welspun Energy Anuppur Pvt. Ltd. had obtained Consent to Establish (CTO) vide letter dated 18.07.2013. Further, the MoEF&CC issued Transfer of Environmental Clearance to Anuppur Thermal Energy (MP) Private Ltd (ATEMPPL) & validity extension up to 26.11.2022, New Delhi vide letter No. F. No: J-13012/144/2010-IA. II(T) dated 07.01.2020.
- iii. The committee noted that there is no activity undertaken at the site other than boundary wall construction.
- iv. The EAC 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.
- v. Total land is 371 ha (Private land: 312 ha + Govt. land 59 ha). Land is already acquired.
- vi. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site as ascertained from DSS.
- vii. The project site is not located within the Critically Polluted Area (CPA) / Severally Polluted Area (SPA) as per CEPI assessment 2018 of CPCB.
- viii. River Kewai is flowing at 0.04 km in West direction. The EAC is of the opinion that PP shall furnish the aquatic biodiversity study of Kawai River and water source for the plant along with biodiversity conservation plan. EAC suggested that Green belt to be developed along River. EAC is of the opinion to conduct a Hydrology/Hydrogeological study from the reputed govt. institutions/organizations.

- ix. PP submitted that Green belt shall be developed in 123 ha (33.15% of the total plant area) area. Total 2400 lakhs has been allocated for greenbelt development. EAC suggested for Concurrent plantation with native species.
- x. The total water requirement for the proposed project is 2m<sup>3</sup>/MWh, which is well within the stipulated norms of Notification dated 28.06.2018. The water shall be sourced from the Sone River through pipeline. The water drawl permission has already been obtained for 2x660 MW TPP and the application to enhance the water allocation to 56 MCM /annum has been submitted vide letter dated 22.07.2024.
- xi. The proposed power plant has total ash pond area 47 ha i.e. 12.67 % of the total project area 371 ha. The EAC is of the opinion that Ash pond shall not be situated in the vicinity of the river side. EAC also suggested to submit the Plan for dry ash collection system for fly and bottom ash.
- xii. Transportation of coal from coal source to the plant premises shall be through Rail.
- xiii. The estimated total project cost is Rs. 36,600 Crores. Total capital cost earmarked towards Environmental Pollution Control measures is Rs. 5,993 Crores.
- xiv. Zero Liquid Discharge (ZLD) System shall be implemented for the proposed project.
- xv. The committee noted that as reported by PP there is no forest land involved in the project.
- xvi. EAC noted that 08 cases are pending pertaining to Land acquisition and other issues.
- xvii. EAC opined that a site visit should be conducted by the Sub-committee of EAC to see the various issues pertaining to the instant project before consideration of EC proposal. The findings of the subcommittee report shall be incorporated in the final EIA/EMP report and the same shall be reported along with the ToR compliance.

#### **Recommendations of the Committee**

- 13.2.23:** The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** the proposal for grant of ToR for conducting an EIA study with Public Consultation to the project for Proposed 4x800 MW Coal Based Ultra-Super Critical Thermal Power Plant (USCTPP) at Village Chhatai, Majhtoliya and Umarda, Tehsil Kotma, District Anuppur, Madhya Pradesh by M/s Anuppur Thermal Energy (MP) Private Ltd, under the provisions of the EIA Notification, 2006, as amended subject to uploading of written submissions on Parivesh portal along with the following specific ToR in addition to the generic ToRs.

#### **[A] Environmental Management and Biodiversity Conservation**

- i. All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent.
- ii. A Cumulative Environmental Impact Assessment study of all the existing and proposed projects in the 10-km radius of the proposed project shall be conducted and the same shall be included the in EIA/EMP report. Details of industrial units present in 10 Km radius of the power plant shall be earmarked in map and submitted.

- iii. EIA/EMP study shall take in to consideration the different scenarios arising due to change of coal source, impact on environmental attributes due to change of coal source along with corresponding mitigation measures with EMP budget shall be submitted.
- iv. Impact of release of cooling tower water on aquatic life need to be studied by a reputed govt. institute and action plan for complying with the mitigation measures shall be submitted.
- v. Project proponent shall commission a study on Hydrology and Hydrogeology of the project site as well as the study area of the project site through a reputed institute/Government organization. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.
- vi. Radioactivity studies along with coal analysis to be provided (sulphur, ash percentage and heavy metals including Pb, Cr, As and Hg). Details of auxiliary fuel, if any including its quantity, quality, storage, etc should also be given.
- vii. A comparative chart shall be prepared with changes observed from the previous baseline study and present baseline study.
- viii. PP should submit the detailed plan in tabular format (year-wise for the life of the project) for concurrent afforestation and green belt development in and around the project site. The PP should submit the number of saplings to be planted, names of native species, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. In addition to this, PP should show on a surface plan (5- year interval for life of project) of suitable scale the area to be covered under afforestation & green belt clearly mentioning the latitude and longitude of the area to be covered during each 5 years. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. In addition to this, plantation in the safety zone at project boundary the plantation should be planned in such a way that it should be completed within 2 years only.
- ix. Action plan for development of three tier plantation programme (33 % of total project cover area) along the periphery of the project boundary including on the Kewai river side shall be provided. Plan shall be dully approved by the local forest department. PP shall submit concurrent plantation plan.
- x. Biodiversity analysis of the surrounding area to be done through any reputed Government institutions. A certificate from PCCF, wild-life to be submitted with respect to wildlife corridor, if any, passing adjacent to the project boundary.
- xi. Detailed action plan shall be prepared for maintenance of air pollution control equipment for proposed units and shall be incorporated in EIA/EMP report.

- xii. Details of Ash management plan as per MoEF&CC notification dated 31/12/2021 & its subsequent amendment for the proposed project shall be submitted. MoU signed for ash utilization with companies shall be submitted.
- xiii. Action plan for dry ash collection system shall be submitted.
- xiv. Action plan for disposal of ash through High Concentration Slurry Disposal shall be submitted.
- xv. HFL data for Kewai River duly certified by the Irrigation department of the State Government as per the Ministry O.M. dated 14/02/2022 pertaining to siting of industries in close proximity to the river along with the action plan for conservation of the same shall be submitted as the said River is flowing at a distance of 0.04 km in West direction of the project site.
- xvi. Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body (minimum 60 meters) etc. shall be planned to reduce the possibility of mixing leachate with any freshwater body for ash pond. A high-density Slurry disposal plan shall be prepared. No additional ash dyke area beyond the earmarked area of 47 ha is permitted.
- xvii. Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 2 km radius of the plant boundary be submitted. Baseline Study for Heavy metals in Groundwater, Surface water and soil to be carried out and incorporated in EIA/EMP report.
- xviii. Details pertaining to water source, treatment and discharge should be provided.
- xix. PP shall submit action plan for using treated Sewage/Domestic wastewater for its operations.
- xx. Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
- xxi. An action plan shall be prepared for Water shed development within 10 km radius of the plant boundary in consultation with reputed government institution and incorporated in EIA/EMP report.
- xxii. PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total material handled) and steps to be taken for reduction of the same. The year-wise target for reduction in the specific diesel consumption needs to be submitted. PP shall also explore the possibility of using e-vehicles/LNG/CNG-based machinery and trucks for the operation and transportation of Coal and ash and submit an implementation strategy.
- xxiii. PP shall provide the details of transportation of flyash from the plant, transportation route etc. Further, carry out a traffic study for at least one month and provide the impact of transportation along with the mitigation measures.

- xxiv. PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2016 and to adhere Ministry's OM dated 18/07/2022.
- xxv. Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted.
- xxvi. PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget.
- xxvii. The input parameters for the AAQ modelling and the influence of various combinations of these on the AAQ must be reported in the EIA/EMP Report. In addition to the Wind Rose diagram collected for one season during the preparation of the E.I.A., wind rose diagram for all seasons must be provided using secondary data from sources such as IMD/CPCB etc.
- xxviii. PP 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 limits.
- xxix. 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. An action plan in this regard shall be submitted.

**[B] Disaster Management**

- i. A Disaster Management Plan shall be prepared and incorporated in the EIA/EMP report.

**[C] Socio-economic Study**

- i. The Public Health Delivery Plan including the provisions for drinking water supply for the local population shall be in the EIA/EMP Report. The status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the needs of the labour force and local populace.
- ii. Public consultation (Public Hearing and Written submission) shall be conducted as per the provisions of EIA Notification, 2006 and as amended. As per the Ministry's OM dated 30.09.2020, to address the concern raised during the Public Hearing, the Project Proponent is required to submit the detailed activities proposed with year-wise budgetary provision (Capital and recurring) for 10 years. Activities proposed shall be part of EMP. Tentative no. of project affected families (if any) shall be identified and accordingly appropriate Rehabilitation & Resettlement plan shall be prepared. The recommendation Socio-economic study may also be considered while planning the activities & budget.
- iii. A need based Social Impact Assessment Study shall also be carried out and an action plan on its recommendations may also be submitted with budgetary provisions.
- iv. Demographic details and land use change details in 10 km area shall be submitted.

**[D] Miscellaneous**

- i. Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study. The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind. A mathematical model shall be developed for the local site rather than using the standard model available in software for both air & water quality modelling.
- ii. PP shall align its activities to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050. PPs shall update the same to the EAC.
- iii. PP shall submit the EIA/EMP report after the plagiarism check using authenticated plagiarism software.
- iv. Detailed description of all the court cases including all directions given by the apex and current status of them shall submit.
- v. PP should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after grant of EC.
- vi. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs which will analyze the samples.
- vii. PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of persons to be engaged for the implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.
- viii. PP should submit the year-wise, activity wise and time-bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during Public Hearing. The capital and recurring expenditure to be incurred needs to be submitted.
- ix. Activities shall be prepared based on the issues arise during public hearing conducted and fresh written submission with defined timeline and budgetary provisions.
- x. Aerial view video of project site and transportation route proposed for this project shall be recorded through drone and be submitted.
- xi. The PP should ensure that only NABET-accredited consultants shall be engaged for the preparation of EIA/EMP Reports. PP shall ensure that the accreditation of the consultant is valid during the collection of baseline data, preparation of EIA/EMP report and the appraisal process. The PP and consultant should submit an undertaking the information and data provided in the EIA Report and submitted to the Ministry are factually correct and the PP and consultant are fully accountable for the same.
- xii. PP should provide in the EIA Report details of the statutory clearances, permissions,



no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after the grant of EC.

- xiii. The budget to be earmarked for the various activities shall be decided after perusal of the Standard EC Conditions published by the Ministry.
- xiv. All the certificates viz. Involvement of Forest land, distance from the protected area, and list of flora & fauna should be duly authenticated by the Forest Department. The Certificate should bear the name, designation, official seal of the person signing the certificate and dispatch number.
- xv. A site visit of the EAC sub committee shall be conducted and its recommendations will form part of the TOR.

### **Agenda No 13.3**

4x600 MW unit Coal based Thermal Power Plant by **M/s Jindal Power Limited (JPL)** located at Village Tamnar, Taluk Gharghoda, District Raigarh, Chhattisgarh – **Amendment in EC – regarding.**

**[Proposal No. IA/CG/THE/472414/2024; F. No. J-13012/117/2008-IA. II(T)]**

**13.3.1:**The instant proposal (No. IA/CG/THE/472414/2024 dated 14/06/2024) is for seeking amendment in Environmental Clearance dated 18.03.2011 and its subsequent amendment granted therein for the project namely “4x600 MW unit Coal based Thermal Power Plant located at Village Tamnar, Taluk Gharghoda, District Raigarh, Chhattisgarh by M/s Jindal Power Limited (JPL) for utilization of existing ash dyke for 4x600 MW TPP till construction of new dyke & change in coal source from imported to domestic, change in location of proposed dyke.

**13.3.2 Details of proposal, as ascertained from the documents and as revealed from the discussion held during the meeting, are given as under:**

- i. The proposal is for amendment in Environmental Clearance of 4x600 MW Thermal Power Plant located at Tamnar, Distt-Raigarh (C.G) by Jindal Power Limited.
- ii. Jindal Power Ltd. (JPL) is operating 1000 MW (4X250 MW) & 2400 MW (4x600 MW) thermal power plants located at village Tamnar, District Raigarh, Chhattisgarh.
- iii. The 1000 MW plant was constructed in two phases. Phase – I and Phase –II, each comprising of two units of 250 MW.
- iv. Existing ash dyke for 4x250 MW has been constructed in an area of 198 ha.
- v. The 4X 600 MW units were granted EC in two parts i.e. on 18.03.2011 (Unit # 1 &2) and on 04.11.2011 (Unit # 3 & 4).

*MoM of 13<sup>th</sup> meeting of the EAC for Thermal sector held on 01<sup>st</sup> October, 2024*

S No	Units	EC date	COD
1.	2x250 MW (Phase I)	24.09.1997	08.12.2007 & 15.06.2007
2.	2x250 MW (Phase II)	08.06.2006	16.04.2008 & 05.09.2008
3.	2x600 MW (Units#1&2)	18.03.2011	27.08.2014 & 09.11.2014
4.	2x600 MW (Units#3&4)	04.11.2011	15.01.2015 2.12.2016

- vi. The MoEF&CC vide letter no. J-13012/117/2008-IA.II(T) dated 24.02.2023 granted amendment in EC permitting extension in use of existing ash dyke of 4x250 MW for disposal of unutilized ash of 4x600 MW till June,2024.
- vii. As per EC dated 18.03.2011, a separate ash dyke near Rodapali village was to be constructed for 4x 600 MW. However, the Ash dyke could not be constructed as the land for the proposed ash dyke area became part of a coal block. Based upon the request of JPL, MoEF&CC vide letter dated 26.04.2017 granted permission to construct the ash dyke on 236 ha land at an alternate location near village Dolesera. However, the Consent to Establish (CTE) for the same was granted by Chhattisgarh Environment Conservation Board (CECB) vide letter dated 27.04.2022. Now, and to conserve the land, JPL has planned to not construct the new ash dyke for 4X600 MW on an area of 236 ha which was permitted by MoEF&CC.
- viii. The project proponent has requested for amendment in EC with the details as under:

S. no	Para of EC issued by MoEF&CC	Details as per the TOR/ EC	To be revised/ read as	Justification/ reason
1.	Para no 3, 4 & 5 EC amendment granted vide letter no. J-13012/117/2008-IA.II(T) dated 24.02.2023.	Permission to use existing ash dyke of 4x250 MW for unutilized ash/ bottom ash of 4x600 MW has been granted till June 2024.	Permission to continue use existing ash dyke of 4x250 MW for unutilized ash of 4x600 MW permanently	<ul style="list-style-type: none"> <li>To conserve the land and maximize ash utilization, the Company has planned to not construct the new ash dyke for 4X600 MW on an area of 236 ha which was permitted by MoEF&amp;CC.</li> <li>As the Company is utilizing about 100% ash in coal mine backfilling along with Overburden, road making, cement, fly ash brick making etc., the existing ash dyke volume will be adequate to continue bottom ash disposal from 4x250 MW and 4x600 MW TPPs.</li> </ul>

ix. Details of Solid waste/ Hazardous waste generation and its management:

• **Solid waste Management (Fly ash)**

Name of the waste	Source	Qty (TPA)	Mode of disposal	Mode of transport
Ash (fly ash & bottom ash)	Plant operation	468000	Ash utilization as per fly ash notification & bottom ash as slurry in ash dyke	1-Fly ash utilization by road 2-Bottom ash transported through slurry pipeline for temporary storage in ash dyke and thereafter by road for utilization

• **Hazardous waste generation and its management**

Name of the waste	Source	Qty (TPA)	Mode of disposal	Mode of transport
Toxic substance glass wool	Plant process	2.5	Sent to authorized vendors	By road
Used or spent oil	Plant maintenance	100	Sent to authorized vendors	By road
Waste residue oil	Plant maintenance	20	Sent to authorized vendors	By road
Spend ion exchange resin	Plant process	0.2	Sent to authorized vendors	By road

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

Court Name	Bench	Case Category	Status	Order direction
NGT	Central bench	OA No. 70/2023 (CZ)	Pending	Matter is at the stage of completion of pleadings

xi. Chronology of permission for use of existing ash dyke of 4x250 MW for 4x600 MW

S No	EC/EC amendment Date	Remarks
1.	18.03.2011	EC granted for 2x600 MW (Unit#1 & Unit#2)
2.	04.11.2011	EC granted for 2x600 MW (Unit#3 & Unit#4)
3.	10.01.2014	Amendment in EC w.r.t. transportation of coal, utilization of existing ash dyke of 4x250 MW for 4x600 MW TPP for 03 years.

S No	EC/EC amendment Date	Remarks
4.	26.04.2017	Amendment in EC w.r.t. transportation of coal, utilization of existing ash dyke for 4x600 MW TPP for 02 more years till construction of new dyke & change in coal source from imported to domestic, change in location of proposed dyke.
5.	28.08.2020	Amendment in EC for extension of permission for transportation of coal, utilization of existing ash dyke for 4x600 MW TPP till October, 2021.
6.	28.10.2021	Amendment in EC for extension of permission utilization of existing ash dyke for 4x600 MW TPP till December, 2022.
7.	24.02.2023	Amendment in EC for extension of permission utilization of existing ash dyke for 4x600 MW TPP till June 2024.

**13.3.3:** The above proposal was earlier considered by the EAC – Thermal in its 11<sup>th</sup> meeting held on 27-28<sup>th</sup> June, 2024 and recommended the following subject to compliance of the following additional specific environmental safeguard conditions:

Paragraphs of EC amendment letter dated 24/02/2023	Details as per EC amendment dated 24/02/2023	Amendment sought by the project proponent	Recommendations of EAC as per MoM
Para no 3, 4 & 5 of EC amendment dated 24.02.2023	Permission to use existing ash dyke of 4x250 MW for unutilized ash/ bottom ash of 4x600 MW has been granted till June 2024.	Permission to continue use existing ash dyke of 4x250 MW for unutilized ash of 4x600 MW permanently	Permission to use existing ash dyke of 4x250 MW for 4x600 MW TPP for 1 year i.e. till 30.06.2025 subject to compliance of the additional specific environmental safeguards.

- i. PP shall expedite the planation activities and plantation shall be done in this monsoon.
- ii. PP shall submit the fresh Certified EC compliance report from RO, MoEF&CC, along with ATR and comments of RO.
- iii. PP shall expedite to start construction of nearby roads, geotagged pictures of before and after

construction of the road shall be submitted.

- iv. PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM. Sprinkling on the road side shall be carried out regularly (twice in a day) and data shall be maintained mentioning about its functionality.
- v. All other conditions mentioned in the EC dated 18.03.2011 and its amendment therein shall remain unchanged.
- vi. 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. An action plan in this regard shall be submitted to concerned RO.

**13.3.4:** The aforesaid EAC recommendations have been considered in the Ministry and the proposal has been again referred back to the EAC with an observation that Whether EAC has taken into consideration scheduled action plan and asked for any inspection. Accordingly, the proposal was again considered by the EAC.

**Observations and deliberations of the Committee:**

**13.3.5: The EAC noted the following:**

- i. As per EC dated 18.03.2011, a separate ash dyke near Rodapali village was to be constructed for 4x 600 MW. However, the Ash dyke could not be constructed as the land for the proposed ash dyke area became part of a coal block. Based upon the request of JPL, MoEF&CC vide letter dated 26.04.2017 granted permission to construct the ash dyke on 236 ha land at an alternate location near village Dolesera. Consent to Establish (CTE) for the same was granted by Chhattisgarh Environment Conservation Board (CECB) vide letter dated 27.04.2022. The present proposal of project proponent is not to construct the ash dyke in the 236 Ha and use the existing ash dyke developed for 4 x250 MW.
- ii. The Committee noted that proponent has obtained amendment in the existing EC with respect to use of existing ash dyke of 4x250 MW for unutilized ash of 4x600 MW on 10/01/2014, 26/04/2017, 28/08/2020, 28/10/2021 and 24/02/2023.
- iii. With respect to ash utilization for the existing 3400 MW TPP, the Committee noted that the ash is being utilized for filling of low lying areas reportedly with prior permission from CECB. However, the quantity of ash disposal in low lying areas and compliance to the stipulated conditions have not made available by the project proponent.
- iv. The committee opined that in order to take considered view in the matter, it is necessary ascertain the compliance status to the prescribed EC conditions inter-alia present

generation, utilization and disposal of ash in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendments.

- v. A court case is pending before the NGT, CZ Bhopal [No. Original Application No.70/2023(CZ)] arising out of News report published in the Newspaper named Indian Express, Daily News Paper dated 4th February, 2022, Kolkata, Late City Edition titled “Noncompliance of EC conditions by different units inter-alia Tamnar Thermal Plant of M/s. Jindal Power Limited, Chhattisgarh.

**Recommendations of the Committee:**

**13.3.6:** In view of the foregoing and after detailed deliberations, the Committee **deferred** the proposal for amendment in EC and sought for following additional information for further consideration:

- i. Present status of 236 Ha land along with photographs and intended purpose of the said land in place of new ash dyke.
- ii. Quantum of ash generation, disposal and utilization as per the ash utilization notification dated 31/12/2021 and its subsequent amendments shall be submitted. Further, the quantum of legacy ash utilization shall also be furnished.
- iii. Action plan for reduction in existing ash pond area shall be submitted.
- iv. Project proponent shall submit a certified compliance report from the concerned Regional Office of the Ministry regarding the compliance of all the stipulated conditions in the existing ECs and its subsequent amendments.
- v. Compliance report from CECB regarding adherence to the terms and conditions by the proponent for disposal of ash in low lying area shall be submitted.
- vi. Action plan for adopting dry bottom ash collection system shall be submitted.
- vii. Detailed status of court case i.e., Original Application No.70/2023 pending before the NGT, CZ Bhopal regarding “Noncompliance of EC conditions by different units inter-alia Tamnar Thermal Plant of M/s. Jindal Power Limited, Chhattisgarh shall be submitted.

In addition to the above, the EAC also recommended for a site visit by the sub-committee for on spot assessment of various environmental conditions.

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**ANNEXURE-I**

**LIST OF PARTICIPANTS OF EAC (THERMAL) IN 13<sup>th</sup> MEETING HELD ON 01<sup>ST</sup> OCTOBER 2024 THROUGH VIRTUAL MODE**

S. No.	Name & Address	Role	29.08.2024
1.	Dr. Sharad Singh Negi (I.F.S. Retd.)	Chairman	Present
3.	Shri Inder Pal Singh Matharu, IFS (Retd.)	Member	Present
3.	Shri Lalit Kapur	Member	Present
4.	Dr. Umesh Jagannathrao Kahalekar	Member	Present
5.	Dr. Santosh Kumar Hampannavar	Member	Present
6.	Shri Savalge Chandrasekhar	Member	Present
7.	Shri K. B. Biswas	Member	Present
8.	Prof. Shyam Shanker Singh	Member	Present
9.	Dr. Vinod Agrawal	Member	Present
10.	Dr Nazimuddin, Scientist - F	Representative of Central Pollution Control Board	Absent
11.	Shri Mahi Pal Singh, Chief Engineer	Representative of Central Electricity Authority (CEA)	Present
13.	Shri Harmeet Sahaney	Representative of Indian Meteorological Department (IMD)	Absent
13.	Prof. R M Bhattacharjee	Representative of IIT/ISM Dhanbad	Absent
14.	Shri Sundar Ramanathan	Member Secretary	Present
<b>MOEF&amp;CC</b>			
1.	Sh. Rajesh Prasad Rastogi	Scientist 'D'	Present

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**APPROVAL OF CHAIRMAN EAC**

**Re: Final Minutes of the 13th EAC (Thermal Sector) meeting held on 1st October, 2024**


**SN** sharad negi <sharadnegi1957@gmail.com>  
Thu, 10 Oct 2024 8:00:33 AM +0530 •  
To "rp.rastogi" <rp.rastogi@gov.in>  
Cc "Sundar Ramanathan" <r.sundar@nic.in>

The final approved MoM of 13th EAC Thermal sector is attached

Dr S S Negi  
**Vice Chairman, Rural Development and Migration Commission, Uttarakhand**  
former Director General Forest and Special Secretary Govt of India  
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On Wed, Oct 9, 2024 at 2:51 PM RAJESH PRASAD RASTOGI <rp.rastogi@gov.in> wrote:

📎 **1 Attachment(s)** • Download as Zip

 FINAL MOM 13 EAC THERMAL 1 ....doc  
757 KB • 🔄

