# MINUTES OF THE 41<sup>ST</sup> MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS HELD ON 12<sup>TH</sup> MAY, 2023.

The 41<sup>st</sup> Meeting of the re-constituted EAC (Thermal Power) organized by the Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Aliganj, Jor Bagh Road, New Delhi was held on 12<sup>th</sup> May, 2023 through physical mode under the Chairmanship of Shri Gururaj P. Kundargi. The list of Members participated in the meeting is at **Annexure**.

#### Agenda Item No. 41.1: Confirmation of the Minutes of the 40<sup>th</sup> EAC meeting

The Minutes of the 40<sup>th</sup> EAC (Thermal Power) meeting held on 25.04.2023 were confirmed in the meeting.

#### Agenda Item No. 41.2

Expansion of Bandhaura Thermal Power Plant by Addition 1600 (2x800) MW Capacity to the existing 1200 (2x600) MW in an area of 920 Acres at Village Bandhaura, Tehsil Mada, District Singrauli, Madhya Pradesh by M/s Mahan Energen Limited -Reconsideration for Environmental Clearance (EC) - reg.

#### [Proposal No. IA/MP/THE/420097/2023; F. No. J-13011/56/2006-IA.II (T)]

**41.2.1** The proposal is for grant of environmental clearance to the project for expansion of Bandhaura Thermal Power Plant by addition of 1600 (2x800) MW capacity to the existing 1200 (2x600) MW in an area of 920 Acres at Village Bandhaura, Tehsil Mada, District Singrauli (Madhya Pradesh) by M/s Mahan Energen Limited.

#### 41.2.2 Observation in Earlier EAC:

The proposal for grant of Environmental Clearance was last considered by the EAC in its 39<sup>th</sup> EAC meeting held on 31<sup>st</sup> March, 2022. The project proponent has submitted the point-wise information on each of observation point of the EAC, the same is given as under:-

**Query No.1.** Action taken report on non/partial complied points raised by Regional office of the Ministry.

**Reply:** MEL had submitted the compliance of partial/non complied EC conditions to the IRO of MoEFCC. Bhopal. The IRO on 11.04.2023 forwarded the updated compliance monitoring report to MoEFCC. The updated EC compliance monitoring report has been submitted.

**Query No.2.** Submission of Wildlife conservation plan for Schedule-I species along with protection measures for wildlife corridor for approval of the State Chief Wildlife Warden.

**Reply:** Ecological Assessment and Flora & Fauna Wildlife Conservation along with Management Plan has been prepared in consultation with Forest Department and same

has been submitted to the PCCF, Wildlife Bhopal vide letter no APL/ MEL/Env/ PCCF/407/23 dated; 03.04.2023. The plan will be implemented as per approval from CWLW.

**Query No.3.** Submit plan for fly ash management along with action Plan for use of legacy ash to reduce the proposed ash pond area.

**Reply:** The proposed Ash Dyke/Pond area is for storage of unutilized ash in emergency situation and during the Rainy season. Action plan for fly ash management and the use of ash from operational ash pond has been submitted.

Query No.4. Details of measures for protection of fishes from the water intake structure.

**Reply:** The water requirement for the proposed expansion of 2x800 MW TPP is 36 MCM/ year, which will be sourced from Rihand reservoir using existing water intake structure at Rihand dam. Screens system of 1500x1500mm is already in place in the existing intake structure for protection of fishes & aquatic animal. Details of provided screen in intake structure has been submitted.

Query No.5. Response and commitment on the issues raised during public hearing.

**Reply:** MEL has already submitted the response & action plan towards issues raised during Public Hearing. An amount of Rs. 35.5 Cr is allocated under CER for identified key areas for issues in Public Hearing covering community engagement, education, community health, sustainable livelihood development, community infrastructure development. MEL's Responses & Action Plan on the issued raised during public hearing is as under:-

S.	Key Area Identification under	Pro	opose y (Rs.	Total Proposed Expendit			
0	raised during Public Hearing	1 <sup>st</sup> Yoa	2 <sup>nd</sup> Yoa	3 <sup>rd</sup>	4 <sup>th</sup> Xoa	5 <sup>th</sup> Voa	ures (Rs In
		r	r	r	r	r	Crores)
Α	Educational Initiatives						
	Modernization and necessary construction of Saraswati Shishu Mandir/Higher Secondary School (Kg to XII Class), Nagawa village.	0.4 0	0.8 0	0.8 0	-	-	2.0
	Distribution of drinking water filter/Drinking water coolers in schools.	0.0 5	0.1 0	0.1 0	-	-	0.25
	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	0.3 5	0.7 0	0.7 0	-	-	1.75

	government school.						
	Educational Vocational Guidance fair (EVGF) for career talk. Conducting Quiz competition for Students, Preparatory Coaching Classes for Navoday Entrance Examination.	0.1 0	0.2 0	0.2 0	-	-	0.50
	Community to provide awareness about education, health, hygiene, and good practices.	0.0 5	0.1 0	0.1 0	-	-	0.25
	Program for skill improvements of teaching staffs in govt. school.	0.0 5	0.1 0	0.1 0	-	-	0.25
	Sub Total	1.0	2.0	2.0	-	-	5.0
В	Community Health Initiatives	I	I	I		1	
	Operation of Primary Health Centre at Nagawa, R & R Colony.	0.6	0.6	0.6	0.6	0.6	3.0
	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.	0.2	0.2	0.2	0.2	0.2	1
	Promotion of awareness of malnutrition and anemia.	0.1	0.1	0.1	0.1	0.1	0.5
	Promotion of Poshan Vatika at backyard of villagers & Project Suposhan.	0.1	0.1	0.1	0.1	0.1	0.5
	Sub Total	1.0	1.0	1.0	1.0	1.0	5.0
С	Sustainable Livelihood and Wome	n Emp	owerr	nent			
	Skill Development Centre (SDC) to make the youth for achieving their Goals in life by becoming Skilled Professionals.		0.3	0.3	0.3	0.1	1.3
	Development & Support for Drip irrigation in core zone villages.	0.2	0.2	0.2	0.2	0.1	0.9
	Sub Total	0.5	0.5	0.5	0.5	0.2	2.2
D	Community Rural Infrastructure De	evelop	ment	L		1	
	Repairing, widening & Maintenance of Existing roads in consultation	0.5	0.5	0.5	0.5	0.5	2.5

	with Gram Panchayats						
	To provide facility for potable drinking water, RO Plants and water supply system through overhead tank in villages.	0.5	0.5	0.2 5	0.15	0.10	1.5
	Creation of clean and hygienic environment by proper drainage systems, community sanitation campaign etc.	0.5	0.5	0.2 5	0.15	0.10	1.5
	Upgradation & Renovation of primary health centers. With toilet facilities etc.	0.5	0.5	0.5	0.5	0.5	2.5
	Provision of solar street lighting, green nurturing programs, implementation of Swachchh Bharat initiatives.	0.5	0.5	0.5	0.2	0.3	2.0
	Sub Total	2.5	2.5	2.0	1.5	1.5	10.0
Ε	Maintenance of R & R Colony						
	Maintenance and Repairing of R & R colony and existing Private Higher Secondary School.	1.5	1.5	1.5	0.5	0.5	5.5
	Maintenance of Primary Health Centre which is operational within the colony	1.5	1.5	1.5	0	0	4.5
	Sub Total	3.0	3.0	3.0	0.5	0.5	10.0
F	Sports & Culture Development				•		
	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	0.05	0.05	0.4
	Sub Total	0.2	0.2	0.2	0.1	0.1	0.8
G	Development of local youth & wom	ien fo	r mana	ageme	ent & a	dminis	tration
	I eam/ Leaders development at village level as coordinator for various programme 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
	Sub Total	0.5	0.5	0.5	0.5	0.5	2.5
	Total (A+B+C+D+E+F+G)	8.7	9.7	9.2	4.1	3.8	35.5

Query No.5. Plan for implementation of activities under Corporate Environment Responsibility.

**Reply:** Focus areas has already identified under CER by MEL:

- Education initiatives
- Communitive Health initiatives
- Sustainable Livelihood & Women Empowerment
- Community Rural Infrastructure Development
- R&R Colony Renovation
- Sports & Cultural Development
- General Management & Administration.

The year wise implementation plan of CER has been submitted.

Query No.6.Commitment to use 100% ash within 5 years.

**Reply** : MEL has Achieved 100% Fly Ash Utilization for FY 2022-23 and our continues efforts to achieve 100% utilization of ash as per Fly Ash Notification, 31.12.2021 and amendments. Undertaking for commitment to use 100% ash within 5 years has been submitted.

**41.2.3** The Project Proponent and the accredited Consultant Greencindia Consulting Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

- (i) The proposal is for grant of environmental clearance to the project for expansion of Bandhaura Thermal Power Plant by addition of 1600 (2x800) MW capacity to the existing 1200 (2x600) MW in an area of 920 Acres at Village Bandhaura, Tehsil Mada, District Singrauli (Madhya Pradesh) by M/s Mahan Energen Limited.
- (ii) The project proposal was considered by the Expert Appraisal Committee (Thermal Sector) in its 19<sup>th</sup> meetings held on 11.01.2022 and recommended for grant of Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-13011/56/2006-IA.I (T); dated 28.02.2022 and same was transferred from M/s. Essar Power (M.P) Ltd to Mahan Energen Limited by MoEFCC, New Delhi on 04.11.2022.
- (iii) All Thermal Power Plants with capacity ≥ 500 MW are listed at S.N. 1(d) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
- (iv) Earlier, environmental clearance was granted by MoEF&CC vide F. No. J-13011/56/2006-IA.II (T) dated 20.04.2007 to Bandhaura Super Thermal Power Project Project (4x500) MW at Singrauli District, Madhya Pradesh. Subsequently, amendments were granted on 10.02.2009, 23.08.2013 and 08.04.2016 for setting up the existing 2x600 MW units. Further, transferred EC from EPMPL to MEL was granted on 15.09.2022 by MoEF&CC. MEL proposed to undertake expansion of the existing project by addition of Ultra Super-Critical Thermal Power Project with configuration of 2 units of 800 MW each translating to a capacity addition of 1600 MW within the existing plant boundary. Amendments

were granted on 10.02.2009, 23.08.2013 and 08.04.2016. Also, transfer of EC from EPMPL to MEL was granted on 15.09.2022 by the Ministry.

- (v) The total land required for proposed expansion is 288 Acres. The land is already in possession with MEL. The total area of the project site 920 acre including the existing facility.
- (vi) The recurring Environment Monitoring Cost during the construction phase is Rs. 3,24,000. During Operation Phase, the recurring Environment Monitoring Cost is Rs. 6,90,000 while the capital cost is Rs. 3,80,000.
- (vii) Total water requirement for the entire project will be 4000m3/hr or 36 MCM/year will be met from Rihand (Govind Vallabh Pant Sagar) Reservoir located at a distance of 36km by existing water pipeline.
- (viii) Public Hearing for the expansion project was conducted on 11.01.2023 at 01.00 noon at Raila Gram Panchayat Ground, (near Romi petrol pump), Village Raila, Tehsil Mada, District Singrauli, Madhya Pradesh under the chairmanship of Sri D. P. Barman, Additional Collector and Additional District Magistrate, Singrauli organized by Madhya Pradesh Pollution Control Board. The major issues raised during public hearing were regarding plot compensation, improvement of education facility, unemployment issues, community infrastructure development etc. The issues were addressed by the Project proponent and due budget has been allocated under CER to cater to the needs.
- (ix) Monitoring report has been issued on 2.09.2022 by Regional office of the Ministry.
- (x) Litigation is pending at the High court, Madhya Pradesh. Writ Petition No -11180/2010 Forum - High Court, Jabalpur, Madhya Pradesh. Subjudice, pending for final hearing.
- (xi) The silent features of the project is as under:

Name of the Proposal	PROPOSED EXPANSION OF BANDHAURA ULTRA SUPER CRITICAL THERMAL POWER PLANT BY ADDING 1600 (2X800) MW CAPACITY TO EXISTING 1200 (2X600) MW AT VILLAGE BANDHAURA, TEHSIL MADA, DISTRICT SINGRAULI, MADHYA PRADESH
Proposal No.	IA/MP/THE/420097/2023
Location	VILLAGE BANDHAURA, NAGWA, KARSUA & KHAIRAHI TEHSIL MADA, DISTRICT SINGRAULI, MADHYA PRADESH
Company's Name	MAHAN ENERGEN LIMITED
Accredited Consultant	Greencindia Consulting Pvt. Ltd.
Inter state issue	
involved	
Seismic zone	ismic Zone III (as per IS:1893)

#### Project Details:

#### Category Details:

Category of the project	Sector - 1(d), Category 'A', Thermal Power Plants				
Capacity	Existing	Expansion	Total		

			1200 MW (2x600) MW	1600 MW (2 x800) MW	2800 MW (1200+ 1600) MW	
Attracts	the	General	No			
Conditions	(Yes/	No)				
Additional	inforn	nation (if	Public Hearing was conducted on 11.01.2023 and PH			
any)			proceeding docum	ents has been sub	mitted.	

## Project Details:

If expansion, the details of ECs (including amendments and extension of validity) of existing Units etc.	<ul> <li>Environmental Clearance was granted by MoEFCC vide File no. J- 13011/56/2006.IA.II(T) dated 20.04.2007 to Bandhaura Super Thermal Power Project Project (4x500) MW at Singrauli District, Madhya Pradesh.</li> <li>Subsequently, amendments were granted on 10.02.2009, 23.08.2013 and 08.04.2016 for setting up the existing 2x600 MW units.</li> <li>Further, transferred EC from EPMPL to MEL was granted on 15.09.2022 by MoEFCC.</li> <li>MEL proposed to undertake expansion of the existing project by addition of Ultra Super-Critical Thermal Power Project with configuration of 2 units of 800 MW each translating to a capacity addition of 1600 MW within the existing plant boundary.</li> <li>The proposal was considered in 39th</li> </ul>
	<ul> <li>The proposal was considered in 39th Meeting of the re-constituted EAC (Thermal Power) held on 31st March'2023 for grant of Environmental Clearance.</li> </ul>
Amendments granted, if Yes	• Amendments were granted on 10.02.2009,
details	23.08.2013 and 08.04.2016. • Eurther transferred EC from EPMPL to
	MEL was granted on <b>15.09.2022</b> by
	MoEFCC, New Delhi.
	• The amendment proposal was considered
	in 40th EAC (Thermal Power Plant)
	Meeting held on 25th April 2023 for

	Amendment in CONDITION NO. (xxxi) of
	Environment Clearance (EC)
Expansion / Green Field (new):	Expansion
(IPP / Merchant / Captive):	(IPP)
If expansion, the date of latest	Certified EC compliance report - EC
monitoring done by the Regional	compliance has certified by Integrated
Office (R.O) of MoEF&CC for	Regional Office of MoEFCC, Bhopal vide
compliance of the conditions	File no. 4(0)-1/2022(ENV.) dated: 02.09.2022
stipulated in the environmental and	and Updated EC Compliance Status w.r.t
CRZ clearances of the previous	non/partial Complied points vide no. 4(0)-
phases. A certified copy of the	1/2022(Env.) I/40692/2023 dated:
latest R.O. monitoring report shall	11.04.2023.
also be submitted.	
Specific webpage address where	https://www.adanipower.com/
all EC related documents	
(including monitoring and	
compliance related reports/	
documents) of the specific project	
under consideration are/will be	
available. Also contact details of	
PP's officer responsible for	
updating this webpage/	
information.	

Co-ordinates of all four corners of	1	HERMAL POWE	R PLANT
TPP	POINT	LATITUDE	LONGITUDE
Site:	Α	24°0'37.46" N	82°23'47.59" E
	В	24º0'42.74" N	82°23'55.56" E
	С	24°0'42.27" N	82°24'08.39" E
	D	24°0'43.48" N	82°24'16.34" E
	E	24°0'39.05" N	82°24'37.62" E
	F	24°0'36.66" N	82°24'51.26" E
	G	24°0'39.36" N	82°24'57.57" E
	Н	24°0'42.88" N	82°25'01.83" E
	I	24º0'37.01" N	82°25'06.40" E
	J	24º0'33.44" N	82º25'18.17" E
	K	24°0'30.58" N	82º25'18.74" E
	L	24º0'26.11" N	82°25'20.44" E
	М	24º0'22.42" N	82°25'21.39" E
	N	24º0'19.98" N	82°25'13.94" E
	0	24º0'16.49" N	82°25'09.18" E
	Р	24º0'11.10" N	82°24'57.77" E
	Q	24º0'12.53" N	82°24'47.96" E
	R	24º0'16.58" N	82°24'34.76" E
	S	24°0'04.69" N	82°24'29.76" E
	T	24º0'02.40" N	82°24'24.03" E
	U	24º0'01.65" N	82º24'10.35" E
	V	24º0'05.22" N	82º23'35.46" E
	W	24°0'05.24" N	82°23'35.47" E
Average height of:			
(a) TPP site,	(a) 338	3 m above MSL	
(b) ash pond site etc. above MSL	(b) 338	3 m above MSL	
Whether the project is in the	The prop	osed expansion	by adding Ultra
Critically	Super Cri	tical 2x800 MW	units to 2x600 MW
Polluted Area (CPA) or within 10	operation	al thermal powe	r plant within the
km of	existina p	lant boundarv.	•
CPA If so the details thereof	The proje	ct area of MEL (	or within 10 Km of
		s not fall under a	any CPCB certified
	Critically	or Soverely P	alluted Areas as
	Cilically		
			1013/5/2010-IA.II(I)
	dt; 13.0	J1.2010 and	its subsequent
	amendme	ents of MoEFCC.	
CRZ Clearance	Not Applic	cable	
Cost of the Project (As per EC and			
revised):			
Cost of the proposed activity in the	INK 1280	0.00 Crores	
amendment:			
Employment Potential for entire	For expa	nsion of 2x800	MW Units during
project/plant and employment	constructi	on phase more the	an 5000 employees
	Jonstructi		an oooo cripioyees

potential	for	the	pro	oosed	has been estimated and during operation
amendmer	nt (spe	cify			phase about 300 nos. employees excluding
number	of	perso	ons	and	contract labour are estimated.
quantitative	e infori	mation	).		
Benefits of	the pr	oject (	specif	iy	Infrastructure development.
quantitative	e infori	mation	)		Direct & indirect employment opportunity
					• Revenue generation to central & state
					government.
					• Trickledown effect of enhance profitability
					to the local populace
					Skill development and capacity building like
					vocational training, income generation
					programmes and entrepreneurship
					development program
					Awareness programme and community
					activities, like health camps, medical aides,
					family welfare camps, sanitization/
					cleanliness awareness programme,
					immunization camp, sports & cultural
					activities, plantation, etc.
					• Awareness about water borne diseases
					and pandemic diseases etc. will be done to
					local villagers.
					• The project will also attract the high-income
					groups to invest in the region and thus bring
					about economic growth of the region.

## Electricity Generation Capacity:

Capacity	&	Unit	00 MW, Configured as 2x 800 MW
Configurations			
eneration o	f	Electricity	00 MWh
Annually			

## Details of Fly and Ash Disposal:

Fuel to be used:	Coal and Auxiliary Fuel
Quantity of Fuel required per	Annual Coal requirement for the 2x800 MW units is
Annum:	about 6.17 MTPA (at 90% PLF) / 6.85 MTPA (at
	100% PLF), considering Average coal GCV as 4072
	kcal/kg.
	Auxiliary liquid fuels, viz. LDO/HSD requirement per
	annum: 6,000 kiloliters.

Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)	<ul> <li>MEL has signed Fuel Supply Agreement (FSA) with M/s. Stratatech Mineral Resources Private Limited for the supply of 6.5 MTPA of coal from its Dirauli Coal Mine.</li> <li>MEL has signed commercial triparty agreement between Adani Group Companies, M/s. Mahan Fuel Management Limited and M/s. Stratatech Mineral Resources Private Limited for the supply of Coal through Pipe Conveyor System from Dirauli Coal Mine (Merchant) to Mahan Energen</li> </ul>
Details of mode of transportation of coal from coal source to the plant premises along with distances.	<ul> <li>Limited.</li> <li>Domestic Coal is proposed for expansion project which will be transported through Rail, Long Belt Conveyor (LBC)/ Pipe conveyor system to the TPP</li> <li>The secondary fuel for the proposed Power Project i.e., LDO/HSD is planned to be transported to the power plant by road tankers and stored in vertical cylindrical steel tanks.</li> </ul>
Fly Ash Disposal System Proposed	Fly ash will be collected in dry form to facilitate utilization while bottom ash will be collected in wet form. There would be provision for dry disposal of fly ash from storage silos to closed tankers for utilization in mine filling, road construction, aggregate replacement in concrete, for manufacturing bricks, cement, mine filling, road construction etc. as per Fly Ash Notification, 31 <sup>st</sup> December'2021 and amendments. Provision would be kept for HCSD disposal of both bottom and fly ash to ash pond in case of exigency. In this case, both bottom ash and fly ash will be disposed through HCSD system to the proposed ash dyke.
Ash Pond/ Dyke (Area, Location & Co- ordinates) Average height of area above MSL (m)	36.4 ha (proposed expansion) 338 m above MSL

	ASH DYKE				
POINT	LATITUDE	LONGITUDE			
	24°00'05.96"	82°24'48.41"			
1	N	E			
	23°59'51.57"	82°25'00.62"			
2	Ν	E			
	23°59'49.42"	82°24'57.86"			
3	N	E			
	23°59'36 23"	82°24'58.96"			
4	N	F			
	23°59'34 91"				
5	N	F			
	23°50'3/ 01"	82°21'50 11"			
6	N	F			
	23050'30 62"	<u> </u>			
7	23 33 30.03 N	52 24 57.54 E			
	1N 22°50'20 05"				
8	23 39 28.95 NI	02 24 30.33 E			
9	23 59 25.43	δ2°24 50.50°			
10	23°59'12.09"	82°24'44.61"			
	N	E			
11	23°59'07.17"	82°24'43.49"			
	N	E			
12	23°59'02.51"	82°24'41.30"			
12	N	E			
12	23°59'01.56"	82°24'40.16"			
15	Ν	E			
14	23°58'00.63"	82°24'24.48"			
14	N	E			
4 6	23°59'00.17"	82°24'07.06"			
15	N	E			
46	23°59'06.67"	82°24'16.76"			
01	N	E			
47	23°59'05.60"	82°24'19.53"			
17	N	E			
40	23°59'14.07"	82°24'26.85"			
18	N	E			
40	23°59'19.18"	82°24'24.67"			
19	N	E			
	23°59'23.08"	82°24'24.97"			
20	N	E			
	23°59'32.85"				
21	N	F			
	23°50'/2 12"	82°24'36 18"			
22	25 53 42.15 N	52 24 30.40 F			
	1N 22°50'50 00"	⊂ 92°24'40 67"			
23	23 39 58.02 NI	02 24 40.07			
	IN				

		24	24°00'07.22" N	82°24'45.12" E		
Quantity of						
a. Fly Ash to be generated	Fly As	sh - 3285.	12 MT/Day			
b. Bottom Ash to be	Bottom Ash - 821.3 MT/Day					
generated:						
Fly Ash utilization (details) Ash will be used for filling of abandoned mine, filling of low-lying area, manufacturing bricks, cement, road construction, aggregate replacement in concrete, etc as per Fly Ash Notification, 31st December'2021 and amendments.						
Stack Height (m) & Type of Flue	120 m	n & Bi flue	s with FGD and	I DeNOx.		

#### Water Requirement:

Source of Water:	Rihand (Govind Vallabh Pant Sagar) Reservoir
	located at a distance of 36km by existing water
	pipeline
Quantity of water	4000m <sup>3</sup> /hr or 36 MCM/year
requirement:	
Distance of source of water	36 km
from Plant:	
Whether barrage/ weir/	No
intake well/ jack well/ others	
proposed:	
Mode of conveyance of	Existing Pipelines
water:	
Status of water linkage:	The water allocation for proposed expansion is 36
	MCM vide letter no. पत्र क्र. वृ प नि म/31 तक/रा. स्त./87
	(बी)/2006/297, dated; 01.09.2022 and Agreement for
	water allotment was signed on 19.10.2022 with Water
	Recourse Department, Bhopal Madhya Pradesh.
(If source is Sea water)	No Sea water is proposed for the project.
Desalination Plant Capacity	
Mode / Management of	Not Applicable
Brine:	
Cooling system	Re-circulating cooling water system using wet
Cooling system	Re-circulating cooling water system using wet evaporative Induced Draft cooling towers will be

## Land Area Breakup

Land Requirement:	c	Within the	Ar	ea of	Aı Pro	rea of oposed	Tota	al Araa
a) TPP Site	No	plant	plant (2x600MW)		ן (סינ	units	1016	
b) Ash Pond	•	boundary	Acr	Hectar	(ZXC) Acr	Hectar	Acr	Hectar
c) Township			e	e	e	e	e	e
d) Railway	Α	PLANT FAC	ILITY					
Siding &	A-	BTG	45	18.2	61	24.7	106	42.9
e) Raw Water	1	(including						
Reservoir		FGD Phase-II						
f) Green Belt		Switchyard						
g) others		,						
Total (if		Transforme						
expansion	Δ_	Coal & Ash	95	38.4	15	6.1	110	44.5
state	2	Facility	30	50.4	15	0.1	110	
additional land		(including						
requirement)		stockyard						
		and AHP						
	A-	Water	50	20.3	68	27.5	118	47.8
	3	system						
		(including						
		raw water						
		cooling						
		Tower, DM						
		Water						
		System,						
		IWT						
		Facility)						
		Sub-total	190	76.9	144	58.3	334	135.2
	B	A OTHER EAC						
	B- 1	Ash Dyke	142	57.5	90	36.4	232	93.9
		Misc.						
		Facilities						
	B-	(Plant					_ /	
	2	Road, Roundary	33	13.4	18	7.3	51	20.7
		Road.						
		Others) *						
		Sub-total B	175	70.9	108	43.7	283	114.6
	С	Green Belt	267	108.1	36	14.6	303	122.7

	Total Area (A+B+C)	632	255.9	288	116.6	920	372.5
Status of Land	The proposed expansion is within the existing land. The land is already						
Acquisition:	under possession v	with Ma	han Energ	gen Lte	d.		
Status of the	Existing plant is co	mmiss	ioned and	unde	r operation	al. Un	it-1 of the
project: If	Power Station is	operati	onal from	24.02	2.2013 and	d Unit	– 2 from
under	18.07.2016.						
construction							
phase: please							
specify the							
reasons for							
delay, works							
completed till							
date and							
balance works							
along with							
expected date							
of completion.							
lf under							
operation							
phase, date of							
commissionin							
g (COD) of							
each unit.							
Whether the							
plant was							
under							
shutdown							
since							
commissionin							
g, details and							
reasons.							
Break-Up of	It is an expansion p	roject,	proposed	within	the existing	g plant	boundary.
land-use of							
TPP site:	I he total lan	d requi	ired for pro	pose	d expansio	n is 288	8 Acres.
a. Total land	I he land is	already	/ in posses	SSION ding t	WITH MEL.	I he tot	al area of
required for		site do	acre inclu espit involv	ung t	/ forest lan	d nati	onal nark/
project	wildlife sand	site uo. tuarv/	biosphere	reser	ve /tiger re	eserve/	elephant
components	reserve in th	e study	y area & do	bes no	ot fall under	coasta	al zone.
b. Private land		-					
c. Government							
land							
d. Forest Land							

Forest Land/	Yes/No			Details of
Protected				Certificate/letter/Remark
Area/				S
Environmental				
Sensitivity Zone				
Reserve	Yes			This is an expansion
Forest/Protected		Forests		project. No forest land is
Forest Land	Name	Distance (km)	Directio n	involved in the project site.
	Open mixed jungle	3.7	NE	Proposed Expansion is within the existing plant
	Mohaban RF	Adjacen t	W, SW, S	NOC from PPCF-WL
	Vihara PF	10.5	NE	has been obtained vide
	Pidarwah PF	7.6	Ν	letter no. व प्रा/माची./2022/ Mine
	Mohanba n RF	0.42	NNW	133/1940 dated;
	Open mixed jungle	9.2	NE	00.00.2020
	Fairly Dense jungle	13.5	SE	
National Park	No	-		-
Wildlife Sanctuary	No			
Archaeological sites	No			
monuments/historica				
1				
temples etc				
Names & distance of	No Nation	al parks,	Wildlife	
National parks,	sanctuaries,	Biosphere	reserves,	
Wildlife sanctuaries,	Heritage si	tes Rivers	s, Tanks,	
Biosphere reserves,	Reserve Fo	orests etc.	Located	
Heritage sites Rivers,	within 10 l	Km from	the plant	
Tanks, Reserve	boundary.			
Forests etc. Located				
within 10 Km from the				
plant boundary:				
Additional	-			
information (if				

## Presence of Environmentally Sensitive areas in the study area

any)	

#### Availability of Schedule-I species in study area

21 mammalian species were recorded from the study area; of which none were reported from the plant area. Out of 21 mammalian species, 1 species is under Schedule I of WPA, 1972 reported outside study area.

#### Court case details:

Any litigation/ Court Case	Litigation is pending at the High court, Madhya Pradesh.
pertaining to the project	Writ Petition No -11180/2010 Forum - High Court, Jabalpur,
	Madhya Pradesh. Subjudice, pending for final hearing.
Is the proposal under any	No
investigation? If so,	
details	
thereof.	
Any violation case	No
pertaining to the project:	

#### **41.2.4** The EAC during deliberations noted the following:

The proposal is for grant of environmental clearance to the project for expansion of Bandhaura Thermal Power Plant by addition of 1600 (2x800) MW capacity to the existing 1200 (2x600) MW in an area of 920 Acres at Village Bandhaura, Tehsil Mada, District Singrauli (Madhya Pradesh) by M/s Mahan Energen Limited.

The ToR has been issued by Ministry vide letter No. J-13011/56/2006-IA.I (T) dated 28.02.2022 in favour of M/s. Essar Power (M.P) Ltd and the same was transferred from M/s. Essar Power (M.P) Ltd to Mahan Energen Limited vide letter dated 4.11.2022.

Public Hearing for the proposed project has been conducted by the Madhya Pradesh Pollution Control Board on 11.01.2023

All Thermal Power Plants with capacity  $\geq$  500 MW are listed at S.N. 1(d) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).

Earlier, environmental clearance was granted by MoEFCC vide F. No. J-13011/56/2006-IA.II (T) dated 20.04.2007 to Bandhaura Super Thermal Power Project Project (4x500) MW at Singrauli District, Madhya Pradesh. Subsequently, amendments were granted on 10.02.2009, 23.08.2013 and 08.04.2016 for setting up the existing 2x600 MW units. Further, transferred EC from EPMPL to MEL was granted on 15.09.2022 by MoEFCC. MEL proposed to undertake expansion of the existing project by addition of Ultra Super-Critical Thermal Power Project with configuration of 2 units of 800 MW each translating to a capacity addition of 1600 MW within the existing plant boundary. Amendments were granted on 10.02.2009, 23.08.2013 and 08.04.2016. Also, transfer of EC from EPMPL to MEL was granted on 15.09.2022 by the Ministry. EC compliance has certified by Integrated Regional Office of MoEFCC, Bhopal vide File no. 4(0)-1/2022(ENV.) dated: 02.09.2022 and Updated EC Compliance Status w.r.t non/partial Complied points vide no. 4(0)-1/2022(Env.) I/40692/2023 dated: 11.04.2023. The EAC found the compliance report to be satisfactory.

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

41.2.5 The EAC after detailed deliberations on the information submitted and as presented during the meeting recommended for grant of Environmental Clearance to the project expansion of Bandhaura Thermal Power Plant by addition of 1600 (2x800) MW capacity to the existing 1200 (2x600) MW in an area of 920 Acres at Village Bandhaura, Tehsil Mada, District Singrauli (Madhya Pradesh) by M/s Mahan Energen Limited subject to compliance of following specific environmental safeguard conditions, in addition to the standard EC conditions stipulated for the thermal power plants:

#### **Environmental Management**

- i. As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.
- ii. Peripheral Green belt (Three row plantation) with Miyawaki plantation technique of 15 m thickness along the plant boundary shall be developed with more than 90% survival rate of the plant species. It would be ensured that total 33% area of total project cover area is under green cover focusing on Ash Dyke area.
- iii. Make a plan for pollution control with the consultation of State Pollution Control Board and submit implementation report with compliance report.
- iv. No coal shall be transported through the villages and no coal shall be transported through road beyond 2026 and no extension shall be granted in this regard.
- v. Extensive green cover within 2 km range of the plant boundary shall be developed. An action plan in this regard to be prepared in consultation with CPCB/expert institution and submitted before Regional Office of the Ministry within 3 months.
- vi. 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 emission Standards for Municipal Solid Waste based Thermal Power Plants as per Municipal Solid Waste Rules, 2016 dated 8.4.2016 (S.O. 1357 (E)) shall be complied (Refer Part C of Schedule II of Municipal Solid Waste Rules, 2016 dated 8.4.2016 (S.O. 1357 (E)).
- vii. 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 shall be done in every 6 hours in winter

season and 3 hours in summer season of roads within 1 km range approaching the plant. A logbook shall be maintained for the activity and be in six-monthly compliance report.

- viii. LED display of air quality (Continuous Online monitoring) shall be installed on the roadside (within 1 km range) and nearby hotspots viz. residential colony, Schools Hospitals; maintenance of devices shall be done on regular basis.
- ix. Everyday cleaning of road/Paved roads within 1 km range of plant site shall be ensured throughout the year through vaccum based vehicle.
- x. Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
- xi. Project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality / local bodies/ similar organization located within 50km radius of the proposed power project to minimize the water drawl from surface water bodies.
- xii. 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. Zero liquid discharge shall be adopted. 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.
- xiii. Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
- xiv. Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.
- xv. Fly ash handling shall be done strictly as per extent rules/regulations of the Ministry/CPCB issued from time to time including Ministry's Notification No. S.O.5481(E) dated 31<sup>st</sup> December, 2021.
- xvi. Monitoring of surface water quality and Ground Water quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. 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.
- xvii. A well designed rain-water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.

- xviii. Watershed development plan shall be prepared and implemented focusing on micro watershed development within 10 km radius of the project. Action taken report in this regard be submitted before regional office of the Ministry in 6 monthly compliance report.
- xix. A detailed ecological monitoring and survey covering forestry, fisheries, wildlife and its habitat shall be done once in two years to assess the impacts of project on the local environment and ecology. Monitoring report shall be uploaded on the Parivesh Portal and a copy of the same be submitted to the regional office of MoEF&CC.
- xx. 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.
- xxi. 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.
- xxii. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- xxiii. The energy sources for lighting purposes shall preferably be LED based.

#### Socio-economic

- xxiv. Public grievance redressal system shall be established under supervision of project head. The functioning of the system shall be reviewed every month.
- xxv. 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.
- xxvi. The Project Proponent shall submit the time- bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of Environmental Clearance for undertaking the CER activities, committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.
- xxvii. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
- xxviii. A multi-specialty Hospital of 100 beds shall be established and maintained to cater

the need of population living within 10 km.

#### Miscellaneous

- xxix. 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.
- xxx. All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.

#### Agenda Item No. 41.3

Expansion of existing 106.617 MW and 112.45 MW gas based TPP by addition of 395 mw gas based TPPP at village Dhuvaran, Taluk Kahambat, District Anand (Gujarat) by M/s Gujarat State Electricity Corporation Limited (GSECL) - Reconsideration of Amendment in Environmental Clearance – reg.

#### [Proposal No. IA/GJ/THE/20425/2011; F. No. J-13012/103/2007-IA.II (T)]

**41.3.1** The proposal is for grant of amendment in Environment Clearance for Expansion of existing 106.617 MW and 112.45 MW gas based TPP by addition of 395 MW gas based TPPP at village Dhuvaran, Taluk kahambat, District Anand (Gujarat).

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

- i. The Environmental Clearance (EC) for "Expansion of existing 106.617 MW and 112.45 MW Gas Based TPP by addition of 395 MW Gas Based TPP at Village Dhuvaran, in Khambhat Taluka in Anand District, in Gujarat" was accorded by MoEF&CC vide letter dated 13.01.2011.
- ii. At time of grant of EC water requirement will be 13.8 MLD, which will be obtained from Mahi Canal and Reservoir at Kanbha village from existing pipeline.
- iii. PP submitted proposal dated 14.10.2022 and has sought following amendments in EC dated 13.01.2011:

S.No.	EC	Stipulated in EC	Amendment requested
	Condition		
	no.		
1.	2.	The Ministry of Environment	The Ministry of Environment &
		& Forests has examined the	Forests has examined the
		application. The proposal is	application. The proposal is for
		for expansion of existing	expansion of existing 106.617 MW
		106.617 MW and 112.45	and 112.45 MW Gas Based TPP
		MW Gas Based TPP by	by addition of 395 MW Gas Based
		addition of 395 MW Gas	TPPP at village Dhuvaran, in
		Based TPPP at village	Kahambat Taluk, in Anand Distt.,
		Dhuvaran, in Kahambat	in Gujarat. Besides the above
		Taluk, in Anand Distt., in	units other units which will be

		Gujarat. Besides the above units other units which will be de-commissioned are 4x63.5 MW Oil Fired Plant; 2x27 MW Open Cycle Gas Turbine and 2x140 MW Open Cycle Gas Turbine. Land requirement will be 30 acres, which is available within the existing premises. The co-ordinates of the site are at Latitude 22°14′03.76″ N to 22°14′09.95″ N and Longitude 72°4530.39″ E to 72° 45′30.75 E. Gas Orequirement will be 1.8 MMSCMD, which will be obtained from GAIL/GSPCL. Water requirement will be 13.8 MLD, which will be obtained from Mahi Canal and Reservoir at Kanbha village from existing pipeline. There are no national park, wild life sanctuary, biosphere/ tiger/ elephant reserves, heritage sites etc within 10km of the project boundary. Public hearing was held on 29.09.2010. Cost of the project will be Rs. 1433.85 Crores.	de-commissioned are 4x63.5 MW Oil Fired Plant; 2x27 MW Open Cycle Gas Turbine and 2x140 MW Open Cycle Gas Turbine. Land requirement will be 30 acres, which is available within the existing premises. The co-ordinates of the site are at Latitude 22°14'03.76" N to 22°14'09.95" N and Longitude 72°45'30.39" E to 72°45'30.75" E. Gas requirement will be 1.8 MMSCMD, which will be obtained from GAIL/GSPCL. Water requirement will be 13.8 MLD, which will be obtained from Mahi Canal and Reservoir at Kanbha village from existing pipeline for a period whenever the water is available from this source. Alternatively, in case of non- availability of water from Mahi Canal and Reservoir at Kanbha village, the water can be obtained from the sweet / brakish water borewells in and around the plant premises. Brackish water from borewells can be used for cooling systems and sweet borewell water can be used for potable use / DM Water / Plant services. There are no national park, wild / life sanctuary, biosphere / tiger / elephant reserves, heritage sites etc within 10km of the project boundary. Public hearing was held on 29.09.2010. Cost of the project will be Rs. 1433.85 Crores.
2. S c (\	opecific condition vi)	No ground water shall be extracted for the project work at any stage.	As the water from Mahi canal and Reservoir at Kanbha village is not available on regular basis, brackish / sweet ground water can be used for the project, in case of non-availability of this water

**41.3.3** The proposal was earlier considered by the EAC in its 36<sup>th</sup> meeting held on 25.01.2023, wherein the EAC recommended for proposed amendment and allowed

to withdrawal of 12.3 MLD Brakish water from borewells during month of March to June only and withdrawal of 0.8 MLD fresh water only for domestic purpose from borewells throughout the year, subject to compliance of following additional conditions: -

(i) The project proponent shall withdraw 12.3 MLD Brakish water from borewells during month of March to June only.

(ii) Fresh water withdrawal shall be 0.8 MLD only for domestic purpose from borewells.

(iii) Automatic water level recorder shall be installed and continuous monitoring shall be carried out for both Fresh and Brakish water in borewell. Periodical monitoring (once in 3 months) of Fluoride, Nitrate and Heavy metals shall also be carried out.

(iv) The project proponent shall conduct Salinity test of ground water during Pre and Post monsoon. The Salinity test report shall be submitted to concerned IRO of the MoEF&CC.

(v) Water audit study shall be conducted and the study report be submitted to the concerned IRO of the MoEF&CC. (after completion).

**41.3.4** The Member Secretary informed that the project proponent vide letter dated 20.02.2023 has submitted request regarding amendment in EC and informed that the EAC has recommended for amendment by allowing withdrawal of 12.3 MLD Brackish water from borewells during month of March to June only and withdrawal of 0.8 MLD fresh water only for domestic purpose from borewells throughout the year. However, as submitted earlier, it is not possible for Water Resources Department (WRD), Gujarat State to supply water to GSECL, DGBPS from March to June every year due to closure of canal. Also as per Water Availability Certificate from Anand Irrigation Division, the Irrigation Dept. provides only 3000 KLD (3 MLD) water to DGBPS.

The project proponent has further informed that the DGBPS is totally dependent on brackish bore well water for cooling tower makeup during the period of March to June every year and partially dependent on bore well water for remaining quantity (apart from 3 MLD, if supplied from Kanbha Pond) for the remaining period of the year i.e. July to February.

Additionally, as per the water availability certificate from Public Health Sanitary Sub-Division GWSSB, Tarapur, no water is provided by them to DGBPS, hence DGBPS does not have any source of fresh/ sweet water other than bore well water. Hence DGBPS needs 1.5 MLD of Fresh water from borewell round the year.

The Brackish bore well / Kanbha pond (irrigation) water is used in Cooling make up water and Fresh bore well water is used in Process (DM water) / Service and domestic water. Now, the project proponent has requested to grant amendment in EC with the details as under:-

Source	Category of area of water	Quantity (MLD)	Time period

	consumption		
Brackish Borewell	Cooling Tower	12.3 (Brackish)	Round the year
Water/Kanbha pond water	Makeup	9.3 ( Brackish) (plus 3 MLD from Kanbha Pond)	July to February (if 3 MLD water is available from Kanbha Pond during)
	Process (DM Water)	0.8	
Sweet	Services-other	0.2	Round the year
	Domestic	0.5	
	Total for fresh / Sweet Water	1.5	

In view of the request of project proponent, the proposal was referred to the EAC again for reconsideration.

#### 41.3.5 The EAC during deliberations noted the following:

The proposal is for amendment in Environmental Clearance (EC) granted by the Ministry vide letter dated 13.01.2011 for the project Expansion of existing 106.617 MW and 112.45 MW gas based TPP by addition of 395 MW gas based TPP at village Dhuvaran, Taluk Kahambat, District Anand (Gujarat) in favour of M/s Gujarat State Electricity Corporation Limited (GSECL).

Earlier, The environment clearance was granted by the Ministry for Expansion of existing 106.617 MW and 112.45 MW gas based TPP by addition of 395 MW gas based TPP at village Dhuvaran, Taluk Kahambat, District Anand (Gujarat) vide letters no J-13012/103/2007-IA.II (T) dated 13.01.2011.

The EAC noted that the project proponent has not submitted the proper justification for revision of EAC recommendations. The EAC observed that the PP has not done in-house exercise to explore the alternative plan by adopting Rain water harvesting system and to use treated water of STP with proper budgeting to meet its requirement. Use of underground water, when other options may be exercised, is not advisable.

41.3.5 The EAC after detailed deliberations **reiterated its recommendations** given during the EAC meeting held on 25.01.2023 and suggested the project proponent to submit proper justification and to explore the alternative plan by adopting Rain water harvesting system and to use treated water of STP with proper budgeting.

#### Agenda Item No. 41.4

Expansion of Coal Based Lara Super Thermal Power Project from capacity 1600

(2x800 MW) to 3200 MW by addition of 2x800 MW at villages Armuda, Chhapora, Bodajharia, Devalpura, Mahloi, Riyapalli, Lara, Jhilgitar and Kandagarh Tehsil Pussore District Raigarh (Chhattisgarh) by M/s NTPC Limited - Environmental Clearance (EC) - reg.

#### [Proposal No. IA/CG/THE/428410/2023; F. No. J-13012/11/2018-IA.I (T)]

**41.4.1** The proposal is for grant of Environment Clearance to the project for Expansion of Coal Based Lara Super Thermal Power Project from capacity 1600 (2x800 MW) to 3200 MW by addition of 2x800 MW in an area of 1036.59 ha located at villages Armuda, Chhapora, Bodajharia, Devalpura, Mahloi, Riyapalli, Lara, Jhilgitar and Kandagarh Tehsil Pussore District Raigarh (Chhattisgarh) by M/s NTPC Limited.

**41.4.2** The Project Proponent and the accredited Consultant M/s. Mantec Consultants Pvt. Ltd., Noida made a detailed presentation on the salient features of the project and informed that:

- (i) The proposal is for environmental clearance to the project for Expansion of Coal Based Lara Super Thermal Power Project from capacity 1600 (2x800 MW) to 3200 MW by addition of 2x800 MW in an area of 1036.59 ha located at villages Armuda, Chhapora, Bodajharia, Devalpura, Mahloi, Riyapalli, Lara, Jhilgitar and Kandagarh Tehsil Pussore District Raigarh (Chhattisgarh) by M/s NTPC Limited.
- (ii) The project proposal was considered by the Expert Appraisal Committee (Thermal/ Hydro River Valley Sector) in its 20<sup>th</sup> meeting held during 30.08.2018 and recommended for grant of Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No.J-13012/11/2018-IA.I(T); dated 29.10.2018.
- (iii) All Thermal Power Plants (>500 MW) are listed at S.N. 1(d) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
- (iv) Ministry had issued EC earlier vide letter no. J-13012/79/2007-IA.II (T); dated 13.12.2012 to the existing project 2x800 MW Coal Based Lara Super Thermal Power Project in favour of M/s. NTPC Limited.
- (v) Existing land area is 678.11 ha. additional 358.48 ha land will be used for proposed expansion. Industry has will develop greenbelt in an area of 33% i.e., 33,15,956.61 m<sup>2</sup> (within and outside the project boundary) out of total area of the project.
- (vi) The estimated project cost is Rs.31,779.5 Crores including existing investment of Rs.17,779.5 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs.1737.41 Crores and the Recurring cost (operation and maintenance) will be about Rs.34.74 Crores per annum.
- (vii) Total Employment under Stage-II will be as direct 112 persons & 4000-5000 indirect (During Construction) and direct 405 persons and 1500 indirect (During

Operation) after expansion. Industry proposes to allocate Rs. 7.39 Crore @ of 0.05 % of Project Cost towards CER.

- (viii) There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River/ water body Kelo is flowing at a distance of 1.4 km in east direction.
- (ix) Ambient air quality monitoring was carried out at 12 locations during March-2022 to May-2022 and the baseline data indicates the ranges of concentrations as: PM10 (40-58 mg/m3), PM2.5 (24-35 μg/m3), SO2 (6-20 μg/m3) and NO2 (15-28 μg/m3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 59.06 μg/m<sup>3</sup>, 23.52 μg/m<sup>3</sup> and 31.52 μg/m<sup>3</sup> with respect to PM<sub>10</sub>, SOx and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
- (x) Total water requirement is 4770 m3/day of which freshwater requirement of 4770 m3/day will be met from Saradih Barrage. Permission for allocation of water obtained vide letter dated 06.12.2022 from Water Resources Dept. Govt of Chhattisgarh for the 68 MCM quantity.
- (xi) Effluent of 55 M3/hr quantity will be treated through Tube settler and Neutralization sumps. The plant will be based on Zero Liquid discharge system (if applicable).
- (xii) Power requirement after expansion will be 7.2% of Generation Capacity (Auxiliary Power requirement to be met from main plant). Existing unit has 2 DG sets of 2000 kVA each (+1 standby), used as standby during power failure. Stage-II units will have 2 DG of 2000 kVA each (+1 standby) for main plant and 1 DG set of 500 kVA (+01 standby) for FGD. Stack (height 30m) will be provided as per CPCB norms to the proposed DG sets.
- (xiii) Existing unit has 2550 TPH coal fired boiler. Additionally, 2580 TPH coal fired boiler will be installed under Stage-II. High Efficiency ESP, FGD & NOx control with a stack height of 150/220m will be installed for controlling the particulate emissions within the statutory limit of 30 mg/Nm<sup>3</sup> for the proposed boilers (Applicable for thermal sector projects).
- (xiv) Details of Solid waste/ Hazardous waste generation and its management:

SI. No.	Waste	Quantity, TPA
1	Fly Ash	22,40,000
2	Gypsum	18,000

Similar to Stage-I, following wastes are expected to be generated during operation of Stage-II.

SI.	Waste	Quantity,	Mode of disposal

No.		ТРА	
1	Municipal Solid Waste	328	Composting, Reuse, disposal through recyclers
2	Plastic Packaging waste	5	Reuse & Disposal through recyclers
3	Computer, Electrical & Electronic waste	5	Disposal through authorized recyclers
4	Used Batteries	5	Disposal through authorized recyclers
5	Biomedical Waste	2	Disposal by authorized agencies
6	Used or spent oil	100	Disposal through authorized recyclers
7	Empty barrels/ containers/ liners contaminated with	60	Sale to authorized recyclers
8	Spent Ion exchange resin containing toxic metals	2	Sale to authorized recyclers
9	Asbestos	0.1	Disposal through TSDF
10	Waste or residue containing oil	10	Sale to authorized recyclers, Disposal through TSDF

- (xii) Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 20.02.2023. The main issues raised during the public hearing are related to Job & Employment, Pollution, Violation of TOR Condition, Education & Health Services, Provision of free Electricity, delay in conducting public hearing, water supply in nearby villages inclusion of additional villages in CSR Program, existence of villages of Odisha within 10 km, Climate change & global/local warming. All the issues have been properly addressed in EIA Report. Some of the issues were raised due to lack of information with participants.
- (xiii)Details of Certified compliance report submitted by RO, MoEF&CC. Latest Monitoring done by the IRO of MOEF&CC on 28.12.2022 & 29.12.2022. There was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023.
- (xiv)Status of Litigation Pending against the proposal, if any: No Court cases regarding Environment issue, However, there are other Court Cases regarding land issue.
- (xv) The silent features of the project are as under:-

Name of the Proposal	2x800 MW (Expansion, Stage-II) Coal Based
	Lara Super Thermal Power Project at villages
	Armuda, Chhapora, Bodajharia, Devalpura,
	Mahloi, Riyapalli, Lara, jhilgitar and Kandagarh in
	Taluk Pussore, in District Raigarh, in Chhattisgarh
Location	Lara Super Thermal Power Project

(Including coordinates)	Village – Chhapora
	Taluk – Pussore
	District – Raigarh
	State - Chhattisgarh
	PIN - 496440
	(a) Main Plant Co-ordinates: Latitudes: 21°44'57"N to 21°46'19"N, Longitudes: 83°25'37"E to 83°27'56"E
	(b) Ash Dyke Co-ordinates: Latitudes: 21°43'7"N to 21°44'27"N Longitudes: 83°27'37"E to 83°29'4"E
Inter- state issue involved	No
Seismic zone	Zone-II
Capacity / Cultural command area (CCA)	1600 MW (2X800MW)
Attracts the General Conditions (Yes/No)	Yes
Powerhouse Installed Capacity	2x800 MW
Generation of Electricity Annually	11.91 Billion Units @85% PLF
No. of Units	Тwo
Cost of project	Estimated Cost of Stage-II of Project: Rs. 14,000 Crores

Total area of Project	Acres			
-			Stage-	Future
		Stage-I	П	Expansion
		Acres	Acres	Acres
	Main Plant	390	267	170
				Included
				in
				Stage-I &
	Green Belt	35	56	ĬI
				Included
				in Stage-
	Reservoir	135	287	I
	Township	151	NA	NA
	Peripheral			
	Road (Public)	57	NA	NA
	Ash Dvke	491	Nil	
	Green Belt in			
	Ash Dvke	45		
	Ash Corridors	49		
	Rlv Sidina &			
	MGR	53	27	
	Miscellaneous/			
	Unutilised			
	Space due to			
	Irregular Shape	270		
	Total	1676	637	170
	Grand Total			2483
		Alrea	ldy	Left Out
		Acqui	red	Land
		(Acre	es)	(acres)
	Private	1929	.17	78.14
	Govt.	179.	11	
	Forest	375.	01	
	Total	2483	.29	78.14
		Grand	Total	2561.43
Details of consultant and	Mantec Consultan	ts Pvt. Lto	., Noida	<u> </u>
status of accredition				
	D- 36, Sector-6, N	oida- 201	301	
	/			
	NABET/EIA/2124/	SA0146		
	Status of Accredita	ation: Vali	a till 19	July 2023
Project Benefits	Proposed Lara	STPP S	tage-II	(2x800 MW)
	will have State	e of Art	Ultra S	uper Critical
	Technology wh	nich has l	petter el	ticlency and
	less carbon em	nissions ir	i compa	rison to sub-
	critical techno	biogy. In	stallatio	n of High

Status of other statutory clearances1) FC/WLC/CRZ not Applicable 2) AAI Clearance for Chimney available dated 18.5.2022 3) Water Commitment dated 12.06.2013 & 06.12.2022R&R detailsN/AAny litigation/Court case pertaining to the projectNo Court cases regarding Environment issue, However there are other Court Cases regarding land issue.Is the proposal under any investigation? If so, details thereof.NoAny violation case pertaining to the project:NoCertified EC compliance report (if applicable)Latest Monitoring done by the IRO of MOEF&CC on 28.12.2022 & 29.12.2022.There was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023Status of Stage- I FCThe site involves 151.762 ha of forest land for which Stage-II clearance is already obtained vide letter no F.NO.8-12/2012-FC dated 12.05.2014.Additional detail (If any)NiiIs FRA (2006) done for FC-I dateNoAdvertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary		<ul> <li>efficiency ESP, FGD and De-Nox System will comply the new emission norms of MOEF&amp;CC.</li> <li>The setting up of the proposed project will lead to direct and indirect benefits to the overall socio-economic development of the region.</li> <li>These will also benefit the local population. NTPC has taken up several community welfare and community development activities under Corporate Social Responsibility and this will be strengthened during commissioning of Lara STPP Stage-II.</li> </ul>
R&R detailsN/AAny litigation/Court case pertaining to the projectNo Court cases regarding Environment issue, However there are other Court Cases regarding land issue.Is the proposal under any investigation? If so, details thereof.NoAny violation case pertaining to the project:NoCertified EC compliance report (if applicable)Latest Monitoring done by the IRO of MOEF&CC on 28.12.2022 & 29.12.2022.There was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023Status of Stage-1 FCThe site involves 151.762 ha of forest land for which Stage-II clearance is already obtained vide letter no F.NO.8-12/2012-FC dated 12.05.2014.Additional detail (If any)NilIs FRA (2006) done for FC-1 dateNoAdvertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary	Status of other statutory clearances	<ol> <li>FC/WLC/CRZ not Applicable</li> <li>AAI Clearance for Chimney available dated 18.5.2022</li> <li>Water Commitment dated 12.06.2013 &amp; 06.12.2022</li> </ol>
Any litigation/Court case pertaining to the projectNo Court cases regarding Environment issue, However there are other Court Cases regarding land issue.Is the proposal under any investigation? If so, details thereof.NoAny violation case pertaining to the project:NoCertified EC compliance 	R&R details	N/A
Is the proposal under any investigation? If so, details thereof.NoAny violation case pertaining to the project:NoCertified EC compliance report (if applicable)Latest Monitoring done by the IRO of MOEF&CC on 28.12.2022 & 29.12.2022.There was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023Status of Stage- I FCThe site involves 151.762 ha of forest land for which Stage-II clearance is already obtained vide letter no F.NO.8-12/2012-FC dated 12.05.2014.Additional detail (If any)NilIs FRA (2006) done for FC-1 dateNoAdvertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary	Any litigation/Court case pertaining to the project	No Court cases regarding Environment issue, However there are other Court Cases regarding land issue.
Any violation case pertaining to the project:NoCertifiedECcompliance report (if applicable)Latest Monitoring done by the IRO of MOEF&CC on 28.12.2022 & 29.12.2022.There was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023The re was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023Status of Stage-IFCThe site involves 151.762 ha of forest land for which Stage-II clearance is already obtained vide letter no F.NO.8-12/2012-FC dated 12.05.2014.Additional detail (If any)NilIs FRA (2006) done for FC-I 	Is the proposal under any investigation? If so, details thereof.	No
CertifiedECcompliance complianceLatest Monitoring done by the IRO of MOEF&CC on 28.12.2022 & 29.12.2022.report (if applicable)There was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023Status of Stage- I FCThe site involves 151.762 ha of forest land for which Stage-II clearance is already obtained vide letter no F.NO.8-12/2012-FC dated 12.05.2014.Additional detail (If any)NilIs FRA (2006) done for FC-I dateNoAdvertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary	Any violation case pertaining to the project:	No
There was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023Status of Stage- I FCThe site involves 151.762 ha of forest land for which Stage-II clearance is already obtained vide letter no F.NO.8-12/2012-FC dated 12.05.2014.Additional detail (If any)NilIs FRA (2006) done for FC-I dateNoAdvertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary	Certified EC compliance report (if applicable)	Latest Monitoring done by the IRO of MOEF&CC on 28.12.2022 & 29.12.2022.
Status of Stage- I FCThe site involves 151.762 ha of forest land for which Stage-II clearance is already obtained vide letter no F.NO.8-12/2012-FC dated 12.05.2014.Additional detail (If any)NilIs FRA (2006) done for FC-INoAdvertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary		There was no non-compliance reported. The additional data sought was submitted vide letter dated 05.04.2023
Additional detail (If any)NilIs FRA (2006) done for FC-INoAdvertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary	Status of Stage- I FC	The site involves 151.762 ha of forest land for which Stage-II clearance is already obtained vide letter no F.NO.8-12/2012-FC dated 12.05.2014.
Is FRA (2006) done for FC-INoAdvertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary	Additional detail (If any)	Nil
Advertisement for PH with dateThe Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary	Is FRA (2006) done for FC-I	No
Date of PHDate: 20.02.2023VenueThe ground near Government Higher Secondary	Advertisement for PH with date	The Advertisement for Public Hearing for Lara STPP Stage-II (2x800 MW) was published in three local newspapers Times of India, Nava Barath and Kelo Prawha on 18.01.2023.
Venue     The ground near Government Higher Secondary	Date of PH	Date: 20.02.2023
	Venue	The ground near Government Higher Secondary

	School, Village Mahloi, Tehsil, Pussore, District, Raigarh
Chaired by	Sri Rajiv Kumar Pandey, ADM, Raigarh
Main issues raised during PH	The main issues raised during Public Hearing were Job & Employment, Pollution, Violation of TOR Condition, Education & Health Services, Provision of free Electricity, delay in conducting public hearing, water supply in nearby villages inclusion of additional villages in CSR Program, existence of villages of Odisha within 10 km, Climate change & global/local warming. All the issues have been properly addressed in EIA Report. Some of the issues were raised due to lack of information with participants. 400-500
Fuel to be used:	Coal
Quantity of Fuel required per Annum:	6.6 MTPA corresponding to 85% PLF
Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)	<ul> <li>Talaipali Coal Block Mining Project (TLCMP) of NTPC Limited is linked to cater the coal requirement for Lara STPP.</li> <li>EC &amp; FC for TLCMP has already been accorded by MoEF&amp;CC as follows:</li> <li>EC: Letter no. J-11015/279/2009-IA.II (M) dated 02.01.2013</li> <li>FC: Stage-I &amp; Stage-II F.No.8-18/2012-FC dated 05.11.2012 &amp; 28.01.2014 respectively</li> </ul>
Details of mode of transportation of coal from coal source to the plant premises along with distances	Mode of coal transportation from the coal mines to the power plant shall be MGR and Indian Railways. Total distance is 58 Km from Mines to Plant premises
Fly Ash Disposal System Proposed	The bottom ash shall be extracted and disposed off in wet form. The fly ash shall be conveyed in dry form from the electrostatic precipitator hoppers. This dry fly ash is taken to buffer hoppers for its onward transportation in dry form to storage silos near plant boundary for utilization. In case of non-utilization, fly ash shall be taken to HCSD system, where in it shall be mixed with water in agitator tanks for its ultimate disposal in high concentration slurry form to ash disposal area. The ash management scheme for fly ash and

	bottom ash involves dry collection of fly ash, supply of ash to entrepreneurs for utilisation, promoting ash utilisation and safe disposal of unused ash. NTPC shall make maximum efforts to utilise the fly ash for various purposes. Unused fly ash and bottom ash shall be disposed off in the ash pond.
Ash Pond/ Dyke (Area, Location & Co- ordinates) Average height of area above MSL (m)	Area: 491 Acres(Lara STPP, Stage-I) (No Additional Ash dyke proposed for Lara STPP Stage-II) Co-ordinates: Latitudes: 21°43'7"N to 21°44'27"N Longitudes: 83°27'37"E to 83°29'4"E 220-242 m
Quantity of a. Fly Ash to be generated b. Bottom Ash to be generated:	1.792 MTPA 0.448 MTPA
Fly Ash utilization (details)	The Ash Utilisation shall be done as per Ministry of Environment, Forests and Climate Change Notification dated 31-12-2021 as amended on 31.12.2022. To utilize ash and also to comply the stipulations of MoEF&CC's Gazette Notification on fly ash dated 31-12-2021 following actions would be taken up by NTPC:
	<ul> <li>NTPC shall provide a system for 100% extraction of dry fly ash along with dedicated dry ash silos for storage of at least sixteen hours of ash based on installed capacity having separate access roads so as to ease the delivery of fly ash. Provision shall also be kept for segregation of coarse and fine ash, loading this ash to closed/ open trucks and also for loading fly ash into rail wagons. This will ensure availability of dry fly ash required for manufacture of Fly Ash based Portland Pozzolana Cement (FAPPC) for cement plants and Ready Mix Concrete plants.</li> <li>NTPC shall also promote, adopt and set up the ash based product manufacturing facilities</li> </ul>

	within its premises & fly ash brick thus produced shall be utilized in in-house construction works as well as for supply in the market on price.
	• NTPC shall make efforts to motivate and encourage entrepreneurs to set up ash based building products such as fly ash bricks, blocks tiles, fly ash based aggregate etc. in the vicinity of proposed power plant.
	<ul> <li>To promote use of ash in agriculture/low lying areas/wasteland development-show case project shall be taken up in the vicinity of proposed thermal power station.</li> </ul>
	<ul> <li>NTPC shall make efforts with authorities of coal mines and other minerals mines for use of ash in reclamation of mines located within 300 km of proposed power station.</li> </ul>
	<ul> <li>All government/ private agencies responsible for construction/ design of buildings, road embankment, flyover bridges and reclamation/ development of low lying areas within 300 km of the plant areas shall be persuaded to use ash and ash based products in compliance of MoEF&amp;CC's Gazette Notification on fly ash.</li> </ul>
	• With all the efforts mentioned above, it is expected that fly ash generated at proposed thermal power station shall be utilized in the areas of cement, concrete & building products manufacturing, road embankment construction, land development, mine filling, shoreline protection structure, agriculture etc.
Stack Height (m) & Type of Flue	Two single flue stacks of 150 m or one bi-flue stack of 220 m height will be provided (to be decided during detailed design)

Name of Project	Expansion / Green Field (new):
	2x800 MW (Expansion, Stage-II) Coal Based Lara Super Thermal Power Project at villages Armuda, Chhapora, Bodajharia, Devalpura, Mahloi, Riyapalli, Lara, jhilgitar and Kandagarh in Taluk Pussore, in District Raigarh, in

Chhattisgarh
(IPP / Merchant / Captive): IPP
If expansion, the details of ECs (including amendments and extension of validity) of existing Units etc.
<ul> <li>Ministry of Environment, Forests and Climate Change (MoEF&amp;CC) had accorded Environmental Clearance (EC) for 2x800 MW Coal Based Lara Super Thermal Power Project vide letter no. J-13012/79/2007.IA.II (T) on 13.12.2012 and</li> <li>EC amendment on 26.04.2017 for "Temporary permission for transport of 6,913 MT/ day of coal through road from Lakhanpur Coal Block to NTPC Lara Power Plant for a period of one year",</li> <li>EC amendment on 15.11.2018 for "Permission for transportation of coal of 9,000 Tons/Day by road except through Route Nos. 5 &amp; 7, i.e. from Kotarliya Railway siding and Dulanga Mines (NTPC, for a temporary period of one-year"</li> <li>Extension of EC Validity on 14.01.2020 for a period of one year(w.e.f 13.12.2019 till 12.12.2020) and extension of permission dated 15.11.2018 for transport coal by road with the quantity of 9,000 TPD for a period of one year (w.e.f. 15.11.2019 till 14.11.2020) on 14.01.2020</li> <li>EC Amendment on 21.10.2020 regarding (i) Deletion of condition regarding provision of online continuous monitoring equipments for SOx, NOx, &amp; PM instead of SOx, NOx, PM2.5 &amp; PM10 in Stack (iii) Modification of condition of Continuous Online Monitoring Radio activity and heavy metals contents in coal and fly ash (including bottom ash)</li> </ul>

Salient Features	
Date of the ToR, extension of	(i) TOR: MoEF&CC vide letter No J-
validity and amendment, if	13012/11/2018-IA.I (T) dated 29.10.2018
any.	(ii) TOR Amendment: MoEF&CC vide letter No
	J-13012/11/2018-IA.I(T) dated 29.08.2022
Capacity & Unit	Under Operation
Configurations:	Stage-I: 1600 MW (2x800 MW)
	Proposed Expansion
	Stage-II: 1600 MW(2x800 MW)

Status of Land acquisition:	A total of acquired capacity Acres, G Forest La Stage-II been ob However, acres of I in progre requireme Stage-I f acres and is propose provision future exp	f 2483.29 acres of l under Stage-I for of project (Private La ovt. Land. – 179. and – 375.01 Acres Forest Clearances tained for forest I land acquisition o eft out patches of pr ess, thereby making acilities are constru- d out of the project as acilities are constru- d out of the above w ed to be utilized for S of 170 acres has pansion.	and has been the ultimate and – 1929.17 11 Acres and ). Stage-I and have already land involved. f about 78.14 ivate land is till ng total land 2561.43 acres. ucted in 1676 thile 637 acres stage-II units. A been kept for
Status of the project: If under construction phase: please specify the reasons for delay, works completed till date and balance works along with expected date of completion.	Constructic after accor Project	on of Lara STPP St d of Environmental	age-II shall start Clearance of the
If under operation phase, date of commissioning (COD) of each unit. Whether the plant was under shutdown since commissioning, details and reasons.			
Break-Up of Land-Use of TPP		Alroady Acquired	Loft Out Land
SITE:		(Acres)	(acres)
	Private	1929.17	78.14
	Govt.	179.11	
	Forest	375.01	
	Total	2483.29	78.14
		Grand Total	2561.43
	No additio proposed p	nal land shall be a project of Stage-II	acquired for the
Fuel to be used:	Coal		
Quantity of Fuel Required per Annum:	6.6 MTPA (	corresponding to 85%	% PLF
Coal Linkage / Coal Block:	Talaipali	Coal Block Mining P	roject (TLCMP)
(If Block allotted, status of EC	of NTPC	Limited is linked to	cater the coal

& FC of the Block)	requirement for Lara STPP.
	EC & FC for TLCMP has already been accorded by MoEF&CC as follows:
	<ul> <li>EC: Letter no. J-11015/279/2009-IA.II (M) dated 02.01.2013</li> </ul>
	<ul> <li>FC: Stage-I &amp; Stage-II F.No.8-18/2012-FC dated 05.11.2012 &amp; 28.01.2014 respectively</li> </ul>
	Ash content in coal: 40(%) Sulphur in coal: 0.5(%) Max Moisture: 15(%) GCV in coal:3000-3500 Kcal/Kg
Details of mode of transportation of coal from coal source to the plant premises along with distances.	Mode of coal transportation from the coal mines to the power plant shall be MGR and Indian Railways. Total distance is 58 Km from Mines to Plant premises
Fly Ash Disposal System proposed:	The bottom ash shall be extracted and disposed off in wet form. The fly ash shall be conveyed in dry form from the electrostatic precipitator hoppers. This dry fly ash is taken to buffer hoppers for its onward transportation in dry form to storage silos near plant boundary for utilization. In case of non- utilization, fly ash shall be taken to HCSD system, where in it shall be mixed with water in agitator tanks for its ultimate disposal in high concentration slurry form to ash disposal area. The ash management scheme for fly ash and bottom ash involves dry collection of fly ash, supply of ash to entrepreneurs for utilisation, promoting ash utilisation and safe disposal of unused ash. NTPC shall make maximum efforts to utilise the fly ash for various purposes. Unused fly ash and bottom ash shall be disposed off in the ash pond.
Ash Pond / Dyke: (Area, Location & Co- ordinates)	Area: 491 Acres(Lara STPP, Stage-I) (No Additional Ash dyke proposed for Lara STPP Stage-II) Co-ordinates: Latitudes: 21°43'7"N to 21°44'27"N Longitudes: 83°27'37"E to 83°29'4"E
	220-242 m

Average height of area above MSL (m)	
Quantity of Fly Ash to be Generated:	1.792 MTPA
Quantity of Bottom Ash to be Generated:	0.448 MTPA
Fly Ash utilisation percentage with details :	<ul> <li>The Ash Utilisation shall be done as per Ministry of Environment, Forests and Climate Change Notification dated 31-12-2021 as amended on 31.12.2022. To utilize ash and also to comply the stipulations of MoEF&amp;CC's Gazette Notification on fly ash dated 31-12-2021 following actions would be taken up by NTPC:</li> <li>NTPC shall provide a system for 100% extraction of dry fly ash along with dedicated dry ash silos for storage of at least sixteen hours of ash based on installed capacity having separate access roads so as to ease the delivery of fly ash. Provision shall also be kept for segregation of coarse and fine ash, loading this ash to closed/ open trucks and also for loading fly ash into rail wagons. This will ensure availability of dry fly ash required for manufacture of Fly Ash based Portland Pozzolana Cement (FAPPC) for cement plants and Ready Mix Concrete plants.</li> <li>NTPC shall also promote, adopt and set up the ash based product manufacturing facilities within its premises &amp; fly ash brick thus produced shall be utilized in in-house construction works as well as for supply in the market on price.</li> <li>NTPC shall make efforts to motivate and encourage entrepreneurs to set up ash based building products such as fly ash bricks, blocks tiles, fly ash based aggregate etc. in the vicinity of proposed power plant.</li> <li>To promote use of ash in agriculture/low lying areas/wasteland development-show case project shall be taken up in the vicinity of proposed thermal power station</li> </ul>

	<ul> <li>NTPC shall make efforts with authorities of coal mines and other minerals mines for use of ash in reclamation of mines located within 300 km of proposed power station.</li> <li>All government/ private agencies responsible for construction/ design of buildings, road embankment, flyover bridges and reclamation/ development of low lying areas within 300 km of the plant areas shall be persuaded to use ash and ash based products in compliance of MoEF&amp;CC's Gazette Notification on fly ash.</li> </ul>
	• With all the efforts mentioned above, it is expected that fly ash generated at proposed thermal power station shall be utilized in the areas of cement, concrete & building products manufacturing, road embankment construction, land development, mine filling, shoreline protection structure, agriculture etc.
Stack Height (m)	Two single flue stacks of 150 m or one bi-flue stack of 220 m beight will be provided(to be
	decided during detailed design)
Source of Water:	Saradih barrage on River Mahanadi
Quantity of water requirement:	Make up water requirement for Lara-II (2 x 800 MW) project would be 4800 m3/hr.
Distance of source of water from Plant:	45 km (Route Length)/34 km (Aerial)
Whether barrage/ weir/ intake well/ jack well/ others proposed:	Yes, Intake structure shall be constructed
Mode of conveyance of water:	Pipeline
Status of water linkage:	Water Resource Department (WRD), Government of Chhattisgarh dated 06.12.2022 have accorded water availability confirmation of 45 MCM (5137 m3/hr) for stage-I (2 x 800 MW) power project and 68 MCM (7763 m3/hr) for stage-II for Lara STPP from Saradih barrage on River Mahanadi.
(If source is Sea water) Desalination Plant Capacity	Not Applicable
Mode / Management of Brine:	Not Applicable
Cooling system	Water Cooled Condenser System

CRZ Clearance	Not Applicable
Names & distance of National parks, Wildlife sanctuaries, Biosphere reserves, Heritage	No National parks, Wildlife sanctuaries, Biosphere reserves, Archaeological Heritage sites exists within 10 Km radius
sites Rivers, Tanks, Reserve Forests etc. Located within 10 Km from the plant boundary:	
Any litigation/Court case pertaining to the project:	No Court cases regarding Environment issue, However there are other Court Cases regarding land issue.
Is the proposal under any investigation? If so, details thereof.	No
Any violation case pertaining to the project:	No
Cost of the Project (As per EC and revised):	<ul> <li>As per EC Project Cost of Stage-I is Rs. 9568.27 Crores</li> </ul>
Cost of the proposed activity in the amendment:	<ul> <li>Approved Cost of Stage-I of Project: Rs. 17,779.45 Crores</li> <li>Estimated Cost of Stage II of Project: Rs.</li> </ul>
	Estimated Cost of Stage-II of Project: Rs. 14,000 Crores
Employment Potential for entire project/plant and employment potential for the	<ul> <li>Current employment at existing power plant (Lara STPP Stage-I)-1773 (Permanent-273 &amp; Temprorary-1500)</li> </ul>
number of persons and quantitative information).	<ul> <li>The estimated employment generation from the proposed project (Stage-II)</li> </ul>
	<ul> <li>(a) During Construction- 4000-5000</li> <li>(Permanent-112 &amp; Temprorary-4000-5000; depending on the construction phase of the project)</li> </ul>
	(b) During Operation- 1905 (Permanent-405 & Temprorary-1500)
	However, the manpower shall be optimised and the exact number of manpower shall be decided during the construction/ operation phases of the project.
Benefits of the project (specify quantitative information)	<ul> <li>Proposed Lara STPP Stage-II (2x800 MW) will have State of Art Ultra Super Critical Technology which has better efficiency and less carbon emissions in comparison to sub-critical technology. Installation of High efficiency ESP, FGD and De-Nox System will comply the new emission norms of MOEF&amp;CC.</li> <li>On CER Activities: Rs. 7.39 Crores (For</li> </ul>

	<ul> <li>three years)</li> <li>The setting up of the proposed project will lead to direct and indirect benefits to the overall socio-economic development of the region.</li> <li>On CSR Activities: Rs. 20 Crores &amp; recurring Rs.6.0 Crores (For Both Stage-I&amp;II)</li> <li>These will also benefit the local population.</li> <li>NTPC has taken up several community welfare and community development activities under Corporate Social Responsibility and this will be strengthened during commissioning of Lara STPP Stage-II.</li> </ul>
Any other declaration	

#### 41.4.3 The EAC during deliberations noted the following:

The proposal is for grant of Environment Clearance to the project for Expansion of Coal Based Lara Super Thermal Power Project from capacity 1600 (2x800 MW) to 3200 MW by addition of 2x800 MW in an area of 1036.59 ha located at villages Armuda, Chhapora, Bodajharia, Devalpura, Mahloi, Riyapalli, Lara, Jhilgitar and Kandagarh Tehsil Pussore District Raigarh (Chhattisgarh) by M/s NTPC Limited.

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

The ToR for the project was granted on 29.10.2018. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 20.02.2023. The main issues raised during the public hearing are related to Job & Employment, Pollution, Violation of TOR Condition, Education & Health Services, Provision of free Electricity, delay in conducting public hearing, water supply in nearby villages inclusion of additional villages in CSR Program, existence of villages of Odisha within 10 km, Climate change & global/local warming. All the issues have been properly addressed in EIA Report. Some of the issues were raised due to lack of information with participants.

Earlier the Ministry had issued EC earlier vide letter no. J-13012/79/2007-IA.II (T); dated 13.12.2012 to the existing project 2x800 MW Coal Based Lara Super Thermal Power Project in favour of M/s. NTPC Limited.

The IRO, Raipur inspected the site on 28-29.12.2022 and submitted the monitoring report. The EAC found the certified compliance report to be satisfactory.

The project proponent has submitted the year wise proposed expenditure for next three years to address the issues raised during Public Hearing of Stage-II is Rs. 7.39 Cores, which is over and above proposed CSR Expenditure of Rs. 20.0 Crores.

SI No.	Issues raised in PH	Action Planned	Tentat	ive Budg Lakhs	et, Rs.
			2023- 24	2024- 25	2025- 26
1	Green Belt Development	Plantation in nearby Villages through Villagers: Distribution of Free Saplings and Protection Measures	5	5	5
2	Biodiversity Management	Awareness Programmes; Reward Scheme; Habitat Development	5	5	5
3	Dust Emission from Ash Ponds	Water Sprinkling on Roads and Ash Evacuation Areas	12	12	12
4	Skill development Programs	Training Programs	10	10	10
5	Drinking Water Facilities & other Community Development Activities	07 Nos. Additional Villages (Netnagar, Chhoti Hardi, Kondpali, Darripali,Basanpali,Kathani, Nawapara) (Deepening of Pond) (Within the radius of 10 km)	105	105	105
6	Stakeholder Meetings	Every Quarter	1	1	1
7	Health and Emergency Services	Improvement in Health & Emergency Services	85	65	65
8	Coaching in Maths and English at Township Schools	Establishment and Operation of Coaching Centers	5	5	5
9	Accidents due to Truck Movement	PEP Talks/ Job Specific Trainings/ Regulation of Truck movements.	5	5	5
10	School in Mahloi	Construction of Govt. Higher Secondary School Mahloi & Other infrastructure facilities in the peripherial Govt. School of Mahloi	50	15	15
	Grand Total		283	228 739	228

The EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. Issues raised during the public hearing have been duly addressed by the project proponent.

**41.3.4** The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** for grant of Environmental Clearance to the project Expansion of Coal Based Lara Super Thermal Power Project from capacity 1600 (2x800 MW) to 3200 MW by addition of 2x800 MW in an area of 1036.59 ha located at villages Armuda, Chhapora, Bodajharia, Devalpura, Mahloi, Riyapalli, Lara, Jhilgitar and Kandagarh Tehsil Pussore District Raigarh (Chhattisgarh) by M/s NTPC Limited subject to compliance of following specific environmental safeguard conditions, in addition to the standard EC conditions stipulated for the thermal power plants:

#### **Environmental Management**

- i. As already committed by the project proponent, Zero Liquid Discharge shall be ensured and no waste/treated water shall be discharged outside the premises.
- ii. Peripheral Green belt (Three row plantation) with Miyawaki plantation technique of 15 m thickness along the plant boundary shall be developed with more than 90% survival rate of the plant species. It would be ensured that total 33% area of total project cover area is under green cover focusing on Ash Dyke area.
- iii. Extensive green cover within 2 km range of the plant boundary shall be developed. An action plan in this regard to be prepared in consultation with CPCB/expert institution and submitted before Regional Office of the Ministry within 3 months.
- iv. 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 emission Standards for Municipal Solid Waste based Thermal Power Plants as per Municipal Solid Waste Rules, 2016 dated 8.4.2016 (S.O. 1357 (E)) shall be complied (Refer Part C of Schedule II of Municipal Solid Waste Rules, 2016 dated 8.4.2016 (S.O. 1357 (E)).
- v. 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 shall be done in every 6 hours in winter season and 3 hours in summer season of roads within 1 km range approaching the plant. A logbook shall be maintained for the activity and be in six-monthly compliance report.
- vi. LED display of air quality (Continuous Online monitoring) shall be installed on the roadside (within 1 km range) and nearby hotspots viz. residential colony, Schools Hospitals; maintenance of devices shall be done on regular basis.
- vii. Everyday cleaning of road/Paved roads within 1 km range of plant site shall be ensured throughout the year through vaccum based vehicle.
- viii. Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.

- ix. Project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality / local bodies/ similar organization located within 50km radius of the proposed power project to minimize the water drawl from surface water bodies.
- x. 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. Zero liquid discharge shall be adopted. 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.
- xi. Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
- xii. Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.
- xiii. Fly ash handling shall be done strictly as per extent rules/regulations of the Ministry/CPCB issued from time to time including Ministry's Notification No. S.O.5481(E) dated 31<sup>st</sup> December, 2021. No coal shall be transported through road shall be allowed.
- xiv. Monitoring of surface water quality and Ground Water quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. 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.
- xv. A well designed rain-water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.
- xvi. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/ operation of the power plant. A list of all small and large water bodies shall be prepared after physical survey within 10 km radius of the project. A detailed conservation plan for all these water bodies shall be prepared and submitted before the Regional Office of the Ministry within 3 months. Implementation status of conservation plan be submitted in 6 monthly compliance report.
- xvii. Watershed development plan shall be prepared and implemented focusing on micro watershed development within 10 km radius of the project. Action taken report in this regard be submitted before regional office of the Ministry in 6 monthly compliance report.

- xviii. A detailed ecological monitoring and survey covering forestry, fisheries, wildlife and its habitat shall be done once in two years to assess the impacts of project on the local environment and ecology. Monitoring report shall be uploaded on the Parivesh Portal and a copy of the same be submitted to the regional office of MoEF&CC.
- xix. 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.
- xx. 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.
- xxi. The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms.
- xxii. The energy sources for lighting purposes shall preferably be LED based.
- xxiii. Explore desulphurization from biotechnological method.

#### Socio-economic

- xxiv. Public grievance redressal system shall be established under supervision of project head. The functioning of the system shall be reviewed every month.
- xxv. 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, creation of sacred groves etc. shall be prepared and submitted to the Regional Office of the Ministry within 6 months. Implementation status of the same shall be reported to the Regional office in 6 monthly compliance report.
- xxvi. 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.
- xxvii. The Project Proponent shall submit the time- bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of Environmental Clearance for undertaking the CER activities, committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.
- xxviii. Occupational health surveillance of the workers shall be done on a regular basis and

records maintained as per the Factories Act.

- xxix. As committed, a multi-specialty Hospital with 100 beds shall be established to cater the need of population living within 10 km.
- xxx. The establishment of a robust 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.

#### Miscellaneous

- xxxi. 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.
- xxxii. All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.

#### Agenda Item No. 41.5

Setting up of Gas/ liquid fuel based Captive Thermal Power Plant of capacity 332 MW in an area of 2.9 Ha located at Motikhavdi Village, Jamnagar District, Gujarat by M/s Reliance Syngas Limited - Terms of Reference (ToR)- reg.

#### [Proposal No. IA/GJ/THE/428278/2023; F. No. J-13012/02/2023-IA.I (T)]

**41.5.1** The proposal is for grant of terms of reference to the project for Setting up of Gas/ liquid fuel based Captive Thermal Power Plant of capacity 332 MW in an area of 2.9 ha located at Motikhavdi Village, Jamnagar District, Gujarat by M/s Reliance Syngas Limited.

**41.5.2** The Project Proponent and the accredited Consultant M/s. NEERI, Nagpur, made a detailed presentation on the salient features of the project and informed that:

- The proposal is for /ToR to the project for setting up a 332 MW gas / liquid fuel based Captive PP located at Village – Padana, Kanalus, District - Jamnagar by M/s. Reliance Syngas Limited
- (ii) The project is listed at S.N. 1(d) of the Schedule to the Environment Impact Assessment (EIA) Notification under category 'A' and are appraised at Central Level by Expert Appraisal Committee (EAC).
- (iii) Total land area is 29,000 m<sup>2</sup>. Industry will develop greenbelt in an area of 33 % i.e. 9,30,000 m<sup>2</sup> out of total area of the project.

- (iv) The estimated project cost is Rs 900 crores. Total capital cost earmarked towards environmental pollution control measures is Rs 18 crores and the Recurring cost (operation and maintenance) will be about Rs 0.5 crores per annum.
- (v) Total Employment will be 25 persons as direct & 50 persons indirect.
- (vi) There are No National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Panna dam and Sasoi dam are at a distance of 2.6 km and 6.2 km in ENE and E direction respectively.
- (vii) Total water requirement is 6,000 m3/day will be met from Existing desalination facility of RIL. Effluent of 35 m3/hr quantity will be treated through existing ETP / TTP of RSL.

Sr No	Waste	Composition	Quantity (TPA)	Disposal to
1	Oily rags	Cotton waste contaminated with oil	10	TSDF / Co- processing
2	Used / Waste Oil	Used lubricating oil / transformer oil	50	Sale

(viii) Details of Solid waste/ Hazardous waste generation and its management

(xvi) Status of Litigation Pending against the proposal, if any. Nil

(xvii) The salient features of the project are as under:-

Name of the Proposal	332 MW Captive PP by Reliance Syngas Limited
Location	Jamnagar
(Including coordinates)	Coordinates of proposed CPP are
	A: 22°18'25.64"N, 69°51'55.50"E
	B: 22°18'25.60"N, 69°52'1.38"E
	C: 22°18'20.05"N, 69°52'1.31"E
	D: 22°18'20.12"N, 69°51'55.39"E
Inter- state issue involved	No
Seismic zone	IV
Capacity / Cultural command area	NA
(CCA)	
Attracts the General Conditions	No
(Yes/No)	
Powerhouse Installed Capacity	Nil

Generation of Electricity Annually	2909 MUs
No. of Units	2 GTs and 2 STGs
Cost of project	900 Cr
Total area of Project	2.9 Ha
Details of consultant and status of	NEERI, Nagpur
accredition	NABET / EIA / 2124 / RA 0227
	Valid 01-07-2024
Project Benefits	Captive generation for the world's
	largest gasification unit, employment
	during construction and operation
	phases.
Status of other statutory clearances	RSL has been granted EC by MoEFCC
	in July 2022. RSL has valid CTE and
	CCA granted by GPCB for its
	gasification unit.
R&R details	NA
Any litigation/Court case pertaining	Nil
to the project	
Is the proposal under any	No
investigation? If so, details thereof.	
Any violation case	No
pertaining to the project:	
Certified EC compliance report (if	Will be submitted during EC application
applicable)	
Status of Stage- I FC	NA
Status of Stage- I FC Additional detail (If any)	NA None
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I	NA None Not Applicable
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I Advertisement for PH with date	NA None Not Applicable PH yet to be conducted
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I Advertisement for PH with date Date of PH	NA None Not Applicable PH yet to be conducted PH yet to be conducted
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I Advertisement for PH with date Date of PH Venue	NA None Not Applicable PH yet to be conducted PH yet to be conducted PH yet to be conducted
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I Advertisement for PH with date Date of PH Venue Chaired by	NA None Not Applicable PH yet to be conducted PH yet to be conducted PH yet to be conducted PH yet to be conducted
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I Advertisement for PH with date Date of PH Venue Chaired by Main issues raised during PH	NA None Not Applicable PH yet to be conducted PH yet to be conducted PH yet to be conducted PH yet to be conducted PH yet to be conducted
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I Advertisement for PH with date Date of PH Venue Chaired by Main issues raised during PH No. of people attended	NA None Not Applicable PH yet to be conducted PH yet to be conducted
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I Advertisement for PH with date Date of PH Venue Chaired by Main issues raised during PH No. of people attended Fuel to be used:	NA None Not Applicable PH yet to be conducted PH yet to be conducted Gaseous / Liquid
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:	NA None Not Applicable PH yet to be conducted PH yet to be conducted Gaseous / Liquid
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:Quantity of Fuel required per	NA None Not Applicable PH yet to be conducted PH yet to be conducted A50/1800 KTPA (NG / Syngas)
Status of Stage- I FC Additional detail (If any) Is FRA (2006) done for FC-I Advertisement for PH with date Date of PH Venue Chaired by Main issues raised during PH No. of people attended Fuel to be used: Quantity of Fuel required per Annum:	NA None Not Applicable PH yet to be conducted PH yet to be conducted Gaseous / Liquid 450/1800 KTPA (NG / Syngas) 550 KTPA (Liquid)
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:Quantity of Fuel required perAnnum:	NA None Not Applicable PH yet to be conducted PH yet to be conducted Gaseous / Liquid 450/1800 KTPA (NG / Syngas) 550 KTPA (Liquid)
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:Quantity of Fuel required per Annum:Coal Linkage / Coal Block:	NA None Not Applicable PH yet to be conducted PH yet to be conducted Gaseous / Liquid 450/1800 KTPA (NG / Syngas) 550 KTPA (Liquid)
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:Quantity of Fuel required perAnnum:Coal Linkage / Coal Block:(If Block allotted, status of EC & FC	NA None Not Applicable PH yet to be conducted PH yet to be conducted Gaseous / Liquid 450/1800 KTPA (NG / Syngas) 550 KTPA (Liquid) NA
Status of Stage- I FC         Additional detail (If any)         Is FRA (2006) done for FC-I         Advertisement for PH with date         Date of PH         Venue         Chaired by         Main issues raised during PH         No. of people attended         Fuel to be used:         Quantity of Fuel required per         Annum:         Coal Linkage / Coal Block:         (If Block allotted, status of EC & FC         of the Block)	NA None Not Applicable PH yet to be conducted PH yet to be conducted Gaseous / Liquid 450/1800 KTPA (NG / Syngas) 550 KTPA (Liquid) NA
Status of Stage- I FC         Additional detail (If any)         Is FRA (2006) done for FC-I         Advertisement for PH with date         Date of PH         Venue         Chaired by         Main issues raised during PH         No. of people attended         Fuel to be used:         Quantity of Fuel required per         Annum:         Coal Linkage / Coal Block:         (If Block allotted, status of EC & FC         of the Block)	NA None Not Applicable PH yet to be conducted PH yet to be conducted Gaseous / Liquid 450/1800 KTPA (NG / Syngas) 550 KTPA (Liquid) NA
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:Quantity of Fuel required perAnnum:Coal Linkage / Coal Block:(If Block allotted, status of EC & FCof the Block)Details of mode of transportation of	NA None Not Applicable PH yet to be conducted PH yet to be conducted PH yet to be conducted PH yet to be conducted PH yet to be conducted Gaseous / Liquid 450/1800 KTPA (NG / Syngas) 550 KTPA (Liquid) NA
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:Quantity of Fuel required per Annum:Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)Details of mode of transportation of coal from coal source to the plant	NANoneNot ApplicablePH yet to be conductedPH yet to be conductedGaseous / Liquid450/1800 KTPA (NG / Syngas)550 KTPA (Liquid)NA
Status of Stage- I FC         Additional detail (If any)         Is FRA (2006) done for FC-I         Advertisement for PH with date         Date of PH         Venue         Chaired by         Main issues raised during PH         No. of people attended         Fuel to be used:         Quantity of Fuel required per         Annum:         Coal Linkage / Coal Block:         (If Block allotted, status of EC & FC         of the Block)         Details of mode of transportation of         coal from coal source to the plant         premises along with distances	NANoneNot ApplicablePH yet to be conductedPH yet to be conductedGaseous / Liquid450/1800 KTPA (NG / Syngas)550 KTPA (Liquid)NA
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:Quantity of Fuel required perAnnum:Coal Linkage / Coal Block:(If Block allotted, status of EC & FCof the Block)Details of mode of transportation ofcoal from coal source to the plantpremises along with distances	NA         None         Not Applicable         PH yet to be conducted         Gaseous / Liquid         450/1800 KTPA (NG / Syngas)         550 KTPA (Liquid)         NA
Status of Stage- I FCAdditional detail (If any)Is FRA (2006) done for FC-IAdvertisement for PH with dateDate of PHVenueChaired byMain issues raised during PHNo. of people attendedFuel to be used:Quantity of Fuel required per Annum:Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)Details of mode of transportation of coal from coal source to the plant premises along with distancesFly Ash Disposal System Proposed	NA None Not Applicable PH yet to be conducted PH yet to be conducted PH yet to be conducted PH yet to be conducted PH yet to be conducted Gaseous / Liquid 450/1800 KTPA (NG / Syngas) 550 KTPA (Liquid) NA

Ash Pond/ Dyke	NA		
(Area, Location & Co-ordinates)			
Average height of area above MSL (m)			
Quantity of	NA		
<ul><li>c. Fly Ash to be generated</li><li>d. Bottom Ash to be generated:</li></ul>			
Fly Ash utilization (details)	NA		
Stack Height (m) & Type of Flue	Stack attached to	Stack Height (m)	Type of flue
	HRSG-I	60	Single flue
	HRSG-II	60	Single flue

Name of Project		Expansion / Green Field (new): (IPP / Merchant / Captive):	Green field (Captive)
		If expansion, the details of ECs (including amendments and extension of validity) of existing Units etc.	Not Applicable. This application is for grant of ToR for a fresh proposal.
		If expansion, whether the application is under 7(ii) of the EIA Notification, 2006.	Not Applicable. This application is for grant of ToR for a fresh proposal.
		If expansion, the date of latest monitoring done by the Regional Office (R.O) of MoEF&CC for compliance of the conditions stipulated in the environmental and CRZ clearances of the previous phases. A certified copy of the latest R.O. monitoring report shall also be submitted.	Not Applicable. This application is for grant of ToR for a fresh proposal.
		Specific webpage address where all EC related documents (including monitoring and compliance related reports/documents) of the specific project under consideration are/will be available. Also contact details of PP's officer responsible for updating this webpage/information.	Not Applicable

Name of Project Proponent	M/s	M/s Reliance Syngas Limited		
Name of Consultan t(s) who	M/s Details of accreditation with	M/s NEERI, Nagpur NABET / EIA / 2124 / RA 0227		
prepared the EIA/EMP	QCI/NABET	Validity - 01-07-2024		
SI. No.	Salient Features			
1.	Date of the ToR, extension of validity and amendment, if any.	ToR is yet to be issued		
2.	Date & place of Public Hearing	PH is yet to be conducted. This application is for grant of ToR for a fresh proposal.		
3.	Issues raised during Public Hearing and assurance given along with the financial provisions, if any, by the project proponent. (Please attach as an annexure in a tabular form.)	PH is yet to be conducted. This application is for grant of ToR for a fresh proposal.		
4.	If the proposal is for re- consideration, the dates of the earlier EAC meeting (s) and the information/documents sought.	- Not applicable		
5.	Location of TPP Village : Taluk : District : State :	Padana, Kanalus Lalpur Jamnagar Gujarat		
	Co-ordinates of all four corners:	The proposed CPP will be bound by following co- ordinates A: 22°18'25.64"N, 69°51'55.50"E B: 22°18'25.60"N, 69°52'1.38"E		
	Average height of (a) TPP site, (b) ash pond site etc above MSL (m) c) township etc.	C: 22°18'20.05"N, 69°52'1.31"E D: 22°18'20.12"N, 69°51'55.39"E		
		(a) 70-77 m		

		(b) Not Applicable
		(c) Not Applicable
6.	Whether the project is in the Critically Polluted Area (CPA) or within 10 km of CPA. If so, the details thereof:	No
7.	Capacity & Unit Configurations, MW:	332 MW (GTs – 2 x 126 MW and STGs – 2 x 40 MW)
8.	Land requirement (Acres / Hectares): a) TPP site b) Ash Pond c) Township d) MGR etc. (if expansion state additional land requirement)	2.9 Ha Not Applicable Not Applicable Not Applicable
9.	Status of Land acquisition:	Not Applicable as land is already available
10.	Status of the project: If under construction phase: please specify the reasons for delay, works completed till date and balance works along with expected date of completion. If under operation phase, date of commissioning (COD) of each unit. Whether the plant was under shutdown since commissioning, details and reasons	The proposal is for grant of ToR. Construction will commence after grant of EC.
11.	Break-Up of Land-Use of TPP site (Acres / Hectares): Forests land (Type and density) : Double Crop agricultural land : Single crop agricultural land : Waste/Barren land : Grazing/Community land : Others (specify) : (Status of land allotment/acquisition)	Land use is industrial, and it is available.
12.	Fuel to be used: Coal/Lignite / Gas / Others (Specify)	Gaseous Fuel (NG / Syngas) : 450 / 1800 KTPA Liquid fuel: 550 KTPA
13.	Quantity of Fuel Required per Annum:	Gaseous Fuel (NG / Syngas) : 450 / 1800 KTPA Liquid fuel: 550 KTPA

14.	Coal Linkage / Coal Block:	Not Applicable
	(If Block allotted, status of EC & FC	
	of the Block)	
	MTPA / MMSCMD (Million Tonne	
	Per Annum)	
	Quantity and details of Linkage	
	Name of Block	
	The method of obtaining remaining	
	coal:	
	(LOA issued on)	
	Ash content in coal(%)	
	Sulphur in coal(%)	
15	Details of mode of transportation of	Not Applicable
15.	coal from coal source to the plant	Not Applicable
	premises along with distances	
	Total distance from the source to	
	Rail:km (from To)	
	Road: km (from To)	
	Pipe/closed/open conveyor: km	
	(from To)	
	Sea: km (from To)	
16.	Fly Ash Disposal System proposed:	Not Applicable as ash will not
	High / Medium / Lean concentration	be generated
17	Sully. Ash Bond / Dyke:	Not Applicable as ash will not
17.	(Area Location & Co-ordinates)	he generated
	Average height of area above MSI	be generated
	(m)	
	(If expansion project state	
	additional area required for ash	
	pond)	
18.	Quantity of Fly Ash to be Generated	Not Applicable as ash will not
	(MTPA)	be generated
19	Quantity of Bottom Ash to be	Not Applicable as ash will not
	Generated (MTPA):	be generated
20.	Fly Ash utilisation percentage with	Not Applicable as ash will not
	details:	be generated
	(MoU with Cement/ Brick	
	Manufactures/ Others)	
21.	Stack Height (m)	The details of proposed
	& Type of Flue (new or existing)	stacks are as follows:
		Stack   Stack   Type of

		at	ached to	Height (m)	flue	
		HR	SG-I	60	Single flu	ue
		ΗF	SG-II	60	Single flu	ue
22.	Source of Water:		Seawater	ſ		
	Sea / River / Barrage (Name)		Desalinat	ted s	eawater	
	(Downstream / Upstream)		supplied	by RIL will b	be used	
	(HFL of nearest river if loca	ted	for the pr	oject.		
	within 10 kms study area)					
23.	Quantity of water requirement: MLD / MCM		250 m³/h			
24.	Distance of source of water fr	om	13 km (	seawater int	ake for	
	Plant:		desalinat	ion)		
	Km / m (from intake point)					
25.	Whether barrage/ weir/ intake w	ell/	No			
	jack well/ others proposed:					
	Yes / No (If yes, give details)					
26.	Mode of conveyance of water:		Pipeline			
	Pipeline / canal / others					
27.	Status of water linkage:		Not app	licable as	surface	
	(Date of allocation obtained)		water will	not be used.		
28.	(If source is Sea wat	er)	Desalinat	ted s	eawater	
	Desalination Plant Capacity		supplied	by RIL will k	be used	
			for the pr	oject.		
29.	Mode / Management of Bri	ne,	Discharge	ed into Gulf a	of Kutch	
30	Cooling system			wstom - Wate	or or	
50.	Induced/Natural draft		cooled	system - wate	71	
			cooled			
			Draft - Ec	orced draft		
31.	CRZ Clearance (Status)		Not Appli	cable		
32.	Names & distance of Natio	nal	None			
	parks, Wildlife sanctuari	es,				
	Biosphere reserves, Heritage si	tes				
	Rivers, Tanks, Reserve Forests e	etc.				
	Located within 10 Km from the pl	ant				
	boundary:					
33.	Any litigation/Court case pertain	ing	None			
	to the project:					
34.	Is the proposal under a	any	No			
	investigation? If so, details there	of.				
	Please provide a list with deta	ails				
	and status as annexure					
35.	Any violation case pertaining to	the	No			
	project:					
	Please provide a list with deta	ails				
	and status as annexure					

	•	
36.	Cost of the Project (As per EC and revised): Cost of the proposed activity in the amendment:	900 crores
37.	Employment Potential for entire project/plant and employment potential for the proposed	Employment potential from the proposed project:
	amendment (specify number of persons and quantitative information).	Permanent25employmentduring operation
		Temporary 500 employment during construction
		Temporary50employmentduring operation
		Total 575
38.	Benefits of the project (specify quantitative information)	Captive generation for the world's largest gasification unit, employment during construction and operation phases.
39.	Any other declaration	No

#### 41.5.2 The EAC during deliberations noted the following:

The proposal is for grant of Terms of Reference to the project for Setting up of Gas/ liquid fuel based Captive Thermal Power Plant of capacity 332 MW in an area of 2.9 ha located at Motikhavdi Village, Jamnagar District, Gujarat by M/s Reliance Syngas Limited

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

Total land area is 29,000 m<sup>2</sup>. Industry will develop greenbelt in an area of 33 % i.e. 9,30,000 m<sup>2</sup> out of total area of the project. The estimated project cost is Rs 900 crores. Total capital cost earmarked towards environmental pollution control measures is Rs 18 crores and the Recurring cost (operation and maintenance) will be about Rs 0.5 crores per annum.

The EAC also deliberated on the issue of usage of Imported Pet coke by RSL in its process of gasification to produce Syngas that will be used in the proposed Power Plant.

The PP in this regard informed that from the order of the Hon'ble Supreme Court passed on 26th July, 2018 it is clear that:

- i. Use of petcoke in the Gasification process is permitted.
- ii. Import of petcoke is permitted as per the above consideration for use in the process of Gasification.
- iii. Gasification process is not restricted to the refinery operations and the process itself is permitted to use petcoke as a feed stock.

**41.5.3** The EAC after detailed deliberation on the information submitted **recommended** the proposal for grant of Standard ToR with public hearing for conducting EIA study to the project for Setting up of Gas/ liquid fuel based Captive Thermal Power Plant of capacity 332 MW in an area of 2.9 ha located at Motikhavdi Village, Jamnagar District, Gujarat by M/s Reliance Syngas Limited, under the provisions of EIA Notification, 2006 and as amended along with the following additional/specific ToR:

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

- i. Public Hearing shall be conducted as per the provisions of EIA Notification, 2006 as amended.
- ii. Details pertaining to water source, treatment and discharge should be provided.
- iii. Revise water balance shall be submitted with Zero Liquid Discharge plan.
- iv. Action plan for development of green belt (33% of total project cover area) across the periphery of the project boundary shall be provided with a video clip of existing green belt.
- v. PP shall submit action plan for using treated Sewage/Domestic wastewater for its operations.
- vi. Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
- vii. An action plan shall be prepared for Water shed development within 10 km radius of the plant boundary in consultation with reputed government institution.
- viii. Site specific wildlife conservation plan duly approved by DFO shall be submitted and no vehicle purchase to be done/ proposed in the said plan.
- ix. Details of nos. of tree along with their density and nomenclature of the tree species required to be felled for project components and ash pond area and afforestation plan inside or outside the plant boundary shall be studied.
- x. Site location map duly authenticated by the PCCF (wildlife) indicating distance of ESZ/boundary of protected area located in the vicinity.
- xi. Permission from concerned regulatory authority for withdrawal of water.

#### [B] Disaster Management

xii. Disaster Management Plan shall be prepared and incorporated in EIA/EMP report.

#### [C] Miscellaneous

- xiii. PP shall submit details of court cases and its status for the project (if any).
- xiv. 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.

xv. Arial view video of project site shall be recorded and to be submit.

#### Agenda Item No. 41.6

Expansion of Coal Based Thermal Power Plant from "1x350 MW to 2x350 MW" located at Sahajbahal Village, Lakhanpur Tehsil, Jharsuguda District (Odisha) by M/s Ind-Barath Energy (Utkal) Limited (IBEUL) – Terms of Reference (ToR)- reg.

[Proposal No. IA/OR/THE/428205/2023; F. No. J-13012/31/2008-IA. II (T)]

**41.6.1** The project proponent did not attend the meeting. The EAC decided to return the proposal in present form.

The meeting ended with vote of thanks to the Chair.

\*\*\*\*

### **ATTENDANCE**

S. No.	Name	Role	Attendance
1.	Shri Gururaj P. Kundargi	Chairman	Р
2.	Shri K. B. Biswas	Member	Р
3.	Shri Suramya Dolarray Vora	Member	Р
4.	Dr. Nazimuddin	Member	Р
5.	Dr. Santosh Kumar Hampannavar	Member	Р
6.	Dr. Umesh Kahalekar	Member	Р
7.	Shri M. P. Singh	Member	Р
8.	Prof (Dr.) Nandini N	Member	Р
9.	Shri Yogendra Pal Singh	Member Secretary	Р

#### **APPROVAL OF THE CHAIRMAN**

#### Fwd: Draft MOM of 41st EAC meeting held on 12.05.2023-reg

From : Yogendra Pal Singh <yogendra78@nic.in> Subject : Fwd: Draft MOM of 41st EAC meeting held on 12.05.2023-reg To : Sourabh Kumar <sourabh.9@govcontractor.in>

From: gpkundargi@gmail.com To: "Yogendra Pal Singh" <yogendra78@nic.in> Sent: Monday, May 29, 2023 5:33:24 PM Subject: Re: Draft MOM of 41st EAC meeting held on 12.05.2023-reg

Dear Dr. Yogendra ji Draft Minutes are in order & Approved for further needful action. Thank you G P Kundargi

On Fri, 26 May, 2023, 7:04 pm Yogendra Pal Singh, <<u>yogendra78@nic.in</u>> wrote: Dear Sir,

Please find attached herewith the draft MOM of 41st EAC meeting held on 12.05.2023 for perusal and comments, if any.

With Regards,

Yogendra Pal Singh Scientist 'E' M/o Environment, Forest and Climate Change Room No. 236, 2nd Floor, Vayu Wing Indira Paryavaran Bhawan Jor Bagh, New Delhi-110003 Tele-fax: 011-20819364