

**MINUTES OF THE 35<sup>TH</sup> MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS HELD ON 28<sup>TH</sup> DECEMBER, 2022.**

The 35<sup>th</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 28<sup>th</sup> December, 2022 through video conference under the Chairmanship of Shri Gururaj P. Kundargi. The list of Members participated in the meeting is at **Annexure**.

**Agenda Item No. 35.1: Confirmation of the Minutes of the 34<sup>th</sup> EAC meeting**

The Minutes of the 33<sup>th</sup> EAC (Thermal Power) meeting held on 16<sup>th</sup> December, 2022 were confirmed in the meeting.

**Agenda Item No. 35.2**

**Expansion of Satpura Super-Critical Thermal Power Project by installing unit of capacity 1x660 MW at Sarni, Village Brahmanwada Ryt, Tehsil Ghoradongri, District Betul, (Madhya Pradesh) by M/s Madhya Pradesh Power Generating Co. Ltd. – Environmental Clearance – reg.**

**[Proposal No. IA/MP/THE/410823/2022; F. No. J-13012/12/2019-IA. II(T)]**

**35.2.1** The proposal is for grant of Environment Clearance to the project for expansion of Satpura Super-Critical Thermal Power Project by installing unit of capacity 1x660 MW at Sarni, Village Brahmanwada Ryt, Tehsil Ghoradongri, District Betul, (Madhya Pradesh) by M/s Madhya Pradesh Power Generating Co. Ltd.

**35.2.2** The Project Proponent and the accredited Consultant M/s Greencindia Consulting Private Limited, 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 Satpura Super-Critical Thermal Power Project by installing unit of capacity 1x660 MW at Sarni, Village Brahmanwada Ryt, Tehsil Ghoradongri, District Betul, (Madhya Pradesh) by M/s Madhya Pradesh Power Generating Co. Ltd.
- (ii) The project proposal was considered by the Expert Appraisal Committee (Thermal) in its 36<sup>th</sup> meeting held on 4.12.2019 and recommended for grant of Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-13012/12/2019-IA. II(T): dated:20.12.2019.
- (iii) The Thermal Power projects 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) The salient features of the project are as under:

<b>Project Details</b>	
Name of the Proposal	1x660 MW Satpura Super-Critical Thermal Power Project (Expansion, Phase -V, Unit no. 12) at Sarni, Tehsil Ghoradongri, Village Brahmanwada Ryt, District Betul, Madhya Pradesh

Proposal No.	IA/MP/THE/410823/2022	
Location	Sarni, Tehsil Ghoradongri, Village Brahmanwada Ryt, District Betul, Madhya Pradesh	
Company's Name	Madhya Pradesh Power Generating Co. Limited (MPPGCL)	
Accredited Consultant and certificate no.	Greencindia Consulting Private Limited(NABET/EIA/2023/SA0155)	
Inter- state issue involved	None	
Seismic zone	Zone III	
<b>Category Details</b>		
Category of the project	Category A	
Capacity	660 MW	
Attracts the General Conditions (Yes/No)	No	
Additional information (if any)	None	
<b>4. Project Details</b>		
If expansion, the details of ECs (including amendments and extension of validity) of existing Units etc.	<p>1. EC for PH -IV of STPS has been obtained from MoEF&amp;CC on 27th Feb, 2009 vide F. No. J-13011/34/2008-IA.II (T).</p> <p>2. For construction of a second ash pond of 111 ha for Power House - I, II &amp; III of STPS, permission has been obtained from MoEF&amp;CC on 27th March, 2015 vide F. No. J-13012/5/2013-IA.II(T)</p>	
Amendments granted, if Yes details	None	
Expansion / Green Field (new): (IPP / Merchant / Captive):	Expansion (Merchant)	
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.	The latest compliance report of existing EC was submitted to RO of MoEF&CC on 18.11.2022 vide letter no. 08-004/Gen: 194-A/833	
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.	No	
Co-ordinates of all four corners of TPP Site:	Latitude	Longitude
	22° 06' 38.94" N	78° 10' 19.02" E
	22° 06' 41.88" N	78° 10' 21.49" E
	22° 06' 52.49" N	78° 10' 27.55" E
	22° 06' 56.60" N	78° 10' 19.00" E
	22° 06' 46.61" N	78° 10' 12.90" E
	22° 06' 42.09" N	78° 10' 13.71" E

Average height of: (a) TPP site, (b) ash pond site etc. above MSL	440 m amsl 452 m amsl
Whether the project is in the Critically polluted Area (CPA) or within 10 km of CPA. If so, the details thereof:	No
CRZ Clearance	Not involved
Cost of the Project (As per EC and revised): Cost of the proposed activity in the amendment:	The cost of the proposed project is Rs. 461636 lakhs
Employment Potential for entire project/plant and employment potential for the proposed amendment (specify number of persons and quantitative information)	<b>For proposed unit:</b> <b>Construction Phase:</b> 3150 people (Permanent: 150, Temporary: 3000) <b>Operation Phase:</b> 700 people (Permanent: 350, Temporary :350)  <b>For existing units: 2175 people</b> (Permanent: 875, Temporary :1300)
Benefits of the project (specify quantitative information)	<ul style="list-style-type: none"> <li>• Enhancement of the Power availability in the State; for Irrigation, Industrial, Commercial &amp; Domestic purpose.</li> <li>• Creation of new Employment: Employment would be created in the State by way of Direct &amp; Indirect employment.</li> <li>• Uplifting of the social status.</li> <li>• Development of the area</li> </ul>
<b>Electricity Generation Capacity:</b>	
Capacity & Unit Configurations:	Proposed 1x660 MW
Generation of Electricity Annually	Considering 85% PLF  4914.36 MU (0.85 x 660 x365 x 24)/1000
<b>Details of Fuel &amp; Ash Disposal</b>	
Fuel to be used	Coal
Quantity of Fuel required per Annum:	3.25 MT with designed CV of 3400 kcal/kg
Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)	<b>Coal</b> Coal linkage has been allotted in 34 <sup>th</sup> CLOA meeting held on 20 <sup>th</sup> Decmber 2019, as per following Grade: - <b>SECL- 1.271 MT;</b> Representative grade G11 (GCV range 4000-4300 Kcal/Kg); Indicative grade G9-G14; Annual coal consumption @85% PLF 4279 TPA/ MW. Normative requirement @90% as per CEA norm.

	<p><b>NCL-1.102 MT</b>; Representative grade G9 (GCV range 4601-4900 Kcal/Kg); Indicative grade G8-G11; Annual coal consumption @85% PLF 3711 TPA/ MW; Normative requirement @90% as per CEA norm.</p> <p>Support fuel LDO/HFO of 2730 KL per year @ 0.5 ml/kwh is required for Boiler start-up / support and for subsequent low load operations.</p>
Details of mode of transportation of coal from coal source to the plant premises along with distances	Coal will be transported by Indian Railway System.
Fly Ash Disposal System Proposed	<p>In the proposed supercritical unit of 1x660 MW, the ash generated due to combustion of coal, will be segregated in to two categories mainly-</p> <p><b>For bottom /wet /coarser ash</b>; collected at the bottom of furnace, will be disposed of form of lean slurry to ash bund through slurry pumps. Three (3) Ash disposal pump streams having adequate capacity will be provided to dispose ash slurry up to ash disposal area. One set will be working and two sets will be standby. Ash disposal pipelines will be routed in trenches and on concrete pedestals, as applicable to suit plant layout. Facilities for easy rotation and replacement of the disposal pipelines will be ensured. Ash disposal pipelines will be joined by sleeve type couplings at an interval of 50 M. The ash disposal pipes will be routed all along the ash dyke to ensure discharge of ash slurry uniformly throughout the ash pond.</p> <p><b>For fly ash (also known as ESP ash)</b>; will be collected in the dry form in ash silos. The power station shall install dedicated silos for storage of dry fly ash silos for at least sixteen hours of ash based on installed capacity as per the stipulation of MoEF&amp;CC notification dated 31.12.2021.</p>
<p>Ash Pond/ Dyke (Area, Location &amp; Co-ordinates) Average height of area above MSL (m)</p>	<p>The already existing 111 ha of ash pond shall be utilised for the proposed unit.</p> <p>Latitude: 22°05'54.19" N to 22°06'31.36" N Longitude: 78°09'10.35" N to 78°09'35.26" E</p> <p>Average height of area above msl: 452 m amsl</p>
<p>Quantity of a. Fly Ash to be generated b. Bottom Ash to be generated:</p>	<p>Fly Ash: 160 TPH Bottom Ash: 40 TPH</p>

Fly Ash utilization (details)	The proposed thermal power plant shall be primarily responsible to ensure 100 per cent utilisation of ash (fly ash and bottom ash) generated by it in. The ash generated shall be utilised only for the following eco-friendly purposes, namely <ul style="list-style-type: none"> <li>• Fly ash-based products viz. bricks, blocks, tiles, fibre cement sheets, pipes, boards, panels;</li> <li>• Cement manufacturing, ready mix concrete;</li> <li>• Construction of road and fly over embankment, Ash</li> <li>• Construction of dam;</li> <li>• Filling up of low-lying area;</li> <li>• Filling of mine voids</li> </ul>
Stack Height (m) & Type of Flue	100, single flue
<b>Water Requirement</b>	
Source of Water:	Satpura Reservoir of MPPGCL
Quantity of water requirement:	47448 KLD
Distance of source of water from Plant:	2-4 km
Whether barrage/ weir/ intake well/ jack well/ others proposed:	Intake well
Mode of conveyance of water:	Pipeline
Status of water linkage:	Granted by WRD vide letter dated: 07/03/2020
(If source is Sea water) Desalination Plant Capacity	Not applicable
Mode / Management of Brine:	Not applicable
Cooling system	Closed Cycle Cooling Water System with Cooling Tower
<b>Land Area Break-up</b>	
TPP Site	33 ha (within the existing plant)
Ash Pond	111 ha (already existing)
Township	273.98 ha (already existing)
Railway Siding & Others	99.12 ha (already existing)
Raw Water Reservoir	1170.78 ha (already existing)
Green Belt	271 ha (existing) + 41 ha (proposed)
Others	790.48 ha (already existing)
Total (if expansion state additional land requirement)	2749.36 ha No additional land is required for the proposed unit.
Status of land acquisition	Already available
Status of the project:	Not started waiting for EC
If under construction phase: please specify the reasons for delay, works completed till date and balance works along with expected	NA

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.	NA		
Break-Up of land-use of TPP site: a. Total land required for project components b. Private land c. Government land d. Forest Land	74 ha (Owned by MPPGCL) 0 ha 0 ha 0 ha		
<b>Presence of Environmentally Sensitive areas in the study area</b>			
Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate /letter / Remarks	
Reserve Forest/Protected Forest Land	Yes	-	
National Park	No	-	
Wildlife Sanctuary	No	-	
Archaeological sites monuments/historical temples etc.	No	-	
Names & distance of National parks, Wildlife sanctuaries, Biosphere reserves, Heritage sites Rivers, Tanks, and Reserve Forests etc. located within 10 km from the plant boundary:	<b>Name</b>	<b>Distance (km)</b>	<b>Direction</b>
	<b>Forests</b>		
	Sobhapur RF	Adjacent to site	N
	Ranipur RF	Adjacent to site	SE
	Asir RF	1.1	NE
	Ladardev RF &PF	4.8	WNW
	Amdhana RF	7.5	NE
	Khatera PF	9.7	SSW
	Satpura Resv	Adjacent to site	N
	Phopas Nadi	8.6	WNW
	Ampani N	3.7	SW
	Dudhi Nadi	6.1	E
	Bharanga N	8.1	E
	Bharadhar Nadi	8.8	ENE
	Tawa River	2.4	E
	Badalpur Tank	12	NW
	Bhatkal R	8.4	SW
Denwa Nadi	8.7	WSW	
Latiya Nala	6.3	NW	
Additional information (if any)	No		
Availability of Schedule-I Species in the Study Area	Yes. Peafowl		
<b>Court Case Details</b>			
Any litigation/ Court Case pertaining to the project	No		
Is the proposal under any investigation? If so, details thereof.	No		

Any violation case pertaining to the project:	No
Additional information (if any)	No

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

The proposal is for grant of Environmental Clearance to the project for expansion of Satpura Super-Critical Thermal Power Project by installing unit of capacity 1x660 MW at Sarni, Village Brahmanwada Ryt, Tehsil Ghoradongri, District Betul, (Madhya Pradesh) by M/s Madhya Pradesh Power Generating Co. Ltd.

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 20.12.2019. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 08.09.2022.

The EAC noted that the consultant has not carried out the complete monitoring of air quality data, monitoring has not been done for parameters Ozone, benzene and Mercury. The committee also noted that land requirement of 111 ha for ash pond is on higher side in view of mandatory requirement of 100% ash utilization by thermal power plants, there is scope for reducing the area for ash handling. The details of land reclamation have not been provided. The Committee felt about the need for intake water study for selection of best option for water intake technologies and their efficiency. It was noted that plantation done in ash pond area is not upto the mark.

**35.2.3** The EAC after detailed deliberations deferred the proposal for want of following additional information: -

- (i) Revised layout plan exercising the possibility for green plantation on 60% area of 111 ha ash pond area.
- (ii) Comparative analysis showing increase/decrease in green cover area within 5km radius of the project boundary.
- (iii) Comparative analysis showing changes in baseline data (including ground water) at sampling locations situated within 10 km radius of the project for 10 years.
- (iv) Details of coal linkage along with the plan for transportation shall be submitted.
- (v) The monitoring data for parameters Ozone, benzene and Mercury shall be incorporated in the EIA report.
- (vi) Certified Compliance report of existing EC duly certified from the concerned IRO, MoEF&CC shall be submitted.
- (vii) Submit the proof of Wildlife Conservation plan submitted to warden.
- (viii) PP shall submit time bound action plan for implementation of periphery green plantation with survival rate of more than 90% by adopting Scientific methodology.
- (ix) PP shall submit the detailed plan of Piezometers installation/ installed.
- (x) PP shall submit report on slope stability of ash pond carried out by reputed institution.
- (xi) PP shall submit ash utilization status of last 5 years and future plan for use of legacy ash.
- (xii) Resubmit the current GLC data.
- (xiii) Submit the plan for dust removal techniques such as fixed sprinkler around the siding of ash pond.
- (xiv) PP shall submit the CER plan as per the points raised during public hearing along with the

budget and timeline.

- (xv) Impact of activities done for Corporate Environment Responsibilities (CER) in the 10 km radius of the project along with formulation self- help group support mechanism.
- (xvi) A statement on the decommissioning of existing unit and court matters against the project be submitted.

**The meeting ended with vote of thanks to the Chair.**

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**ATTENDANCE**

<b>S. No.</b>	<b>Name</b>	<b>Role</b>	<b>Attendance</b>
1.	Shri Gururaj P. Kundargi	Chairman	P
2.	Shri Suramya Vora	Member	P
3.	Dr. Santosh Kumar Hampannavar	Member	P
4.	Dr. Umesh Kahalekar	Member	P
5.	Professor S. S. Rai,	Member	P
6.	Shri K.B. Biswas	Member	P
7.	Dr. Nandini N	Member	P
8.	Dr. Narmada Prasad Shukla	Member	P
9.	Shri M.P. Singh	Member (Representative of CEA)	P
10.	Shri Yogendra Pal Singh	Member Secretary	P

## **APPROVAL OF THE CHAIRMAN**

**From:** [gpkundargi@gmail.com](mailto:gpkundargi@gmail.com)

**To:** "Yogendra Pal Singh" <[yogendra78@nic.in](mailto:yogendra78@nic.in)>

**Sent:** Thursday, January 19, 2023 6:55:44 PM

**Subject:** Re: Draft MOM of the EAC (Thermal) 35th meeting held on 28.12.2022-reg

Dear Dr Yogendra ji

Draft Minutes are fine with me & Approved for further needful action.

Thank you

G P Kundargi

On Wed, 18 Jan, 2023, 5:24 pm Yogendra Pal Singh, <[yogendra78@nic.in](mailto:yogendra78@nic.in)> wrote:

Dear Sir,

Please find attached the draft MOM of the EAC (Thermal) 35th meeting held on 28.12.2022, for perusal and comments, if any.