

MINUTES OF THE 30TH MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS HELD ON 14TH SEPTEMBER, 2022

The 30th Meeting of the re-constituted EAC (Thermal Power) organized by the Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi was held on 14th September, 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.30.1: Confirmation of the Minutes of the 29th EAC meeting

The Minutes of the 29th EAC (Thermal Power) meeting held on 24th August, 2022 were confirmed in the meeting with marking of attendance of Shri K. Gowrappan, Damage Assessment Expert, who was coopted as Expert Member of the EAC and participated in the deliberation on Agenda item no. 29.2 “*Regularisation of 3 × 21 = 63 MW Gas-based Thermal Power Station in an area of 55.89ha at Rokhia in village Manikyanagar, Boxanagar PS, District Sepahijala, Tripura by M/s Tripura State Electricity Corporation Limited – Environment Clearance (EC) – reg. [Proposal No. IA/TR/THE/125111/2019; F. No. J-13012/13/2019-IA.I(T)]*”.

Agenda Item No. 30.2

Expansion of power generating capacity from 470 MW to 680 MW with an additional 45 MW of power recovery from process by M/s Reliance Industries Limited at Village Mora village, Tehsil Chorasi, District Surat (Gujarat) - Environment Clearance (EC) – reg.

[Proposal No. IA/GJ/THE/290329/2021; F. No. J-13012/5/2021-IA.I (T)]

30.2.1 The Project Proponent and the accredited Consultant M/s. Aqua-Air Environmental Engineers 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 power generating capacity from 470 MW to 680 MW with an additional 45 MW of power recovery from process. Use of biomass to the extent of its availability in CFBC boilers of CCPP located at Hazira, Village - Mora, Taluka - Chorasi, District - Surat, State - Gujarat by M/s Reliance Industries Limited.
- ii. The project proposal was considered by the Expert Appraisal Committee (Thermal Sector) in its 17th and 18th meetings held on 30-11-2021 and 23-12-2021 and recommended for grant of Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-13012/5/2021-IA.I (T); dated 18.05.2022.
- 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. Ministry had issued EC earlier vide letter no. J-11011/40/2015-IA-II(I); dated 10-07-2017 to the existing project Debottlenecking and Expansion of existing Petrochemical complex in favour of M/s. Reliance Industries Limited
- v. Existing land area is 39,83,200 m^2 . *No additional land* will be used for proposed expansion.
- vi. Industry has already developed greenbelt in an area of 12,30,000 m^2 out of total area of the project.
- vii. The estimated project cost is Rs 10,000 crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 790 crores and the recurring cost (operation and maintenance) will be about Rs. 47 crores per annum.
- viii. Total Employment will be 50 persons as direct employment. About 2,000 manpower will be required during the construction phase of the DBN&E project.
- ix. 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 Tapi estuary is flowing at a distance of 0.5 km in South direction.
- x. Ambient air quality monitoring was carried out at 17 locations during March, 2021 to May, 2021 and the baseline data indicates the ranges of concentrations as: PM_{10} (71.0 – 77.0 $\mu g/m^3$), $PM_{2.5}$ (40.8 – 44.9 $\mu g/m^3$), SO_2 (12.4 – 15.4 $\mu g/m^3$) and NO_2 (13.9 – 16.5 $\mu g/m^3$). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 2.17 $\mu g/m^3$, 12.94 $\mu g/m^3$ and 7.37 $\mu g/m^3$ with respect to PM_{10} , SO_x and NO_x . The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS).
- xi. Total water requirement for the entire project is 21,364 m^3/day of which fresh-water requirement of 21,364 m^3/day will be met from Tapi river. Permission for allocation of water obtained vide letter dated PB-2 / WTR / RELIANCE / F / 421460 from Narmada Water Resources, Supply and Kalpasar Department, Govt. of Gujarat.
- xii. After expansion, total effluent of 82,286 m^3/day quantity will be treated through Effluent Treatment Plant. About 10,000 m^3/day of effluent will be recycled and the remaining treated effluent i.e. 72,286 m^3/day will be discharged through the existing diffuser into Tapi estuary.
- xiii. Power requirement after expansion will be 7,48,750 KVA (~599 MW) including existing 4,12,500 KVA (~330 MW) and will be met from captive power plants. Existing unit has 18 DG sets of ~20,000 KVA capacity for use in emergency purposes.
- xiv. Existing unit has 5 x 500 TPH coal-fired boiler. No new boilers are proposed to be installed. No additional solid / hazardous wastes are expected from the proposed projects in captive power plants.
- xv. Public Hearing for the proposed project has been conducted by the Gujarat State Pollution Control Board on 26-07-2022. The people attending the PH have welcomed the project and made suggestions for social enhancement.

- xvi. Monitoring was carried out by the Regional office of the Ministry on 16-02-2022 and 17-02-2022 and compliance report was issued on 21-06-2022. ATR was issued on 21-07-2022. Certified copy of monitoring report is attached as Annexure I.
- xvii. No litigation is pending against the proposal.
- xviii. The salient features of the project are as under: -

Name of the Proposal	Expansion of power generating capacity from 470 MW to 680 MW with an additional 45 MW of power recovery from process. Use of biomass to the extent of its availability in CFBC boilers of CCPP.
Location (Including coordinates)	Hazira, Village - Mora, Taluka - Chorasi, District - Surat, State – Gujarat Coordinates of project site: 21°9'3.99"N, 72°42'1.90"E 21°10'46.25"N, 72°40'56.53"E 21°9'57.17"N, 72°39'57.46"E 21°9'25.43"N, 72°42'4.12"E
Inter- state issue involved	No
Seismic zone	III
Capacity / Cultural command area (CCA)	680 MW, Additional 45 MW from energy recovery proposals in PTA and CF plants
Attracts the General Conditions (Yes/No)	No
Powerhouse Installed Capacity	680 MW Coal-based power – 360 MW Gas-based power – 320 MW
Generation of Electricity Annually	5256 MUs
No. of Units	5256 MUs
Cost of project	10,000 crores (entire project)
Total area of Project	398.32 Ha
Details of consultant and status of accreditation	M/s Aqua-Air Environmental Engineers Pvt. Ltd. <ul style="list-style-type: none"> • Accreditation No: NABET/EIA/2023/IA0062 • Accreditation valid till 07-10-2023
Project Benefits	<ul style="list-style-type: none"> • Sourcing of power from captive power plant will help in efficient operations and reduction in transmission losses and allied emissions. • Use of biomass as a fuel in CCPP to the extent of its availability will help in reducing carbon footprint.
Status of other statutory clearances	CCA valid till 31-03-2027

R&R details	Not Applicable
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
Certified EC compliance report (if applicable)	Monitoring was carried out on 16-02-2022 and 17-02-2022 and compliance report was issued on 21-06-2022. ATR was issued on 21-07-2022. Certified copy of monitoring report is attached as Annexure I
Status of Stage- I FC	Not Applicable
Additional detail (If any)	Not Applicable
Is FRA (2006) done for FC-I	Not Applicable
Advertisement for PH with date	23-06-2022
Date of PH	26-07-2022
Venue	EPH, Reliance DoT Center, Behind L & T Training Center, RS Nos. 60, 63/1, 65/2+3, 66, 67/1, 67/2, 68, Vill. Mora, Ta. Choryasi, Dist. Surat - 394510.
Chaired by	Hon'ble District Collector
Main issues raised during PH	Employment and infrastructure
No. of people attended	170
Fuel to be used:	Gas and Liquid for the gas-based power plant and coal / biomass (up to its availability) for the coal-based power plant
Quantity of Fuel required per Annum:	Gas – 12,76,025 KSm ³ (145665 Sm ³ /h) Liquid – 1,638 KT (187 TPH) Coal – 3,100 KT (350 TPH) (or biomass of equivalent calorific value)
Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)	Existing arrangement is adequate as expansion is not proposed in the coal-based power plant
Details of mode of transportation of coal from coal source to the plant premises along with distances	Coal is transported from a jetty receiving it and located about 12 km. This is proposed to continue.
Fly Ash Disposal System Proposed	Existing disposal system will not change due to the proposed use of biomass as a fuel.
Ash Pond/ Dyke (Area, Location & Co-ordinates) Average height of area above MSL (m)	Not applicable
Quantity of a. Fly Ash to be generated b. Bottom Ash to be generated:	3,51,832 TPA (21-22) 26,783 TPA (21-22) Quantity will not change due to the proposed use of biomass as a fuel in place of coal. Use

	of biomass will not increase the quantity.																																							
Fly Ash utilization (details)	Fly ash is currently utilized in filling of low-lying areas, for brick manufacturing, in cement plants, etc. and this is not expected to change due to the proposed use of biomass.																																							
Stack Height (m) & Type of Flue	<p>The details of proposed stacks are as follows:</p> <table border="1"> <thead> <tr> <th>Stack attached to</th> <th>Stack Height (m)</th> <th>Type of flue</th> </tr> </thead> <tbody> <tr> <td>HRSG-III</td> <td>60</td> <td>Single flue</td> </tr> <tr> <td>HRSG-IV</td> <td>60</td> <td>Single flue</td> </tr> <tr> <td>HRSG-V</td> <td>60</td> <td>Single flue</td> </tr> <tr> <td>HRSG-VI</td> <td>60</td> <td>Single flue</td> </tr> <tr> <td>HRSG-VIII</td> <td>60</td> <td>Single flue</td> </tr> <tr> <td>HRSG-IX</td> <td>60</td> <td>Single flue</td> </tr> </tbody> </table> <p>The details of existing stacks are as follows:</p> <table border="1"> <thead> <tr> <th>Stack attached to</th> <th>Stack Height (m)</th> <th>Type of flue</th> </tr> </thead> <tbody> <tr> <td>Boiler 1</td> <td rowspan="3">220</td> <td rowspan="3">Triple flue</td> </tr> <tr> <td>Boiler 2</td> </tr> <tr> <td>Boiler 3</td> </tr> <tr> <td>Boiler 4</td> <td rowspan="2">220</td> <td rowspan="2">Double flue</td> </tr> <tr> <td>Boiler 5</td> </tr> <tr> <td>HRSG-I</td> <td>60</td> <td>Single flue</td> </tr> <tr> <td>HRSG-II</td> <td>60</td> <td>Single flue</td> </tr> </tbody> </table>	Stack attached to	Stack Height (m)	Type of flue	HRSG-III	60	Single flue	HRSG-IV	60	Single flue	HRSG-V	60	Single flue	HRSG-VI	60	Single flue	HRSG-VIII	60	Single flue	HRSG-IX	60	Single flue	Stack attached to	Stack Height (m)	Type of flue	Boiler 1	220	Triple flue	Boiler 2	Boiler 3	Boiler 4	220	Double flue	Boiler 5	HRSG-I	60	Single flue	HRSG-II	60	Single flue
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xix. The details of earlier environmental clearance is as under:-

Issuing Authority	File No/ Letter No/Proposal No	Date of Issue of EC	EC Issued for	Captive Power Plant Details	Status
MoEF	J-11011/12/90-IA-II	31 Jan'92	Setting up of Petrochemical Complex	Mentioned as Integral part of Petrochemical complex	Captive power plant set up
MoEF	J.11011/32/2005-IA (II) - I	30 Jun'05	Expansion of Petrochemical Complex and CPP	Increase of captive power generation from 290 MW to 380 MW	Capacity increased to 350 MW

SEIAA, Gujarat	SEIAA/GUJ/EC/1(d) & 7(e)/3/2015	28 Jan'15	Coal based CCPP and Coal Jetty (3.5 MMTPA)	Coal based CCPP - 360 MW	Coal Based PP commissioned in Dec' 2016
SEIAA, Gujarat	SEIAA/GUJ/EC/1(d)& 7(e)/584/2016	28 Sep'16	Amendment in EC dated 28 Jan '15 to restrict operating power generation from 360 MW to 470MW	Installed – 499 MW Operating – 470 MW	Generation restricted to 110 MW as per EC granted by SEIAA*

30.2.2 The EAC during deliberations noted the following:

The proposal is for grant of environmental clearance to the project for Expansion of power generating capacity from 470 MW to 680 MW with an additional 45 MW of power recovery from process by M/s Reliance Industries Limited in an area of 39,83,200 sqm at Village Mora village, Tehsil Chorasi, District Surat (Gujarat).

The project proposal was considered by the Expert Appraisal Committee (Thermal Sector) in its 17th and 18th meetings held on 30-11-2021 and 23-12-2021 and recommended for grant of Terms of References (ToRs) for the Project. The ToR has been issued by Ministry vide letter No. J-13012/5/2021-IA.I(T); dated 18-05-2022.

Public Hearing for the proposed project has been conducted by the Gujarat State Pollution Control Board on 26-07-2022

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 the Ministry vide letter no. J-11011/40/2015-IA-II(I); dated 10-07-2017 to the existing project Debottlenecking and Expansion of existing Petrochemical complex in favour of M/s. Reliance Industries Limited. 21-06-2022. The monitoring report was submitted by the Regional office of the Ministry vide letter dated 21st June, 2022 followed by ATR vide dated 21st July, 2022. The EAC found the Certified Compliance report to be satisfactory.

The EAC observed that 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.

30.2.3 The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** for grant of Environmental Clearance to the project for expansion of power generating capacity from 470 MW to 680 MW with an additional 45 MW of power recovery from process by M/s Reliance Industries Limited in an area of 39,83,200 sqm at Village Mora village, Tehsil Chorasi, District Surat (Gujarat), subject to compliance of following specific environmental safeguard conditions, in addition to the standard EC conditions stipulated for the thermal power plants:

- i. *Green belt with Miyawaki plantation (Three row plantation) 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. An action plan in this regard to be submitted before Regional Office of the Ministry within 3 months. Plant species shall be selected for green belt after Air Pollution Tolerance Index (APTI) study.*
- ii. *Continuous Air quality monitoring stations shall be established in villages falling within 5 KM radius from the project boundary namely Suvali Village, Mora Village, Damka Village, Limla Village and Bhatlai Village connecting with CPCB server.*
- iii. *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 biomass/coal based Thermal Power Plants shall be complied.*
- iv. *Water quality monitoring stations shall be established in Tapti estuary for continuous monitoring of estuary water connecting with CPCB server.*
- v. *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.*
- vi. *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. Detailed plan shall be prepared and implemented in stipulated time to mitigate problem of malnutrition (6.67% current level) in project surrounding area as observed by the project proponent during Epidemiological Study. Action taken report shall be submitted to the Regional Office of the Ministry.*
- vii. *Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system.*
- viii. *EC shall be published in at least two newspapers widely circulated, one shall be in the vernacular language of the locality concerned.*
- ix. *Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.*
- x. *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.*
- xi. *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.

- xii. Fly ash handling shall be done strictly as per extent rules/regulations of the Ministry/CPCB issued from time to time.*
- xiii. Monitoring of surface water quantity 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.*
- xiv. 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.*
- xv. 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.*
- xvi. In view of CER schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CER prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.*
- xvii. CER activities will be carried out as per OM No. 22-65/2017-IA.II dated 30th September, 2020 along with the detailed scheduled of implementation with appropriate budgeting.*
- xviii. Public grievance redressal system shall be established under supervision of project head. The functioning of the system shall be reviewed every month.*
- xix. 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.*
- xx. Implementation of EMP and compliance of EC conditions, E (P) Act, 1986, Rules and MoEF&CC Notifications issued time to time shall be achieved by a full-time qualified Environment Officer having Post Graduate qualification in environmental Science/Environmental Engineering.*
- xxi. The conditions stipulated in the previous EC dated 10.07.2017 granted by the Ministry shall also be complied with.*
- xxii. All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.*

The meeting ended with vote of thanks to the Chair.

ATTENDANCE

S. No.	Name	Role	Attendance
1.	Shri Gururaj P. Kundargi	Chairman	P
2.	Shri Suramya Dolarray Vora, IFS (Retd.)	Member	P
3.	Dr. Unmesh Patnaik	Member	P
4.	Dr. Santosh Kumar Hampannavar	Member	P
5.	Dr. Umesh Jagannathrao Kahalekar	Member	P
6.	Professor S S Rai	Member	
7.	Shri K. B. Biswas	Member	P
8.	Dr. Nandini N	Member	
9.	Shri M. P. Singh	Member(Representative of CEA)	P
10.	Sh. Nazimuddin	Member (Representative of CPCB)	P
11.	Shri Yogendra Pal Singh	Member Secretary	P
12.	Dr Saurabh Upadhyay	Scientist, MoEF&CC	P

APPROVAL OF THE CHAIRMAN FOR CO-OPTING

From: gpkundargi@gmail.com
To: "Yogendra Pal Singh" <yogendra73@nic.in>
Sent: Wednesday, August 17, 2022 12:16:35 PM
Subject: Co opting Dr Gourappan on 24th Aug EAC meeting

Dear Dr Yogendra ji

On 24th scheduled meeting of Thermal EAC ,the first agenda is Regularisation of 3*21 MW plant which under violation & attracts damage assessment, NRAP & CRAP etc.I advise you co opt Dr Gourappan for the meeting to deal with violation project. & Communicate him accordingly with Agenda.

Thank you
Kundargi G P

APPROVAL OF THE CHAIRMAN



Yogendra Pal Singh via nic.in
to me ▾

3:40 PM (38 minutes ago) ☆ ↶ ⋮

From: gpkundargi@gmail.com
To: "Yogendra Pal Singh" <yogendra78@nic.in>
Sent: Thursday, September 29, 2022 5:32:44 PM
Subject: Re: Draft MOM of the EAC (Thermal) meeting held on 14.09.2022, for perusal and comments-reg

Dear Dr Yogendra ji
Draft minutes of EAC held on 14th Sept is fine with me & approved for further needful.
Thank you G
G P Kundargi

On Tue, 27 Sep, 2022, 7:02 pm Yogendra Pal Singh, <yogendra78@nic.in> wrote:
Dear Sir,

Please find attached the draft MOM of the EAC (Thermal) 30th meeting held on 14.09.2022, for perusal and comments, if any.

With Regards,

Yogendra Pal Singh
Scientist 'E'
M/o Environment, Forest and Climate Change
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Indira Paryavaran Bhawan
Jor Bagh, New Delhi-110003
Tele-fax: 011-20819364