MINUTES OF THE 19TH MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS HELD ON 11TH JANUARY, 2022

The 19th 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 11th January, 2022 through video conference under the Chairmanship of Shri Gururaj P. Kundargi. The list of Members participated in the meeting is at **Annexure**.

Agenda No. 19.1:

Confirmation of the Minutes of the 18th EAC meeting

The Minutes of the 18th EAC (Thermal Power) meeting held on 23rd December, 2021 were confirmed in the meeting except the following:

Agenda No. 18.3

3x800 MW (Phase-I) Patratu Super Thermal Power Project in area of 1,234 acres at Village and Tehsil Patratu, District Ramgarh, Jharkhand by M/s Patratu Vidyut Utpadan Nigam Limited – Amendment in Environment Clearance (EC) – reg.

[Proposal No. IA/JH/THE/240635/2021; F. No. J-13012/21/2015-IA.I (T)

The proposal for amendment in Environment Clearance dated 7th November, 2017 to 3x800 MW Patratu Super Thermal Power Project at Patratu, District Ramgarh, Jharkhand was considered by EAC in its 18th meeting held on 23rd December, 2021

It was observed that date of EC in mentioned at 7th November, 2011 instead of 7th November, 2017. Also, online proposal reference seeking amendment is mentioned as IA/BR/THE/236422/2021 on 29th October 2021 instead of IA/JH/THE/240635/2021.

*EAC noted the typo error and **agreed to record corrigendum** in this instant MoM. Ministry may note the correction and do the needful while processing the file*.

Agenda Item No. 19.2:

Expansion of Waste to Energy (WTE) Plant from 15 MW to 25 MW in an area of 12.34 ha at Village Bandhwari, Tehsil & District Gurgaon (Haryana) by M/s Gurugram Municipal Corporation – For Environment Clearance (EC) – reg.

[Proposal No. IA/HR/THE/162510/2020; F. No. J-13012/08/2020-IA.I (T)]

19.2.1 The proposal is for grant of Environmental Clearance for expansion of Waste to Energy (WTE) Plant from 15 MW to 25 MW in an area of 12.34 ha at Village Bandhwari, Tehsil & District Gurgaon (Haryana) by M/s Gurugram Municipal Corporation.

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

(i) Municipal Corporation Gurugram (MCG) are proposing for expansion of WTE plant from 15 MW to 25 MW in IMSWM facility at Bandwari village, Gurugram, Haryana State.

(ii) The main objective of the proposed expansion is to collect and process 100% of MSW generated in the area limits and produce valuable compost & RDF for generating electricity using RDF based WTE and to dispose of the inert' s through scientific process of Sanitary Landfilling (SLF).

(iii) Earlier, Environmental Clearance (EC) was granted by MoEF&CC vide letter no. F. No. 10-74/2016-IA.III for "Integrated Municipal Solid Waste Processing Facility (IMSWM) with Waste to Energy plant of 15 MW capacity" to MCG on 1st November 2019 under sector - 7(i) Common Municipal Solid Waste Management Facility (CMSWMF).

(iv) MCG and awarded Concessionaire (M/s. Ecogreen Energy Gurgaon Faridabad Pvt Ltd.) has proposed for expansion of WTE plant from 15 MW to 25 MW in the same IMSWM facility at Bandwari.

(v) The expanded capacity of proposed project is 25 MW and also interstate boundary Haryana and Delhi which is distance about 0.98 km from project site, hence an Environment Impact Assessment & Environmental Management Plan Report has been considered mandatory for the Public Hearing to Haryana State Pollution Control Board (HSPCB) as well as Delhi Pollution Control Committee (DPCC).

(vi) Accordingly, Terms of Reference was granted vide letter noJ-13012/08/2020-IA.I (T) dated 16.09.2020 for further conducting EIA/EMP study for the proposed expansion project.

(vii) Present waste quantity, based on average per capita waste generation, in the proposed service area (Gurugram-Faridabad Cluster) is estimated to be about 1165 for year 2015 TPD. Considering the population projection and the waste generation forecast, the total waste quantity in the year 2035 is estimated to be about 2100 TPD.

(viii) Brief description of Nature, Size, Location of the Project:

Sr. No.	Particulars	Details
A.	**Nature of the Project**	Integrated Municipal Solid Waste Management (IMSWM) Processing Facility with proposed expansion of Waste to Energy (WTE) Plant from 15 MW to 25 MW capacity.

<table>
<tr><td>B.</td><td colspan="2">Size of the Project</td></tr>
<tr><td></td><td>Existing & Proposed Capacity</td><td>Waste quantity: 1165 TPD in 2015, 1565 TPD in 2025 & estimated waste quantity in 2035 will be 2100 TPD (as per 2011 census)
IMSWM-WTE Project Area - 30.5 Acres

<table>
<tr><th>Project Activity/ Components</th><th>As per EC awarded</th><th>Proposed expansion</th></tr>
<tr><td>Total capacity of facility</td><td>2100 TPD</td><td>NIL</td></tr>
<tr><td>RDF plant</td><td>1500 TPD</td><td>NIL</td></tr>
<tr><td>Composting</td><td>147 TPD</td><td>210 TPD</td></tr>
<tr><td>Area for SLF</td><td colspan="2">24680 Sqm</td></tr>
<tr><td>Waste to Energy (RDF based)</td><td>15 MW</td><td>25 MW</td></tr>
</table>
Therefore, the following are proposed for expansion in WTE plant:
• Proposed expansion to 25 MW
• Mechanical Grate type Boilers: 2 No. (750 TPD/each)
• Steam Turbine Generator: 1 no. 25 MW
Bag Filters System</td></tr>
<tr><td>2.</td><td>Composting</td><td>210 TPD</td></tr>
<tr><td>3.</td><td>RDF Plant</td><td>1500 TPD</td></tr>
<tr><td>4.</td><td>Sanitary Landfill</td><td>Area: 24680 Sqm,</td></tr>
<tr><td>5.</td><td>Waste to Energy (WTE) Plant</td><td>25 MW</td></tr>
<tr><td>6</td><td>Fuel Supply & Availability for Proposed WTE of 25 MW</td><td>Municipal Solid Waste (MSW) shall be processed to make RDF/ Combustible material further to use as fuel for Power generation.</td></tr>
<tr><td>C</td><td colspan="2">Location Details</td></tr>
<tr><td>1.</td><td>Plot no./Kasra no.</td><td>46//5/26,15,16,17/1,24/1,24/2,25,
47//8,9,10,11,12,13,18,19,20,21,22,23,
48//1,2,9,10,11,49//3/3,4,5,7,8/1,13/2,14,15</td></tr>
<tr><td>2.</td><td>Latitude & Longitude of Project site</td><td>A. 28°24'14.89"N 77°10'16.86"E
B. 28°24'13.13"N 77°10'27.39"E
C. 28°24'01.35"N 77°10'18.83"E
D. 28°24'02.72"N 77°10'11.54"E</td></tr>
</table>

<table>
<tr><td>3.</td><td>Topo sheet No.</td><td>53H/3, 53H/7</td></tr>
<tr><td>D</td><td colspan="2">Environmental Settings of the Area</td></tr>
<tr><td>1.</td><td>Ecological Sensitive Areas</td><td>Asola Wildlife Sanctuary boundary exists at 300 m in NE direction from the project site and is beyond Eco Sensitive Zone (ESZ) of Asola WLS which is 150 m at ID P- 9 & P-10 points (nearest points to site) as per MoEF&CC notification no. S.O.1911 (E) dated 31st May 2019 in reference of Asola Bhatti Wildlife Sanctuary.

NOC & Clarification letter regarding the same has been obtained.</td></tr>
<tr><td>2.</td><td>River / water body</td><td>
<table>
<tr><th>River/ water body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Jauhar Nala</td><td>1.14 km</td><td>SE</td></tr>
<tr><td>Lake Shail</td><td>2.25</td><td>SE</td></tr>
<tr><td>Water body near village Gothda Mohbtabad</td><td>3.73</td><td>SSE</td></tr>
<tr><td>Li Nala</td><td>3.72 km</td><td>NW</td></tr>
<tr><td>Sharpur Nala</td><td>5.92 km</td><td>NNE</td></tr>
<tr><td>Paliwala Nala</td><td>6.22 km</td><td>E</td></tr>
<tr><td>Harcliandpur Distributary</td><td>6.72 km</td><td>SE</td></tr>
<tr><td>Lake Niharika</td><td>7.81</td><td>E</td></tr>
<tr><td>Nekpur Miner</td><td>8.41 km</td><td>ESE</td></tr>
<tr><td>Bhiruya Nala</td><td>9.35 km</td><td>ENE</td></tr>
<tr><td>Fatehpur Miner</td><td>9.86 km</td><td>SSE</td></tr>
<tr><td>Barkhal Lack</td><td>9.70 km</td><td>E</td></tr>
</table>
</td></tr>
<tr><td>3.</td><td>Nearest Town / City</td><td>Gurugram- 6.44 Km; Faridabad – 9.67 Km</td></tr>
<tr><td>4.</td><td>Nearest Railway Station</td><td>Faridabad Railway Station at 13.7 km in East Direction</td></tr>
<tr><td>5.</td><td>Nearest Airport</td><td>Indira Gandhi International Airport at 18.10 km in NNW Direction. NOC from Airports Authority of India has been obtained through vide letter no. AAI/RHR/NR/ATM/NOC/2018/288/1517-1520 dated: 04.09.2018.</td></tr>
<tr><td>6.</td><td>State Boundary</td><td>Interstate Boundary of Haryana and Delhi lies at 0.98 km from the site</td></tr>
<tr><td>7.</td><td>Seismic Zone</td><td>Zone – IV [as per IS 1893 (Part-I): 2002]</td></tr>
<tr><td>E</td><td colspan="2">Cost Details</td></tr>
</table>

1.	Total Project Cost	61700.92 Lakhs
F	**Requirements of the Project**	
1.	Water Requirement	Construction Phase: 8 -10 KLD Source: Municipal Corporation of Gurgaon Operation Phase: 792 KLD (for MSW Processing & WTE plant) + 12 KLD (for Domestic) Source: Nearby STP approved by GMDA and drinking water, separately through MCG approved water tankers. Approval from GMDA to receive 4 MLD reclaimed water from STP for the project operation was obtained Memo no. GMDA/S&S/2018/579 on 24.05.2018.
2.	Power Requirement	Construction Phase: 675 KW (backed up through 630 KVA DG set.) Operation Phase: auxiliary supply from proposed waste to energy plant (backup through 1500 KVA DG set)
3.	Manpower requirement	Construction Phase: Around 600 workers Operation Phase: 2100 (Including manpower required for Waste collection & Transportation)

(ix) **Project Site connectivity:** The IMSWM project site at Bandhwari village is very well connected with roads, rail & air. The nearest road which connects to project site is Faridabad-Gurgaon Road (MDR-137) at 300m on North direction and NH236 at a distance of 1339 km on North West direction. The nearest railway station is Faridabad located at a distance of 13.7 km in East direction. Indira Gandhi International airport is the nearest airport at an aerial distance of 18.10 km in North West direction.

(x) The proposed project is designed to process approx. 2100 TPD of Municipal solid waste (MSW) on per day basis. The unit would comprise of the following components for scientifically sound treatment of municipal solid waste.

a) Compost Production capacity – 210 TPD
b) Refused Derived Fuel (RDF): 1500 TPD
c) Sanitary Landfill Area: 24680 Sqm
d) Waste to Energy Plant: 25 MW (RDF based)
   - Mechanical Grate type Boilers: 2 No. (750 TPD/each
   - Steam Turbine Generator: 1 no. 25 MW
e) Leachate collection & treatment system
f) Flue Gas Cleaning System
   - "SNCR furnace denitration system

- Semi-dry flue gas de-acidification tower
- Dry powder injection adsorption system
- Activated carbon injection adsorption system
- Bag filters

(xi) **Components of Proposed Waste to Energy Plant:** Waste to energy plant of 25 MW capacity is proposed to be setup utilizing RDF as main fuel based on Grate Technology with natural circulation drum type water tube boiler- Grate type boiler. The incineration system consists of feeding system, grate system, incinerator system, flue gas cleaning system, ash handling system, and safety equipment. Also each incineration line is equipped with an independent hydraulic system to provide liquid power for on-line equipment.

Unit Description	**Capacity**
2 No. Boiler,	750 tpd each
1 No. Turbo Generator set of 25MW	25 MW
Air Cool Condenser	
Power Switch yard	
Auxiliary Power Supply System	
Control Panel & Instrumentation Area	
Process Water Conveyance Pipeline	
Raw Water Treatment Plant (DM plant)	
Flue gas Purification System	
Continuous Emission Monitoring System	02 No.
Chimneys / Stack for Flue Gas emission -60 Mtr.	02 x 60 Mtrs/Each
Leachate Treatment Plant	500 KLD
Reject Management System	
Firefighting System	
Administration/ office building, Workers area, Canteen and security office.	
Green Belt -3 Tier	33%
Sewage treatment Plant	
RO/UF/Demineralization Plant	
DTRO	
Ash Pond	
RDF storage	For 3 Days
HFO/HSD storage	02 x 30 M3
SWAS Laboratory	01 no
Bag Filter & Ash Silos	

(xii) **Land uses:** The total project site area is 30.5 acres which includes MSW processing plant of 2100 TPD, SLF & 25 MW capacity WTE plant. The project will be developed as Integrated Solid waste site with the following facilities:

Facility	Area (in acres)	% of total land
Waste to Energy Plant Area	6.56	21.57
MSW processing area	3.35	11.03
Roads/ Amenities	2.7	9
Sanitary Landfill	6.0	20
Green Belt	10.0	33
Drain/Sump	1.6	5.4
Total	**30.5**	**100**

(xiii) **Baseline Environmental Studies**

Field studies were carried out to establish the existing environmental status (air, water, noise, soil, and ecology) and prevailing socio-economic conditions. A study area of 10 km radius from the project site was identified to establish the present environmental and socio-economic conditions. The baseline studies were carried out during the post monsoon season October 2020 to December 2020.

During the study period, wind direction was predominantly recorded from NW closely followed by W. Calm condition prevailed for 0.27% of the total time and the average wind speed for the season is 3.40 m/s.

a) Ambient Air Quality

Ambient Air Quality samplers were installed at 8 different locations for estimating the particulate and gaseous pollutants. The monitoring locations were selected in downwind, cross wind and upwind direction of the existing project location. At each location, monitoringwas carried out at a frequency of 2 days per week for 12 weeks during the study period, as per the NAAQM guidelines.

$PM_{2.5}$ levels were recorded in the range of 98.04-140.23 µg/m^3 while PM_{10} levels were in the range of 154.42-354.37 µg/m^3. SO_2 concentrations were in the range of 12.69-19.99 µg/m^3 and NOx concentrations were in the range of 27.29-74.09 µg/m^3. Ammonia concentrations were in the range of 24.81-69.92 µg/m^3 and Ozone concentrations were in the range of 8.81-49.13 µg/m^3. CO levels were in the range of 1.09 to 2.06 mg/m^3.

The observed concentrations were compared with CPCB standards (National Ambient Air

Quality Standards, 2009) It is observed that the monitored parameters are within the permissible limits as per NAAQS, 2009 during the study period except PM10 & PM2.5 which were very high due to the continuous practice of stubbles burning in nearby villages in Haryana as well as Delhi.

b) Water Quality Monitoring

A total of 8 ground water and 3 surface water samples were collected from different sources within the study area and analyzed for all important physico-chemical Characteristics to establish the quality of water prevailing in the project surroundings. The ground water samples were drawn from the hand pumps and bore wells used by the villagers for their domestic needs. Surface water samples were taken from the Lake & Pond in the study area.

It is identified that the pH values of ground water were in the range of 6.58 to 7.27, while pH values of surface water were in the range of 6.85 to 7.79. The TDS values of ground water were in the range of 464 mg/l to 2988 mg/l, while the TDS values of surface water were in the range of 274 to 326 mg/l. Chloride concentrations of ground water were in the range of 48 mg/l to 1085 mg/l, while surface water values were in the range of 26 to 64 mg/l. The hardness of ground water was in the range of 276 mg/l to 1120 mg/l, while hardness of surface water was in the range of 116 to 180 mg/l.

c) Noise Monitoring

Noise levels were monitored at 8 locations within the study area, using a continuous noise measurement device. The day levels of noise have been monitored during 6 AM to 10 PM and the night levels during 10 PM to 6 AM. The day equivalent values during the study period were in the range of 46.6 to 56.1 dB(A) while the night equivalents were in the range of 35.2 to 40.6 dB (A). From the results it can be seen that the day equivalent values and the night equivalent values were within the ambient noise standards of residential area.

d) Soil Quality

A total of 8 soil samples were collected from different locations within the study area. The sampling locations were selected to assess the existing soil conditions representing various land use conditions and geological features. From the analysis of soil samples, it is found that in the study area, the pH values varied from 6.89 to 7.54, the organic carbon varies from 0.14 to 0.69 %, the available Nitrogen from 144.9 to 340.2 kg/ha, the available Phosphorus varies from 32.25 to 85.08 kg/ha and the available Potassium from 126.92 to 179.55 kg/ha.

e) Ecological Environment

The biological study of the area has been conducted in order to understand the ecological

status of the existing flora and fauna to generate baseline information and evaluate the probable impacts on the biological environment. Asola Wildlife Sanctuary is situated to 300 m NE direction from the project site.

NOC from the Principal Chief Conservator of Forest and Chief Wildlife Warden, Haryana was obtained vide letter no. 992 on dated: 09/07/19 certifying that the project is outside the defined Eco-sensitive zone of the Asola Bhatti Wildlife Sanctuary as per Notification dated: 31.05.2019. Hence, clearance from NBWL is not applicable for the project. A detailed site specific conservation plan & wildlife management plan was prepared and approved by Principal Chief Conservator of Forest & Chief Wildlife Warden, Haryana vide letter no. 992 dated: 09/07/19

f) Socio – Economic Environment

Total population of the study area is 153342 persons. Out of which 82571 (53.8%) are male and 70771 (46.2%) are female. SC total population is 21848 out of which 11656 (53.4%) are male and 10192 (46.6%) are female.

Literacy Rate is the amount of people in a country with the ability to read and write. The analysis of the literacy levels is done in the study area. Literacy in any region is key for socio- economic progress and the Indian literacy rate grew to 74.04% in 2011 from 12% at the end of British rule in 1947. Although this was a greater than six fold improvement, the level is well below the world average literacy rate of 84% and of all nations.

(xiv) **Environment Monitoring Program:** The major construction activities involved in setting up the expansion unit are construction of sheds for treatment units, stores, etc. major components in the proposed plant are landfill, waste to energy plant, diesel generator, FGCS, LTP cathode ray tube cutter and other civil, mechanical and electrical equipment. The construction activities require preparation of site, remediation of existing old dump, mobilization of construction material and equipment. The construction activities are expected to last for few months.
During construction phase of landfill and WTE at every stage quality of construction will be monitored viz. base preparation, liners quality, drainage layers, leachate collection system, FGCS, storm water management system, gas vent systems, etc.
Environmental Monitoring Program includes: (i) continuous online monitoring of the incinerator stack emission for flue gas parameters, (ii) incinerator stack emission monitoring to ensure compliance with emission standards, (iii) periodic analysis of water from monitoring bore wells, (iv) ambient air quality monitoring, (v) analysis of treated wastewater, especially in case of discharge, (vi) periodic monitoring of incineration ash and sludge etc., (vii) other parameters as prescribed in Consent to Operation (CTO) etc.

(xv) **Environment Management Plan:** The Environmental Management Plan (EMP) is required to ensure sustainable development in the area of the proposed project site. Hence, it needs proper Environmental Management Plan (EMP) to meet these objectives. The purpose of the

Environmental Management Plan is to minimize the potential environmental impacts from the project and to mitigate the adverse impacts. Minimum 33% of the total plot area shall be developed as greenbelt as per CPCB guidelines. The budget allocated for implementation of EMP is Rs 2905 lakhs with a recurring cost of Rs. 292 lakhs per annum. As per the directions given in the MoEF&CC Office Memorandum, F.No. 22-65/2017-IA-III on 30th September 2020, all the proposed activities will be part of Environmental Management Plan instead of CER.

(xvi) **Total Project Cost:** The total project cost including proposed expansion is Rs. 617.01 Cr which includes cost for IMSWM –WTE (15 MW) - 330.48 Cr and cost for proposed expansion of WTE to 25 MW- 286.53 Cr, i.e. Rs. 286.53+ 330.48 = 617.01Cr.

(xvii) **Project Benefits**: The proposed project will have direct and indirect economic benefits in form of employment, development of ancillaries, establishment of service facilities, development of telecom and transportation facilities. The compost production from IMSWM would add to the revenue of state as per CCA and compost shall also enhance the crop productivity and improvement in the soil texture and enhancement of soil nutrients resulting increase in fertility of soil. The compost produced from the composting pads can be used as soil conditioner that improves soil quality. This compost has the ability to help regenerate poor soil by increasing nutrient content in soil and retain moisture.

19.2.3 The EAC during deliberations noted the following**:**

The proposal is for grant of Environmental Clearance for expansion of Waste to Energy (WTE) Plant from 15 MW to 25 MW in an area of 12.34 ha at Village Bandhwari, Tehsil & District Gurgaon (Haryana) by M/s Gurugram Municipal Corporation.

Earlier, Environmental Clearance (EC) was granted by MoEF&CC vide letter no. F. No. 10-74/2016-IA.III for "Integrated Municipal Solid Waste Processing Facility (IMSWM) with Waste to Energy plant of 15 MW capacity" to MCG on 1st November 2019 under sector - 7(i) Common Municipal Solid Waste Management Facility (CMSWMF).

As the project capacity increased from 15 MW to 25 MW, therefore it categorized under Item "1(d) Thermal Power Plants - Waste to Energy (WTE)" as per EIA Notification, dated September 14, 2006 and as amended. Accordingly, Terms of Reference was granted vide letter no. J-13012/08/2020-IA.I (T) dated 16.09.2020 for further conducting EIA/EMP study for the proposed expansion project.

The Public Hearing was held at the project site of IMSWM site of Gurugram Municipal Corporation at Bandhwari Village for Proposed Expansion of Waste to Energy (WTE) Plant from 15MW to 25 MW at Integrated Municipal Solid Waste Management (IMSWM) Processing Facility on dated 31.08.2021 at 11:00 AM. Also, the representative of DPCC has been participated

in Public Hearing as mentioned in list of attendance.

The EAC noted that EC compliance reports for "Integrated Municipal Solid Waste Processing Facility (IMSWM) with Waste to Energy plant of 15 MW capacity" where duly certified from MoEF&CC, North Regional Office at Chandigarh vide letter no. 6-18/2019 (ENV)/622-624 dated 24.09.2020.

The EAC also observed that PP has not explained the Baseline parameters studied, predicted values and source of ground water and its discharge shall be included in the focused manner.

Further it was noted that Asola Wildlife Sanctuary is situated to 300 m NE direction from the project site. The NOC from Principal Chief Conservator of Forest and Chief Wildlife Warden, Haryana was obtained vide letter no. 992 on dated: 09/07/19 certifying that the project is outside the defined Eco-sensitive zone of the Asola Bhatti Wildlife Sanctuary as per Notification dated 31.05.2019.

The EAC noted that NOC granted by the Principal Chief Conservator of Forest and Chief Wildlife Warden, Haryana was issued before ToR for 25 MW was granted. It was also noted that Legacy leachate waste will be treated within 7-8 months & PP committed that before start of operation of the project there will be no Legacy leachate left of project area.

19.2.4 *The EAC observed on the details submitted by the project proponent and presentation made during the meeting, opined that the details submitted by PP is incomplete and following information is required for further deliberations:*

i. *Fresh NOC shall be obtained from PCCF with certified map citing distance from Asola Wildlife Sanctuary along with approval of site-specific conservation plan & wildlife management plan and revised allocated fund considering increase in capacity. NOC from PCCF shall clearly mention regarding presence of any wildlife corridor.*
ii. *Heavy metal analysis and radioactivity of fly ash and bottom ash shall be carried out of similar projects as mentioned in additional ToR point at Sr. No. 4.*
iii. *Heavy metals analysis of ground water and surface water within 5 km range of the project site (10 sampling sites including MSW site) with comparative analysis of the findings of CSIR-NEERI report shall be submitted.*
iv. *Plan for Miyawaki plantation in 33 % of the total project cover area with 3 rows of plantation along the plant boundary shall be prepared and be submitted.*
v. *Single chart addressing public issues, Action plan, budget allocated towards it and its timelines need to be submitted in terms of issues raised during public hearing.*
vi. *Action plan to mitigate and control leachate during raining season need to be submitted.*
vii. *A plan for harnessing the solar energy at least 0.5 MW with allocated fund and timelines be submitted.*
viii. *PP shall submit a separate chapter of cumulative assessment report consider all sources of*

emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail as per standard ToR condition at Sr. No. 41.

ix. *PP shall submit design details of Air Pollution Control Equipment and GLC modelling variables using AERMOD modelling.*

x. *Presence of high Total Coliform and E-coli and other higher parameters in Groundwater sampling data be examined with causes.*

xi. *PP shall conduct modelling of noise, vibration and traffic impact due to instant project.*

xii. *PP shall submit impact and restoration plan of water bodies present in the buffer zone of the project.*

*The project was **deferred** on above points.*

Agenda No. 19.3:

Katwa Super Thermal Power Project (2x660 MW) in an area of 884.562 acres at Village Srikhanda, Debakundu and Koshigram, Tehsil Katwa – I, District Bardhaman (West Bengal) by M/s NTPC Limited – Terms of References (TOR) – reg.

[Proposal No. IA/WB/THE/248261/2021; F. No. J-13012/24/2014-IA.I (T)]

19.3.1 Project Proponent vide its email dated 7th January, 2022 and during the meeting informed to the EAC that project is being reconsidered for implementation and accordingly have decided to withdraw the proposal due to Policy issues for Thermal Power sector. The EAC therefore decided to **return** the proposal.

Agenda No. 19.4:

Talcher Super Thermal Power Station Stage-I (2x500 MW) & Stage-II (4x500 MW) on additional 60.24 ha of land at Village & Tehsil Kaniha, District Angul, (Odisha) by M/s NTPC Limited – Amendment in Environment Clearance (EC) – reg.

[Proposal No. IA/OR/THE/246362/2021; F. No. J-13011/14/1994-IA.II (T) Pt.]

19.4.1 The proposal is for grant of amendment in Environment Clearance (EC) to Talcher Super Thermal Power Station Stage-I (2x500 MW) & Stage-II (4x500 MW) on additional 60.24 ha of land at Village & Tehsil Kaniha, District Angul, (Odisha) by M/s NTPC Limited.

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

i. The Talcher Super Thermal Power Station Stage-I (2x500 MW) & Stage-II (4x500 MW) is located at Latitude 21° 06' 24" N to 21° 04' 54" N and Longitude 85° 05' 04" E to 85°03' 38"

E.

ii. The total coal requirement for the TPP to generate power is 6.02 MTPA at 90% PLF and Sources of coal is MCL mines. The project was commissioned in 1997.

iii. Environmental Clearance (EC) for Stage-I (2x500 MW) was accorded by MOEF vide OM No. 25/5/84-En.2/IA dated 17.02.1988 and EC for Talcher STPP Stage-II (4x500 MW) was accorded vide letter No. J-13011/14/94-IA.II (T) dated 17.05.1996.

iv. Earlier, proposal for amendment in Environmental Clearance regarding additional land for construction of new ash pond on 60.24 ha land at Village Masunihita was submitted to MOEF&CC on 05.09.2019. The EAC (Thermal) had recommended the proposal in its meeting held on 25.09.2019 However, MOEF&CC vide letter dated 20.11.2020 advised that necessary steps may also be initiated for ash disposal in Jagannath Mine voids as per the ministry's permission dated 20.09.2018 and progress report in this regard may be submitted in September – 2021.

v. In response to Ministry's letter dated 20.09.2018 the following are submitted by PP

a) A contingency pipeline for disposal of ash from Talcher STPS into Jagannath Mine void (Quarry No.8) has been commissioned and a small part of ash generated is being disposed of since 09.10.2021 on a pilot basis. The laying of permanent pipeline is also in progress and scheduled to be completed by February, 2023. The status is as follows:

S.No.	Description	Remarks
A) Pilot Mine Void Filling Project		
i)	Date of Commissioning (Trial run)	10.06.2021
ii)	Commencement of Slurry discharge to Quarry-08 on a pilot basis	09.10.2021
B) Progress & Schedule for laying the permanent pipeline for disposal of ash in Quarry # 8		
i	Pipe laying done	2 Km. out of 23 Km Expected date of Completion Oct., 2022
ii	Pipe laying contracts	2 packages awarded. 1 being retendered expected award by Feb., 22.
iii	Contract for Booster Pump house, AWR pump house and control Room	To be awarded by Dec'21 Expected date of Completion : Dec., 2022
iv	Contract for construction of a bridge along with service road	Technical bids opened, award by Jan., 2022.

		Expected date of completion: Dec., 2022
v	Completion and commissioning of the Main Mine Void Filling Project	Feb., 2023

b) Talcher STPS has taken several steps for enhancement of ash utilization since 2018. E.g. Supply of ash to NHAI for road construction, rail loading facility for transportation of dry ash to distant places with high ash demand, export of ash to Bangladesh / Nepal, etc. Ash utilization is continuously increasing since 2018-19 and the target for 2021-22 is 78%. Ash utilization achieved since 2018-19 is as follows:

S. No	**FY**	**AU (in Percentage)**
i	2018-19	50.18
ii	2019-20	67.27
iii	2020-21	70.25
iv	2021-22 (up to October-21)	59.05

Plan for ash utilization for next five years:

- Station has planned to lay additional three numbers lines for filling of mine void under main mine void filling package.
- Station will supply dry fly ash to Cement/ RMC/ Building material industries through rakes.
- Station will use fly ash in construction of road.
- Station is also planning to use bottom ash for construction purposes.

c) Talcher Thermal Power Station (460 MW) of NTPC Ltd. located in the same area has already been closed since 31.03.2021 on account of techno-economic and environmental reasons. Due to the closure of Talcher Thermal (460 MW), Talcher STPP is running at its maximum capacity (3000 MW) to fill the gap of power supply. The existing ash pond of Stage-I has already been exhausted and that of Stage-II will be exhausted within 2.5 years. Under the present scenario, without the availability of alternate ash dyke it may not be possible to continue with normal plant operations for more than 2.5 years. Hence there is an urgent requirement of a new ash pond for sustainable operation of power plant.

d) As the proposed land of 60.24 ha at Village Masunihita is located between existing ash ponds of Talcher STPS, it will have minimum impact on the natural resources and maximum benefits.

vi. Ash utilization at Kaniha is very low due to following reasons:

a) Remote geographical location,

b) No major city or Cement plant nearby
c) Custer of power plants
d) Less industrial requirement in the vicinity
e) Industrial/ constructional requirement of ash is mostly being met up by other power stations like NALCO, GMR etc., located close to NH-42.

vii. PP has submitted the proposal no. IA/OR/THE/246362/2021 on 21st December, 2021 due to following reasons:

a) Due to geographical and other constraints, ash utilization in Talcher STPS is very difficult.
b) Stage-I dyke was designed for 7th raising on its starter which has been completed in Feb'2017.
c) Existing ash pond of Stage-I (2x500 MW) is likely to be exhausted by next two years, i.e. by March, 2021.
d) Therefore, a new ash pond is proposed near existing ash ponds at village Masunihata.

19.4.3 The EAC during deliberations noted the following:

The proposal is for grant of amendment in Environment Clearance (EC) to Talcher Super Thermal Power Station Stage-I (2x500 MW) & Stage-II (4x500 MW) for construction of a new ash pond by acquiring additional 60.24 ha of land at Village & Tehsil Kaniha, District Angul, (Odisha) by M/s NTPC Limited. The EAC observed that the proposal involves acquisition of additional land so same cannot be considered as an amendment proposal. It was also noted that Ash utilization for the year 2020-21 is 70.25% only; whereas as per the MoEF&CC Fly Ash notifications the plant had to achieve the target of 100% ash utilization. The M/s NTPC could not provide any valid reason for the same.

The notification dated 31.12.2021 issued by the MoEF&CC prescribes fresh road maps for achieving 100% utilization for current ash and legacy ash. The said new notification also provides that "…..*any new as well as operational thermal power plant may be permitted an emergency or temporary ash pond with an area of 0.1 hectare per MW capacity*….".

As per *'Detailed Project Report for New Ash dyke of Stage-I at Masunihata NTPC Ltd, Kaniha'* submitted by the PP the existing plant has ash ponds measuring 750 acres and 840 acres for Stage-I and Stage-II respectively for ash disposal.

The EAC further noted that even after amendment granted by Ministry in 2018 for five years, PP has just installed pilot stage pipeline and disposing minimal quantity of fly ash in Jagannath mine void as of now and now it has been proposed to install permanent pipeline till 2023. As informed by PP, it has still 2.5 years to ash pond capacity even after running full capacity of power plant. PP may expedite the laying of said permanent pipeline which will prevent degradation of virgin land of 60.24 ha. Also, if PP increases utilization of fly ash to other consumers such as in cement making, road construction, brick

kiln then the life of already existing ash shall increase. There are various mines of M/s MCL wherein fly ash can be disposed in mine void. PP shall explore this mode instead of degrading agriculture land.

19.4.4 *The EAC, after detailed deliberations on the details submitted by the project proponent and presentation made during the meeting, opined that PP first comply with the target of 100% ash utilization in terms of Fly Ash notifications of the MoEF&CC and then submit the proposal for further consideration by the EAC. The project was* ***returned*** *on above points.*

Agenda No. 19.5:

Talcher Thermal Power Project, Stage-III (2x660 MW) in an area of 446 Acres at Village Talcher Thermal, Tehsil Talcher Sadar, District Anugu (Odisha) by M/s NTPC Limited – Amendment in Environment Clearance (EC) – reg.

[Proposal No. IA/OR/THE/246749/2021; F. No. J-13012/31/2009-IA. II (T)]

19.5.1 The proposal is for grant of amendment in Environment Clearance (EC) to Talcher Thermal Power Project, Stage-III (2x660 MW) in an area of 446 Acres at Village Talcher Thermal, Tehsil Talcher Sadar, District Anugu (Odisha) by M/s NTPC Limited.

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

i. Environmental Clearance for 2x660 MW (Stage-Ill, Expansion) Coal based Ultra Super Critical Talcher Thermal Power Project was accorded by MoEF&CC vide Letter no. J-13012/31/2009-IA.II (T) dated 12.09.2018.

ii. The units under Stage-I and II of the project have already been closed down since 31.03.2021. However, the construction of the project is yet to be started. M/s NTPC makes its best efforts for implementation of the conditions stipulated in EC. The construction of power plant have not been started.

iii. PP submitted proposal dated 22nd December, 2021 for amendments in the following EC conditions of letter dated 12.09.2018 due to technical constraints, closure of Stage 1&II of Talcher Thermal Power Station and the changed scenario. The amendments requested along with brief justification of the same are as follows:

Date of EC & condition No.	**Stipulation in EC**	**Amendment Requested**	**Justification for Amendment**
EC letter dtd. 12.09.2018 Condition no.(iv)	As the coal source is determined, the details regarding characteristics of	As the coal source is yet to be determined, the details	NTPC had conveyor system for transportation of coal under Stage-I & II, which shall also be used for Stage-III. Talcher TPS stage-III

	coal along with transport mode shall be submitted to Ministry. Coal transportation shall be done by rail only. In any event, coal shall not be transported by road.	regarding characteristics of coal along with transport mode shall be submitted to Ministry. Coal transportation shall be done by rail and conveyor system only.	(2x660 MW), NTPC shall take care of the norms laid down by Ministry of Power for transportation of coal by closed pipe conveyor system/ MGR system, whichever is applicable. Hence coal transportation by conveyor may also be added. Further, the provisions of MOEFCC Notification dated 21.05.2020 regarding transportation of coal shall be followed. In view of the above, the sentence "In any event, coal shall not be transported by road." may be deleted.
EC letter dtd 12.09.2018 Condition no. (v)	The ash which is sent to South Balanda mines shall kindly be mixed with 8% lime before disposing into the mines.	The condition may be deleted.	South Balanda mines have already been filled up and it is proposed to dispose off ash from Talcher Thermal Power Station Stage - III in Quarry No. 4 of Jagannath Mine void. Further NTPC shall follow the guidelines notified by MoEF&CC vide OM dated 28.08.2019 for ash filling in mine voids. Therefore, the condition regarding mixing 8% lime with ash may kindly be deleted.
EC letter dated 12.09.2018 Condition no.(xvi)	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.	Harnessing solar power within the premises of the plant particularly at available roof tops and floating solar plants on raw water reservoir shall be carried out and status of implementation including actual generation of solar power shall	NTPC is already planning to install rooftop solar plants within the premises. However, in addition to rooftop solar, NTPC also intends to install floating solar plants on raw water reservoir. The condition may be modified accordingly including floating solar power plant.

		be submitted along with half yearly monitoring report.	
EC letter dated 12.09.2018 Condition no. (xxv)	No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close coordination with the State Pollution Control Board.	The condition may kindly be deleted	It is proposed to dispose off ash from Talcher Thermal Power Station Stage- III in Quarry No. 4 of Jagannath Mine void by following the guidelines notified by MoEF&CC vide OM dated 28.08.2019 for ash filling in mine voids. Therefore, the condition may kindly be deleted.

19.5.3 *The EAC after detailed deliberation on the information submitted and as presented during the meeting* ***recommended*** *the proposal for amendment in EC condition to Talcher Thermal Power Project, Stage-III (2x660 MW) in an area of 446 Acres at Village Talcher Thermal, Tehsil Talcher Sadar, District Anugu (Odisha) by M/s NTPC Limited, under the provisions of EIA Notification, 2006*

and its amendments therein subject to additional conditions as detailed below:

[A] Environmental Management

i. *Coal transportation shall be done by rail only and closed conveyor system only. In any event, coal shall not be transported by road. Further, PP shall follow Ministry's Notification dated 21st May, 2020.*
ii. *PP shall complete 33% tree plantation in the periphery of the project area with miyawaki technique within strict timelines.*

[B] Miscellaneous

iii. *PP shall install solar power within premise of the plant at available roof tops and floating solar plants on raw water reservoir within certain timeline and status report shall be submitted to Ministry's IRO with its six monthly monitoring report.*
iv. *Other conditions of the EC letter dated 12th Spetember,2018 shall remain unchanged.*
v. *PP shall follow Ministry's guidelines vide OM dated 28th August, 2019 for ash filling in mine voids and monitor the heavy metal in Groundwater and Surface water quarterly. PP shall also check pH of supernatant water in mine void and if required mixing of lime with ash may be done.*

Agenda No. 19.6:

Expansion of Captive Power plant of 3000 MW (from 2880 MW to 5880 MW) Projects in area of 15.99 ha located at Reliance Industries Limited (RIL) Jamnagar Manufacturing Division (JMD) at Village Motikhavdi, Tehsil Lalpur, District Jamnagar (Gujarat) by M/s Reliance Industries Limited –Terms of References (TOR) – reg.

[Proposal No. IA/GJ/THE/247793/2021; F. No. J-13012/4/2021-IA. I (T)]

19.6.1 The proposal is for grant of Terms of Reference to Expansion of Captive Power plant of 3000 MW (from 2880 MW to 5880 MW) Projects in area of 15.99 ha located at Reliance Industries Limited (RIL) Jamnagar Manufacturing Division (JMD) at Village Motikhavdi, Tehsil Lalpur, District Jamnagar (Gujarat) by M/s Reliance Industries Limited.

19.6.2 The proposal no. IA/GJ/THE/239074/2021 of same project was earlier considered by reconstituted EAC in its 17th EAC meeting held on 30th November, 2021 and the project proposal was return due certain deficiencies in proposal submitted by PP. Therefore, PP submitted the fresh proposal for grant of Terms of Reference along with point wise reply to additional details sought by the EAC in 17th EAC meeting. PP vide letter dated 27th December, 2021 submitted the following:

Query 1: PP shall submit Pre-Feasibility Report (PFR) for Thermal power plant and same shall be submitted including proposed baseline data and impact on marine life.

Reply: The revised PFR is has been submitted in Form 1 in Parivesh Portal.

Query 2: PP shall revise Form- 1 on PARIVESH Portal and further submit with proper and approximate data of Environment sensitivity parameters.

Reply: Form - 1 is revised and uploaded in PARIVESH portal.

Query 3: PP shall submit breakup of 3000 MW capacity plant with specified area, number of units, percentage and source of fuel to be used etc. in detail.

Reply: The power requirement for each individual plant for the growth projects has been estimated based on available data and a capacity of 3000 MW has been estimated to be requirement for the new projects, for which the Environmental Clearance for CPP has been applied for as an interlinked project. The power plants will be operated on gaseous fuels to the maximum extent possible and low sulphur liquid fuel ("S" content below 0.5 %) will be used in case of non - availability of gaseous fuels. Syngas will be made available from the existing Pe/coke Gasification Complex. Natural Gas will be sourced from domestic producers to the extent of its availability and balance through import from across the globe. Natural gas will be received through existing Pipeline network. The details of proposed CPPs, to be located within the Jamnagar complex, are as indicated in Table /. The locations of proposed CPPs, numbered 1 through 5 as indicated in Table I, are indicated in the. kml file.

S.no.	Description	Area #1	Area #2	Area #3	Area #4	Area #5	Total
1	Area, hectare	8.91	2.72	0.19	1.92	2.25	15.99
2	Coordinates	**1.** 22°20’ 31.46” N – 69°53’ 57.79” E **2.** 22°20’ 31.14” N – 69 54’ 08.35” E **3.** 22°20’ 22.22” N – 69 54’ 08.35” E **4.** 22°20’ 22.08”N – 69 53’ 58.14”E	**1.** 22°19’ 46.44” N – 69°53’ 02.28” E **2.** 22°19’ 46.25” N – 69°53’ 10.03” E **3.** 22°19’ 42.48” N – 69°53’ 09.74” E **4.** 22°19’ 42.48”N – 69°53’ 02.38”E	**1.** 22°19’ 01.23” N – 69°52’ 19.09” E **2.** 22°19’ 01.15” N – 69°52’ 20.42” E **3.** 22°18’ 59.72” N – 69°52’ 20.49” E **4.** 22°18’ 59.62”N – 69°52’ 19.17”E	**1.** 22°18’ 48.61” N – 69°51’ 21.09” E **2.** 22°18’ 48.29” N – 69°51’ 24.81” E **3.** 22°18’ 42.46” N – 69°51’ 24.97” E **4.** 22°18’ 43.12”N – 69°51’ 21.27”E	**1.** 22°19’ 35.01” N – 69°51’ 02.81” E **2.** 22°19’ 35.16” N – 69°51’ 09.93” E **3.** 22°19’ 30.45” N – 69°51’ 10.10” E **4.** 22°19’ 33.13”N – 69°51’ 02.89”E	
2	Configuration of machines						

a	GT - 30 MW	2	0	1	0	1	4
b	GT - 110 MW	2	1	0	3	3	9
c	GT - 240 MW	3	1	0	0	0	4
d	STGs	7	2	0	0	2	11
3	Power Production, in MW						
a	GTs	1,000	350	30	330	360	2,070
b	STGs	600	170			160	930
c	Total	1,600	520	30	330	520	3,000
3	Fuel Consumption, KTPA						
a	Natural Gas	1,887	659	65	663	728	4,002
	Or						
b	SynGas	7,549	2,638	260	2,652	2,911	16,009
	Or						
c	Liquid Fuel; <0.5% S	2,272	794	78	798	876	4,819

The proposed GTs will be capable of operating on any of the fuels. However, the usage of gas will be maximized and liquid fuels will be used only as a backup / stand-by arrangement in case of shortage / non-availability of gas.

Query 4: PP shall submit current data of continuous ambient air quality and manual air quality data and its comparison with annual average data.

Reply: The six-monthly monitoring report w.rt AAQ monitoring (April'21 to September'21) was submitted by PP and deliberated during appraisal.

Continuous AAQ Monitoring, RIL JMD, (April'21 to September'21)

POLLUTANT	MINIMUM	MAXIMUM	AVERAGE
Particulate Matter <2.5, $PM_{2.5}$ ($\mu g/m^3$)	8.42	66.16	25.05
Sulphur Dioxide - SO_2 ($\mu g/m^3$)	6	32	13
Nitrogen Dioxide - NO_2 ($\mu g/m^3$)	26	49	37
Ammonia – NH_3 ($\mu g/m^3$)	6	56	36

Ozone - O_3 ($\mu g/m^3$)	55	128	95
Benzene – C_6H_6 ($\mu g/m^3$)	0.40	4.89	3.04

Query 5: PP shall submit comparative chart including previous ECs granted with number of Gas Turbines/ Steam Turbines and its capacity (as detailed in EC letters and EIA / EMP report) vis-~-vis with their existing capacity and CTO granted for DTA, SEZ area and C2 Complex them in with timeline and desired expansion capacity.

Reply: The existing Jamnagar complex consists of two petroleum refineries (OTA & SEZ) and a petrochemicals complex (C2). Power for the Jamnagar complex is supplied by CPPs set up after obtaining necessary approvals granted as apart of each environmental clearance by the MoEFCC. The summary of the existing power plants, their approvals and their present status is as follows:

Details of existing CPPs at Jamnagar complex

Sr. No.	Year of grant of EC	CPP Capacity as per EC	Capacity as per CTO	Number of GTs/STGs	Location
1.	1995	340 MW	340 MW	8X30 GTs 100 STG	DTA Refinery
2.	2005	340 to 780 MW	450 MW	3 X110 GTs 120 STGs	SEZ Refinery
3.	2010	2100 MW	1227 MW	2X126GTs 4X30GTs 4X 10GTs 415 STG	C2 complex - Pet-coke 347 MW, Gasification complex –880 MW
Total		**2880 MW**	**2017 MW**		

Query 6: Scope for in-house generation of Renewable energy to cater the local needs shall be studied and a detailed plan shall be submitted emphasizing the past experience.

Reply: RIL has envisioned to achieve Net Carbon Zero by 2035. RIL aims to achieve this by:

- Transition from fossil fuels to renewable fuels for captive energy demand.
- Transition from transportation fuels to chemical building blocks integrated with sustainable downstream derivatives.
- Scaling up recycling of materials and maximising circularity across the value chains.
- Achieving CO_2 capture, storage and conversion to useful chemicals and materials at

competitive costs.

- Maximising use of biofuels and using bio-pathways to fix CO2 and facilitate conversion to renewable fuels and materials.

In view of the above the transition to renewables is being planned as per the ambition and will be implemented once the overall strategy is finalized.

Query 7: Current practice of disposal plan of brine shall be prepared and technologies available for recovering resources from brine shall studied considering Brine as a resource not as a waste**.**

Reply: The return sea water is presently discharged at a location recommended by N/0 after conducting Marine Environment Impact Assessment and ecological study of the region. The location has been granted CRZ approval by the Ministry for discharge of up to 32,000 m/hr. The brine being discharged is presently not in a position to be used for any other uses. There have been salt pan owners in the vicinity who have made attempts to probably utilize it and have not succeeded. In the present project as there is a Ch/or Alkali plant also proposed it will be endeavored to utilize some part of the return sea water in it. However, the quantity that can be possibly used will be very small as compared to its generation.

Query 8: PP shall submit HFL of river and level of dam which is touching the boundary of the project and details regarding whether it is perennial or non-perennial and source of contamination

Reply: The South Eastern end of the proposed site has a water reservoir "Panna Dam" near lo its edge. The boundary of the project will be located about 500 m from the reservoir and the plants will be located further from the boundary. The present ground level of the complex varies from +56 to +16m above MSL and is above the HFL observed in the area. As per lye design philosophy of all projects al Jamnagar all possible contamination of storm water is arrested at source and sent for treatment to the respective ETPs associated with that area. Similar design basis will ensure that no contaminant can enter the water body. There is no possibility of flooding as per the past data available. The Panna River on which the reservoir is located is a seasonal river and is only active during monsoon period. In case of a heavy monsoon, water from the reservoir overflows into the Gulf of Kutch. The water from the reservoir is mainly used by villagers for irrigation, washing, cattle washing etc. and is not used as potable water.

Query 9: PP shall submit number of villages present in the buffer zone and 1 km of the project boundary with details of current impact on nearby villages.

Reply: There are no villages within 1 Km of the project boundary.

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

i. This complex is a prime example of cluster development, which refines crude oil to produce

various petroleum products and petrochemical feedstocks and products, comprising of the following interlinked clusters:

- Domestic Tariff Area or DTA Refinery
- Special Economic Zone or SEZ Refinery
- Petrochemical complex
- Gasification complex
- Utilities, offsites and infrastructure facilities

ii. The proposed increase in Power generation capacity by 3,000 MW using gas / liquid fuels, will be set up in an area of ~ 15.99 hectares of vacant barren land in possession of RIL. The proposed 3,000 MW CPPs will provide power to the proposed oil-to-chemicals project which in turn will boost India's development and prosperity objectives.

iii. Power requirement during the construction phase is available within the complex. Gas Turbines (GTs) and steam turbine generators (STGs) are proposed to be used for generation of power. Heat Recovery Steam Generators (HRSG) attached to gas turbines and auxiliary boilers will produce the required steam for steam turbines and plant use. The power requirement will be met by installing Gas Turbines and STGs.

iv. The power requirement of 3,000 MW for the proposed project will be met by installing 4 Gas Turbines of 30 MW capacity each, 9 Gas Turbines of 110 MW capacity each and 4 Gas Turbines of 240 MW capacity each. Heat Recovery Steam Generators and Auxillary boilers are installed to meet steam requirement.

v. The 3,000 m3 /h water requirement for the proposed captive power plant (CPP) will be sourced from the proposed sea water desalination facility. The estimated capital expenditure for the proposed CPP is Rs. 10,000 Crore.

vi. Baseline environmental monitoring has been carried out by M/s NEERI, Nagpur during winter season of 2020 to establish the baseline status of the environment in the study area within 10 km from the project site.

vii. The proposed power plants will be operated mainly on gaseous fuel (Natural Gas / Refinery Fuel Gas / Syngas from gasification / re-gasified LNG) with low sulphur liquid fuel to be used to the extent necessary, in case of non-availability of gaseous fuel. The emissions from the power plant will be well within the stipulated standards. The NOx emissions will be controlled by using low NOx burners and establishing standard operating procedures for the units.

viii. **Waste management and Disposal**: The wastewater generated from the proposed projects will be characterized and quantified to design the required treatment methodology to meet the National standards. The hazardous waste generation (mainly used oil) will be minimized and

disposed as per the Hazardous and Other Wastes Rules, 2016. RIL JMD's established Environmental Management System will be extended to cover the proposed projects.

ix. **Employment Generation (Direct and Indirect)**: Approximately 5,000 construction workers and 100 operational workers will benefit from the proposed project. The proposed projects will also provide indirect employment to the local inhabitants based on their skill and availability. The construction workers will be housed in well-designed accommodation with access to proper infrastructure and sanitation facilities.

x. **Rehabilitation and Resettlement Plan**: Rehabilitation and resettlement is not envisaged as the project is proposed in uninhabited barren land which is already under RIL's procession.

xi. **Estimated Project Cost**: The estimated capital cost of the proposed project is Rs. 10,000 Crores

19.6.4 *The EAC after detailed deliberation on the information submitted and as presented during the meeting* ***recommended*** *the proposal for grant of Standard ToR for conducting EIA study for expansion of Captive Power plant of 3000 MW (from 2880 MW to 5880 MW) Projects in area of 15.99 ha located at Reliance Industries Limited (RIL) Jamnagar Manufacturing Division (JMD) at Village Motikhavdi, Tehsil Lalpur, District Jamnagar (Gujarat) by M/s Reliance Industries 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. PP shall submit exact percentage of High speed diesel/Liquid Fuel (in case of non-availability gas fuel) and impact after using liquid fuel shall be assessed and mitigation measures shall be provided in EIA/EMP report.

ii. PP shall submit chemical analysis of soot/ash generated by using liquid fuel from already existing Power Plants.

iii. Marine impact study from recognized expert institution shall be carried out and to be incorporated in EIA/EMP study.

iv. Brine disposal and Management plan shall be studied and to be incorporated in EIA/EMP study.

v. Separate chapter on cumulative impact study and mitigation measures of complex specially in terms SO_x, NO_x, $PM_{2.5}$ and PM_{10} shall be carried out and to be incorporated in EIA/EMP study. Further, Air pollution impact assessment should consider all sources of pollution in the area.

vi. Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.

vii. PP during presentation informed that M/s RIL envisages Net Carbon Zero by 2035, accordingly, PP shall submit plan of action for Net Carbon Zero by 2035 and usage of renewable source of energy in order to replace conventional source of energy.

viii. PP shall submit action plan for using treated Sewage/Domestic wastewater for its operations.

[B] Miscellaneous

ix. Site visit of EAC sub-committee members shall be carried out before appraisal of EC for further specific conditions in terms of marine ecology, insitu other measures for mitigation of environment pollution due to proposed Power Plant.

x. PP shall submit CRZ clearance, if applicable, for the project.

xi. PP should present the real time aerial footage by using Drone and video of the project area during the appraisal by the EAC.

xii. 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.

Agenda No. 19.7:

Expansion of 1600 MW (2x800MW) Bandhaura Ultra Super Critical Thermal Power Plant in an area of 920 Acres at Village Bandhaura, Nagwa, Karsualal and Khairahi, District Singrauli, Tehsil Mada, (Madhya Pradesh) by M/s Essar Power (M P) Limited – Terms of References (TOR) – reg.

[Proposal No. IA/MP/THE/247354/2021; F. No. J-13011/56/2006-IA.II (T)]

19.7.1 The proposal is for grant of Terms of References for Expansion of 1600 MW (2x800MW) Bandhaura Ultra Super Critical Thermal Power Plant in an area of 920 Acres at Village Bandhaura, Nagwa, Karsualal and Khairahi, District Singrauli, Tehsil Mada, (Madhya Pradesh) by M/s Essar Power (M P) Limited.

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

i. M/s Essar Power (M P) Limited (EPMPL**)** proposed to developed as an expansion of the existing 2 x 600 MW units at the site and all the necessary infrastructure to cater the requirement of the enhanced capacity will be developed while also using the facilities of the existing plant. The identified plot is located at 24°0'28.90"N latitude / 82°24'49.94"E longitude.

ii. The Project is conceptualized to be operated by utilizing coal from nearby commercial coal

mines and water from the Rihand reservoir. For auxiliaries' viz. Coal Handing, Ash Handling and Plant Water System, it is proposed to utilise the latest technology with adequate margin to ensure high availability of the Project.

iii. M/s Essar Power (MP) Limited (EPMPL) owns and operates a 1200 MW (2 x 600 MW) coal based Thermal Power Station situated at villages Bandhaura, Khairahi, Karsualal and Nagwa in Singrauli District in Madhya Pradesh. Unit-1 of the Power Station was commissioned in December 2012 and Unit-2 was commissioned in May 2017.

iv. Environment Clearance was granted by MoEF vide letter dated 20th April, 2007 to Mahan Super thermal power project (4x500 MW) at Singrauli Tehsil, Sindh district, Madhya Pradesh by M/s Essar Power (M P) Limited. Subsequently, amendments were granted on 10th February, 2009, 23rd August, 2013 and 8th April, 2016.

v. EPMPL was admitted into the Corporate Insolvency Resolution Process (CIRP) vide the order dated 29th September 2020 passed by Hon'ble NCLT Principal Bench New Delhi (NCLT) and Mr. Ashish Chhawchharia was appointed as Resolution Professional. Further vide its order dated 01st November 2021, the Hon'ble NCLT pronounced approval of the Resolution Plan submitted by Adani Power Limited (APL), thereby concluding the CIRP of the Company. Pursuant to the said order and as per the terms of the Resolution Plan of APL, an Implementation & Monitoring Committee (IMC) has been constituted which consists of (i) 1 (one) nominee of the Designated Lender (ii) 1 (one) member appointed by APL as its nominee; and (iii) Mr. Ashish Chhawchharia (the erstwhile RP), and the powers of the Board of Directors of EPMPL are now exercised by the IMC till Effective Date under Resolution Plan. APL is in advance stage of Implementation of Resolution Plan.

vi. Salient features of the proposed project as below:

I	**General:**		
1	Project Authority (SPV)	:	Essar Power (MP) Limited
2	Project	:	Expansion by addition of 1600 MW (2x800 MW) Ultra Super-Critical Thermal Power Project.
3	Selected Location	:	Bandhaura, Nagwa, Karsualal and Khairahi village, Singrauli District, Madhya Pradesh
4	Nearest Major Town	:	Waidhan and Singrauli
5	Seismic Zone	:	Zone-IV as per IS 1893.
6	Access by Road	:	State Highway (SH14) is passing about 16 km from the site
7	Access by Rail	:	Singrauli Station is located at 52 km from Project Site.
8	Access by Air	:	Nearest Airport is at Varanasi at a distance of 280 km.
9	Access by Sea	:	Nearest Seaport is at Dhamra at a distance of 770 km.

II	**Preliminary Project Particulars:**		
1	Main Fuel	:	Coal from Commercial Coal Mines (GCV 3000-4200 Kcal /Kg)
2	Fuel Transportation	:	Through Long Belt conveyor (LBC) system
3	Water	:	From the Rihand Reservoir at 36 km from Site.
4	Land	:	920 Acres of land is available for the Power Project
5	Layout Features	:	2 X 800 MW Ultra Super-Critical Units
III	**Technical Features:**		
1	Power Generating Unit	:	Two units of 800 MW turbine generator sets fed by steam from coal fired P.F. boiler operating at Ultra Super-critical range.
2	Cooling System	:	Closed recirculating condenser cooling system with induced draft cooling tower.
3	Coal Handling System	:	Coal handling facility, which comprises receipt of coal from Mines through LBC system, with on-line existing & new crushing and stacking by existing & new stacker-cum-reclaimer in the existing & new coal yard and finally feeding the bunker level conveyors.
4	Ash Disposal System	:	Provision will be made for disposal of fly ash in dry form to adjacent Cement Plants/ Mine back filling. Provision will be made for disposal of ash in high concentration slurry form.
5	Power Evacuation	:	At 400 kV level to State Transmission Unit (STU)
6	Environmental Aspects	:	Elaborate arrangements for Flue gas desulphurization (FGD) and Selective Catalytic Reduction (SCR) systems complying with emission norms as per latest MoEF & CC. Independent steel wet flue for each unit, down- stream of FGD of suitable height as per MoEF & CC guidelines and an adequately designed electrostatic precipitator with more than 99.99% efficiency are envisaged. Wastewater quality to be maintained as per MoEF & CC notification. Zero Plant Discharge facility shall be present since the cooling water, blow down water, wastewater and ash water would be recycled back to the system after suitable treatment for reuse. For coal transportation from mines, pipe conveyor technology will be adopted to mitigate environmental concerns.
IV	**Other Facilities:**		

1	Township	:	Residential Township with civic amenities shall be developed in the separate location and EC will be obtained, if required.
2	Project Time Frame	:	54 months from Zero Date i.e., the date of 'Financial Closure' for Commercial Operation of Unit#3 and 60 months for Unit#4 of expansion project.

vii. **Land Requirement:** A land area of about 920 Acres has been identified for the Project which includes the existing 2 x 800 MW units, land area for accommodation of coal stockyard, water reservoir, roads, green verge, etc.

viii. **Coal Requirement:** For the presently proposed power Project of 1600 MW, the maximum daily coal requirement @ TMCR would be about 22,002 TPD and annual fuel requirement is estimated about 6 - 7 Million MTPA at 85% plant load factor with coal GCV of 3,700 kCal/kg. Coal requirement for existing 2x600MW (Ph-I) shall be 5.5 million MTPA as per existing Environmental Clearance of Ph-I. Coal receipt through LBC- (Long Belt Conveyor System) system from nearby mines

ix. **Water Requirement:** The total consumptive water requirement for 1,600 MW Project capacity is 4000 m3 /hr (35.04 MCM/year considering specific water consumption limited to 2.5m3 /hr/MWh by MoEF. It may be noted that the allocation of 71.54 MCM/year received from Water Resource Department of the State for the existing 1,200 MW Project is adequate for the proposed 1,600 MW Project. Raw water supply to the proposed Plant is planned from an existing intake on the Rihand Reservoir through a pipeline. The site is located at a distance within 36 km from the Rihand Reservoir.

x. **Coal handling system**: The Coal Handling Plant for the Project is designed to operate with coal from nearby mines to be transported through suitable conveyor system. The system design would ensure a margin of 10% minimum in capacity. The design capacity of Coal Handling System -for receiving will be 2000 TPH. Existing In-plant coal handling system is designed for 2500 TPH which will be used to existing as well as proposed units. Further, 1 no. new crusher house, 2 nos. coal stock piles, 1 no. stacker reclaimer and conveyor system for stacking & reclaiming and feeding to existing conveyor system are also envisaged.

xi. **Ash Handling System**: For each unit, Bottom ash will be collected in wet form; while fly ash will be collected in dry form to facilitate utilization. Fly ash and bottom ash shall be disposed via High Concentration Slurry disposal (HCSD) system to Ash dyke in case of exigencies; provision to be considered for transportation of ash (in semi-wet/conditioned form) to Mine void filing. Ash extraction system is unitized basis and ash disposal systems will be common for Two (02) units. Provision for truck disposal of both bottom and fly ash is provided.

It is envisaged that the bottom ash will be collected in wet. Efforts will be made to utilize

100% bottom ash as per MoEF guidelines. Un utilised bottom ash if any shall be disposed to the ash pond/mine void filling Ash collected in Bottom ash hopper (B.A + Eco Ash) shall be transported to hydro bins through jet pumps and slurry pumps. Inside the hydro-bins, water shall be removed from the slurry.

19.7.3 The EAC during deliberations noted the following:

EAC in the present meeting (19th meeting) deliberated on the information submitted (Form 1, PFR, etc.) and noted that the proposal is for grant of Terms of References for Expansion of 1600 MW (2x800MW) Bandhaura Ultra Super Critical Thermal Power Plant in an area of 920 Acres at Village Bandhaura, Nagwa, Karsualal and Khairahi, District Singrauli, Tehsil Mada, (Madhya Pradesh) by M/s Essar Power (M P) Limited.

Environment Clearance was granted by MoEF vide letter dated 20th April, 2007 to Mahan Super thermal power project (4x500 MW) at Singrauli Tehsil, Sindh district, Madhya Pradesh by M/s Essar Power (M P) Limited. Subsequently, amendments were granted on 10th February, 2009, 23rd August, 2013 and 8th April, 2016.

The EAC further noted that Unit-1 of the Power Station was commissioned in December 2012 and Unit-2 was commissioned in May 2017 out of which only one unit is in operation. It was also observed that till date no site visit has been conducted by Regional Office of MoEF&CC.

The EAC observed that M/s EPMPL was admitted into the Corporate Insolvency Resolution Process (CIRP) vide the order dated 29th September 2020 passed by Hon'ble NCLT Principal Bench New Delhi (NCLT) and M/s Adani Power Limited (APL) is in advance stage of Implementation of Resolution Plan.

The EAC noted that Project site is located 19 km away from severally polluted area of Singrauli region. Also, Mohanban Reserve forest is located 0.42 km in NNW direction to project site boundary.

19.7.4 *The EAC after detailed deliberation on the information submitted and as presented during the meeting* ***recommended*** *the proposal for grant of Standard ToR for conducting EIA study for expansion of 1600 MW (2x800MW) Bandhaura Ultra Super Critical Thermal Power Plant in an area of 920 Acres at Village Bandhaura, Nagwa, Karsualal and Khairahi, District Singrauli, Tehsil Mada, (Madhya Pradesh) by M/s Essar Power (M P) 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. PP shall conduct Carrying Capacity study and Cumulative Impact Assessment Study (separate chapter each) considering 15 km buffer area.

ii. PP shall submit the action plan for installing the pipe conveying system from its Dhirauli Coal mine (as proposed) to the project site, with timelines for all existing and proposed expansion

units.

iii. *Baseline Study Heavy metals in Ground water, Surface water and soil to be carried out and incorporated in EIA/EMP report*

iv. *Details pertaining to water source discharge treatment should be provided.*

v. *Status of green belt (33% of total project cover area) across the periphery of the project boundary shall be provided with a video clip.*

vi. *Transportation plan of ash (bottom ash and fly ash) into ash dyke shall be submitted and shall be incorporated in EIA/EMP report.*

vii. *Ash Utilization of last 5 years, 100% ash utilization plan for next 5 years along with timeline need to be submit. (Accordingly, ash dyke area will be decided by the EAC).*

viii. *PP shall submit action plan for using treated Sewage/Domestic wastewater for its operations*

[B] Disaster Management

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

x. *Slope Stability study of ash Dyke shall be carried out in consultation with reputed institution and incorporated in EIA/EMP report.*

xi. *Scientific plan for controlling the pollution from ash dyke so that it cannot act a source of pollution, be submitted.*

[C] Miscellaneous

xii. *PP shall submit letter from State Pollution Control Board that the project area does not come under Critically or Severely Polluted Areas.*

xiii. *PP shall submit letter from PCCF that area does not come under Wildlife Sanctuary/National Park and any wildlife corridor with certified map.*

xiv. *Certified compliance report of previous EC to be submit certified by Regional office of the MoEF&CC.*

xv. *PP shall submit details of court cases and its status for the project.*

Agenda Item No. 19.8:

Rajpura Thermal Power Plant (2x700 MW) in an area of 1278 Acres at Village Nalash, Tehsil Rajpura, District Patiala, Punjab by M/s Nabha Power Limited – Amendment in Environment Clearance (EC) – reg.

[Proposal No. IA/MP/THE/247046/2021; F. No. J-13011/44/2008-IA.II (T)]

19.8.1 The proposal is for grant of amendment in Environment Clearance (EC) to Rajpura Thermal Power Plant (2x700 MW) in an area of 1278 Acres at Village Nalash, Tehsil Rajpura, District Patiala,

Punjab by M/s Nabha Power Limited.

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

i. Environmental Clearance was granted on 3rd October, 2008 by MoEF to 1320 MW Rajpura Thermal Power Plant at Village Nalash, Tehsil Rajpura, District Patiala, Punjab by M/s Nabha Power Limited. Subsequently, change in configuration from 2x660 MW to 2x700 MW was granted on 15th November, 2010 and extension in EC validity was accorded on 5th February, 2014. The First Unit of Thermal Power plant was commissioned in February, 2014 and Second Unit was commissioned in July, 2014.

ii. The project is located at 30° 32' 36 to 30" 33' 51" N and 76° 33' 42" to 76° 35' 05" E. The coal requirement is estimated as 5.8 million TPA, which will be obtained from SECL mines, Water requirement is estimated as 4500 m^3/hr, which will be obtained from Rajpura Distributary of Bhakra main line. The public hearing for the project has been held on 4th July, 2008. No ecologically sensitive area is located within a radius of 10 km from plant boundary. Total cost of project is Rs 5500.00 crores, which includes Rs 410.10 crores for environmental protection measures.

iii. The project proponent submitted online proposal no. IA/MP/THE/247046/2021 on 27th December, 2021 seeking amendment in Environmental Clearance dated 10.05.2013 read with amendment dated 5th February, 2014, clause 3, condition number xlv, which mentions is as under:

"*An amount of Rs.22 crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs. 4.4 crores per annum shall be earmarked as recurring expenses for CSR activities. Details of the activities undertaken shall be submitted within one month along with road map for implementation"*

Amendment sought:

The PP has requested that delete the condition number xlv of clause 3 of EC dated 5.2.2014 and issue suitable amendment in this regard.

Justification from PP:

PP submitted that stipulation of condition pertaining to CSR by MOEFCC in EC under the Environment (Protection) Act 1986, have created ambiguity in multiple reporting and duplication. This is because CSR activities are covered exclusively under section 135 of the Companies Act 2013.

19.8.3 PP vide letters dated 12th January, 2022 and 14th January, 2022 submitted the additional

information sought by the EAC members during the meeting. PP submitted following:

1) Public Consultation and Compliance: The public consultation for the project was held on 04th July 2008 and its minutes has been submitted.

The issues raised during the public consultation were largely related to the compensation for land acquired for the project, and same have been addressed by NPL.

Other than land related issues, other issues raised have also been addressed as detailed below:

a) With reference to Point No. 7.1 of Annex-1 – State of the art technology-based air pollution control (APC) equipment (Electrostatic Precipitators) are installed to capture the dust emission and stack emissions are being maintained to meet the emission standard less than 50mg/Nm^3. The real time stack emission parameters (Particulate Matter, Sox, NOx etc) are transmitted to the portal of CPCB.

b) With reference to Point No. 9.1 of Public hearing it was submitted that all the trade effluents generated in NPL are adequately treated and/ or recycled as process water. This has been possible because of the continuous running of 360 TPH ETP/RO system and ash water recovery system. These measures have not only ensured zero liquid discharge (ZLD), but also significantly reduced fresh water consumption for the processes. We are currently operating at a Raw water consumption rate of -1.9 m3/Mwh against a permissible 3.5 mg3/Mwh. It is submitted that NPL does not discharge any effluent out of its boundary, thus qualifying as a ZLD plant.

In view of the above submissions, it is submitted that NPL is in full compliance of the issues raised during the public consultation for the project.

2) Environmental Management Plan: For grant of the EC, the environmental management plan (EMP), a part of EIA studies, was submitted with MoEF&CC, where the implementation of environmental measures; mainly greenbelt, ash utilization, water harvesting, environment management group and staff training were envisaged.

To ensure these compliances, following measures have been adopted for environmental management and are ongoing on continuous basis:

a) Extensive plantation in and around the plant covering more than 1/g3 of plant area
b) 100% ash utilization is being ensured
c) Conservation of Water by maintaining Cycle of Concentration (COC)
d) Plant operation based on Zero Liquid Discharge (ZLD) Concept
e) Installation of Air Pollution Control (APC) devices i.e. Electrostatic precipitators (ESP) at Main boiler Stack
f) Control of fugitive emissions during coal handling through dust suppression, wind screens around coal yard etc.
g) Online Continuous Air Quality monitoring for measurement of dust levels inside Plant
h) Acoustic Enclosures are installed for Noise mitigation
i) Sewage Treatment Plant (STP) of 48 KLD capacity to treat domestic sewage from industry.

j) Hazardous waste, E-waste, Biomedical Waste Management

k) Strict measures are adopted for the control of following:

- Dust: Electrostatic precipitators (ESP), Bag filters, Fixed and portable water sprinklers, closed/covered conveyors, fully mechanised coal handling and Ash Handling Systems, use of PPEs etc.
- Heat: Insulation and cladding of hot parts (boiler, steam pipelines etc.), installation of Air handling units, Air Conditioners to mitigate heat effects.
- Noise: Acoustic barrier/enclosures, timely maintenance of Equipment, PPE's, Green Belt etc.
- Vibration: Vibration studies of Equipment and timely maintenance of the same.
- Open areas inside plant are either grassed or concreated to control the fugitive emissions
- A thick three tier plantation is developed around Ash dyke to control fugitive emissions
- Rainwater harvesting pits are operational and have been made as per the Rainwater harvesting scheme approved by CGWA.

The detailed report in this regard has been submitted, which is also submitted as part of Environmental Statement to regional office of MoEF&CC at Chandigarh every year.

3) Expenses Incurred for Environment Protection Measures: Each year, NPL incurs significant expenses to ensure effective implementation of environmental guards for prevention and protection of environment.

The expense incurred from FY 18 to FY 21 are as following:

Financial Year	Amount Spent (Rs. Cr)
FY 18	23.68
FY 19	37.38
FY 20	26.57
FY 21	25.87

It is submitted that details of these expenses are shared with the regional office of MoEF&CC, as part of Annual Environmental Statement. We hereby undertake that NPL shall continue to incur these expenses as required, for protection of the environment and NPL shall always remain at forefront on environmental initiatives.

4) Nabha Power Limited is certified with latest ISO standards (9001:2015, Quality Management System), (14001:2015, Environmental Management System), (45001:2018, Safety Management System) and (50001:2018, Energy Management System) by LRQA, UK to bring continual improvement on front of Quality, Environment, Safety and Energy.

5) Nabha Power Limited is one of the first IPPs in the country which has taken the lead and is in the process of installing the Flue Gas Desulphurization (FGD) system.

It is further submitted that Nabha Power Limited is an environmentally and socially responsible power generation company with an unblemished track record of implementing and operating with highest standards of performance and efficiency, while ensuring strict and rigorous compliance with the applicable environmental regulations.

6) Nabha Power Limited has also created infrastructure for sanitation, roads, cross drains, health, skill development, pond rehabilitation, school adoption and education, disaster management during COVID etc. in 49 villages around the plant. Some of the key highlights are:

- To improve the sanitation conditions in villages, NPL has constructed the drainage network in 30 villages to remove wastewater, which was otherwise accumulating on the streets.
- NPL undertook pond development to treat the contaminated water coming out from households. The ponds were cleaned, desilted and it is now being used for irrigation, fisheries, and other allied activities
- To ensure better health facilities, NPL has refurbished and upgraded seven Primary Health Centers (PHC) in nearby villages and equipped them with various medical equipment.
- NPL has been actively engaged in enhancing green cover in nearby villages. So far, more than 1 lakh trees have been planted in schools, panchayat spaces, open areas and along the roads.
- NPL has developed all-weather internal roads (25 Km) in about 34 villages, providing safe passage to the commuters. These efforts have improved the connectivity in the villages and provided smooth travel.
- Various initiatives have been taken for improving the existing infrastructure of government schools, along with skill enhancement of students. NPL has also provided grants to meritorious students from economically backward classes to help them pursue higher studies.
- NPL has provided grants to daughters born in adjoining villages and has provided financial help to girls during wedding.
- NPL provided ration to 3700 families during COVID to ensure that basic requirements were met.
- NPL installed an oxygen plant along with electric generator in Civil Hospital, Raikot to ensure that patients from nearby villages had facility of oxygen support, if needed.
- More than 3300 girls were trained as beauticians, tailors, hand embroiderers, jute bag manufacturers to provide them long term self-employment.
- 36 deserving children were sponsored, and the entire fee was paid by NPL to undergo training in 111, Rajpura. Another 19 girls were similarly fully sponsored to undergo GNM course in Swift College, Rajpura.

It is submitted that Nabha Power Limited shall continue its work to support the population living in villages around the plant and contribute towards the economic development while improving the quality of life of the local community and society at large.

With reference to the specific issue regarding Corporate Environment Responsibility (CER), we would further like to submit that MOEF&CC, vide its Office Memorandum dated 1.5.2018, has specifically

mentioned in para 6 clause (IX) that CER is not applicable in name change, transfer and amendment involving no additional project investment. In view of the same, CER should not be applicable given that Nabha Power Limited is an operational plant and amendment to EC does not involve any additional project investment.

Subsequently, MOEF&CC, vide its Office Memorandum dated 30.9.2020, decided that EAC shall deliberate on commitments made by the project proponent to address the concerns raised during the public consultation and prescribe specific condition(s) in physical terms while recommending the proposal, for grant of prior environmental clearance instead of allocation of fund under CER.

It is submitted that the public consultation for the project was held on 4.7.2008. All the issues raised during public consultation have been fully resolved by Nabha Power Limited as clarified vide our letter dated 12.01.2022 referred above.

19.8.4 *The EAC after detailed deliberation on the information submitted and as presented during the meeting* ***recommended*** *the proposal for amendment in EC condition as requested by the PP subject to compliance of following additional conditions:*

[A] Environmental Management and Biodiversity Conservation

i. *An epidemiology study shall be carried out in every two years and report shall be submitted to Regional Office of MoEF&CC.*

ii. *Other conditions of the EC letter dated 27th December, 2021, 10th May, 2013 and 5th February, 2014 shall remain unchanged.*

iii. *A Public grievances reddressal cell to address the social and environmental concerns shall be established under the supervision of project head, regular status of activities of the cell be submitted in six monthly compliance report.*

The meeting ended with vote of thanks to the Chair.

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Annexure

ATTENDANCE

S. No.	Name	Role	Attendance
1.	Shri Gururaj P. Kundargi	Chairman	P
2.	Dr. N. P Shukla	Member	P
3.	Shri SuramyaVora	Member	P
4.	Dr. Santosh Kumar	Member	P
5.	Dr. Umesh Jagannathrao Kahalekar	Member	P
6.	Shri K.B. Biswas	Member	P
7.	Dr. Nandini. N	Member	P
8.	Dr. Unmesh Patnaik	Member	P
9.	Shri S.K. Paliwal	Member (Representative of CPCB)	P
10.	Shri M.P. Singh	Member (Representative of CEA)	P
11.	Prof. S. S. Rai	Member Representative of IIT/ISM Dhanbad	P
12.	Shri Yogendra Pal Singh	Member Secretary	P

APPROVAL OF THE CHAIRMAN

Email

Re: Draft Minutes of 19th EAC meeting held on 11th January, 2022 for approval-reg

From : gpkundargi@gmail.com
Subject : Re: Draft Minutes of 19th EAC meeting held on 11th January, 2022 for approval-reg
To : Yogendra Pal Singh <yogendra78@nic.in>
Cc : Munna Kumar Shah <munna.shah@gov.in>, Sourabh Kumar <sourabh.9@govcontractor.in>

Dear Yogendra ji
Revised draft is fine with me.You can delete word 'enable' with word 'prevent' on Fifth line of highlighted portion of 19.4.3.Rest is fine.
Minutes are approved.
Thank you
G P Kundargi

On Thu, 27 Jan, 2022, 11:47 am Yogendra Pal Singh, <yogendra78@nic.in> wrote:

> Dear Sir,
> Please find attached Draft corrected Minutes of 19th EAC meeting held on 11th January, 2022 for approval, please.
> Also, kindly check and approve highlighted portion in agenda item 19.4.3 of EAC deliberation column.