



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The Chief General Manager
NTPC VIDYUT VYAPAR NIGAM LIMITED
2nd Floor, Core 5, Scope Comple, 7, Institutional Area, Lodi Road, New
Delhi,,New Delhi,Delhi-110003

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity
under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC)
in respect of project submitted to the Ministry vide proposal number
IA/AN/THE/113957/2019 dated 23 Dec 2020. The particulars of the environmental
clearance granted to the project are as below.

1. EC Identification No.	EC22A004AN110974
2. File No.	J-13012/14/2018-IA.I(T)
3. Project Type	New
4. Category	A
5. Project/Activity including Schedule No.	1(d) Thermal Power Plants
6. Name of Project	50 MW DUAL FUEL BASED POWER PROJECT AT ANDAMAN & NICOBAR
7. Name of Company/Organization	NTPC VIDYUT VYAPAR NIGAM LIMITED
8. Location of Project	Andaman and Nicobar
9. TOR Date	02 Aug 2019

The project details along with terms and conditions are appended herewith from page
no 2 onwards.

Date: 19/09/2022

(e-signed)
Yogendra Pal Singh
Scientist E
IA - (Thermal Projects sector)

*Note: A valid environmental clearance shall be one that has EC identification
number & E-Sign generated from PARIVESH. Please quote identification
number in all future correspondence.*

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F. No. J-13012/14/2018-IA.II (T)
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division

Indira Paryavaran Bhavan,
2nd Floor, Vayu Wing,
Aliganj, Jor Bagh Road,
New Delhi-110 003

Dated: 15th September, 2022

To,

M/s NTPC VidyutVyapar Nigam Ltd.
2nd Floor, Core 5, Scope Complex
7, Institutional Area, Lodhi Road,
New Delhi - 110 003
Email id: contact@nvvn.co.in

Sub: Setting up of 55 MW dual fuel based Power Project at South Andaman District, Andaman & Nicobar Islands by M/s NTPC Vidyut Vyapar Nigam Limited - Environmental Clearance and CRZ Clearance - reg.

Sir,

This has reference to your online proposal No. IA/AN/THE/113957/2019 dated 23rd December, 2020 for Environmental Clearance and CRZ Clearance to the above mentioned project.

2. The Ministry of Environment, Forest and Climate Change has examined the proposal for Environmental Clearance to the project for setting up of 55 MW dual fuel based Power Project in an area of 2 acres at South Andaman District, Andaman & Nicobar Islands by M/s NTPC Vidyut Vyapar Nigam Limited.
3. The total land area required is 2 acres. Estimated cost of environmental protection measures would be about Rs. 25 crores out of total project cost of Rs. 376.06 Crores (as on 2nd Quarter of 2020). Total Employment will be 20 persons.
4. The ecologically sensitive areas within 10 km of the project site are as follows:

Reserve Forest/ Protected Forest	National Parks & Wildlife Sanctuary
<ul style="list-style-type: none">Mount Harriet Shoal Bay RF (0.7km, N);Mangrove Swamp (2.5km, WNW);Namunaghar PF(2.8km,SW);Port MouatBrindaban RF-II(4.5km,WNW);Port MouatBrindaban RF-I(5.1 km,W);JirkatangRF(5.6km,NW);South Andaman RF(8.5km,N);Birch Ganj PF(8.6km,SSE);andPort Mouat PF(9.1km,SW).	<ul style="list-style-type: none">Mt.Harriet National Park(3.4km,NNE);Ross Island (Netaji Shubash Chandra Bose Island)(4.3km,SSE)Snake Island-I(7km, SSE);Snake Island-II(7.1km,SSE);andLoha Barrack crocodile sanctuary(11.2km,SW).

[Handwritten Signature]

5. A&N Wildlife Department vide letter no. CWLW/WL/236/Vol-I/152 dated 09.09.2019 has communicated that wildlife clearance is not required for the proposed project. The proposed project site is located within Island Coastal Regulation Zone-III (ICRZ-III). A&N Coastal Zone Management Authority (A&NCZMA) in its meeting held on 10th April, 2019 considered the project proposal and recommended to National Coastal Zone Management Authority (NCZMA) for CRZ clearance with exemption for locating the power plant in ICRZ-III as a special case.

6. A&NCZMA forwarded its recommendations and Minutes of Meeting (MOM) to NCZMA, New Delhi vide letter dated 26th April, 2019. Subsequently, Ministry of Shipping, Government of India vide its Gazette Notification dated 02nd March, 2020 has notified the land area within 50 Yards of High-Water Mark as the landward port limit of Hope Town at Port Blair within the Port Limit, which covers the project site.

7. The Ministry of Environment, Forest & Climate Change vide S.O. 2095(E) dated 5th May, 2022 and S.O. 2090 dated 5th May, 2022 has issued an amendment to IPZ notification 2011 & ICRZ notification 2019 and included establishment of Gas based power plant within the island coastal regulation zone area as a permissible activity.

8. The project proponent during presentation before the committee informed that the Marine Environment Impact Assessment Study done by National Institute of Ocean Technology (NIOT), Chennai, has reported as under:

- (i) There is no Schedule-I Marine species recorded near the project site within a kilometer and most of the marine ecosystem are geographically isolated.
- (ii) There will be no significant effect on Schedule-I species due to the proposed gas based power plant activity.
- (iii) The major effluent of the power plant will be brine water (+15 to +18 ppt of ambient water) and heated water (+5 °C of ambient water).
- (iv) According to model studies, the brine water will be diluted and the temperature of the water will be dissipated and return to ambient level within 60 m distance.
- (v) It will not affect marine life except the plankton of the ambient environment during intake. Therefore, specific marine conservation plans are not needed for the proposed project.
- (vi) However, funds from Corporate Environment Responsibility (CER) will be provided to NGOs or research organizations to study the Scheduled species and propose conservation plans for Schedule-I Species in Study area.

9. The water requirement for the proposed project is estimated at around 8m³/day (approx. 0.33 m³/hr) and will be required only for makeup for engine cooling, yard cleaning, potable water and initial filling of fire water tank. As sea water desalination will be adopted, around 25 m³/day (approx. 1.04 m³/hr) of water will be drawn from the sea. The project will be provided with sweet drinking waters supply.

10. The fuel requirement for the project is 0.07 MTPA LNG, which would be met from a Floating Storage Re-gasification Unit (FSRU) as Gas Supply Infrastructure, to be established separately near the power project.

11. The project/activities are covered under category B of item 1(d) 'Thermal Power Plants' of the Schedule to the Environment Impact Assessment Notification, 2006, and requires appraisal at State level. However, due to applicability of general condition project appraised at Central level as category A.

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12. The Terms of References (ToR) for the project was granted by the Ministry on 2nd August, 2019 followed by amendments in ToR on 22nd October, 2019 and 29th January, 2020. Public Hearing was conducted on 29th September 2020 at Panchayat Hall (Hopetown), in Ferrargunj Tehsil in South Andaman District, Andaman & Nicobar Islands.

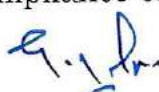
13. The proposal for Environmental Clearance and CRZ Clearance was considered by the EAC (Thermal) in its 5th, 7th and 27th meetings held on 30th December, 2020 and 15th February, 2021 and 1st July, 2022 respectively. The project proponent and their accredited consultant M/s. VIMTA Labs Limited (VLL), made a detailed presentation and have presented the EIA/EMP report. 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 including CRZ considerations. Issues raised during the public hearing have been duly addressed by the project proponent. The EAC after detailed deliberations on the information submitted and as presented during the meeting recommended for grant of **Environmental Clearance and CRZ Clearance.**

14. The EAC, constituted under the provision of the EIA Notification, 2006 and comprising of Experts Members/domain experts in various fields, have examined the proposal submitted by the Project Proponent in desired form along with EIA/EMP report prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent. The EAC noted that the Project Proponent has given undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP report. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental and CRZ Clearance given, if any, will be revoked at the risk and cost of the project proponent.

15. The Committee noted that the EIA/EMP report is in compliance of the ToR issued for the project, reflecting the present environmental concerns and the projected scenario for all the environmental components. The Committee has found the baseline data and incremental GLC due to the proposed project within NAAQ standards. The EAC has deliberated the proposal and has made due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC have found the proposal in order and have recommended for grant of Environmental and CRZ Clearance.

16. The recommendation of the Expert Appraisal Committee has been examined in the Ministry. The EC granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc. required to be obtained or standards/ conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project.

17. Based on the proposal submitted by the project proponent and recommendations of the EAC (Thermal sector), Ministry of Environment, Forest and Climate Change hereby accords Environmental and CRZ Clearance to the project for **setting up of 55 MW dual fuel based Power Project in an area of 2 acres at South Andaman District, Andaman & Nicobar Islands submitted by M/s NTPC Vidyut Vyapar Nigam Limited**, under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the terms and conditions as under:-



A. Specific conditions

1. Environmental Management

- (i) The entire discharge quantity of Floating Storage Re-Gasification Unit (FSRU) shall be used for dilution of brine to control salinity & ambient temperature of discharge & it shall be ensured that salinity/quality of discharge water before disposal into sea should be equivalent to sea water.
- (ii) The condenser water blow down from Thermal Power Plant to be discharged at sea water temperature.
- (iii) Wildlife Management Plan for Schedule -I species shall be implemented after due approval of CWL, Andaman & Nicobar Islands forest department.
- (iv) Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
- (v) A detailed ecological monitoring and survey covering forestry, fisheries, wildlife and its habitat shall be done once in two years to assess the impacts of project on the local environment and ecology. Monitoring report shall be uploaded on the Parivesh Portal and a copy of the same be submitted to the regional office of MoEF&CC.
- (vi) Conditions stipulated by the SCZMA shall be satisfactorily implemented.
- (vii) All construction shall be strictly in accordance with the provisions of CRZ Notification, 2011 and as amended from time to time.
- (viii) Disposal of solid/liquid from Desalination plant, if installed, shall comply with the prescribed standards and if need be, environmental safeguard measures by providing balancing/neutralizing tank may be set up and operated regularly & efficiently.
- (ix) Sea water quality shall be continuously monitored for salinity, turbidity and temperature at selective sites across the impacted zone including estuarine waters through reputed Government institutes such as NIOT, Annamalai University for continuous preservation of mangroves and their ecology. The monitoring data shall be uploaded on the company's website and also submitted to Regional Office of the Ministry every six months.
- (x) To minimize entrapment of even small marine flora and fauna, state of the art low aperture intake screens with high effectiveness for impingement and entrainment and fishnet around intake shall be installed.
- (xi) Fish catch along the impacted zone of sea should be monitored periodically by the Department of Fisheries, UT administration of A&N islands. The project proponent shall accordingly take up the matter with the Fishery Dept., UT administration of A&N islands from time to time.
- (xii) Mitigation measures suggested by the NIOT in their Marine Environment Impact Assessment Study shall be implemented in letter and spirit.
- (xiii) A state-of-the-art environmental laboratory at the project site shall be established such that the laboratory has facilities for long term monitoring of sea water quality and sediment in the impacted zone over and above and ambient air, soil quality analysis of the area. The proponent shall undertake mitigative measures if there are any negative impacts.
- (xiv) An Environmental Cell comprising of at least one expert in environmental science/ engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.



- (xv) Permanent labour camp, machinery and material storage shall not be set up in the CRZ area.
- (xvi) Excavated material during the construction shall not be dumped in the CRZ area.
- (xvii) The site shall be restored to its near original condition after completion of construction of work.

2. Corporate Environment Responsibility

- (xviii) Marginalized section of society particularly traditional fishermen communities shall be identified based on 2011 population census data and socio-economic study of the various strata of families such as those carrying out subsistence fishing, commercial fishing etc. shall be carried out and impact on their livelihoods shall be assessed separately. Accordingly, sustainable welfare scheme/measures shall be undertaken and status of implementation shall be submitted to the Regional Office of the Ministry within six months.
- (xix) All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.
- (xx) The Project Proponent shall submit the time-bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of Environmental Clearance for undertaking the CER activities, committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.

B. Standard EC Conditions for Thermal Power Sector:

a. Statutory compliance:

- i. Emission Standards for Thermal Power Plants as per Ministry's Notification S.O. 3305 (E) dated 7.12.2015, G.S.R.593 (E) dated 28.6.2018 and as amended from time to time shall be complied.
- ii. Part C of Schedule II of Municipal Solid Wastes Rules, 2016 dated 08.04.2016 as amended from time to time shall be complied for power plants based on Municipal Solid Waste.
- iii. MoEF&CC Notification G.S.R 02 (E) dated 2.1.2014 as amended time to time regarding use of raw or blended or beneficiated/washed coal with ash content not exceeding 34% shall be complied with, as applicable.
- iv. MoEF&CC Notifications on Fly Ash Utilization S.O. 763 (E) dated 14.09.1999, S.O. 979 (E) dated 27.08.2003, S.O. 2804 (E) dated 3.11.2009, S.O. 254 (E) dated 25.01.2016 as amended from time to time shall be complied.
- v. Thermal Power Plants other than the power plants located on coast and using sea water for cooling purposes, shall achieve specific water consumption of 2.5 m³/MWh and Zero effluent discharge.
- vi. The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
- vii. No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its sitting criteria for height clearance.



- viii. Groundwater shall not be drawn during construction of the project. In case, groundwater is drawn during construction, necessary permission be obtained from CGWA.

b. Ash content/ mode of transportation of coal:

- i. EC is given on the basis of assumption of ____% of ash content and ____km distance of transportation in rail/road/conveyor/any other mode. Any increase of %ash content by more than 1 percent, and/or any change in transportation mode or increase in the transport distance (except for rail) require application for modifications of EC conditions after conducting the 'incremental impact assessment' and proposal for mitigation measures.

c. Air quality monitoring and Management:

- i. Flue Gas Desulphurisation System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO₂ emissions standard of 100 mg/Nm³.
- ii. Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NO_x Burners with Over Fire Air (OFA) system shall be installed to achieve NO_x emission standard of 100 mg/Nm³.
- iii. High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/Nm³.
- iv. Stacks of prescribed height ____m shall be provided with continuous online monitoring instruments for SO_x, NO_x and Particulate Matter as per extant rules.
- v. Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.
- vi. Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM₁₀, PM_{2.5}, SO₂, NO_x within the plant area at least at one location. The monitoring of other locations (at least three locations outside the plant area covering upwind and downwind directions at an angle of 120° each) shall be carried out manually.
- vii. Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
- viii. Appropriate Air Pollution Control measures (DEs/DSs) be provided at all the dust generating sources including sufficient water sprinkling arrangements at various locations viz., roads, excavation sites, crusher plants, transfer points, loading and unloading areas, etc.

d. Noise pollution and its control measures:

- i. The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
- ii. Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
- iii. Periodical medical examination on hearing loss shall be carried out for all the workers and maintain audiometric record and for treatment of any hearing loss including rotating to non-noisy/less noisy areas.

e. Human Health Environment:

- i. Bi-annual Health check-up of all the workers is to be conducted. The study shall take into account of chronic exposure to noise which may lead to adverse effects like increase in heart rate and blood pressure, hypertension and peripheral vasoconstriction and thus increased peripheral vascular resistance. Similarly, the study shall also assess the health impacts due to air polluting agents.
- ii. Baseline health status within study area shall be assessed and report be prepared. Mitigation measures should be taken to address the endemic diseases.
- iii. Impact of operation of power plant on agricultural crops, large water bodies (as applicable) once in two years by engaging an institute of repute. The study shall also include impact due to heavy metals associated with emission from power plant.
- iv. Sewage Treatment Plant shall be provided for domestic wastewater.

f. Water quality monitoring and Management:

- i. Induced/Natural draft closed cycle wet cooling system including cooling towers shall be set up with minimum Cycles of Concentration (COC) of 5.0 or above for power plants using fresh water to achieve specific water consumption of 2.5 m³/MWhr. (Or) Induced/Natural draft open cycle cooling system shall be set up with minimum Cycles of Concentration (COC) of 1.5 or above for power plants using sea water.
- ii. In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120 consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant.
- iii. Records pertaining to measurements of daily water withdrawal and river flows (obtained from Irrigation Department/Water Resources Department) immediately upstream and downstream of withdrawal site shall be maintained.
- iv. Rainwater harvesting in and around the plant area be taken up to reduce drawl of fresh water. If possible, recharge of groundwater to be undertaken to improve the ground water table in the area.
- v. Regular (at least once in six months) monitoring of groundwater quality in and around the ash pond area including presence of heavy metals (Hg, Cr, As, Pb, etc.) shall be carried out as per CPCB guidelines. Surface water quality monitoring shall be undertaken for major surface water bodies as per the EMP. The data so obtained should be compared with the baseline data so as to ensure that the groundwater and surface water quality is not adversely impacted due to the project & its activities.
- vi. The treated effluents emanating from the different processes such as DM plant, boiler blow down, ash pond/dyke, sewage, etc. conforming to the prescribed standards shall be re-circulated and reused. Sludge/ rejects will be disposed in accordance with the Hazardous Waste Management Rules.
- vii. Hot water dispensed from the condenser should be adequately cooled to ensure the temperature of the released surface water is not more than 5 degrees Celsius above the temperature of the intake water.
- viii. Based on the commitment made by the Project Proponent, Sewage Treatment Plants within the radius of 50 km from proposed project, the treated sewage ofKLD from STP (name) shall be used as an



- alternative to the fresh water source to minimize the fresh water drawl from surface water bodies.
- ix. Wastewater generation ofKLD from various sources (viz. cooling tower blow down, boiler blow down, wastewater from ash handling, etc) shall be treated to meet the standards of pH: 6.5-8.5; Total Suspended Solids: 100 mg/l; Oil & Grease: 20 mg/l; Copper: 1 mg/l; Iron: 1 mg/l; Free Chlorine: 0.5; Zinc: 1.0 mg/l; Total Chromium: 0.2 mg/l; Phosphate: 5.0 mg/l;
 - x. Sewage generation ofKLD will be treated by setting up Sewage Treatment plant to maintain the treated sewage characteristics of pH: 6.5-9.0; Bio-Chemical Oxygen Demand (BOD): 30 mg/l; Total Suspended Solids: 100 mg/l; Fecal Coliforms (Most Probable Number): <1000 per 100 ml.

g. Risk Mitigation and Disaster Management:

- i. Adequate safety measures and environmental safeguards shall be provided in the plant area to control spontaneous fires in coal yard, especially during dry and humid season.
- ii. Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made as per the extant rules in the plant area in accordance with the directives of Petroleum & Explosives Safety Organisation (PESO). Sulphur Content in the liquid fuel should not exceed 0.5%.
- iii. Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- iv. Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
- v. Regular mock drills for on-site emergency management plan and Integrated Emergency Response System shall be developed for all kind of possible disaster situations.

h. Green belt and Biodiversity conservation:

- i. Green belt shall be developed in an area of 33% of the total project with indigenous native tree species in accordance with CPCB guidelines. The green belt shall inter-alia cover an entire periphery of the plant.
- ii. In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.
- iii. Suitable screens shall be placed across the intake channel to prevent entrainment of life forms including eggs, larvae, juvenile fish, etc., during extraction of seawater.

i. Waste management:

- i. Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
- ii. Toxicity Characteristic Leachate Procedure (TCLP) test shall be conducted for any substance, potential of leaching heavy metals into the surrounding areas as well as into the groundwater.
- iii. Ash pond shall be lined with impervious liner as per the soil conditions. Adequate dam/dyke safety measures shall also be implemented to protect the ash dyke from getting breached.
- iv. Fly ash shall be collected in dry form and ash generated shall be used in phased manner as per provisions of the Notification on Fly Ash Utilization issued by

the Ministry and amendment thereto. By the end of 4th year, 100% fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry. Mercury and other heavy metals (As, Hg, cr, Pb, etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. Flyash utilization details shall be submitted to concerned Regional Office along with the six-monthly compliance reports and utilization data shall be published on company's website.

- v. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry/Medium Concentration Slurry/Lean Concentration Slurry method. Ash water recycling system shall be set up to recover supernatant water.
- vi. In case of waste-to-energy plant, major problems related with environment are fire smog in MSW dump site, foul smell and impacts to the surrounding populations. Therefore, the following measures are required to be taken up:
- vii. Water hydrant at all the dumpsites of MSW area to be provided so that the fire and smog could be controlled.
- viii. Sprayer like microbial consortia may be provided for arresting the foul smell emanating from MSW area.

j. Monitoring of compliance:

- i. Environmental Audit of the project be taken up by the third party for preparation of Environmental Statement as per Form-V & Conditions stipulated in the EC and report be submitted to the Ministry.
- ii. Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
- iii. Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates.
- iv. Monitoring of Carbon Emissions from the existing power plant as well as for the proposed power project shall be carried out annually from a reputed institute and report be submitted to the Ministry's Regional Office.
- v. Energy and Water Audit shall be conducted at least once in two years and recommendations arising out of the Report should be followed. A report in this regard shall be submitted to Ministry's Regional Office.
- vi. Environment Cell (EC) shall be constituted by taking members from different divisions, headed by a qualified person on the subject, who shall be reporting directly to the Head of the Project.
- vii. The project proponent shall (Post-EC Monitoring):
- viii. Send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
- ix. Upload the clearance letter on the web site of the company as a part of information to the general public.
- x. Inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at <http://parviesh.nic.in>.



- xi. Upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
- xii. Monitor the criteria pollutants level namely; PM (PM10 & PM2.5 in case of ambient AAQ), SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
- xiii. Submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
- xiv. Submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
- xv. Inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project and the date of commencement of the land development work.

k. Corporate Environmental Responsibility (CER) activities:

- i. CER activities will be carried out as per OM No. 22-65/2017-IA.II dated 01.05.2018 or as proposed by the PP in reference to Public Hearing or as earmarked in the EIA/EMP report along with the detailed schedule of implementation with appropriate budgeting.

l. Marine facilities:

- i. As the seawater intake systems are required for the plant fall in CRZ area, recommendations from State Coastal Zone Management Authority (SCZMA) as per CRZ Notification shall be implemented.
- ii. Marine intake and outfall pipelines shall be located as per the recommendations State Coastal Zone Management Authority (SCZMA).

m. Sea Water Intake:

- i. Seawater intake system shall be so designed and constructed to ensure sufficient seawater in terms of quantity and quality.
- ii. The withdrawal of seawater shall be preferably through a pipeline with a riser equipped with a velocity cap arrangement and bar screen to arrest the impingement of large marine organisms.
- iii. In all tide conditions (particularly at spring low tides) the riser head must be flooded with the required submergence of seawater above its top.

n. Effluent Release:

- i. At the effluent release point, maximum temperature of the discharge water shall not be more than 50°C and salinity shall not exceed 50 ppt with respect to that of the ambient seawater.
- ii. Use of antifouling agents like chlorine / hypochlorite, shall be carefully controlled. The chlorine concentration shall not exceed 0.2 ppm at the effluent release point.

- iii. The effluent when released at the selected location shall attain sufficient dilution so that near ambient water quality (particularly temperature and salinity) is attained within 500 m from the release location, at low tide.
- iv. The location of the diffuser shall be marked with a solar lighted buoy to avoid accidents.
- v. The site selected based on mathematical modelling shall ensure absence of recirculation of the effluent plume in the seawater intake area under all tidal conditions.
- vi. The effluent shall be released through a properly designed multiport diffuser above the seabed to facilitate its efficient initial mixing with the receiving seawater.
- vii. Efficacy of the diffuser shall be ascertained at least once in 2 years through scientific studies and corrective actions such as cleaning of the diffuser from marine growth, removal of silt deposits, etc. shall be taken up, if warranted.
- viii. Continuous online monitoring system for Temperature and Salinity shall be installed to monitor the quality of effluent.

o. Common to intake and effluent:

- i. The pipeline shall be buried below the seabed at a depth to ensure its stability under rough sea conditions particularly during cyclone / tsunami. The depth of burial will depend on the seafloor strata but normally the top of the pipeline shall be at least 1 m below the bed level. In the surf and intertidal zones, the pipeline shall be buried below the maximum scour level.
- ii. In case of open channel, the channel shall be constructed as per the recommendations of State Coastal Zone Management Authority (SCZMA).
- iii. If the substratum is rocky the pipeline may be anchored to the rock provided the geology of the area satisfactorily supports the structure which shall be ascertained through geo-technical investigations.
- iv. Exposed pipeline section and riser shall be protected by armour stone from waves, boats anchoring, fishing activities etc.
- v. The location of the riser & diffuser shall be marked with a solar lighted buoy to avoid accidents from boats.
- vi. Marine / Sea water quality shall be monitored at effluent release location at the center. Parameters to be monitored shall be as follows:
- vii. Physico-chemical: Temperature, Salinity, pH and Dissolved Oxygen.
- viii. Biological: Primary Productivity, Phytoplankton (Chlorophyll a, Phaeophytin, Population, Species), Zooplankton (Biomass, Population, Species) and Benthos (Biomass, Population, Species).

18. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.


19. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this

clearance and attract action under the provisions of Environment (Protection) Act, 1986.

20. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

21. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

22. This issues with the approval of the competent authority.


(Yogendra Pal Singh)
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Copy to: -

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110 001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R. K. Puram, New Delhi - 110 066.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.
4. The Additional Director General of Forests, Regional Office (SEZ), First and Second Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai - 600 034.
5. The Chief Secretary, Andaman and Nicobar Administration, Andaman and Nicobar Island, Port Blair.
6. The Chief Wildlife Warden Administration of Andaman & Nicobar Islands, Van Sadan, P.O Haddo, Port Blair - 744 102.
7. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
8. The Member Secretary, Andaman and Nicobar Pollution Control Committee, Andaman and Nicobar Island.
9. The District Collector, South Andaman District, RGT Rd, AHW Colony, Shadipur, Port Blair, Andaman and Nicobar Islands - 744 101.
10. Guard File/Record File/Monitoring File.
11. MoEF&CC Website


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