PRE-FEASIBILITY REPORT

FOR

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) STUDY

FOR

ANDAMAN & NICOBAR GAS POWER PROJECT (50 MW)

IN

HOPE TOWN AT FERRARGUNJ TEHSIL
DIST. SOUTH ANDAMAN
(ANDAMAN & NICOBAR ISLANDS)

NTPC VIDYUT VYAPAR NIGAM LIMITED
(NVVN)
(A wholly owned subsidiary of NTPC Ltd.)

October, 2018
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# ANNEXURES

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1.0 Executive Summary

| Name of Project: | Andaman & Nicobar Gas Power Project (50 MW) at Hope Town in Ferrargunj Tehsil of South Andaman District. |
| Name of Project Proponent: | NVVN |
| Location of the Project: | The project site is located in Hope Town at Ferrargunj Tehsil in South Andaman District of Andaman & Nicobar Islands. Nearest National Highway NH-223 is at a distance of 8 km in North direction. Nearest major city is Port Blair located at a distance of 7.9 km South to the project site. The vicinity map of the project is shown in Exhibit-I. |
| Capacity & Unit Configurations: | 50 MW Greenfield project (Dual Fuel Power Project) |
| Land Requirement, Current Land Use and Availability: | At Hope Town Site, about 2 acres of undulated barren land having irregular topography with elevation of 2 M above MSL exists along the Sea Shore. The power project is proposed to be accommodated within the available land (2 Acres) located in Hope Town. The land is Government land and is under physical possession of A&N Administration. No forest land is involved. Topography of the site is rocky and undulated terrain. The land is away from the navigational channel & other marine traffic. |
| Water Requirement and Availability: | Sea Water will be the Source of Water. About 8 KL/day of fresh water is required to meet the requirement of Cooling Water System & Service Water System of the plant. In order to meet the water requirement of the project through desalination plant, it is proposed to draw 25 KL/day of water from Sea. Plant Water requirement i.e... Engine Jacket Cooling, Lub Oil Cooling and Portable Water is proposed to be met by treating the sea water in Water Treatment Plant/ Desalination Plant. |
| Fuel Requirement: | LNG required for 50 MW Dual Fuel Power Project is proposed to be met from proposed LNG Terminal & Floating Storage Regasification Unit (FSRU) at Hope Town. Diesel requirement for the power project is to be met from M/s Indian Oil Corporation Ltd (IOCL)’s existing Oil Depot, which is at about 50 Km from the Site. |
Fuel Transportation

As per discussions held between Andaman & Nicobar Administration, NTPC & PLL on 22.02.2018 at A&N Secretariat, Port Blair regarding setting up 50 MW Power Project at Hope Town, NTPC has requested A&N Admin to explore pipeline transfer of liquid fuel (HSD) to power project for uninterrupted supply of fuel. Presently liquid fuel transfer up to site is considered through road tankers.

Environmental Setting of the Project

The project will require a) Environmental Clearance b) CRZ Clearance & c) Wildlife Clearance from Ministry of Environment and Forests & Climate Control (MoEF&CC). The necessary process for obtaining these clearances shall be followed by NVVN.

Cost of the Project:

Approximate capital cost of the project would be about Rs. 387.80 Crore.

2.0 Introduction of the Project & Background Information

2.1 Identification of Project & Project Proponent

NTPC Vidyut Vyapar Nigam Limited (A wholly owned subsidiary of NTPC) has been established with an objective, inter alia, to carry on the business of Purchase / Sale of all forms of electrical power including surplus power from NTPC stations for sale to SEBs, Power Distribution Companies, other organizations and bulk power consumers etc, in India and abroad. NVVN has also carried out the implementation of 1000 MW NSM Phase-I scheme of Government of India as a Nodal Agency for selection of the Solar Power Projects and Long term PPAs for purchase of Solar power and PSAs for sale of bundled power to Discoms. NVVN has been carrying out sale of 733 MW Solar Bundled Power to 21 Discoms under NSM Phase I.

In the Financial year 2017-18, NVVN had traded 17,278 Million Units (MUs) apart from Renewable Energy Certificates (RECs) equivalent to 104 MUs and Energy Saving Certificates equivalent to 7,45,826. NVVN is a profit making company and has been consistently paying dividend to NTPC.

2.2 Brief Description and Nature of the Project

The Dual Fuel Technology enables reciprocating engine to operate on either Liquid Natural Gas (LNG) or High Speed Diesel (HSD). Switching between fuels can take place seamlessly during operation, without loss of power or speed. The engines are designed to have the same output regardless of the fuel used.

When running in gas mode, the engine works according to the Otto process, where the Lean Air Fuel Mixture is fed to cylinders during the suction stroke. When running in diesel mode, the engine works according to the diesel process, where the diesel fuel...
is fed to cylinders at the end of compression stroke. At full load, efficiency of the
engine is in the order of 45% for gas fuel & 42% for liquid fuel. Engines are optimised
for running on gaseous fuels as primary fuel and diesel fuel is used for back-up fuel
operation.

2.3 Need for the Project & Its Importance to the Country & Region

Electricity plays an important role in economical and tourism development of a region
& Country. The Projected Peak Demand for South Andaman Islands, wherein majority
of population (>60%) of A&N Islands lives, will be 50 MW by the end of year 2021.

The detailed analysis of demand supply gap and justification for the project is
presented in section 2.4

2.4 Demand Supply Gap

The project (5X10 MW) is envisaged to meet the power demand of Andaman &
Nicobar Islands. It is expected to start yielding benefits from 2021-22.

Being disconnected from the mainland, the A&N Islands relies on isolated power
generation, powered by the Diesel Generation Systems. The power generation and
distribution system of Andaman and Nicobar islands is served by standalone systems
and each island has its own generation & distribution system.

The power requirement of Andaman & Nicobar Islands is met mainly from
Government owned diesel generation units with balance power purchased from
Independent Power Producers (IPP).

Power Generation Portfolio:

<table>
<thead>
<tr>
<th>SL.No.</th>
<th>Generation</th>
<th>Installed Capacity (MW)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Diesel</td>
<td>99.20</td>
<td>90.64</td>
</tr>
<tr>
<td>2</td>
<td>Hydro</td>
<td>5.25</td>
<td>4.80</td>
</tr>
<tr>
<td>3.</td>
<td>Solar</td>
<td>5</td>
<td>4.56</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>109.45 MW</td>
<td></td>
</tr>
</tbody>
</table>

From the details of installed power plants in A&N Islands, it is observed that
concentration of Diesel Power Plants (59 MW) is highest in South Andaman, where
approximately 64 MW out of total base of 109.45 MW is installed.

Conclusion

As per above demand & supply scenario analysis, the sales of electricity is projected to
grow from 229 MU in FY15 to around 330 MU by FY19 at a CAGR of 10% with Peak
demand expected to grow from around 58 MW to around 68 MW by FY19. Moreover,
out of the 99.2 MW DG capacities, about 51.745 MW of DG capacities has already outlived their lives thereby making the effective available DG capacity as 47.465 MW.

In order to meet the increasing power demand (CAGR of 10%) of A&N Islands while reducing dependency on conventional diesel generation sets (DG Sets), the proposal for setting up of 50 MW Power Project, which would help in reducing the diesel consumption through cleaner and cheaper fuel (LNG as primary fuel) is justified.

2.5 Employment Generation (Direct & Indirect) due to the Project

A&N Gas project shall be a mechanised and automated plant, therefore, the direct opportunities for employment during operation phase are limited. However, due to increased availability of power, the opportunities for self-employment and business activities shall increase.

3.0 Project Description:

3.1 Type of Project, Interlinked Project & Interdependent Project

A&N Gas Project shall be dual fuel (LNG & HSD) based project.

Location

The project site is located in Hope Town at Ferrargunj Tehsil in South Andaman District of Andaman & Nicobar Islands. Nearest National Highway NH-223 is at a distance of 8 km in North direction. Nearest major city is Port Blair located at a distance of 7.9 km south to the project site. The site can be approached from coastal road linking Bamboo Flat & Hope Town and through Water Ways.

The General Layout Plan (GLP) of proposed site is enclosed as Exhibit-II.

3.2 Details of Alternate Sites

M/s PLL in consultation with A&N Authority conducted studies in 2016-17 at three alternative locations in South Andaman – Hope Town, Chatham Island and Elephant Point (Hathi Tapu) to install proposed Floating, Storage and Regasification Unit (FSRU) along with a land based power project. The study concluded Hope Town as best suited site for installing FSRU together with a power project.

NTPC team visited Andaman and Nicobar (A&N) Islands on 21.02.2018 along with representatives of A&N and Petronet LNG Ltd. and following three (3) Alternative Sites were identified and examined for setting up a 50 MW LNG based Power Project sites in Ferrargunj Tehsil of South Andaman district (A&N Island);

- **Site 1:** At Hope Town Site
- **Site 2:** Within premise of Surya Chakra Power Ltd (an IPP) diesel generating plant.
- **Site 3:** At Shore Point Junction (within vacant land in west direction of Bamboo flat jetty)

After comparison of various environmental & technical aspects, the site near Hope Town is selected as most preferred site to install duel fuel (LNG & HSD) based Power
Plant. Due to following advantages;

- Sufficient Govt. land (about 2 acres) is available to install plant & its associated facilities
- Topography of the site is rocky and undulated terrain and its land use is barren/wasteland type
- No forest land is involved
- Few people live close by environmental impact is low
- Well Connected by road/NH-223
- Good soil conditions: sand and rock;
- Open water area, not effected by Tsunami in 2004;

In view of the above, it is site at Hope Town (Site 1) is selected as most preferred site.

3.3 Size & Magnitude of Operation

The capacity of the proposed expansion would be 50 MW with installation of 5 units of 10 MW each. About 8 KL/day of fresh water is required to meet the requirement of Plant Cooling Water System & Service Water System. In order to meet the water requirement of the project through desalination plant, it is proposed to draw 25 KL/day of water from sea.

Plant Water requirement i.e. Engine Jacket Cooling, Lub Oil Cooling and Portable water can be met by treating the sea water in water Treatment Plant/ Desalination plant. The project will operate round the clock in three shifts of operation.

3.4 Project Description & Process Details

The power plant will be worked on dual fuel technology i.e. through Liquid Natural Gas (LNG) or High Speed Diesel (HSD). The Dual Fuel Technology enables reciprocating engine to operate on either LNG or HSD. Switching between fuels can take place seamlessly during operation, without loss of power or speed. The engines are designed to have the same output regardless of the fuel used.

When running in gas mode, the engine works according to the Otto process, where the Lean Air Fuel Mixture is fed to cylinders during the suction stroke. When running in diesel mode, the engine works according to the diesel process, where the diesel fuel is fed to cylinders at the end of compression stroke. At full load, efficiency of the engine is in the order of 45% for gas fuel & 42% for liquid fuel. Engines are optimised for running on gaseous fuels as primary fuel and diesel fuel is used for back-up fuel operation.

Gas engine Operation

In Gas operation, the engine works according to the lean-burn Otto cycle. In this process the gas and air is mixed before the inlet valves, during the air intake period. After the compression phase, the gas-air mixture is ignited by a small amount of pilot fuel. The pilot fuel is pressurized, and fed into the cylinders by a small common rail system. The combustion is fast, and after the working phase, the exhaust gas valves
open and the cylinder is emptied of exhaust gases. The intake air is turbocharged and intercooled.

When the engine is started in gas mode, it is started with pilot fuel injection only, without gas admission. When the combustion is stabilized in every cylinder, the gas admission is activated.

**HSD Fuel Operation**

In HSD fuel operation, the engine works according to the Diesel process. In this process, liquid fuel is injected in the cylinder at high pressure by camshaft-operated pumps. The fuel is ignited instantly due to the high temperature resulting from the compression. Combustion takes place under constant pressure with fuel injected into the cylinder during the combustion. After the working phase, the exhaust gas valves open, and the cylinder is emptied of exhaust gases.

### 3.5 Requirement of Raw Materials

LNG/HSD and Water are the main raw materials proposed to be used in A&N Gas Power Project. Water requirement for the project will be met from Sea. Fuel requirement for the project is proposed to be met from proposed LNG Terminal & Floating Storage Regasification Unit (FSRU) at Hope Town. Diesel requirement for the power project is to be met from M/s Indian Oil Corporation Ltd (IOCL)’s existing Oil Depot, which is at about 50 Km from the Site.

### 3.6 Resource Optimization, Recycle & Reuse

Fuel, Water and Land are the three main natural resources required for setting up of project. With extensive experience in power sector, NVVN shall make the best efforts to optimize the utilization of resources.

### 3.7 Availability of Power

The requirements of the construction power supply for the project would be met from temporary DG Sets.

### 3.8 Quantity of Wastes to be Generated

Not Applicable

### 3.9 Schematic Representation of Feasibility Drawing

A schematic of power generation process is presented in Section 3.4 above. Further, details like Lay-out Plan, Plant Sections etc. shall be worked out during detailed Engineering stage.
4.0 Site Analysis

4.1 Connectivity

The Nearest National Highway NH-223 is at a distance of 8 km in North direction. Nearest major city is Port Blair located at a distance of 7.9 km south to the project site. The site can be approached from coastal road linking Bamboo Flat & Hope Town and through Water Ways.

4.2 Existing Land Form, Land Use, Ownership & Topography

At the proposed site at Hope Town, about 2 Acres of polygon shaped waste and barren land (Survey No- 41) having irregular topography exists along the seashore. The Site having elevation of 2 meters above MSL is flanked between Sea on front side & stiff rock Hill on backside. The top area of hill is reported to be private allotted land. The power project is proposed to be accommodated within the available land (2 Acres) located in Hope Town.

The land is Government land & is under physical possession of A&N Administration. No forest land is involved. Topography of the site is rocky and undulated terrain. The land is away from the navigational channel & other marine traffic.

4.3 Existing Infrastructure/ social infrastructure

A detailed analysis of social infrastructure available at site shall be undertaken during EIA Study.

4.4 Climatic Data

The climatological tables for the area published by nearest IMD station at Port Blair is enclosed at Annexure-II.

5.0 Brief Planning

5.1 Planning Concept

The planning of power projects is based on demand & supply scenario of the A&N Islands undertaken by A&N Administration. The site for project is selected based on the following considerations:

i. Availability of suitable and adequate land
ii. Availability of reliable source of water
iii. Distance from source of fuel
iv. Road/rail/marine access
v. Availability of infrastructural facilities
vi. Conformity of Environmental Guidelines

5.2 Population Projection

5.3 Land Use Planning

The land acquired for the project shall be mainly used for establishing main power house complex.
5.4 **Assessment of Infrastructure Demand and Amenities/Facilities**

Due to limited availability of land (2 acres only) for the project, the existing infrastructure of nearby town shall be used. The same shall be strengthened if required.

6.0 **Proposed Infrastructure**

6.1 **Industrial Area**

Major part of the project shall be developed as Industrial Area – consisting of the following:
- Main Plant Building
- Switch Yard.
- Fuel Storage area
- Water Treatment and Storage Area
- Control Room and Administrative Building

6.2 **Social Infrastructure**

Existing social infrastructure of the nearby areas shall be strengthened based on need assessment survey.

6.3 **Drinking Water Management**

Entire Main Plant area will be provided with sweet drinking water supply.

6.4 **Power Requirement & Source**

Construction Power shall be sourced from temporary D.G sets. During operation phase the project itself would generate power.

7.0 **Power Evacuation**

Step Up/Power Evacuation Voltage of the project is proposed to be kept at 33 KV. The power evacuation system shall be owned and setup by A&N Administration through appropriate agency.

The scope of NVVN is limited up to evacuation switchyard located at Power Station. Four number of 33 KV outgoing cable feeders with appropriate metering have been envisaged for the same. Transformers of suitable ratings, located at the respective load centers shall be provided to meet the loads at different voltage levels.

8.0 **Rehabilitation and Resettlement (R&R) Plan**

No Rehabilitation & Resettlement is involved as the land involved is government land and site is in physical possession of A&N Administration & is free from encroachment.

9.0 **Project Schedule & Cost Estimates**

The Commercial Operation Date (COD) of the project is envisaged in 18 months from the Main Plant Award. The estimated project current cost of the project is Rs. 387.80 Crore.
10.0 Analysis of Proposal (Recommendations)

Keeping in view the availability of sufficient land generally free from habitation and forests, nearness of source of water, proximity to Highway and generally meeting the requirements of environmental guidelines, the site is considered prima-facie feasible for setting up a power project of capacity 5x10 MW.

11.0 ENVIRONMENTAL ASPECTS

11.1 INTRODUCTION

Power Plants using R-LNG/liquid fuel, as proposed in Hope Town project, are much more environmentally cleaner as compared to coal based power plants of similar capacity as they produce lesser greenhouse emissions, lesser fugitive/dust emissions and release of effluents is significantly lower. As R-LNG/liquid fuel is proposed to be used at this plant, particulate emissions will be eliminated. Appropriate stack height in line with the requirement of regulatory agencies for disposal of gaseous emissions would be provided. Oxides of Nitrogen (NOx) emissions will be controlled in line with the regulatory requirements.

In view of the above, the impact on surrounding environment is expected to be marginal. Various mitigation measures proposed to be adopted for minimizing the pollution load from the proposed project are as follows:

11.2 POLLUTION CONTROL MEASURES

The various environmental measures, pollution control systems and mitigation measures proposed to be adopted for the proposed power project are as follows:

11.2.1 Air Pollution Control System

Gas Engine shall be designed to fire R-LNG and Diesel fuels. Diesel and gas engines emit pollutants during their operation. Gas based power plants are considered relatively cleaner and Oxides of Nitrogen (NOx) are the only major gaseous pollutant emanating from it. The NOx emissions from the units shall be controlled by adopting suitable technology and suitable pollution control equipment.

The NOx emissions shall be limited within the standards prescribed vide Ministry of Environment, Forest and Climate Change (MoEF&CC) Notification dated 22.12.1998 under Environment (Protection) Rules, 1986 in case of R-LNG as fuel.

Suitable environment friendly technology with appropriate pollution control equipment shall be adopted in the proposed 50 MW Dual Fuel Power Project. The exhaust emissions (for NOx, NMHC, PM, CO) will be in line with the requirements of the emission standards for Diesel Engines (Engine rating more than 0.8 MW) dated 09.07.2002 under Environment (Protection) Third Amendment Rules, 1986.

Each module shall be provided with a stack/chimney for wider dispersal of gaseous emissions from the gas engines. The height of the Stack shall be 30 M.
The stack will have provisions for monitoring of gaseous pollutants such as NOx, SO$_2$ etc. in stack emissions. Provision shall also be kept for continuous monitoring of Oxides of Nitrogen and other gaseous emissions.

**Stack / Chimney**

To facilitate wider dispersal of emissions, each module shall be provided with a steel stack. Five steel stacks of 30 M height are envisaged for the project. Each stack would be provided with personal access for regular monitoring of stack emissions.

### 11.2.2 Water Pollution Control System

The proposed Dual Fuel Power Project is based on gas engine not a water intensive technology unlike thermal power plants utilizing steam-electric technology, in which water is used to produce steam to spin turbines to produce electricity thereby requiring significant volumes of cooling water for condensing steam turbine exhaust and cooling auxiliary equipment. The water requirement for the proposed project is estimated at around 8 M$^3$/Day (approx. 0.33 m$^3$/Hr) and will be required only for makeup to engine cooling, yard cleaning, potable water and initial filling of fire water tank. As sea water desalination will be adopted, around 25 M$^3$/day (approx. 1.04 M$^3$/HR of water will be drawn from the sea.

However, an effluent management scheme would be implemented with the objective of optimization of various water systems so as to reduce intake water requirement which would result in lesser waste water discharge. The effluent management scheme would essentially involve collection, treatment and recirculation/ disposal of various effluents. Adequate treatment facilities would be provided to all the waste streams emanating from the power plant. This would include physico-chemical and biological treatment for other effluents conforming to the standards prescribed vide MoEF&CC Notification dated 22.12.1998 under Environment (Protection) Rules, 1986. Efficient operation of treatment plants would be ensured so that the quality of effluents conforms to the relevant standards prescribed by the Regulatory Agencies. All the treated effluents would be discharged through a single point outlet from Central Monitoring Basin (CMB). Treated effluents shall be collected in Central Monitoring Basin (CMB) and shall be recycled & re-used /discharged to sea.

### 11.2.3 Noise Pollution

The major noise generating sources are gas engines, compressors, pumps, fans etc. Acoustic enclosures shall be provided to control the noise level below 90 dB (A). Personal protective equipments shall be provided to the persons working in high noise area.
11.2.4 Solid Waste Management

As the units under the proposed project shall use Re-gasified Liquefied Natural Gas (R-LNG) as primary fuel and HSD as secondary fuel, near zero solid waste shall be generated due to operation of the power plant. However, the waste generated within the proposed project, if any, including the waste generated due to desalination plant shall be handled as per the stipulations of various waste management rules of MoEF&CC such as:
   I. Solid Waste Management Rules, 2016,
   II. Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016,
   IV. Construction and Demolition Waste Management Rules, 2016,

11.2.5 Green Belt Development

Green belt shall also be developed as per the guidelines prescribed by the Central Pollution Control Board (CPCB) & plantation shall be done in the available spaces.

11.2.6 Rehabilitation & Resettlement

No Rehabilitation & Resettlement is involved as site is government land and in physical possession of A&N Administration & is free from encroachment.

11.2.7 Post Operational Monitoring Programme

Regular monitoring of pollutants for different environmental attributes such as Air, Water etc. shall be conducted for the proposed project and the data/ monitoring reports/ half yearly compliance reports/ annual statements etc. as prescribed vide statutory clearances shall be submitted regularly to MoEF&CC/ UTPCC (Andaman Nicobar Pollution Control Committee in present case). However, minimum once in six month monitoring for other parameters shall be adopted by the plant.

11.2.8 Institutional Set-Up

The station will be equipped with all necessary instrumentation/ equipment required for ensuring effective environmental monitoring and management.

11.2.9 STATUTORY CLEARANCES

Statutory clearances that are applicable w.r.t. the proposed Dual Fuel power project at Hope Town are as follows:
11.2.9.1 Environment Clearance

The Terms of Reference for conducting an Environmental Impact Assessment study for assessment of impact due to the proposed project will be obtained from MoEF&CC. Concerned Union Territory Pollution Control Committee (UTPCC) i.e. Andaman Nicobar Administration Pollution Control Committee in present case, will be approached for Public Hearing and obtaining Consent to Establish/ Operate and Ministry of Environment, Forest and Climate Change for obtaining Environmental Clearance, in accordance with the procedure laid down in the EIA Notification, 2006 and its amendment.

11.2.9.2 Approval from Standing Committee of the National Board for Wildlife (NBWL)

Literature review of the area shows that one (01) National Park (Mount Harriett National Park) and two (02) Wildlife Sanctuaries (Snake Island-I and Snake Island-II Wildlife Sanctuary) are located within the 10 Km radius from proposed project site. As per MoEF&CC Notification, projects involving wildlife habitat (core zone of elephant/ tiger reserve etc.) and or located within the boundary limits of Eco-Sensitive Zone or 10 Km of the National Park/ Wildlife Sanctuary (where ESZ is not fixed), a prior clearance from Standing Committee of the National Board for Wild-life will be required. Therefore, clearance from Standing Committee of the NBWL shall be obtained.

C.R.Z Clearance

The proposed project is located very close to the coast and therefore simultaneous action shall also be taken to obtain the requisite clearance from A&N CRZ nodal agency under the provisions of the C.R.Z Notification, 1991 and its amendment in 2011 for the activities to be located in the CRZ, if applicable.

11.2.9.3 ASI Clearance/NOC

The proposed project is located very close to Cellular Jail (about 3.1 Km) which is amongst one of the UNESCO’s World Heritage monuments and therefore simultaneous action shall also be taken to obtain the requisite clearance/NOC from concerned Dept. of A&N Administration/ASI, if applicable.
Exhibit-I: Vicinity Map of A&N Power Project
Exhibit-II: General Layout Plan
D. O. No. EL/PL/1-42/2018/

Dear [Name],

I am to invite your attention to the decisions taken in the meeting held under the Chairmanship of Hon’ble Minister of State (I/C) for Power and New & Renewable Energy on 10th January, 2018. It was decided that “50 MW LNG Based Power Plant Generation Capacity may be set-up to ensure availability of firm power round the clock in Port Blair. The 50 MW LNG Based Power Plant may be set-up by NTPC Ltd. and Floating Storage Regasification Unit (FSRU) required for the power plant may be installed by M/s Petronet LNG Ltd. (PLL)”. A copy of MoM of 10th January, 2018 is attached as Annexure-I.

It was also decided that “Regarding procurement of Gas, JS (Thermal) suggested to explore the possibility of using the un-utilized LNG already available under existing “Take or Pay” contract between NTPC & GAIL. Hon’ble Minister agreed with the suggestion”.

As per the MOU dated 14.04.2016, M/s Petronet LNG Ltd., has completed the studies related to Site Selection Studies and Marine Studies (including assessment of the operational conditions within the harbor basins & ship motion studies and Tsurami & Seismic Studies) through M/s BMT Consultant India and Geotechnical investigations for the proposed LNG terminal through M/s Geo Foundations & Structures Pvt. Ltd. of the proposed site at Hoptown. M/s Petronet LNG Ltd. has submitted the Detailed Feasibility Report vide letter dated 22.12.2017 (Annexure-2). The copy of DFR can be collected from M/s PLL, however, a copy of the Executive Summary of the Feasibility Report is attached as Annexure-3.

It is therefore requested to kindly take-up the work for establishment of 50 MW LNG Based power plant with Dual-Fuel Engine at South Andaman and explore the possibility of using the unutilized LNG already available under “Take or Pay” contract between NTPC & GAIL, at the earliest.

Yours faithfully,

[Name]

(Sanjeev Khirwar)

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The Secretary, GOI, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi.
## Climatological Table

### Port Blair

<table>
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<tr>
<th>Month</th>
<th>Station Mean (ºC)</th>
<th>Max. (ºC)</th>
<th>Min. (ºC)</th>
<th>Rainfall (mm)</th>
<th>Mean Relative Humidity (%)</th>
<th>Max. Relative Humidity (%)</th>
<th>Total Rainfall (mm)</th>
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<td>Jan</td>
<td>26.1</td>
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