



**BID DOCUMENT FOR PROCUREMENT  
OF**

**“ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF  
DULIAJAN TO SV-02 CUM IP-1A PIPELINE  
(16” Dia. x 55 Km)”**

**TENDER NO. DNPL/PC/2023/55km/EIA/22/- DATED- 27/10/2023**

**OPEN DOMESTIC COMPETITIVE BIDDING**

**VOLUME - II OF II**

**PREPARED AND ISSUED BY**



**PIPELINE ENGINEERING CONSULTANTS PVT. LTD.**

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**PMC Document No. P143-TEN-Z002**

**VOLUME - II OF II**

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**ABBREVIATION**

SV	:	Sectionalize valve
EIA	:	Environmental Impact Assessment
SEIAA	:	State Level Environmental Impact Assessment Authority
MoEF	:	Ministry of Environment and Forest
CPCB	:	Central Pollution Control Board
SPCB	:	State Pollution Control Board
QCI	:	Quality Council of India
NABET	:	National Accreditation Board for Education and Training
CCEA	:	Cabinet Committee of Economic Affairs
NOC	:	No Objection Certificate
EMP	:	Environment Monitoring Plan
CTE	:	Consent To Establishment
CTO	:	Consent To Operate



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## 1 INTRODUCTION

DNP Ltd., a Govt. of Assam undertaking is a joint venture of DNPL (Assam Gas Company Ltd.), NRL (Numaligarh Refinery Ltd.) & OIL (Oil India Limited) engaged in the business of transportation of Natural gas from Duliajan. DNP Limited (DNPL) operates a dedicated pipeline supplying natural gas to Numaligarh refinery. The company has executed an agreement to supply 1.0 MMSCMD of natural gas with an annual contracted quantity of 300 MMSCM.

DNP Limited intends to replace existing Pipeline section 16" dia x 55 KM of Duliajan Numaligarh Pipeline.

Pipeline Engineering Consultants Pvt. Ltd. has been appointed as Engineering Consultant by M/s. DNP Limited to carry out Engineering, Procurement and Project management services.

## 2 PURPOSE

This document is for the Annual Rate Contract for Environmental Impact Assessment (EIA) Of Duliajan to SV-02 Cum IP-1A Pipeline (16" Dia. X 55 Km).

## 3 DEFINITION

Where used in this document, the following terms shall have the meanings indicated below, unless clearly indicated by the context to this order

PROJECT	:	Environmental Impact Assessment (EIA) Of Duliajan to SV-02 Cum IP-1A Pipeline (16" Dia. X 55 Km).
OWNER/COMPANY	:	DNP Limited
CONSULTANT	:	Pipeline Engineering Consultants Pvt. Ltd. (PLECO) the party to Act for and on behalf Of OWNER for the Engineering Services.
VENDOR/BIDDER	:	The party, who manufactures and supplies equipment and Provide services to the OWNER or to CONTRACTOR

## 4 SCOPE OF WORK

The Scope of Work under this tender is to carry out EIA Of Duliajan to SV-02 Cum IP-1A Pipeline (16" Dia. X 55 Km).

### 4.1 ENVIRONMENTAL IMPACT ASSESSMENT (EIA) STUDY

EIA study report is to take stock of the prevailing quality of environment, to assess the impacts of proposed industrial activity on environment and to plan appropriate environmental control measures to minimize adverse impacts and to maximize beneficial impacts from the proposed project.

#### 4.1.1 The following major objectives have been considered:

- Assess the existing status of land, air, noise, water and natural (biological- ecological) environment and socioeconomic component of environment including parameters of human interest covering the project site (Baseline survey).
- To evaluate significant qualitative impact of the proposed project on the major environment components.
- To prepare an Environmental Impact Assessment Statement based on predictions, identification and evaluation of the impacts of the proposed project.
- Assess financial considerations for suggested environmental control plans.



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- Generation of EIA Study Report as per the generic structure for Pipelines, approved TORs and latest guidelines/amendments issued by Ministry of Environment and Forests, Govt. of India and other Central/State Government authorities' statutory guidelines either existing or issued from time to time.
- Clearances from statutory authorities, as required.

**5 STANDARD TERMS OF REFERENCE (TOR)**

Standard TOR shall be followed for EIA study, as applicable

- 1) Justification of the project.
- 2) Route map indicating project location.
- 3) Details of land to be acquired. Details of projects vis-à-vis Ecological Sensitive Areas and approvals thereof.
- 4) Project location along with map of 1 km area (500 meters on either side of the proposed project area from center line) and site details providing various industries, surface water bodies, forests etc.
- 5) Analysis of alternative sites and technology.
- 6) Location of National Park/Wild life sanctuary/Reserve Forest within 10 km radius of the project.
- 7) Status of clearance from NBWL for pipeline passing through wildlife sanctuary/ Eco-logical sensitive area (if applicable).
- 8) Recommendation of SCZMA /CRZ clearance for the proposed pipeline (if applicable).
- 9) Present land use based on satellite imagery for the study area of 10 km radius.
- 10) Details of applications filed for forest clearance to be obtained for the project for the forest land involved in the project along with details of the compensatory a forestation.
- 11) Process Description along with Process Flow Diagram.
- 12) Details of associated facilities/utilities to be installed.
- 13) Details of water consumption and source of water supply, waste water generation, treatment and effluent disposal.
- 14) Detailed solid & Hazardous waste generation, collection, segregation, its recycling and reuse, treatment and disposal.
- 15) Total cost of the project along with total capital cost and recurring cost/annum for environmental pollution control measures.
- 16) Site-specific micro-meteorological data for temperature, relative humidity, hourly wind speed and direction and rainfall for one season at one location.
- 17) Ambient air quality monitoring within the study area of 500 m along the pipeline route and around the pumping station and delivery station for PM2.5, PM10, SO2, NOx, CO, HC, VOC for one season (non-Monsoon) taking into account the pre-dominant wind direction at the representative locations covering population zone and sensitive receptors including reserved forests.
- 18) Determination of atmospheric inversion level and assessment of ground level concentration of pollutants. Air quality modelling for proposed project.
- 19) Water monitoring to be conducted including surface & ground water for one season (non-Monsoon).



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- 20) Soil sample analysis within the study area for one season (non-Monsoon).
- 21) Noise Monitoring will be taken up for one season (non-Monsoon).
- 22) Demography & socio-economics of the study area.
- 23) Ecological features (terrestrial & Aquatic) of the study area for one season (non-Monsoon).
- 24) Assessment of impact on air, water, soil, solid/ hazardous waste and noise levels.
- 25) A detailed note on method to be used for crossing road, nalla, stream, rivers, railway line etc.
- 26) Air pollution control measures proposed for the effective control of gaseous emissions within permissible limits.
- 27) Details of proposed preventive measures for leakages and accident.
- 28) Risk assessment including Hazard identification, Consequence Analysis, Risk Assessment and preparation of Disaster Management Plan as per Regulations.
- 29) Corrosion Management of Pipeline
- 30) Details of proper restoration of land after laying the pipelines.
- 31) Details of proposed Occupational Health Surveillance program for the employees and other labour

**6 TIME FRAME FOR EIA STUDY:**

- 1) Contractor shall submit the draft EIA Study report as per the approved Terms of Reference (TOR) incorporating the inputs from Public Hearing (if required).
- 2) If required by EAC/MOEF, Contractor shall conduct the public hearing on behalf of DNPL. Contractor shall make all necessary arrangements for successful conduct of Public Hearing within due time as per date given by Expert Appraisal Committee (EAC) of MOEF or date as notified by DNPL. Contractor shall also do necessary follow-up action with government authorities to submission of Minutes of Public Hearing & Submission of final EIA report to SPCB & MOEF after incorporating suggestions/concerns expressed during Public Hearing. The quoted price shall be deemed to include all such expenditure for successful conduct of Public Hearing.
- 3) Contractor shall submit the final EIA report with other required documents (after review/approval by DNPL) to MOEF for grant of EC. Contractor shall also arrange to provide any other additional information/ data if required by EAC/MOEF for grant of EC. Contractor shall obtain the Environmental Clearance (if required) within the timeline specified in EIA notification.
- 4) Contractor shall prepare and submit application for Consent to Establish (CTE) for various installations of the project on receipt of all related information and documents from DNPL. Contractor shall obtain the requisite permits from SPCB within 90 days from the date of application. In case of any delay for reasons which are not in control of owner/ consultant, prior approval will be taken from owner

The Contractor shall complete the activities of Phase-I, Phase II as detailed below and thereafter the contractor shall be associated with Company for obtaining the Environmental Clearance (EC). The detailed time frame for the execution of the Contract will be as follows:



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Activity	Time frame- No. of Days
<b>PHASE-I: EIA STUDY</b>	
a) Mobilization & Commencement of work	Within 15 days of issuance of work order
b) Data collection (Primary and Secondary) and analysis (air, water, soil, ecology etc.)	90 days from the date of commencement of work
c) Submission of EIA Draft Report (2 hard copies and soft copies) & Presentation/discussion on the EIA Draft Report at PHQ, Company's comments/ views.	30 days after completion of Data collection and analysis (b)
d) Submission of Revised Draft EIA Report along with Project Summary both in English & Local Language (if necessitated) after discussion/presentation at PHQ.	Within 30 days of discussion on the Draft Report at PHQ (c).
e) Submission of approved EIA Draft Report and EIA Project summary, in English & local language (if necessitated)-3 hard copies and soft copies after incorporating company's comments / views.	10 days of written advice by the Company
f) To prepare & submit the application and other documents (after review by the Company) to State Pollution Control Board for Conduct of Public Hearing.	Within 7 days of written advice by the Company
g) To prepare Public Hearing presentation in English & local language (if necessitated) and give presentation, in case of requirement, during Public Hearing Public Hearing as described in detail in the Scope of services (if required or as applicable)	During Public Hearing and as & when required
h) To review the EIA Draft Report, prepare Final EIA Report incorporating the issues raised in the Public Hearing and submission of 3 hard and soft copies for Company's approval (if required or applicable).	Within 7 days from the date of receiving Public Hearing data from the State Pollution Control Board
i) Submission of Company approved Final EIA Report (after incorporating all the issues raised during Public Hearing and Company's approval) of 3 hard copies in bound volume and 3 soft copies (CD/DVD/Pen drive).	Within 14 days of advice by the Company.
<b>PHASE-II: ENVIRONMENTAL CLEARANCE</b>	
a) Preparing all documents including the application for obtaining EC from MOEF &CC.	Within 7 days of advice by the company
b) Preparation of presentation & making presentation to the EAC (MOEF & CC), New Delhi for obtaining EC and Preparation & submission of Revised Final EIA report (3 Copies both in hard & soft Copy) to DNPL based on EAC recommendations, if any.	As & when advised by DNPL after receiving the intimation regarding date and time from MOEF.
c) Subsequent follow up for obtaining EC from the MOEF &CC.	Within 2 (two) weeks from the date of EAC presentation.



## **7 DELIVERABLES/ REPORTS:**

### **7.1 Draft Report:**

- i. Submission of hard Copies of Draft Report on EIA Study along with a soft copy of report in CD/DVD for company's review.
- ii. One presentation to Company at Duliajan on the submitted EIA draft report prior to finalization of the draft report.
- iii. Submission of hard copies of approved draft report in bound volume and soft copies (CD/DVD) after incorporating Company's views/comments.
- iv. If required, Submission of Application to State Pollution Control Board: To prepare & submit the application and other documents (after review of the EIA draft report by the company) to State Pollution Control Board for conduct of Public Hearing
- v. If required, Presentation during Public Hearing: To be present during Public Hearing and make presentation. The presentation shall also be made in local language.
- vi. Review of the Draft EIA Report after Public Hearing: Considering Company's views/comments, the approved draft EIA report shall be reviewed incorporating all the issues raised/discussed during Public Hearing/Consultation meeting.
- vii. Preparation of Final Report: After review of the Draft EIA report based on Public Hearing issues, the final EIA report shall be prepared covering all the points as per Terms of Reference/Technical specifications and compliance of any other statutory recommendations issued by the Statutory Authorities, if available. The copy of the bidder's (consultants) QCI/NABET accreditation certificate shall be included in the final EIA report.
- viii. Submission of Final Report: 2 copies (both in hard & soft copy) of Final Draft EIA report shall be submitted to the Company for approval.
- ix. **Application for EC (If required):**
  - I. To assist in preparation of all the documents including the application for obtaining EC.
  - II. To make presentation to EAC members, MOEF at New Delhi for obtaining EC.
  - III. Copies of applications for EC from the MOEF and NOC from the SPCB:  
One copy each of these applications must be submitted to DNPL.
  - IV. Bidder shall be ultimately responsible for getting the approvals from MOEF/CC.

## **8 SPECIAL TERMS AND CONDITIONS**

Project Site is located in Assam, India as per SOI map (Survey of India). Consultant has to locate & verify the site as per details provided in the schematic drawings.

- 4 no's bound hard color copies and 4 no's of soft copies in pdf format (each report in one hard disk respectively) and one copy in editable format (MS Office Latest version). PLECO will provide Document cover format for the Report.

## **9 EXPERIENCE/QUALIFICATION OF BIDDER'S PERSONNEL:**

As the EIAs are multi-disciplinary activities where inputs are required from specialists having knowledge of the sector/ industry for which EIAs are to be carried out as well as in the functional areas like land use, air pollution control, air quality modelling, water pollution control, noise and vibration, ecology and bio-diversity, socioeconomic aspects, risks and hazard management etc., hence the:

- a) Successful Bidder must provide competent personnel having expertise in all functional areas to carry out required environmental impact assessment studies most efficiently.



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- b) Bidders must provide the details of experience of their personnel to be deployed for the study along with their bid. Curriculum vitae of the personnel proposed to be deployed by the bidder must accompany the bid document. All personnel proposed to be deployed must be fluent in speaking English.
- c) The bidder shall specify the name of the key person, the EIA coordinator, for the EIA study. The key person should have broad knowledge about the project and clear understanding about the related functional areas. The coordinator should be thoroughly aware of national and global environmental concerns and be familiar with all relevant environmental regulations, the EIA Notification and its Amendments and the public consultation procedures. Also, the coordinator should have experience of completion of 1 (one) no. EIA study.
- d) Contractor's personnel shall be fluent in English language (both writing and speaking).
- e) Accreditation Certificate: Bidders must submit Certificate of Accreditation from QCI/NABET agency along with the technical bid. (NABET: National Accreditation Board for Education & Training, QCI- Quality Council of India)

**10 OUT STATION TRAVEL / VISIT TO PMC AND DNPL OFFICE:**

All expenses towards travel, lodging and boarding at PMC Office at Noida & DNPL Office at Duliajan shall be at the cost of bidder. No reimbursement shall be made towards above account. Bidder to bid accordingly consider all expenses funds (Travelling, Lodging & Boarding) in LS Rates.

**11 OTHER TERMS AND CONDITIONS:**

- 1) In addition to the Indian laws and regulations specified under General Conditions of the Contract, any other Indian laws applicable to Environmental Impact Assessment study shall be binding to the bidder.

**Some are mentioned below for easy reference:**

- EIA Notification 2006 with latest amendment.
  - Environmental (Protection) Act, 1986
  - Wildlife Protection Act, 1972
  - Forest Conservation Act, 1980.
  - Hazardous Wastes (Management and Handling) Rules, 1989
  - Oil Industry Safety Directorate (OISD) guidelines.
  - Air (Prevention and Control of Pollution) Act, 1981
  - Water (Prevention and Control) Act, 1974
  - CPCB guidelines
- 2) The arrangement of necessary permits from the concerned authorities to carry out the EIA study will be the sole responsibility of the bidder.
  - 3) The bidder shall arrange accommodation, food, transportation for its people to be deployed at site for carrying out the job at his own cost. DNPL will not be responsible for it.
  - 4) The successful bidder shall submit a document containing detailed information of the personnel, along with the photographs, deployed by the bidder for execution of the jobs to the company before initiation of EIA activities.
  - 5) The bidder shall be responsible for providing necessary PPE for the work-related activities of the personnel. The bidder shall be responsible for any work-related accidents throughout the contract period.
  - 6) The bidder shall be directly responsible for overall safety of the personnel deployed by him for the purpose. In no case, Company will be held responsible for safety of the bidder's personnel engaged against the said



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contract.

- 7) The bidder shall submit the documents of compliance of minimum wages act every month, in case of deployment of contractual laborer.
- 8) Bidder shall replace any of their personnel(s) at any point of time during the contractual period if, in the opinion of the Company, found not suitable for any reason.
- 9) One Nodal representative from the contractor side should continue from the start of the project till its completion.

**12 SUPPLEMENT-I: ACTIVITIES THAT ARE LIKELY TO BE STUDIED FOR EACH ENVIRONMENTAL COMPONENT:**

**General description of activities that are likely to be studied are:**

**12.1. Air Environment:**

- i. Determination of impact zone (through a screening model) and developing a monitoring network.
- ii. Monitoring the existing status of ambient air quality within the impacted region (10 km on both sides of the proposed project site)
- iii. Monitoring the site-specific meteorological data, viz., wind speed and direction, humidity, and ambient temperature.
- iv. Identification, quantification and evaluation of other potential emissions (including those of vehicular traffic) within the impact zone and estimation of cumulative impact of all the emissions/impacts.
- v. Evaluation of the adequacy of the proposed pollution control methods and devices to meet gaseous emission and ambient air quality standards.
- vi. Delineation of mitigation measures at source, pathways and receptors.

**12.2. Noise Environment:**

- i. Monitoring the present status of ambient noise levels within the impact zone, and prediction of future noise levels resulting from the proposed project and related activities including increase in vehicular movement.
- ii. Identification of impacts due to any anticipated for noise levels on the surrounding environment.
- iii. Recommendations on mitigation measures for noise pollution.

**12.3. Water Environment:**

- i. Study of water quality and quantity of the water sources within the impact zone.
- ii. Assessment of wastewater characteristics and quantity of effluent likely to be discharged during the operations.
- iii. Suggestions of suitable measures for prevention and control of water pollution.
- iv. Study of existing ground and surface water resources with respect to quantity and quality within the impact zone of the proposed project.
- v. Prediction of impacts on water resources due to the proposed water use/pumping on account of the project.
- vi. Evaluation of the proposed pollution prevention and waste water treatment system and suggestions on modification, if required.
- vii. Prediction of impacts of effluent discharge on the quality of the receiving water body using appropriate mathematical simulation models.
- viii. Assessment of the feasibility of water recycling and reuse and delineation of detailed plan in this regard.

**12.4. Biological Environment:**

- i. Survey of flora and fauna clearly delineating season and duration.
- ii. Assessment of flora and fauna present within the impact zone of the project.
- iii. Assessment of potential damage to terrestrial and aquatic flora and fauna due to discharge of effluents and gaseous emissions.
- iv. Assessment of damage to aquatic flora and fauna due to air pollution, and use and landscape changes
- v. Assessment of damage to aquatic flora and fauna (including commercial fishing) due to physical disturbances and alterations
- vi. Prediction of biological stresses within the impact zone of the proposed project
- vii. Delineation of mitigation measures to prevent and / or reduce the damage.

**12.5. Land Environment:**

- i. Studies on soil characteristics, existing land use and topography, landscape and drainage patterns within the impact zone.
- ii. Estimation of impacts of project on land use, landscape, topography, drainage and hydrology.
- iii. Identification of potential utility of treated effluent in land application and subsequent impacts.
- iv. Estimation and characterization of solid wastes and delineation of management option for minimization of waste and environmentally compatible disposal.

**12.6. Socio-economic and Health Environment:**

- i. Collection of demographic and related socio-economic data.
- ii. Collection of epidemiological data, including studies on prominent endemic diseases (e.g., fluorosis, malaria, filaria, malnutrition) and morbidity rates among the population within the impact zone.
- iii. Projection of anticipated changes in the socio-economic and health due to the project and related activities including traffic congestion and delineation of measures to minimize adverse impacts.
- iv. Assessment of impact on significant historical, cultural and archaeological sites/plates in the area.
- v. Assessment of economic benefits arising out of the project.
- vi. Assessment of rehabilitation requirements with special emphasis on scheduled areas, if any.

**12.7. Risk Assessment:**

- i. Hazard identification taking recourse to hazard indices, inventory analysis Natural Hazard Probability, etc.
- ii. Maximum Credible Accident (MCA) analysis to identify potential hazardous scenarios
- iii. Consequence analysis of failure and accidents resulting in fire, explosion, hazardous releases, etc.



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- iv. Hazard & Operability (HAZOP) studies
- v. Assessment of risk on the basis of the above evaluations
- vi. Preparation of an onsite and offsite (project affected area) Disaster Management Plan.

**12.8. Environment Management Plan:**

- i. Delineation of mitigation measures including prevention and control for each environmental component and rehabilitation plan, if necessary.
- ii. Delineation of monitoring scheme for compliance of conditions.
- iii. Delineation of implementation of plan including public consultation, scheduling and resource allocation.

EIA study should be in accordance with the above broad scope and will have to meet all the requirements under the relevant guidelines of the Ministry of Environment & Forests, Government of India and the Central Pollution Control Board.



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**13 SUPPLEMENT-II: SAMPLE STRUCTURE FOR EIA REPORT:**

**EIA Report:** As per MOEF notification/ guideline & TOR will be followed. Following structure is shown as minimum requirement:

Executive Summary		Non-technical executive summary of the Environmental Impact Assessment (EIA) and the Environmental Management Plan (EMP), highlighting the main conclusions.
1	Introduction	Describes background to the project, the proponent (partners, operator), the environmental policies, principles, EMS and past environmental performance of the operator and summarizes the initial environmental examination, scoping (issues & study area), methodology, and approach undertaken.
2	The proposed development (include maps, drawings as required)	Describes proposed operations (including associated activities e.g., construction of buildings, road building, transportation of materials etc.), consumption of natural resource, emissions and discharges into the atmosphere and alternatives considered.
3	Description of the existing Environment (include location, maps, photo-documentation, geographical distribution of environmental and social-economic characteristics with respect to project location)	Describes the background environmental (physicochemical, biological) and social-economic characteristics in the area of the proposed operations (Baseline Data). This may be in the form of statistical, graphical representation of data and primarily include conclusive, interpretative information with respect to variance, regulatory standards and guidelines, comparative analysis with respect to available regional data.
4	Environmental Impacts and mitigation measures	Defines the environmental interactions as part of the project (including consumption/demand on natural, socio-economic resources and generation, degradation of the same). Potential impacts due to the proposed operations, requirement and details of the control and mitigation measures to be implemented to eliminate or limit the potential negative impacts. Identify all the regulations, international conventions and stakeholders (mainly regulators, NGOs and local communities) relevant to the proposed development and the baseliner environment of the location. Describe the environmental and socio-economic provisions with respect to the regulations and conventions and analyse their implications on the planning and implementation of the project.



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5	Environmental Management and Monitoring Plan	Provides and Environmental Aspects Register with an outline of how the project will be managed to ensure protection of the environmental throughout the life of the proposed operations. The section should specifically include provision of "Change management" (to accommodate changes in project planning and implementation). The section should also include organizational resources, communication and documentation, training and monitoring requirement to fulfil the SMS requirements.
6	Conclusions	Summarizes main conclusions of the environmental assessment.
7	References	Sources consulted in preparing the Report.
8	Glossary of Terms	Definitions of the Technical terms and abbreviations.
9	Appendices	Standards for various environmental elements.