



|    |                          | <b>CORRIGENDUM # 2</b> |                                    |  | Date: 22.10.2024                                     |   |  |  |  |
|---|--------------------------|------------------------|------------------------------------|--|--|---|---|--|--|
| <b>NAME OF PROJECT: MDPE LAYING AND LMC WORKS IN HOWRAH, HOOGLY, NADIA, NORTH 24-PARGANA, SOUTH 24- PARGANA AND KOLKATA MUNICIPAL CORPORATION IN KOLKATA GA ON ARC BASIS FOR 2 YEARS</b><br><br>E-Tender ID: 2024_BGCL_211050_1 |                          |                        |                                    |  | Project: City Gas Distribution Project in Kolkata GA |   | Owner: Bengal Gas Company Ltd.  |  |  |
|   |                          |                        |                                    |  | Pre-Bid meeting Date: 18.10.2024                     |   |   |  |  |
| Sl. No.   | Section Description      | Tender Page No.        | Clause/Para/ Section               | Clause Description   | Amendment/Addition/Modification /Deletion            |   |   |  |  |
| 1   | Vol I of II - Commercial | Various                | Wherever applicable                | Replacement of Word " MECON" with 'LYONS"  | Modification   | Wherever word "MECON" is mentioned in Tender, the same may be read as "LYONS"   |   |  |  |
| 2   | Vol I of II - Commercial | Various                | Wherever applicable                | Modification in Tender description   | Modification   | Tender description may be read as "MDPE LAYING AND LMC WORKS IN HOWRAH, HOOGLY, NADIA, NORTH 24-PARGANA, SOUTH 24- PARGANA AND KOLKATA MUNICIPAL CORPORATION IN KOLKATA GA ON ARC BASIS FOR 2 YEARS   |   |  |  |
| 3   | Vol I of II - Commercial | Various                | Wherever applicable                | Rectification in E-Tender ID   | Modification   | Please read the E-Tender ID as : 2024_BGCL_211050_1   |   |  |  |
| 4   | Vol I of II - Commercial | 11 of 350              | BEC - Technical Clause A (A1 & A2) | <p>A.1 The bidder should have executed at least one order of LMC work including installation, testing and commissioning of MDPE Pipeline, GI Network, Domestic household connection, for any City Gas Distribution project of value as per Table-1 given below in any of last 07 years reckoned from the bid due date.</p> <p>OR</p> <p>A2. Bidder must have successfully completed at-least one contract for laying, commissioning of underground pipelines for carrying Hydro-carbon products/ Water – Drainage/Sewage/laying of cable /telecom ducts or any other underground utility laying job through various methods (Open excavation method/Moling/HDD/Boring, etc.) during last 07 years having executed value as per Table-1 given below reckoned from bid due date.</p> | Amendment  | <p>The Clause may be read as;</p> <p>A.1 The bidder should have successfully executed/completed order of LMC work including installation, testing and commissioning of MDPE Pipeline/GI Network/Domestic household connection for any City Gas Distribution project of value as per Table-1 given below in any of last 07 years reckoned from the bid due date.</p> <p>OR</p> <p>Bidder must have successfully executed/completed order for laying, commissioning of underground pipelines for carrying Hydro-carbon products/Water-Drainage/Sewage/laying of cable /telecom ducts or any other underground utility laying job through various methods (Open excavation method/Moling/HDD/Boring, etc.) during last 07 years having executed value as per Table-1 given below reckoned from bid due date.</p> |   |  |  |



M. Girish Kumar  
Head-C&P - Lyons Engineering Pvt. Ltd.



**CORRIGENDUM # 2**

Date: 22.10.2024



NAME OF PROJECT: MDPE LAYING AND LMC WORKS IN HOWRAH, HOOGLY, NADIA, NORTH 24-PARGANA, SOUTH 24- PARGANA AND KOLKATA MUNICIPAL CORPORATION IN KOLKATA GA ON ARC BASIS FOR 2 YEARS

Project: City Gas Distribution Project in Kolkata GA

E-Tender ID: 2024\_BGCL\_211050\_1

Owner: Bengal Gas Company Ltd.

Pre-Bid meeting Date: 18.10.2024

| Sl. No. | Section Description            | Tender Page No.   | Clause/Para/ Section               | Clause Description  | Amendment/Addition/Modification /Deletion |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
|---------|--------------------------------|---|------------------------------------|---|---|---|--|---|-------------------------------|-------------|---|-------------------------------|-------------|---|-------------------------------|-------------|-----------|--|--------|-------------|---|---|--------------------------------|---|----|--|--|---|------------------------------|---|----|--|--|---|----------------------------|---|
| 5       | Vol I of II - Commercial       | 11 of 350   | BEC - Technical Clause A - Table 1 | <table border="1"> <thead> <tr> <th>Sl No.</th> <th>Description</th> <th>Minimum Executed Value of Each PO/Works (inclusive of GST)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Experience of 3 similar works</td> <td>2,44,55,414</td> </tr> <tr> <td>2</td> <td>Experience of 2 similar works</td> <td>3,05,69,267</td> </tr> <tr> <td>3</td> <td>Experience of 1 similar works</td> <td>4,89,10,828</td> </tr> </tbody> </table> | Sl No.                                    | Description   | Minimum Executed Value of Each PO/Works (inclusive of GST) | 1 | Experience of 3 similar works | 2,44,55,414 | 2 | Experience of 2 similar works | 3,05,69,267 | 3 | Experience of 1 similar works | 4,89,10,828 | Amendment | <table border="1"> <thead> <tr> <th>Sl No.</th> <th>Description</th> <th>Minimum Executed Value of Each Work Order/Contract (inclusive of GST)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3(Three) work orders/contracts</td> <td>Rs. 2,44,55,414/-<br/>(Indian Rupees Two Crore Forty-Four Lakh Fifty-Five Thousand Four Hundred Fourteen Only)</td> </tr> <tr> <td colspan="3" style="text-align: center;">OR</td> </tr> <tr> <td>2</td> <td>2(Two) work orders/contracts</td> <td>Rs. 3,05,69,267/-<br/>(Indian Rupees Three Crore Five Lakh Sixty-Nine Thousand Two Hundred Sixty-Seven Only)</td> </tr> <tr> <td colspan="3" style="text-align: center;">OR</td> </tr> <tr> <td>3</td> <td>1(One) work order/contract</td> <td>Rs. 4,89,10,828/-<br/>(Indian Rupees Four Crore Eighty-Nine Lakh Ten Thousand Eight Hundred Twenty-Eight Only)</td> </tr> </tbody> </table> | Sl No. | Description | Minimum Executed Value of Each Work Order/Contract (inclusive of GST) | 1 | 3(Three) work orders/contracts | Rs. 2,44,55,414/-<br>(Indian Rupees Two Crore Forty-Four Lakh Fifty-Five Thousand Four Hundred Fourteen Only) | OR |  |  | 2 | 2(Two) work orders/contracts | Rs. 3,05,69,267/-<br>(Indian Rupees Three Crore Five Lakh Sixty-Nine Thousand Two Hundred Sixty-Seven Only) | OR |  |  | 3 | 1(One) work order/contract | Rs. 4,89,10,828/-<br>(Indian Rupees Four Crore Eighty-Nine Lakh Ten Thousand Eight Hundred Twenty-Eight Only) |
| Sl No.  | Description                    | Minimum Executed Value of Each PO/Works (inclusive of GST)  |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 1       | Experience of 3 similar works  | 2,44,55,414   |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 2       | Experience of 2 similar works  | 3,05,69,267   |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 3       | Experience of 1 similar works  | 4,89,10,828   |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| Sl No.  | Description                    | Minimum Executed Value of Each Work Order/Contract (inclusive of GST)   |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 1       | 3(Three) work orders/contracts | Rs. 2,44,55,414/-<br>(Indian Rupees Two Crore Forty-Four Lakh Fifty-Five Thousand Four Hundred Fourteen Only) |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| OR      |                                |   |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 2       | 2(Two) work orders/contracts   | Rs. 3,05,69,267/-<br>(Indian Rupees Three Crore Five Lakh Sixty-Nine Thousand Two Hundred Sixty-Seven Only)   |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| OR      |                                |   |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 3       | 1(One) work order/contract     | Rs. 4,89,10,828/-<br>(Indian Rupees Four Crore Eighty-Nine Lakh Ten Thousand Eight Hundred Twenty-Eight Only) |                                    |   |   |   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
|         |                                |   |                                    |   |   | Revised Table 1   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 6       | Vol I of II - Commercial       | NA  | SECTION VI                         | Particular Job Specification and Scope of Work  | Addition                                  | Please find Job Specification and Scope of work enclosed in Annexure I  |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 7       | Vol I of II - Commercial       | 322 of 350  | SECTION V - Annexure 5             | Payment Terms   | Amendment                                 | Please find Amended Payment Terms enclosed in Annexure II   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 8       | Vol I of II - Commercial       | 96 of 350   | BID DATA SHEET                     | Clause 3 - Bids from Consortium / Joint Venture - Applicable  | Amendment                                 | The Clause may be read as : Bids from Consortium/Joint Venture - Not applicable   |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 9       | Vol I of II - Commercial       | 133 of 350  | Forms and Formats - Format F-2C    | PROFORMA OF "INSURANCE SURETY BOND" FOR "EARNEST MONEY DEPOSIT/ BID SECURITY"   | Modification                              | Revised Form F-2C is enclosed herewith as per Annexure III which may be used in place of existing format in the Tender. |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |
| 10      | Vol I of II - Commercial       | 143 of 350  | Forms and Formats - Format F-4B    | PROFORMA OF "INSURANCE SURETY BOND" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"  | Modification                              | Revised Form F-4B is enclosed herewith as per Annexure III which may be used in place of existing format in the Tender. |  |   |                               |             |   |                               |             |   |                               |             |           |  |        |             |   |   |                                |   |    |  |  |   |                              |   |    |  |  |   |                            |   |

M. Girish Kumar  
Head-C&P - Lyons Engineering Pvt. Ltd.

**ANNEXURE – I TO CORRIGENDUM 2**

**SECTION VI**

**PARTICULAR JOB SPECIFICATION & SCOPE OF WORK**

| <b>Serial No.</b> | <b>CONTENTS</b>  |
|-------------------|--|
| <b>1</b>          | Project Description & Scope of Work  |
| <b>2</b>          | General Terms and Condition  |
| <b>3</b>          | Procurement  |
| <b>4</b>          | Scope of Supply  |
| <b>5</b>          | Documents, Specifications, Standards & Drawings  |
| <b>6</b>          | Resources/ Facilities  |
| <b>7</b>          | Project Scheduling & Monitoring  |
| <b>8</b>          | Construction   |
| <b>9</b>          | Documentation  |
| <b>10</b>         | Survey and Level/ Setting out Work   |
| <b>11</b>         | Order of Works/ Permissions/ Right of Entry/ Care of Existing Services                       |
| <b>12</b>         | Make of Material/ Bought Out Items   |
| <b>13</b>         | Inspection of Supply Items   |
| <b>14</b>         | Escalation   |
| <b>15</b>         | Documents to be submitted / produced alongwith R.A. Bills                                    |
| <b>16</b>         | Insurance for Free Issue Material  |
| <b>17</b>         | Special Points pertaining to Specification   |
| <b>18</b>         | Appendix-I to Particular Job Specification ( LIST OF APPROVED SUPPLIER FOR BOUGHT OUT ITEMS) |

## **1.0 PROJECT DESCRIPTION**

Bengal Gas Company Limited (BGCL), A Joint Venture of GAIL (India) Limited (A Maharatna CPSE) and Greater Calcutta Gas Supply Corporation Limited (A Govt. of West Bengal Enterprises) has been established inter-alia for undertaking marketing, distribution and supply of Piped Natural Gas and Compressed Natural Gas in the geographical area of Kolkata and parts of its adjoining districts of North 24 Parganas, south 24 Parganas, Howrah, Hooghly and Nadia (KOLKATA GA).

BGCL has been authorized for implementation of City Gas Distribution project by Petroleum and Natural Gas Regulatory Board for implementation of CGD project in the geographical area of Kolkata and parts of adjoining districts.

This tender deals with the laying, testing and commissioning of Approx 1000KM underground Medium Density Polyethylene (MDPE) main pipeline and service pipelines of sizes ranging from 20mm to 180mm OD from DCU / DRS / MRS (including CS/PE transition fittings covering PE end only) to PE network pipelines for Piped Natural Gas supply to domestic and commercial consumers at KOLKATA GA. The scope of work also covers 100000 nos. PNG connections for domestic consumers.

## **1.2 SCOPE OF WORK**

The scope of work involves providing PNG connections to about 100,000 nos of consumers at Kolkata GA.

The scope of work also covers laying, testing and commissioning of Approx 1000KM Underground Polyethylene (PE) pipelines of sizes 20mm to 180mm OD from the DCU/DRS/MRS to various end point consumers of Piped Natural Gas (PNG) in **KOLKATA GA**. Other than MDPE pipe, GI Pipes ( ½” , ¾” , 1” ), Meters & Regulators, all other materials including GI pipes (quantity as per SoR) shall be procured by the contractor as indicated in SoR.

## **2.0 GENERAL Terms and Condition**

- i. Special Condition of Contract shall be read in Conjunction with the General Conditions of Contract, SOR, PJS of work, specifications, Drawings and any other documents forming part of this contract wherever the context so requires.
- ii. Notwithstanding the sub-division of the documents into these separate sections and volumes every part of each shall be deemed to be supplementary to and complementary

of every other part and shall be read with and into the contract so far as it may be practicable to do so.

iii. Where any portion of the General Condition of Contract is repugnant, to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to override the provisions of the General Condition of Contract and shall to the extent of such repugnancy or variations, prevail.

iv. The materials, design and workmanship shall satisfy the relevant INDIAN STANDARDS, the TECHNICAL SPECIFICATIONS contained herein and Codes referred to. Where the technical specification stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.

v. Wherever it is mentioned in the specifications that the CONTRACTOR shall perform certain work or provide certain facilities, it is understood that the CONTRACTOR shall do so at his cost and the VALUE OF CONTRACT shall be deemed to have included cost of such performance and provisions, so mentioned.

vi. It will be Contractor's responsibility to bring to the notice of Engineer-in charge any irreconcilable conflict in the contract documents before starting the work(s) or making the supply with reference which the conflict exists.

vii. In the absence of any specifications covering any material, design of work(s) the same shall be performed/ supplied/ executed in accordance with Standard Engineering Practice as per the instructions/ directions of the Engineer-in-charge, which will be binding on the Contractor.

### **3.0 Procurement**

3.1.1 CONTRACTOR shall procure and supply all the materials other than OWNER supplied materials, required for permanent installation of pipeline and aboveground GI Installation in sequence and at appropriate time. All equipment, materials, components etc. shall be suitable for the intended service. Approved vendor list has been indicated in the bid package for various items. For items which are not covered in the vendor list, CONTRACTOR shall obtain Owner's prior approval for the vendor based on PTR document.

3.1.2 CONTRACTOR shall procure all materials, components, equipment, consumable etc. required for successful completion of the pipeline system. CONTRACTOR shall also procure and supply spares required for pre-commissioning and commissioning/start up as recommended for all items supplied by him as per specifications provided in the bid package. Where no specification is available in the contract, the same shall be prepared

by the CONTRACTOR based on the piping material specification and shall be subject to Owner's approval.

3.1.3 Material take-off with complete description of size, rating, material, thickness and specifications to be prepared by contractor.

3.1.4 Only single offer shall be provided by the bidder fully complying to specifications/ drawings/ requirements for Owner's review and approval. CONTRACTOR shall provide for inspection of the items at vendor's works by the OWNER/ Owner's REPRESENTATIVE or by a reputed inspection agency and shall submit inspection reports for Owner's clearance.

3.1.5 Stores management including receipt, warehousing, preserving the material in good condition, issue of material to construction site, reconciling/ handing over surplus material to OWNER for OWNER supplied items.

3.1.6 Carry out proper documentation of inspection and quality assurance programmes for all equipment and bulk materials duly approved by OWNER. CONTRACTOR shall maintain an accurate and traceable listing of procurement records for the location, quality and character of all permanent materials in the Project.

3.1.7 CONTRACTOR shall immediately report to the OWNER of all changes which will affect material quality, and recommend any necessary corrective actions to be taken.

3.1.8 Submit periodic progress reports highlighting hold ups and slippages, if any, to OWNER and take remedial measures.

3.1.9 Interact with authorities such as Sales Tax, Octroi, Excise, Customs etc. as necessary and arrange for transportation of the materials under his scope of supply to site.

3.1.10 All purchase requisitions including purchase orders shall be approved by Owner/ Owner's Representative.

3.1.11 Compliance with vendor's and supplier's instructions and recommendations for transportation, handling, installation & commissioning.

## **3.2 Construction**

### **3.2.1 General**

3.2.1.1 All construction works shall be carried out as per "Approved for Construction"

drawings, procedures, specification and applicable codes and standards. Any changes at site shall also need prior approval from the OWNER and revision of drawings. Construction drawings will be submitted by the Contractor in a phased manner for Owner's approval in accordance with the procurement and construction plan prepared and furnished by contractor & agreed by Owner. Owner will take minimum 7 working days from the date of submission of the documents / drawings submitted by the contractor for Owner's comments / approval.

#### **3.2.1.2 Statutory Approvals**

The Owner shall provide to the Contractor the basic / in principal approval for laying the pipeline. However, the Contractor at his own initiative shall obtain all permissions, permits and licenses necessary for the performance of the work. If any such permission, permit or license required for the performance of the work by the contractor can only be granted at the request or recommendation of the Owner, the Owner shall at the request of the Contractor, provide recommendatory letters to the contractor to obtain or procure the same. The contractor shall not, however be entitled to any additional compensation over and above contracted rates of services for any hardship or increased cost caused by any idleness, suspension or disruption of work or any other account whatsoever as a result of the inability of the contractor to obtain the permission(s), permit(s), license(s) aforesaid to match with the progress of the work nor shall the same constitute a ground for extension of time.

a) The approval from any authority required as per statutory rules and regulations of Central/ State Government agencies etc. shall be the contractor's responsibility unless otherwise specified in the tender document. The application on behalf of the Owner for submission to relevant authorities along with copies of required certificates complete in all respects shall be prepared and submitted by the Contractor well ahead of time so that the actual construction/ commissioning of the work is not delayed for want of the approval/ inspection by concerned authorities.

The Contractor shall arrange the inspection of the works by the authorities and necessary coordination and liaison work in this respect shall be the responsibility of the Contractor. However statutory fees paid, if any, for all inspections and approvals by such authorities shall be reimbursed at actual by the Owner to the Contractor on production of documentary evidence.

b) The defective work resulting from poor workmanship and/ or material supplied by contractor, as pointed out by any statutory authority shall be rectified by the contractor at no extra cost to the Owner. Any change/ addition required to be made to meet the requirements of the statutory authorities, the same shall be carried out by the contractor free of charge. The inspection and acceptance of the work by statutory authorities shall, however, not absolve the contractor from any of his responsibilities under this contract.

3.2.1.3 The Contractor shall comply with all the conditions and requirements issued by Authorities having jurisdiction in the area where the work is to be performed.

It shall be the Contractor's sole responsibility to make arrangements for land for setting up of its string fabrication yards, all storage areas for line pipe and other materials, wherever required, and all other work areas.

The Contractor shall make all arrangements for access to his work site at his own cost and responsibility. If no public road exists Contractor shall arrange on his own for access to his work area at no extra cost to the COMPANY.

The CONTRACTOR shall be responsible for claims if any arising out of damage/ obstruction to public utilities like lines of DOT etc. where the claims will cover the restoration costs as well as loss of revenue due to down time.

3.2.1.4 Providing schedules, progress reporting, organization chart at construction site, quality assurance plan and developing quality control procedures, as per requirements indicated elsewhere in the bid package.

3.2.1.5 Coordination and supervising the work of sub-contractors.

3.2.1.6 Transportation of appropriate materials and taking delivery of Company supply materials, store, worksite, intermediate storage points, maintaining and operating an adequate material control procedure at worksite.

3.2.1.7 Fabrication of all GI piping, structural components as per approved drawings.

3.2.1.8 All civil/ structural works, electrical and instrumentation, laying and commissioning works shall be performed in accordance with relevant specifications and requirements enclosed elsewhere in the bid package.

3.2.1.9 CONTRACTOR shall provide complete details of manpower, equipment etc. to be deployed. Mobilizing and providing all equipments, manpower (skilled and unskilled), consumable and other resources etc. for each spread as required for the execution of the complete job defined herein and thereafter demobilizing the same upon completion of work.

3.2.1.10 Provide, maintain and operate all temporary facilities required for the construction related works and remove after completion of work. Providing barricading at trench in city area as per instruction of engineer in charge for safety.

3.2.1.11 Hook up / tie-in of pipeline and piping system with other facilities etc.



3.2.1.12 All works related to cleaning, testing, dewatering, swabbing, drying, pre-commissioning and commissioning of the work tendered.

3.2.1.13 Idle time preservation of pipeline, if required.

3.2.1.14 All incidental and associated works and any other works not specifically listed therein but are required to be carried out to complete entire work related to pipelines and terminals.

### **3.2.2 Branch / service Pipeline**

#### **3.2.2.1 Familiarization of Pipeline Route**

Bidders are advised to make site visits to familiarize themselves with all the salient features of available infrastructure along the proposed pipeline in concerned GA area (cities). Contractor shall be deemed to have considered all constraints and eventualities on account of site conditions while formulating his bid. Contractor shall not be eligible for any compensation in terms of cost and / or time, on account of site conditions varying to any extent from whatever described in the Bid Package.

3.2.2.2 The city condition field / other fields may have lots of PVC, PE & utility pipelines or other pipelines & cables being used for city utility / other utilities purposes. CONTRACTOR shall ensure that these lines shall not be damaged/ cut affecting the water / power / communication / other supply to concerned Users / Owners / Authorities. Wherever required, temporary necessary precautions have to be maintained for uninterrupted supply.

3.2.2.3 Supply, loading, unloading, handling, stacking, storing and transportation to workshop/ work site of all materials that may be used for the construction of pipeline system at their designated stack yard/ dump site/ store and/ or by CONTRACTOR as the case may be.

3.2.2.4 Stacking, clearing, grading as required, trenching to all depths in all types of soil including soft & hard rock by chiseling or otherwise cutting etc. to a width to accommodate the PE pipeline as per relevant standards, drawings, specification etc. transportation of PE pipes along the route, stringing, aligning, bending, jointing including testing, inspection, field jointing including supply of all materials as per specifications, laying and lowering of the pipeline, back filling, Supply and installation of pipeline as shown in approved drawings and as directed by OWNER, installation of supports wherever required, supply of select backfill material as required, clean- up, flushing, pneumatic testing, nitrogen purging / pre-commissioning and commissioning of complete pipeline system, including all associated works as per relevant specifications, standards and approved drawings.

### 3.2.2.5

Sand / soft soil padding around pipe wherever required in areas where trenching has been done in hard soil area / rocky area including supply of sand/ soft soil. The thickness of sand/ soft soil padding at the top of pipe shall be minimum 150 mm and bottom of pipe shall be minimum 150 mm or as per drawing enclosed whichever is more.

### 3.2.2.6

Installation of all inline / online instruments / valves / fittings / transition fittings / appurtenances etc. as per requirements of approved drawings.

### 3.2.2.7

## **Testing & Purging**

### **A) Testing**

Pressure testing will be carried out with compressed air. Compressed air will be provided by Contractor for testing purposes and is to be included in the rates. Measuring instruments shall have been calibrated and their accuracy and sensitivity confirmed. For testing of Network, calibrated pressure gauges of suitable range shall be supplied by the contractor. The pressure gauges shall be calibrated from time to time as desired by Engineer-in-Charge. All testing shall be witnessed and approved by the EIC or his delegated representative. Tie-in joints may be tested at working pressure following commissioning. For service lines in some cases testing will be carried out for the test duration of 4 hrs. The service testing in this case will be performed after the service installation is complete but before the service tee has been tapped. Also in some cases the tapping of the service tee will be delayed pending the completion and purging of the main pipelines.

### **B) Purging**

Purging shall be carried out in accordance with the principles defined in the American Gas Association publication 'Purging Principles and Practice'. Nitrogen required for purging will also be provided by the Contractor. Nitrogen shall be supplied in labelled, tested and certified cylinders, and completed with all necessary regulators, hoses and connections, which will be in good condition and working order.

In addition the Contractor shall submit and get approved a Purging Plan before commencing any purging work. The Plan shall include, but not be limited to, the provision of the following materials and equipment: Personal safety equipment, Fire extinguisher, Purging adaptor, Purge stack with flame trap and gas sampling point, Gas sampling equipment (may be gas leak detector), squash-off tool, Polyethylene connecting pipe work.

The Plan shall also include the purging process along with detail on the sequence of events. The process is to also specifically mention the need to lay a wet cloth over the PE main and in contact with the ground, to disperse static electricity during the purging work. A purge stack with flame trap shall be used when purging services. Care shall be taken to ensure that the purge outlet is so located that vent gas cannot drift into buildings.

#### **3.2.2.8 Markers**

Installation of all types of markers including all associated civil works. Any other work not specifically mentioned above but required for making the entire pipeline system ready for operation.

#### **3.2.2.9 Priorities**

The Contractor shall start the execution work as per approved execution methodology / plan / procedure to complete the scope of work and shall deploy adequate manpower, machinery, tools & tackles etc. accordingly. However, Owner may, at its sole option, assign priority of construction to any part/ segment of the work. Contractor shall comply with such priority of execution and their deployment without any time and cost implication to the Owner.

#### **3.2.2.10 Pre-commissioning and Commissioning Assistance**

- Pre-commissioning including supply of all materials, consumables and manpower of the complete pipeline system
- Making the entire system ready for commissioning and providing assistance during the complete duration of commissioning operations.
- Completion of all pipeline activities as detailed in SOR.

#### **3.2.2.11 Civil Works**

- Civil works shall be carried out as per scope mentioned at SOR and as per Indian Standard norms.
- Any other work not specifically listed herein but required for the completion of the work.

#### **3.2.2.12 Installation of welded Riser and Lateral Pipes in High Rise Building for PNG connection**

- Erection, Fabrication, Socket Welding of GI Pipes (heavy duty, as per IS-1239 Part-I duly Zinc coated in accordance with IS 4736) & wrought steel fittings (forged fittings, conforming to IS-1239 Part-II). The threading of GI pipe shall be NPT and conforming to ANSI B120.1
- Erection, Fabrication, Socket Welding, Testing & Installation of welded GI Pipes & Fittings etc., including NPT threading as per technical specification and sketch attached.

- Preparation and approval of sketches, schedules, execution procedures & WPS as per technical specification. All consumables e.g. electrodes, flux etc. for welding pipes and fittings are under contractor's scope.
- Supply & fixing of MS angle clamps, Ceiling clamps & dowel plugs with screws, grout material, suitable thread sealant i.e. Teflon Tape / lock tight, Supply and fixing of studs & bolts of various sizes ranging from 1/2" to 2" and 3/4" to 2", Jointing of transition fittings to above ground GI pipes, purging, testing and commissioning of the complete installation.
- Welding of Riser is to be carried out in line with duly approved PQR / WPS.
- Galvanized (Zinc) coating shall be removed by light duty grinder or by any other suitable tool at both ends of riser pipe at about 25mm in length where welding is to be performed.
- The entire riser assembly shall be fabricated with socket welds both for threaded riser assembly and plain ended pipes. Threaded joints are permitted after first isolation valve on laterals where riser is not approachable from balcony and in case if riser is in approach of balcony within 300 mm gap from balcony laterals may be threaded with tee of welded riser on account of workability and future maintenance considerations
- Pipe and required fittings shall be first coupled with threaded (NPT) joints. The threaded joints to be made using male tapered thread and female parallel thread fittings.
- Teflon/PTFE Tape or any other joining compound shall not be used in threaded joints for welded riser. Alternatively plain ended pipes and fitting can also be used for welding in welded riser.
- Risers and laterals must be designed to run through the optimal possible route, taking into consideration potential meter positions, design regulations and access for future maintenance. A riser must not be constructed so that the laterals face directly into the wall from the riser.
- Risers and laterals must be laid a minimum of 300 mm from any electrical equipment or installations. On occasions where the pipe has to cross over a cable, this has to be done at right angles and a minimum gap of 25 mm must be maintained between the pipe and cable. Consideration may be given to wrapping the pipe with electrical insulation tape for protection against electrical short circuiting.
- The riser shall be installed in a vertical line from its point of support to its highest point with a minimum of changes in direction. All riser and lateral pipe shall be clamped to the building at intervals not exceeding 1.5 mtrs. Maximum distance between clamps shall be 1.0 - 1.5 m when pipe goes to the straight, if any tee or fittings lies in between the pipe then clamp shall be placed 150 mm far away from centre line of fittings at every sides. However, the same may be changed as per site conditions/as directed by EIC. Minimum gap between pipe & wall shall be 25 mm.

- Only pretested riser shall be erected using pulley. Pretesting shall be done with compressed air as per latest standard.
- Supply and Installation of lateral GI pipes of 1/2” to 2” dia. from welded riser tapping TEE (Isolation Valve) to customer’s kitchen appliances including NPT threading of GI pipes, supply of proper seal outs for threads to join fittings such as elbows, tees, connectors, regulators (free issue), meters (free issue), appliance & isolation valves etc., as per approved procedures and specification including clamping and sealing etc.
- The lateral extending from the riser at right- angles must extend a minimum of 400 mm from the riser before passing through a wall. Where the 400 mm length cannot be achieved, a flexible fitting such as stainless steel hose (anaconda) shall be fitted.
- **For the laterals beyond eighth floor, flexible Anaconda shall be used in compliance to the material specification of SS316, fittings shall be used with brass connections conforming to IS 319, in order to account for the temperature induced stresses.**
- Where pipe passes through the balcony and the surface is slightly elevated around the service pipe or it’s surrounding, sleeves to be provided to prevent the accumulation of water at that point.
- Pipe shall preferably be entered into building above ground and remain in a ventilated location. The location for entry shall be such that it can be easily routed to the usage points by the shortest practicable route.
- Risers and laterals shall be Leak tested with compressed air @ 2 bar (g) for minimum 2 hrs after vertical installation.
- The joints/ fittings of the GI installation shall be painted only after carrying out testing of the installation
- Making temporary but stable platforms/scaffolding/rope ladder etc., required for installation of pipes/fittings at all heights/multi storied flats and locations. Any other material & activities not mentioned/covered above, but otherwise required for satisfactory completion/safety of work as defined in tender has to be supplied / done by contractor within specified schedule at no extra cost to Owner.

#### **4.0 SCOPE OF SUPPLY**

##### **4.1 Owner’s Scope of Supply (Free Issue Item)**

Owner’s scope of supply includes all DRS / MRS, MDPE Pipe, GI Pipe (Qty. as per SOR), Meters & Regulators only as required. In addition to above, In order to speed up the project other Materials if available with Owner shall be issued on replacement basis to the Contractor from the designated store(s) of BGCL Ltd. Contractor shall be responsible

for lifting the free issue materials from Owner's storage point(s) and transporting the same to work site(s) at his own cost.

#### **4.2 Material to be supplied by Contractor**

The procurement and supply, in sequence and at the appropriate time, of all materials and consumables required for completion of the work as defined in this Bid document except the materials specifically listed above, shall be entirely the CONTRACTOR'S responsibility and item rates quoted for the execution of the CONTRACT shall be inclusive of supply of all these materials. The material to be supplied by the Contractor shall be as per specification and preferred make as indicated in Appendix- I or duly approved / recommended for use by BGCL Ltd. / PMC. The materials will be, but not by way of limitations, as follows:

All materials except what is under Owner's scope of supply as mentioned in Clause No. 4.1 above, and required for successful completion of works in all respects shall be supplied by the Contractor and the cost of such supply shall be deemed to have been included in the quoted price without any additional liability on the part of Owner.

The following materials to be supplied by the contractor as required for completing the work. However other additional/ Supplementary materials required for execution of the project is to be supplied by the contractor.

#### **Material under Contractor's Scope of Supply**

##### **A) HDPE Casing Pipes PE 63/80, PN 6**

i) HDPE Ducting Pipes of various sizes

##### **B) Coupler / bends / elbows as required**

i) For 20 to 180 mm (PE)

##### **C) End Caps**

i) Ends caps 20 to 180 mm (PE)

##### **D) Equal Tee**

i) Equal Tee 20 to 180 mm OD (PE)

##### **E) Saddle Tapping Tee**

i) Saddle Tapping Tee 32x20 (PE)

ii) Saddle Tapping Tee 63x20 (PE)

iii) Saddle tapping Tee 63x32 (PE)

iv) Saddle tapping Tee 90x20 (PE)

- v) Saddle Tapping Tee 90x32 (PE)
- vi) Saddle Tapping Tee 125x63 (PE)
- vii) Saddle Tapping Tee 125x90 (PE)
- viii) Saddle Tapping Tee 125x63 (PE)

**F) Reducers**

- i) Reducers 32x20 (PE)
- ii) Reducers 63x32(PE)
- iii) Reducers 90x63 (PE)
- iv) Reducers 125x63 (PE)
- v) Reducers 125x90 (PE)

**G) Transition Fitting**

- i) PE to G.I. (20 mm to 1/2")-01(Imp)
- ii) PE to G.I. (32 mm to 1")

**H) Warning mat**

Warning Mat 300mm Wide-1mm Thick

**I) GI Fittings**

- i) Elbows F End (1/2") (GI)
- ii) Elbows F End (3/4") (GI)
- iii) Elbows F End (1") (GI)
- iv) Elbows F End (1 1/2") (GI)
- v) M & F Elbows End (1/2") (GI)
- vi) M & F Elbows End (3/4") (GI)
- vii) M & F Elbows End (1") (GI)
- viii) M & F Elbows End (1 1/2") (GI)
- ix) Equal Tee (1/2") (GI)
- x) Equal Tee (3/4") (GI)
- xi) Equal Tee (1") (GI)
- xii) Equal Tee (1 1/2") (GI)

- xiii) Union (1/2") (GI)
- xiv) Union (3/4") (GI)
- xv) Union (1") (GI)
- xvi) Union (1 1/2") (GI)
- xvii) Sockets (1/2") (GI)
- xviii) Sockets (3/4") (GI)
- xix) Sockets (1") (GI)
- xx) Sockets (1 1/2") (GI)
- xxi) Reduced Elbows (3/4" x 1/2") (GI)
- xxii) Reduced Elbows (1" x 3/4") (GI)
- xxiii) Reduced Elbows (1 1/2" x 3/4") (GI)
- xxiv) Reduced Elbows (1 1/2" x 1") (GI)
- xxv) Reduced Elbows (2" x 1 1/2") (GI)
- xxvi) Hex Nipple Size (1/2" x 2") Long (GI)
- xxvii) Hex Nipple Size (1/2" x 3") Long (GI)
- xxviii) Hex Nipple Size (3/4" x 2") Long (GI)
- xxix) Hex Nipple Size (1" x 2") Long (GI)
- xxx) Hex Nipple Size (1 1/2" x 2") long (GI)
- xxxii) Reduced Sockets (3/4" x 1/2") long (GI)
- xxxiii) Reduced Sockets (1" x 3/4") (GI)
- xxxiv) Reduced Sockets (1 1/2" x 3/4") (GI)
- xxxv) Reduced sockets (1 1/2" x 1") (GI)
- xxxvi) Reduced sockets (2" x 1 1/2") (GI)
- xxxvii) GI Plugs 3/4", 1"

**J) GI PIPEs like**

- i) 1/2" all floor (including connectivity from TF to regulator)
- ii) 3/4" all floor (including installation of riser)
- iii) 1" dia all floor (for riser installation)



#### **K) COPPER TUBES**

i) 12.0 OD X 0.6 mm wall thickness

#### **L) ISOLATION VALVES**

i) ½”

ii) ¾”

iii) 1”

#### **M) APPLIANCE VALVES**

i) ½”

**Anaconda (flexible hoses) before meter if required.**

**Steel reinforced rubber hose (before burner) if required**

**Any other fittings not specified above but required for GI, Cu and PE lines is to be provided by the contractor.**

#### **Notes:-**

- i. All the supply items shall be procured from the vendors / manufacturers listed in tender documents.
- ii. For any other item(s) for which the vendor list is not provided, bidders can supply those item(s) from vendors/ suppliers who have earlier supplied same item(s) for the intended services in earlier projects and the item(s) offered is in their regular manufacturing/ supply range. The bidder is required to submit documentary evidences (PO copies, Inspection Certificate etc.) before procurement / Placement of Order for approval to Owner / PMC.
- iii. For supply items the contractor has to **submit only Material test certificate** and other relevant documents from the approved / listed manufacturer for review of Owner / PMC.
- iv. In case, Contractor proposes a vendor other than those as per the suggested vendor list, Contractor is required to submit documentary evidences such as PO copies, Inspection Certificate and any other information etc (such as reasons for proposing the change of vendor) before procurement / Placement of order for approval to Owner / PMC.
- v. Owner / PMC reserve the right to accept material on MTC basis from listed / approved vendors for procurement of supply items by the contractor.

### **5.0 DOCUMENTS, SPECIFICATION, STANDARDS AND DRAWINGS**

5.1 Owner shall furnish tender purpose drawings as listed in content of Volume-II of II of

the tender document and other typical standard drawings attached with respective technical specifications enclosed with Volume-II of II of the tender document. Contractor shall prepare detail engineering drawing, bill of materials and all construction drawings and submit to Consultant for approval prior to start of the job / any procurement.

5.2 Contractor shall prepare isometric drawings, any specific detail drawings (if required by Engineer-in-charge) & bill of materials and submit the same for Owner/ Consultant's approval / record. Contractor shall prepare drawing for utilities line as required or as per SOR and submit the same for Owner/ Consultant's approval/ record.

5.3 No construction small or big shall be carried out without proper construction / standard drawings duly approved by Owner's Engineers at Delhi or site office or Owner's representative duly authorized to do so.

5.4 After completion of construction & commissioning of pipeline system, Contractor shall incorporate all the correction in drawings, prepare and issue the drawings "as built drawings" as listed below to Owner as final submission of drawings. For pipeline alignment sheet, all block valves location & details, pipe book etc. and for tap-off point & consumers premises, piping GAD, Isometric and all civil drawings including hook-up arrangement with Meter Regulator. For final submission only 4 sets of documents shall be handed over by Contractor. Any construction done by Contractor without duly approved drawings shall be wholly at his risk and cost. Contractor shall also submit soft copy of pipe book in excel alongwith hard copy. Soft copy of all as built drawings shall be also submitted in AutoCAD.

#### **5.5 Specifications**

The work shall be carried out by CONTRACTOR strictly in accordance with the following specifications enclosed in Volume-II o II of this document:

- 1) Laying of Underground PE Pipeline
- 2) Installation of Aboveground GI Piping for Domestic Consumers
- 3) PE Pipes
- 4) GI Pipe
- 5) GI Fittings
- 6) HDPE Pipes
- 7) Cu Pipes
- 8) Cu fitting
- 9) Warning mats
- 10) MDPE Fittings and Electro-fusion
- 11) Brass Fitting
- 12) Flexible Hose (anaconda)

- 13) Flux
- 14) Isolation valve & Appliance Valve
- 15) Health safety and environment
- 16) Quality Assurance
- 17) Steel reinforced rubber hose
- 18) PE isolation valves

### **5.6 Drawings**

The drawings to the extent available are included in Vol.-II of the bid package for BIDDER's reference purpose only; Bidders are advised to go through these drawings and also visit the site before submitting their bids. The Contractor shall develop all drawings including for all crossings, along with the all connection drawings required for construction works as detailed in respective SCC, PJS & SOR etc.

## **6.0 RESOURCES / FACILITIES**

### **6.1 Recruitment of Personnel by Contractor**

The Contractor shall not recruit personnel of any category from among those who are already employed by the other agencies working at the sites but shall make maximum use of local labour available.

### **6.2 Construction Water and Power Supply**

No water and power will be provided by the Owner. It should be the responsibilities of the contractor to arrange water and power at his own cost.

### **6.3 Land for Residential Accommodation**

Owner shall not provide any land for residential accommodation of contractor's staff and labour.

## **7.0 PROJECT SCHEDULING & MONITORING**

The following schedules/documents/reports shall be prepared and submitted by the Bidder/Contractor for review/approval at various stages of the contract.

### **7.1 Along with Bid**

#### **a) Time Schedule**

The Completion Time Schedule for the work (including mobilization period) as per SCC Annexure- 3 **of Tender in all respect, from the date of issue of telex/telegram/letter/Fax of Intent.**

The Bidder is required to submit a Project Time Schedule in Bar Chart Form, alongwith the Bid. The Schedule shall cover all aspects like sub-ordering, manufacturing and delivery, indicated in the Bid Document. The Owner interface activities shall be clearly identified with their latest required dates.

Owner reserves the right to disqualify the Bidder if the above Schedule submitted by the Bidder is not in line with the over all Project requirement.

b) Scheduling & Monitoring System

The Bidders should describe their system of Project Scheduling and monitoring, the extent of computerization, level of detailing, tracing methodology etc. with the name of computer package and sample outputs.

## **7.2 After the Award of Contract**

a) Overall Project Schedule

The Contractor shall submit within 1 week of Fax of Intent, a sufficiently detailed over all Project Schedule in the activity network form, clearly indicating the major milestones, interrelationship/ interdependence between various activities together with analysis of critical path and floats. The network will be reviewed and approved by Engineer- in-Charge and the comments if any shall be incorporated in the network before issuing the same for implementation. The network thus finalized shall form part of the contract document and the same shall not be revised without the prior permission from Engineer-in- Charge during the entire period of contract.

b) Progress Measurement Methodology

The contractor is required to submit within 1 week of award of WORK, the methodology of progress measurement of sub-ordering, manufacturing/ delivery, sub- contracting construction and commissioning works and the basis of computation of overall services/physical progress informed. Owner reserves the right to modify the methodology in part or in full.

b) Functional Schedules

The contractor should prepare detailed functional schedules in line with network for functional monitoring and control and submit scheduled progress covers for each function viz. ordering, delivery and construction.

## **7.3 Project Review Meetings**

The Contractor shall present the programme and status at various review meetings as required.

a) Weekly Review Meeting

Level of Participation: Contractor's/Consultant's RCM/ Site In charge & Job Engineers.

Agenda: a) Weekly programme v/s actual achieved in the past week &

programme for next week.

- b) Remedial Actions and hold up analysis.
- c) Client query/ approval.

Venue: Site Office

- b) Monthly Review Meeting

Level of Participation: Senior Officers of BGCL Ltd. / PMC and Contractor.

Agenda: a) Progress Status/ Statistics

- b) Completion Outlook
- c) Major hold ups/slippages
- d) Assistance required
- e) Critical issues
- f) Client query / approval

Venue: BGCL Ltd. /PMC Office/ Site at the discretion of Owner/ PMC

#### **7.4 Progress Reporting Performa**

##### **A) Monthly Progress Report**

This report shall be submitted on a monthly basis within 10 (ten) calendar days from cut-off date, as agreed upon covering overall scenarios of the work. The report shall include, but not limited to the following:

- a) Brief Introduction of the work.
- b) Activities executed / achievements during the month.
- c) Schedule versus actual percentage progress and progress curves for Detail Engg. Sub-ordering, Manufacturing / Delivery, Subcontracting, Construction, Commissioning and Overall and quantum wise status & purchase orders against schedule.
- d) Area of concern/ problem/ hold-ups, impacts and action plans.
- e) Resources deployment status.
- f) Annexures giving status summary for drawings, MRs deliveries, sub-contracting and construction.
- g) Procurement status for items to be supplied by Contractor.

##### **B) Weekly Reports**

The report will be prepared and submitted by the Contractor on weekly basis and will cover following items:

- a) Activities programmed and completed during the week.
- b) Resource deployed men and machines.
- c) Quantities achieved against target in construction
- d) Record of Man-days lost.
- e) Construction percentage progress schedule and actual.

### C) Daily Repots

- a) Activity programme for the day
- b) Progress of the previous day and commutative progress.
- c) Manpower & machinery deployed.

### **7.5 Progress Reports**

7.5.1 CONTRACTOR shall make every effort to keep the OWNER adequately informed as to the progress of the WORK throughout the CONTRACT period. CONTRACTOR shall keep the OWNER informed well in advance of the construction schedule so as to permit the OWNER to arrange for requisite inspection to be carried out in such a manner as to minimize interference with progress of WORK. It is imperative that close coordination be maintained with the OWNER during all phases of WORK.

7.5.2 By the 10th (tenth) of each month, CONTRACTOR shall furnish the OWNER a detailed report covering the progress as of the last day of the previous month. These reports will indicate actual and scheduled percentage of completion of construction as well as general comments of interest or the progress of various phases of the WORK. The frequency of progress reporting by the CONTRACTOR shall be weekly.

7.5.3 Once a week, CONTRACTOR shall submit a summary of the WORK accomplished during the preceding week in form of percentage completion of the various phases of the WORK, to the OWNER.

7.5.4 Progress reports shall be supplied by CONTRACTOR with documents such as chart, networks, photographs, test certificate etc. Such progress reports shall be in the form and size as may be required by the OWNER and shall be submitted in at least 3 (three) copies.

7.5.5 Contractor shall prepare Daily Progress Report (DPR) in the desired format and submit it to Engineer-in-charge alongwith schedule of next day to Engineer-in- charge.

### **8.0 CONSTRUCTION**

OWNER reserves the right to inspect all phases of CONTRACTOR's operations to ensure conformity to the SPECIFICATIONS. Owner will have Engineers, Inspectors or other duly authorized representatives, made known to the CONTRACTOR present during progress of the WORK and such representatives shall have free access to the WORK at all times. The presence or absence of OWNER's representative does not relieve the CONTRACTOR of the responsibility for quality control in all phases of the WORK. In the event that any of the WORK being done by the CONTRACTOR or any SUB-CONTRACTOR is found by OWNER's representatives to be unsatisfactory or not in accordance with the DRAWINGS,

procedures and SPECIFICATIONS, the CONTRACTOR shall, upon verbal notice of such, revise the work in a manner to conform to the relevant DRAWINGS, procedures and SPECIFICATIONS.

### **8.1 Rules & Regulations**

CONTRACTOR shall observe in addition to Codes specified in respective specification, all National and Local Laws, Ordinances, Rules and Regulations and requirements pertaining to the WORK and shall be responsible for extra costs arising from violations of the same.

### **8.2 Procedures**

Various procedures and method statements to be adopted by CONTRACTOR during the construction as required in the respective specifications shall be submitted to OWNER in due time for APPROVAL. No such construction activity shall commence unless approved by OWNER in writing.

### **8.3 Field Inspection**

CONTRACTOR shall have at all times during the performance of the WORK, a Competent Superintendent on the premises. Any instruction given to such superintendent shall be construed as having been given to the CONTRACTOR.

### **8.4 Erection and Installation**

The CONTRACTOR shall carry out required supervision and inspection as per quality assurance plan and furnish all assistance required by the OWNER in carrying out inspection work during this phase. The OWNER will have engineers, inspectors or other authorized representatives present who are to have free access to the WORK at all times. If an OWNER's representative notifies the CONTRACTOR's authorized representative not lower than a Foreman of any deficiency, or recommends action regarding compliance with the SPECIFICATIONS, the CONTRACTOR shall make every effort to carry out such instructions to complete the WORK conforming to the SPECIFICATIONS and approved DRAWINGS in the fullest degree consistent with best industry practice.

### **8.5 Construction Aids, Equipment, Tools & Tackles**

CONTRACTOR shall be solely responsible for making available for executing the work, all requisite Construction Equipments, Special Aids and Tools, Tackles and testing equipments and appliances. Such construction equipments etc. shall be subject to examination by Owner and approval for the same being in first class operating condition. Any discrepancies pointed out by OWNER shall be immediately got rectified, repaired or

the equipment replaced altogether, by CONTRACTOR. OWNER shall not in any way be responsible for providing any such equipment, machinery, tools and tackles. The OWNER reserves the right to rearrange such deployment depending upon the progress and priority of work in various sections. Tie-end between main line and starting point of terminal is included in the scope of contract, as and when main line section is available for Tie-ins.

## **9.0 DOCUMENTATION**

### **9.1 "As Built" Drawings**

The Contractor will be required to submit computerized as-built drawings duly certified by EIC in **A1/ A2** sheet form at 1:200 scale with one set for BGCL site office in original hard copy and one set hard copy for BGCL, plus soft copy. The as-built drawing shall be submitted on area wise as specified. The bill of materials used for the particular area shall be specified on the drawings.

### **9.2 Completion Document – PE & GI**

The following documents shall be submitted in hard binder by the BIDDER in one set for BGCL site office in original and one set for BGCL, as a part of completion documents: -

- a) Copies of the Inspection reports, Laying Graphs, HDD Profiles (if required) and valve pit drawings (if required).
- b) Pre testing, final Hydrostatic / pneumatic and other Test results and reports.
- c) Consumption statements of PE / GI certified by Owner's Site Engineer.
- d) Material Reconciliation, stores issue & return statements
- e) All other requirements as specified in the respective specifications.
- f) Completion Certificate issued by Owner's Site Engineer.
- g) No claim certificate by the BIDDER.
- h) Completion certificate for embedded and covered up works wherever applicable.
- i) Recovery statement, if any.
- j) Deviation statement.
- k) Statement for reconciliation of all the payments and recoveries made in the progress bills.
- l) Copies of deviation statement and order of extension of time, if granted.
- m) Any other contractual documents required on completion.
- n) Total list of houses in the area allotted to him giving details of connections provided & reasons where connection could not be given / completed.
- o) The details recorded in measurement cards of every domestic house.



- p) Details of houses where extra piping done along with materials used.
- q) Total material consumption report.
- r) Material reconciliation with respect to the materials issued.
- s) Test reports & test certificates of gauges etc.
- t) Any other documents / records required.

## **10.0 SURVEY AND LEVEL / SETTING OUT WORK**

10.1 Before the WORK or any part thereof are begun, the CONTRACTOR's agent and the Engineer-in-Charge's representative shall together survey and take levels of the SITE and decide all particulars on which the survey is to be made, and on which measurements of the WORK are to be based. Such particulars shall be plotted by the CONTRACTOR and after agreement the drawings shall be signed by the Engineer-in-Charge.

10.2 The CONTRACTOR shall be entirely responsible for the horizontal and vertical alignment, the level and correctness of every part of the WORK and shall rectify any errors or imperfections therein. Such rectifications shall be carried out by the CONTRACTOR at his own cost, when instructions are issued to this effect by the Engineer-in-Charge or his representative.

10.3 The Engineer-in-Charge shall furnish the relevant existing grid point with Bench Mark on the land. It shall be CONTRACTOR's responsibility to set out the necessary control points in and to set out the alignment of the various works. The CONTRACTOR shall have to employ efficient survey team for this purpose and the accuracy of such setting out work shall be CONTRACTOR's responsibility.

10.4 The CONTRACTOR shall give the Engineer-in-Charge not less than 24 (twenty four) hours notice in writing of his intention to set out or give levels for any part of the WORK so that arrangements may be made checking the same.

10.5 WORK shall be suspended for such times as necessary for checking lines and levels on any part of the WORK.

10.6 The CONTRACTOR shall at his own expense provide all assistance, which the Engineer-in-Charge may require for checking the setting out of WORKS.

10.7 Before commencement of any activity, contractor's quality control set up duly approved by company must be available at site.

## **11.0 ORDER OF WORKS / PERMISSIONS / RIGHT OF ENTRY / CARE OF EXISTING SERVICES.**

11.1 The order in which the WORK shall be carried out shall be subject to the approval of the Engineer-in-charge and shall be so as to suit the detailed method of construction adopted by the CONTRACTOR, as well as the agreed joint programme. The WORK shall be carried out in a manner so as to enable the other contractors, if any, to work concurrently. OWNER reserves right to fix up priorities which will be conveyed by Engineer-in-Charge and the CONTRACTOR shall plan and execute work accordingly.

## **11.2 Existing Service**

11.2.1 Drains, pipes, cables, overhead wires and similar services encountered in course of the works shall be guarded from injury by the CONTRACTOR at his own cost, so that they may continue in full and uninterrupted use to the satisfaction of the Owners thereof, or otherwise occupy any part of the SITE in a manner likely to hinder the operation of such services.

11.2.2 Should any damage be done by the CONTRACTOR to any mains, pipes, cables or lines (whether above or below ground etc), whether or not shown on the drawings the CONTRACTOR must make good or bear the cost of making good the same without delay to the satisfaction of the Engineer-in-Charge.

## **12.0 MAKE OF MATERIAL / BOUGHT OUT ITEMS**

Approved vendors for various major items are enclosed as Appendix-I to Particular Job Specification with this tender document. The bidder shall consider such names only as indicated in the aforesaid list and clearly indicate in the bid the name(s) as selected against these items. For any other item not covered in the list enclosed with this tender document, prior approval shall be obtained by the contractor for its make/ supplier's name.

## **13.0 INSPECTION OF SUPPLY ITEMS**

All inspections and tests shall be made as required by the specifications forming part of this contract. Contractor shall advise Owner/ Consultant in writing at least 10 days in advance of the date of final inspection/tests. Manufactures inspection or testing certificates for equipment and materials supplied, may be considered for acceptance at the discretion of Owner/ Consultant. All costs towards testing etc. shall be borne by the contractor within their quoted rates. All inspection of various items shall be carried out based on Quality Assurance Plan, which will be submitted by the Contractor and duly approved by Owner/ Consultant.

## **14.0 ESCALATION**

The Unit Rates quoted shall be kept firm till completion of work and no price Escalation shall be paid.

## **15.0 DOCUMENTS TO BE SUBMITTED / PRODUCED ALONGWITH R.A. BILLS**

**Refer 'the checklist- F-26' for details of the documents to be submitted. Checklist duly signed will become part of RA bill.**

## **16.0 INSURANCE FOR FREE ISSUE MATERIAL**

### **Insurance for Free Issue Material**

Contractor shall at his own expense arrange, secure and maintain insurance cover for Owner's supplied free issue materials as defined in Tender Document of adequate value as intimated by Owner / consultant. Contractor's quoted price shall be inclusive of all costs on account of insurance liabilities covered under the Contract. Contractor to note that the beneficiary of insurance cover shall be Bengal Gas Company Ltd.

### **16.2. Insurances in India**

16.2.1 Contractor shall at his own expense arrange, secure and maintain insurance with Indian insurance companies to the satisfaction of the Owner as may be necessary and to its full value for all such amounts to protect the works in progress from time to time and the interest of Owner against all risks as detailed herein. The form and the limit of such insurance as defined herein together with the under writer works thereof in each case should be as acceptable to the Owner. However, irrespective of work acceptance the responsibility to maintain adequate insurance coverage at all times during the period of Contract shall be that of Contractor alone. Contractor's failure in this regard shall not relieve him of any of this responsibilities and obligations under Contractor.

16.2.2 Any loss of damage to the equipment during inland transportation, storage, erection and commissioning till such time the Work is taken over by Owner shall be to the account of Contractor. Contractor shall be responsible for preferring of all claims and make good for the damage or loss by way of repairs and/ or replacement of the parts of the Work damaged or lost. Contractor shall provide the Owner with a copy of all insurance policies and documents shall be submitted to the Owner immediately upon the Contractor having taken such insurance coverage. Contractor shall also inform the Owner regarding the expiry cancellation and/ or changes in any of such documents and ensure revalidation/ renewal etc., as may be necessary well in time.

16.2.3 The risks that are to be covered under the insurance shall include, but not be limited to the loss or damage in handling, transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire, war risk etc. The scope of such insurance shall cover the entire value of supplies of equipments, plants and materials.

16.2.4 All cost on account of insurance liabilities covered under this Contract will be to Contractor's account and will be included in Contract Price. However, the Owner may from time to time, during the currency of the Contract, ask the Contractor in writing to limit the insurance coverage risk and in such a case, the parties to the Contract will agree for a mutual settlement, for reduction in Value of Contract to the extent of reduced premium amounts. Contractor as far as possible shall cover insurance with Indian Insurance Companies.

**17.0 SPECIAL POINTS PERTAINING TO SPECIFICATION:-**

**The technical specification & safety standards as prescribed in PNGRB is to be followed further**

The minimum pipeline cover shall be kept as follows:

Pipeline Burial Requirement

The entire pipeline shall be buried and provided with a minimum cover as given in Table below:

| <b>Pipeline Burial Requirements</b>                      |                       |
|--|-----------------------|
| <b>Location</b>  | <b>Min. Cover (m)</b> |
| a) minor water crossing (below firm bed level)           | 1.5                   |
| b) Cased/ Uncased Road/ cart track crossings             | 1.2                   |
| c) Drainage, ditches at roads crossings                  | 1.0                   |
| d) Residential and other locations including rocky areas | 1.0                   |

Note:

i) The depth of cover shall be measured from the top of the pipe to the top of the undisturbed surface of soil or the top of graded working strip, whichever is lower. The fill material in the working strip shall not be considered in the depth of cover.

ii) The cover shall be measured from the top of road or top of rail, as the case may be.

iii) For water courses that are prone to scour and erosion, adequate safe cover as mentioned above or as advised by concerned authorities (whichever is stringent) shall be provided below the predicted scour profile expected during the life time of the pipeline.

iv) When scour level is not known, an additional cover of at least 1 m or as advised by concerned authorities shall be provided from the existing firm bed of the river / water course except in case of rocky river bed.

v) Minimum cover mentioned above against Sl. no. a), b), c), d) & e) category may be increased based on the statutory requirements from concerned authorities and requirement shall be final and binding to the contractor.

vi) Soft soil / sand padding of minimum 150 mm thickness or as mentioned in standard drawing ( whichever is stringent ) to be provided around the pipeline where gravel / hard soil or rocky area **if** encountered.

- Piping at consumer ends, connection at existing tap-off location and for future connections alongwith bill of materials.

Contractor shall develop General Arrangement Drawings (GADs) good for construction for size 20 to 180 mm and locations based on typical sketches/ drawings alongwith bill of materials and submit to Owner for reviews/ approval. Construction work shall be carried out based on construction drawings duly approved by Owner/ Consultant.

- The detailed engineering for above ground installation shall include detail engineering pertaining to all disciplines (if required) along with bill of materials.

- All the documents/ drawings prepared by the Contractor shall be submitted to Owner/ Engineer-in-charge for review and approval. All works shall be executed based on the approved drawings/ documents only.

- Contractor shall obtain all clearance from Government authorities (if required). However bank guarantee/ required fee or charges shall be submitted by Owner.

17a. If any ambiguity arises between SCC (Tech.) & Particular Job Specification in that case later shall govern. However in some cases, decision of Engineer-in-charge shall be final and binding to the contractor.

**17b Following points shall be taken care by the contractor before during execution works.**

i) Contractor shall be responsible for taking necessary precautions regarding traffic (installation of notice / warning boards).

ii) Contractor shall be totally responsible for the occurrence of any accident during excavation of road and shall be liable for damages / expenses due to the same.

iii) Concerned authority / Owner shall not be responsible for any loss / damage.

- iv) One copy of the permission shall be made available with contractor's responsible workman (if required) at the place where excavation is undertaken.
- v) While executing the subject work, excavation shall be done in consultation with the concerned authority engineer of that area.
- vi) Necessary safety measures shall be taken for the gas pipeline, since high tension lines and other services carriers are running alongwith in gas pipeline route in the area.

## **18.0 APPENDIX-I TO PARTICULAR JOB SPECIFICATION**

### **LIST OF APPROVED SUPPLIER FOR BOUGHT OUT ITEMS**

#### **PE FITTINGS & PE VALVES**

- 1) M/s Friatech AG, Germany (represented by M/s Sherman Sales in India)
- 2) M/s Jain Irrigation Systems Ltd. Jalgaon (Fusion, UK)
- 3) M/s George Fisher
- 4) M/s Plasson Ltd.
- 5) M/s Agru, Australia
- 6) M/s Kimplas, Nasik (PE Fittings only)
- 7) M/s Innogaz & M/s Frialen of M/s Aliaxis Utilities & Industry Pvt. Ltd.  
(formerly Glynwed pipe systems)

#### **HDPE PIPES & DUCT**

- 1) M/s Climax Synthetics (P) Ltd., Vadodra
- 2) M/s Indian Poly Pipes, Calcutta
- 3) M/s Jain Irrigation Systems Ltd., Jalgaon
- 4) M/s Kirti Industries (India) Ltd., Indore
- 5) M/s Ori Plast Limited, Calcutta
- 6) M/s Phoel Industries Limited, Delhi
- 7) M/s Sangir Plastics (P) Ltd., Mumbai
- 8) M/s Veekay Plast, Jaipur
- 9) M/s Kisan Irrigation
- 10) M/s Dutron Polymers Ltd.
- 11) M/s Manikya Plastichem (P) Ltd
- 12) M/s Mangalam Pipes Pvt. Ltd., Bengaluru
- 13) M/s Shand Pipe industry Pvt. Ltd., Bengaluru
- 14) M/s Varun Pipes Pvt. Ltd., Bengaluru
- 15) M/s EPP Composite Pvt. Ltd., Rajkot
- 16) M/s DM Engineering Co. , Mumbai
- 17) M/s Narayani Polypipes, Kolkata
- 18) M/s Tirupati Teleplast Private Limited, Kolkata
- 19) M/s Utkarsh Polypipes, Kolkata

20) M/s East Hooghly Polypipes, Kolkata

### **GI PIPES**

- 1) M/s Goodluck Steel Tubes Ltd, Ghaziabad
- 2) M/s Indus Tubes Ltd , New Delhi
- 3) M/s Jindal Pipes Ltd , New Delhi
- 4) M/s Jyotindra Steel & Tubes Ltd, Firozabad
- 5) M/s Rama Steel Tubes Ltd, New Delhi
- 6) M/s Surya Roshni Ltd, Bhadurgarh
- 7) M/s Vishal Pipes Ltd.
- 8) M/s Advance Steel Ltd.
- 9) M/s Swastik Pipe Ltd.
- 10) M/s Fortune Pipe Ltd.
- 11) M/s Indian Seamless Metal Tubes Ltd., Pune
- 12) M/s Appolo Tubes, Bengaluru
- 13) M/s Nezone Tubes Ltd., Kolkata
- 14) M/s Topworth Pipes & Tubes Pvt. Ltd., Navi Mumbai

### **WARNING MAT**

- 1) M/s Sparco Multiplast Pvt. Ltd., Ahmedabad
- 2) M/s Singhal Industries, Ahmedabad
- 3) M/s Raychem RPG Ltd.
- 4) M/s Puja Packings, Mumbai
- 5) M/s Bina Enterprises, Mumbai
- 6) M/s Shree Vijay Wire & Cables Industries, Jaipur

### **GI FITTINGS**

- 1) M/s Jainsons Industries, Jalandhar
- 2) M/s Jupiter Metal Industries Ltd.
- 3) M/s Rajnesh Malleables Ltd., Delhi
- 4) M/s Industrial Valves & Components, Delhi
- 5) M/s Sarin Industries, Delhi
- 6) M/s Excel Metal & Engineering Industries, Mumbai
- 7) M/s Modern Stores & Engineering Concern, Kolkata
- 8) M/s Jinan Meide Casting Co. Ltd., China
- 9) M/s Mehta Brother & Co., Mumbai- (Make: M/s Jinan Meide Casting Co. Ltd., Japan) confirming to IS 1879:2010 latest standard
- 10) M/s Chokhawala Distributors

### **COPPER TUBES AND FITTINGS**

- 1) M/s Paras Industries Ltd.

- 2) M/s Rajco Metal
- 3) M/s Chandan Enterprises
- 4) M/s Mehta Tubes
- 5) M/s Cofit Industries, Bengaluru
- 6) M/s Mandev Tubes
- 7) M/s Sagardeep Alloys
- 8) M/s Pallavi Copper Pipes

#### **BRASS FITTINGS**

- 1) M/s Chandan Enterprises
- 2) M/s Paras Industries Ltd.
- 3) M/s Umesh Enterprises
- 4) M/s Om brass Enterprises
- 5) M/s KPC Flexi Tubes
- 6) M/s Mehta Bros, Mumbai

#### **FLEXIBLE HOSE (ANACONDA)**

- 1) M/s KPC Flex Tubes
- 2) M/s Vestas Hose Division
- 3) M/s Alfa Flexitubes
- 4) M/s Bengal Industries Pvt. Ltd.
- 5) M/s Vikram & co.
- 6) M/s Gaytri Industrial Corporation, Thane (W)

#### **PE PIPES**

- 1) M/s Jain Irrigation System Ltd., New Delhi
- 2) M/s Pennwalt Agru Plastics Ltd., Navi Mumbai
- 3) M/s Pioneer Polyfeb Ltd. Ghaziabad
- 4) M/s Kriti Industries (i) Ltd., Indore
- 5) M/s Ori Plast Ltd., Kolkata
- 6) M/s.Purma Plast Pvt Ltd, Rajasthan

#### **METERS AND REGULATORS**

- 1) M/s Actaris Metering System, New Delhi
- 2) M/s Elster Messtechnik Gmbh, Lampertheim
- 3) M/s Emerson Process Management (India) Pvt. Limited, Mumbai
- 4) M/s Equimeter Inc., USA
- 5) M/s Gorter Controls B.V., Netherlands
- 6) M/s Instromet International, Belgium
- 7) M/s Invensys Metering Systems India Ltd., Pune
- 8) M/s Mesura SA, France



- 9) M/s Pietro Fiorentini S.p.A, Italy
- 10) M/s RMG Regal – Messtechnik GmbH, Germany
- 11) M/s Raychem RPG Limited, Kolkata
- 12) M/s Rockwin Flowmeter India Pvt. Ltd., New Delhi
- 13) M/s Itron India Pvt. Limited, Noida
- 14) M/s. Daniel Solutions Pvt. Ltd. Gurgaon

#### **STEEL REINFORCED RUBBER HOSE**

- 1) M/s Suraksha Products Pvt. Ltd.
- 2) M/s Vansh Industries
- 3) M/s T &L Gases
- 4) M/s Vikram & Co.
- 5) M/s Gayatri
- 6) M/s Luxmi Rubtech

#### **ISOLATION VALVES AND APPLIANCE VALVES**

- 1) M/s Universal Srl
- 2) M/s Tiemme Raccorderie Sede
- 3) M/s Jainson Industries
- 4) M/s Enolgas Bonimu s.a.s.
- 5) M/s Fratelli Fortis s.r.l
- 6) M/s Giacomo Climbrio
- 7) M/s Parker Hannifin S.P.A.
- 8) M/s Singapore Valve & Amp; Fittings Pte Limited, Singapore
- 9) M/S Rubinetterie Utensilerie Bonomi (RUB)
- 10) M/s Zhejiang Valogin Technology Co. Ltd. , China
- 11) M/s Ningbo Huaping Metalwork Co. Ltd., China
- 12) M/s Mehta Brothers, Mumbai.
- 13) M/s Chokhawala Distributors

## ANNEXURE II TO CORRIGENDUM 2

### ANNEXURE-5 TO SCC

1.0

#### TERMS OF PAYMENT

Pending completion of the whole works, provisional progressive payments for the part of work executed by the contractor shall be made by Owner on the basis of said work completed and certified by the Owner's representative as per the agreed milestone payment schedule and the percentage break-ups given below.

Contractor shall submit his invoices to the Owner's representative monthly in the manner as instructed by Owner. Each invoice will be supported by documentation acceptable to Owner and certified by the Owner's representative. Payments made by owner to the contractor for any part of the work shall not deem that the Owner has accepted the work.

The Contractor has to raise the RA bill on monthly basis and payment shall be made as per the following terms:

#### For SOR serial No. 26.00

|     |   |
|-----|---|
| 65% | In continuous stretches of minimum 100 Mtrs. including trench less laying or total scope whichever is less after completion of trenching, lowering, electro-fusion jointing of pipeline, back-filling and compaction for the complete stretch as per the scope of work. |
| 10% | Making of PCC pedestal of grade (1:2:4) and size (8"x6"x4"), supply and installation of GI sleeve (Heavy (C-Class) as per IS-1239), filling of sand and installation of TF ( along with supply).  |
| 5%  | Testing of network, installation of Permanent Markers & Valve chambers.   |
| 10% | Pre-Commissioning of the system with Nitrogen at positive pressure or Commissioning with gas charging of the PE pipeline (case decided by EIC) and material re-conciliation.  |
| 10% | Submission of all documents, submission of NOC, Submission of As built drawings. Closure of contract, Submission of final bill.   |

#### For SOR serial No. 27.00 to 53.00 & 61.00 to 80.00

|     |   |
|-----|---|
| 60% | In continuous stretches of minimum 100 Mtrs. including trench less laying or total scope whichever is less after completion of trenching, lowering, electro-fusion jointing of pipeline, back-filling and compaction for the complete stretch as per the scope of work. |
| 20% | Testing of network, installation of Permanent Markers & Valve chambers.   |
| 10% | Pre-Commissioning of the system with Nitrogen at positive pressure or Commissioning with gas charging of the PE pipeline (case decided by EIC) and material re-conciliation.  |
| 10% | Submission of all documents, submission of NOC, Submission of As built drawings. Closure of contract, Submission of final bill.   |

**For SOR serial No. 54.00 to 60.00**

|     |  |
|-----|--|
| 75% | After Complete area wise restoration as per the standards (bidder may note that restoration work shall be carried out after testing/ pre-commissioning / gas charging in respective area). |
| 15% | After obtaining NOC from respective local authorities / Third party Agencies designated by land owning agencies/ BGCL executive.   |
| 10% | After Completion of all works and closure of contract.   |

**For SOR serial No. 81.00 to 91.00, 99.00 to 102.00, 112.00 to 113.00, 119.00 to 122.00 & 170.00 to 176.00**

|     |  |
|-----|--|
| 90% | Upon supply and Complete installation of item's and all its associated work. |
| 10% | After submission of documents and closure of contract.                       |

**For SOR serial No. 92.00 to 98.00 & 103.00 to 109.00**

|     |  |
|-----|--|
| 50% | Upon supply of items including all Accessories and acceptance of supplied items at site. |
| 40% | Upon Complete installation of item's and all its associated work.                        |
| 10% | After submission of documents and closure of contract.                                   |

**For SOR serial No. 110.00 to 111.00**

Payment for the liasioning work shall be made for the actual length of network laid as follows:

|     |   |
|-----|---|
| 50% | Payment on approval for the length applied                                |
| 40% | Payment for the length applied shall be paid on the start of laying work. |
| 10% | Payment along with final bill.  |

**For SOR serial No. 114.00 to 118.00**

|     |   |
|-----|---|
| 50% | After submission of draft report/ data. |
| 40% | Acceptance of final report/data.        |
| 10% | Payment along with final bill.          |

**For SOR serial No. 124.00 to 129.00**

|     |   |
|-----|---|
| 75% | Upon Complete installation of items and its associated work |
| 5%  | Testing of installations.                                   |

|     |   |
|-----|---|
| 10% | Pre-Commissioning with Nitrogen at positive pressure or Commissioning with gas charging including all related activities (case decided by EIC). |
| 10% | After submission of documents and closure of contract.  |

**For SOR serial No. 131.00 to 169.00, 249.00 to 252.00 & 260.00 to 284.00**

|     |   |
|-----|---|
| 90% | After completion of the work in all respects.         |
| 10% | After submission of documents and closure of contract |

**For SOR serial No. 179.00 to 227.00 & 258.00 to 259.00**

|     |   |
|-----|---|
| 75% | Completion of installation of pipes / meter/regulator including all fittings, valves, etc.  |
| 5%  | Testing of installations & painting.  |
| 10% | Pre-Commissioning with Nitrogen at positive pressure or Commissioning with gas charging including all related activities (case decided by EIC). |
| 10% | After submission of documents and closure of contract   |

**For SOR serial No. 228.00 to 237.00**

|     |   |
|-----|---|
| 40% | Upon supply of items including all Accessories and acceptance of supplied items at site.  |
| 35% | Completion of installation of pipes including all fittings, valves, clamping etc.   |
| 5%  | Testing of installations & painting.  |
| 10% | Pre-Commissioning with Nitrogen at positive pressure or Commissioning with gas charging including all related activities (case decided by EIC). |
| 10% | After submission of documents and closure of contract   |

**For SOR serial No. 238.00 to 242.00 & 253.00 to 257.00**

|     |  |
|-----|--|
| 75% | Upon Complete installation of Items and its associated work  |
| 15% | Testing of installations and Pre-commissioning with Nitrogen at positive pressure or commissioning with gas charging including all related activities (case decided by EIC). |
| 10% | After submission of documents and closure of contract  |

**For SOR serial No. 243.00 to 248.00**

|     |  |
|-----|--|
| 35% | supply of all associated items & its Accessories and acceptance of supplied items at site.   |
| 40% | Upon Complete installation of Items and its associated work  |
| 15% | Testing of installations and Pre-commissioning with Nitrogen at positive pressure or commissioning with gas charging including all related activities (case decided by EIC). |
| 10% | After submission of documents and closure of contract  |

1. Any other work (Not mentioned above)
  - a) Completion of individual work as per SOR including supply (wherever applicable): 90%
  - b) Completion of all activities and their acceptance submission of final documents, final bill and acceptance of these by owner thereafter for successful closure of work order: 10 %

Note: Any further breakup of each activity for the payment purpose can be done depending upon the site situation/ requirement and recommendation by EIC and approval of construction in- charge.

## 2. Payment Methodology

- I. The Contractor shall raise invoices on monthly basis. Bidder shall enclose all documents as per checklist issued by BGCL/ LEPL including during Kickoff meeting
- II. The payment of the contractor will be released within 15 days from the date of receipt of complete invoice and after certification of PMC as per terms and condition of the contract.
- III. Employer will release payment through e-payments only as detailed in bidding document.
- IV. All payments against running bills are advance against the work and shall not be taken as Final acceptance of work / measurement carried out till the final bill.
- V. Further break-up of Lump sum Prices, if deemed necessary for any progressive payment of individual item may be mutually arrived at between Engineer-in-Charge and the Contractor.
- VI. Successful bidder(s) to submit material reconciliation certificate along with each bill.
- VII. Bills shall be raised by contractor in line with check list attached in Tender document.
- VIII. As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for procurement of goods / services/works/consultancy services exceeding Rs. 2 Lacs per transaction.

Accordingly, supplier/ contractor/ service provider/ consultant should mention their PAN no. in their invoice/ bill for any transaction exceeding Rs. 2 lakhs. As provided in the notification, in case supplier/ contractor/ service provider/ consultant do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of supplier/ contractor / service provider/ consultant shall be processed only after fulfillment of above requirement.

- IX. BGCL' PAN No. is AAICB1994M.
- X. After receipt of complete RA Bill as per terms and conditions of the contract and duly certified by Engineer-in-Charge (EIC)/PMC, on-account payment equivalent to seventy percent (70%) of the net payable certified amount of the RA Bill will be released to the contractor within a period of 07 working days from submission of certified bill by PMC to BGCL. The balance amount will be released within a period of 15 days from submission of certified bill by PMC to BGCL.

**ANNEXURE III**

**FORMAT F-2C**

**PROFORMA OF "INSURANCE SURETY BOND" FOR "EARNEST MONEY DEPOSIT/ BID SECURITY"**

(To be stamped in accordance with the Stamp Act)

|  |  |  |
|--|--|--|
| To,<br><br>M/s Bengal Gas Company Limited<br><br>_____ | <b>Insurance Surety Bond No.</b>   |  |
|  | <b>Date of ISB</b>   |  |
|  | <b>ISB Valid up to (Expiry date)</b>   |  |
|  | <b>Claim period up to (indicate date of expiry of claim period which includes minimum three months from the expiry date)</b> |  |
|  | <b>Stamp Sl. No./e-Stamp Certificate No.</b>   |  |

**Dear Sir(s),**

In accordance with Tender Document under your reference No. \_\_\_\_\_ M/s. \_\_\_\_\_ having their Registered / Head Office at \_\_\_\_\_ (hereinafter called the Tenderer/Bidder), wish to participate in the said tender for \_\_\_\_\_

As an irrevocable Insurance Surety Bond against Earnest Money Deposit for the amount of \_\_\_\_\_ is required to be submitted by the bidder as a condition precedent for participation in the said Tender Document which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender Document.

We, the \_\_\_\_\_ [Name & address of the Insurer] at \_\_\_\_\_ having our Head Office \_\_\_\_\_ (Local Address) guarantee and undertake to pay immediately on demand without any recourse to the Bidder by Bengal Gas Company Limited (BGCL) , the amount \_\_\_\_\_ without any reservation, protest, demur and recourse. Any such demand made by Bengal Gas Company Limited, shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder.

This Insurance Surety Bond shall be irrevocable and shall remain valid up to \_\_\_\_\_ [this date should be two (02) months beyond the validity of the bid]. If any further extension of this Insurance Surety Bond is required, the same shall be extended to such required period on receiving instructions from Bidder M/s. \_\_\_\_\_ on whose behalf this Insurance Surety Bond is issued.

Notwithstanding anything contained herein:

a) The Insurer's liability under this Insurance Surety Bond shall not exceed (currency in figures) . . . . . (currency in words only ) . . . . .

b) This Insurance Surety Bond shall remain in force upto \_\_\_\_\_ (this expiry date of Insurance Surety Bond should be two months beyond the validity of bid) and any extension(s) thereof; and

c) The insurer shall be released and discharged from all liability under this Insurance Surety Bond unless a written claim or demand is issued to the insurer on or before the midnight of .....(indicate date of expiry of claim period which includes minimum three months from the expiry of this Insurance Surety Bond) and if extended, the date of expiry of the last extension of this Insurance Surety Bond. If a claim has been received by us within the said date, all the rights of Bengal Gas Company Limited (BGCL) under this Insurance Surety Bond shall be valid and shall not cease until we have satisfied that claim.

In witness whereof the insurer, through its authorized officer, has set its hand and stamp on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_ at \_\_\_\_\_

Details of next Higher Authority of the Officials who have issued the Insurance Surety Bond:

Name .....  
Designation .....

WITNESS:

1. \_\_\_\_\_  
(SIGNATURE)  
  
\_\_\_\_\_  
(NAME)  
  
\_\_\_\_\_  
(OFFICIAL ADDRESS)  
  
\_\_\_\_\_

(SIGNATURE)  
(NAME)  
Designation with Insurer Stamp  
E-Mail ID:  
Telephone/Mobile No. :  
Attorney as per  
Power of Attorney No.  
Date:

**INSTRUCTIONS FOR FURNISHING "BID SECURITY DEPOSIT/ EARNEST MONEY" BY "INSURANCE SURETY BOND"**

- a) The Insurance Surety Bond shall be from Insurance Regulatory Insurer and Development Authority of India (IRDAI) registered general insurance companies as per guidelines issued by Insurance Regulatory and Development Authority of India (IRDAI).
- b) The Employer shall be the Creditor, the Bidder shall be the Principal debtor and the Insurance company/Insurer shall be the Surety in respect of the Insurance Surety Bond to be issued by the Insurer.
- c) The Insurance Surety Bond should be on Non-Judicial stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the state(s) where the Insurance Surety Bond is submitted or is to be acted upon or the rate prevailing in State where the Insurance Surety Bond is executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Bidder/Insurer issuing the Insurance Surety Bond.
- d) The expiry date should be arrived at in accordance with "ITB: Clause-16.1".
- e) The Insurance Surety Bond by bidders will be given from Insurer as specified in "ITB: Clause-16.3".
- f) A letter from the issuing insurer of the requisite Insurance Surety Bond confirming that said Insurance Surety Bond / all future communication relating to the Insurance Surety Bond shall be forwarded to the Purchaser at its address as mentioned at "ITB".
- g) Bidder must indicate the full postal address of the Insurer along with the Insurer's E-mail / Fax / Phone from where the Insurance Surety Bond has been issued.

**MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR ALONG WITH INSURANCE SURETY BOND**

|   |   |   |  |                         |            |                |
|---|---|---|--|-------------------------|------------|----------------|
| 1 | <b>INSURANCE SURETY BOND NO</b>                 | : |  |                         |            |                |
| 2 | <b>VENDOR NAME / VENDOR CODE</b>                | : | <b>NAME</b>                              |                         |            |                |
|   |   |   | <b>VENDOR CODE</b>                       |                         |            |                |
|   |   |   | <b>VENDOR EMAIL ID</b>                   |                         |            |                |
|   |   |   | <b>VENDOR MOBILE NO</b>                  |                         |            |                |
| 3 | <b>INSURANCE SURETY BOND AMOUNT</b>             | : |  |                         |            |                |
| 4 | <b>TENDER NO</b>                                | : |  |                         |            |                |
| 5 | <b>NATURE OF INSURANCE SURETY BOND</b>          | : |  |                         |            |                |
|   | <b>(Please Tick (√) Whichever is Applicable</b> |   | <b>PERFORMANCE INSURANCE SURETY BOND</b> | <b>SECURITY DEPOSIT</b> | <b>EMD</b> | <b>ADVANCE</b> |



|   |                        |                       |  |
|---|------------------------|-----------------------|--|
| 6 | <b>INSURER DETAILS</b> |                       |  |
|   |                        | <b>(A) EMAIL ID :</b> |  |
|   |                        | <b>(B) ADDRESS :</b>  |  |
|   |                        | <b>(C) PHONE NO :</b> |  |

**ANNEXURE IV**

**F-4B**

**PROFORMA OF "INSURANCE SURETY BOND" FOR "CONTRACT  
PERFORMANCE SECURITY / SECURITY DEPOSIT"  
(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)**

|  |  |  |
|--|--|--|
| To,<br><br>M/s Bengal Gas Company Limited<br><br>_____ | <b>Insurance Surety Bond No.</b>   |  |
|  | <b>Date of Insurance Surety Bond</b>   |  |
|  | <b>Insurance Surety Bond Valid up to (Expiry date)</b>   |  |
|  | <b>Claim period up to (indicate date of expiry of claim period which includes minimum three months from the expiry date)</b> |  |
|  | <b>Stamp No./e-Stamp Certificate No.</b>   |  |

**Dear Sir(s),**

M/s. \_\_\_\_\_ having registered office at \_\_\_\_\_ (herein after called the "contractor/supplier" which expression shall wherever the context so require include its successors and assignees) have been placed/ awarded the job/work of \_\_\_\_\_ vide PO/LOA /FOA No. \_\_\_\_\_ dated \_\_\_\_\_ for Bengal Gas Company Limited having registered office at 1<sup>ST</sup> Floor, Block-A, Finance Centre, CBD Action Area-II B, Newtown, Kolkata- 700161 (herein after called the "BGCL" which expression shall wherever the context so require include its successors and assignees).

The Contract conditions provide that the SUPPLIER/CONTRACTOR shall pay a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) as full Contract Performance Guarantee in the form therein mentioned. The form of payment of Insurance Surety Bond executed by Insurer, undertaking full responsibility to indemnify BENGAL GAS COMPANY LIMITED, in case of default.

The said M/s. \_\_\_\_\_ (herein after called the "insurer" which expression shall wherever the context so require include its successors and assignees) has approached us and at their request and in consideration of the premises we having our office at \_\_\_\_\_ have agreed to give such guarantee as hereinafter mentioned.

1. We \_\_\_\_\_ hereby undertake to give the irrevocable & unconditional guarantee in form of Insurance Surety

Bond to you that if default shall be made by M/s. \_\_\_\_\_ in performing any of the terms and conditions of the tender/order/contract or in payment of any money payable to BENGAL GAS COMPANY LIMITED we shall on first demand pay without demur, contest, protest and/or without any recourse to the contractor to BGCL in such manner as BGCL may direct the said amount of Rupees \_\_\_\_\_ only or such portion thereof not exceeding the said sum as you may require from time to time.

2. You will have the full liberty without reference to us and without affecting this Insurance Surety Bond, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the order/contract with the said M/s. \_\_\_\_\_ and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said M/s. \_\_\_\_\_ and such postponement forbearance would not have the effect of releasing the insurer from its obligation under this debt.
3. Your right to recover the said sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) from us in manner aforesaid is absolute & unequivocal and will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. \_\_\_\_\_ and/or that any dispute or disputes are pending before any officer, tribunal or court or arbitrator or any other authority/forum and any demand made by you to the insurer shall be conclusive and binding. The insurer shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission or commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the insurer.
4. The Insurance Surety Bond herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said supplier/contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. The insurer undertakes not to revoke this Insurance Surety Bond during its currency without your previous consent and further agrees that the Insurance Surety Bond shall continue to be enforceable until it is discharged by BGCL in writing. However, if for any reason, the Contractor/Supplier is unable to complete the supply/work within the period stipulated in the order/contract and in case of extension of the date of delivery/completion resulting extension of defect liability period/guarantee period of the Contractor/Supplier fails to perform the supply/work fully, the insurer hereby agrees to further extend this Insurance Surety Bond at the instance of the supplier/contractor till such time as may be determined by BGCL. If any further extension of this Insurance Surety Bond is required, the same shall be extended to such required period on receiving instruction from M/s. \_\_\_\_\_ (contractor) on whose behalf this Insurance Surety Bond is issued.
6. Insurer also agrees that BGCL at its option shall be entitled to enforce this Insurance Surety Bond against the insurer (as principal debtor) in the first instant, without proceeding against the Contractor/Supplier and notwithstanding any security or other guarantee that BGCL may have in relation to the Contractor/Supplier's liabilities.

7. The amount under the Insurance Surety Bond is payable forthwith without any delay by insurer upon the written demand raised by BGCL. Any dispute arising out of or in relation to the said Insurance Surety Bond shall be subject to the exclusive jurisdiction of courts at Kolkata.
  
8. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Contractor/Supplier up to a total amount of \_\_\_\_\_ (amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring the Contractor/Supplier to be in default under the order/contract and without caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.
  
9. We have power to issue this Insurance Surety Bond in your favor under our Memorandum and Articles of Association, and the undersigned has full power to sign and execute documents under the Power of Attorney, dated \_\_\_\_\_ granted to him by the Insurer.
  
10. Notwithstanding anything contained herein:
  - a) The Insurer's liability under this Insurance Surety Bond shall not exceed (currency in figures) . . . . . (currency in words only ) . . . . .
  - b) This Insurance Surety Bond shall remain in force upto \_\_\_\_\_ (this date should be expiry date of defect liability period of the Contract) and any extension(s) thereof; and
  
11. The Insurer shall be released and discharged from all liability under this Insurance Surety Bond unless a written claim or demand is issued to the Insurer on or before the midnight of .....(indicate date of expiry of claim period which includes minimum three months from the expiry of this Insurance Surety Bond) and if extended, the date of expiry of the last extension of this Insurance Surety Bond. If a claim has been received by us within the said date, all the rights of BGCL under this Insurance Surety Bond shall be valid and shall not cease until we have satisfied that claim.

Details of next Higher Authority of the Officials who have issued the Insurance Surety Bond:

Name .....

Designation .....

Yours faithfully,

\_\_\_\_\_  
Insurer by its Constituted Attorney

Signature of a person duly  
Authorized to sign on behalf of the  
Insurer

INSTRUCTIONS FOR FURNISHING  
"CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "INSURANCE  
SURETY BOND"

- a) The Insurance Surety Bond shall be from Insurance Regulatory and Development Authority of India (IRDAI) registered general insurance companies as per guidelines by Insurance Regulatory and Development Authority of India (IRDAI).
- b) The Employer shall be the Creditor, the Bidder shall be the Principal debtor and the Insurance company/Insurer shall be the Surety in respect of the Insurance Surety Bond to be issued by the Insurer.
- c) The Insurance Surety Bond should be on Non-Judicial stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the state(s) where the Insurance Surety Bond is submitted or is to be acted upon or the rate prevailing in State where the Insurance Surety Bond is executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Bidder/Insurer issuing the Insurance Surety Bond.
- d) The Insurance Surety Bond by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing Insurer.
- e) The Insurance Surety Bond by Bidders will be given from insurer as specified in cl.no. 38.2 of ITB [Section-III] of Tender Document.
- f) A letter from the issuing insurer of the requisite Insurance Surety Bond confirming that said Insurance Surety Bond and all future communication relating to the Insurance Surety Bond shall be forwarded to Purchaser.
- g) Supplier shall submit attached cover letter (Annexure) while submitting Contract Performance Security / Security Deposit.

MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY  
VENDOR ALONG WITH INSURANCE SURETY BOND

|   |                                     |   |                         |
|---|-------------------------------------|---|-------------------------|
| 1 | <b>INSURANCE SURETY BOND NO</b>     | : |                         |
| 2 | <b>VENDOR NAME / VENDOR CODE</b>    | : | <b>NAME</b>             |
|   |                                     |   | <b>VENDOR CODE</b>      |
|   |                                     |   | <b>VENDOR EMAIL ID</b>  |
|   |                                     |   | <b>VENDOR MOBILE NO</b> |
| 3 | <b>INSURANCE SURETY BOND AMOUNT</b> | : |                         |
| 4 | <b>PURCHASE ORDER/ LOA NO</b>       | : |                         |

|   |   |     |  |                         |             |                |
|---|---|-----|--|-------------------------|-------------|----------------|
| 5 | <b>NATURE OF INSURANCE SURETY BOND</b>          | :   |  |                         |             |                |
|   | <b>(Please Tick (√) Whichever is Applicable</b> |     | <b>PERFORMANCE INSURANCE SURETY BOND</b> | <b>SECURITY DEPOSIT</b> | <b>EM D</b> | <b>ADVANCE</b> |
|   |   |     |  |                         |             |                |
| 6 | <b>INSURER DETAILS</b>                          |     |  |                         |             |                |
|   |   | (A) | <b>EMAIL ID :</b>                        |                         |             |                |
|   |   | (B) | <b>ADDRESS :</b>                         |                         |             |                |
|   |   | (C) | <b>PHONE NO :</b>                        |                         |             |                |