


|  | | CORRIGENDUM # 1 LAYING OF STEEL PIPELINE NETWORK AT AGRA (UP) TENDER NO. - P. 005914 R11050 012 | | | Date: 12.07.2017 Project: City Gas Distribution Project in: Agra Owner: Green Gas Ltd. (GGL) |
|---|------------------------------------|--|--|--|---|
| Sr. No. | Description | Tender Page No. | Clause/ Para/ Section | Amendment/Addition/Modification/Deletion | |
| Vol I of II | | | | | |
| Commercial | | | | | |
| 1 | Schedule of Rates | 100141 to 100160 | Schedule of Rates | Modification | Revised Schedule of Rates is attached. Bidders to quote prices in Revised SOR only. Revised SOR in Excel format is being uploaded on TE / GGL websites. |
| Vol IIIA of II | | | | | |
| Technical | | | | | |
| 2 | PTS-Construction of Steel Pipeline | 200012 | 4.0/4.1/Material to be supplied by owner as free issue | Modification | Please refer bullet 2. Please read thickness of 8" pipe as 6.4 mm |



S K Gupta
TE

(MATERIAL CHECKED BY)
TE

Name of Bidder

Owner : Green Gas Ltd.

Currency: INR

| Item No. | Description | Unit | Total Quantity | UNIT RATE INCLUSIVE OF ALL TAXES AND DUTIES INCLUDING EXCISE DUTY, SALES TAX, BOCW TAX, LEVIES,FREIGHT, INSURANCE INCLUDING TRANSIT INSURANCE OF FREE ISSUE MATERIALS AS DEFINED IN BID DOCUMENT (EXCLUDING SERVICE TAX) | TOTAL AMOUNT INCLUSIVE OF ALL TAXES AND DUTIES INCLUDING EXCISE DUTY, SALES TAX, BOCW TAX, LEVIES,FREIGHT, INSURANCE INCLUDING TRANSIT INSURANCE OF FREE ISSUE MATERIALS AS DEFINED IN BID DOCUMENT (EXCLUDING SERVICE TAX) 4= 2*3 |
|----------|--|------|----------------|---|--|
| | | 1 | 2 | 3 | 4 |
| 1 | Laying and Installation of Carbon Steel Pipeline | | | | |
| | <p>Receiving and taking-over as defined in the specifications, handling, loading, transportation and unloading of Owner supplied 3 - Layer PE coated line pipes (8" and 4" sizes) and Ball Valves (8" and 4" sizes) from Owner designated stock-yard to Contractor's own stock yards/workshops/work-sites. Procurement and Installation of all other materials like Flanges, Fitting, Bends, Insulating Joints, Ball Valves (except free issue), Globe Valves, Check Valves etc. and any other materials required for satisfactory completion of the project shall be in contractor's scope.</p> <p>Preliminary activities, preparation of drawings, wherever required for crossings etc. including handling, stacking, obtaining Permissions from Statutory agencies in time bound manner with proper Liaisoning, stringing on the pipeline Right-of-use / pipeline route alignment, carrying out inspection of company supplied materials including line pipes at the time of taking over, laying / installation of coated line pipe, associated fittings and accessories, including executing all works, "taking over", handling, including loading and unloading, transportation of Owner supplied materials other than line pipe from Owner's designated place(s) of issue to work site, arrangement of all additional lands required for Contractor's storage, fabrication, access for construction, procurement and supply of all other materials like consumables, equipment, manpower and other inputs, carrying out all temporary, ancillary, auxiliary works, ready for commissioning of pipeline as per drawings, Specifications, other provisions of Contract document and instruction of Owner/ Owner's Representative, including but not limited to carrying out the following works:</p> | | | | |
| | <p>Surveying of detours for the detours required at the time of construction including marking the same in topographical sheet, preparation of AFC drawings showing survey details. And submit same to Owner/ Owner's Representative for review.</p> | | | | |
| | <p>Staking and installation of construction markers, clearing, fencing, grubbing, cutting of trees, fulfilling all the requirements of various statutory / environment authorities to the entire satisfaction of concerned authorities, grading of work area, Shifting of all obstruction within the ROU/ pipeline route alignment viz electrical lines/poles, telephone lines/poles, co-ordination with concerned authorities and obtain permissions from these authorities.</p> | | | | |
| | <p>Trenching to all depths by excavation in all types of soils including soft/hard rock, chiseling or otherwise cutting different types of pavement, footpath, roads etc. As required and storing excavated soil, reusable materials at designated area as directed by Owner/ Owner's Representative and to a width to accommodate the pipeline as per relevant standard/ specifications etc. (The minimum depth of the top of pipeline shall be 1.2 m or more from the finish of the stabilized grade level). Dewater of trenches if required as per site condition. Making trial pits as per instructions of EIC</p> | | | | |
| | <p>Carrying out repairs of pipe defects/replacement in case of irreparable defects and repairs of defects of pipe coating not attributable to Owner including defects / damages occurring during transportation/handling.</p> | | | | |
| | <p>Checking, cleaning, aligning, bending, cutting and beveling (as required) of pipes for welding and field adjustments including pipe fittings, welding, carrying out non-destructive testing of welds as required including 100% radiography and providing all requisite equipment, labor, supervision, materials, films, consumables, all facilities and personnel to process, develop, examine and interpret radiographs and other tests as required, carrying out repairs of welds joints found defective by Owner/ Owner's Representative, carrying out re-radiography and other tests as required on repaired joints. Providing PE warning mat over the pipeline etc.</p> | | | | |
| | <p>Carrying out installation of carrier pipe at all crossings like roads/nallas at designated depths by open cut/jacking/boring (except at cased crossings or crossings carried out by HDD method).</p> | | | | |

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|----------|---|------|----------------|--|---|
| | Supply & Installation of 10mm thick neoprene Sheet / HDPE Sheet / Concrete Slab shall be installed as per standard drawing no. TEIND-STD-G-M-2014 at foreign pipeline crossing, Underground EHV power cable (≥ 66 KV) crossing and HT power cable crossing locations. | | | | |
| | Coating of field weld joints, long radius bends, buried fittings & valves etc. including supply of coating materials duly approved by owner etc as per specification. | | | | |
| | Counting the number and type of trees cut in presence of DFO/concerned authorities and keeping record thereof; stacking and handing over of all cut trees. | | | | |
| | Installation/ lowering the pipeline in trench to required depth, placement of 1.0 mm thickness HDPE yellow color warning mat (to be supplied by Contractor) over the pipeline along the complete route, padding around pipeline with suitable approved soil including supply of padding material, backfilling with available/ borrowed earth, approved excavated material and/ or other suitable soil by crowning. Compaction with jumping jack compactor and water at subsequent layers of 150mm or as directed by Owner/ Owner's Representative. All tiles / slabs/ curb stones etc. removed during excavation shall be placed properly. Roads, pavements, footpaths, etc. to be made motorable wherever pipeline is laid. | | | | |
| | Supply and Installation of slope breakers, bank protection wherever required and as directed by Owner / Owner's Representative. | | | | |
| | Carrying out air cleaning, pigging, flushing, cleaning and hydrostatic testing of complete pipeline with quantity of corrosion inhibitor including pre-testing of designated sections complete as per specification and approved by Owner/ Owner's Representative to specified pressures indicated elsewhere and duration after stabilization as per specification, providing all equipment, pumps, fittings, instruments, dead weight tester, pressure recorder, thermocouples etc., and services, supervision, labor, consumables, water including supply of corrosion inhibitor, air, etc. as required, locating of leaks and rectification of defects attributable to Contractor (rectification of defects in line pipe material not attributable to contractor shall be paid separately as per schedule of rate), re-testing after rectification, dewatering after successful completion of Hydrotesting of entire section and as approved by Owner/ Owner's Representative. | | | | |
| | All tie-in, including the tie-ins with adjacent / Golden Joints section of the pipeline. | | | | |
| | Protective coating of 450 micron thick two component epoxy / polyurethane (applied with the help of minimum three coats) including supply of materials duly approved by owner for all piping, Valves, fittings, structural steels etc. for buried installation and inside the valve pit. | | | | |
| | Final clean - up and restoration of right -of -use and disposal of debris and surplus material to designated disposal areas and re-instating the area to its earlier state and as directed by Owner/ Owner's Representative. | | | | |
| | Pre-commissioning activities like swabbing, drying of the complete pipeline network and the associated facilities being installed to the specified acceptance criteria as per Owner/Owner's Representative. | | | | |
| | Maintaining the completed pipelines/ installation for any defect, failures during defect liability period (i.e. 12 months from date of commissioning of Pipeline). | | | | |
| | Ensuring proper safety codes & practices during construction, cordoning off the work area, providing warning signs, barricading and proper tools & tackles, Equipping the workers with safety boots, helmets and florescent aprons & barricading as per drawing no. TEIND-STD-G-M-9001. The barricading is to be done throughout along the trench/ welding string. | | | | |
| | Any other activities not mentioned/ covered explicitly above, but otherwise required for satisfactory completion/ operation/ safety/ statutory/ maintenance of the works shall also be covered under the scope of work and has to be completed by the Contractor within specified time schedule at no extra cost to owner. The pipeline laying shall be done as per specification, code & standard & guideline by Owner/ Owner's Representative. | | | | |

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|----------|---|------------------|-----------------------------|------|----------------|--|---|
| | Preparation of as-built drawings, pipe-books (1 set of tracing on polyester film and 6 sets of as - built drawings (on A "0" size drawing sheets) and 1 soft copy and 3 copies of pipe book.) All the works shall be executed in accordance with the provision of contract including carrying out all temporary/ancillary/ auxiliary works required of the performance of the works and all other acts, deeds, matters and things necessary to make the pipeline ready for pipe commissioning activities. | | | | | | |
| 1.1 | Specified NB (inch) | Thk in mm (inch) | Material | | | | |
| a) | 8" | 6.4 (0.252") | API 5L Gr. B (ERW / SMLS) | m | 5000 | | |
| b) | 4" | 6.4 (0.252") | API 5L Gr. B (ERW / SMLS) | m | 2000 | | |
| | Note: | | | | | | |
| | 1. This item shall be applicable for the pipeline, fittings, accessories, valves etc. between existing / proposed underground tap off points from existing steel main grid to I.J. for U/G portion | | | | | | |
| | 2. For restoration of asphalt / concrete roads, the item for construction of asphalted top/concrete top/red stone etc. are included in bidders scope payment will be made as per SOR item no. 13 (a) & (b). | | | | | | |
| | 3. Applying permission by obtaining request letter from the Owner, follow up and getting permission from the statutory authorities shall be in contractor's scope, only R.R. charges shall be paid by Owner. The rates quoted by the Bidder shall be inclusive of all expenses towards Liaisoning to obtain permission. | | | | | | |
| 2 | Supply & Installation of Casing pipe with Career Pipe by HDD Method: | | | | | | |
| | Supply & Installation of Casing pipe (Carbon steel) by HDD for Nala, road, Rail and canal crossings wherever required in all types of soils and terrain & all associated works including supply of all other materials, equipment, consumables, manpower, welding of steel casing including visual inspection of all weld joints backfilling and restoration as original of the facility crossed and performing all works as per drawings, specifications and instructions of Owner/ Owner's Representative and provisions of contract document. Submission of as built drawings. Any other activities not mentioned/ covered explicitly above, but otherwise required for satisfactory completion/ operation/ safety/ statutory/ maintenance of the works shall also be covered under the scope of work and has to be completed by the Contractor within specified time schedule at no extra cost to owner. It shall be done as per specification, code & standard & guideline by Owner/ Owner's Representative | | | | | | |
| 2.1 | Career Pipe with Carbon steel Casing | | | | | | |
| a | 16" NB Carbon steel casing pipe HDD Method with 8" NB Career pipe | | | m | 450 | | |
| b | 8" NB Carbon steel casing pipe HDD Method with 4" NB Career pipe | | | m | 50 | | |
| | Note: | | | | | | |
| | 1. Payment shall be based on the actual length of HDD. Measurement of HDD length shall be done from middle of Entry Pit to the middle of exit pit of the pulled HDD pipe length. | | | | | | |
| | 2. Casing end seals, casing insulators, Vent & drain connections shall be provided by the contractor. | | | | | | |
| | 3. SOR item no. 2.1 is Including of installation of carrier pipe in the casing pipe, string preparation (stringing, welding, NDT, Pretesting, coating, Hydrotesting, Precommissioning etc.). | | | | | | |

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|----------|--|----------------|----------------|--|---|
| | 4. Contractor shall procure carbon steel casing pipe as per attached specification. | | | | |
| 3 | Installation of Crossings without casing pipe: | | | | |
| | Receiving and taking-over as defined in the specifications, handling, loading, transportation and unloading of Owner supplied 3 - Layer PE coated line pipes from Owner designated stock-yard to Contractor's own stock yards/workshops/work-sites including preliminary activities, carrying out inspection of owner supplied materials (3LPE coated line pipe) at the time of taking over and supply of all materials (except 3LPE coated line pipe) consumables, equipment, labor and other inputs, carrying out all temporary, ancillary, auxiliary works, as per drawings, Specifications, other provisions of Contract document and instruction of Owner/ Owner's Representative, including but not limited to carrying out the following works: Site Preparation, welding, radiography, coating field joints with special type heat shrinkable sleeves (Direx) pretesting of completed carrier pipe and making the string and welding of entry & exit point of HDD/boring with main pipeline. Pre Hydrotesting including leaks and repair of defects and retesting etc. for defects attributed to contractor's faulty work, Hydrotesting with main pipeline and precommissioning activities like swabbing, drying to the specified criteria as per owner/owners representative. Purging with nitrogen (Including supply) and Commissioning of complete pipeline network including supply of all equipment, machinery, consumables, tools and tackles, manpower, etc., as per specification, provisions of bid document and instructions of Owner/Owner's Representative. Final dossier all notes & calculations as required in the specification. Preparation of as-built drawings, pipe-books (1 set of tracing on polyester film and 6 sets of as - built drawings (on A "0" size drawing sheets) and 1 soft copy and 3 copies of pipe book.) | | | | |
| | Installation of Crossings of carrier pipes by HDD for Rail, Road, Nala and Canal crossings etc wherever required in all types of soils and terrain & all associated works including supply of all other materials, equipment, consumables, manpower including visual inspection of all weld Joints , backfilling and restoration as original of the facility crossed and performing all works as per drawings, specifications and instructions of Owner/ Owner's Representative and provisions of contract document. | | | | |
| | Any other activities not mentioned/ covered explicitly above, but otherwise required for satisfactory completion/ operation/ safety/ statutory/ maintenance of the works shall also be covered under the scope of work and has to be completed by the Contractor within specified time schedule at no extra cost to owner. It shall be done as per specification, code & standard & guideline by Owner/ Owner's Representative. | | | | |
| a | Installation of 8" NB PE Coated Steel pipe without any casing by HDD | m | 3000 | | |
| b | Installation of 4" NB PE Coated Steel pipe without any casing by HDD | m | 100 | | |
| | Note: | | | | |
| | 1. Payment shall be based on the actual length of HDD. Measurement of HDD length shall be done from middle of Entry Pit to the middle of exit pit of the pulled HDD pipe length. | | | | |
| | 2. Minimum length of Carrier pipe string shall be 200 m along the National Highway, However any variation in length of String due to site condition may be allowed as per direction of EIC | | | | |
| 4 | Rock Cutting | | | | |
| | Excavation of hard rock, wherever hard rock of single piece exceeding 1.5 m in any direction and removable only by pneumatic chisel / drill as per the specifications and direction of EIC. The rates are payable over and above the Laying rates as per relevant SOR Items. | m ³ | 10 | | |
| 5 | Installation of SV stations with venting arrangement | | | | |



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|----------|---|------|----------------|--|---|
| | <p>All works for installation of all underground & above ground piping at all elevations and below ground at all depth for Sectionalizing Valve Station as per P & ID no. P.005914/P-20701-002 & GAD no.P.005914-L-20707-001 in all type of terrains and soils including "Receiving and taking over" as defined in the specifications, handling, loading, transportation and unloading of all Owner supplied materials i.e. extended stem butt welded sectionalizing ball valve, line pipes for mainline , vent lines from Owner's designated place(s) of issue to work site. Supply of pipes & valves below 4" size, associated fittings of all sizes , supply of all consumables, materials, manpower and carrying out all mechanical works of underground and above ground piping including fabrication, welding, non-destructive testing of welds, weld repairs/ retesting, cleaning/ flushing, pre-Hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and beveling (if required), tie-in of valve assembly, including radiography of tie-in joints, corrosion, coating and external painting as required</p> | | | | |
| | <p>Supply of pressure gauges as per Data Sheet Installation of instruments like pressure/ temperature instruments/ gauges, provision for tubing to the actuator in future, obtaining all statutory clearances, approvals and permissions for the works (wherever required). Excavation in all types of soil including soft / hard / rocky surfaces, providing 200 mm thk PCC for valve base support, backfilling and compaction with approved soil for installation of pipes and fittings, etc including sand padding all around the valves in SV station, pipe supports and fencing would be paid against separate SOR s), painting, finishing, clean-up and restoration of site; preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.</p> | | | | |
| a | On pipeline of NB 8" x 6.4 mm w.t. | Nos. | 4 | | |
| b | On pipeline of NB 4" x 6.4 mm w.t. | Nos. | 1 | | |
| | <p>Note: i) This work is exclusive of all works associated with main pipeline covered under Sl. No. 1 above. ii) All civil / structural works including area fencing and gate, pipe supports, valve chamber will be paid separately as per unit rate provided elsewhere in the SORs.</p> | | | | |
| 6 | Complete works for Tap off Points | | | | |
| | <p>Complete works of design, engineering, installation of all piping, valves, fittings at all depths inside the pit in all types of terrains and soils including transportation, handling of all Owner supplied materials from Owner's designated issue point(s) to work site, supply of Contractor's supplied materials to work site(s), all mechanical works including fabrication, welding, non destructive testing of welds, weld repairs/ retesting, cleaning/ flushing, pre-Hydrotesting & hydrostatic testing, dewatering, functional testing, cutting of mainline and beveling (if required), tie-in of valve assembly, including radiography of tie-in joints, corrosion, coating and external painting as required. All civil works including excavation of pit, piping supports including all PCC and RCC works for pedestals with insert plates as required, construction of valve chamber including with supply of all material and finishig, clean up and restoration of site, filling and grading of area around valve station for avoiding any local flooding of area and as per specification and instructions of Owner/Owner's representative. Preparation of as-built drawings, documents and project records and performing all works as per drawings, specifications, other provisions of Contract document and instructions of Engineer-in-charge.</p> <p>Note : Bolts, nuts, washer, U-clamps, gaskets etc required for piping facilities shall be procured and supplied by the contractor with in the rate quoted. These items shall not be separately measured and paid.</p> | | | | |
| a | 8"x 8" | Nos. | 1 | | |
| b | 8"x 4" | Nos. | 3 | | |
| | Note : - Making of valve pit for tap-off points, pipe supports and fencing would be paid against separate SOR items. | | | | |

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| 7 | Purging and inertisation of existing pipeline | | | | |
| | Purging and inertisation of existing pipeline section between the two isolation valves with nitrogen to make the pipeline section free from hydrocarbons (prior to carrying out cutting / installation of tap off connection) and oxygen (after completion of tap off works including supply of required quantity of nitrogen and all equipments, tools and tackles, manpower etc. required for the works and as per instruction of engineer in charge. | Nos. | 30 | | |
| | Note:- Above rate is for Number of Nitrogen cylinders of 7 M³ capacity. | | | | |
| 8 | Pipeline laying / installation of above ground pipeline (Wherever required at CNG/DRS/MRS stations and consumer ends etc.) | | | | |
| 8.1 | Welding of pipes with Pipes/fittings/Valves/Flanges :- | | | | |
| | Receiving and taking over of all free issue materials from company's designated place of issue, handling including lifting, transportation from Owners and / or contractors storage point to work site / workshop as applicable for fabrication or / and to work site for field fabrication and erection for all piping items supplied by COMPANY / CONTRACTOR. | | | | |
| | Fabrication including cutting, edge preparation, inclusive of grinding the edges of pipes, fittings, etc. to match with grinding the edges of pipes, fittings etc. to match with the matching edges of uneven / different thickness wherever required fit - up bending, preheating wherever required, welding etc. pipe fittings like elbows, tees, reducers, weldolets, sockolets, etc. vent and drain point connection etc. including providing stub - in connection, fabricated fittings and reinforcement pads etc. as required. Carrying out Non-destructive testing as per specification & instruction of EIC. | | | | |
| a | 8" NB | Nos. | 24 | | |
| b | 4" NB | Nos. | 60 | | |
| c | 2" NB | Nos. | 150 | | |
| d | 1" NB | Nos. | 6 | | |
| e | 0.75" NB | Nos. | 6 | | |
| 8.2 | Erection & Testing: | | | | |
| | Complete work of erection, painting, testing and making ready for further commissioning / start - up carbon steel piping and fittings of all sizes and ratings including supply & installation of, all fittings like elbow, tees, reducers, swages, weldolet, sockolets, nipples, flanges, blind flanges, spectacle blind flanges, valves, pipes of sizes below 2" NB and of all ratings including supply of all consumables, equipment, manpower and other resources and execution of but not limited to the following works in accordance with relevant specifications, drawings, scope of work and instruction of Owner/ Owner's Representative and as per all provisions of the contract document. | | | | |
| | Erection of pipes of all types and thickness over sleepers, overhead on rack and at all elevations, connecting with equipment nozzle, aligning and installation for all types of valves, all online instruments and fittings of all sizes of elbow, reducers, tees, flanges blind flange, spectacle blind flanges, branch connection / tapping, vents and drains, required for process and hydro testing, tapping for pressure gauges thermo wells sample connections, etc. | | | | |
| | Painting of entire system (including all pipes and accessories) as per specification, including supply of approved paints and primers, preparation of surface and application of primer and paint, identification lettering/numbering, color coding, etc. as specified including rub down & touch up of shop primer or scrapping of shop primer wherever required by COMPANY and providing scaffolding for all heights etc. Cleaning and flushing by water /compressed air, testing of the system including hydrostatic, pneumatic and any other type of testing as specified, draining, drying by compressed air / other methods approved by COMPANY. | | | | |
| | Cleaning and flushing by water/ compressed air, testing of the system including hydrostatic, pneumatic and any other type of testing as specified, draining, drying by compressed air/ other methods as approved by Owner. | | | | |