



REPLY TO BIDDER'S PRE-BID QUERIES

SUPPLY OF DECOMPRESSION SKID

TENDER NO: IGL/ND/C&P/EP14759

VCS Ref No. VCS/NOIDAC&P/13823/25-RO

Owner -Indraprastha Gas Ltd.  
Consultant - VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 12.03.2018

Date: 22.03.2018

| Sl. No.           | Vol. No. | Clause No.  | Description   | Bidder's Query/Clarification  | IGL/VCS Reply   |
|-------------------|----------|---|---|---|---|
| <b>Commercial</b> |          |   |   |   |   |
| 1                 | I        | 8.1.1 of IFB Technical BEC                                    | The bidder must have supplied one or more natural gas decompression skid of capacity 500 SCMH or more with inlet pressure as 200 bar or more and outlet pressure up to 6 bar during a period of five years from the bid due date in India or abroad for natural gas distribution application. | We request IGL to kindly accept "The bidder must have supplied one or more natural gas decompression skid of capacity 450 SCMH or more with inlet pressure as 200 bar or more and outlet pressure up to 6 bar during a period of five years from the bid due date in India or abroad for natural gas distribution application." this will help us in participating in your valued tender.   | Tender condition prevails.  |
| 2                 | I        | Clause No. 7.5 of IFB, Bid Submission date and time           | Extension of bid due Date   | Request to extend the bid-submission date   | Tender Condition shall prevail  |
| <b>Technical</b>  |          |   |   |   |   |
| 1                 | II       | Technical specification, Page No-19                           | Gas velocities in pipe work must not exceed 20 meters / second,   | As per our sizing calculation , considering given process data & velocity limitation of 20 m/s, line sizing shall be as below :<br>After 2nd stage PRV : 3" (velocity : 9.95 m/s ). However as per P&ID, mentioned line size is 2". (velocity 25.69 m/s ) which is above the velocity limitation of 20 m/s.<br><br>Please let us know, whether we have to follow line size as per mentioned in P&ID or velocity limitaion 20 m/s.<br><br>Generally CNG being a clean gas, velocity of 30 m/s is accepted. | Bidder to follow the velocity limitation of 20m/s.  |
| 2                 | II       | Technical specification- Hose pipe and accessories Page No-20 | a) Hose pipe (5 meters) – 12Nos. with required inter connectors (SS304) capable to bear 250 bar and 500 SCMH flow rate. One end with QRC  | We understand that we have to loose supply 12 nos of hoses. Each hose shall be of 5mtr length. Each hose shall have NPTM end connection and only one hose out of 12nos shall be supplied with QRC at one end. Please confirm our understanding.   | Bidder's understanding is not correct. Two number of 5 Mtrs. Hose pipes shall be connected to form a single length of 10 Mtrs. with QRC at each end of 10 Mtrs. length and hence 5 mtrs. lengths shall be supplied with interconnectors i.e.Each hose pipe shall be with QRC at one end and NPTF connection at the other end and one number of NPTM socket shall be supplied with each hose length of 5 Mtrs. to connect the high pressure valves in between the two hose lenth of 5 Mtrs. High pressure valves shall be SS 304with NPTF end connections. |
| 3                 | II       | Technical specification- Hose pipe and accessories Page No-20 | b) High pressure valves (SS304) – 6Nos. to be used along with hose pipes.   | We undertand that these 6 nos of SS304 ball valves are to be supplied as loose. end connections of these ball valves shall be NPTF. Please confirm.   |   |
| 4                 | II       | Technical specification, Page No-20                           | Connection shall be Quick Release Coupling (QRC) Type   | We undersatnd that quick release coupling to be provided along with hose shall be connected at skid inlet. Kindly confirm.  | QRC end of hose pipes shall be connected to gas supply inlet and outlet of both the stages.   |



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| 5       | II       | Technical specification-Skid Footprint (LxWxH) Page No-21 | 1350x1000x1500 mm  | Dimension of skid Length: 1.35 mtrs X Width: 1 mtr X Height : 1.5 mtrs is too compact for the given specs considering twin stream skid with heater scope. This will not fit into given TATA 407 vehicle. The size of skid is likely to be more than the specified . Please confirm your acceptance.   | IGL may consider higher dimensions with prior approval after award.  |
| 6       | II       | filter Page No-21   | Design and construction shall meet the requirements as per ASME Boiler & Pressure Vessel (BPV) Code, Section VIII: 2010. The filters shall be of vertical design. Differential pressure indicator (clogging indicator) should be provided. The filters shall have purge, vent and drain connections with valve (with positive blind arrangement), shall be suitably located and sized to ensure a reasonably short blow down time. Quick opening covers, but which cannot be removed while under pressure shall be incorporated. All welded joints shall be radio graphically examined and acceptance criteria shall comply with ASME BPV Codes. | this clause is not applicable for stainers / filters used in CNG application. Please confirm.   | Noted and Confirmed  |
| 7       | II       | Technical specification-PRESSURE CONTROL VALVE Page-25    | The materials selected for the regulators and SSV components shall be conform to the process requirements (minimum SS316) and shall be specified in the data sheets.   | body material of first stage pressure regulator and SSV shall be SS316 and second stage pressure regulator with built in SSV shall be carbon steel. Please confirm our understanding is correct.  | Bidder to supply the material suitable for the application.  |
| 8       | II       | Technical specification-PAINTING Page-28                  | If required, vendor shall provide suitable weatherproof cabinet for the skid. The thickness shall be minimum 16 SWG (1.6mm) SS304. Structural for canopy shall be MS with aluminum epoxy painted. The drawing for the same shall be submitted during detailed engineering for approval.  | Please confirm that the canopy is not mandatory for the skid.   | Canopy not required.   |
| 9       | II       | P & ID Page-31  | P & ID   | We understand that the given P&ID is indicative. vendor can make relevant changes based on their own design.  | Bidder can make relevant changes based on their design provided the changes considered are suitable for the application and meets te technical requirements specified in the tender.<br><br>Bidder is reponsible for overall performance of the skid supplied. |
| 10      | II       | P & ID Page-31  | P & ID   | Please confirm that 1st stage pressure regulator shall be direct operated. 1st stage pressure regulator and SSV does not come in scope of EN334 and EN14382 as pressure is above 100 Barg upto 1st stage.<br>2nd stage pressure regulator with built in SSV shall be pilot operated and shall be designed as per EN334 and EN14382.<br>Please confirm our understanding is correct. | Noted and Confirmed  |
| 11      | II       | P & ID Page-31  | PG is shown across strainer  | We understand that DPG is to be provided across strainer. Please confirm our understanding is correct.  | Yes, DPG to be provided. PID shall be updated by Vendor during Detail Engineering  |



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| 12      | II       | Datasheet-<br>TEMPERATURE<br>GAUGE<br>Page-37           | Case material  | Die cast AL case is asked for PG, SS316 case is asked for TG and DPG. the casing is unwetted part. Thus it is available in SS304 by default. please confirm your acceptance for PG,DPG, TG.  | Tender conditions shall prevail.   |
| 13      | II       | Datasheet-<br>TEMPERATURE<br>GAUGE<br>Page-37           | Thermowell connection  | As the line size is very small, we use 3/4"NPTM thermowell in all CNG skids being supplied. please confirm acceptance. using flanged thermowell in such small skid is not feasible.  | Bidder to expand line at the location of temperature gauge to meet the requirement.                |
| 14      | II       | Datasheet-<br>DIFFERENTIAL<br>PRESSURE GAUGE<br>Page-39 | DIFFERENTIAL PRESSURE GAUGE  | DPG of diaphragm type is not suitable for high pressure of 250 barg. please confirm acceptance of piston type DPG. Piston type DPG is used in all CNG PRS and even in all CNG dispensing units.  | Noted and accepted.  |
| 15      | II       | Datasheet-<br>CARTRIDGE FILTER<br>Page-42               | CARTRIDGE FILTER DATASHEET   | These specifications are not applicable for CNG filter. We understand that y type strainer is to be supplied as shown in P&ID.   | Noted and accepted.  |
| 16      | II       | VENDER LIST<br>Page-44                                  | M/s Nirmal Industrial Controls(India)-for maximum 300# and size 8".  | Kindly accept NIRMAL MAKE PCV & STV upto 2500 #. We have supplied high pr. PRV's & STV's in no. of similar decompression skids . PTR / ref. list is attached for your consideration & approval. Along with the bid, we will submit PO copy, datasheet , Release note for the supply. | May be accepted if meets all required technical specifications.                                    |
| 17      | II       | P & ID<br>Page-31                                       | High pressure side chamber size shown in P&ID is 4". Also PG & TG connections shown in tender P&ID are 2" & 1.5 " flanged.   | Chamber size should be 2" & all connections shall be threaded i.e for PG 1/2" NPTF & for TG 3/4" NPTF as flanged connections on high pressure side are not possible. Refer enclosed P & ID of other customer. Kindly Confirm.  | Noted and Confirmed  |
| 18      | II       | P & ID<br>Page-31                                       | For 300# , PG connections shown in P&ID is 2" flanged.   | PG Connections' shall be 1/2" NPTF. Kindly Confirm.  | PG connection shall be at-least 3/4". PID shall be updated by Vendor during Detail Engineering     |
| 19      | II       | P & ID<br>Page-31                                       | Vent connection's shown in P&ID on high pressure side are combination of Ball & Globe valve.   | Combination of Ball & Globe valve on high pressure side is not possible. Kindly accept vent with high pressure ball valve only.  | Noted. Double isolation to be provided.  |
| 20      | II       | P & ID<br>Page-31                                       | Level gauge connections shown in P&ID is 2"  | Level gauge connections shall be 1". Kindly confirm  | Noted and confirmed. PID shall be updated by Vendor during Detail Engineering                      |
| 21      | II       | P & ID<br>Page-31                                       | Ball valve after 2nd stage PRV is shown in P&ID.   | There are two ball valve in series after 2nd stage PRV. One valve can be deleted. Kindly confirm.  | Tender conditions shall prevail.   |
| 22      | II       | 9.0 DECOMPRESSION<br>SKID DATA SHEET:<br>Page 20 of 327 | Inlet pressure 20-250 bar-g<br>Inlet temperature 5-30°C<br>First stage outlet pressure 18-26 bar-g   | Inlet Pressure is 20 to 250 barg. So we need to consider the outlet pressure of first stage regulator as 18 barg only. Please confirm our understanding is correct.  | Confirmed.-- Bidders understanding is correct  |
| 23      | II       | 9.0 DECOMPRESSION<br>SKID DATA SHEET:<br>Page 20 of 327 | Inlet/Outlet Connection<br>Inlet Size – 1" , 2500# SS Tube with plain ends<br>Outlet size – 2" NB, 150# WNRF Connection shall be Quick Release Coupling (QRC) Type | As per our understanding we need to provide the Quick release coupling at inlet only. Please confirm our understanding is correct.   | Each hose pipe shall be with QRC at one end and NPTf connection at the other end with NPTM socket. |



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| 24      | II       | 15.0 PAINTING:<br>Page 28 of 327  | If required, vendor shall provide suitable weatherproof cabinet for the skid. The thickness shall be minimum 16 SWG (1.6mm) SS304. Structural for canopy shall be MS with aluminum epoxy painted. The drawing for the same shall be submitted during detailed engineering for approval. | Please confirm cabinet is required or Not?  | Not Required.  |
| 25      | II       | Appendix-I : P&ID<br>(Typical PID for reference only)<br>Page 30 of 327 | P&ID : Line sizes & Equipment sizes   | Please confirm the line sizes & Equipment sizes mentioned as per P&ID are freeze Or need to Vendor need do the sizing considering 20 m/sec velocity criteria?                     | PID is for reference to the bidder and minimum requirements. Bidder need to do the sizing as per the velocity criteria.      |
| 26      | II       | Page 6 of 17  | Suitable stands shall be provided on the 4 corners of the skids which can be used for installation of monsoon protection canopy.  | We understand removable stands will be provided at corners whereas Canopy for skid will not be in bidder scope of supply.   | Bidder's understanding is correct.   |
| 27      | II       | Skid Foot Print   | 1350x1000x1500 mm   | Skid foot print will be finalised dueing detail engineering. Kindly accept.   | IGL may consider higher dimensions with prior approval after award.  |
| 28      | II       | Decompression skid datasheet  | Hose pipe and accessories<br>a) Hose pipe (5 meters) – 12Nos. With required inter connectors (SS304) capable to bear 250 bar and 500 SCMh flow rate. One end with QRC.<br>b) High pressure valves (SS304) – 6Nos. to be used along with hose pipes.                                     | Please confirm Scope of supply for hose pipe and accessories.   | The hos pipe and accessoroes shall be supplied with each skid. IGL to review.  |
| 29      | II       | Gas Cleaning Block - Filter   | Requirement of Filter   | Request you to confirm weather Y-strainer is required or filter is required, because in P&ID Y-strainer is given, and separate datasheet of filter is given with tender documents | Y-strainer required.   |
| 30      | II       | Solar Panel   | Technical Specification   | Request you to provide more technical details or datasheet of solar panel, inverter & battery   | Bidder to select.  |
| 31      | II       | Dimension of skid   | Skid Datasheet  | Please confirm if proposed skid should be transported from site to site in TATA 407, as it is not possible to accommodate the twin stream decompression skid in TATA 407          | Yes, the skid shall be transported from site to site and higher skid foot print may be accepted after prior approval of IGL. |
| 32      | II       | Vendor List   | Vendor List - Filter  | Request you to include AEL as approved vendor for Filter (if strainer is not required.)   | Y-strainer required.   |
| 33      | II       | Decompression Skid datasheet  | QRC & Hose  | Request you to confirm if QRC is required with integrated NRV or without NRV, also confirm the end connection of the same.  | End connection shall be compatible with the connection on the skids.   |