

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
ISRO PROPULSION COMPLEX (IPRC)
MAHENDRAGIRI**

Tender for Supply of Liquid Methane road tankers

Bids to be submitted online

Tender No.: IPRC/PURGP2/IP202400159201 dated 28-01-2025

A. Tender Details

Tender No :	IPRC/PURGP2/IP202400159201
Tender Date :	28-01-2025
Tender Classification:	GOODS
Purchase Entity :	PURGP2
Centre :	ISRO PROPULSION COMPLEX (IPRC)

Supply of Liquid Methane road tankers

This is a two-part bid. Price details shall NOT be mentioned in technical Bid/attachments, failing which the offer will not be considered.

Foreign vendors are not permitted to quote.

Only Class-I and Class-II Local suppliers as per Make in India (MII) Policy are eligible to participate in the bid and submit the MII declaration certificate which is mandatory.

The percentage of local content is mandatory and it should be specifically mentioned in the offer.

Preference will be given to Class-I Local Supplier and in their absence, Class-II Local Supplier will be considered.

MSME preference is applicable only against the claim of the manufacturer and production of documentary evidence by the manufacturers for the registration of particular item under MSME.

Last minute clarification on tenders will not be entertained.

This is an e-Tender. Hence Postal/Fax/Email tenders will not be accepted.

Acceptance of Guarantee / Warranty, PBG, SD, LD & AMC shall be complied. (AMC charges will be considered/ loaded for cost comparative purpose for arriving the L1 price)

Please mention your Government E market Place (GeM) Seller ID for our reference.

A.1 Tender Schedule

Bid Submission Start Date :	28-01-2025 17:00
Bid Clarification Due Date :	06-02-2025 14:00
Bid Submission Due Date :	24-02-2025 11:30
Bid Opening Date :	24-02-2025 11:31

Price Bid Opening Date :

28-02-2025 11:00

B. Tender Attachments

Technical Write-up/Drawings

Document : QAP

Document : P&ID

Document : Terms and conditions

Document : Specification of Liquid Methane Road tankers

Instructions To Vendors

5. LOCAL CONTENT DECLARATION CERTIFICATE FORMAT (in your letter head)

1. In line with the Government Public Procurement Order No. P/45021/2/2017-BE-II dtd . 15.06.2017 , as amended from time to time, and as applicable on the date of submission of tender, we hereby certify that , we M/s. _____ are local supplier meeting the requirement of minimum local content, _____%, as defined above in the orders for the material against Tender Enquiry No. ____ dtd. ____ .

2. The HSN No. of the item supplied is _____

Percentage of Local value addition , involved in the item are:

- 1.
- 2.
- 3.

3. This is also certified that the following factors are excluded in the above percentage: (strike out which are not applicable)

1. imported item sourced locally from resellers/distributors (value in ____% including tax, if applicable)
2. The license fee/royalties paid/technical charges paid out of india. (value in ____% including tax, if applicable)
3. Repackaged/refurbished/rebranded imported products (value in ____% including tax, if applicable)

4. The details of location at which the value addition will be made is as follows :

5. We also understand that , false declarations will be in breach of code of integrity, under rule 175 (1) (i) (h), of the General Financial Rules, for which a bidder, or its successors can be debarred for up to 3 years under Rule 151 (iii) of the GFR along with such other actions as may be permissible under law.

For (company name)

Authorised Signatory

6. Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA

1. Any false declaration and non-compliance of the above would be a ground for immediate rejection of offer or termination of the contract and further legal action in accordance with the laws.

2. As per the Rule 144(xi) of General Financial Rule, 2017, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority ie., Department for Promotion of Industry and Internal Trade (DPIIT).

3. Hence, Vendors or Agents of a Vendor (Indian or others) from a country sharing border with India shall submit copy of valid registration made with Department for Promotion of Industry and Internal Trade (DPIIT), Government of India along with the tender mandatorily, without which the offer will be treated as invalid.

4. Model Certificate for Tenders

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered

5. Validity of Registration: Registration should be valid at the time of submission of bids and should be valid at the time of placement of order.

7. GeM Seller ID

1. GeM Seller Registration: All vendors shall register themselves in GeM Portal (gem.gov.in) and provide GeM Seller unique ID in the tender documents, as this ID is mandatory for award of contract.

8. STANDARD TERMS AND CONDITIONS (DOS PM:19)

1. a. Prices are required to be quoted according to the units indicated in the annexed tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two systems of unit must be furnished.

2. Arbitration in the event of any dispute or difference arising under these terms & conditions or any condition contained in the Purchase Order or in connection with this Contract. (except as to any matter the decision of which is specially provided for by these conditions), the same shall be referred to the sole arbitration of the Head of the Purchase Office or of some other person appointed by him, and the dispute further processed in terms of the Arbitration & Conciliation Act, 1996. There will be no objection that the arbitrator is a Government Servant that he had to deal with matter which the Contract relates to or that in the course of his duties as Government Servant has expressed views on all or any of the matters in dispute or difference. The award of the arbitrator shall be final and binding on the parties of this Contract.

3. As per the Rule 144(xi) of General Financial Rule, 2017, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the competent authority ie., Department for Promotion of Industry and Internal Trade (DPIIT).

Hence, Vendors or Agents of a Vendor (Indian or others) from a country sharing border with India shall submit copy of valid registration made with Department for Promotion of Industry and Internal Trade (DPIIT), Government of India along with the tender mandatorily, without which the offer will be treated as invalid.

4. b. Corrections, if any, in the quotation must be attested. All amounts shall be indicated both in words as well as in figures. When there is difference between the amount quoted in words and figures, the amount quoted in words shall prevail.

5. GST/ other duties/levies, where legally leviable and intended to be claimed, should be distinctly shown separately in the tender.

6. Guarantee: The stores offered should be guaranteed for a minimum period of twelve months against defective stores design, operation or manufacture. For defects noticed during the guarantee period, replacement/repair should be arranged free of cost within a reasonable period of such notification. In cases where our specifications call for a guarantee period more than 12 months specifically, then such a period shall apply

7. If the arbitrator is a person appointed by the Head of the Purchase Office, In the event of his denying or neglecting or refusing to act, or resigning or being unable to act, for any reason, shall be lawful for the Head of the Purchase Office either to proceed with the reference himself or to appoint another person as arbitrator in place of the outgoing arbitrator subject, as aforesaid, to the Arbitration and Conciliation Act, 1996, and the rules thereunder and any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceeding under the clause. The Arbitrator shall have the power to extend with the consent of the Purchaser and the Contractor the time for making and publishing the award. The venue of arbitration shall be the place as the Purchaser in his absolute discretion may determine. Work under the Contract shall, if reasonably possible, continue during Arbitration Proceedings.

8. If the arbitrator is the Head of the Purchase Office :

(i) In the event of his being transferred or vacating his office by resignation or otherwise, it shall be lawful for his successor in office either to proceed with the reference himself for to appoint another person as arbitrator, or In the event of his being unwilling or unable to act for any reason, it shall be lawful for the Head of the Purchase Office to appoint another person as arbitrator

9. Late Tenders will not be considered

10. Model Certificate for Tenders:

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered

11. Packing and Forwarding: The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air, to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense to the Contractor.

12. Payment terms are full payment within 30 days from the date of receipt and acceptance of material ordered. Our Bankers are State Bank of India, Mahendragiri.

13. Quotation should be valid for at least 120 days from the date of opening of the tender.

14. Specifications: Stores offered should strictly conform to Purchasers specifications. Deviations, if any, shall be clearly indicated by the tenderer in his quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples, wherever necessary, along with the quotation. Test certificate, wherever necessary, should be forwarded along with supplies. Wherever options are called for in our specifications, the

tenderer should address all such options, wherever specifically mentioned by us, and the tenderer could suggest changes to specifications with appropriate response for the same. Even in such case, the tenderer should state why he cannot meet our specifications and why he is suggesting the change.

15. Successful tenderer will have to furnish in the form of a Bank Guarantee or in any other form as called for by the Purchaser towards adequate security for the materials/property provided by the purchaser for the due execution for the Contract.

16. TERMS AND CONDITIONS OF TENDER:

Price quoted should be on the basis of FOR IPRC, Mahendragiri or delivery at site. The Purchaser will not pay separately for transit insurance, and the risk and cost during transit shall be exclusively the responsibility of the Contractor and the purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

17. The Contractor shall at all times indemnify the Purchaser against all claims which may be in respect of the stores for infringement of any right protected by Patent, Registration or design or Trade Mark and shall take all risks of accidents or damage which may cause a failure of the supply from whatever causes arising and the entire responsibility for the sufficiency of all means used by him for the fulfilment of the Contract.

18. The Purchaser reserves the right to accept or reject any quotation fully or partly without assigning any reason therefore.

19. The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed not later than the date specified therein, and failure to do so, without adequate justification, may involve cancellation of the Contract at the discretion of the Purchaser.

20. Vendors may please note that in case of two-part tender, the price details shall be mentioned only in the price-bid template. If the price details either in part or full are indicated in the technical bid, the bid will be disqualified.

21. Where counter terms and conditions/printed or cyclostyled conditions of sale have been offered by the tenders, the same shall not be deemed to have been accepted by the Purchaser unless the Purchaser's specific written acceptance thereof is obtained.

9. STANDARD TERMS AND CONDITIONS (DOS PM: 20)

1. ACCEPTANCE OF STORES:

- (a) The stores shall be tendered by the Contractor for inspection at such places as may be specified by the purchaser at the Contractor's own risk, expense and cost.
- (b) It is expressly agreed that the acceptance of the stores Contracted for, is subject to final approval by the purchaser, whose decision shall be final.
- (c) If, in the opinion of the purchaser, all or any of the stores do not meet the performance or quality requirements specified in the Purchase Order, they may be either rejected or accepted at a price to be fixed by the purchaser and his decision as to rejection and the prices to be fixed shall be final and binding on the Contractor.
- (d) If the whole or any part of the stores supplied are rejected in accordance with Clause No. 8 (c) above, the purchaser shall be at liberty, with or without notice to the Contractor, to purchase in the open market at the expense of the Contractor stores meeting the necessary performance and quality Contracted for in place of those rejected, provided that either the purchase, or the agreement to purchase, from another supplier is made within six months from the date of rejection of the stores as aforesaid.

2. DELIVERY:

- (a) The time for and the date of delivery of the stores stipulated in the Purchase Order shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.
- (b) Should the Contractor fail to deliver the stores or any consignment thereof within the period prescribed for such delivery, the purchaser shall be entitled at his option either.
- (i) to recover from the Contractor as agreed liquidated damages and not by way of penalty, a sum of 0.5% per week of the price of any stores which the Contractor has failed to deliver as aforesaid or during which the delivery of such store may be in arrears subject to a minimum of 10%, or
- (ii) to purchase from elsewhere, without notice to the Contractor on the account and at the risk of the Contractor, the stores not delivered or others of a similar description (where others exactly complying with the particulars, are not, in the opinion of the purchaser, readily procurable, such opinion being final) without cancelling the Contract in respect of the consignment (s) not yet due for delivery, or
- (iii) to cancel the Contract or a portion thereof and if so desired to purchase or authorise the purchase of stores not so delivered or others of a similar description (where others exactly complying with the particulars are not, in the opinion of the purchaser, readily procurable, such opinion final) at the risk and cost of the Contractor.

In the event of action being taken under sub-clause (ii) & (iii) of clause 10 (b) above, the Contractor shall be liable for any loss which the purchaser may sustain on that account, provided that the re-purchase or if there is an agreement to re-purchase then such agreement is made within six months from the date of such failure. But the Contractor shall not be entitled to any gain on such re-purchase made against default. The manner and method of such re-purchase shall be at the discretion of the purchaser, whose decision shall be final. It shall not be necessary for the purchaser to serve a notice of such re-purchase on the defaulting Contractor. This right shall be without prejudice to the right of the purchaser to recover damages for breach of Contract by the Contractor.

3. DISPATCH:

The Contractor is responsible for obtaining a clear receipt from the Transport Authorities specifying the goods dispatched. The consignment should be dispatched with clear Railway Receipt/Lorry Receipt. If sent in any other mode, it shall be at the risk of the Contractor. Purchaser will take no responsibility for short deliveries or wrong supply of goods when the same are booked on "said to contain" basis. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.

4. ERECTION OF PLANT & MACHINERY:

Wherever erection of a plant or machinery is the responsibility of the Contractor as per the terms of the Contract and in case the Contractor fails to carry out the erection as and when called upon to do so within the period specified by the purchaser, the purchaser shall have the right to get the erection done through any source of his choice. In such an event, the Contractor shall be liable to bear any additional expenditure that the purchaser is liable to incur towards erection. The Contractor shall, however, not be entitled to any gain due to such an action by the purchaser.

5. EXTENSION OF TIME:

As soon as it is apparent that the Contract dates cannot be adhered to, an application shall be sent by the Contractor to the purchaser. If failure, on the part of the Contractor, to deliver the stores in proper time shall have arisen from any cause which the purchaser may admit as reasonable ground for an extension of the time (and his decision shall be final) he may allow such additional time as he considers it to be justified by circumstances, of the case without prejudice to the purchaser's right to recover liquidated damages under clause 10 thereof.

6. GUARANTEE & REPLACEMENT:

(a) The Contractor shall guarantee that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.

(b) For a period of twelve months after the acceptance of the stores, if any defects are discovered therein or any defects therein found to have developed under proper use, arising from faulty stores design or workmanship, the Contractor shall remedy such defects at his own cost provided he is called upon to do so within a period of 14 months from the date of acceptance thereof by the purchaser who shall state in writing in what respect the stores or any part thereof are faulty.

(c) If, in the opinion of the purchaser, it becomes necessary to replace or renew any defective stores such replacement or renewal shall be made by the Contractor free of all costs to the purchaser, provided the notice informing the Contractor of the defect is given by the purchaser in this regard within the said period of 14 months from the date of acceptance thereof.

(d) Should the Contractor fail to rectify the defects, the purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.

(e) The decision of the purchaser notwithstanding any prior approval or acceptance or inspection thereof on behalf of the purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the said period of 12 months or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.

(f) To fulfill guarantee conditions outlined in clause 4 (a) to (e) above, the Contractor shall, at the option of the purchaser, furnish a Bank Guarantee (as prescribed by the purchaser) from a Bank approved by the purchaser for an amount equivalent to 3% of the value of the Contract along with first shipment documents. On the performance and completion of the Contract in all respects, the Bank Guarantee will be returned to the Contractor without any interest.

(g) All the replacement stores shall also be guaranteed for a period of 12 months from the date of arrival of the stores at purchaser site.

(h) Even while the 12 months guarantee applies to all stores, in case where a greater period is called for by our specifications then such a specification shall apply in such cases the period of 14 months referred to in para 4 (b) & (c) shall be the guarantee period plus two months.

7. PERFORMANCE BANK GUARANTEE:

Supplier has to submit an interest free Performance Bank Guarantee for an amount equivalent to 3% (THREE PERCENT) of order value obtained from any scheduled Banks executed on Rs.200/- non-judicial stamp paper and shall be valid for a period of sixty days beyond expiry date of warranty period. The same shall be submitted along with Invoice towards final payment.

8. PACKING FORWARDING & INSURANCE:

The Contractor will be held responsible for the stores being sufficiently and properly packed for transport by rail, road, sea or air to withstand transit hazards and ensure safe arrival at the destination. The packing and marking of packages shall be done by and at the expense of the Contractor. The purchaser will not pay separately for transit insurance, all risks in transit being exclusively of the Contractor and the Purchaser shall pay only for such stores as are actually received in good condition in accordance with the Contract.

9. PRICES:

Tender offering firm prices will be preferred. Where a price variation clause is insisted upon by a tenderer, quotation with a reasonable ceiling should be submitted. Such offers should invariably be supported by the base price taken into account at the time of tendering and also the formula for any such variation/s.

10. REJECTED STORES:

Rejected stores will remain at destination at the Contractor risk and responsibility. If instructions for their disposal are not received from the Contractor within a period of 14 days from the date of receipt of the advice of rejection, the purchaser or his representative has, at his discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

11. SECURITY DEPOSIT(SD):

The Supplier shall provide Bank Guarantee for an amount equivalent to the 3% (Three PERCENT) of the total Order value towards Security Deposit for the due performance of the Purchase Order. The Security Deposit can be submitted in the form of Bank Guarantee (format enclosed) or Fixed Deposit receipt obtained from any Nationalized/ Scheduled Bank and it shall be kept valid for a period of sixty days beyond the date of completion of the Purchase Order. This Security Deposit will be returned to the Supplier only upon successful completion of all the contractual obligations or shall be adjusted/ forfeited against non-fulfilment of any of the contractual obligations. The Security Deposit shall be submitted within 30 days from the date of receipt of Purchase Order.

12. TEST CERTIFICATE:

Wherever required, test certificates should be sent along with the dispatch documents.

13. The Purchaser shall mean the President of India or his successors or assigns.

10. GENERAL TERMS AND CONDITIONS

1. a) Facility of after sales service to be confirmed with details.
 - b) Permanent Account Number (PAN) allotted by Income-Tax authorities shall be furnished with documentary proof. Otherwise, documentary proof for having applied for PAN should be provided. Also PAN should be in the name of Company/Firm, if quoted by the Company/Firm and in the name of Individual, if quoted by individual.
 - c) GST No.
 - d) PAN No.
 - e) Local office in Tirunelveli / Nagercoil is preferable.
- Note: (b) to (e) are applicable for Indian Companies only.

2. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.

3. GST where legally leviable and intended to be claimed should be distinctly shown separately in the tender.

4. Guarantee / Warranty period as applicable shall be indicated, along with the quote. Guarantee/Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the contract/purchase order.

5. If an Indian agent submits bid on behalf of the Principal/OEM, the same Indian agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product

6. In a tender, either the Indian Agent on behalf of the Principal/OEM or Principal/ OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

7. In case of imported items (stores), Ex-Works/FOB/FCA prices should be indicated. In case of indigenous stores the quotation should be on FOR-Destination / Door delivery basis.

8. In case the vendor falls in the category of Small Scale Industries(SSIs), who are registered with NSI, Public Sector Undertakings (PSUs) and Micro & Small Enterprises (MSMEs) the same shall be mentioned in their quote for evaluation.

9. Indian Agents while quoting on behalf of their principals shall attach necessary authorization letter from their Principals along with the bid.

10. IPRC reserves the right to accept or reject any quotation in full or part thereof by recording the reasons.

11. IPRC shall not be responsible for failure of vendors in submitting bids online caused due to technical reasons at vendor end such as network or power failures, computer failure, internet-browser, mistakes / errors in filling the bids on line by vendor etc.
12. ISRO PROPULSION COMPLEX (IPRC) is exempted from payment of Customs Duty under Notification No. 50/2017-Customs dated 30.06.2017 and as amended by Notification No.5/18 Customs dt:25/1/18. For imported items IPRC will provide Customs Duty Exemption Certificate for availing Concessional CD and IGST.
13. Last minute request for the extension of the due date w.r.t. any technical issue at Vendors/Suppliers side will not be considered. You may submit your quotation online well in advance instead of waiting till the last date to ensure that Internet problem and network condition does not cause problem
14. LIQUIDATED DAMAGES:Delivery is the essence of the contract. Items shall be delivered within stipulated period. If delivery is delayed beyond the stipulated delivery period mentioned in the purchase order or any extension thereof, an amount equal to 0.5% per week shall be recovered, subject to a maximum of 10% of the order value shall be deducted from your bills due. For Staggered supply, maximum of 10% of value respective staggered supply lot.
15. Offers sent through post, telegram, fax, e-mail, courier will not be considered. Partially completed / incomplete tenders shall not be considered.
16. Only authorized dealers/agents or their accredited representatives for original manufacturers have to submit the quotation with documentary evidence.
17. PAYMENT: 100% through RTGS within 30 days from the date of receipt and acceptance of items at our site is the normal payment for Indigenous supply. In the case of direct Import, normal terms of payment are by Sight Draft / Wire Transfer after receipt of items. However, other terms of payment like establishment of Letter of Credit may be considered by the Purchaser on such terms and conditions as may be agreed upon.
18. PERFORMANCE BANK GUARANTEE :
- The Supplier shall guarantee the successful and satisfactory performance/commissioning of equipment/machinery under the conditions specified in the Purchase Order. As a performance security, the SUPPLIER shall furnish a performance bank guarantee (format enclosed) from Nationalized Bank/Scheduled Bank for an amount equal to the sum of 3% of the order value ensuring the due performance of equipment/machinery in accordance with all the specifications and terms specified in the Purchase Order herein valid for the warranty period. On due performance, the performance bank guarantee shall be automatically cancelled and returned to the Supplier within 30 days after expiry of the Warranty period. The performance bank guarantee shall have claim period of six months.

19. SECURITY DEPOSIT : Security Deposit @ 3% of order value shall be submitted in the form of DD/FDR duly endorsed in favour of Accounts Officer, IPRC or by way of Bank Guarantee (in the prescribed format) within 20 days after receipt of order and valid up to the successful execution of the order.

20. The goods or material offered should be strictly as per our specifications. Change(s) in specifications, if any, should be clearly indicated by the supplier in his quotation. The supplier should also indicate make/type No. of the materials or equipment offered. Vague terms such as Best Indian, Best Indigenous and Imported make should not be used.

21. The offer should be valid for a minimum period of 120 days from the date of opening of the bids (Technical bid in case of 2-part tender).

22. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portions of the quantity offered and the tenderer shall supply the same at the rates quoted.

23. Wherever the tenderer is asked to submit sample for evaluation of tenders, the same shall be submitted along with your quote.

C. Bid Templates

C.1 Technical Bid - Supply of Liquid Methane road tankers

1. Cryogenic Tanker : Design, Detail engineering, instrumentation , fabrication, testing and mounting on suitable semi trailer and delivery of super insulated road tanker for liquid methane application as per the specifications and QAP attached

2. Cryogenic Tanker : Third party inspection charges

3. Cryogenic Tanker : Spares for trouble free operation for a period of two years

4. Cryogenic Tanker: Transportation charges

Common Specifications (Applicable for all items)

SI No	Specification	Value	Compliance	Offered Specification	Remark
1	1.SCOPE OF WORK	Design, detail engineering, obtaining PESO approval, sourcing of raw materials and bought-out flow components & instruments, fabrication, testing, coordination for inspection (including third party inspection), mounting on suitable semi trailer, temporary registration of trailer, transportation and delivery of super insulated cryogenic road tanker to IPRC, Mahendragiri.	Yes / No / Explain		
2	2.1 Design data: Service fluid	LNG / Liquid Methane (LCH4)	Yes / No / Explain		
3	2.2 Gross (geometrical) volume/ Nominal Water capacity (WC)	≈ 46 Cu.m (46000 litres)	Yes / No / Explain		

4	2.3 Maximum Allowable Working Pressure (MAWP)/ Design pressure of Inner Vessel	7 bar (g)	Yes / No / Explain		
5	2.4 Expected Operating Pressure (MEOP) of Inner Vessel	6 bar (g)	Yes / No / Explain		
6	2.5 Working temperature of inner vessel at design pressure	75 – 350 K	Yes / No / Explain		
7	2.6 Working temperature of outer vessel	290 to 350 K	Yes / No / Explain		
8	2.7 Permissible evaporation loss rate Note: To be specified by the results of calculations during Detail engineering review and demonstrated during performance test at IPRC	Less than 0.2% per day	Yes / No / Explain		
9	2.8 Liquid Expulsion flow rate from tanker during usage.	5 kg/s of LCH4	Yes / No / Explain		
10	2.9 Expected service life	20 years	Yes / No / Explain		
11	2.10 Type of thermal insulation	Super insulation [Double-walled construction with vacuum and multi-layer super insulation in the annular jacket]	Yes / No / Explain		

12	2.11 Vacuum pressure in the jacket (at atmospheric temperature)	$\leq 1 \times 10^{-2}$ mbar	Yes / No / Explain		
13	2.12 Expected periodicity of re-evacuation	Once in 5 years (to be confirmed during Detail Engineering Review)	Yes / No / Explain		
14	2.13 Design code	Inner vessel: Section VIII, Division 1 of Boiler & Pressure Vessel (BPV) code by American Society of Mechanical Engineers (ASME) or EN 13530-2:2002 Outer vessel: Sec VIII, Div.1 of ASME, CGA 341:2007 (or) EN relevant standard.	Yes / No / Explain		
15	2.14 Wind speed	Wind load shall be calculated as per IS 875 (Part 3 – 1987) with basic wind speed of 39 m/s. Probability factor (risk coefficient) K1 of 1.08, Terrain, height & structure size factor K2 for terrain category 1 of specific to width & height of structure and Topography factor K3 of 1.36 shall be considered.	Yes / No / Explain		
16	2.15 Acceleration load Note: The design consideration regarding dynamic loads shall account for the horizontal mode transportation of tanker. The speed limit for road transportation on trailer shall be defined.	1.5 g in vertically upward direction 2 g in vertically downward direction 1.5 g in transverse (horizontal) direction 2 g in longitudinal (horizontal) direction	Yes / No / Explain		

17	2.16 Allowable internal pressure of outer vessel (not more than the set pressure of outer vessel safety devise)	0.5 bar (g)	Yes / No / Explain		
18	2.17 Allowable external pressure of outer vessel (External overpressure) with full vacuum inside	0.2 MPa (a)	Yes / No / Explain		
19	2.18 Safety Devices	Vendor shall suitably size the safety relief devices as per code and specify during Detail engineering review. The size of nozzle for installing safety relief devices shall also be verified by results of calculations during Detail engineering review.	Yes / No / Explain		
20	2.18.1 Safety system to protect vacuum jacket between inner and outer vessel.	Vendor shall suitably size the safety device (Rupture disc/ lift- off plate) and install in the outer vessel to prevent vacuum jacket from over pressure.	Yes / No / Explain		
21	2.18.2 Safety Relief Valves (SRV) to protect inner vessel.	Vendor shall suitably size and install Safety Relief Valves (SRV) to protect the inner vessel from overpressure due to loss of vacuum in jacket and fire engulfed condition. All vents of SRVs shall be connected and relieved through common vent header	Yes / No / Explain		
22	2.18.3 Safety relief valves (SRV) between two successive isolation valves of Cryogenic piping.	Vendor shall install Safety Relief Valves (SRV) for thermal relief (to protect the inner pipe from overpressure due to heat in leak and loss of vacuum in jacket)	Yes / No / Explain		

23	3. MATERIAL OF CONSTRUCTION Note: Cold stretched/ pressure strengthened material should not be used		-		
24	3.1 Inner vessel	ASTM A 240 304L or 316L or Dual certified 304/304L or 316/316L or equivalent	Yes / No / Explain		
25	3.2 Outer vessel	ASTM A 516 Gr. 70 / IS 2062	Yes / No / Explain		
26	3.3 Pipes & tubes	ASTM A 312 TP 304L/ 316L	Yes / No / Explain		
27	3.4 Pipe fittings	ASTM A 403 WP 304L/ 316L	Yes / No / Explain		
28	3.5 Flanges	ASTM A 182 F 304L/ 316L/ 321	Yes / No / Explain		
29	3.6 Bolts	ASTM A 320 B8	Yes / No / Explain		
30	3.7 Nuts	ASTM A 194 8	Yes / No / Explain		
31	3.8 Valves	304L /316L/ 321	Yes / No / Explain		
32	3.9 Gland packing	Material compatible for LCH4/ LNG	Yes / No / Explain		
33	3.10 Plug insert/ seat/ seal	Material compatible for LCH4/ LNG	Yes / No / Explain		
34	4. 1 Configuration details of tanker	The inner vessel of the tanker shall be designed for MAWP and design check shall be carried out for 500 mbar vacuum in the inner vessel and 0.2 bar(g) in the vacuum jacket.	Yes / No / Explain		

35	4.1.1 Configuration details of tanker	The inner & outer tank shall be of cylindrical configuration	Yes / No / Explain		
	4.1.1 Configuration details of tanker				
36	4.1.2 Configuration details of tanker	The fill/ drain port of the tanker shall be provided with suitable anti-vortex baffles.	Yes / No / Explain		
37	4.1.3 Configuration details of tanker	The pressurization / vent ports of the tanker shall be provided with diffuser.	Yes / No / Explain		
38	4.1.4 Configuration details of tanker	All the nozzles of DN 50 and smaller sizes shall be suitably stiffened with gusset plates.	Yes / No / Explain		
39	4.1.6 Configuration details of tanker	Suitable earthing bosses shall be provided	Yes / No / Explain		
40	4.1.7 Configuration details of tanker	The tanker shall be designed for withdrawal LCH4 by pressurization in two mode as given below: (i) External pressurization (ii) Self pressurization using ambient evaporator coil (the vendor shall suitably size and install evaporator coil)	Yes / No / Explain		
41	4.1.8 Configuration details of tanker	(i) Bottom withdrawal line shall not be less than DN 80 (ii) Pressurization line size shall not be less than DN 40 (the adequacy of pipe line size for pressurizing the tanker for the specified expulsion flow rate shall be presented during DER with the results of calculation)	Yes / No / Explain		

42	4.1.9 Configuration details of tanker	Manual valves, Emergency shut off valves, Vent valves, Pressure gauges, vacuum gauge heads including vacuum gauge controller (vacuum meter), Level gauge shall be provided as per the flow diagram attached. Other valves, piping & Fittings if any, required shall be provided as per standards for LNG/ LCH4 transport tankers. valve 4. Pressurization inlet valve 5. Lower filling valve 6. Vapour equalisation valve, etc.,	Yes / No / Explain		
43	4.1.10 Configuration details of tanker	The outer vessel of the tanker shall be fitted with a vacuum safety disc, a vacuum pump-out port cum seal-off valve and a vacuum gauge head. The vacuum safety disc shall be set to relieve at an internal pressure of 1.3 bar (a) to 1.5 bar (a). However, during normal period, the vacuum safety disc shall withstand an external pressure of 1.01 bar (a) with full vacuum inside.	Yes / No / Explain		
44	4.1.11 Configuration details of tanker	Thermal fuse arrangement shall be provided in air line for preventing spread of fire from external sources.	Yes / No / Explain		

45	4.1.12 Configuration details of tanker	The Pneumatically actuated cryogenic globe valves shall be operated in two modes as given below: a)Command gas (GN2 @ 6 to 8 bar) from a command bottle installed in the tanker. b)Command gas (GN2 @ 6 to 8 bar) from external source Note: If the operating actuator of the pneumatic valve is less than 6 bar, then suitable air pressure regulator (AFR) shall be installed in the pneumatic valve.	Yes / No / Explain		
46	4.2 Configuration of trailer		-		
47	4.2.1 Configuration of trailer	The semi-trailer shall be suitably designed to accommodate the LNG/ LCH4 tank on it	Yes / No / Explain		
48	4.2.2 Configuration of trailer	The semi trailer shall have fifth wheel coupling of reputed make to suit with standard prime movers available with IPRC. The details of fifth wheel coupling shall be finalized during DER. The kingpin shall be of 2" in size	Yes / No / Explain		
49	4.2.3 Configuration of trailer	During the operation of tanker the prime mover will be detached by engaging leg support. Accordingly the leg support of the tanker shall be designed considering load and moments	Yes / No / Explain		
50	4.2.4 Configuration of trailer	The trailer shall be connected to a primer (IPRC Scope) of GVW 55T with double axel configuration.	Yes / No / Explain		
51	4.2.5 Additional requirements	a.Cattle arrestor b.Electronic braking system c.Pneumatic suspension	Yes / No / Explain		

52	4.3 Flow Components and Instruments	Flow components and instruments are to be located in a cabin & panel respectively at the rear end of the tanker. The panel shall have suitable doors and locking mechanism. The valves and instruments shall be accessible for operation, maintenance and calibration.	Yes / No / Explain		
53	4.3.1 Flow components:	All the flow components (Valves, SRVs, etc.) shall be procured from reputed manufacturers. All the Cryogenic service valves shall be of extended stem globe type. Instrument valves shall be needle type valves. All the flow components and instruments shall be provided with permanent, easy-to-read tag number plates.	Yes / No / Explain		
54	4.3.2 Instruments	Differential pressure (DP) type level gauge with manifold valve for isolation & equalizing shall be installed. Vacuum gauge head shall be mounted in the vacuum jacket and a Vacuum measuring instrument (Gauge controller) shall also be supplied.	Yes / No / Explain		

55	4.3.3 Make of flow components and instruments:	Make of flow components is subject to approval by Purchaser during DER. All the flow components (Valves, SRVs, etc.) shall be procured from reputed manufacturers. Suggested list of vendors for flow components is given below. If the bidder proposes alternate sub vendors other than listed, such details may be submitted in the bid. The decision of the IPRC in regard to acceptance/ rejection of the sub vendor proposed by the bidder shall be the final.	Yes / No / Explain		
56	4.3.3.1 Extended stem Cryogenic Pneumatic actuated & Manual globe valves	a.M/s. Herose GmbH, Gurgaon b.M/s. Ireland SA, France c.M/s. MIL Controls Ltd, Aluva, Kerala d.M/s. Samson controls Pvt. Ltd, Pune	Yes / No / Explain		
57	4.3.3.2 Instrument isolation manifold needle valves, Instrument isolation Needle valves	a.M/s. Swagelok b.M/s. Parker c.M/s. Weka AG Switzerland d.M/s. Hoke	Yes / No / Explain		
58	4.3.3.3 Safety Relief valves	a.M/s. LESSER India, Mumbai b.M/s. Herose GmbH, Gurgaon c.M/s. Tyco Sanmor, Chennai	Yes / No / Explain		
59	4.3.3.4 Pressure gauges.	Make: Samson/Wika/Burton	Yes / No / Explain		
60	4.3.3.5 Pressure regulators	Make: Cash valve, USA / Swagelok, England/ RHPS, France / Tescom, UK	Yes / No / Explain		
61	4.4 Statutory Clearances		-		

62	4.4.1 Statutory Clearances	The supplier shall obtain design / fabrication approval from PESO for the LNG/ LCH4 transportation tanker before commencing fabrication.	Yes / No / Explain		
63	4.4.2 Statutory Clearances	Approval from State Transport Authority shall be obtained for semi-trailers.	Yes / No / Explain		
64	4.4.3 Statutory Clearances	Sales invoice, other relevant documents and e-way bill shall be drawn in favor of "Director, ISRO Propulsion Complex [IPRC], Tirunelveli district 627 133, Tamil Nadu.	Yes / No / Explain		
65	4.4.4 Statutory Clearances	The supplier shall obtain temporary registration in the name of Director, IPRC for the trailer before delivering the tanker.	Yes / No / Explain		
66	5. FABRICATIO N:		-		
67	5.1 FABRICATIO N:	Forming: All the forming works of the tank shall be carried out by suitable forming process. After forming, the parts shall be suitably stress-relieved.	Yes / No / Explain		

68	5.2 FABRICATIO N:	Welding: The welding on stainless steel parts of the tank shall be carried out by Gas Tungsten Arc Welding (GTAW) with Gaseous Argon of 99.995 % purity as the purge medium. All the welding on carbon steel parts of the outer vessel of the tanks shall be carried out by Shielded Metal Arc Welding (SMAW). Prior to commencement of welding on the tanks, welding procedure qualification and welder's performance qualification tests shall be carried out in accordance with Section IX of ASME BPV code.	Yes / No / Explain		
69	5.3 FABRICATIO N	Surface Treatment: The following procedure shall be employed for surface treatment of the tanks.	Yes / No / Explain		
70	5.4 FABRICATIO N	Cleaning of stainless steel surfaces: After fabrication, the interior and exterior surfaces of the inner vessel and the interior surfaces of the nozzles, interconnecting pipelines and flow components shall be cleaned, employing the following procedure:	Yes / No / Explain		
71	5.4.1 FABRICATIO N	Mechanical cleaning: All the metallic surfaces with scales and newly welded surfaces shall be cleaned by scrubbing with stainless steel metallic wire brush. The loose scales and particles obtained from mechanical cleaning shall be removed by blowing with dry air, sucking with vacuum cleaner or washing with water.	Yes / No / Explain		

72	5.4.2 FABRICATIO N	Degreasing: The surfaces shall be degreased to Oxygen service standard as per CGA G-4.1 (Compressed Gases Association Inc, USA) or MIL-C-52211 or ASTM G-93 or equivalent.	Yes / No / Explain		
73	5.4.3 FABRICATIO N	Pickling: In order to remove rusts and scales, the surfaces are pickled with a solution containing Hydro-fluoric acid (HF) and Nitric acid (HNO ₃). The composition of pickling solution and duration are to be adjusted after trial test on a sample piece to remove uniformly less than 25 µm thick materials. Mostly, the composition is as follows: HF: 5 % (by mass) HNO ₃ : 15 to 20 % Water : Remainder This is followed by rinsing with water.	Yes / No / Explain		
74	5.4.4 FABRICATIO N	Passivation : "In order to form a protective layer, the surfaces are passivated with a solution of the following composition: HNO ₃ : 25 % (by volume) Water : Remainder Duration : 2 h (minimum) This is followed by rinsing with De-Mineralized (DM) water." "	Yes / No / Explain		

75	5.4.5 FABRICATIO N	Drying :The surfaces of the tanker shall be dried by purging with dry Air or Gaseous Nitrogen until the moisture content in the medium is brought down to 20 ppm,v. Before transportation, the inner vessel be kept pressurized at 0.15 MPa(a) with Gaseous Nitrogen.	Yes / No / Explain		
76	5.4.6 FABRICATIO N	Buffing :The exterior surface of inner vessel shall be finished by buffing.	Yes / No / Explain		
77	5.5 FABRICATIO N	Cleaning of carbon steel surfaces: The interior and exterior surfaces of the outer vessel shall be sand-blasted and mechanically cleaned.	Yes / No / Explain		
78	5.6 FABRICATIO N	Painting: The exterior surfaces of the outer tank shall be painted with 2 coats of primer (Zinc or Red oxide) and 2 coats of white color Poly Urethane (PU) or Epoxy paint. A suitable color band of 200 mm width shall be painted circumferentially at the middle of the tank as per standard practice. Exact color coding shall be furnished along with the quotation.safety disc shall withstand an external pressure of 0.1 MPa(a) with full vacuum inside. Vacuum measurement instrument shall be provided.	Yes / No / Explain		
79	6.TESTS	The following tests are to be performed as per the standards mentioned therein.	Yes / No / Explain		

80	6.1. TESTS	Material certificates: The material test certificates shall be provided for all the principal and pressure-bearing parts of the tanks (including plates, nozzles, interconnecting pipes, flow components, etc) to ascertain the physical and chemical properties. This shall include chemical composition and impact strength.	Yes / No / Explain		
81	6.2. TESTS	Ultrasonic test: All the plates used for the fabrication of inner vessel & outer vessel and the pipes used for the nozzles and interconnection shall be subject to 100% ultrasonic test.	Yes / No / Explain		
82	6.3. TESTS	Radiographic test: All the (100 % of the) stainless steel butt weld joints on the inner vessel as well the nozzles, interconnecting pipelines, etc. and 10 % of the butt weld joints on the outer vessel shall be subject to radiographic test to 2% sensitivity.	Yes / No / Explain		
83	6.4. TESTS	Inner vessel pressure test: The inner vessel shall be pneumatic pressure tested with Gaseous Nitrogen or dry Air. The pneumatic test pressure shall be as per design code. Alternatively, hydraulic pressure test at a pressure as specified by the design code may be conducted. In such case, the water with pH at 6.5 to 7.5 and chloride content < 30 ppm shall be used. After draining water, the vessel shall be dried down to a residual moisture content less than 20 ppm(v).	Yes / No / Explain		

84	6.5. TESTS	Outer vessel pressure test: The outer vessel (in assembled form) shall be pneumatic pressure tested with Gaseous Nitrogen or dry Air. The pneumatic test pressure shall be as per design code.	Yes / No / Explain		
85	6.6. TESTS	Leak test: The leak tightness across the inner vessel as well as the outer vessel shall be tested with Gaseous Helium Mass Spectrometer Leak Detector (MSLD) as per Article 10, Section V of ASME BPV code by hood technique. While leak-testing the inner vessel, the internal volume shall be charged with a mixture of 75 % Gaseous Nitrogen + 25 % Gaseous Helium and the annular volume between the inner vessel and the outer vessel be evacuated and connected to MSLD. While leak-testing the outer vessel, the exterior surface of the outer vessel shall be shrouded by synthetic bag with a mixture of 75 % Gaseous Nitrogen + 25 % Gaseous Helium and the annular volume between the inner vessel and the outer vessel be evacuated and connected to MSLD. The global leakage rate thus measured and extrapolated for 100% Helium shall be finer than $1E-6$ mbar/s.	Yes / No / Explain		

86	6.7. TESTS	<p>Vacuum retention test: The annular space between inner and outer vessel (vacuum jacket) to be evacuated & sealed and the vacuum pressure in the jacket (at atmospheric temperature) shall be $\leq 1 \times 10^{-2}$ mbar. Subsequently the vacuum level shall be periodically monitored and recorded for a minimum period of 120 hrs and there should not be deterioration in the vacuum level. The vacuum pressure should stabilize at 1×10^{-2} mbar (at atmospheric temperature).</p>	Yes / No / Explain		
87	6.8. TESTS	<p>Performance test: The performance test with Liquid Nitrogen shall be conducted by supplier at their premises. The tanker shall be properly chilled and then filled with 50% of Liquid Nitrogen and the evaporation loss rate shall be measured using a gas flow meter. The evaporation loss rate thus measured and extrapolated to the working fluid (Liquid Methane) shall be less than the value specified. The performance test procedure shall be finalized during DER.</p>	Yes / No / Explain		
88	6.8.1 TESTS	<p>On the day of performance test the vacuum level in the vacuum jacket shall be measured and recorded before start of chill down.</p>	Yes / No / Explain		

89	6.8.2 TESTS	After completion of performance test and draining LN2 & warm up to ambient the vacuum level in the jacket shall be measured and ensured that the vacuum level is not deteriorated.	Yes / No / Explain		
90	7. INSPECTION		-		
91	7.1.1 INSPECTION	SCOPE OF TPI: The in-process (stage) and pre-delivery inspection of the tanks shall be carried out by one of the following Third Party Inspection (TPI) agencies: Lloyds Register Industrial Services Pvt Ltd (LRIS) Det-Norske Veritas (DNV) Technischer Uberwachungs Verein (TUV-NORD) Technischer Uberwachungs Verein (TUV-SUD) It shall be the responsibility of the Supplier to arrange for and coordinate with the TPI agency. The scope of inspection shall be as per the QAP attached.	Yes / No / Explain		
92	7.1.2 Scope of Department:		-		
93	7.1.2.1 Scope of Department:	Approval of P&I diagram and general arrangement drawing with overall dimension.	Yes / No / Explain		
94	7.1.2.2 Scope of Department:	Review of test certificates and visual examination of bought out components.	Yes / No / Explain		
95	7.1.2.3 Scope of Department:	Inspection at critical stages of fabrication as mutually agreed upon to ensure the compliance of fabrication as per approved QAP.	Yes / No / Explain		

96	7.1.2.4 Scope of Department:	Witnessing vacuum stabilization / hold tests, pressure tests (ambient & cold condition), leak tests, moisture content in the inner vessel, evaporate rate measurement test etc.	Yes / No / Explain		
97	8.DOCUMENTATION	<p>DOCUMENTATION</p> <p>The following documents (in English) in 2 hard prints/ copies as well as in electronic/ soft copy shall be furnished at different stages specified thereupon. Wherever Purchaser's approval is required on the documents submitted by the Supplier, the Purchaser will dispatch/ transmit their approval or comments within 10 calendar days from the date of receipt of such documents at the Purchaser's end. Wherever Purchaser's representatives are required (for Detail Engineering Review, Pre-Delivery Inspection, etc.) at the Supplier's premise, the Purchaser will depute their representative within 15 calendar days from the date of readiness of documents for review or hardware for inspection and receipt of intimation from Supplier.</p>	Yes / No / Explain		

98	8.1 Detail engineering review	<p>Detail engineering review: Within 2 months from placement/ award of the Purchase order, the Purchaser shall conduct the Detail Engineering Review (DER). The following documents duly reviewed and approved by the TPI agency for compliance with the requirements of the relevant design codes as specified in the Purchase order and statutory regulations, shall be submitted to the Purchaser during the DER. These documents are subject to review by the Purchaser and only upon approval of the same by the Purchaser, the Supplier shall proceed with fabrication. However, the Purchaser's approval shall not absolve the Supplier of their responsibility to comply with the specifications of the Purchase order.</p>	Yes / No / Explain		
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99	8.1.1 Detail engineering review	An overall dimensioned General Arrangement (GA) drawing of the tanker, showing the assembled view along with all accessories shall be provided. The details of the interconnecting pipelines and their location with respect to the tanker shall also be shown in the GA drawing. The interface details for both fluid connections and instrument connections, including the relative positioning among the interfaces, their location with respect to the tanker and the end connection/ preparation details for each interface shall also be shown in the GA drawing.	Yes / No / Explain		
100	8.1.2 Detail engineering review	The detailed design calculations for the tanker (thermal & structural) and trailer shall be provided.	Yes / No / Explain		
101	8.1.3 Detail engineering review	The Quality Assurance Plan (QAP) duly approved by TPI shall be provided.	Yes / No / Explain		
102	8.1.4 Detail engineering review	A schedule chart detailing the various activities involved in fabrication and the time required for completing the same, so as to comply with the specified overall delivery period, shall be furnished.	Yes / No / Explain		
103	8.1.5 Detail engineering review	Gross volume calculation for tanker shall be provided	Yes / No / Explain		
104	8.1.6 Detail engineering review	Trailer design calculations and ARAI,STA approval for the trailers shall be provided	Yes / No / Explain		

105	8.1.7 Detail engineering review	The make, model number and specifications of the flow components and instruments along with the relevant catalogues shall be provided.	Yes / No / Explain		
106	8.1.8 Detail engineering review	Detailed procedure shall be provided for conducting performance test including chill-down procedure and the methodology of computing evaporation loss rate of actual working fluid from the measured evaporation loss rate of LN2.	Yes / No / Explain		
107	8.1.9 Detail engineering review	Detailed procedure shall be provided for commissioning at Purchaser's site.	Yes / No / Explain		
108	8.2 On completion of DER	On completion of DER: The following documents shall be supplied	Yes / No / Explain		
109	8.2.1 On completion of DER	The bidder shall obtain PESO approval of drawings / documents within one month from the date of completion of DER	Yes / No / Explain		
110	8.2.2 On completion of DER	The bidder shall obtain approval from State transport Authority for semi-trailer	Yes / No / Explain		
111	8.2.3 On completion of DER	During the course of fabrication: The details of activities completed by the end of every month shall be sent to the Purchaser.	Yes / No / Explain		

112	8.2.4 On completion of DER	Pre-delivery review: On completion of fabrication and testing, but prior to delivery of the consignment, the Purchaser shall conduct a pre-delivery review. During the review, the following documents, duly approved by the TPI agency, shall be submitted to the Purchaser. The Purchaser shall review the same to ensure compliance with the specification of the Purchase order. On being satisfied, the Purchaser shall issue a "Purchaser's delivery clearance", only upon receipt of which the Supplier shall proceed with delivery of the consignment.	Yes / No / Explain		
113	8.2.5 On completion of DER	The certificates of all tests and calibration (including those for the bought-out flow components and instruments) shall be provided. Each page of the certificates shall be duly counter-signed and stamped by the TPI agency.	Yes / No / Explain		
114	8.2.6 On completion of DER	Calibration chart for the level gauge with respect to water column, liquid Nitrogen and liquid Methane.	Yes / No / Explain		
115	8.2.7 On completion of DER	As-built GA and fabrication drawings	Yes / No / Explain		
116	8.2.8 On completion of DER	Design reports / documents mentioned under DER	Yes / No / Explain		
117	8.2.9 On completion of DER	Test certificates of tanker	Yes / No / Explain		
118	8.2.10 On completion of DER	Test certificates of flow components used	Yes / No / Explain		

119	8.2.11 On completion of DER	PESO approval document. PESO approved documents	Yes / No / Explain		
120	8.2.12 On completion of DER	PDI certificate (IRN) by the TPI agency	Yes / No / Explain		
121	8.3 Along with supply	The following documents shall be supplied	Yes / No / Explain		
122	8.3.1 Along with supply	Warranty certificate	Yes / No / Explain		
123	8.3.2 Along with supply	Instruction manual for commissioning, operation, trouble-shooting and maintenance	Yes / No / Explain		
124	8.3.3 Along with supply	Purchaser's Delivery Clearance	Yes / No / Explain		
125	8.3.4 Along with supply	Temporary registration of Trailer	Yes / No / Explain		
126	8.3.5 Along with supply	State Transport approval document	Yes / No / Explain		

127	9.Commissioning:	<p>After receipt of the tanker at the Purchaser's site at IPRC, Mahendragiri, the tanker shall be commissioned by the Purchaser based on the documents to be provided by the Supplier for the same. The commissioning shall comprise the following:</p> <p>a) Pressure test up to the MEOP with Liquid nitrogen and functional check of the flow components and instruments.</p> <p>b) Filling the tanker with working fluid (LNG/LCH4) and performance check</p> <p>Though commissioning is NOT included under the Supplier's scope of responsibility, in case any discrepancy or ill-performance is observed during commissioning, it shall be the Supplier's responsibility to rectify/ replace the defective/ ill-performing subsystems or the entire tanker. The Supplier may, at their discretion, depute their representative(s) to witness the commissioning, but at their own expense. In case the defective/ ill-performing subsystems or the entire tanker require rectification/ rework to be carried out at the Supplier's works, it shall be Supplier's responsibility to transport the same to the Supplier's works and item back to the Purchaser's site.</p>	Yes / No / Explain		
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128	1.Annexure-B	Delivery Term: The tanker shall be delivered in totally integrated and ready-to-use form on FOR Mahendragiri basis. The supplier shall make their own arrangement to deliver the road tanker at IPRC, Mahendragiri. The supplier shall arrange for temporary registration and transit insurance.	Yes / No / Explain		
129	2.Annexure-B	Delivery Period: The tanker shall be delivered at IPRC within 12 months from the date of PO. The delivery period includes the period for DER, obtaining PESO and State Transport Authority approvals.	Yes / No / Explain		
130	3.Annexure-B	Warranty: The tanker shall be warranted for satisfactory performance over a period of 18 months from the date of delivery of tanker at IPRC, Mahendragiri.	Yes / No / Explain		

131	4. Annexure-B	<p>Payments terms: The payment shall be made within 30 days after receipt and acceptance of LNG/LCH4 tanker at IPRC, Mahendragiri. The Department does not normally entertain advance payment. However, in case the Bidder proposes for advance payment, the Department may consider it, subject to the following conditions.</p> <p>a. Bank Guarantee for equivalent sum from a nationalized/ scheduled bank approved by RBI valid till final acceptance of tanker with additional claim period of 2 months is to be submitted.</p> <p>b. In case of different advance payment terms proposed by the Bidders, Department will load simple interest on the advance payment over the execution period at the rate of marginal cost of funds-based lending rate [MCLR] as notified by State Bank of India [SBI] applicable on the due date for submission of bid for comparison of the price bids. Moreover, in case of delay in execution of the Purchase Order by the supplier beyond the stipulated period due to reasons not attributable to the Department, the Department will recover interest on the advance payment after at the at the rate of MCLR as notified by SBI on the scheduled date of completion.</p>	Yes / No / Explain		
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132	5. Annexure-B	Documentation along with the quotation: Along with the quotation, the following documents shall be furnished in English. Any lack of the following details in the quotation will be treated as sufficient cause for rejection of the bidder.	Yes / No / Explain		
133	5.1 Annexure-B	P&I diagram clearly indicating nozzles, valves, vents, fluid temperature measurement, level measurement and safety systems to be enclosed with the tender document.	Yes / No / Explain		
134	5.2 Annexure-B	A complete technical description of the tanker offered shall be furnished. Technical deviations, if any, from the tender specification shall be explicitly indicated in the quotation. The following details shall be specifically highlighted: Overall dimensions (outside diameter & length) of the inner vessel of the tanker. Overall dimensions (outside/inside diameter & length) of the outer vessel of the tanker. Overall size of the trailer.	Yes / No / Explain		
135	5.3 Annexure-B	A detailed profile of the bidder, in terms of the design and fabrication shall be provided in the quotation.	Yes / No / Explain		
136	5.4 Annexure-B	A list of clients (including address, telephone and fax numbers and contact person) to whom tanks of similar specification have been supplied shall be furnished.	Yes / No / Explain		

137	5.5 Annexure-B	Suggested list of vendors for flow components is given in section 4.3 of Annexure-A. If the bidder proposes alternate sub vendors other than listed, such details may be submitted in the bid. The decision of the IPRC in regard to acceptance/ rejection of the sub vendor proposed by the bidder shall be the final.	Yes / No / Explain		
138	5.6 Annexure-B	The list of spares for hassle free operation of the road tanker for a period of two years shall be submitted: a.Spares for Pneumatic actuated Cryogenic Globe valves b.Spares for Manual Cryogenic Globe valves c.Spares for Safety relief valves d.Spare for vacuum safety device e.Spares for vacuum valve/ Pump-out tool f.Spare gaskets g.Spare O-rings	Yes / No / Explain		

139	5.7 Annexure-B	<p>Pre – qualification criteria The Bidder’s capability shall be evaluated based on the following Pre-Qualification (PQ) criteria. The Bidders shall suitably fill-up the information solicited in “Item specification” and submit as part of the Techno-Commercial Bid (TCB). Those Bidders who comply with the PQ criteria only will be screened-in for opening and evaluation of Price Bid. The information to be submitted in the TCB shall be complete in all respects substantiated by attached documents and there shall not be any further opportunity for the Bidders to submit any information or document unless the Purchaser solicits so at their own discretion. Any lack of information or incomplete/ambiguous information or false information or information non-compliant with the PQ criteria shall be treated as sufficient cause to reject such Bids. The bidder shall be a regular Supplier of vacuum jacketed (VJ) cryogenic road tanker. The bidder should have manufactured & supplied at least 3 VJ cryogenic tankers of at least 25 m3 (25000 liters) volume and 0.4 MPa(g) (4 bar) pressure. during 01-07-2017 to 31-10-2024. The claim shall be substantiated by purchase order(s) and inspection release note(s)/ acceptance certificate(s) by third-party inspection</p>	Yes / No / Explain		
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Supporting Documents required from Vendor

1. P&ID of tankers

2. Detailed schedule chart

3. Quality Assurance Plan

4. Catalogues all flow components like valves, pressure gauges, regulators, etc.

5. Document related to LCH4 tankers

6. Price bid (Price Bid Related)

7. Company profile & ISO certification

8. Deviation statement

9. Document related to Pre Qualification Criteria

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	The tankers shall be delivered at IPRC, Mahendragiri	Yes / No / Explain	
2	Fabrication of tankers shall be started after Detailed Engineering Review and PESO approval	Yes / No / Explain	
3	Taxes and other costs, if any: (Specify) IPRC/ISRO is eligible to avail Concessional rate of GST@5% shall be paid extra against Ministry of Finance, Dept. of Revenue Notification No. 1/2017 Integrated Tax (Rate), Schedule-I; Sl. No. 243B dated 28/06/2017 as amended by Notification No. 07/2018 & 25/2018 Integrated Tax (Rate) dated 31.12.2018 and Government of Tamil Nadu, Commercial Taxes & Registration (B1) Department G.O(Ms) No.18 Dtd. 25/01/2018 & Schedule-I; Sl. No. 243 B as per the amendment dated 31.12.2018 (Amendment G.O(Ms)No.170 dated 31/12/2018). Please note and quote accordingly.	Yes / No / Explain	
4	Validity of Offer (specify) [Minimum 120 days required]	Yes / No / Explain	
5	Delivery Period (specify) Please see the tender document/instructions	Yes / No / Explain	
6	Delivery Terms: Normal delivery terms - FOR Destination (i.e., IPRC, Mahendragiri)	Yes / No / Explain	
7	PAYMENT TERMS - Our normal payment terms is 100% within 30 days of receipt and acceptance of the items (No advance payment allowed). Specify your payment terms.	Yes / No / Explain	

8	<p>Security Deposit: Supplier shall submit an interest free Security Deposit for an amount equivalent to 3% of the order value, obtained through Bank Guarantee or fixed deposit receipt from any of the Nationalized/Scheduled Banks executed on non-judicial stamp paper of Rs.200/- value, and shall be kept valid for a period of sixty days beyond the date for completion of the Purchase Order. The Security Deposit can be submitted within 15 days from date of PO.</p> <p>1.In case of BG, confirmation for issued BG may be sent by issuing Bank/Branch to : IFSC Code: SBIN0000880; SBI, Nagercoil Branch.</p> <p>2.In case of FDR, the lien should be marked to Sr. Accounts Officer, IPRC, Mahendragiri.</p> <p>3.In case of DD, it should be drawn in the favour of Sr. Accounts Officer, IPRC, Mahendragiri, payable at Mahendragiri.</p>	Yes / No / Explain	
9	Confirm: Conditions for BIDDER FROM A COUNTRY WHICH SHARES LAND BORDER WITH INDIA	Yes / No / Explain	
10	Name, Address, Contact No, E-mail Id etc. (specify):	Yes / No / Explain	
11	Currency quoted (specify)	Yes / No / Explain	
12	Warranty / Guarantee Period: (specify)	Yes / No / Explain	
13	Only Class-I and Class-II Local suppliers as per Make in India Policy are eligible to participate in the bid. Percentage of Local Content for the offered item / items shall be specified	Yes / No / Explain	
14	MSE preference is applicable only against the claim of the manufacturer and production of documentary evidence by the manufacturer	Yes / No / Explain	
15	Liquidated Damages - Delivery is the essence of the order. If delivery is delayed beyond the stipulated delivery period, LD at 0.5% per week shall be recovered subject to a maximum of 10% of order value of undelivered items	Yes / No / Explain	

16	Bank Details (State Bank of India, Mahendragiri, Tirunelveli (Dist) - 627 133) Details of your bank shall be furnished.	Yes / No / Explain	
17	Percentage of Local Content shall be declared in the prescribed format attached. For the items sold by the bidders as a resellers, Country of Origin Certificate from your OEM shall be submitted mandatorily.	Yes / No / Explain	
18	PERFORMANCE BANK GUARANTEE: Supplier shall furnish Performance Bank Guarantee for an amount equivalent 3% of order value on Non-Judicial stamp paper of appropriate value, obtained from any of the scheduled / nationalized Banks, valid for a period of 60 days beyond completion of warranty period.	Yes / No / Explain	
19	Any other terms	Yes / No / Explain	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	Cryogenic Tanker : Design, Detail engineering, instrumentation, fabrication, testing and mounting on suitable semi trailer and delivery of super insulated road tanker for liquid methane application as per the specifications and QAP attached	2.00 Nos.		-		
2	Cryogenic Tanker : Third party inspection charges	1.00 Lumsm		-		

3	Cryogenic Tanker : Spares for trouble free operation for a period of two years	1.00 Lumsm		-		
4	Cryogenic Tanker: Transportation charges	2.00 Times		-		