

बिड दस्तावेज़ / Bid Document

बिड विवरण/Bid Details	
बिड बंद होने की तारीख/समय /Bid End Date/Time	19-03-2026 19:00:00
बिड खुलने की तारीख/समय /Bid Opening Date/Time	19-03-2026 19:30:00
बिड पेशकश वैधता (बंद होने की तारीख से)/Bid Offer Validity (From End Date)	180 (Days)
मंत्रालय/राज्य का नाम/Ministry/State Name	Ministry Of Heavy Industries And Public Enterprises
विभाग का नाम/Department Name	Department Of Heavy Industry
संगठन का नाम/Organisation Name	National Automotive Board
कार्यालय का नाम/Office Name	National Automotive Board Manesar
कुल मात्रा/Total Quantity	1
वस्तु श्रेणी /Item Category	Test Bed Upgrade for H2-ICE and EURO VII at ICAT
GeMARPTS में खोजी गई स्ट्रिंग्स / Searched Strings used in GeMARPTS	Test Bed Upgrade for H2-ICE and Euro VII
GeMARPTS में खोजा गया परिणाम / Searched Result generated in GeMARPTS	Point of Care Rapid Test Kits for Humans - Dengue, Malaria, Typhoid & Others, Dynamic Visual Acuity (DVA) For Vertigo Clinics, Bunk Beds as per IS 17636, Rapid Test Kit for HIV / Syphilis / Hepatitis B Virus (HBV) / Hepatitis C Virus (HCV)
अधिसूचना के लिए चयनित प्रासंगिक श्रेणियाँ / Relevant Categories selected for notification	<ul style="list-style-type: none">Power Quality Analyzer
उन्हीं/समान सेवा के लिए अपेक्षित विगत अनुभव के वर्ष/Years of Past Experience Required for same/similar service	3 Year (s)
एमएसएमई के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है/MSE Relaxation for Years of Experience and Turnover	No
स्टार्टअप के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है /Startup Relaxation for Years of Experience and Turnover	No

बिड विवरण/Bid Details	
विक्रेता से मांगे गए दस्तावेज़/Document required from seller	Experience Criteria,Past Performance,Bidder Turnover,Certificate (Requested in ATC),OEM Authorization Certificate,Additional Doc 1 (Requested in ATC),Additional Doc 2 (Requested in ATC),Additional Doc 3 (Requested in ATC),Additional Doc 4 (Requested in ATC),Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
क्या आप निविदाकारों द्वारा अपलोड किए गए दस्तावेज़ों को निविदा में भाग लेने वाले सभी निविदाकारों को दिखाना चाहते हैं? संदर्भ मेनू है/Do you want to show documents uploaded by bidders to all bidders participated in bid?	Yes (Documents submitted as part of a clarification or representation during the tender/bid process will also be displayed to other participated bidders after log in)
बिड लगाने की समय सीमा स्वतः नहीं बढ़ाने के लिए आवश्यक बिड की संख्या। / Minimum number of bids required to disable automatic bid extension	3
दिनों की संख्या, जिनके लिए बिड लगाने की समय-सीमा बढ़ाई जाएगी। / Number of days for which Bid would be auto-extended	7
ऑटो एक्सटेंशन अधिकतम कितनी बार किया जाना है। / Number of Auto Extension count	3
विगत प्रदर्शन /Past Performance	20 %
बिड से रिवर्स नीलामी सक्रिय किया/Bid to RA enabled	Yes
रिवर्स नीलामी योग्यता नियम/RA Qualification Rule	H1-Highest Priced Bid Elimination
बिड का प्रकार/Type of Bid	Two Packet Bid
तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय /Time allowed for Technical Clarifications during technical evaluation	5 Days
निरीक्षण आवश्यक (सूचीबद्ध निरीक्षण प्राधिकरण /जेम के साथ पूर्व पंजीकृत एजेंसियों द्वारा)/Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
मूल्यांकन पद्धति/Evaluation Method	Total value wise evaluation
वित्तीय दस्तावेज की आवश्यकता है / Financial Document Required	Yes
मध्यस्थता खंड/Arbitration Clause	No
सुलह खंड/Mediation Clause	No

ईएमडी विवरण/EMD Detail

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एडवाइजरी बैंक/Advisory Bank	HDFC Bank
ईएमडी राशि/EMD Amount	3800000

ईपीबीजी विवरण /ePBG Detail

एडवाइजरी बैंक/Advisory Bank	HDFC Bank
ईपीबीजी प्रतिशत (%) /ePBG Percentage(%)	5.00
ईपीबीजी की आवश्यक अवधि (माह) /Duration of ePBG required (Months).	40

(a). जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित कटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज प्रस्तुत करने है। एमएसई कटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।/EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.

(b). ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए। / EMD & Performance security should be in favour of Beneficiary, wherever it is applicable.

लाभार्थी /Beneficiary :

International Centre For Automotive Technology
Unit - National Automotive Board, Plot No. 26, Sector - 3, IMT Manesar, Gurugram - 122051 (Haryana - India)
(International Centre For Automotive Technology)

बोली विभाजन लागू नहीं किया गया/ Bid splitting not applied.

एमआईआई खरीद वरीयता / MII Purchase Preference

एमआईआई खरीद वरीयता / MII Purchase Preference	Yes
मेक इन इंडिया विक्रेताओं को खरीद में प्राथमिकता, यदि उनका मूल्य L1+X% तक की सीमा में है / Purchase Preference to MII sellers available upto price within L1+X%	20
मेक इन इंडिया खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Maximum Percentage of Bid quantity for MII purchase preference	50
सार्वजनिक खरीद (मेक-इन-इंडिया को प्राथमिकता) आदेश 2017 के अनुसार केवल क्लास 1/क्लास 2 के स्थानीय आपूर्तिकर्ताओं को ही भागीदारी की अनुमति है दिनांक 16.09.2020 (समय-समय पर संशोधित एवं लागू) / Allow participation only from Class 1/Class 2 local suppliers as per the Public procurement(Preference to Make-in-india) order 2017 date 16.09.2020(as amended and applicable time to time)	Yes, in compliance with the MII ORDER : DPIIT Order(as amended and applicable time to time)

एमएसई खरीद वरीयता/MSE Purchase Preference

एमएसई खरीद वरीयता/MSE Purchase Preference	Yes
सूक्ष्म और लघु उद्यम मूल उपकरण निर्माताओं को खरीद में प्राथमिकता, यदि उनका मूल्य L1+X% तक की सीमा में हो / Purchase Preference to MSE OEMs available upto price within L1+X%	15
सूक्ष्म और लघु उद्यम को खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Maximum Percentage of Bid quantity for MSE purchase preference	25

1. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM of the product offered in the bid {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts and delivery acceptance certificates like CRAC to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.

2. Preference to Make In India products (For bids < 200 Crore): Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023.

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

3. Purchase preference will be given to MSEs having valid Udyam Registration and whose credentials are validated online through Udyam Registration portal as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product on GeM. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service and Buyer will decide eligibility for purchase preference based on documentary evidence submitted, while evaluating the bid. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for 25% (selected by Buyer) percentage of total quantity. The buyers are advised to refer the OM No. F.1/4/2021-PPD dated 18.05.2023 [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if seller is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

4. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 20% of bid quantity, in at least one of the last three Financial years before the bid opening date to any Central / State Govt Organization / PSU. Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity

supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having highest bid value should meet this criterion.

5. Reverse Auction would be conducted amongst all the technically qualified bidders except the Highest quoting bidder. The technically qualified Highest Quoting bidder will not be allowed to participate in RA. However, H-1 will also be allowed to participate in RA in following cases:

- i. If number of technically qualified bidders are only 2 or 3.
- ii. If Buyer has chosen to split the bid amongst N sellers, and H1 bid is coming within N.
- iii. In case Primary product of only one OEM is left in contention for participation in RA on elimination of H-1.
- iv. If L-1 is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE L-1
- v. If L-1 is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII L-1

एक्सेल में अपलोड किए जाने की आवश्यकता /Excel Upload Required :

Price Breakup - [1772024484.xlsx](#)

Pre Bid Detail(s)

मूल्य भिन्नता खंड दस्तावेज़/Pre-Bid Date and Time	प्री-बिड स्थान/Pre-Bid Venue
12-03-2026 14:00:00	ETL Meeting Room C/o International Centre For Automotive Technology, Plot No. 26, Sector - 3, Near HSIIDC Office, IMT Manesar, Gurugram - 122051 (Haryana - India)

Test Bed Upgrade For H2-ICE And EURO VII At ICAT (1 Unit)

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

तकनीकी विशिष्टियाँ /Technical Specifications

क्रेता विशिष्टि दस्तावेज़ /Buyer Specification Document	Download
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परेषिती/रिपोर्टिंग अधिकारी तथा मात्रा/Consignees/Reporting Officer and Quantity

क्र.सं./S.No.	परेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Girish Chander	122051,INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY Plot No 26, Sector 3, HSIIDC, IMT-Manesar, Gurgaon 122050	1	450

Buyer added Bid Specific Additional Scope of Work

क्र.सं./S.N o.	Document Title	Description	रिवर्स प्रभार के अनुसार जीएसटी/Applicable i.r.o. Items
1	Detailed Technical Specification View	Please Refer Attached Tender Document	Test Bed Upgrade For H2-ICE And EURO VII At ICAT(1)

The uploaded document only contains Buyer specific Additional Scope of Work and / or Drawings for the bid items added with due approval of Buyer's competent authority. Buyer has certified that these additional scope and drawings are generalized and would not lead to any restrictive bidding.

क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें/**Buyer Added Bid Specific Terms and Conditions**

1. **Generic**

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The delivery period of quantity shall commence from the last date of original delivery order and in cases where option clause is exercised during the extended delivery period the additional time shall commence from the last date of extended delivery period. The additional delivery time shall be $(\text{Increased quantity} \div \text{Original quantity}) \times \text{Original delivery period (in days)}$, subject to minimum of 30 days. If the original delivery period is less than 30 days, the additional time equals the original delivery period. The Purchaser may extend this calculated delivery duration up to the original delivery period while exercising the option clause. Bidders must comply with these terms.

2. **Scope of Supply**

Scope of supply (Bid price to include all cost components) : Supply Installation Testing Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any)

3. **Warranty**

Warranty period of the supplied products shall be 2 years from the date of final acceptance of goods or after completion of installation, commissioning & testing of goods (if included in the scope of supply), at consignee location. OEM Warranty certificates must be submitted by Successful Bidder at the time of delivery of Goods. The seller should guarantee the rectification of goods in case of any break down during the guarantee period. Seller should have well established Installation, Commissioning, Training, Troubleshooting and Maintenance Service group in INDIA for attending the after sales service. Details of Service Centres near consignee destinations are to be uploaded along with the bid.

4. **Buyer Added Bid Specific ATC**

Buyer uploaded ATC document [Click here to view the file.](#)

अस्वीकरण/**Disclaimer**

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.

2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.
15. Buyer added ATC Clauses which are in contravention of clauses defined by buyer in system generated bid template as indicated above in the Bid Details section, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by GeM GTC.
16. In a category based bid, adding additional items, through buyer added additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogs or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

All GeM Sellers/Service Providers shall ensure full compliance with all applicable labour laws, including the provisions, rules, schemes and guidelines under the four Labour Codes i.e. the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020 as and when notified and brought into force by the Government of India.

For all provisions of the Labour Codes that are pending operationalisation through rules, schemes or notifications, the corresponding provisions of the pre-existing labour enactments (such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972, etc. and relevant State Rules) shall continue to remain applicable.

The Seller/ Service Providers shall, therefore, be responsible for ensuring compliance under:

- **All notified and enforceable provisions of the new Labour Codes as mentioned hereinabove; and**
- **All operative provisions of the erstwhile Labour Laws until their complete substitution.**

All obligations relating to wages, social security, safety, working conditions, industrial relations etc. and any other statutory requirements shall be strictly met by the Seller/ Service Provider. Any non-compliance shall constitute a breach of the contract and shall entitle the Buyer to take appropriate action in accordance with the contract and applicable law.

[यह बिड सामान्य शर्तों के अंतर्गत भी शासित है /This Bid is also governed by the General Terms and Conditions](#)

जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।/In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---धन्यवाद/Thank You---

Additional Terms & Conditions (ATC)

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Additional Terms & Conditions (ATC)

NIT (Notice Inviting Tender)

The Director, International Centre for Automotive Technology (ICAT), having GST No. 06AABAN9435G2ZI, a division of the National Automotive Board (NAB) under the Government of India, hereby invites proposals under Two-Bid System (Technical Bid and Financial Bid) from experienced and eligible bidders for “**Test Bed Upgrade for H₂-ICE and Euro VII**” in ETL at ICAT Centre - 1, Manesar (Haryana).

Tender Activity Schedule

Scope of Supply	Test Bed Upgrade for H ₂ -ICE and Euro VII in ETL at ICAT Centre - 1, Manesar (Haryana)
Detailed Technical Specification	Please Refer “ <i>Chapter - 1</i> ”
Site Location	ETL Department at ICAT Centre - 1, Manesar (Haryana)
Earnest Money Deposit (EMD) Or Bid Security Declaration	<p>Earnest Money Deposit (EMD): INR 38,00,000/- (Rupees Thirty Eight Lakhs Only) shall be submitted in form of DD/Bank Guarantee/Banker’s Cheque & FDR drawn in favour of “International Centre for Automotive Technology”, payable at Manesar/ Gurugram valid for at least six months from any branch of Delhi/NCR of Indian scheduled Bank or Online through RTGS/NEFT/Internet Banking in Beneficiary Name “International Centre for Automotive Technology”.</p> <p style="text-align: center;">Or</p> <p>Firms who are registered with NSIC for the tendered item /Start-ups/ Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organization or the concerned Ministry or Department, are exempted from payment of EMD but these firms should submit a copy of the registration along with the Technical Bid. (The certificate should be valid for at least 6 months from the date of submission of bids). <i>Note: Traders/Distributors/Sole agents/Work contracts are not eligible for benefits under MSME category.</i></p> <p style="text-align: center;">Or</p> <p>In place of a Bid security, Bidders can submit Bid securing declaration as per “Form IV” accepting that if they withdraw or modify their Bids during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document, they will be suspended for the period of 1 year from the date of opening of this bid from being eligible to submit Bids for contracts with the ICAT that invited the Bid.</p>
Eligibility Criteria	Please Refer “ <i>Chapter - 4</i> ” of the ATC Document
The Last Date of Receipt of Queries if any,	Submission of Pre-Bid Queries Bidders are required to submit their queries, if any, in writing to <i>E-mail ID by 10th March’ 2026 up to 1700 Hrs.</i>

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Date for Clarification Meeting	<p>Pre-Bid Meeting shall be held to address queries and provide clarifications regarding the scope of work, technical requirements, and the bid submission process.</p> <ul style="list-style-type: none"> ➤ Date: 12th March' 2026 ➤ Time: 14:00 Hrs. ➤ Venue: ETL Meeting Room, International Centre for Automotive Technology (ICAT), Plot No. 26, Sector - 3, IMT Manesar, Gurugram - 122051, Haryana ➤ Mode: Physical Meeting <p>All interested bidders are encouraged to attend the pre-bid meeting to seek necessary clarifications before submission of their bids.</p>
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ICAT Bank Details for NEFT/RTGS (In case any bidder deposits the EMD of INR 38,00,000/- (Rupees Thirty-Eight Lakhs Only) through NEFT/RTGS)

HDFC Bank Details (Saving A/c for transactions in INR Only); -

Beneficiary Name	International Centre for Automotive Technology
Bank Name	HDFC Bank Ltd.
Branch	Plot-K, Sector-2, Manesar-122051 Haryana
Account No.	05891450000118
Account Type	Saving
RTGS IFSC Code	HDFC0000589
Swift Code	HDFCINBB
MICR Code	110240079

- ICAT reserves the right to reject/modify/cancel the tender without assigning any reason thereof.

Test Bed Upgrade for H2-ICE and Euro VII

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Chapter - 1

Detailed Technical Specification and Scope of Work

The Director, International Centre for Automotive Technology (ICAT), having GST No. 06AABAN9435G2ZI, a division of the National Automotive Board (NAB) under the Government of India, hereby invites proposals under Two-Bid System (Technical Bid and Financial Bid) from experienced and eligible bidders for “Test Bed Upgrade for H₂-ICE and Euro VII” in ETL at ICAT Centre - 1, Manesar (Haryana).

A.1 Scope of Supply Details:

The broad scope of this tender document includes **Part - A & B** as mentioned below.

Part A: Design services as mentioned in “**Annexure - I of Chapter - 1**” and will be limited to Hydrogen fuel only wherever it is not mentioned explicitly in this document.

Part B: Scope of work as per table of contents.

- I. Supply, Installation, Testing and Commissioning of test bed facility/utility as per design report of **Part A**.
- II. Procurement, Installation, Testing and Commissioning of additional equipment for testing Hydrogen Fueled IC engines.

Table of Contents (Part - B)

SI No.	Description	Annexure Number
1.	Supply, Installation, Testing & Commissioning of Facility/Utility Systems.	Annexure - II
2.	Process Study Parameters.	Appendix - A
3.	Regulatory Standards.	Appendix - B
4.	Technical Specification of Hydrogen and CNG Fuel Flow Meter	Annexure - III
5.	Technical Specification of Hydrogen Analyzer.	Annexure - IV
6.	Technical Specification of Blow by Meter	Annexure - V
7.	Technical Specification of Intercooler	Annexure - VI
8.	Technical Specification of Pressure and Temperature Sensors.	Annexure - VII
9.	Technical Specification of DC Power Supply for Engine.	Annexure - VIII
10.	Technical Specification for Coolant Conditioning Unit	Annexure - IX
11.	Upgrade Kit for Existing Equipment for Exhaust Measurement	Annexure - X
12.	Upgradation/Replacement of Engine Testbed Control & Dynamometer Drive System	Annexure - XI
13.	Existing List of Equipment.	Annexure - XII
14.	Equipment Description (Make and Model)	Annexure - XIII

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A.2 Detailed Technical Requirement:

Part - A

Annexure - I

Design Service Requirement for ETC-6: A detailed report on the below subjects/services w.r.t establishment of Hydrogen ICE engine test cell which will be also used for conventional fuels like diesel, gasoline, CNG, LNG, etc. Here the design service is needed for hydrogen fuel only wherever not defined or mentioned explicitly.

SI No.	Activity
1.	Civil Infrastructure
i.	<p>Design review of the existing civil infrastructure and confirm its adequacy or suggest feasible minimal modification and recommendation w.r.t. test cell, console room, acoustic vision window, auto locking door and pit, if any.</p> <p>Note:</p> <ul style="list-style-type: none"> Supplier to provide design report. ICAT will do necessary design modifications, execute feasible modification and obtain approval from structural consultants. PDF layout drawing for understanding the available space and placement of equipment/utilities is shared by ICAT through email to all Suppliers who attended pre-bid. Actual Site visit at ICAT Centre 1 -Manesar will be done during pre-bid meeting to understand the availability of space.
ii.	Supplier to review and study of Utility floor space and terrace space and propose options which will not require modification or require minimal modification in infrastructure.
iii.	Equipment is proposed to be placed in the test cell and emission room area adjacent to the test cell. Suppliers study the same and suggest minimum modification as per the safety requirements of H ₂ test cell w.r.t Analyzer room, test equipment room.
iv.	All necessary study to be conducted for hydrogen explosion scenarios considering building safety and minimum modification in the infrastructure.
2.	Design of Test Cell Utility Systems & H2 Fuel Storage Yard
	<p>Note: The existing test cell is equipped with the following.</p> <ol style="list-style-type: none"> Conventional fuel lines - Diesel (reference and commercial), Gasoline (reference and commercial), CNG, LPG, LNG. Heating Ventilation and Air Conditioning (HVAC) Process and chilled water supply Cooling/Shop floor water supply Calibration and operational gas handling system. Compressed air distribution system.
i.	<p>H2 fuel storage layout, distribution system, Pressure Reduction System.</p> <ul style="list-style-type: none"> 350 bar from storage yard to outside the test cell shutoff mechanism and 70 bar downstream from shutoff mechanism to hydrogen flow meter inside test bed.

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	<ul style="list-style-type: none"> Storage yard requirements include safety, leak detection, fire detection and suppression system, lightening protection at storage location. H2 Gas detector system & its quantity required at the storage location to be included in design service report. Requirements of roof in the cascade storage area for ventilation and dilution of H2. Stage one pressure reduction should be outside the test cell as per the Supplier final design. Supplier to ensure that the fuel line from storage yard to test cell should be designed for continuous H2 pressure at 350 bar, including initial Hydro-pressure testing at minimum factor of safety as 1.25 or better as per latest standard for Hydrogen testing pressure. The maximum H2 flow rate to be considered at engine is 50 kg/hr. (for piping purpose) Supplier to consider H2 compatible materials for above requirements from storage to test cell (up to Hydrogen flowmeter).
ii.	<p>Nitrogen / any other suitable inert gas purging system.</p> <ul style="list-style-type: none"> Supplier to provide Nitrogen/any other suitable inert gas cylinders till installation. ICAT will provide Nitrogen/any other suitable inert gas cylinders after installation. However, Supplier to indicate overall consumption rate of inert gas during design phase.
iii.	<p>Exhaust extraction system - test cell.</p> <ul style="list-style-type: none"> Supplier to consider design for engine exhaust extraction as per Gas group IIC.
iv.	Scavenging system and interlock mechanism as per Gas group IIC for Safe operation of H2 in Test cell.
v.	Fire stop sealings and louvers in the test cell.
vi.	Submission of detailed report and layout mentioning the requirements.
3.	Process Study
i.	Complete process study and detailed report to be prepared for H2 and impact of other fuels used in the test cell.
ii.	The list of process study parameters is mentioned in Appendix A of this document.
iii.	The applicable standards are mentioned in Appendix B of this document.
iv.	Submission of detailed report fulfilling the requirements of <i>"Appendix - A & B"</i> .
4.	Fire Detection And Suppression Systems
	<p>Note: The existing test cell is equipped with the following.</p> <p>a) High pressure water mist fire extinguish system at test cell. ICAT will share the Make and Model and layout details for better understanding through email.</p>
5.	Building Management System (BMS) Interface and Integration Requirements
i.	Review of existing BMS and PLC.

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	ii.	<p>All the new devices provided by Supplier under the scope of tender shall be compatible with Supplier supplied PLC system. Supplier provides the interface protocol for communication with the existing centralized BMS and to ensure compatibility with the existing centralized BMS.</p> <p>BMS System:</p> <ul style="list-style-type: none"> • Scope in BMS- This BMS is only for HVAC System. One input from Hydrogen test cell panel shall be given to existing HVAC BMS System. • Make of PLC/Software- Schneider. • Communication protocol- Modbus.
	iii.	Submission of detailed report and layout mentioning the requirements
6.		Electrical
		<p>Note:</p> <ul style="list-style-type: none"> • Supplier to Review of the existing infrastructure including the electrical points available at test cell and suggest modification and recommendation. • Input power will be supplied for engine test cell by ICAT. • Supplier to design and supply power distribution panel and indicate overall ratings for the scope of the bid. • Lighting arresters already present at site. Supplier to consider additional lighting arrested in case of any design modifications for H2-ICE Testbed compatibility. • Earthing points to be indicated by Supplier in design. 06 nos. of earth pits are available. Supplier to highlight additional earth pits, if required.
	i.	Requirement finalization considering the load, existing distribution, Load calculations, Fault level calculations and voltage drops calculations.
	ii.	Submission of detailed report and layout mentioning the requirements.
7.		Material Handling (Hydrogen Compliant)
	i.	Existing Test cell having electric crane capacity is 2 tons. Supplier to study the compatibility of the existing crane.
	ii.	Other requirements related to the material handling for the UUT shall be shared by the supplier.
	iii.	Submission of detailed report and layout mentioning the requirements.

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Part - B

- I. Supply, Installation, Testing and Commissioning of test bed Utility/facility as per design report (Part A).
- II. Procurement, Installation, Testing and Commissioning of additional equipment for Hydrogen & Multi Fuel Test Facility.

Supply, Installation, Testing and Commissioning of Hydrogen Test Bed Utility/Facility as per Design Report in ETL - 6 at ICAT Centre - 1, Manesar (Haryana)

Annexure - II

Technical Description		
SI No.	Technical Requirement	Remark
1	Test Cell Utility Systems	
i.	Test cell temperature: 25 °C with tolerance +/- 5 °C during engine testing.	
ii.	Supplier to supply, install, test and commission the New Heating Ventilation and Air Conditioning (HVAC) w.r.t to Test Bed equipment details available in tender document.	
iii.	The HVAC System must be able to fulfil the requirement of all types of engines planned in the test cell with H ₂ as a fuel and various other conventional fuels. [Diesel (reference and commercial), Gasoline (reference and commercial), CNG, PNG].	
iv.	The system must be Energy efficient with option of Auto and Manual selection between option (a) and (b), (a) Hydrogen fuel application (b) Conventional fuels.	
v.	Supplier to prepare and provide the detailed (2D and 3D) layout as per the available space. Supplier may visit the site before submission of the bid.	
vi.	Supplier to provide Piping and instrumentation design (P&ID).	
vi.	Complete Bill of material (BOM) of the HVAC system to be provided.	
2	Water Supply System	
i.	Supplier to specify the total process and chilled water supply requirements under the scope of bid.	
ii.	Supplier to specify the total Cooling/Shop water supply requirements under the scope of bid.	
iii.	Chiller, piping layout to and from utility including the final execution will be in Supplier scope.	
iv.	Note 1: Process and chilled water supply, Cooling/Shop water supply for the existing equipment & additional utilities will be provided by ICAT.	
v.	Complete Bill of material (BOM) for supply system to be provided.	
3	H₂ Fuel Supply, Storage & Distribution	
i.	As per Supplier design report for the H ₂ storage yard, Civil Execution will be done by ICAT, and necessary statutory approvals will be taken by ICAT.	

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ii.	Safety matrix preparation to be done by the Supplier. Supplier must integrate all applicable safety devices as per National and international standards.	
iii.	Supplier to provide the Leak detection, flame detection and fire suppression system at storage locations integrated with testbed/building management system meeting all the National and International Standards.	
iv.	Supplier to include the H ₂ Gas detector covering the area identified for the H ₂ storage.	
v.	Supplier to provide layout, distribution, pressure reduction, its material from storage to test cell.	
vi.	Supplier to visit site to get actual line dimensions (length & sizes) and other required dimensions to and from test cell to storage and vice versa. Suppliers mandatorily use only Swagelok/Parker/HIP/HIFLUX/FITOK make fittings.	
vii.	Anti-spark requirements at storage & test cell to be ensured, Fulfilment of the same is in Supplier scope .	
viii.	Anti-static requirements at storage & test cell to be ensured, fulfilment of the same is in Supplier scope.	
ix.	Supplier to include the Nitrogen / any other suitable Purging system for H ₂ at storage & test cell. Supplier to provide layout, distribution, pressure reduction, its material from storage to test cell. Suppliers mandatorily use only Swagelok/Parker/HIP/HIFLUX/FITOK make fittings.	
x.	Complete Bill of material (BOM) to be provided.	
4	Calibration And Operational Gas Handling System	
i.	ICAT will use the existing gas handling system and supplier to extend as per equipment requirements.	
5	Compressed Air Distribution System	
i.	ICAT will use the existing compressed air distribution system and supplier to extend as per equipment requirement.	
6	Exhaust Extraction & Scavenging System	
i.	Supply, installation, test and commissioning of New Exhaust Extraction System for Hydrogen and other conventional fuels in test cell.	
ii.	Supply, install, test and commissioning of New Scavenging System for Hydrogen and other conventional fuels in test cell.	
iii.	Supply, install, test and commissioning of New Safety Interlock mechanism which should synchronize with exhaust extraction and scavenging system for Safe operation of H ₂ in Test cell.	
7	Fire Detection and Suppression Systems as Per H₂	
i.	Note: The existing test cell is equipped with the following as per testing of conventional fueled engines. a) High pressure water mist fire extinguish system at test cell. b) Heat and flame & smoke detection in test cell.	

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ii.	Upgradation, and modification of existing safety system and equipment, including the selection, supply, testing, installation and commissioning of the safety system equipment for hydrogen and other conventional fuels as per the report provided by Supplier in PART A, if any shall be in the scope of supplier. New Gas & Fire detection system (ATEX/ flame proof) - multi-spectrum based on H ₂ requirements	
iii.	Supplier to provide suitable Gas Detection system (H ₂ -Flame detection).	
iv.	Supplier to provide the H ₂ leak detector.	
v.	Supplier to provide next level safety for H ₂ leak detection inside test cell via installation of Thermal camera or ultrasonic leak sensor (Qty- 02 Nos (Min.))	
vi.	Supplier to supply, install, test and commission Safety Interlock mechanism which should synchronize with all safety system including fire detection and suppression for Safe operation of H ₂ in Test cell and other conventional fuels.	
vii.	Supplier to provide the complete Bill of material (BOM).	
8	Building Management System (BMS) Interface and Integration Requirements	
i.	Supply, install, test and commission PLC system (safety PLC for all H ₂ systems) for utility which can be integrated with test bed data acquisition system.	
ii.	Interface between the Test bed automation system and test bed utility system which is designed and supplied by Supplier. In case of the Test bed automation system is not from the Supplier, it must provide the interface protocol for the same so that integration can be done.	
iii.	Tri-Party meeting between supplier and Equipment manufacturer, if the Supplier and equipment supplier are different.	
iv.	Supplier is responsible for the Safety matrix definition of all systems.	
v.	Supplier to ensure that Fail-safe arrangement in BMS must be available and implemented.	
9	Electrical	
i.	Supplier to supply, install, test and commission the electrical system as per the report submitted by the Supplier in Part A.	
ii.	Supplier to prepare and supply the complete Schematic of the electrical layout to ICAT.	
iii.	All the power cables & signal cables for the test cell utility under this scope of bid including to and from power termination point will be in the scope of Supplier. Cable route layout is also in Supplier scope.	
iv.	Supply, install, test and commission of flame proof test cell lighting, sockets, is also in Supplier scope.	
v.	Supply, install, test and commission static discharge unit at test cell and fuel storage area is also in Supplier scope.	
vi.	ICAT will be responsible for the existing power load of equipment. Flame-proof power connections for existing equipment to be provided by the supplier.	

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vii.	Input Power supply based on the Supplier recommendation will be provided by ICAT.	
10	Material Handling	
i.	Supplier to supply, install, test and commission test cell Crane as per the design report mentioned in " Part - A ".	
ii.	Supplier to supply, install, test and commission other requirements related to the material handling for the UUT as per the design report mentioned in " Part - A ".	
11	Process Study	
i.	Supplier to supply, install, test and commission the necessary equipment to comply with the requirements based on the process study report as per Part A and requirements of " Appendix - A & B ".	
12	Civil Infrastructure	
i.	Supplier to comply the requirements based on the civil infrastructure report as per Part A including the ATEX zone Identification etc.	
ii.	Supplier to supply, install, test and commission the H ₂ compatible Acoustic panels in the scope of supply.	
iii.	<p>Supplier to supply, install, test and commission the viewing window based on suggestions mentioned in the report of "Part - A" considering minimal modification w.r.t Test cell, control room.</p> <p>Supplier needs to submit the compliance Certificate for viewing window (meeting all the design & safety requirements).</p> <ul style="list-style-type: none"> • Camera (Minimum 2 Nos.) compatible for H₂ operations to be fitted inside the Test Cell other than the Infra-red cameras. • Display LED Monitor (min 40" dimension - 01 no.) along with its peripheral. • All the cabling and junction boxes will be under the Supplier scope. <p style="text-align: center;">Or</p> <p>If the viewing window is not present as per Supplier design study, the following equipment's/utility needs to be included.</p> <ul style="list-style-type: none"> • Camera (Minimum 04 nos.) compatible for H₂ operations to be fitted inside the Test Cell other than the Infra-red cameras. • Display LED Monitor (min 80" dimension - 01 no.) along with its peripheral. • All the cabling and junction boxes will be under the Supplier scope. 	
iv.	ICAT will carry out all the civil Infrastructure work with the Supplier as per the design report of " Part - A ".	

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Appendix - A

Process Study Parameters

SI No.	ICAT Requirement for system to meet	Remarks
1	HAZOP - Hazard and Operability Analysis	
2	LOPA (Layer of Protection Analysis) Study	
3	SIL (Safety Integrity Level) classification	
4	Hazardous area classification (HAC)	
5	Safety matrix preparation	
6	Safety protocols Integration and its documentation	
7	Risk assessment study - Quantitative	
8	Consequence Analysis -Gas Dispersion & Explosion Analysis	
9	Lightening Protection Study	
10	Fire & Gas Mapping	
11	Hazard Identification and Risk Assessment (HIRA) analysis	
12	ATEX zone definition and identification	
13	Explosion Protection by Deflagration Venting	
14	Any other study if required must be included by Supplier for the safe operation of H ₂ in H ₂ -ICE test cell	

Test Bed Upgrade for H₂-ICE and Euro VII

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Appendix - B

Regulatory Standards

Supplier must fulfil all the relevant standard w.r.t to design supply, installation of systems/facility/equipment in H₂ test cell and associated facility. Supplier must comply with latest version of standard and subsequent amendments, if any.

Regulatory Standards		
SI No.	ICAT Requirement for system to meet	Remarks
1	NFPA (National Fire Protection Association):	
1.1	NFPA 1: Fire Code	
1.2	NFPA 2: Hydrogen Technologies Code	
1.3	NFPA 10: Standard for portable Fire Extinguisher	
1.4	NFPA:13: Standard for the installation of Sprinkler Systems	
1.5	NFPA 55: Compressed Gases and Cryogenic Fluids Code	
1.6	NFPA 68: Standard on Explosion Protection by Deflagration venting	
1.7	NFPA 70: National Electrical Code	
1.8	NFPA 72: National Fire alarm and signaling Code	
1.9	NFPA 101: Life Safety Code	
1.10	NFPA 497: Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas	
1.11	NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids	
1.12	NFPA 750: Standard on Water mist Fire Protection System	
1.13	NFPA 2001: Standard on Clean Agent Fire Extinguishing System	
2	IEC: International electrotechnical commission	
2.1	IEC 61882: Hazard and operability studies (HAZOP studies)	
2.2	IEC 62305: Part 1, 2, 3 & 4: Protection against lightning	
2.3	IEC 61511: Functional safety - Safety instrumented systems for the process industry sector	
2.4	IEC/IS 60079: Explosive Atmosphere Standards.	
3	IS: Indian Standard	
3.1	IS 7689: Code of Practice against Static Charges.	
3.2	IS 5571: Guide for selection and installation of electrical equipment in hazardous areas.	
4	ISO 12100: General Principles for design Risk assessment and risk reduction	

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5	2014/34/EU ATEX 114	
6	1999/92/EU ATEX 153	
7.1	EN 60079-10-1-Classification of areas. Explosive gas atmospheres	
7.2	EN 60079-14 Electrical installations design, selection and erection	
7.3	EN 60079-17 Electrical installations inspection and maintenance	
7.4	EN 1127-1 Explosion prevention and protection	
8	Storage System design as per PESO approval (Gas cylinder Rules 2016) as amended from time to time	
9	ASME B31.12: Hydrogen Pipelines and Piping Code - hydrogen piping design	
10	CGA: Handbook of compressed gases	
11	CGA- G-5.5: Hydrogen Vent systems	
12	ASME B31.3: Process Piping, Code for pressure piping	
13	OISD 163: Safety of Control Room for Hydrocarbon Industries	
14	TRGS, TRBS, NFPA Technical Rules	

Note:

- Additional Standard if required, Same to be considered for System design requirement and implementation.
- In addition to above all NFPA standards the system should comply to their counterpart IS standards also to fulfil all legal requirement applicable in INDIA.

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Procurement, Installation, Testing and Commissioning of Additional Equipment for Hydrogen & Multi Fuel Facility

Annexure - III

Technical Specifications of Hydrogen and CNG Fuel Flow Meter

SI No.	Technical Requirements	Quantity
A	Fuel Consumption Measurement - Hydrogen and CNG Flow Meters	1 Nos.
1	Suitable for H ₂ and CNG (with density correction feature) and Hydrogen + CNG.	
2	1 Working principle: Coriolis	
	2 Nominal Range- up to 40 kg/h (H ₂) and for CNG up to 140kg/h.	
	3 Accuracy should be $\pm 0.5\%$ at measured value above 10 % of Range specified (i.e 40kg/hr) and below 10% it must be less than $\pm 0.3\%$ at full scale.	
	4 Repeatability +/-0.5% at point.	
	5 Dynamic on-line continuous measurement with minimum sampling rate of 10 Hz.	
	6 Non-resettable fuel totalizer to be included in scope of supply.	
3	Fuel inlet Pressure at device range up to 70 bar. Variable output pressure must be possible depending on the engine requirements at engine fuel inlet.	
4	Fuel temp & pressure measurement will be done near to engine fuel inlet point.	
5	Fuel consumption meter must be capable of measurement during motoring operation of Engine.	
6	In-built N ₂ purging systems and leak check functionality must be available.	
7	Distance between the measurement unit and the engine should be max. 10 meters.	
8	In-built pressure control for stable measurement conditions.	
9	Flow Meter Trolley to be included.	
10	Including suitable interface to the test cell automation system.	
11	Suitable Power cables, HOST Interfacing cables to be included in the scope of supply.	
12	Provision for Interface with existing test bed automation system.	

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Annexure - IV

Technical Specification of Hydrogen Analyzer

SI No.	Technical Specifications	Quantity
A	Hydrogen Analyzer	1 Nos.
1	System must be suitable for the measurement of the H ₂ measurement in exhaust gas.	
2	Working Principle: Electron Impact Ionization Mass Spectrometry (EIMS).	
3	Measurement range: 0 to 100 % H ₂	
4	Response Time - Supplier to specify.	
5	Lower detection Limit: Supplier to specify.	
6	Concentration drift: Supplier to specify.	
7	Accuracy: ± 1.0% of full scale, ≤ 3 % of measured value (10 - 100 % of range full scale) whichever is better	
8	Minimum 10 points linearity verification is required.	
9	Calibration certificate traceable to national and international standards. However, internal factory calibration certificate may be accepted.	
10	Software integration of H ₂ exhaust analyzer with Ammonia measurement device and automation system.	

Test Bed Upgrade for H₂ and Euro VII

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Annexure - V

Technical Specification of Blow by Meter

SI No.	Technical Specifications	Quantity
A	Blow by meter	1 Nos.
1	System must be suitable for continuous measurement and monitoring blowby on H ₂ -ICE, conventional and gas engine.	
2	Working Principle: Orifice measurement	
3	Measurement Uncertainty: ±1% with linearization Measurement Range: up to 300 l/min	
4	Device should ensure measurement accuracy in case of heavy pulsation in measuring gas and provision to separate condensate.	
5	Operating Temperature: 0°C to 50°C.	
6	Device must be capable of measuring temperature and pressure of Blow by gas	
7	Device should be integrated with automation using analog (±10V, 4...20mA), RS232 and LAN. Also, provided with suitable interface to the test cell automation system	
8	Blowby meter trolley to be included.	

Test Bed Upgrade for H₂-ICE and Euro VII

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Annexure - VI

Technical Specification of Intercooler

SI No.	Technical Specifications	Quantity
A	Intercooler	1 Nos.
1	Suitable for engines up to 350 kW with maximum boost pressure ratio of 3.5	
2	Must have sufficient capacity to maintain $45^{\circ}\text{C} \pm 5\%$ air temperature at the outlet of the engine intercooler.	
3	1 The maximum air flow through the intercooler shall be in between 1500-1800 kg/h.	
	2 Maximum inlet temperature 250°C.	
	3 The cooling media will be water with temperature range of 25 to 35 °C.	
4	Charge Air Input - Max 250 °C with pressure of 3.5 bar(absolute) . Pressure drop across intercooler should be less than 40mbar@max airflow.	
5	Pressure drops across intercooler adjustment required with external valve and controlling should be possible through automation as well as manually.	
6	Quick coupling arrangement for shop water connection (IN/OUT).	
7	Intercooler Drop- Appropriate Simulation valve and PID response control via automation through lookup/PID parameters.	

Test Bed Upgrade for Euro VII

Additional Terms & Conditions (ATC)

Annexure - VII

Technical Specification of Pressure and Temperature Sensors

SI No.	Technical Requirement	Quantity
A	Pressure and temperature sensors	As Mentioned
1.1	H₂ compliant PT-100 with 3 Wire: Total 24 Nos. (100MM Length, 3 MM Diameter) with System Accuracy (Sensor + Cable + Indicator) of +/- 1°C absolute with cable length of sensor to 3 Meters.	
1.2	H₂ compliant K Type Thermocouple - Total 24 Nos. (100MM Length, 3 MM Diameter) with accuracy of +/-2°C absolute below 327 °C and +/-1% of reading above 327 °C with cable length of sensor to 3 Meters.	
2	Spare Connectors 10 Each for RTD and K type to be included in scope of supply for each sensor.	
3	Thermocouples shall have noise protection.	
4	Temperature sensors should have an identity name plate mentioning measuring range, Sr. No. Type, date of calibration and due date of calibration.	
5	Pressure sensors (ATEX approved)	
5.1	ATEX approved DPT (Differential Pressure Transducer) for Air intake depression (Range 0 to 10 kPa, system accuracy +/-0.05 kPa absolute) - 2 Nos.	
5.2	ATEX approved DPT for engine exhaust back pressure Range 0 to 120 kPa, system accuracy +/-0.2 kPa absolute) - 2 Nos.	
5.3	ATEX approved DPT for boost pressure (Range 0 to 500 kPa)- (accuracy 0.075% of FS range or better) - 2 Nos.	
5.4	ATEX approved Gauge PT - Fuel in/out etc. (Range 0 to 500 kPa, system accuracy +/-0.1 kPa absolute)- (accuracy 0.075% of FS range or better) - 4 Nos.	
5.5	ATEX approved Gauge PT - Engine Oil pressure (Range 0 to 1000 kPa, system accuracy +/-0.1 kPa absolute)- 2 Nos.	
5.6	ATEX approved Gauge PT - Miscellaneous (Range 0 to 300 kPa) - 06 nos. (02 nos. ATEX + 04 nos. Non ATEX), system accuracy +/-0.1 or better). (accuracy 0.075% of FS range kPa absolute)	
5.7	ATEX approved Ambient Absolute Pressure sensor (range 0 to 120 kPa, system accuracy +/-0.1 kPa absolute) - 3 Nos.	
5.8	Pressure sensor- coolant out, EGR cooler-coolant in/out (range 0 to 500 kPa, System accuracy +/-0.1 kPa absolute) - 4 Nos.	
5.9	Pressure sensor- coolant in (range 0 to 250 kPa, System accuracy +/-0.1 kPa absolute) - 1 Nos.	
5.10	ATEX approved Gauge Pressure sensor-crankcase (range 0 to 10 kPa, System accuracy +/- 0.1 kPa absolute) - 1 Nos.	
6	All above sensors to work at temperatures as per the respective application. Media will be water, oil, air or fuel.	
7	Easy zero offset adjustment is required both on sensor or through software.	

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8	Appropriate Pressure tubing from the pressure sensors to the measuring point to be supplied by the Supplier.	
9	Quick release coupling / connectors, necessary adapters to be provided to connect and disconnect the engine pressure channels quickly at the transducer.	

Test Bed Upgrade for H₂-ICE and Euro VII

Additional Terms & Conditions (ATC)**Annexure - VIII****Technical Specification of DC Power Supply for Engines**

SI No.	Technical Requirement	Quantity
1	DC Power supply for Engines	1 Nos.
i.	Variable voltage range- 0 to 30 V	
ii.	Variable current range- 0 to 70 A	
iii.	I/P voltage / Frequency- 220 V +/- 10%, 50 Hz, Single Phase AC	
iv.	Protection- overload, short circuit protection and reverse polarity protection	
v.	Operating Temperature- 0 to 55 deg C and 10 to 90% humidity	
vi.	Voltage Regulation- < +/- 0.2% of set voltage	
vii.	Voltage and current should set up to 1 decimal place.	
viii.	Both voltage and current should be displayed on the power supply.	

Additional Terms & Conditions (ATC)

Annexure - IX

Technical Specification of Coolant Conditioning Unit

SI No.	Technical Specifications	Quantity
A	Coolant Conditioning unit	1 Nos.
1	System must be suitable for testing of 350 kW H2 Engine rating and 400 kW conventional engine rating (including related H2-safety and operational parameters).	
2	Flow direction arrow mark required.	
3	Media: Suitable for standard engine pre-mixed coolant, Engine coolant with water, shop water.	
4	Engine coolant temperature control +/-2 °C for the set point between 70 to 120 °C with cooling water temperature 30-35°C at inlet of CCU. Pressure adjustment in the water circuit of 2.5 to 4 bar is required. Max delta temperature (Engine input/output) is 10 °C.	
5	The PID control function is carried out by the system.	
6	Including suitable interface to the test cell automation system.	
7	Alarms for low water pressure, low water level & high-water temperature.	
8	Design to be based on constant water flow through the conditioning unit.	
9	Engine water pump inlet pressure and engine inlet and outlet temperature indication on unit is required continuously.	
10	Distance between the engine and conditioning unit should be approx. 4- 6 m.	
11	Stainless Steel valve for coolant control should be provided.	
12	1 Inline heating of coolant.	
	2 Provision of coolant heating while engine is running.	
	3 Provision of coolant pre-heating (in circulation within system) before engine start.	
	4 Temp. rise rate of circulating coolant from ambient temp, 2 °C per minute.	
	5 Heater control: Settable up to 85 °C.	
	6 Safety provision related to heater.	
13	Provision of enable or disable heater control, as and when required	
14	Provision of manual electromechanical bypass of system inbuilt pump/motor for checking working of running engine inbuilt pump.	
15	Provide suitable water filter in the shop water circuit.	
16	Suitable cable for Conditioning unit, Power cables, HOST Interfacing cables to be included in the scope of supply.	
17	Provision for Interface with existing test bed automation system.	
	DC Analog volt Input/Output: 0 - 10V or 4 - 20mA for set point and actual measured and TCP-IP or RS 232 /485 or better along with standard interface protocol.	

Additional Terms & Conditions (ATC)**Annexure - X****Upgrade Kit for Existing Equipment's for Exhaust Measurement**

SI No.	Technical Requirement	Quantity
A	Upgradation of existing exhaust gas analyzer (PRE and POST) (hardware and software) including safety to measure exhaust emissions emitted from H2 ICE and upcoming EURO VII regulations.	1 Nos.
B	Upgradation of existing NH3 analyzer -01 Qty (hardware and software) including safety to measure exhaust emissions emitted from H2 ICE and upcoming EURO VII regulations.	1 Nos.
C	Bidder is requested to evaluate the requirements of upgradation of other existing equipment like PM measurement device if required for H2 ICE testing and EURO VII compliance during pre-bid meeting/visit and cover in the scope of supply.	As per evaluation report of existing equipment.

Test Bed Upgrade for H₂-ICE and Euro VII

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Annexure - XI

Upgrade/Replacement of Testbed Control & Dynamometer Drive System

1. Upgradation/ Replacement of existing AVL make engine test cell automation system PUMA 1.5.3 to comply with H2-ICE and up to EURO VII capabilities.

- The operating system (Windows) and automation system should be provided with the latest available updates.
- The updated/replaced automation system should fulfill **existing automation capability**- software, hardware, data acquisition, data post processing with result generation, **integration & interfacing** with existing, upgraded, replaced & new devices and auxiliaries with the updated H2-ICE and upcoming EURO VII capabilities (as per scope).
- ICAT requires system upgrade with the latest software version free of cost (even if new software requires latest platform) within a period of two years after commissioning and final acceptance, if any. The referred system upgradation shall be applicable in the event of:
 - Critical releases on the software
 - New Operating System adoption
 - Accumulation of minor upgrades in the software

If Hardware upgradation is required to achieve the software upgradation, this will also be included free of charge. This includes, as an example, the computer, connections and communication cards.

- Bidder is requested to check the existing automation capability, if required during pre-bid meeting/visit and cover in the scope of supply.

Parameter	Description
Software	Upgradation of existing PUMA 1.5.3 software to latest updated available automation system or any other equivalent engine test bed automation system for operation, monitoring and control of testbed by use of I/O modules connected to the workstation. Software for controlling monitoring and operation of combustion engine.
<p>The software should be able to cater to various engine applications, namely Automotive up to EURO VII and H2-ICE, Off-road engines-tractors and CEVs, Gensets. The application of the software to include (minimum):</p> <ol style="list-style-type: none"> 1. High operability of visualization and structuring of all testbed parameters and test runs. 2. Parameter management and distribution. 3. Pre-defined library of test runs and parameters. 4. Data acquisition ensuring full data throughput for all existing and connected I/O signals, Digital and Analog channels (Supplier may visit the site before submission of the bid for checking existing modules and related specifications). 5. Steady state up to 5000 channels and Continuous measurement up to 5 recorder, 500 channels and along with timestamp and data synchronization. 6. Test Cell Controller compatible for control of testbed peripheral equipment. For peripheral equipment's, necessary operational monitoring and emergency shutdown should be interfaced with Test bed control system 7. Formula script for cyclic and real-time calculations with calculation frequency up to 100 Hz. 8. Measurement data acquisition and storage- mixed mode storage, lookup table, filter function, result presentation, power fail handling. 	

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	<p>9. Communication/Integration of ASAM up to 600 parameters, AVL Indicom parameters to automation system.</p> <p>10. Heavy duty emission testing, Provision for interfacing other R&D equipment for future upgrades shall be included: NMOG sampling devices additional analyzers such as N2O for exhaust analysis.</p> <p>11. Capable of operating in mono-fuel and dual-fuel modes for running applicable regulatory cycles.</p> <p>12. The updated software should be updated to ensure compatibility with the upgraded/replaced dynamometer drive and all required functionalities.</p>
Hardware	Upgradation of existing hardware configurations to operate various applications of automation system.
The configuration should include (minimum)	
<ol style="list-style-type: none"> 1. Testbed workstation for connection of devices 2. 8* RS232 ADAPTER/USB 3. IEEE 1394 ADAPTER PCI-E 4. CAN Interface Board PCI-E (4 LINES) 5. Ethernet RT network card (4 PORTS) 6. Profibus-Interface HP BOARD PCI-E 7. UPS System 	
Data Processing	Data processing platform to be included with automation system for visualization, analyzing and reporting measured and simulated data types. The data processing of automation software should fulfill the necessary reporting requirements (mono and dual fueled engines) as per the Emission test Cycles and Standards mentioned in this Annexure- Engine test cycles and standards.

2. Upgradation/Replacement of Schneider Electric Make Transient Dynamometer drive for smoother and reliable dyno operation.

- The details of existing transient dynamometer and its drive are mentioned **Annexure - XII**.
- The Dynamometer drive (VFD) is needed to be upgraded/replaced, compliant with current and upgraded specifications.
- The upgraded/replaced drive should be integrated with the existing dynamometer and the upgraded/replaced testbed automation software, which is compatible with all the existing and upgraded testing operations.
- The upgraded/replaced dynamometer drive should have minimum 10 years' service support and spares availability.
- The upgraded/replaced VFD should be provided with necessary manuals (English version mandatory) in softcopy (USB) and hardcopy, necessary spares.
- The updated drive should have protection rated as IP54
- The upgraded/replaced drive should fulfill the minimum requirements mentioned below or better: -

Main Connections Requirements: -
<ul style="list-style-type: none"> ➤ The total harmonic distortion of the mains voltage must be less than 15%. ➤ The mains fault level on the termination point must be $SK/SN \geq 20$ ➤ Are several dynamometers of similar or different nominal power connected on the same termination point, there must be $SK/\Sigma SN \geq 10$ if $SK/SN \geq 20$ <p><i>for each dynamometer is valid.</i></p> <p><i>SKMains fault level</i></p> <p><i>SN.....Nominal apparent power of the dynamometer</i></p> <p><i>ΣSN ...Summated nominal apparent power of all dynamometers connected to termination point.</i></p>
Reaction on System: -

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<ul style="list-style-type: none"> ➤ Total harmonic distortion of mains voltage at SK/SN = 100 up to 40th harmonic $\leq 1,0\%$ up to 9kHz $\leq 3,5\%$ ➤ Total harmonic distortion of mains voltage at SK/SN = 20 up to 40th harmonic $\leq 1,2\%$ up to 9kHz $\leq 4,5\%$ SKMains fault level SN.....Nominal apparent power of the dynamometer
--

Input Feeder Module	Mains Module	Motor Module
EMOS A50/5-40/S-2 Input: 3 phase, AC 400V, 50hz, 700A Output: 3 phase, AC 400V, 50hz, 700A	NEMO 50/5-40-078/S-1 Input: 3 phase, AC 400V, 50hz, 700A Output: 780V DC, 642A	MOMO 50/5-078/S-0 Input: 780V DC, 642 A Output: 3 phase, AC 0-500V, 0-400hz, 725A

**3. The updated automation system under the bid must satisfy the following standards and test cycles
Regulatory Standards**

Engine Test Cycles And Standards

SI No.	Requirement for system to meet	Supplier Remark
1	UNECE R-49, Rev.6	
2	UNECE R-24, Rev.2	
3	UNECE R96 rev 03	
4	ISO 8178: 2006,2019,2020	
5	2024/1257/EU (draft) (or Latest applicable revision)	

SI No.	Technical Requirement for System to Meet	Supplier Remark
Test Cycles (Onboard - EURO VI-VII)		
1	EURO VI WHSC	
2	EURO VI WHTC	
3	EURO VI WNTE	
4	EURO VII WHSC (draft)	
5	EURO VII WHTC (draft)	
6	EURO VII fuel mapping (draft)	
7	Custom Test Cycles - Option for multiple 'N' number of consecutive WHTC Cycles with regression and emission calculation with report generation (for minimum 3)	
8	R24	
Test Cycles (Non-Road & Stationary Engine - EURO Stage IV-V, ISO 8178:2020)		
1	European Non-Road Cycle for Stage IV/V C1 RMC	
2	European Non-Road Cycle for Stage C1 NRSC DMC	

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3	European Non-Road Cycle for Stage IV/V NRTC	
4	D1 3 Mode Steady State DMC & RMC - ISO 8178:2020	
5	D2-5 Mode DMC & D2- 5 Mode RMC for constant speed engine including NTE / Control Area - ISO 8178:2020	
6	D2- 5 Mode for variable speed engine - ISO 8178:2020	
7	C1- 8 Mode DMC and C1- 9 Mode RMC for variable speed engine including NTE / Control Area (ISO 8178-2020)	
8	Custom Test Cycles - Option for multiple 'N' number of consecutive NRTC Cycles with regression and emission calculation (for minimum 3)	
9	Full load performance and Part Load Performance	User Requirement

Test Bed Upgrade for H₂-ICE and Euro VII

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Annexure - XII

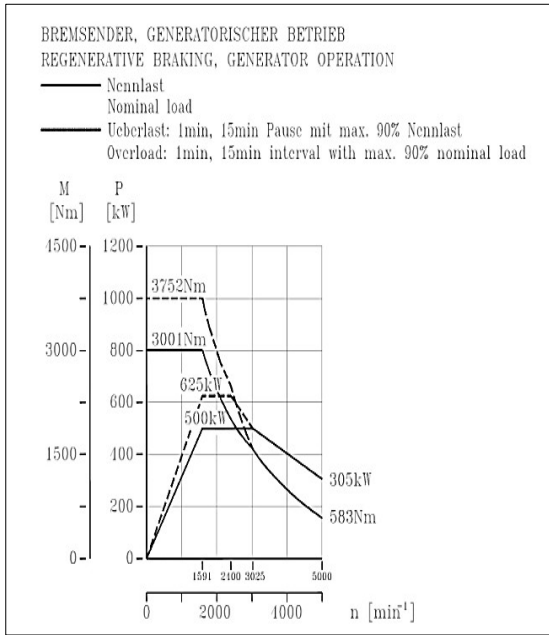
Existing List of Equipment

Following is the list of equipment including make and model available at ICAT, Manesar and planned for shifting to ICAT-ETC 06 hydrogen test cell (Not in the scope of this tender document).

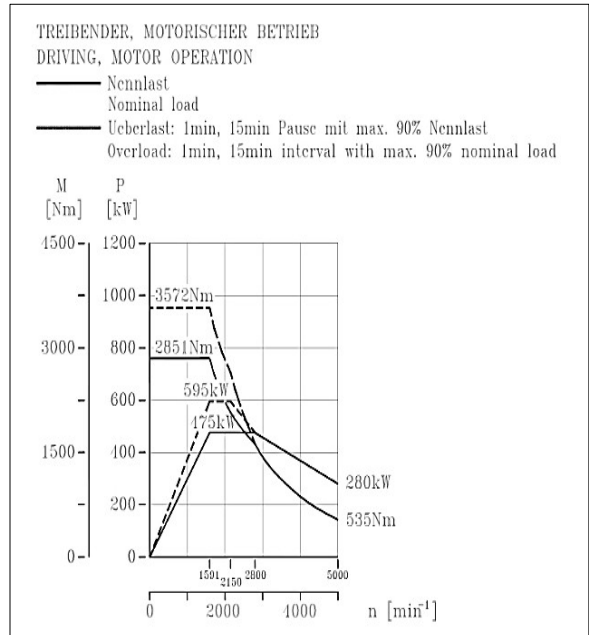
Technical Description		
SI No.	Equipment Description	Supplier Remark
	<p>Test Bed Equipment And Systems</p> <ul style="list-style-type: none"> ➤ Dynamometer - INDY S50-4/3001-1BV-1 <ul style="list-style-type: none"> • Nominal Power: 500kW or equivalent, Make: Schneider Electric (Engine fueled with H2 will be operated for min 35 to max 350 kW power rating) (Torque Curve attached) • Type: Transient • Description: Three phase asynchronous machine with a squirrel-cage rotor. • No. of Poles: 4 • MOI: 4.46 kgm² • Insulation class: H • Automation: AVL PUMA 1.5.3 • Engine testing Application: Automotive, Off Road, Genset etc. • Drive details: <ul style="list-style-type: none"> □ Input feeder: EMOS A50/5-40/S-2 <i>Input: 3 phase, AC 400V, 50hz, 700A</i> <i>Output: 3 phase, AC 400V, 50hz, 700A</i> □ Main Module: NEMO 50/5-40-078/S-1 <i>Input: 3 phase, AC 400V, 50hz, 700A</i> <i>Output: 780V DC, 642A</i> □ Motor Module: MOMO 50/5-078/S-0 <i>Input: 780V DC, 642 A</i> <i>Output: 3 phase, AC 0-500V, 0-400hz, 725A</i> ➤ Emission systems- Dual line emission analyzer with EGR (AMA i60/ MEXA ONE) ➤ PN system: AVL APC 489 Advance with PN 23nm. ➤ PM System: AVL SPC PLUS/ Horiba MDLT ➤ FTIR: AVL FTIR/HORIBA MEXA-ONE-FT ➤ Fuel Flow Meter & Conditioning (Liquid Fuel): - AVL 735S and AVL 753C ➤ Combustion Air Handling Unit: - AVL (QCORP) with WNTC capability ➤ Coolant Conditioning Unit: - AVL CONSYSCOOL 553-450 ➤ Blow By meter: AVL 442S ➤ Air flow meter: ABB SENSY/ AVL FSA ➤ Micro soot: AVL 483 Plus ➤ Oil conditioning unit: CONSYSLUBE 200 ➤ Smoke meter: AVL 415S ➤ Opacimeter: AVL 439 	

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(Dyno torque curve)



Generator Operation Curve



Motoring Operation Curve

Test Bed Upgrade for H₂

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Annexure - XIII

Equipment Description (Make and Model) for Major Components/Items

SI No.	Description	Make/Model (As Mentioned or Equivalent)	Supplier Remarks
1	Air Handling Unit		
1.1	Air Cooled Chiller	Trane/Daikin/York/Carrier	
1.2	Pumps	Grundfos/Armstrong/Xylem/Wilo	
1.3	AHU	Zeco/Citizen/Edgetech/System Air/Flaktwood	
1.4	Cooling Tower	Bell/Advance/Techni/Himgiri	
1.5	Ventilation Fans	Kruger/Nicotra/Engi-Con/Nadi	
1.6	Panel	To be specified	
1.7	PLC	Siemens/Mitsubishi/Allen Bradley	
1.8	VFD	ABB/Siemens/Danfoss/Schneider/DEIF	
2	Safety Interlocks		
2.1	Fire Damper	Trox/Schischek/Rotork/Systemair/MSA	
2.2	Actuator Motor for Damper	Siemens/Honeywell	
2.3	Differential Pressure Transmitter	Dwyer/Yokogawa/Honeywell/Siemens/Danfoss/MSA	
2.4	Door Switch	Pilz/Substantial Equivalent	
2.5	Differential Pressure Switch	Siemens/Dwyer/Honeywell/Danfoss	
2.6	Temperature & Humidity Transmitter	Vaisala/Honeywell/Dwyer/Siemens/Johnson Controls	
2.7	Temperature Transmitter	Honeywell/Dwyer/Siemens/Johnson Controls	
2.8	Hydrogen Sensor	Honeywell/Ambetronics/MSA	
3	Ducting		
3.1	Supply Air Grill	Systemair/Ruskin Titus/Trox/Flaktwood / Cosmos	
3.2	Spot Diffuser	Systemair/Ruskin Titus/Trox / Flaktwood / Cosmos	
3.3	Louver	Systemair/Ruskin Titus/Trox/Flaktwood / Cosmos	

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3.4	Dampers	Systemair/Ruskin Titus/Trox/Flaktwood / Cosmos	
3.5	Flexible Duct Connector	Easyflex/Resistoflex	
4	Scavenging System		
4.1	Blower	MZ Aspiratory/Sodeca/Kruger/Nicotra/Nadi	
4.2	Air Flow Meter	FCI/Equivalent	
4.3	Differential Pressure Transmitter	Yokogawa/Honeywell/Siemens/Danfoss	
4.4	Fire Damper	Trox/Schischek/Rotork/Systemair	
5	Engine Exhaust Package		
5.1	Exhaust Blower	MZ Aspiratory/Sodeca/Kruger/Nadi	
5.2	High Temperature Valve	Aira Automation/Floetek/L&T/Herber Holz	
5.3	Differential Pressure Transmitter	Dwyer/Yokogawa/Honeywell/Danfoss/Siemens	
5.4	Temperature Sensor & Transmitter with Thermowell	Yokogawa/Honeywell/Siemens/Danfoss /Gauges Bourdon	
5.5	Hydrogen Sensors	Honeywell/Ambetronics/MSA	
5.6	Shut-off Valve	Kitz/Audco/Advance/L&T	
5.7	Pneumatic Pump	Graco/Festo	
5.8	Ball Valves	Kitz/Audco/Advance/L&T/Zoloto	
5.9	Dilution Box (SS 304)	MOC: SS 304, Fabricated in minimum 3 mm thickness	
5.1	Flexible Joints	Resistoflex/Easyflex/Coree	
5.11	Gaskets	Garlock	
5.12	Pipe	Ratnamani/DHV/Tata/Jindal JSW -MOC: SS 304	
5.13	Insulation	Superwool HT/Superwool Plus; Cloth: Q Shield	
6	Fuel Storage and Supply		
6.1	Ball Valves	Swagelok/Parker/HIP/HIFLUX/FITOK	

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6.2	Check Valves	Swagelok/Parker/HIP/HIFLUX/FITOK	
6.3	Pressure Regulators	GCE/Tescom Emerson	
6.4	Flow Meter	Emerson/Krohne Marshall/ABB/ Endress+Hauser	
6.5	Shut-off Valves	Swagelok / Parker / HIP / HIFLUX / FITOK	
6.6	Pressure Relief Valves	Statso/Emerson	
6.7	Tube and Tubing Accessories	Swagelok/Parker /HIP/HIFLUX/FITOK	
7	Water Mist Fire Suppression System		
7.1	Booster Pump, Pneumatic Valves, Nozzles, Pipes & Cables	Fogtec/Minimax/Danfoss	

Note: For other items not in the list - Supplier to consider the make and model suitability to the H₂ test cell requirements including compatibility.

Bill of Quantity and Description for Major Component/Items

SI No.	Description	Make (As Mentioned or Equivalent)	Minimum Quantity	Supplier Remarks
1	Fire Detection System			
1.1	Flame Sensor/Detector	Honeywell/Hochiki/Morley/ Siemens	2	
1.2	Heat Detector	Honeywell/Hochiki/Morley/ Siemens / Agni / Dregor	2	
1.3	Fire Alarm Panel	Honeywell/Notifier/Hochiki/ Morley / Siemens	1	
1.4	Hooter	Notifier/Hochiki/Morley/ Siemens	1	
1.5	Thermal Camera with Monitor, Recorder & UPS	Fluke/Honeywell/Equivalent	1	
2	Gas Detection System			
2.1	H ₂ Sensor - Test Cell	Honeywell/Ambetronics/MSA	8	
2.2	H ₂ Sensor - Storage	Honeywell/Ambetronics/MSA	2	

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2.3	CO, CO ₂ , NO _x , CNG Sensor	Honeywell/ Ambtronics/ Oldham / MSA	1 Each	
3	Electrical			
3.1	Lighting – Test Cell	CGL/Baliga/TRI-FLP/Sudhir	20	
3.2	3-Phase Flame Proof Switch Socket	TRI-FLP/CGL/Baliga/ Equivalent	5	
3.3	1-Phase Flame Proof Switch Socket	TRI-FLP/CGL/Baliga/ Equivalent	6	
3.4	Static Discharge Unit (One at Test Cell & One at Storage)	Precious / Equivalent	2	

Note:

- For other items not in the list – Supplier to consider the BOQ suitability to the H2 test cell requirements including compatibility
- Equivalent make shall be declared by the Supplier during the pre-bid meeting along with all technical catalogues of the proposed brand for scrutiny. After acceptance of all the Suppliers, the name of the equivalent make shall be included in the BOQ. In case of non-acceptance, the Supplier has to confirm for the mentioned make. The decision of the ICAT shall be final and binding.

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A.3 Other Technical Conditions:

1. Submission of Quotation and Technical Compliance

- The Bidder shall submit their quotation strictly in accordance with the specifications, scope of supply, and other requirements as detailed in the tender documents pertaining to the procurement, **Test Bed Upgrade for H₂-ICE and Euro VII**.
- The Technical Bid shall mandatorily include detailed information such as the brand name, model number, complete technical specifications, and supporting technical literature/catalogues clearly highlighting the features and parameters being offered. All technical submissions must be relevant, specific, and clearly linked to the tendered requirements.
- The Bidder is mandatorily required to fill and submit the Technical Compliance Checklist as provided in **"Form XX"** of the tender document, clearly indicating item-wise compliance against each of the technical specifications laid out in the bid.
- The Statement of Compliance in **"Form XX"** shall be accompanied by authentic, verifiable documentary evidence, including datasheets, certificates, manuals, or test reports to demonstrate conformity to each parameter specified. Unsupported compliance claims shall not be considered and may lead to rejection of the bid.
- All pages of the bid submission, including the technical bid, annexures, catalogues, and all supporting documents, shall be duly signed and stamped by the authorized signatory of the bidding entity. Any overwriting, corrections, or alterations must also be authenticated by the same.
- Non-submission or incomplete submission of **"Form XX"**, absence of a proper Statement of Compliance, lack of supporting documents, or failure to sign/stamp bid documents shall be treated as non-compliance and may result in summary rejection of the bid without any further correspondence or clarification.

2. Product Availability and Support Condition

- The bidder shall ensure that the **Test Bed Upgrade for H₂-ICE and Euro VII** offered in response to this tender is not classified as **"End-of-Life"** (EOL) or **"End-of-Sale"** (EOS) as of the date of bid submission.
- If, for any reason whatsoever, support, availability, or manufacturing of the quoted product is discontinued, withdrawn, or declared obsolete prior to delivery or commissioning, the bidder shall, without any additional cost to the Purchaser, furnish and supply a replacement product that is a superior or equivalent alternative. Such replacement product shall conform to or exceed all original technical specifications, quality standards, and functional requirements as set forth in the tender document.
- The bidder shall furnish a formal declaration undertaking to provide spare parts and requisite service support for a minimum period of **Ten (10) Years** following the expiry of the warranty period.
- The bidder shall ensure that the provision of such replacement product and the continued support obligations shall not cause any disruption, delay, or compromise to the Purchaser's operational requirements or intended use of the equipment.
- Failure to comply with the foregoing conditions shall be construed as a material breach of contract, entitling the Purchaser to exercise all available remedies, including but not limited to rejection of the bid, cancellation of the contract, or enforcement of penalties in accordance with the terms and conditions of the tender.

3. **Notification of Buyer's Responsibilities:** The Successful Bidder shall, within **Fifteen (15) calendar days** or earlier from the date of issuance of the Purchase Order (PO), be obligated to provide timely and advance written notification to the Purchaser specifying any requirements, materials, services, or facilities necessary for the installation, testing, and commissioning of the Test Bed that fall outside the scope of the Successful Bidder's contractual obligations and are to be arranged by the Purchaser.

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Such notification shall be made with sufficient lead time to enable the Purchaser to make the necessary arrangements without causing any delay to the project schedule. Failure to provide such timely notification shall not relieve the Successful Bidder of responsibility for any resultant delays or additional costs arising from such oversight.

4. Delivery, Packaging, and Insurance Instructions

- 4.1 **Delivery Terms:** The delivery of the equipment shall be on **FOR (Free on Road)** basis to the premises of the International Centre for Automotive Technology (ICAT), Manesar, Haryana. The successful bidder shall bear all risks, responsibilities, and costs associated with the transportation of the **Test Bed Upgrade for H₂-ICE and Euro VII** and all related components up to the designated delivery location at the ICAT project site.
- 4.2 **Loading, Transportation, and Unloading:** The successful bidder shall be solely responsible for the loading, transportation, unloading, and safe handling of the equipment at the ICAT project site. All necessary manpower, tools, handling equipment, and resources required for these operations shall be arranged and borne by the bidder at no additional cost to ICAT.
- 4.3 **Packaging:** The equipment shall be securely and adequately packed to prevent any damage, deterioration, or loss during transit, handling, and storage. Packaging shall conform to internationally accepted standards and best practices for heavy, sensitive, and precision equipment of this nature. Packing materials shall provide protection against moisture, dust, corrosion, mechanical shocks, and any other potential hazards associated with long-distance transportation. Packaging shall also be designed to facilitate safe and efficient handling during unloading and installation.
- 4.4 **Marking and Labelling:** Each package shall be clearly and permanently marked with Consignee details, Purchase order/reference number, Package number, Handling instructions, and any other information necessary to ensure safe, accurate, and compliant transportation, handling, and storage.
- 4.5 **Insurance:** The successful bidder shall arrange, maintain, and bear the full cost of comprehensive insurance coverage for the equipment, including all components and accessories, against loss or damage during transit, storage, and until final acceptance at ICAT premises. The insurance policy shall remain valid from the time of dispatch until the equipment is duly received, inspected, and accepted at the ICAT site.
- 4.6 **Claims and Liability:** In the event of any loss, damage, or shortage during transit or unloading, the bidder shall be solely responsible for lodging claims with the carrier or insurance provider and for ensuring repair or replacement of the damaged equipment at no additional cost to ICAT. ICAT shall not be liable for any such loss or damage occurring prior to formal acceptance of the equipment.
- 4.7 **Documentation:** The bidder shall provide all necessary documentation for shipment, packing, and insurance, including but not limited to Packing list, Insurance certificate, Bill of lading/airway bill, and any other documents required for smooth transportation, customs clearance, handling, and delivery at ICAT premises.

5. Assignment and Sub-Contracting

- The Successful Bidder shall not, without the prior written consent of the Procuring Entity, sublet, assign, transfer, delegate, or otherwise dispose of the Contract or any part thereof, or any rights, interests, benefits, or obligations arising therefrom, in any manner whatsoever.
- The Successful Bidder shall provide the Procuring Entity with prompt written notification of all subcontracts awarded under this Contract that were not disclosed in the original bid or contract documentation. Such notification shall not relieve or discharge the Successful Bidder from any liability, obligation, or responsibility under this Contract.
- Subcontracting shall be permitted solely for the procurement of bought-out items and incidental works or services directly related to the execution of the Contract. All subcontracted work shall be subject to the Successful Bidder's full responsibility and compliance with the terms, conditions, and obligations of this Contract. Subcontracting shall not be used as a means to circumvent or diminish the Successful Bidder's contractual responsibilities or performance obligations.

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- Any assignment, subletting, or transfer of the Contract, or any part thereof, without the prior written approval of the Procuring Entity, shall be deemed a material breach of Contract. In the event of such unauthorized assignment or subcontracting, the Procuring Entity reserves the right to invoke any or all remedies available under the Contract and/or applicable law, including but not limited to termination of the Contract, forfeiture of performance guarantees, and claims for damages.

For or any technical queries please feel free to contact the undersigned:

Contact Person: Mr. Vaibhav Yadav- ETL Department

Contact No.: +91-84499 31000 (Mobile)

Email ID: vaibhav.yadav@icat.in

Contact Person: Mr. Amit Kumar Sisodia- ETL Department

Contact No. +91-8284828682

Mail ID: amit.sisodia@icat.in

Test Bed Upgrade for H₂-ICE and Euro VII

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Chapter - 2 Instructions To Bidders

- 1. Submission of Quotation and Technical Documentation:** The Bidder shall submit a complete and comprehensive quotation in strict conformity with the detailed technical specifications of *Test Bed Upgrade for H₂-ICE and Euro VII* as specified in "*Chapter - 1*" of the *Additional Terms and Conditions (ATC) document*. The submission must encompass both the technical and financial proposals, duly separated and prepared in accordance with the requirements and formats prescribed in the tender documents. The technical bid shall include all requisite technical documentation, specifications, detailed drawings, product literature, and any other supporting information necessary to demonstrate full compliance with the tender specifications. Non-compliance with the stipulated submission requirements or failure to provide the requisite technical and financial details may result in rejection of the bid at the sole discretion of the Purchaser.
- 2. Proposal Submission Compliance and Documentation Requirements:** The Bidder is required to submit their proposal in strict compliance with all terms, conditions, and requirements outlined in this tender document. The technical bid must include comprehensive details of the proposed solution, including the products, services, specifications, and relevant technical literature clearly demonstrating conformance to the specified requirements. Failure to adhere to any of the above requirements may render the bid liable for rejection at the sole discretion of the Purchaser.
- 3. Submission of Signed Tender Documents and Supporting Documentation:** The Bidder shall submit, as part of their proposal, a duly signed and stamped copy of the entire tender document, including all corrigenda, amendments, and annexures issued, as a token of unconditional acceptance of all terms, conditions, and specifications contained therein. Additionally, all forms, declarations, schedules, and annexures enclosed with the tender/bid document must be duly filled, signed, and stamped by the authorized signatory of the Bidder and submitted in accordance with the instructions provided. The Bidder shall also furnish all supporting documents as specified in the tender, including those required under the eligibility criteria, technical specifications, and any other qualifying requirements. Failure to submit any of the required documents, or submission of incomplete, unsigned, or unstamped documents, may result in rejection of the bid at the sole discretion of the Purchaser. It is the sole responsibility of the Bidder to ensure that the submitted bid is complete in all respects and compliant with the tender requirements. No claim shall be entertained on account of incomplete submission or non-compliance with the stated instructions.
- 4. Clarifications, Deviations, and Conditional Bids:** Bidders are strictly advised to submit their bids in full compliance with all terms, conditions, technical specifications, and requirements stipulated in this tender document. Conditional bids or bids containing deviations, exceptions, assumptions, or qualifications shall be summarily rejected without further reference or clarification, at the sole discretion of the Purchaser. Any suggestions, clarifications, or concerns regarding the tender terms and conditions must be formally raised by the Bidders only during the Pre-Bid Meeting. The Purchaser shall review such requests and reserves the absolute right to accept, modify, or reject any suggestion or concern, wholly or in part, without assigning any reason, and solely in the best interest of the Purchaser. All clarifications, amendments, or modifications arising out of the Pre-Bid Meeting shall be published either as a Corrigendum and/or as the Minutes of the *Pre-Bid Meeting (MoM)* on the Purchaser's official website (www.icat.in) and on the *GeM Portal*. These shall form an integral part of the tender and shall be binding on all Bidders. No request for changes or deviations shall be entertained after the Pre-Bid stage.

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5. Pre-Bid Meeting Conditions

5.1 Pre-Bid Meeting shall be held to address queries and provide clarifications regarding the scope of work, technical requirements, and the bid submission process.

- **Date:** *12th March' 2026*
- **Time:** *14:00 Hrs.*
- **Venue:** *ETL Meeting Room, International Centre for Automotive Technology (ICAT), Plot No. 26, Sector - 3, IMT Manesar, Gurugram - 122051, Haryana*
- **Mode:** *Physical Meeting*

All interested bidders are encouraged to attend the pre-bid meeting to seek necessary clarifications before submission of their bids.

5.2 Submission of Pre-Bid Queries

- Bidders are required to submit their queries, if any, in writing to, vaibhav.yadav@icat.in, amit.sisodia@icat.in, vikas.sharma@icat.in & javed.rahi@icat.in by *10th March' 2026 up to 1700 Hrs.*
- **Queries should be submitted in the following format (Format XII):**

Sl. No.	Clause No.	Existing Provision	Query/Suggestio
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5.3 Clarifications and Amendments

- Clarifications and responses to the pre-bid queries shall be issued in the form of a Corrigendum/ Addendum and uploaded on the *GeM Portal & ICAT Website*.
- The corrigendum shall form an integral part of the tender document and must be duly considered while submitting the final bid.

5.4 No Individual Communication

- No individual responses will be provided to bidders. All clarifications shall be shared only through official corrigenda.

5.5 Binding Clarifications Only Through Corrigendum

- Only clarifications provided through officially issued corrigenda shall be considered binding. Any verbal discussions or informal exchanges during the pre-bid meeting shall not be treated as official unless formally incorporated.

5.6 No Suggestions or Deviations Post Submission Deadline

- No suggestions, deviations, modifications, or requests for clarification shall be entertained after the bid submission deadline. Bidders are therefore advised to seek all necessary clarifications and raise concerns during the pre-bid period.

6 Earnest Money Deposit (EMD)

6.1 EMD Amount: Bidders are required to submit an *Earnest Money Deposit (EMD) of INR 38,00,000/- (Indian Rupees Thirty-Eight Lakhs Only)* along with their bid. The EMD shall be submitted through the mode specified in the GeM portal or as otherwise prescribed in the tender document.

6.2 Exemption for MSEs/Startups: As per the guidelines issued by the Ministry of Micro, Small and Medium Enterprises and the Department for Promotion of Industry and Internal Trade (DPIIT), Government of India, Micro and Small Enterprises (MSEs) and recognized Startups are exempted from payment of EMD, subject to submission of the following

- Valid supporting documents such as Udyam Registration Certificate (for MSEs) or Startup Recognition Certificate issued by DPIIT.

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- A duly signed Declaration/Undertaking in lieu of EMD in the prescribed format **“Form-IV”** provided in the Additional Terms and Conditions (ATC) document.

6.3 Bid Rejection in Absence of EMD/Declaration

- Bids submitted without the requisite EMD or valid exemption documents or duly signed Declaration/Undertaking in lieu of EMD in the prescribed format **“Form-IV”** shall be summarily rejected as non-responsive.
- Submission of incorrect, expired, or manipulated exemption certificates may lead to disqualification and blacklisting as per applicable procurement rules.

6.4 Forfeiture of EMD: The EMD shall be liable to forfeiture in the following cases

- If the bidder withdraws or modifies the bid during the bid validity period.
- In case of any false declaration or non-compliance with tender terms.
- If the successful bidder fails to sign the contract or submit the required Performance Security within the stipulated time.

6.5 **Refund of EMD:** EMD's of unsuccessful bidders shall be refunded without interest after finalization of the contract. For the successful bidder, EMD may be adjusted against the Performance Security, if applicable.

7 Submission of Bids

Bidders are required to submit their bids in **two separate parts** as detailed below:

- **Part I – Technical Bid:** This shall include all relevant documents and information demonstrating the bidder's compliance with the technical requirements and eligibility criteria as outlined in the **tender document**. *Bidders must not divulge price of tendered item in technical bid. Violation of the same may lead to rejection of the bid.*
- **Part II – Financial Bid:** This shall contain the price proposal strictly in the format prescribed in the tender document.

Both parts must be submitted in separate as specified in the e-tendering or GeM platform.

8 Evaluation Process

- **Stage 1 – Technical Evaluation:** The Technical Bids shall be opened and evaluated first. Only those bidders who meet all mandatory requirements and obtain the minimum qualifying marks, including full marks in technical capability (as applicable), shall be deemed technically qualified.
- **Stage 2 – Financial Evaluation:** The Financial Bids of only the technically qualified bidders will be opened and considered for further evaluation. Financial Bids of bidders who fail to qualify in the technical stage shall be returned unopened or disqualified from further consideration.

9 **Availability of Tender Documents and Corrigendum:** Prospective Bidders are advised to regularly visit the official website of the International Centre for Automotive Technology (ICAT) at www.icat.in and/or the **Government e-Marketplace (GeM) portal** for downloading the complete Tender Document, including all instructions, terms, specifications, and any corrigendum, amendment, clarification, or notification issued in connection with this Tender.

It shall be the sole responsibility of the Bidder to ensure that they have the latest version of the Tender Document and are fully aware of all updates, revisions, or corrigenda issued prior to the bid submission deadline. ICAT shall bear no responsibility or liability for any oversight or failure on the part of the Bidder to obtain such information from the aforementioned platforms.

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Chapter - 3

Earnest Money Deposit (EMD Clause)

Earnest Money Deposit (EMD): *INR 38,00,000/- (Rupees Thirty Eight Lakhs Only)* can be submitted in form of NEFT/RTGS/FDR/DD/Bank Guarantee/Banker's Cheque drawn in favour of "International Centre for Automotive Technology", payable at Manesar/ Gurugram valid for at least six months from any branch of Delhi/NCR of Indian scheduled Bank or Online through RTGS/NEFT/Internet Banking in Beneficiary Name "International Centre for Automotive Technology".

Or

Firms that are registered as Micro or Small Enterprises (MSEs) under the provisions of the Public Procurement Policy for MSEs, 2012, issued by the Ministry of Micro, Small and Medium Enterprises (MSME), Government of India, or those recognized as Startups by DPIIT, or are registered with the Central Purchase Organization or the concerned Ministry/Department for the tendered item, shall be exempted from submission of Earnest Money Deposit (EMD), subject to the following conditions:

- A valid registration certificate clearly indicating coverage for the tendered item must be submitted along with the Technical Bid.
- The registration certificate should remain valid for a minimum of six (6) months from the last date of bid submission.
- Exemption shall be granted only for procurement of goods/services directly covered under the registration.

Note: The exemption shall not apply to traders, agents, dealers, distributors, or firms engaged in works contracts, even if they are registered under MSME or NSIC.

Or

In place of a Bid security, Bidders can submit Bid securing declaration as per "Form IV" accepting that if they withdraw or modify their Bids during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document, they will be suspended for the period of 1 year from the date of opening of this bid from being eligible to submit Bids for contracts with the ICAT that invited the Bid.

ICAT Bank Details for NEFT/RTGS (in case any bidder deposits the EMD of INR 38,00,000/- through NEFT/RTGS)

HDFC Bank Details (Saving A/c for transactions in INR Only); -

Beneficiary Name	International Centre for Automotive Technology
Bank Name	HDFC Bank Ltd.
Branch	Plot-K, Sector-2, Manesar-122051 Haryana
Account No.	05891450000118
Account Type	Saving
RTGS IFSC Code	HDFC0000589
Swift Code	HDFCINBB
MICR Code	110240079

Proof of payment shall be submitted online on GeM portal & original NEFT/RTGS/FDR/DD/Bank Guarantee/Banker's Cheque should reach at "To, The Purchase Department, International Centre For Automotive Technology, Plot No. 26, Sector - 3, Near HSIIDC Office, IMT Manesar, Gurugram - 122051 (Haryana).

Key Note's

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- EMD shall be exempted to Micro & Small Enterprises registered for the tendered items/as per the latest Govt. of India guidelines. MSME/Start-up Policy is meant for procurement of only goods produced and services rendered by MSE's. However, traders/distributors/sole agent/works contracts are excluded from the purview of Public Procurement Policy for MSEs Order, 2012. The bidders claiming the preference must submit the relevant document (The certificate should be valid for at least 6 months from the date of submission of bids).
- The bid received without EMD/Documentary proof of Exemption of EMD, will be summarily rejected.
- Cheque/Money Order/Cash shall not be accepted as EMD.
- A bid will be rejected if EMD is found to be of lesser amount or EMD is not submitted in the manner prescribed.
- A bid which is not accompanied by such Earnest Money Deposit or Non-Submission of Bid Security Declaration Form **"Form IV"** will be construed as non-compliant bid and should be rejected.
- The Earnest Money Deposit (EMD) of the unsuccessful bidder will be returned to them within 30 days after finalization and award of the tender without any interest. The Earnest Money Deposit of the successful Bidder will be returned upon the successful Bidder furnishing the Performance Bank Guarantee.

EMD should be forfeited in favour of ICAT in case the Bidder: -

- The EMD may be forfeited, if a Bidder withdraws his bid during the period of bid validity or on submission of false documents/undertaking.
- Without the written consent of ICAT, it has withdrawn its Bid during the validity period of the Bids and any extensions thereto.
- After opening of the financial bid, alters the quoted rates/conditions in the Bid.
- Fails to provide /furnish the Performance Bank Guarantee within stipulated period mentioned in the Letter of Acceptance.
- Does not reply to any queries that may be raised after opening of technical/financial bids.
- If the bidder does not accept the corrections made by ICAT to its Bid Price pursuant to "Examination of Financial Proposal and Correction of Arithmetical Errors".

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Chapter - 4

Eligibility & Technical Evaluation Criteria

Part - I (Pre-Qualification/Minimum Eligibility Criteria)

Eligibility Criteria: The following mentions the pre-qualification criteria. A bidder participating in the procurement process shall possess the following pre-qualification/minimum eligibility criteria: Any bid failing to meet the stated criteria shall be summarily rejected and will not be considered for technical evaluation.

Pre-qualification/Minimum Eligibility Criteria for the Bidders:

1. **Legal Valid Entity:** The Bidder must be a legally recognized entity under applicable Indian laws and shall be eligible to participate in the tender in any of the following forms: Proprietorship Firm, Partnership Firm, Private Limited Company, or Registered Agency.

To establish legal status and eligibility, the Bidder shall mandatorily submit documentary evidence of their legal constitution along with the Technical Bid, as specified below:

- **Proprietorship Firm:** A copy of the valid registration certificate, trade license, or any equivalent document issued by a competent authority clearly indicating the establishment and legal existence of the firm.
- **Partnership Firm:** A copy of the duly executed Partnership Deed along with the firm's registration certificate issued by the Registrar of Firms (if applicable under the Partnership Act, 1932).
- **Private Limited Company:** A copy of the Certificate of Incorporation issued by the Registrar of Companies (RoC), along with the Memorandum of Association (MoA) and Articles of Association (AoA), duly certified by an authorized signatory.
- **Agency:** A copy of the registration certificate or any valid statutory license or document evidencing the agency's legal status under the relevant law (e.g., registration under the Shops and Establishments Act or equivalent legislation).

Failure to submit any of the above documents as applicable to the nature of the bidding entity may render the bid liable for rejection at the sole discretion of the Purchaser. All documents shall be self-attested and submitted as part of the Technical Bid.

2. **Mandatory Submission of Comprehensive Proposal:** It shall be a mandatory pre-qualification requirement that all Bidders submit a complete and comprehensive proposal covering the entire scope of supply, services, and deliverables as specified in the Tender Documents, including but not limited to all items, components, and associated works listed in the Bill of Quantity (BoQ), Scope of Work (SoW), Technical Specifications, and Additional Terms and Conditions (ATC).

Submission of an incomplete or partial bid, including but not limited to omission of any item, sub-item, or service from the proposal, shall be treated as non-compliance with the tender specifications and shall result in outright rejection of the bid without further consideration or evaluation.

Bidders are advised to thoroughly review all tender documentation and ensure that their technical and financial proposals fully comply with the requirements stated therein. No relaxation, clarification, or opportunity for rectification shall be provided in cases of non-compliance with this condition.

3. **Bidder Eligibility - OEM or Authorized Channel Partner**

The Bidder must be either:

- Original Equipment Manufacturer (OEM) of the offered *Test Bed Upgrade for H₂-ICE and Euro VII*,
- or

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- an Authorized Channel Partner duly appointed by the OEM for the purposes of participation in this tender.

3.1 In case the Bidder is an Authorized Channel Partner

- The Bidder shall submit a valid and current Authorization Certificate issued by the OEM, explicitly authorizing the Bidder to quote, supply, install, and provide after-sales support for the quoted equipment under this tender.
- The Authorization Certificate shall be submitted in the prescribed format annexed as **“Form VII”** in the tender document and must be duly signed and stamped by an authorized signatory of the OEM.
- Bids submitted without the required Authorization Certificate in the specified format shall be considered non-compliant and shall be rejected without further evaluation.

3.2 In case the Bidder is the OEM

- The Bidder shall submit a self-declaration or certificate confirming their status as the Original Equipment Manufacturer (OEM) of the quoted product.
- This declaration must be furnished on the OEM’s official letterhead and signed by an authorized representative of the organization.
- Failure to submit the applicable certification or declaration as outlined above shall render the bid technically non-responsive, and such bids shall be summarily rejected.

4. **Financial Eligibility – Average Annual Turnover:** The Bidder must have achieved an average annual turnover of not less than **INR 50 Crores (Rupees Fifty Crores Only)** during the **last three (3) consecutive financial years, namely FY 2022–23, FY 2023–24, and FY 2024–25.**

Documentary Evidence Required: To substantiate the above, the Bidder shall submit any of the following documents as part of the Technical Bid.

- A certificate from a Chartered Accountant (**Form XVI**), clearly certifying the annual turnover for each of the above-mentioned financial years, **or**
- A copy of the Audited Balance Sheet and Profit & Loss Account for each of the three financial years, duly certified by a Chartered Accountant or Statutory Auditor, **or**
- An attested certificate from a Government Department/Client confirming the turnover, provided it is backed by audited financial statements.

Mandatory Disclosures:

- Full contact details of the Chartered Accountant or Statutory Auditor who has certified the document, including Name, Designation, Firm Name, Email ID, Contact Number.
- The UDIN (Unique Document Identification Number), as issued by the Institute of Chartered Accountants of India (ICAI), must be clearly visible on all CA-certified documents and balance sheets.

Non-Compliance: Failure to submit the required financial documentation in the prescribed format, or failure to mention the CA/Auditor's contact details and UDIN, shall render the bid technically non-responsive and liable for rejection without any further evaluation.

5. **Technical Experience – Minimum Work Experience Requirement:** The Bidder, or the Original Equipment Manufacturer (OEM) represented by the Bidder (in case the Bidder is not the OEM), shall possess adequate technical capability and proven past performance. Accordingly, the Bidder/OEM must have, as on the date of submission of bid, a minimum of three (3) years’ experience in the Supply, Installation, Testing and Commissioning (SITC) of any of the following systems **Capable of up to EURO VI/BSVI/TREM/CEV Stage V standards within India:**

- *Engine Test Beds/Engine Test Facilities with or without Emission Measurement Systems; or*

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- *Vehicle Test Benches (Chassis Dynamometer) with or without Emission Measurement Systems; or*
- *Electric Vehicle (EV) Test Benches systems (where applicable to CMVR norms).*

6. **Prior Experience:** During the past three (3) years preceding the date of release of this Tender, the Bidder, or the Original Equipment Manufacturer (OEM) represented by the Bidder (in case the Bidder is not the OEM) must have successfully Supplied, Installed and Commissioned at least one (1) similar Engine Test Facility/Test Bed in India, which shall have been in satisfactory and continuous operation for a minimum period of one (1) year from the date of commissioning and final acceptance.

Note: If the test facility installed at bidder's technical centre (within India), also be considered for prior experience & the same test facility must not be solely utilized by the bidder only and shall be undertaken in development of H2-ICE Engines for other Engine Manufacturers also (Contract copy or Project Agreement confirmation or Executed Service Agreement & feedback from project undertaking organization/engine manufacturer to be provided).

Such facilities should have been supplied and commissioned for one or more of the following types of entities

- Central Government Ministries/Departments
- State Government Departments
- Public Sector Undertakings (PSUs)
- Autonomous Bodies/Institutions
- Government-funded R&D Organizations
- Reputed Private Sector Companies operating in relevant fields (automotive, aerospace, electronics, defence, or other industrial testing applications)
- Bidder's own technical centre

The Bidder shall provide the following documents in support of meeting this criterion:

- i. Copies of Purchase Orders/Work Orders issued by Government Departments, PSUs, Research Institutions, or reputed Private Sector Organizations clearly indicating the scope of work, nature of equipment supplied, and year of execution.
- ii. Corresponding Completion Certificates or Client Performance Certificates issued by the end-user.
- iii. A detailed statement summarizing past projects executed in the last 3 years, including:
 - Name of Client
 - Equipment Supplied
 - Year of Completion
 - Contact Details of Client (for verification, if required)

Failure to demonstrate prior experience in last three (3) years in Supply, Installation, Testing and Commissioning similar nature engine test facility/ test bed (at least 1 Nos) shall render the bid technically non-responsive and liable for rejection.

Similar Nature Definition: To qualify under similar nature work, the bidder or their OEM must have upgraded the existing conventional engine test cell to H2-ICE test facility or commissioned new H2-ICE test facility/ies in any of the following entities within the territory of India:

- Departments or Ministries of the Government of India
- State Government Departments
- Public Sector Undertakings (PSUs)
- Automobile Industry
- Any reputed private organization or institution
- Bidder's own technical centre

7. **Local Presence:** The Bidder must be an entity based and registered in India, possessing a valid legal status under applicable Indian laws and regulations.

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8. **Blacklisting Declaration:** The Bidder shall not be currently blacklisted, debarred, or suspended by any Ministry or Department of the Government of India, any State Government, Public Sector Undertaking (PSU), or any reputed private organization or institution within India. A self-declaration to this effect, duly signed by the authorized signatory on the Bidder's official letterhead, must be submitted along with the tender documents. Any concealment or misrepresentation of such information shall result in disqualification and potential legal action as per applicable laws.
9. **Service Support Facility:** The Bidder must maintain a fully operational service support facility within India (**details of skilled/ trained manpower (at least 5 personnel)**), capable of providing prompt and effective maintenance and repair services for *Test Bed Upgrade for H₂-ICE and Euro VII* during the warranty period and subsequent post-warranty phase. The Bidder shall submit a formal declaration on its official letterhead, affirming the availability of such service support infrastructure within India, including details of the location(s), technical manpower, and spare parts availability to ensure minimal downtime in case of any equipment breakdown.

Bidders to Comply with:

10. Rule 144(xi) of GFR 2017 regarding restrictions on procurement from a bidder of a country that shares a land border with India will be liable to rejection (refer to the to the Office Memorandum of the Department of Expenditure dated July 23, 2020, and as revised from time to time at <https://doe.gov.in/sites/default/files/OM%20dated%2023.07.2020.pdf>).
11. Department of Industrial Policy and Promotion (DIPP) vide No. P-45021/2/2017-PP (BE-II) dated 04.06.2020 and as revised from time to time regarding bidders eligibility and preference to make in India (<https://dpiit.gov.in/sites/default/files/PPP%20MII%20Order%20dated%204th%20June%202020.pdf>).

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Part - II (Technical Bid Evaluation Parameters)

Bid Evaluation - Eligibility for Technical Assessment: The Bidder shall mandatorily comply with all the *Pre-Qualification/Minimum Eligibility Criteria* as specified in "**Chapter - 4**" of this tender document. Only those Bidders who are found to be fully compliant with the *Pre-Qualification/Minimum Eligibility Criteria*, upon detailed scrutiny of the submitted documentation, shall be considered eligible for Technical Bid Evaluation.

Any Bidder failing to meet the stipulated criteria in "**Chapter - 4**" shall be disqualified from further evaluation, and their Financial Bids shall not be opened or considered under any circumstances. The decision of the Purchaser in this regard shall be final and binding, without any obligation to provide justification or entertain representations.

Technical Bid Evaluation Parameters

1.1 ICAT shall follow segregated bid submission evaluation system. The minimum pass mark in technical bid shall be **80 Points (80%) out of 100 Points**. Bidders, who gets cut-off marks, will be qualified for next part of evaluation i.e. financial part.

1.2 The Technical Bids shall be awarded points based on the following evaluation criteria:

Evaluation Parameter	Details	Marks
Equipment Specifications	Technical Specifications/Requirements offered against the requirements spelt out in Annexure A in this tender	55
Service Support	Local Support (Delhi NCR) <ul style="list-style-type: none"> • Within NCR - 5 Marks • Outside NCR & Within India - 3 Marks 	5
	Response Time (In Hours) <ul style="list-style-type: none"> • <24 Hours - 5 Marks • >24 Hours & < 48 hours - 3 Marks 	5
Bidder's Past Experience	Similar Nature Project (In Last 3 Years before bid submission) <ul style="list-style-type: none"> • 1 Project (Minimum) - 10 Marks • 1-2 Projects - 12 Marks • More Than 2 Projects - 15 Marks 	15
	Experience (Nos. of Year) in Supply, Installation, Testing and Commissioning (SITC) of any of the following systems <i>Capable of up to EURO VI/BSVI/TREM/CEV Stage V standards within India (As Defined in Criteria - 5 of Chapter 4)</i> . <ul style="list-style-type: none"> • 3 Years (Minimum) - 2 Marks • Above 3 Up To 5 Years - 3 Marks • More Than 5 Years - 5 Marks 	5
	Average Annual Turnover of 50 Crores in the Past 3 FY: 2022-23, 2023-24 & 2024-25 <ul style="list-style-type: none"> • 50 Crores (Minimum) - 5 Marks • 50 Crores up to 75 Crores - 7 Marks • More Than 75 Crores - 10 Marks 	10
Customer Feedback (executing similar natural of work)	<ul style="list-style-type: none"> • Minimum 1 Nos - 2 Marks • >1 up to 2 - 3 Marks • More Than 2 - 5 Marks 	5
Total Marks		100

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Evaluation Criteria and Preference Policy:

1. **Technical Evaluation Threshold – Mandatory Compliance**
 - Bidders must secure a **minimum of 55 out of 55 points** in the **Technical Specifications Evaluation** section. This is a **mandatory qualifying criterion**; failure to achieve the full technical specification score will result in **immediate disqualification**, irrespective of the total overall score.
2. **Overall Evaluation Threshold:** To qualify for financial bid opening, bidders must obtain a minimum of **80 out of 100 points (80%)** in the overall evaluation. This includes scores from technical specifications, company credentials, past performance, and other evaluation parameters as outlined in the tender document.
3. **Preference to Local Suppliers under Public Procurement Policy**
 - ICAT reserves the right to extend **purchase preference to local suppliers** in accordance with the provisions of the **Public Procurement (Preference to Make in India), Order 2017**, issued by the **Department for Promotion of Industry and Internal Trade (DPIIT)**, Ministry of Commerce and Industry, Government of India, vide Order No. **P-45021/2/2017-PP (BE-II)** dated **04.06.2020**, and any subsequent amendments thereto.
 - For detailed guidelines, bidders may refer to the DPIIT policy document available at: <https://dpiit.gov.in/sites/default/files/PPP%20MII%20Order%20dated%204th%20June%202020.pdf>
 - Bidders seeking such preference must submit the requisite **self-declaration and certification** documents as per the DPIIT guidelines along with their Technical Bid.
4. **Purchase Preference for MSEs and Startups:** In accordance with the provisions of the Public Procurement Policy for Micro and Small Enterprises (MSEs), 2012 and the relevant guidelines issued by the Ministry of Micro, Small and Medium Enterprises (MSME), as well as Startup India Policy.
 - **Preference as per Government Policy:** ICAT reserves the right to extend preference to Local Suppliers, Micro and Small Enterprises (MSE's), and Startups, in accordance with the applicable guidelines, circulars, and notifications issued by the Government of India, as amended from time to time. Such preference shall be accorded only upon submission of valid, relevant, and verifiable supporting documents along with the bid. Failure to provide the required documentation shall result in ineligibility for any preferential treatment.
 - **Applicability of MSE Public Procurement Policy:** In accordance with the Public Procurement Policy for Micro and Small Enterprises (MSE's) Order, 2012, as amended, the benefits under this policy shall apply exclusively to goods manufactured or services rendered by registered MSE's. Entities operating solely as traders, distributors, marketing agents, or engaged under works contracts are expressly excluded from the scope and benefits of this policy.
 - **Relaxation of Prior Turnover and Experience Requirements:** ICAT, at its sole discretion, may relax the requirements of prior turnover and prior experience for start-up enterprises recognized by the Department for Promotion of Industry and Internal Trade (DPIIT), provided that such entities fully comply with all quality standards, technical specifications, and performance criteria as specified in the tender documents. Such start-ups may be MSMEs or otherwise. Only registered Micro and Small Enterprises (MSEs) and DPIIT-recognized start-ups shall be considered for relaxation under this provision. Any such relaxation shall be strictly conditional upon the enterprise's demonstrated capability to meet all functional, operational, and contractual requirements of the tender. This relaxation shall be applied in accordance with the provisions of applicable government policies and shall not compromise adherence to the tender's prescribed technical, quality, or performance requirements. ICAT's decision in this regard shall be final and binding.

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- **Purchase Preference:** If an MSE or eligible Startup bidder quotes within L1 + 15% price range and agrees to match the L1 price, the order for up to 25% of the total tendered quantity may be awarded to such MSE/Startup, as per the policy provisions.

Test Bed Upgrade for H₂-ICE and Euro VII

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Chapter - 5 Bid Rejection Criteria

Bids submitted in response to this tender shall be liable for outright rejection and shall not be considered for further evaluation under any of the following circumstances:

1. **Non-Compliance with Bid Security Requirements**
 - Submission of bid without the required Earnest Money Deposit (EMD), or
 - Non-submission of the Bid Security Declaration Form (**Form IV**), or
 - Non-submission of valid Udyam Registration Certificate (for MSEs) or a DPIIT recognition certificate (for Startups) along with the bid.
2. **Financial Turnover Below Threshold:** Bidders must have an average annual turnover of not less than **INR 50 Crores** during the three most recent financial years (**FY 2022-23, 2023-24, and 2024-25**). Failure to submit audited financial statements or turnover certificates certified by a Chartered Accountant (CA) for these years shall result in disqualification.
3. **Non-Submission of Statutory Registrations:** Bidders failing to submit valid copies of **their GST registration certificate and Permanent Account Number (PAN)** shall be deemed non-compliant.
4. **Unsatisfactory Client References:** If even one reference provided by the bidder is found to be unsatisfactory, the bidder shall be disqualified. Internal references obtained from **NAB or its associated centres** may also be considered valid for disqualification purposes, regardless of whether they are formally submitted with the bid.
5. **Conditional or Deviated Bids:** Any bid containing deviations, conditions, or modifications to the tender terms and conditions shall be summarily rejected.
6. **Incomplete Bid Submission:** It is a mandatory requirement that bidders submit comprehensive proposals covering all items listed in the tender. Any incomplete bid, including failure to quote for any item or component, shall be treated as non-compliant. Such bids shall be rejected without further correspondence, and the bidder shall be disqualified from the evaluation process.
7. **Segregated Bidding Process and Rejection of Non-Compliant Submissions:** Bids under this Tender shall be submitted through the GeM Portal under a Segregated Bidding Process, comprising separate Technical and Financial Bids, as prescribed in the Tender Document and as per GeM guidelines. The Technical Bid shall contain only technical information and supporting documentation, with no reference to prices or commercial terms. Submission of any price details, financial information, or commercial quotation within the Technical Bid, either directly or indirectly, on the GeM Portal shall constitute a material deviation and result in summary rejection of the bid without further evaluation. Such non-compliance shall render the bidder ineligible for consideration under this Tender, and the decision of the Procuring Entity / Evaluation Committee in this regard shall be final, conclusive, and binding, with no correspondence entertained thereafter.
8. **Non-Compliance with Pre-Qualification/Minimum Eligibility Criteria:** Failure to satisfy any single condition under the "**Pre-qualification/Minimum Eligibility Criteria**" section shall result in the immediate disqualification of the bid from the tender process.
9. **IP Address Duplication on GeM Portal:** The Government e-Marketplace (GeM) portal tracks and displays the IP addresses used by Buyers and Bidders/Sellers. Bids submitted from identical or shared IP addresses across different bidders/sellers shall be considered suspicious and will be automatically disqualified from further evaluation.

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- 10. OEM Participation and Channel Partner Authorization:** A manufacturer (OEM) may authorize only one channel partner to participate in this tender, in accordance with the declaration submitted under **“Form VI - Declaration in Respect of Conflict of Interest”**. If both the OEM and its authorized channel partner submit bids under this tender, the bid submitted by the OEM shall be accorded precedence and taken forward for further evaluation. Consequently, the bid submitted by the authorized channel partner shall be summarily rejected and shall not be considered for further evaluation.
- 11. Bid Rigging and Conflict of Interest:** The Purchaser reserves the right to **reject any bid or disqualify any bidder** from the tendering process at any stage if, in the opinion of the Purchaser, there is sufficient evidence to conclude that:
- **Bid Rigging:** The Bidder has engaged in any form of collusive bidding, bid rigging, cartel formation, or anti-competitive practices, whether directly or indirectly, with other bidders in order to influence the outcome of the bidding process. Such practices shall include but are not limited to: Sharing of bid prices or commercial terms prior to bid submission or Agreement among bidders not to compete or to submit complementary bids or Coordinated bid withdrawals or bid rotation schemes.
 - **Conflict of Interest: A Conflict of Interest exists or is reasonably deemed to exist if**
 - The Bidder or any of its associated entities, subsidiaries, or affiliates has a direct or indirect relationship with another bidder participating in the same tender, which could compromise the integrity or fairness of the procurement process.
 - The Bidder has a relationship with any official, employee, or representative of the Purchaser who is directly or indirectly involved in the tender evaluation or award process.
 - The Bidder uses resources, infrastructure, or personnel that are also engaged in preparing or influencing another competing bid in this tender.
 - **Declaration of Integrity:** All Bidders shall submit a duly signed Declaration of Non-Collusion and Conflict of Interest in the format prescribed in the tender. Any failure to submit this declaration or submission of a false declaration shall lead to immediate disqualification and may result in blacklisting or legal action, as deemed appropriate by the Purchaser.
- 12. Declaration of Integrity:** All Bidders shall submit a duly signed Declaration of Non-Collusion and Conflict of Interest in the format prescribed in the tender. Any failure to submit this declaration or submission of a false declaration shall lead to immediate disqualification and may result in blacklisting or legal action, as deemed appropriate by the Purchaser.
- 13. Purchaser’s Rights:** The Purchaser shall have the sole discretion to determine whether a bid is non-compliant due to the reasons outlined above. In such cases, the Purchaser shall be under no obligation to inform the bidder of the grounds for disqualification or provide any further clarification. The decision of the Purchaser shall be final, binding, and non-contestable.

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Chapter - 6

General Terms & Conditions

1. **Scope of Supply/Work:** Supply, Installation, Testing, Commissioning and Training of **Test Bed Upgrade for H₂-ICE and Euro VII** (As per technical specification and scope of work defined in "**Chapter - 1**") Installed in ETL Department at ICAT Centre - 1, Manesar (Haryana).
2. **Notification of Buyer's Responsibilities:** The Successful Bidder shall, within *Fifteen (15) calendar days or earlier from the date of issuance of the Purchase Order (PO)*, be obligated to provide timely and advance written notification to the Purchaser specifying any requirements, materials, services, or facilities necessary for the installation, testing, and commissioning of the **Test Bed Upgrade for H₂-ICE and Euro VII** that fall outside the scope of the Successful Bidder's contractual obligations and are to be arranged by the Purchaser.
Such notification shall be made with sufficient lead time to enable the Purchaser to make the necessary arrangements without causing any delay to the project schedule. Failure to provide such timely notification shall not relieve the Successful Bidder of responsibility for any resultant delays or additional costs arising from such oversight.
3. **Delivery and Installation & Commissioning (I&C) Schedule**
 - 3.1 **Overall Completion Period:** The delivery and Installation, Testing & Commissioning (I&C) timelines indicated herein are tentative and indicative in nature and are provided solely for the purpose of planning, coordination, and monitoring of progress. Notwithstanding the above, the Successful Bidder shall be solely responsible for completing the entire scope of work, including supply, delivery, installation, integration, testing, commissioning, conduct of Final Acceptance Test (FAT), submission of documentation, and obtaining final acceptance, within an overall period of **Four Hundred Fifty (450) Calendar Days** from the date of issuance of the GeM Contract/Purchase Order (PO) (hereinafter referred to as the "Effective Date").
 - 3.2 **Tentative Delivery Timeline:** The Successful Bidder is expected to complete delivery of the complete equipment, inclusive of all accessories, sub-systems, software (if any), documentation, and associated components, within **Two Hundred Seventy (270) Calendar Days from the Effective Date**. The said **270 Calendar Days delivery period** is indicative and intended for progress monitoring purposes only and shall not be construed as an independent ground for levy of Liquidated Damages, provided that the overall completion period of **450 Calendar Days** is adhered to.
 - 3.3 **Tentative Installation, Testing & Commissioning Timeline:** Upon formal site handover by ICAT, duly recorded in writing, the Successful Bidder is expected to complete installation, integration, testing, commissioning, and readiness for Final Acceptance Test within **One Hundred Eighty (180) Calendar Days** from the date of such site handover. The **One Hundred Eighty (180) Calendar Days** I&C timeline is indicative and subject to coordination and site readiness. However, the Successful Bidder shall ensure that the overall completion period of **450 Calendar Days from the Effective Date** is not exceeded.
 - 3.4 **Final Acceptance Test (FAT):** Upon completion of installation and commissioning, the Final Acceptance Test (FAT) shall be conducted in the presence of authorized representatives of ICAT in accordance with the technical specifications, performance parameters, and acceptance criteria specified in "**Chapter - 8**" of the Tender Document. Final acceptance shall be deemed complete only upon issuance of written Acceptance Certificate by ICAT.
 - 3.5 **Liquidated Damages:** Liquidated Damages (LD) shall be applicable only in the event the Successful Bidder fails to complete the entire scope of work within the overall completion period of **Four Hundred Fifty (450) Calendar Days** from the Effective Date, unless such delay is formally extended in writing by ICAT. No Liquidated Damages shall be levied solely on account of deviation from the **tentative delivery timeline of 270 days or the tentative I&C timeline of 180 days**, provided the overall completion

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period is strictly adhered to. Imposition of LD shall be without prejudice to ICAT's other contractual rights and remedies under the Contract.

3.6 Time as Essence of Contract: Time shall be the essence of the Contract with respect to the overall completion period of **450 Calendar Days**. The Successful Bidder shall plan and execute the work in a manner that ensures strict adherence to the said overall completion timeline.

4. Liquidated Damages (LD)

4.1 Delay in Delivery and/or Installation, Testing, and Commissioning: The Supplier shall strictly adhere to the delivery schedule, installation, testing, and commissioning timelines as specified in the Purchase Order/Contract. In the event of any delay attributable to the Supplier, ICAT reserves the right to recover **Liquidated Damages (LD)** without prejudice to any other rights or remedies available under the contract or law.

4.2 Rate of Liquidated Damages (LD): Liquidated Damages shall be levied at the rate of **0.5%** of the total contract value per week of delay attributable to the Supplier, subject to a maximum ceiling of **10%** of the total contract value.

4.3 Applicability: Liquidated Damages shall apply in the event of any delay attributable to the Supplier, including but not limited to delay in delivery of the equipment at ICAT premises, delay in completion of installation, testing, and commissioning, or delay in rectification of defects or deficiencies identified during the Pre-Delivery Inspection (PDI) or final acceptance tests.

4.4 Waiver of LD due to Force Majeure: No Liquidated Damages shall be levied for delays directly caused by events of Force Majeure, including, without limitation, acts of God, natural disasters, war, civil unrest, epidemics or pandemics, government restrictions, or any other circumstances beyond the reasonable control of the Supplier. To qualify for this waiver, the Supplier shall notify ICAT in writing *within 7 days* of the occurrence of such event and provide adequate evidence demonstrating that the delay was solely due to the Force Majeure event and could not have been avoided despite exercising reasonable care and diligence.

4.5 Recovery: ICAT shall have the right to deduct the LD amount from payments due to the Supplier, invoke Performance Bank Guarantee (PBG), or recover it through any other legal means, subject to the provisions of Force Majeure.

4.6 Cumulative Remedies: Recovery of LD shall be without prejudice to ICAT's other rights and remedies, including but not limited to termination of contract, withholding payments, or claiming damages for loss incurred due to delay.

5. Warranty Condition

5.1 Warranty Period: The Supplier/Bidder shall provide a comprehensive warranty for the **Test Bed Upgrade for H₂-ICE and Euro VII** and all associated equipment, including components, accessories, and software, for a period of **Twenty-Four (24) Months** from the date of successful commissioning and acceptance by ICAT.

5.2 Scope of Warranty: During the warranty period, the Supplier shall, at no additional cost to ICAT, be fully responsible for the repair, replacement, or rectification of any defects, faults, or malfunctions arising from defective design, materials, workmanship, or non-conformity with the specifications and performance requirements. All replaced parts shall be new, genuine, and of equivalent or higher quality.

5.3 Response and Resolution: The Supplier shall respond to any warranty claim within 48 Hours of notification by ICAT and shall rectify the issue within a reasonable time frame, not exceeding 10 Days from the date of notification. In case of repeated failures or delays, ICAT reserves the right to engage an alternative vendor at the Supplier's cost, without prejudice to any other rights or remedies available to ICAT under the contract or law.

5.4 Warranty Exclusions: The warranty shall not cover defects or damages arising from misuse, mishandling, unauthorized modifications, improper storage, natural calamities, or any conditions outside the Supplier's control.

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- 5.5 **Warranty Obligations:** The Supplier shall maintain sufficient inventory of spare parts, technical documentation, and qualified personnel to ensure uninterrupted support throughout the warranty period. ICAT shall have the right to inspect the repaired or replaced equipment to verify compliance with the specifications.
- 5.6 **Failure to Comply:** Failure to comply with the warranty obligations may render the Supplier liable to penalties, invocation of performance guarantees, or other remedies as detailed in the tender terms and conditions.
- 5.7 **Effect on Other Rights:** The provision of warranty shall be in addition to and without prejudice to any other rights or remedies available to ICAT under the contract, applicable law, or general principles of commercial law.
6. **Delivery, Packaging, and Insurance Instructions**
- 6.1 **Delivery Terms:** The delivery of the equipment shall be on FOR (Free on Road) basis to the premises of the International Centre for Automotive Technology (ICAT), Manesar, Haryana. The successful bidder shall bear all risks, responsibilities, and costs associated with the transportation of the **Test Bed Upgrade for H₂-ICE and Euro VII** and all related components up to the designated delivery location at the ICAT project site.
- 6.2 **Loading, Transportation, and Unloading:** The successful bidder shall be solely responsible for the loading, transportation, unloading, and safe handling of the equipment at the ICAT project site. All necessary manpower, tools, handling equipment, and resources required for these operations shall be arranged and borne by the bidder at no additional cost to ICAT.
- 6.3 **Packaging:** The equipment shall be securely and adequately packed to prevent any damage, deterioration, or loss during transit, handling, and storage. Packaging shall conform to internationally accepted standards and best practices for heavy, sensitive, and precision equipment of this nature. Packing materials shall provide protection against moisture, dust, corrosion, mechanical shocks, and any other potential hazards associated with long-distance transportation. Packaging shall also be designed to facilitate safe and efficient handling during unloading and installation.
- 6.4 **Marking and Labelling:** Each package shall be clearly and permanently marked with Consignee details, Purchase order/reference number, Package number, Handling instructions, and any other information necessary to ensure safe, accurate, and compliant transportation, handling, and storage.
- 6.5 **Insurance:** The successful bidder shall arrange, maintain, and bear the full cost of comprehensive insurance coverage for the equipment, including all components and accessories, against loss or damage during transit, storage, and until final acceptance at ICAT premises. The insurance policy shall remain valid from the time of dispatch until the equipment is duly received, inspected, and accepted at the ICAT site.
- 6.6 **Claims and Liability:** In the event of any loss, damage, or shortage during transit or unloading, the bidder shall be solely responsible for lodging claims with the carrier or insurance provider and for ensuring repair or replacement of the damaged equipment at no additional cost to ICAT. ICAT shall not be liable for any such loss or damage occurring prior to formal acceptance of the equipment.
- 6.7 **Documentation:** The bidder shall provide all necessary documentation for shipment, packing, and insurance, including but not limited to Packing list, Insurance certificate, Bill of lading/airway bill, and any other documents required for smooth transportation, customs clearance, handling, and delivery at ICAT premises.
7. **Assignment and Sub-Contracting**
- The Successful Bidder shall not, without the prior written consent of the Procuring Entity, sublet, assign, transfer, delegate, or otherwise dispose of the Contract or any part thereof, or any rights, interests, benefits, or obligations arising therefrom, in any manner whatsoever.
 - The Successful Bidder shall provide the Procuring Entity with prompt written notification of all subcontracts awarded under this Contract that were not disclosed in the original bid or contract documentation. Such notification shall not relieve or discharge the Successful Bidder from any

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liability, obligation, or responsibility under this Contract.

- Subcontracting shall be permitted solely for the procurement of bought-out items and incidental works or services directly related to the execution of the Contract. All subcontracted work shall be subject to the Successful Bidder's full responsibility and compliance with the terms, conditions, and obligations of this Contract. Subcontracting shall not be used as a means to circumvent or diminish the Successful Bidder's contractual responsibilities or performance obligations.
- Any assignment, subletting, or transfer of the Contract, or any part thereof, without the prior written approval of the Procuring Entity, shall be deemed a material breach of Contract. In the event of such unauthorized assignment or subcontracting, the Procuring Entity reserves the right to invoke any or all remedies available under the Contract and/or applicable law, including but not limited to termination of the Contract, forfeiture of performance guarantees, and claims for damages.

8. Pre-Delivery Inspection (PDI)

- 8.1 **Arrangement of PDI:** Prior to dispatch of the *Test Bed Upgrade for H₂-ICE and Euro VII, inclusive of all associated components, accessories, and software (if any)*, the Successful Bidder shall arrange for a Pre-Delivery Inspection (PDI) at its manufacturing premises or at any mutually agreed location. The PDI shall be conducted strictly in accordance with the inspection and acceptance checklist specified in "*Chapter - 7*" of the Tender Document. PDI shall be a pre-dispatch verification activity and shall not constitute final acceptance of the equipment.
 - 8.2 **Advance Notice:** The Successful Bidder shall provide written notice of not less than **Thirty (30) Calendar Days** prior to the proposed PDI date to enable ICAT to depute its authorized representatives.
 - 8.3 **Inspection Rights:** During PDI, ICAT and/or its authorized representatives shall have the right to inspect, examine, test, and verify compliance with contractual specifications. Any deficiencies or non-conformities observed during PDI shall be rectified by the Successful Bidder at its own cost prior to dispatch. Inspection, testing, or clearance during PDI shall not relieve the Successful Bidder of its contractual obligations, nor prejudice ICAT's right to reject the equipment upon delivery, installation, or during Final Acceptance Testing.
 - 8.4 **Dispatch Authorization:** Dispatch of equipment shall be undertaken only after completion of PDI and receipt of written dispatch clearance from ICAT. Such clearance shall not be construed as final acceptance under the Contract.
 - 8.5 **Postponement or Non-Attendance:** ICAT may Postpone PDI by up to **Fifteen (15) Calendar Days**, provided written intimation is given at least **Fifteen (15) Calendar Days** prior to the scheduled PDI date or Waive participation in PDI. Where ICAT postpones PDI, no penalties or Liquidated Damages shall be levied on the Successful Bidder on account of such postponement. If ICAT waives participation or does not attend the rescheduled PDI, the Successful Bidder may proceed with inspection in accordance with the prescribed checklist and submit the relevant inspection reports and Certificate of Conformity.
 - 8.6 **Effect of Non-Attendance:** In the event of ICAT's non-attendance, the inspection documents duly certified by the Successful Bidder's authorized Quality Assurance representative shall be accepted for the limited purpose of permitting dispatch. However, such certification shall not constitute final acceptance, limit ICAT's right to conduct verification at site, prejudice ICAT's right to reject defective or non-conforming equipment, or relieve the Successful Bidder of its warranty, performance, or defect liability obligations under the Contract.
 - 8.7 **Costs and Expenses:** All costs related to conduct of PDI shall be borne by the Successful Bidder. Travel, lodging, boarding, and daily allowance expenses of ICAT's representatives, if deputed, shall be borne by ICAT.
9. **Training Requirement Clause:** As an integral part of the scope of work for the Test Bed Upgrade for H₂-ICE and Euro VII, the Successful Bidder shall be responsible for providing comprehensive training to designated personnel of the International Centre for Automotive Technology (ICAT), including the Technical and Maintenance teams, during the acceptance and commissioning phase of the equipment.

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The training shall be conducted exclusively at the Purchaser's facility and shall comprehensively cover the following areas, without limitation:

- **Installation Procedures:** The Successful Bidder shall provide detailed and practical training to ICAT's Maintenance Team on the proper installation methodologies, protocols, and safety practices specific to the *Test Bed Upgrade for H₂-ICE and Euro VII*.
- **Commissioning:** The Successful Bidder shall train both the Technical and Maintenance teams on the commissioning process to ensure the equipment's operational readiness, adherence to performance specifications, and compliance with applicable standards.
- **Operational Training:** The Successful Bidder shall impart hands-on training to the Operational Team on the effective and safe operation of the *Test Bed Upgrade for H₂-ICE and Euro VII*, encompassing all relevant functionalities and operational safety protocols.
- **Maintenance Training:** The Successful Bidder shall provide detailed training to the Maintenance Team on routine, preventive maintenance, fault diagnosis, troubleshooting, and overall upkeep to ensure sustained performance and reliability of the equipment.

The Successful Bidder shall supply all requisite training materials, including manuals, technical documents, and operational guidelines in the English language. Such documentation shall be furnished in both printed and digital formats, as deemed appropriate, to facilitate effective knowledge transfer and future reference.

10. ICAT's Rights

- 10.1 **Right to Inspect and Verify:** The International Centre for Automotive Technology (ICAT) reserves the right to inspect, test, and verify the *Test Bed Upgrade for H₂-ICE and Euro VII* and all related components at any stage during manufacturing, pre-delivery, installation, commissioning, and operational phases to ensure strict compliance with the tender specifications, contractual terms, and applicable standards.
 - 10.2 **Right to Reject:** ICAT shall have the right to reject any equipment, parts, or services that do not conform to the prescribed technical specifications, quality requirements, or contractual obligations without prejudice to its rights under the contract. Rejected goods or services shall be replaced or rectified by the Successful Bidder at no additional cost to ICAT within the stipulated time frame.
 - 10.3 **Right to Seek Clarifications and Modifications:** ICAT reserves the right to seek clarifications, request additional information, or require modifications to the equipment or services at any point during the contract period to ensure alignment with its operational requirements and safety standards.
 - 10.4 **Right to Audit and Access Records:** ICAT shall have the right to audit, access, and review all relevant documentation, quality records, test reports, and certifications related to the *Test Bed Upgrade for H₂-ICE and Euro VII* supplied under this contract.
 - 10.5 **Right to Enforce Contractual Remedies:** In the event of breach, delay, or non-performance by the Successful Bidder, ICAT reserves the right to invoke any and all remedies available under the contract, including but not limited to penalties, liquidated damages, withholding of payments, or termination of the contract.
 - 10.6 **Right to Final Acceptance:** The final acceptance of the *Test Bed Upgrade for H₂-ICE and Euro VII* and all related components shall rest solely with ICAT and shall be contingent upon satisfactory fulfilment of all technical, operational, and contractual requirements as determined by ICAT's authorized representatives.
 - 10.7 **Right to Reject, Modify, or Cancel Tender:** ICAT expressly reserves the right to reject, modify, or cancel the tender process, in whole or in part, at any stage without assigning any reason thereof and without incurring any liability whatsoever to any bidder or party.
11. **Payment Terms:** The total contract value shall be payable to the Successful Bidder in accordance with the following milestone-based payment schedule, subject to fulfillment of the contractual obligations related to the *Supply, Installation, Integration, Commissioning, Training and Acceptance of the Test Bed Upgrade for H₂-ICE and Euro VII*.

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11.1 Payment Milestones

a) 60% (Sixty Percent) of the total contract value shall be released upon:

- Receipt of the complete equipment and all associated components at the ICAT project site in a defect-free condition.
- Submission of all requisite delivery documents; and
- Physical verification and material receipt certification by the authorised representative of ICAT.

b) 20% (Twenty Percent) of the total contract value shall be released upon:

- Successful Installation, Commissioning and Training of the Test Bed Upgrade for H₂-ICE and Euro VII; and
- Submission of Installation and Commissioning certificate duly signed by the authorised ICAT official.

c) Balance 20% (Twenty Percent) of the total contract value shall be released upon:

- Completion of final acceptance testing to the satisfaction of ICAT.
- Confirmation of compliance with all technical and performance parameters as specified in the tender documents; and
- Issuance of the Final Acceptance Certificate by ICAT.

11.2 Performance Bank Guarantee (PBG): Prior to the release of any payment under this contract, the Successful Bidder shall furnish an unconditional and irrevocable Performance Bank Guarantee (PBG) from a nationalised or scheduled Indian bank, amounting to 5% (Five Percent) of the total contract value.

The PBG shall:

- Be in the format prescribed by ICAT.
- Remain valid for a period of twenty-four (24) months from the date of satisfactory completion of the entire scope of work, including supply, installation, commissioning, and final acceptance.
- Be in favour of "International Centre for Automotive Technology".
- Cover any defects in material, workmanship, or performance of the equipment throughout the warranty period.

Failure to submit the PBG shall result in withholding of payments as per ICAT's discretion.

11.3 Mandatory Documents for Payment Release: The following documents shall be submitted by the Successful Bidder to ICAT for processing of payments

- Original Tax Invoice (in compliance with GST norms).
- Original Delivery Challan.
- E-Way Bill (Part A & Part B, as applicable).
- Consignee LR Copy (if applicable).
- Warranty/Guarantee Certificate issued by the OEM.
- Installation & Commissioning Report and Final Acceptance Certificate (as applicable).

All payments shall be subject to statutory deductions (such as TDS) as applicable under Indian laws. No advance payment shall be made unless specifically agreed to in writing by ICAT.

11.4 Advance Payment (If Applicable): Bidders are hereby requested to submit their financial proposals in strict accordance with the Payment Schedule stipulated under Clause 11.1 above. However, if a bidder expressly seeks an advance payment, such request shall be considered only in accordance with the applicable provisions of the General Financial Rules (GFR) and Manual for Procurement of Goods. In such cases, an advance payment of up to **30% of the total contract value** may be granted, subject to the prior approval of the ICAT Competent Authority, and compliance with the following conditions.

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- The bidder must submit a formal written request justifying the requirement for advance payment.
- The advance payment shall be secured by an unconditional and irrevocable Advance Bank Guarantee (ABG) issued by a scheduled commercial bank. The ABG shall be for an amount equivalent to one hundred and *ten percent (110%)* of the approved advance payment value and shall remain valid until the advance amount is fully adjusted or recovered in accordance with the terms of the contract. The ABG must be submitted in the prescribed format acceptable to ICAT and shall be enforceable on demand without any demur or condition, to safeguard the interests of ICAT in the event of default, non-performance, or failure to adjust the advance payment.
- The ABG shall remain valid until the completion of final acceptance of the equipment by ICAT.
- No advance payment shall be processed unless the original ABG is received and verified by ICAT in physical form.
- The release of advance shall be further subject to the signing of the Contract Agreement and fulfilment of any other conditions precedent as may be specified by ICAT.
- Upon disbursement of the advance payment, the same shall be adjusted proportionately against subsequent milestone payments as outlined under the *Payment Terms in Clause 11.1 above*.

Failure to furnish the Advance Bank Guarantee in the prescribed format and validity period shall result in non-release of advance payment.

12. Performance Security

- 12.1 Submission of Performance Security:** The Successful Bidder shall furnish a Performance Security for an amount equivalent to *five percent (5%)* of the total contract value, within fifteen (15) days from the date of award of contract on the GeM portal.
- 12.2 Form and Validity:** The Performance Security shall be submitted in the form of an unconditional *Bank Guarantee or Fixed Deposit Receipt (FDR)* issued by a Scheduled Commercial Bank in India, in favour of "International Centre for Automotive Technology", payable at Manesar/Gurugram. The Performance Security shall remain **valid for a period covering the entire warranty duration of Twenty-Four (24) Months**, from the date of successful *installation, commissioning, and final acceptance, plus a minimum additional claim period of six (6) months* thereafter. Accordingly, the total validity of the Performance Security shall not be less than *Thirty (30) Months* from the date of final acceptance.
- 12.3 Purpose and Invocation:** The Performance Security shall serve as a safeguard against any failure of the Successful Bidder to perform its obligations under the contract. ICAT reserves the right to invoke the Performance Security, in part or in full, without notice, in the event of any breach of contract, non-performance, delay, or defect in performance during the warranty period.
- 12.4 Release of Performance Security:** Subject to satisfactory performance and fulfilment of all contractual obligations by the Successful Bidder, the Performance Security shall be released upon expiry of the warranty period and successful completion of the claim period, against a written request by the bidder and submission of a No Dues Certificate from the concerned ICAT department.
- 12.5 Failure to Submit Performance Security:** Failure on the part of the successful bidder to submit the required Performance Security within the stipulated time period shall be treated as a material breach of contractual obligations. In such an event, the Purchaser (ICAT) reserves the right to take any or all

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of the following actions, without prejudice to any other rights available under the contract or applicable law

- Cancellation of the contract in part or in full; or
- Forfeiture of any payments/advances made to the bidder, including any Earnest Money Deposit (EMD) or other securities submitted; or
- Blacklisting or debarment of the bidder from participation in future tenders of ICAT; or
- Initiation of legal proceedings or recovery actions for losses, if any, suffered by ICAT due to non-compliance; and/or
- Any other action as may be deemed appropriate by ICAT in accordance with the terms of the contract and applicable Government of India procurement policies.

The decision of ICAT in this regard shall be final and binding on the bidder.

13. **Billing Address:** International Centre For Automotive Technology (Centre - 1), Plot No. 26, Sector - 3, IMT Manesar, Gurugram - 122051 (GST No. 06AABAN9435G2ZI)
14. **Offer Validity:** Offers should be valid for a minimum of **One Hundred Eighty (180) Days** from the date of opening the Technical Bid. A bid, valid for a shorter period, is liable to be rejected. ICAT and Manesar may ask the bidders to extend the period of validity, if required.
15. **Price:** The prices are to be quoted in INR in figures only. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected.
16. The tender document is not an offer and is issued with no commitment. ICAT reserves the right to withdraw this notice inviting tender or vary any part thereof at any stage. ICAT further reserves the right to disqualify any bidder, should it be so necessary at any stage. ICAT reserves the right to reject any or all the tenders, wholly or partly, without assigning any reason thereof and shall not be bound to accept the lowest tender.
17. **System of Award of Contract:** The bidder who satisfies the qualification criteria and offers lowest (L1) would be selected.
18. **Applicability of ATC and GeM General Terms and Conditions:** All provisions, stipulations, obligations, and requirements set forth in the Additional Terms and Conditions (ATC) shall be strictly binding and enforceable upon all bidders, without exception. In respect of any matter, condition, or contingency that is not expressly covered, specified, or regulated under the ATC, the GeM General Terms and Conditions shall ipso facto govern such aspects and shall be deemed to be incorporated into, and to form an integral part of, this tender document with full force and effect.
19. Please ensure that ATC documents must be signed and stamped on all pages as a token of acceptance of all the terms and conditions.
20. Once submitted in e-Procurement, Bidder cannot view or modify his bid since it is locked by encryption. However, resubmission of the bid by the bidders for any number of times superseding earlier bid(s) before the date and time of submission is allowed. Resubmission of a bid shall require uploading of all documents, including financial bid afresh. The system shall consider only the last bid submitted as the valid bid. The bidder may withdraw his bid before the bid submission deadline, and it shall be marked as withdrawn and shall not get opened during the Bid opening. No bid should be withdrawn after the deadline for the bid submission and before the expiry of the bid validity period.
21. **Corrigenda to the tender document:** Before the deadline for submitting bids, the Buyer may update, amend, modify, or supplement the information, assessment or assumptions contained in the Tender Document by issuing a corrigendum. The corrigenda shall be published in the same manner as the original Tender Document through GeM portal. Without any liability or obligation, the Portal may send

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intimation of such corrigenda to bidders who have downloaded the document under their login. However, the bidders' responsibility is to check the portal for any corrigenda. Bidders are therefore requested to regularly visit GeM portal for updates. Any corrigendum thus issued shall be considered a part of the Tender Document. To give reasonable time to the prospective bidders to take such corrigendum into account in preparing their bids, the Buyer may suitably extend the deadline for the bid submission, as necessary. After the Buyer makes such modifications, any Bidder who has submitted his bid in response to the original invitation shall have the opportunity to either withdraw his bid or re-submit his bid superseding the original bid within the extended time of submission.

22. **This Enquiry is a two-part tender. Against Part - I bid, bidders must submit only documents required against "Technical Specifications, Pre-Qualification & Technical Evaluation Criteria - Chapter - 4 and ATC".** Bidders must not divulge price of tendered item in technical bid. Violation of the same may lead to rejection of the bid. Bidders must quote prices in **Part - II bid (price bid) only.**
23. **Eligibility Criteria:** Subject to provisions in the Tender Document as per enclosed **"Technical Specifications and Pre-Qualification & Technical Evaluation Criteria - Chapter - 4"** of the tendered item, participation in this Tender Process is open to all bidders who fulfil the 'Qualification' criteria. Bidders are required to submit all documents as per the Pre-Qualification & Technical Evaluation Criteria along with Part 1 bid, to ensure the eligibility of their offer. Failure to submit any of the certificates/documents specified in the Bid Document or any subsequent Corrigendum to the tender, within the stipulated time, can result in rejection of the offer.
24. **Submission of Modifications, Deviations or Improvements to the Conditions of Contract**
 - i. **Permissibility and Stage of Submission:** Bidders may, only up to and including the Pre-Bid Meeting stage, propose deviations, modifications, or improvements to the Conditions of Contract, if considered necessary. Such proposals shall be limited in scope, shall be fully justified, and shall be directly relevant to the scope, objectives, and deliverables of the Tender, and demonstrably in the best interest of the International Centre for Automotive Technology (ICAT). Under no circumstances shall any proposed deviation, modification, or improvement alter the fundamental nature, scope, technical requirements, commercial framework, or objectives of this Tender.
 - ii. **Manner, Format, and Deadline for Submission:** All proposed deviations, modifications, or improvements shall be submitted strictly in the prescribed format, namely **"Form XII - Deviations or Modifications Suggested"** and shall be uploaded through the Government e-Marketplace (GeM) portal or submitted to the designated email address(es) as specified in the Tender Document. Any proposal submitted after the Pre-Bid Meeting, or after the stipulated deadline, shall not be accepted, considered, or entertained under any circumstances and shall be summarily disregarded.
 - iii. **Declaration of No Deviation:** Bidders who do not intend to propose any deviations, modifications, or improvements shall submit an explicit declaration to that effect by indicating **"No Deviation Suggested" in Form XI. Failure to submit either Form XI or Form XII** within the prescribed time shall be deemed to constitute the Bidder's unconditional, irrevocable, and unqualified acceptance of all terms, conditions, and provisions of the Tender Document, without any exception, reservation, or qualification whatsoever.
 - iv. **Finality and Prohibition of Post Pre-Bid Deviations:** No deviations, modifications, clarifications, conditional terms, or alternative proposals shall be accepted after the Pre-Bid Meeting, at the time of bid submission, or at any subsequent stage of the tender process. Any bid containing conditional terms, unauthorized deviations, late submissions, or non-compliant proposals shall be liable to rejection outright, without any obligation on ICAT to seek clarifications, conduct correspondence, or provide any opportunity for rectification.

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v. **Discretion of ICAT:** ICAT reserves the sole, absolute, and unfettered discretion to accept or reject, in whole or in part, any deviation, modification, or improvement proposed within the permitted timeframe. Acceptance of any such proposal, if considered appropriate, shall be communicated only through a formal corrigendum issued to the Tender Document. ICAT may, at its discretion, revise the bid submission schedule to enable prospective bidders to respond to such corrigendum. The decision of ICAT in this regard shall be final, conclusive, and binding on all Bidders.

25. **Unsatisfactory Performance:** The successful bidder hereby agrees and acknowledges that the International Centre for Automotive Technology (ICAT) shall have the sole and absolute discretion to evaluate and determine the suitability, quality, and performance of any component(s), subsystem(s), or complete system(s) supplied under this contract, whether during the pre-dispatch, inspection, testing, installation, commissioning, or post-commissioning phases.

In the event that any component, equipment, or system—whether in part or in full—is found to be **deficient, substandard, non-compliant with specifications**, or otherwise **unsatisfactory** in the opinion of ICAT, ICAT reserves the unequivocal right to **reject such component(s) or system(s)** without incurring any liability, financial or otherwise, and **without any obligation to provide justification** or explanation for such rejection.

The bidder expressly undertakes to abide by and accept ICAT's decision in this regard as final and binding, and waives all rights to contest, dispute, or seek redressal in respect of such decision. No claim for costs, compensation, or consequential damages shall be entertained by ICAT under such circumstances.

26. **Termination of Contract:** If the performance of the successful bidder (hereinafter referred to as the "Vendor") is found to be unsatisfactory – whether in terms of timely delivery, quality of the goods supplied, or non-compliance with the contractual obligations – ICAT shall issue a written notice to the Vendor, treating the same as a formal warning.

If, notwithstanding the first warning, the Vendor fails to rectify the deficiencies or does not take corrective measures within **fifteen (15) days** from the date of the first notice, a **second and final warning** shall be issued.

Should the Vendor continue to remain non-compliant or fail to meet the required performance standards even after issuance of the second warning, **ICAT reserves the right to terminate the contract/work order**, in whole or in part, **by giving one (1) month's written notice**, without assigning any further reason and without any liability whatsoever on the part of ICAT.

Upon termination:

- The contract shall become **null and void** from the date of expiry of the notice period.
- Any pending payment deemed payable to the Vendor, if any, shall be **withheld or forfeited** at the discretion of ICAT.
- **No further claims, liabilities, or compensations** of any kind shall be entertained by ICAT.
- The Vendor shall be required to **withdraw all deployed personnel, equipment, and material** from ICAT premises within **thirty (30) days** from the termination date.
- **Failure to vacate the premises** may lead to ICAT taking appropriate legal and administrative measures.

The **decision of the Competent Authority of ICAT** regarding the performance of the Vendor and termination of the contract shall be **final and binding**.

27. **Confidential Information:** ICAT and Selected Bidder shall keep confidential and not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract,

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whether such information has been furnished prior to, during or following completion or termination of contract.

28. **Dispute Resolution (Arbitration):** In the event of any dispute or difference arising between the International Centre for Automotive Technology (ICAT) and the Contractor/Supplier in connection with or arising out of this Contract, including any matter relating to the interpretation or performance of its terms, the parties shall endeavor to resolve such disputes amicably through mutual discussion and consultation.

If the dispute remains unresolved after thirty (30) days of such mutual discussions, the matter shall, subject to the provisions herein, be referred to arbitration in accordance with the Arbitration and Conciliation Act, 1996, and any amendments thereto.

Subject to the guidelines issued by the *Department of Expenditure, Ministry of Finance, vide OM No. F.1/2/2024-PPD dated 03.06.2024*, arbitration shall be an available method of dispute resolution only where the value of the dispute is less than ₹10 crores (Rupees Ten Crore). This threshold refers to the value of the dispute and not the overall value of the contract. For disputes where the value exceeds ₹10 crores, the parties shall resolve the matter through appropriate judicial forums and arbitration shall not be applicable. Where arbitration is permissible, a Sole Arbitrator shall be appointed by the Director (ICAT), with the mutual concurrence of both parties. The decision of the Sole Arbitrator shall be final and binding on both parties.

The arbitration proceedings shall be conducted in the English language, and the venue of arbitration shall be Gurugram, Haryana. The parties agree that they shall not approach any court of law for the resolution of disputes unless the arbitration mechanism provided herein is exhausted, where applicable. Subject to the above, the courts at Gurugram, Haryana, shall have exclusive jurisdiction over all matters arising under this contract.

29. Law of the Republic of India are applicable to this tender.

30. **Intellectual Property Rights (IPR)**

- **Ownership of Existing Intellectual Property:** All Intellectual Property Rights in the equipment, including patents, designs, trademarks and proprietary technologies, shall remain vested with the Original Equipment Manufacturer (OEM) or the Bidder, as applicable.
- **Right to Use Equipment and Documents:** ICAT shall have the unrestricted right to use the equipment supplied under the Contract for official purposes. The operation, maintenance and user manuals supplied along with the equipment may be copied, stored and shared internally by ICAT for training, operation and maintenance purposes.
- **Embedded Software/Firmware (if any):** Where the equipment includes embedded software or firmware, ICAT shall have a perpetual, royalty-free and non-exclusive license to use the same solely for the operation, maintenance and servicing of the equipment. No separate license fee shall be payable.
- **Non-Infringement Assurance:** The Bidder shall ensure that the supply, installation and use of the equipment by ICAT do not infringe any Intellectual Property Rights of any third party.
- **Indemnity:** The Bidder shall indemnify and hold harmless ICAT from and against any loss, claim, demand, cost or expense arising out of any alleged or actual infringement of Intellectual Property Rights in relation to the supplied equipment.
- **Use of ICAT Name and Logo:** The Bidder shall not use the name, logo, emblem or any official identification of ICAT for publicity, advertisement or commercial purposes without prior written approval of ICAT.
- **Survival:** The provisions of this clause shall survive the completion, expiry or termination of the Contract.

31. **Indemnity:** The Successful Bidder/Vendor shall defend, indemnify and hold harmless ICAT, its officers, employees and representatives, from and against any and all actions, causes of action, claims, demands,

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liabilities, suits, proceedings, judgments, liens, awards, damages, losses, costs and expenses, including costs of litigation and legal fees, to the extent such claims arise out of or are attributable to

- Any infringement or alleged infringement of Intellectual Property Rights, including patents, copyrights, trademarks or designs.
- Any wrongful use or unauthorized disclosure of trade secrets or confidential information; or
- Any act, omission or negligence on the part of the Successful Bidder/Vendor or its personnel, in connection with the performance of the Contract or the supply, installation, use or operation of the goods and/or services provided thereunder.

32. **Force Majeure:** For the purpose of this Contract, "*Force Majeure*" shall mean any event or circumstance beyond the reasonable control of either party (the Successful Bidder or ICAT) which was not reasonably foreseeable, or which, with the exercise of due diligence, could not have been foreseen or prevented, and which materially and adversely affects the performance of obligations under this Contract.

Events qualifying as Force Majeure shall include, but not be limited to, the following:

- Natural calamities such as floods, droughts, earthquakes, hurricanes, cyclones, lightning, or other acts of God.
- Pandemics or epidemics, or any public health emergency declared by competent authorities.
- Acts of war (declared or undeclared), hostilities, invasion, armed conflict, terrorism, civil unrest, riots, or sabotage.
- Acts or orders of Government authorities, including but not limited to quarantine restrictions, embargoes, prohibitions, or trade restrictions imposed by any competent government authority.
- Freight embargoes, restrictions on transportation, or any unforeseen change in law or government policy materially impacting contract performance.

Obligations during Force Majeure: The party affected by a Force Majeure event shall, within **Seven (7) calendar days** of the occurrence of such event, **notify the other party in writing**, providing sufficient details and evidence of the Force Majeure circumstances and its anticipated impact on the performance of contractual obligations.

Neither party shall be held liable for any **delay or failure** in the performance of its contractual obligations arising directly from such Force Majeure event, provided that:

- The obligations affected are directly related to the Force Majeure event.
- The affected party takes all reasonable steps to mitigate the effect of the Force Majeure on the performance of the contract.
- The performance is resumed as soon as reasonably practicable after the Force Majeure event ceases.

If the period of delay due to Force Majeure extends beyond **sixty (60) days**, either party shall have the right to **terminate the contract** by giving **fifteen (15) days' written notice**, without any financial repercussion or liability on either side, subject to settlement of dues already accrued prior to such termination. The decision of ICAT regarding the existence, duration, and impact of Force Majeure shall be **final and binding** on the successful bidder.

33. **Conflict of Interest:** The bidder must not have a conflict of interest, which substantially affects fair competition. The prices quoted should be competitive and without adopting any unfair/unethical/ anti-competitive means. No attempt should be made to induce any other bidder to submit or not to submit an offer for restriction competition. All bidders are required to submit the declaration regarding conflict of interest in the format enclosed at **Form - VI of ATC**, signed by the authorized signatory of the bidder.

34. **Fraud and Corruption:** The bidders, suppliers and contractors shall observe the highest standard of ethics during bidding and during performance of the contract. For the purposes of this provision, the following acts shall be considered as corrupt and/or fraudulent practices.

- "**Corrupt Practice**" means offering, giving, receiving, or soliciting directly or indirectly, of anything of value to influence the action of an official in the procurement process or in contract execution.

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- **“Fraudulent Practice”** means misrepresentation or omission of facts in order to execution of contract.
- **“Collusive Practice”** means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, non-competitive level.
- **“Coercive Practice”** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process or in execution of a contract.
- During the process of evaluation of a bid or proposal for award of a contract, if it is detected that a bidder directly or through agent has engaged in corrupt, fraudulent, collusive or coercive practice in competing for the contract in question, then a) the bid shall be rejected and b) declare the firm ineligible for a specific period or indefinitely to participate in a bidding process.
- Bidders may note that GeM is capturing and showing the IP addresses used by the Buyer and Bidder(s)/Seller(s). Bids submitted from IP addresses that are identical to or shared with other Bidders/Sellers shall be deemed invalid and automatically disqualified from further evaluation.

35. **Collusive Bidding or Bid Rigging or Cartelization:** The Bidder(s) acknowledges and agrees that any form of bid rigging, cartelization, or coordination among bidders, aimed at manipulating the bidding process or prices, is strictly prohibited. In the event of any evidence or suspicion of collusion, bid rigging, or cartel behavior, the Tendering Authority reserves the right to reject the bid(s) and take appropriate legal action, including but not limited to debarment from future tenders and reporting to relevant authorities. Bidders are required to submit their bids independently, without any undue influence or agreement with other participants in the tender process.

36. Integrity Clause

- **Integrity Pact:** The Bidder/Supplier/Contractor shall maintain the highest standards of integrity and shall not indulge in any corrupt, fraudulent, collusive, coercive, or undesirable practices while participating in the tender process or in execution of the contract.
- **Prohibition of Corrupt Practices:** The Bidder shall not offer, give, solicit or accept, directly or indirectly, any bribe, gift, consideration, reward, commission, or other advantage as an inducement or reward for doing or forbearing to do any act in relation to the tender or contract.
- **Compliance with Laws:** The Bidder shall comply with all applicable laws, rules, regulations, and guidelines, including but not limited to the General Financial Rules (GFR) issued by the Government of India and relevant procurement manuals.
- **Declaration of Non-Conflict:** The Bidder affirms that it has not been convicted of any offense involving corrupt or fraudulent practices and is not involved in any ongoing investigation related to such offenses.
- **Consequences of Breach:** Any violation of this Integrity Clause shall entitle the Purchaser/Contracting Authority to reject the bid, terminate the contract, and take any other legal action including blacklisting/debarment as per applicable rules.
- **Reporting Mechanism:** Bidders may report any observed or suspected violation of this clause through appropriate channels as prescribed in the tender documents or procurement manuals.

37. **Purchase Preference Policies of the Government:** Unless otherwise stipulated in the Tender, the Buyer reserves its right to grant preferences to the following categories of eligible Bidders under various Government Policies/Directives.

- i. Class I Local Suppliers under Public Procurement (Preference to Make in India) Order 2017” (MII) of Department for Promotion of Industry and Internal Trade, (DPIIT - Public Procurement Section) as revised from time to time.
- ii. Bidders from Micro and/ or Small Enterprises (MSEs) under Public Procurement Policy for the Micro and Small Enterprises (MSEs) Order, 2012 as amended from time to time.

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- iii. Start-ups Bidders under Ministry of Finance, Department of Expenditure, Public Procurement Division OM No F.20\212014-PPD dated 25.07.2016 and subsequent clarifications; and/or
- iv. Any other category of Bidders, as per any Government Policies, announced from time to time, if so, provided in the Tender document

- 38. Local Content Declaration (as per PPP-MII order from DPIIT, Govt of India, Ministry of Commerce):** This tender is governed by extant PPP-MII order dated 19.07.24 and subsequent revisions (if any), issued by DPIIT, Government of India. Hence, all bidders must submit a certificate stating following details (*Proforma for MII certificate has been attached vide Form - XVIII*):
- a. Percentage of local content in offered products
 - b. Place (s) of value addition in India

Note:

- i. For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local supplier/ non-local supplier and purchase preference to class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the Nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after the issue of the NIT, but before opening of Part-II bids against the NIT.
 - ii. Eligibility: only class I and class II local supplier as per extant PPP-MII order dated 19.07.24 are eligible to bid for the tender.
 - iii. In case the tender value is more than **INR 10 Crores**, the suppliers (bidders) shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
 - iv. Non-submission of the same shall render the bid ineligible for further consideration.
- 39. Declaration regarding MSE status of the bidder:** In case the Bidder is an MSE, they must submit valid UDYAM certificate and declaration stating MSE status of the firm, on its company's letterhead. Proforma has been attached in "*Form - XIX*". If the bidder does not furnish the required details in the tender, offer shall be processed by construing that the bidder is not falling under MSE category.
- 40. Support to Start ups:** The Startup should be registered with DPIIT and produce documentary evidence for the same. The Government of India has ordered the following support to Start-ups (as defined by the Department of Promotion of Industrial and Internal Trade - DPIIT).
Exemption from submission of Bid Security: Such Start-ups shall be exempted from payment of Earnest Money. They shall be required only to submit Bid Security Declaration.
Relaxation in Prior Turnover and Experience: The Procuring Entity reserves its right to relax the condition of prior turnover and prior experience for start-up enterprises subject to meeting of quality & technical specifications. The decision of the Procuring Entity in this regard shall be final. Please be guided by the tender document.
- 41. Compliance to Restrictions under Rule 144 (xi) of GFR 2017:** OM dad. 23.02.2023 of Department of Expenditure, Ministry of Finance, Govt. of India provides guidelines in terms of dealing with Bidders representing Countries sharing land border with India. Undertaking at "*Form - XVII*" to be provided.

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Chapter - 7

Pre-Acceptance Criteria

Acceptance Criteria: All drawings, utility requirements, interface specifications with the Civil Works, and detailed lists of all elements to be supplied, including the principal technical specifications, shall be submitted to ICAT for review and approval. Acceptance shall be contingent upon ICAT's written verification and approval of the aforementioned documents.

Should ICAT require any amendments, clarifications, or modifications, the Supplier shall revise and resubmit the relevant documents accordingly, at no additional cost and within the timeframe stipulated by ICAT. All such modifications shall be deemed mandatory and shall form part of the Supplier's contractual obligations.

Pre-Acceptance

1. **General Requirements:** Prior to delivery, ICAT's duly authorized representatives shall conduct a comprehensive inspection and pre-acceptance testing of the fully assembled equipment to be supplied. The purpose of this inspection and testing is to enable the Supplier to demonstrate full compliance with all technical, operational, and performance requirements set forth in the tender documents.
2. **Non-Compliance and Remedial Actions:** Any defects, deficiencies, or instances of non-compliance identified during the pre-acceptance process shall be rectified by the Supplier at its sole cost and expense. All corrective actions shall be carried out to the satisfaction of ICAT and within the timeframe specified by ICAT. No additional charges, extensions, or claims shall be permitted in relation to such remedial work.
3. **Duration and Limitations:** The pre-acceptance tests shall have a minimum duration of three (3) consecutive days. Completion of the off-site inspections and tests shall not constitute, nor be construed as, final acceptance of the equipment. Pre-acceptance does not waive ICAT's right to reject the equipment at a later stage should any non-conformity with the tender specifications be discovered.
4. **Scope of Pre-Acceptance for Specific Equipment:** The pre-acceptance activities shall include, but not be limited to, the verification of the Test Bed Upgrade for H₂-ICE and Euro VII, as referenced in the Scope of Supply.
5. **Pre-Acceptance Activities:** The pre-acceptance visit shall comprise, at a minimum, the following activities
 - **Visual inspection** of the actual equipment and all supplied components.
 - **Specification inspection** of the testing equipment covered in supply of scope.
 - **Review and verification** of the calibration status of the applicable equipment.
 - **Verification of compliance** to ensure that the equipment is capable of performing all required tests in accordance with the standards, regulations, and technical criteria stipulated in this tender, and that the equipment meets the operational and safety requirements of the laboratory.

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Pre-Acceptance				
SI No.	Description	Pre-Acceptance Criteria	Complied (Y/N)	Remarks
1	Supplied Equipment Specifications	<ul style="list-style-type: none"> ➤ New Heating Ventilation and Air Conditioning (HVAC) ➤ Leak detection, flame detection and fire suppression systems at storage locations. ➤ New Exhaust Extraction System for Hydrogen and other conventional fuels in test cell. ➤ New Scavenging System for Hydrogen and other conventional fuels in test cell. ➤ Gas Detection system (H₂ -Flame detection), H₂ leak detection, safety system equipment for hydrogen inside Test cell. ➤ Fire Suppression system ➤ Material Handling- Test Cell Crane ➤ Fuel Consumption Measurement- Hydrogen and CNG flow meters ➤ Hydrogen Analyzer, Blow by meter, Intercooler, Coolant Conditioning unit. ➤ Automation Hardware, software and dyno drive 		
2	Hydrogen Fuel System, Storage and Distribution	<ul style="list-style-type: none"> ➤ Piping & Fittings (Swagelok/Parker/HIP/Hiflux/Fitok) ➤ Hydrogen-compatible material visibly confirmed. ➤ Vent / Blowdown / Purge routing and termination details (stack/vent points, safe location) ➤ Supplier has provided the H₂ storage yard layout incl. foundations, clearances & routing ➤ ATEX/flameproof certification 		
3	Documentations	<ul style="list-style-type: none"> ➤ Datasheets available for all sensors/equipment. ➤ Certificates (material, compliance) submitted. ➤ Devices Calibration Certificates and Manuals. ➤ Necessary Safety procedural documents, manuals and matrices. 		

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Chapter - 8

Final Acceptance Test (FAT) Criteria

1. **Initial Verification Procedures:** Upon delivery and installation of the equipment on-site, the following inspections and verifications shall be carried out by ICAT's authorized representatives, in the presence of the Supplier
 - **Calibration Verification:** Review and confirmation that the calibration certificates correspond to the serial numbers of the equipment delivered. All calibration values shall be verified to ensure they fall within admissible tolerances.
 - **On-Site Recalibration:** A complete recalibration of the equipment shall be performed on-site in accordance with the applicable standards and manufacturer procedures.
 - **Sensor Validation:** Verification of all sensors, including but not limited to bridges, connectors, and identification features.
 - **Software Validation:** Verification of the correct operation of all software components, including the ability to execute required functions and to export, transfer, or dump data in the prescribed formats.
 - **Power Supply Verification:** Verification of all electrical connections and confirmation that the power supply meets the required specifications and operates correctly with the equipment.
 - **System Validation:** Functional validation of all subsystems to ensure they operate in accordance with the technical requirements.
 - **Calibration Plan Verification:** Review and validation of the Supplier's proposed calibration plan applicable during the warranty period.
 - **Documentation Verification:** Verification of all documentation delivered, including manuals, certificates, technical drawings, software licenses, and maintenance procedures.
 - **Standards-Based Testing Capability:** ICAT may request the performance of any test referenced in the standards listed in this tender to confirm that the equipment is capable of meeting all required testing conditions.
 - **Operational Inspections with Samples:** Execution of inspections or tests using multiple sample types to demonstrate that the equipment's operation and outputs satisfy all requirements specified in this tender.
2. **Subsequent System Testing:** Upon successful and complete achievement of all initial checks described above, the following tests shall be conducted.
 - **Comprehensive Subsystem Evaluation:** The Supplier shall conduct a complete system evaluation and shall demonstrate to the full satisfaction of ICAT the correct and compliant operation of all subsystems and auxiliary devices. The Supplier shall provide evidence that all auxiliary devices meet or exceed the performance, accuracy, and operational requirements specified in the tender documents.

The Supplier shall further verify and demonstrate that the equipment interfaces correctly and safely with all required utilities, infrastructure, and safety systems, in accordance with all applicable standards and tender specifications.

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Any defects, malfunctions, deficiencies, or instances of non-conformity identified at this stage— whether or not such issues were detected during pre-delivery inspection shall be remedied by the Supplier promptly, at its sole cost and expense, and without any entitlement to additional payment or extension of time.

Final Acceptance Overall Parameters				
SI No.	Description	Acceptance Criteria	Complied (Y/N)	Remarks
1	System Integration & Functionality Check	<ul style="list-style-type: none"> ➤ All systems (covered in scope of supply) integrated and operational (existing, upgraded/replaced and new) and functioning as per standard operation. 		
2	Documentation	<ul style="list-style-type: none"> ➤ Process Study Reports and protocol definition for H2 Test cell. ➤ Delivery of manuals (hard and soft (pen drive, USB 3.0)- 2 copies each). ➤ Applicable drawings ➤ Calibration certificates traceability to national/international standards ➤ Full BOM & BOQ verifications 		
3	Training & Testing support	<ul style="list-style-type: none"> ➤ Operator & maintenance training (02 Weeks) completed towards hydrogen ICE test cell operation, testing, safety, handling etc. under the scope of this bid at supplier site. ➤ 4 weeks testing support (for H2-ICE Engine testing) 		
4	Compliance & related support	<ul style="list-style-type: none"> ➤ Statutory & safety compliance certificates submitted (as per H2-ICE testbed compliance) ➤ Support in providing requisite data/document for Preliminary and Final PESO approval including local permission for the same for storage and usage as per Gas Cylinder Rules, 2016, and other statutory requirements (Max H2 Storage 350 Kg at 350 bar) ➤ Safety Mock drill conducted with support of ICAT for emergency preparedness ➤ All required safety signages as per legal and other requirements, emergency response plan, operator safety manual 		
5	Final handover accepted by ICAT	<ul style="list-style-type: none"> ➤ Warranty & service obligations in force ➤ Regulatory tests (EURO VI, and/or EURO VII (draft); European off road- 		

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		<p>Stage IV/V engines and European D2- 5 Mode/3 Mode) on available fuel (Conventional and H2) will be performed after successful upgradation and commissioning (as covered in scope) with the system generated report as per applicable standard.</p> <ul style="list-style-type: none"> ➤ The test(s) to be carried out as per applicable selected regulation are to be repeated 3 times on engine in the test cell to ensure repeatability in emission values (CO, THC, PM, CO2, NOX, NH3), fuel consumption, engine work. (Tolerances in emission values to be set by ICAT) ➤ The system generated results and report will be validated as per applicable calculations mentioned in test standard. <p><i>Note: H2 and other conventional engine used for commissioning and acceptance will be provided by ICAT. Also, Calibration and operational gas cylinders used for this activity will be provided by ICAT.</i></p>		
--	--	---	--	--

3. **Acceptance Testing of Auxiliary Devices:** ICAT reserves the right to conduct, or require the Supplier to conduct, any tests referenced in the technical specifications to evaluate the performance of the test beds, actuators, control systems, and all auxiliary devices. The Supplier shall demonstrate to ICAT’s satisfaction that all performance, accuracy, and operational requirements have been fully met.

Additional Terms & Conditions (ATC)**Form "I"****Performa for Performance Bank Guarantee**

(To be executed on non-Judicial stamped paper of an appropriate value)

WHEREAS International Centre for Automotive Technology having its office at Plot - 26, Sector - 3, IMT, Manesar, Gurugram - 122 051 (hereinafter referred to as "**The Owner**" which expression shall unless repugnant to the context includes their legal representatives, successors and assigns) and having their Corporate office at Plot No. 1, Sector - M11, Near Maruti Gate No. 4, IMT Manesar, Gurugram 122051, has executed a contract on [Please insert date of execution of Contract] ("**Contract**") with [insert name of the Successful Bidder](hereinafter referred to as the "**Contractor**" which expression shall unless repugnant to the context include its legal representatives, successors and permitted assigns) for the performance, execution and implementation of the Works ("**Works**" shall have the meaning ascribed to it in the Contract] based on the terms & conditions set out in the Tender Documents number [insert reference number of the Tender Documents] dated [insert date of issue of Tender Documents].....and various other documents forming part thereof.

AND WHEREAS one of the conditions of the Contract is that the Contractor shall furnish to the Owner a Bank Guarantee from a scheduled bank in India having a branch at Manesar for an amount equal to 5% (**five percent**) of the total Contract Sum (the amount guaranteed under this bank guarantee shall hereinafter be referred to as the "**Guaranteed Amount**") against due and faithful performance of the Contract from the post-commissioning stage of the Works under the Contract, including the performance bank guarantee obligation and other obligations of the Contractor for the supplies made and the Works being performed and executed by under the Contract. This bank guarantee shall be valid from the date hereof up to the expiry of the Warranty Period including any extension thereof.

AND WHEREAS the Contractor has approached [insert the name of the scheduled bank] (here in after referred to as the "**Bank**") having its registered office at [insert the address].....and at the request of the Contractor and in consideration of the promises made by the Contractor, the Bank has agreed to give such guarantee as hereunder:-

- (i) The Bank hereby undertakes to pay under this guarantee, the Guaranteed Amount claimed by the Owner without any further proof or conditions and without demur, reservation, contest, recourse or protest and without any enquiry or notification to the Contractor merely on a demand. Any such demand made on the Bank by the Owner shall be conclusive as regards the amount due and payable by the Bank under this bank guarantee and the Bank shall pay without any deductions or set-offs or counterclaims whatsoever, the total sum claimed by the Owner in such Demand. The Owner shall have the right to make an unlimited number of Demands under this bank guarantee provided that the aggregate of all sums paid to the Owner by the Bank under this bank guarantee shall not exceed the Guaranteed Amount.
- (ii) However, the Bank's liability under this bank guarantee shall be restricted to an amount not exceeding [figure of Guaranteed Amount to be inserted here].....only).
- (iii) The Owner will have the full liberty without reference to the Bank and without affecting the bank guarantee to postpone for any time or from time to time the exercise of any powers and rights conferred on the Owner under the Contract and to enforce or to forbear endorsing any powers or rights or by reasons of time being given to the Contractor which under law relating the Surety would but for the provisions have the effect of releasing the surety.

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- (iv) The rights of the Owner to recover the Guaranteed Amount from the Bank in the manner aforesaid will not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Contractor and / or that any dispute(s) are pending before any office, tribunal or court in respect of such Guaranteed Amount and/ or the Contract.
- (v) The guarantee herein contained shall not be affected by the liquidation or winding up, dissolution, change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to the Owner in respect of such liability or liabilities is affected.
- (vi) This bank guarantee shall be governed by and construed in accordance with the laws of the Republic of India and the parties to this bank guarantee hereby submit to the jurisdiction of the Courts of New Delhi for the purposes of settling any disputes or differences which may arise out of or in connection with this bank guarantee and for the purposes of enforcement under this bank guarantee.
- (vii) All capitalized words used but not defined herein shall have the meanings assigned to them under the Contract.

NOTWITHSTANDING anything stated above, the liability of the Bank under this bank guarantee is restricted to the Guaranteed Amount and this bank guarantee shall expire on the expiry of the Warranty Period under the Contract. Unless a Demand under this bank guarantee is filed against the Bank within six (6) months from the date of expiry of this bank guarantee all the rights of the Owner under this bank guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities hereunder. However, if the Contractor's obligations against which this bank guarantee is given, are not completed or fully performed by the Contractor within the period prescribed under the Contract, the Bank hereby agrees to further extend the bank guarantee for further periods of six months each till the Contractor fulfills its obligations under the Contract.

We have the power to issue this bank guarantee in your favor under Memorandum and Article of Association and the Undersigned has full power to do so under the Power of Attorney dated [date of power of attorney to be inserted].....granted to him by the Bank.

Date:

Bank

Corporate Seal of the Bank

By its constituted Attorney Signature of a person duly authorized to sign on behalf of the Bank.

Additional Terms & Conditions (ATC)

Form "II"

Bidder Information Checklist (Information/Documents to be submitted along with the Bid)

1	Name of the Bidder	
2	Address of the Bidder	
3	Contact Details of the Bidder	
	Telephone No. With STD Code	
	Fax No.	
	Mobile No.	
	E-mail ID	
	Website, if any	
4	Name of Proprietor/Partners/Directors of Firm/Agency	
5	Bidder Bank Details:	
	Name of Account Holder	
	Complete A/c No. (Current/Savings)	
	Name of Bank	
	Name of the Branch with Complete Address	
	IFS Code of the Branch	
	9 Digit MICR Code of the Branch	
6	Registration and Incorporation Particulars of the bidder indicating legal status such as Company, partnership/proprietorship concern, etc (Please attached copies of the relevant documents/certificates)	
7	GST Registration Details	
8	Copies of Permanent Income Tax Number (PAN)/Income Tax Circle	
9	Copies of Income Tax Returns Filed for the Last Three Financial Years should be attached	
10	Annual Turnover for the Last Three Years (Audited A/c Statements such as Profit & Loss A/c, Balance Sheets,	

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	etc for the last three financial years should be attached) Form XVI	
11	Original Copy of Authorization In Favor of Bidder From Manufacturer (OEM) Against this Tender Valid Throughout the Contract Period, in case the firm is not a manufacturer of the item (As per format given in Form "VII").	
12	Proof of experience in supplying to State/Government Departments/PSUs/Autonomous Bodies/Reputed Private Institutions (Copies of Purchase Orders received from Central/State Departments/Ministries of the Government of India/PSUs/Autonomous Bodies/Reputed Private Institutions during the last three years should be enclosed). Form XIV	
13	Declaration regarding blacklisting or otherwise by the government departments as given in "Form III"	
14	The ATC (Additional Terms and Conditions document (all pages) duly signed and stamped as proof of having read the contents therein and in acceptance thereof should be enclosed	
15	Any other information document: Please specify	

Additional Terms & Conditions (ATC)

Form "III"

Undertaking Regarding Blacklisting/Non-Debarment

(Format of Undertaking, to be furnished in Company Letter Head With Regard to
Blacklisting/Non-Debarment, By Organization)

To,
Director ICAT,
International Centre For Automotive Technology
Plot No. 26, Sector - 3, Near HSIIDC Office
IMT Manesar, Gurugram 122051 (Haryana - India)

We here by confirm and declare that we, M/s----- is not blacklisted/De-registered/debarred by any Government department/ Public Sector Undertaking/ Private Sector/ or any other agency for which we have executed/undertaken the works/services during the last 3 Years.

For.....

Authorised Signatory

Date:

Test Bed Upgrade for H₂-ICE and Euro VII

Additional Terms & Conditions (ATC)

Annexure "IV"

Format of Declaration In Lieu of EMD/Bid Security
(To be submitted on the Bidder's Letter Head)

To,
The Director
International Centre For Automotive Technology
Plot No. 26, Sector - 3, Near HSIIDC, IMT Manesar
Gurgaon - 122050

Reference: Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII at ICAT Centre - 1, Manesar (Haryana), "ICAT/GeM/ETL/TB-UPG/2025-26/395".

Sir/Madam,

We, the undersigned, solemnly declare that:

We understand the according to the conditions of this Tender Document, they must be supported by a Bid Securing Declaration In lieu of Bid Security/Earnest Money Deposit (EMD).

We unconditionally accept the conditions of this Bid Securing Declaration. We understand that we shall stand automatically suspended from being eligible for bidding in any tender in Procuring Organization for **1 Year (12 Months)** from the date of opening of this bid if we breach our obligations under the tender conditions if we:

1. Withdrawn/Amend/Impair/Derogate, in any respect, from our bid, within the bid validity or
2. Being notified within the bid validity of the acceptance of our bid by the Procuring Entity:
 - a) Refused to or failed to produce original documents for scrutiny or the required Performance Security within the stipulated time under the conditions of the Tender Document.
 - b) Fail or refuse to sign the contract.

We know that this bid Securing Declaration shall expire if the contract is not awarded to us, upon:

1. Receipt by us for your notification
 - a) of cancellation of the entire tender process or rejection of all bids or
 - b) of the name of the successful bidder or
2. Forty-Five days after the expiration of the bid validity period or any extension to it.

(Signature with Date)

(Name and Designation)

Duly Authorized to Sign the Bid for and on behalf of (Name & Address of Bidder and Seal of Company)

Date on day of

Place.....

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Form "V"

Earnest Money Deposit

[To be executed on the Letter Head of the Bidder]

Date: _____

To,
International Centre for Automotive Technology
Plot - 26, Sector - 3, IMT, Manesar,
Gurugram - 122051 (Haryana)

Re: Tender No. _____

We hereby enclose NEFT/RTGS UTR No. _____, dated _____, for Indian Rupees _____ Only (to be filled in figures and words both), drawn on _____, in favour of "International Centre for Automotive Technology", payable at Manesar, India.

OR

We hereby enclose Earnest Deposit Money Bank Guarantee for Rs. _____ [amount to be filled in figures and words both] issued by _____ [Name of the Bank], on _____ [Insert date of issue] valid up to _____.

Name of Bidder

Signature of Authorised Representative

Additional Terms & Conditions (ATC)

**Form "VI"
Declaration In Respect of Conflict of Interest**

Tender No. ICAT/GeM/ETL/TB-UPG/2025-26/395

Tender Detail: Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII at ICAT Centre - 1, Manesar (Haryana).

SI. No.	Particulars			
1	Name of Firm			
2	Office Address Phone No. Fax No. Email ID			
3	Works Address as per Vendor Registration Phone No. Fax No. Email ID			
4	Type of Firm Private Limited Company/Public Limited Company/Limited Liability Partnership (LLP)/Partnership Firm/Proprietor Firm (Tick whichever is applicable)			
5	CIN/LLPIN of Firm			
6	GST No. of Firm			
7	Names of all Directors/LLP Partners/ Partners / Proprietors of Bidder Firm with DIN (if any) and full address (as on the bid submission date)			
	SI No.	Full Name	DIN	Full Residential Address
	1			
	2			
	3			
	4			
5				

The details of Legal Representative/ Agent of the Bidder Firm are as Under:

Full Name of Legal Representative/ Agent	
Whether employee of Bidder-Firm or not? (Yes/No)	
Designation	
Office Address	
Office Land-Line Nos.	
Mobile No.	

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Email ID	
Whether acting as Legal Representative / Agent in any other Private Limited Company or Public Limited Company or Limited Liability Partnership (LLP) or Partnership Firm or Proprietor Firm? If yes, give names.	

WE HEREBY DECLARE AND CONFIRM THAT no bid has been submitted for the quoted item by any other Private Limited Company or Public Limited Company or Limited Liability? partnership (LLP) or Partnership Firm or Proprietor Firm in which any relative of any Director or Partner or Proprietor of Bidder Firm is a Director, Partner or Proprietor. The word “relative” is defined as under:

The Companies Act, 2013 Sec 2(77) “relative”, with reference to any person, means anyone who is related to another, if–

- (1) *they are members of a Hindu Undivided Family.*
- (2) *they are spouses; or*
- (3) *A person shall be deemed to be the relative of another, if they are related to another in the following manner, namely: -*
 - a. *Father including stepfather,*
 - b. *Mother including stepmother,*
 - c. *Son including stepson,*
 - d. *Son’s wife,*
 - e. *Daughter,*
 - f. *Daughter’s husband,*
 - g. *Brother including stepbrother,*
 - h. *Sister including stepsister.*

WE FURTHER DECLARE THAT we have carefully read and understood the clause relating to ‘Conflict of Interest’ of Tender No. _____ . The detailed Clause is as under:

“A bidder shall not have conflict of interest with other bidders for quoted item. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity’s interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process for quoted item, if:

- a) *they have proprietor/ partner(s)/ Director(s) in common; or*
- b) *they receive or have received any direct or indirect subsidy/ financial stake from any of them; or*
- c) *they have the same legal representative/ agent for purposes of this bid; or*
- d) *they have relationships with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another bidder; or*
- e) *Bidder participates in more than one bid in this bidding process. Participation by a bidder in more than one Bid will result in*

Additional Terms & Conditions (ATC)

the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ assemblies from one bidding manufacturer in more than one bid.

- f) *in cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/ dealer. There can be only one bid from the following:*
- 1. The principal manufacturer directly or through one Indian agent on his behalf; and*
 - 2. Indian/ foreign agent on behalf of only one principal.*
- g) *a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid.*
- h) *In case of a holding company that has more than one independent manufacturing unit or more than one unit having common business ownership / management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business.*
- i) *Bidder shall not act in contravention/ violation to the provisions of competition act, as amended from time to time.*

We hereby certify that our Firm M/s. _____ do not have any conflict of interest with other bidders for this tender.

We hereby declare and confirm that the above information and particulars are true and correct.

For (Firm Name)

Signature of Director/ Partner/ Proprietor/ Authorized Signatory

Authorized Signatory Name:

Place:

Date:

Stamp / Seal of Firm

Additional Terms & Conditions (ATC)

Form "VII"
OEM Authorization Certificate

Date:

Reference: ICAT/GeM/ETL/TB-UPG/2025-26/395

To

The Procurement Officer,

International Centre for Automotive Technology (ICAT),

Unit - National Automotive Board (NAB), Ministry of Heavy Industries (Govt. of India)

Plot No. 26, Sector 3, IMT Manesar, Gurugram - 122051, Haryana, India.

Subject: OEM Authorization Certificate for Participation in Tender for *Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII* at ICAT Centre - 1, Manesar (Haryana).

Dear Sir/Madam,

We, [OEM's Company Name], having our registered office at [OEM's Address], hereby authorize M/s [Bidder's Company Name], having its office at [Bidder's Address], to participate in the above-mentioned tender and to offer and supply our products, spares, and services as specified in the tender documents issued by ICAT.

This authorization is granted for the specific purpose of enabling M/s [Bidder's Company Name] to:

- Offer and supply genuine products and spares manufactured by us.
- Carry out installation, testing, commissioning, maintenance, and/or reconditioning services related to our equipment.
- Provide after-sales support, including warranty, repair, and service obligations as applicable under the scope of the tender.

We confirm that:

1. M/s [Bidder's Company Name] is our authorized dealer/reseller/partner for the following product line(s):
2. List of authorized equipment/systems/spares related to *Test Bed Upgrade for H₂-ICE and Euro VII*
3. The products and services offered by them shall be genuine, OEM-approved, and sourced directly through us or our authorized supply channels.
4. We shall extend all necessary technical support, spare parts supply, documentation, and warranty backing to M/s [Bidder's Company Name] for fulfilling their contractual obligations arising out of this tender, during both execution and warranty periods.
5. This authorization shall remain valid from [Start Date] to [End Date], unless earlier revoked by the OEM in writing with prior notice to ICAT.

We confirm that the authorization is being issued solely for the purpose of this specific tender and shall not be construed as a general appointment unless expressly stated.

We request you to consider this certificate as part of the technical bid submitted by M/s [Bidder's Company Name].

Yours sincerely,

For and on behalf of [OEM's Company Name]

Additional Terms & Conditions (ATC)

Authorized Signatory: _____

Name: [Full Name]

Designation: [Official Title]

Seal & Signature:

Date: [Insert Date]

Place: [Insert Place]

Test Bed Upgrade for H₂-ICE and Euro VII

Additional Terms & Conditions (ATC)

Form "VIII"

Declaration and Undertaking from Original Equipment Manufacturer (OEM)
(To be submitted Original on the OEM Letter Head)

Date: _____

To,
The Purchase Office,
International Centre For Automotive Technology
Plot No. 26, Sector - 3, Near HSIIDC, IMT Manesar, Gurgaon 122050 (Haryana)

Sub: Undertaking by *Original Equipment Manufacturer* against *Tender No. Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII at ICAT Centre - 1, Manesar (Haryana), "Tender No. ICAT/GeM/ETL/TB-UPG/2025-26/395"*.

Dear Sir/ Madam, I/We, M/s _____ (Name of the OEM) having registered office at _____ (address of the manufacturer) by virtue of being original equipment manufacturer for the _____ (Name of the product/s).

We hereby confirm the following points.

1. Parts supplied by us are certified and compatible with the solution offered.
2. Parts supplied and available are not declared as End-Of-Life/ EOS for next **10 Years** from the date of acceptance. After installation, if such parts are found End-Of-Life, then it will be our responsibility to replace with newer and higher compatible parts along with implementation at no cost to the "*International Centre For Automotive Technology (ICAT)*" during the warranty period i.e., **2 Year (24 Months)**.

The undersigned is authorized to issue such authorization on behalf of M/s _____ (Name of the manufacturer).

For M/s _____ (Name of the manufacturer)

Signature & company seal
Name Designation
Email
Mobile No.

Additional Terms & Conditions (ATC)

Form "IX"

Undertaking For Product/Service Compliance
(To be submitted Original on Bidder Letter Head)

To,
The Purchase Office,
International Centre For Automotive Technology
Plot No. 26, Sector - 3, Near HSIIDC, IMT Manesar, Gurgaon 122051 (Haryana)

Sub: Undertaking for Product/Service Compliance

Dear Sir/ Madam,

I/We, [Bidder/Seller's Name] hereby undertake that all the Products/Services offered in response to the tender fully comply with the specifications or requirements mentioned in the tender document. We confirm that the offered products/services meet the technical requirements, standards, and features outlined in the tender. In case of any deviations, we commit to notifying the buyer and obtaining approval before the delivery of products.

Date: _____

Signature of Authorized Signatory: _____

Name and Designation: _____

Seal: _____

Additional Terms & Conditions (ATC)

Form "X"
Undertaking

This is to certify that we have carefully gone through the scope of work, job requirement, terms and conditions given in the tender documents & have clearly understood the terms and conditions of the tender and have accordingly quoted our best rates after going through all details. We hereby given an undertaking that we shall the material & services in accordance with your *Tender/ATC Document No. ICAT/GeM/ETL/TB-UPG/2025-26/395* as per the requirement during the period of contract.

Dated:

Place:

(Signature of the bidder with seal/rubber stamp)

Test Bed Upgrade for H₂-ICE and Euro VII

Additional Terms & Conditions (ATC)

Form "XI"

No Deviation Declaration

(To be submitted Original on Bidder Letter Head)

Date: _____

To,
The Purchase Office,
International Centre For Automotive Technology
Plot No. 26, Sector - 3, Near HSIIDC, IMT Manesar, Gurgaon 122051 (Haryana)

Sub: No Deviation Declaration

Dear Sir/ Madam,

This is to certify that, the product (s) quoted items _____ by our firm M/s.....
..... is as per the given technical specifications in the tender document
& there is no deviation in relation to any conditions / requirements specified in the tender document. It is
also to declare that all other commercial clauses stipulated in the tender have been carefully seen. I hereby
convey the unconditional acceptance of the same.

Signature of Authorized Signatory with Stamp

For M/s _____

Signature & company seal
Name Designation
Email
Mobile No.

Additional Terms & Conditions (ATC)

Form "XII"

Deviations or Modification Suggested

(To be submitted Original on Bidder Letter Head)

The Bidder can present and justify here any modification or improvement to the Conditions of Contract proposed to in the interest of ICAT. Such suggestions should be concise and to the point. In case, the Bidder does not want to suggest any deviation, this section must contain a statement indicating "No Deviation Suggested".

Sl. No.	Clause No.	Existing Provision	Query/Suggestion

Note: Give clear reasons why you think the proposed solution is better than the Requirement expressed in **Chapter "1"** or any conditions expressed in **Chapter "6"**

Signature of Authorized Signatory with Stamp

For M/s _____

Signature & company seal
Name Designation
Email
Mobile No.

Additional Terms & Conditions (ATC)

Form "XIII"

Undertaking For Non-Subcontracting
(To be submitted Original on Bidder Letter Head)

To,
The Purchase Office,
International Centre For Automotive Technology
Plot No. 26, Sector - 3, Near HSIIDC, IMT Manesar, Gurgaon 122051 (Haryana)

Sub: Undertaking for Non-Subcontracting

Dear Sir/Ma'am,

I/We, [Bidder/Seller's Name], hereby undertake not to subcontract any aspect of the contract, including the supply and installation, without obtaining prior written consent from the buyer. We understand that failure to seek approval for subcontracting may result in disqualification from the bidding process.

Date: _____

Signature of Authorized Signatory: _____

Name and Designation: _____

Seal: _____

Test Bed Upgrade for H2-ICE and Euro VII

Additional Terms & Conditions (ATC)

Form "XIV"

Details of Contracts

(To be submitted Original on Bidder Letter Head)

Details of contracts with Central Govt./State Govt./PSUs/Autonomous Bodies & Reputed Private Firms in India managed by the Bidder during the last three (3) years in the following format (attested copies of the PO's and completion certificates may be closed).

SI No.	Details of client along with address, contact details (telephone, email, website, fax etc.)	Contract Value (INR)	Duration of contract	
			Order Received Date	Project Completion Date
1.				
2.				
3.				
4.				
5.				

(If the space provided is insufficient, a separate sheet may be attached)

Signature of authorized person

Date:

Name:

Place:

Seal:

Additional Terms & Conditions (ATC)

Form "XV"

Declaration by the Bidder for Code of Integrity
(On the Letter Head of the Bidder)

Date _____

To,
The International Centre For Automotive Technology
Unit - National Automotive Board (NAB), Ministry of Heavy Industry (Govt. of India)
Plot No. 26, Sector - 3, Near HSIIDC Office, IMT Manesar, Gurugram - 122051 (Haryana)

Dear Sir,

We, [Name of the Bidder], hereby solemnly affirm and declare that:

1. We have not engaged in any corrupt, fraudulent, collusive, coercive, or undesirable practices in competing for or in executing the contract for [Tender/Work/Service Description].
2. We have complied with all applicable laws, regulations, and guidelines including the General Financial Rules (GFR) and relevant procurement manuals issued by the Government of India.
3. We declare that no undue influence or payments have been made or promised to any official or employee of the Procuring Entity in connection with this tender.
4. We understand and agree that violation of this declaration shall result in rejection of our bid, termination of the contract, and/or legal actions as deemed appropriate by the Procuring Entity.
5. We commit to uphold integrity and transparency throughout the tendering process and contract execution.

Thanking you,

Yours faithfully,

[Signature of Authorized Signatory]

[Name of Authorized Signatory]

[Designation]

[Company Seal]

[Date]

Additional Terms & Conditions (ATC)**Form "XVI"****Format for Annual Turnover**

(To be submitted on letterhead of Chartered Accountant along with their UDIN)

Ref: Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII at ICAT Centre - 1, Manesar (Haryana), "Tender No. ICAT/GeM/ETL/TB-UPG/2025-26/395"

Annual Turnover Declaration

The Annual Turnover to be provided in the following format for the 3 (Three) Financial Years.

Financial Information (in INR)			
Financial Year	2022-23	2023-24	2024-25
Annual Turnover (In Lakhs)			
Average Annual Turnover:			
Note: Annual turnover should be certified by Chartered Accountant/ Statutory Auditors.			

Certificate from the Chartered Accountant/Statutory Auditor

This is to certify that _____ (Name of the Bidder) had a turnover as shown above against the respective financial years.

Name of the audit firm:

Seal of the audit firm:

Membership No. of Chartered Accountant:

UDIN:

Date:

(Signature, name and designation of the Chartered Accountant)

Note:

1. The details submitted by the Bidder in "**Form II**" must be corrected and submitted by the bidder with UDIN. "**Form XVI**" submitted without valid UDIN shall not be considered.
2. Average annual turnover over the last three years (i.e. 2023-23, 2023-24 & 2024-25) shall be min. INR 50 Cr.
3. Financial turnover: Financial statement / certificate duly signed and stamped from authorized Chartered Accountant with **UDIN No**

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Form "XVII"

Declaration regarding "Restrictions on Procurement from a Bidder of a Country Which Shares a Land Border with India".

(To be submitted on Applicant's Letter Head)

To,
International Centre For Automotive Technology
Unit - National Automotive Board
Plot - 26, Sector - 3, Near HSIIDC Office
IMT Manesar, Gurgaon 122051

Dear Sir,

With reference to our bid proposal for participation in ICAT tender *ATC Document No. ICAT/GeM/ETL/TB-UPG/2025-26/395*, I/we hereby confirm that, I/We have read the clause as mentioned in the tender document mentioned above regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries.

I/We certify that we/our Collaborator/JV Partner/Consortium member/Assignee are/is not from such a country or, if from such a country, have/have been registered with the Competent Authority and we will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.

We hereby certify that we fulfil all requirements in this regard and are eligible to be considered.

We further confirm that evidence of valid registration by the Competent Authority for us/our Collaborator/JV Partner/Consortium member/Assignee, as applicable, is enclosed as Annexure.

*Bidder to strike-off, if not applicable.

**Bidder to mention the Annexure no.

Date: _____ Place: _____

Seal of Organization & Signature of Authorized Applicant

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Form "XVIII"

**Certificate Regarding Declaration of Local Content
(On the Bidder Letter Head)**

To,
International Centre For Automotive Technology
Unit - National Automotive Board
Plot No. 26, Sector - 3, Near HSIIDC Office, IMT Manesar
Gurgaon - 122051 (Haryana)

Sub: Compliance of Minimum Local Content Requirement as mentioned in Ministry of Commerce and Industry Trade and order no. P-45021/2/2017-PP(BE-II) dated 4th June' 2020

Ref: GeM Document No: ICAT/GeM/ETL/TB-UPG/2025-26/395, Description of Item(s): Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII at ICAT Centre - 1, Manesar (Haryana).

We hereby certify that the quoted items offered by us against above Enquiry No. is having local content of%.

Further, to certify that the local content % certified above is in line with definition of Local content given in point no 2 of Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 and we qualify as Class -..... (Class-I/ Class-II/Non-Local supplier - as applicable) local supplier.

We further confirm that details of location at which the local value addition is made is at
..... (Bidder's / OEM's Manufacturing works)

Country of Origin from OEM:

(For items sold by bidder as reseller, OEM certificate for Country of Origin to be submitted.)

We confirm the following for the current tender:

1. Repackaging/ Refurbishment/ Rebranding of imported products has not been considered for calculation of local content or Domestic Value Addition (DVA). That the cost of imported items sourced locally from resellers/ distributors and cost of license/royalty paid/technical expertise cost etc. source from outside of India has been excluded from the local content, as mentioned in 3(d) of PPP-MII order Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT.
2. For contracts involving supply of multiple items, weighted average of all items has been taken while calculating the local content.
3. We understand, for this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non-local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.
4. We understand that we have to give a self-certification regarding local content wherever the tender value is up to Rs 10 crores. In case the tender value is more than INR 10 Crores, we shall be required to provide

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a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. In both cases, the certification has to be provided by us during bid submission.

5. We also understand that false declaration will be in breach of Code of Integrity under the rule 175(1)(i)(h) of the General Finance Rules for which the bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Finance Rules along with such other actions as may be permissible under the law.
6. That in case we are the successful bidder and the contract value of the order awarded to us is more than Rs 10 crores, we will provide local content certification duly certified by cost/ chartered accountant in practice during execution of the contract. That a penalty up to 10% of the contract value may be imposed on us during execution, in case we do not meet the stipulated local content during the execution of the contract. We are also aware that the contract awarded to us will not be terminated on this account.
7. We hereby declare that the details furnished above are true and correct to the best of our knowledge and belief and we undertake to inform you of any changes therein, immediately. In case any of the above information is found to be false or untrue or misleading or misrepresenting, we are aware that we may be held liable for it.

Thanking you,

Yours faithfully,

(Signature, Date & Seal of Authorized Signatory of the Bidder)

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be ground for penal action and for taking further action in accordance with law and as per extant guidelines.

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Form "XIX"

Declaration to be provided by MSE bidder
(to be submitted by Bidder on its company's letterhead)

To,
International Centre For Automotive Technology
Unit - National Automotive Board
Plot No. 26, Sector - 3, Near HSIIDC Office, IMT Manesar
Gurgaon - 122051 (Haryana)

Sub: Compliance of Minimum Local Content Requirement as mentioned in Ministry of Commerce and Industry Trade and order no. P-45021/2/2017-PP(BE-II) dated 4th June' 2020

Ref: Tender Document No: ICAT/GeM/ETL/TB-UPG/2025-26/395, Description of Item(s): Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII at ICAT Centre - 1, Manesar (Haryana).

With reference to above GeM bid, we M/s (Bidder's Name) confirm/declare the following:

1. Our MSE Category:
2. Details of the MSE category are as under: We furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with our techno-commercial offer.

Udyam No	Type Under MSE	SC/ST Owned	Women Owned	Others (Excluding SC/ST & Women Owned)
	Micro			
	Small			

Thanking You,

Yours Faithfully,

(Signature, Date & Seal of Authorized Signatory of the Bidder)

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be ground for penal action and for taking further action in accordance with law and as per extant guidelines.

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Form "XX"

Price Reasonability Declaration Letter
(On Bidder Letter Head)

To

The Director,

International Centre for Automotive Technology (ICAT),

Unit - National Automotive Board (NAB), Ministry of Heavy Industries, Government of India,

Plot No. 26, Sector 3, IMT Manesar, Gurugram - 122051, Haryana (India).

Subject: Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII at ICAT Centre - 1, Manesar (Haryana).

Reference: ICAT/GeM/ETL/TB-UPG/2025-26/395

Dear Sir/Madam,

We, M/s _____ (Name of Bidder), having our registered office at _____, do hereby certify and declare as under:

1. That the prices/rates quoted by us in response to the above-mentioned tender for the Supply, Installation, Testing, Commissioning and Training of Test Bed Upgrade for H₂-ICE and Euro VII are **exclusive to the International Centre for Automotive Technology (ICAT)**.
2. That the prices offered are **not higher than those charged** to any other Government Department, Public Sector Undertaking (PSU), Autonomous Body, or reputed private automotive testing agency for similar goods or services, in the **recent past**.
3. That we have extended the **maximum applicable discount** to ICAT and hereby confirm that the price quoted to ICAT is the **lowest** offered by us to any of the institutions or organizations as mentioned above for comparable goods/services.
4. That in the event it is discovered at any stage during the currency of the contract that we have supplied the same or substantially similar goods/services to any other Government/PSU/Autonomous Body/Private Automotive Testing Agency at a **lower price**, we agree and undertake that ICAT shall, at its sole discretion, be entitled to exercise any one or more of the following remedies, without prejudice to its other legal rights or remedies:
 - Demand and recover the differential amount from us by way of refund or adjustment.
 - Cancel the purchase order in full or in part, without any liability on the part of ICAT.
 - Debar/blacklist us from participation in future tenders or procurement processes of ICAT.
 - Initiate appropriate legal proceedings under applicable laws for misrepresentation or breach of declaration.

We understand and accept that this declaration is a binding commitment forming an integral part of our bid, and any violation may result in appropriate penal or legal action.

Thanking you,

Yours faithfully,

For and on behalf of M/s _____

Authorized Signatory: _____

Name & Designation: _____

Seal of the Bidder: _____

Date & Place: _____

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Form "XXI"
Technical Compliance Checklist

Requirement	Form XXI Checklist		Supplier Name			
	General	Specific Functionality	Requested Info for each requirement to be filled in column "Proposed Specification"	Essential parameter	Minimum Requirement	Proposed Specifications: Bidder to fill with Proposed Specification included in its Offer for each individual requirement. Detailed description of all Items to be included in Chapter - 1: Detailed Technical Specifications ". For each Proposed Specification that deviates from Minimum Requirement, one entry shall be done in document " Form - XII: Deviations "
1	Design Service Requirement as per Part A		Specify (Yes/No)	Yes	Required	
2	Test Cell Utility Systems		Specify (Yes/No)	Yes	Required	
i.	Test cell temperature: 25 °C with tolerance +/- 5 °C during engine testing.					
ii.	Supplier to supply, install, test and commission the New Heating Ventilation and Air Conditioning (HVAC) w.r.t to Test Bed equipment details available in tender document.					
iii.	The HVAC System must be able to fulfil the requirement of all types of engines planned in the test cell with H ₂ as a fuel and various other conventional fuels. [Diesel (reference and commercial), Gasoline (reference and commercial), CNG, PNG].					

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iv.	The system must be Energy efficient with option of Auto/Manual selection between option (a) and (b), (a) Hydrogen fuel application (b) Conventional fuels.				
v.	Supplier to prepare and provide the detailed (2D and 3D) layout as per the available space. Supplier may visit the site before submission of the bid.				
vi.	Supplier to provide Piping and instrumentation design (P&ID).				
vi.	Complete Bill of material (BOM) of the HVAC system to be provided.				
3.	Water Supply System	Specify (Yes/No)	Yes	Required	
i.	Supplier to specify the total process and chilled water supply requirements under the scope of bid.				
ii.	Supplier to specify the total Cooling/Shop water supply requirements under the scope of bid.				
iii.	Chiller, piping layout to and from utility including the final execution will be in Supplier scope.				
iv.	Note 1: Process and chilled water supply, Cooling/Shop water supply for the existing equipment & additional utilities will be provided by ICAT.				
v.	Complete Bill of material (BOM) for supply system to be provided.				
4.	H₂ Fuel Supply, Storage & Distribution	Specify (Yes/No)	Yes	Required	
i.	As per Supplier design report for the H ₂ storage yard, Civil Execution will be done by ICAT and necessary statutory approvals will be taken by ICAT.				
ii.	Safety matrix preparation to be done by the Supplier. Supplier must integrate all applicable safety devices as per National and international standards.				

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iii.	Supplier to provide the Leak detection, flame detection and fire suppression system at storage locations integrated with testbed/building management system meeting all the National and International Standards.				
iv.	Supplier to include the H ₂ Gas detector covering the area identified for the H ₂ storage.				
v.	Supplier to provide layout, distribution, pressure reduction, its material from storage to test cell.				
vi.	Supplier to visit site to get actual line dimensions (length & sizes) and other required dimensions to and from test cell to storage and vice versa. Supplier to mandatorily use only Swagelok/Parker/HIP/HIFLUX/FITOK make fittings and orbital welding for line connections.				
vii.	Anti-spark requirements at storage & test cell to be ensured Fulfilment of the same is in Supplier scope				
viii.	Anti-static requirements at storage & test cell to be ensured, fulfilment of the same is in Supplier scope				
ix.	Supplier to include the Nitrogen / any other suitable Purging system for H ₂ at storage & test cell. Supplier to provide layout, distribution, pressure reduction, its material from storage to test cell. Suppliers mandatorily use only Swagelok / Parker / HIP/HIFLUX/FITOK make fittings and orbital welding for line connections.				
x.	Complete Bill of material (BOM) to be provided.				
5.	Calibration And Operational Gas Handling System - ICAT will use the existing gas handling system and supplier to extend as per equipment requirements.	Specify (Yes/No)	Yes	Required	
6.	Compressed Air Distribution System - ICAT will use the existing compressed air distribution system and supplier to extend as per equipment requirement.	Specify (Yes/No)	Yes	Required	
7.	Exhaust Extraction & Scavenging System	Specify (Yes/No)	Yes	Required	

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i.	Supply, install, test and commission of new Exhaust extraction system for Hydrogen and other conventional fuels in test cell.				
ii.	Supply, install, test and commission of New Scavenging System for Hydrogen and other conventional fuels in test cell.				
iii.	Supply, install, test and commissioning of New Safety Interlock mechanism which should synchronize with exhaust extraction and scavenging system for Safe operation of H ₂ in Test cell.				
8.	Fire Detection And Suppression Systems	Specify (Yes/No)	Yes	Required	
i.	Note: The existing test cell is equipped with the following. <ul style="list-style-type: none"> ➤ High pressure water mist fire extinguish system at test cell. ➤ Heat and flame & smoke detection in test cell. 				
ii.	Upgradation, and modification of existing safety system and equipment, including the selection, supply, testing, installation and commissioning of the safety system equipment for hydrogen and other conventional fuels as per the report provided by Supplier in PART A, if any shall be in the scope of supplier.				
iii.	Supplier to provide suitable Gas Detection system (H ₂ /Flame detection).				
iv.	Supplier to provide the Hydrogen leak detector.				
v.	Supplier to provide next level safety for H ₂ leak detection inside test cell via installation of Thermal camera or ultrasonic leak sensor (Qty- 2 Nos Minimum)				
vi.	Supplier to supply, install, test and commission of Safety Interlock mechanism which should synchronize with all safety system including fire detection and suppression for Safe operation of H ₂ in Test cell and other conventional fuels.				
vi.	Supplier to provide the complete Bill of material (BOM).				
9.	Building Management System (BMS) Interface And Integration Requirements	Specify (Yes/No)	Yes	Required	

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i.	Supply, install, test and commission PLC system for utility which can be integrated with test bed data acquisition system.				
ii.	Interface between the Test bed automation system and test bed utility system which is designed and supplied by Supplier. In case of the Test bed automation system is not from the Supplier it must provide the interface protocol for the same so that integration can be done.				
iii.	Tri-Party meeting between supplier and Equipment manufacturer if the Supplier and equipment supplier are different.				
iv.	Supplier is responsible for the Safety matrix definition of all systems.				
v.	Supplier to ensure that Fail-safe arrangement in BMS must be available and implemented.				
10.	Electrical	Specify (Yes/No)	Yes	Required	
i.	Supplier to supply, install, test and commission the electrical system as per the report submitted by the Supplier in Part A.				
ii.	Supplier to prepare and supply the complete Schematic of the electrical layout to ICAT.				
iii.	All the power cables & signal cables for the test cell utility under this scope of bid including to and from power termination point will be in the scope of Supplier. Cable route layout is also in Supplier scope.				
iv.	Supply, install, test and commission of flame proof test cell lighting, sockets, is also in Supplier scope.				
v.	Supply, install, test and commission static discharge unit at test cell and fuel storage area is also in Supplier scope.				
vi.	For the existing power load of equipment will be the responsibility of ICAT. Flame proof power connections for existing equipment to be provided by the supplier.				

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vii.	Input Power supply based on the Supplier recommendation will be provided by ICAT.				
11.	Material Handling	Specify (Yes/No)	Yes	Required	
i.	Supplier to supply, install, test and commission test cell Crane as per the design report mentioned in Part A.				
ii.	Supplier to supply, install, test and commission other requirements related to the material handling for the UUT as per the design report mentioned in Part A.				
12.	Process Study	Specify (Yes/No)	Yes	Required	
i.	Supplier to supply, install, test and commission the necessary equipment to comply the requirements based on the process study report as per Part A and requirements of Appendix A and Appendix B .				
Appendix A (Process Study Parameters)		Specify (Yes/No)	Yes	Required	
1	HAZOP - Hazard and Operability Analysis				
2	LOPA (Layer of Protection Analysis) Study				
3	SIL (Safety integrity level) classification				
4	Hazardous area classification (HAC)				
5	Safety matrix preparation				
6	Safety protocols Integration and its documentation				
7	Risk assessment study - Quantitative				
8	Consequence Analysis -Gas Dispersion & Explosion Analysis				
9	Lightening Protection Study				
10	Fire & Gas Mapping				
11	Hazard Identification and Risk Assessment (HIRA) analysis				
12	ATEX zone definition and identification				
13	Explosion Protection by Deflagration Venting				

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14	Any other study if required must be included by Supplier for the safe operation of H ₂ in H ₂ -ICE test cell				
Appendix B		Specify (Yes/No)	Yes	Required	
1. NFPA (National Fire Protection Association):					
1	NFPA 1: Fire Code				
2	NFPA 2: Hydrogen Technologies Code				
3	NFPA 10: Standard for portable Fire Extinguisher				
4	NFPA:13: Standard for the installation of Sprinkler Systems				
5	NFPA 55: Compressed Gases and Cryogenic Fluids Code				
6	NFPA 68: Standard on Explosion Protection by Deflagration venting				
7	NFPA 70: National Electrical Code				
8	NFPA 72: National Fire alarm and signaling Code				
9	NFPA 101: Life Safety Code				
10	NFPA 497: Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas				
11	NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids				
12	NFPA 750: Standard on Water mist Fire Protection System				
13	NFPA 2001: Standard on Clean Agent Fire Extinguishing System				
2. IEC: International Electrotechnical Commission					
1	IEC 61882: Hazard and operability studies (HAZOP studies)				
2	IEC 62305: Part 1, 2, 3 & 4: Protection against lightning				

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3	IEC 61511: Functional safety – Safety instrumented systems for the process industry sector				
4	IEC/IS 60079: Explosive Atmosphere Standards.				
3. IS: Indian Standard					
1	IS 7689: Code of Practice against Static Charges.				
2	IS 5571: Guide for selection and installation of electrical equipment in hazardous areas.				
4. ISO 12100: General Principles for design Risk assessment and risk reduction					
5. 2014/34/EU ATEX 114					
6. 1999/92/EU ATEX 153					
7.	1 EN 60079-10-1-Classification of areas. Explosive gas atmospheres				
	2 EN 60079-14 Electrical installations design, selection and erection				
	3 EN 60079-17 Electrical installations inspection and maintenance				
	4 EN 1127-1 Explosion prevention and protection				
8. Storage System design as per PESO approval (Gas cylinder Rules 2016) as amended from time to time					
9. ASME B31.12: Hydrogen Pipelines and Piping Code - hydrogen piping design					
10. CGA: Handbook of Compressed Gases					
11. CGA- G-5.5: Hydrogen Vent systems					
12. ASME B31.3: Process Piping, Code for pressure piping					
13. OISD 163: Safety of Control Room for Hydrocarbon Industries					
14. TRGS, TRBS, NFPA Technical Rules					
13.	Civil Infrastructure	Specify (Yes/No)	Yes	Required	
i.	Supplier to comply the requirements based on the civil infrastructure report as per Part A including the ATEX zone Identification etc.				

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ii.	Supplier to supply, install, test and commission the H ₂ compatible Acoustic panels in the scope of supply.				
iii.	<p>Supplier to supply, install, test and commission the viewing window based on suggestions mentioned in the report of Part A considering minimal modification w.r.t Test cell, console room.</p> <p>Supplier need to submit the compliance Certificate for viewing window meeting all the design requirement.</p> <ul style="list-style-type: none"> ➤ Camera (Minimum 2 Nos.) compatible for H₂ operations to be fitted inside the Test Cell other than the Infra-red cameras. ➤ Display LED Monitor (min 40" dimension - 1 Nos.) along with its peripheral. ➤ All the cabling and junction box will be under the Supplier scope. <p style="text-align: center;">Or</p> <p>If the viewing window is not present as per Supplier design study, the following equipment's /utility needs to be included.</p> <ul style="list-style-type: none"> ➤ Camera (Minimum 4 Nos.) compatible for H₂ operations to be fitted inside the Test Cell other than the Infra-red cameras. ➤ Display LED Monitor (min 80" dimension - 1 Nos.) along with its peripheral. <p>All the cabling and junction boxes will be under the Supplier scope.</p>				
iv.	ICAT will carry out all the civil Infrastructure work with the Supplier as per the design report of Part A				
14	Hydrogen And CNG Fuel Flow Meter	Specify (Yes/No)	Yes	Required	
	Suitable for H ₂ and CNG (with density correction feature) and Hydrogen + CNG.				
	Working principle: Coriolis				
	Nominal Range- up to 40 kg/h (H ₂) and for CNG up to 140kg/h.				
	Accuracy should be better than +/-0.5% at point above 10 % of Range specified (i.e 40kg/hr) and below 10% it must be less than +/-1% at point.				
	Repeatability +/-0.5% at point.				

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	Dynamic on-line continuous measurement with minimum sampling rate of 10 Hz.				
	Non-resettable fuel totalizer to be included in scope of supply.				
	Fuel inlet Pressure at device range up to 70 bar. Variable output pressure must be possible depending on the engine requirements at engine fuel inlet.				
	Fuel temp & pressure measurement will be done near to engine fuel inlet point.				
	Fuel consumption meter and leak check functionality must be capable of measurement during motoring mode.				
	In-built N2 purging systems and leak check functionality must be available.				
	Distance between the measurement unit and the engine should be approx. 10 meters.				
	In built pressure control for stable measurement conditions.				
	Flow Meter Trolley to be included.				
	Including suitable interface to the test cell automation system.				
	Suitable Power cables, HOST Interfacing cables to be included in the scope of supply.				
	Provision for Interface with existing test bed automation system.				
15	Hydrogen Analyzer - 1 QTY.	Specify (Yes/No)	Yes	Required	
	System must be suitable for the measurement of the H2 measurement in exhaust gas.				
	Working Principle: Electron Impact Ionization Mass Spectrometry (EIMS).				
	Measurement range: 0 to 100 % H2				
	Response Time - Supplier to specify.				
	Lower detection Limit: Supplier to specify.				
	Concentration drift: Supplier to specify.				

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	Accuracy – ± 1.0% of full scale ≤ 3 % of measured value (10 – 100 % of range full scale) whichever is better				
	Minimum 10 points linearity verification is required.				
	Calibration certificate traceable to national and international standards. However, internal factory calibration certificate may be accepted.				
	Software integration of H2 exhaust analyzer with Ammonia measurement device and automation system.				
16	Blow By Meter - 1 Quantity	Specify (Yes/No)	Yes	Required	
	System must be suitable for continuous measurement and monitoring blowby on H2-ICE, conventional and gas engine.				
	Working Principle: Orifice measurement				
	Measurement uncertainty- ±1% with Linearization Measurement Range- up to 300 l/min				
	Device should ensure measurement accuracy in case of heavy pulsation in measuring gas provision to separate condensate.				
	Operating temperature- 0°C to 50°C.				
	Device should be integrated with automation using analog(±10V, 4...20mA), RS232 and LAN. Also, provided with suitable interface to the test cell automation system				
	Blowby meter trolley to be included.				
17	Intercooler - 1 Quantity	Specify (Yes/No)	Yes	Required	
	Suitable for engines up to 350 kW with maximum boost pressure ratio of 3.5				
	Must have sufficient capacity to maintain 45 °C± 5% air temperature at the outlet of the engine intercooler.				
	The maximum air flow through the intercooler shall be 1500-1800 kg/h.				
	Maximum inlet temperature 250°C.				

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	The cooling media will be water with temperature range of 25 to 35 °C.				
	Charge Air Input – Max 250 °C with pressure of 3.5 bar (absolute). Pressure drop across intercooler should be less than 40mbar@max airflow.				
	Pressure drop across intercooler adjustment required with external valve and controlling should be possible through automation as well as manual.				
	Quick coupling arrangement for shop water connection (IN/OUT).				
	Intercooler Drop- Appropriate Simulation valve and PID response control via automation through lookup/PID parameters.				
18.	Coolant Conditioning Unit - 1 Quantity	Specify (Yes/No)	Yes	Required	
	System must be suitable for testing of 350 kW H2 Engine rating and 400 kW conventional engine rating (including related safety and operational parameters).				
	Flow direction arrow mark required.				
	Media: Suitable for standard engine pre-mixed coolant, Engine coolant with water, shop water.				
	Engine coolant temperature control +/-2 °C for the set point between 70 to 120 °C with cooling water temperature 30-35 at inlet of CCU. Pressure adjustment in the water circuit of 2.5 to 4 bar is required. Max delta temperature (Engine input/output) is 10 °C.				
	The PID control function is carried out by the system.				
	Including suitable interface to the test cell automation system.				
	Alarms for low water pressure, low water level & high-water temperature.				
	Design to be based on constant water flow through the conditioning unit.				
	Engine water pump inlet pressure and engine inlet and outlet temperature indication on unit is required continuously.				

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	Distance between the engine and conditioning unit should be approx. 4-6 meters.				
	Stainless Steel valve for coolant control should be provided.				
	Inline heating of coolant.				
	Provision of coolant heating while engine is running.				
	Provision of coolant pre-heating (in circulation within system) before engine start.				
	Temp. rise rate of circulating coolant from ambient temp, 2 °C per minute.				
	Heater control: Settable up to 85 °C.				
	Safety provision related to heater.				
	Provision of enable or disable heater control, as and when required				
	Provision of manual electromechanical bypass of system inbuilt pump/motor for checking working of running engine inbuilt pump.				
	Provide suitable water filter in the shop water circuit.				
	Suitable cable for Conditioning unit, Power cables, HOST Interfacing cables to be included in the scope of supply.				
	Provision for Interface with existing test bed automation system.				
	DC Analog volt Input/Output: 0 - 10V or 4 - 20mA for set point and actual measured and TCP-IP or RS 232 /485 or better along with standard interface protocol.				
19.	Pressure And Temperature Sensors	Specify (Yes/No)	Yes	Required	
	H2 compliant PT-100 with 3 wire: Total 24 Nos. (100mm length, 3 mm diameter) with system accuracy (sensor +cable + indicator) of +/- 1°C absolute with cable length of sensor to 3 Meters.				
	H2 compliant K type thermocouple - Total 24 Nos. (100mm length, 3 mm diameter) with accuracy of +/-2°C absolute below 327 °C and +/-1% of reading above 327 °C with cable length of sensor to 3 Meters.				

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	Spare Connectors 10 Each for RTD and K type to be included in scope of supply for each sensor.				
	Thermocouples shall have noise protection.				
	Temperature sensors should have an identity name plate mentioning measuring range, Sr. No. Type, date of calibration and due date of calibration.				
	Pressure sensors (ATEX approved)				
	ATEX approved DPT (Differential Pressure Transducer) for Air intake depression (Range 0 to 10 kPa, system accuracy +/-0.05 kPa absolute) - 2 Nos.				
	ATEX approved DPT for engine exhaust back pressure Range 0 to 120 kPa, system accuracy +/-0.2 kPa absolute) - 2 Nos.				
	ATEX approved DPT for boost pressure (Range 0 to 500 kPa)- (accuracy 0.075% of FS range or better) - 2 Nos.				
	ATEX approved Gauge PT - Fuel in/out etc. (Range 0 to 500 kPa, system accuracy +/-0.1 kPa absolute)- (accuracy 0.075% of FS range or better) - 4 Nos.				
	ATEX approved Gauge PT - Engine Oil pressure (Range 0 to 1000 kPa, system accuracy +/-0.1 kPa absolute)- 2 Nos.				
	ATEX approved Gauge PT - Miscellaneous (Range 0 to 300 kPa) - 6 Nos. (2 Nos. ATEX + 4 Nos. Non ATEX) , system accuracy +/-0.1 or better). (accuracy 0.075% of FS range kPa absolute)				
	ATEX approved Ambient Absolute Pressure sensor (range 0 to 120 kPa, system accuracy +/-0.1 kPa absolute) - 3 Nos.				
	Pressure sensor- coolant out, EGR cooler-coolant in/out (range 0 to 500 kPa, System accuracy +/-0.1 kPa absolute) - 4 Nos.				
	Pressure sensor- coolant in (range 0 to 250 kPa, System accuracy +/-0.1 kPa absolute) - 1 Nos.				
	ATEX approved Gauge Pressure sensor- crankcase (range 0 to 10 kPa, System accuracy +/- 0.1 kPa absolute) - 1 Nos.				

Additional Terms & Conditions (ATC)

	All above sensors to work at temperatures as per the respective application. Media will be water, oil, air or fuel.				
	Easy zero offset adjustment is required both on sensor or through software.				
	Appropriate Pressure tubing from the pressure sensors to the measuring point to be supplied by the Supplier.				
	Quick release coupling / connectors, necessary adapters to be provided to connect and disconnect the engine pressure channels quickly at the transducer.				
20.	Upgrade Kit for Existing Equipment's for Exhaust Measurement	Specify (Yes/No)	Yes	Required	
	Upgradation of existing exhaust gas analyzer - 1 Quantity (PRE and POST) (hardware and software) including safety to measure exhaust emissions emitted from H2 ICE and upcoming EURO VII regulations.				
	Upgradation of existing NH3 analyzer - 1 Quantity (hardware and software) including safety to measure exhaust emissions emitted from H2 ICE and upcoming EURO VII regulations.				
	Bidder is requested to evaluate the requirements of upgradation of other existing equipment like PM measurement device if required for H2 ICE testing and EURO VII compliance during pre-bid meeting/visit and cover in the scope of supply.				
21.	DC Power Supply for Engines - 1 Quantity	Specify (Yes/No)	Yes	Required	
	Variable voltage range- 0 to 30 V				
	Variable current range- 0 to 70 A				
	I/P voltage / Frequency- 220 V +/- 10%, 50 Hz, Single Phase AC				
	Protection- overload, short circuit protection and reverse polarity protection				
	Operating Temperature- 0 to 55 deg C and 10 to 90% humidity				
	Voltage Regulation- < +/-0.2% of set voltage				
	Voltage and current should set up to 1 decimal place.				

Additional Terms & Conditions (ATC)

	Both voltage and current should be displayed on the power supply.				
22.	Upgrade/Replacement of Test Bed Control & Dynamometer Drive System	Specify (Yes/No)	Yes	Required	
	Automation Hardware				
	Automation Software				
	Schneider Electric Dynamometer Drive-Upgradation/Replacement				
	Engine Test Cycles and Standards				
23.	Pre-Delivery Inspection - Delivery Inspection shall be carried out at the supplier's end by two ICAT Engineers <i>(As Per Clause 8 of Chapter - 6)</i>	Specify Yes/No	Yes	Required	
24.	Warranty - The supplier shall provide the warranty for 2 Years Minimum from Acceptance of Equipment.	Specify	Yes	Required	
25.	Local Support (Delhi NCR) <ul style="list-style-type: none"> • Within NCR • Outside NCR & Within India Response Time (In Hours) <ul style="list-style-type: none"> • <24 Hours • >24 Hours & < 48 hours 	Specify	Yes	Required	
		Specify	Yes	Required	
26.	Prior Experience- Similar Nature Project (In Last 3 Years before bid submission) <ul style="list-style-type: none"> • 1 Project (Minimum) • 1-2 Projects • More Than 2 Projects Technical Experience (Nos. of Year) <ul style="list-style-type: none"> • Years (Minimum) • > 3 Up To 5 Years • More Than 5 Years Average Annual Turnover of 50 Crores in the Past 3 FY: 2022-23, 2023-24 & 2024-25 <ul style="list-style-type: none"> • 50 Crores (Minimum) • > 50 Crores up to 75 Crores • More Than 75 Crores 	Specify	Yes	Required	
		Specify	Yes	Required	
		Specify	Yes	Required	
27.	Customer Feedback Minimum 1 Nos - <ul style="list-style-type: none"> • >1 up to 2 • More Than 2 	Specify	Yes	Required	
28.	Service Support Facility: Details of skilled/ trained manpower (at least 5 Personnel), capable of providing support and maintenance for H ₂ -ICE Test bed.	Specify	Yes	Required	

Additional Terms & Conditions (ATC)

29.	<p>Training Operational & Maintenance</p> <ul style="list-style-type: none"> Operator & maintenance training (2 Weeks) completed towards hydrogen ICE test cell operation, testing, safety, handling etc. under the scope of this bid at supplier site. No of Personnel to be trained: 8 (6+2 for Maintenance) 	Specify	Yes	Required	
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Test Bed Upgrade for H₂-ICE and Euro VII