Tele: 011 21410476
dnom@navy.gov.in

The reply should addressed to
The Chief of the Naval Staff {for Cmde (NOM)}

Integrated Headquarters
Ministry of Defence (Navy)
Directorate of Naval
Oceanology & Meteorology
Room No. 004, Ground Floor
Talkatora Stadium Annexe
New Delhi 110001

Quoting: NOM/ 0361/ HG

01 December 2020

REQUEST FOR INFORMATION (RFI) FOR PROCUREMENT OF HYDROGEN GENERATOR FOR INDIAN NAVY MET OFFICES (LAST DATE FOR RESPONSE EXTENDED TO 21 DEC 20)

Sir,

1. Refer to IHQ MoD (N)/ DNOM letter of even number dated 21 Sep 20 regarding Request For Information (RFI) for procurement of Hydrogen Generator for Indian Navy Met Offices.

2. The Ministry of Defence, Government of India, intends to procure 'Hydrogen Generator' for *IN* Met Offices in possession of Upper Air Sounding System (UASS). The system, which when installed in the Naval Air Stations would aid in filling up of Meteorological balloons using the generated hydrogen gas for launching of Radiosondes towards collection of upper atmospheric meteorological data.

3. RFI Structure. This Request for Information (RFI) consists of three parts as indicated below. Submission of incomplete format will render the Firm(s)/ Vendor(s) liable for rejection.

(a) Part I. This part of RFI incorporates the intended use of 'Hydrogen Generator' and its features that should be met by the Firm(s)/ Vendor(s). Firm(s)/ Vendor(s) specifications and other requirements as per Defence Acquisition Plan (DAP-20) are discussed in this part.

(b) Part II. The second part of the RFI states the methodology of seeking response of Firm(s)/ Vendor(s).

(c) Part III. Guidelines for Framing Criteria for Vendor Selection/ Pre Qualification in Buy Indian (IDDM), Buy (Indian) and Buy & Make (Indian) Cases.

PART – I

4. **Operational Requirements/ Intended Use**. Indian Navy possesses Upper Air Sounding Systems (UASS) at Naval Air Stations for profiling of upper atmospheric meteorological parameters. The recorded data is used for operational meteorological forecasting, identification of atmospheric ducts, ANAPROP. The system consists of an expendable Radiosonde (meteorological probe) which is the main sensing component that records the atmospheric parameters and transmits to a ground station. The Radiosonde is launched by attaching it to a ***hydrogen filled balloon*** which helps in lifting the Radiosonde through the atmosphere.

5. Hydrogen Generators are intended to be used for generating hydrogen gas for filling of the Met balloons.

6. **Intended Quantity**. There would be a requirement to install six **'Hydrogen Generators'** at the following locations:-

Ser	Location	Quantity
(a)	NAE Porbandar	01
(b)	INS Rajali, Arakkonam	01
(c)	INS Parundu, Ramnad	01
(d)	INS Kohassa, Shibpur, North Andaman	01
(e)	INS Utkrosh, Port Blair	01
(f)	INS Baaz, Campbell Bay	01
	Total	06

7. **Mandatory Requirements**. As part of the execution of the project, the Firm(s)/ Vendor(s) should abide by the following mandatory requirements:-

(a) Offer a complete and proven solution for installation of the **'Hydrogen Generator'** at the locations mentioned at Para 6 above.

(b) Execute the project at all the designated locations within 18 months from the date of signing of the Contract.

(c) The hydrogen generation should be based on the principle of 'Solid State Electrolysis' and necessary customisation needs to be undertaken for the system to facilitate economical space utilisation in the Naval Air Stations. Therefore, the Firm(s)/ Vendor(s) should offer a compact solution, wherein the Hydrogen generator and relevant peripherals/ accessories need to be confined within the offered space. To assess the space availability for necessary customisation, the Firm(s)/ Vendor(s) may visit any one of the Air Stations on their own accord. In this regard, necessary security clearance would be provided by ***IN*** to facilitate the said visits.

(d) While provision of limited covered space for mountings of the Hydrogen Generator & its peripherals, electricity, supply of potable water and AC hygiene is the responsibility of the User, provision/ supply/ installation of all necessary equipment, storage cylinder, work stations, racks, cables/ discharge hoses, consumables and any other system/ equipment/ accessory required for operationalisation of the Hydrogen Generator would be the responsibility of the Firm(s)/ Vendor(s). The Firm(s)/ Vendor(s) needs to provide a complete solution (ie. ***from the input stage of potable water to generation and transfer of hydrogen gas with requisite pressure to hydrogen storage cylinder***) for the **'Hydrogen Generator'** at all the locations.

(e) **Technical Parameters**. The Operational Requirements/ Specifications of the **'Hydrogen Generator'** are placed at ***Appendix 'A'***. The technical parameters sought for the **'Hydrogen Generator'** are placed at ***Appendix 'B'***. Firm(s)/ Vendor(s) may also utilise this opportunity to recommend various inputs to determine the capabilities proposed in terms of Essential Parameters-A, Essential Parameters-B and Enhanced Performance Parameters i.a.w. Para 14 Chapter II of DAP-20 for development of SQRs.

(f) **Costing**. The Firm(s)/ Vendor(s) are required to indicate rough estimate of cost of the equipment. Tax/ custom duty component should be indicated separately. The cost breakdown is to be for the following:-

(i) One set of **'Hydrogen Generator'** with all associated sub-systems, installation material, documentation and installation.

(ii) Training for one set of crew (04) per system on **'Hydrogen Generator'** for **operator and operator-level ('O' level) maintenance training** including all associated sub-systems.

(iii) Comprehensive Annual Maintenance Contract (CAMC) cost (considering 10 years of AMC post expiry of two years of warranty).

(iv) Cost of product support packages for Operator level maintenance which includes the details of Manufacturer's Recommended List of Spares (MRLS to include Line Spares and Base Depot Spares), Jigs/ Fixtures, Special Maintenance Tools, calibrators, **Do-it-yourself videos** etc.

(v) Taxes and Duties.

(g) **Indigenous Content (IC)**. The Firm(s)/ Vendor(s) are required to indicate the percentage (by cost) of the Indigenous Contents and Indigenous Design which would be whole/ part of the system.

(h) The Firm(s)/ Vendor(s) may give details on execution of similar contracts by them in other Governmental Organisations/ Defence Forces within India along with Unit Price (without taxes/ customs duties) and year in which it was supplied. If there is a significant difference between the two versions of the equipment being supplied, the same may be clearly stated in the response to the RFI.

(j) The Firm(s)/ Vendor(s) may also express willingness/ feasibility for conduct of Field Evaluation Trials (FET) along with the proposed modalities involved.

(k) Based on the past experience, the Firm(s)/ Vendor(s) may suggest manpower requirement for smooth operation and maintenance of the proposed '**Hydrogen Generator'** and also may specify the modalities for undertaking training for operator-level ('O' level) maintenance.

(l) **Transfer of Technology (ToT)**. The Firm(s)/ Vendor(s) are required to indicate their willingness to provide Transfer of Technology (ToT) along with the scope of ToT and Transfer of Production.

(m) **Clause for Upgradation on Obsolescence**. In case of changes in manufacturing procedures, indigenisation or obsolescence in future, *IN* in consultation with the Vendor, may have requirement to carry out technical upgradation/ alterations in the design, drawings and specifications. This will, however, not in any way adversely affect the end specifications of the equipment. 'Changes in technical details, drawings repair and maintenance techniques along with necessary SMTs /STEs/ Test Jigs as a result of upgradation/ alterations will have to be provided to the vendor free of cost. The Firm(s) are required to indicate their willingness/ comments on the same.

(n) **Safety Standards**. The Firm(s)/ Vendor(s) are required to indicate the safety standards viz. Bureau of Indian Standards (BIS), International Organisation of Standardisation (ISO), International Safety Equipment Association (ISEA) Standards etc. which can be provided for the system and the subcomponents.

(p) The Firm(s)/ Vendor(s) should confirm compliance with all provisions of Para 14 of DAP-20. In case of noncompliance, the Firm(s)/ Vendor(s) should specify the Para/ Clause of DAP-20 to which they do not agree to, with reasons.

(q) The Firm(s)/ Vendor(s) should specify tentative delivery schedule for supply of the equipment & subsequent installation after conclusion of the Contract.

(r) Foreign Firm(s)/ Vendor(s) should provide inputs on restrictions related export and time taken for necessary export clearances in their respective country. The export clearance time may be separately indicated in the delivery schedule.

(s) The Firm(s)/ Vendor(s) should confirm the acceptability to the terms of payment as per DAP-20.

(t) Additional literature/ equipment details may be submitted along with the response to RFI.

8. **Additional Conditionalities**. Further, Firm(s)/ Vendor(s) should confirm acceptance of the following conditions in accordance with Defence Acquisition Plan 2020 (DAP-20):-

(a) Solicitation of offers will be as per 'Single Stage–Two Bid System'. It would imply that a 'Request for Proposal (RFP)' would be issued soliciting the technical and commercial offers together, but in two separate sealed envelopes. The validity of commercial offers should be at least for 18 months from the date of submitting of offers.

(b) The technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with RFP.

(c) The equipment of all TEC cleared Firm(s)/ Vendor(s) would be put through Field Evaluation Trials (FET) on a 'No Cost No Commitment (NCNC)' basis. A staff evaluation would be carried out by SHQ to analyse the result of field evaluation and shortlist the equipment for introduction into service. Towards this, the participating Firm(s)/ Vendor(s) are to forward a list of equipment that would be made available for NCNC trials.

(d) Firm(s)/ Vendor(s) are to confirm the feasibility to offer NCNC trials of proposed equipment in India/ abroad, in exact configuration as proposed in response to the RFI. Alternately, the difference between various configurations and their consequent costs may be highlighted. Firm(s)/ Vendor(s) may clarify the venue for demonstration of equipment/ similar equipment if already fitted (India/ abroad) for conduct of FET.

(e) Firm(s)/ Vendors(s) are to provide a 'Trial Methodology' for the FET which would provide a clear and objective assessment of the extent of trial evaluation, including parameters where vendor/ OEM certification, certification from accredited labs and trials by simulation are accepted.

(f) Amongst the Firm(s)/ Vendor(s) cleared by Staff Evaluation, a Contract Negotiation Committee would decide the Lowest Cost Bidder (L1) and conclude the appropriate Contract.

(g) The Firm(s)/ Vendor(s) would be bound to provide product support for the time period specified in RFP, which includes spares and maintenance tools/ jigs/ fixtures/ documentation/ **Do-it-Yourself Videos** for training for field and component level repairs by a **non-technically trained crew**.

(h) The Firm(s)/ Vendor(s) would be required to accept the general conditions of Contract given in the Standard Contract Document at Chapter VI of DAP-20 or as amended from time to time.

(j) **Integrity Pact**. An Integrity Pact along with appropriate IPBG is a mandatory requirement for the instant case, if the cost of the Contract exceeds Rs 20.00 Crs (Annexure I to Appendix O of Schedule I to Chapter II of DAP 20).

(k) **Performance-cum-Warranty Bond**. A Performance-cum-Warranty Bond equal to 10% value of the Contract is required to be submitted after signing of the Contract.

PART – II

9. **Procedure for Response**. The procedure for response is as follows:-

(a) Firm(s)/ Vendor(s) must fill the form of response as given in ***Appendix 'C'*** and ***Appendix 'D'*** of this RFI. Apart from filling exact details about the company, details about the exact product meeting our generic technical specifications should also be carefully filled. Additional literature on the product can also be attached with the form.

(b) The filled form should be dispatched at the under mentioned address:-

The Chief of the Naval Staff
(for Commodore (NOM))
Integrated Headquarters of Ministry of Defence (Navy)
Directorate of Naval Oceanology & Meteorology
Room No. 004, Ground Floor
Talkatora Stadium Annexe
New Delhi 110001
Telefax: 011 21410476
Email id: dnom@navy.gov.in

(c) This RFI was published first on 21 Sep 20 with Last date for response as 21 Nov 2020. The **Last date** of acceptance of the filled form **has now been extended** to **21 Dec 2020**. The Firms/ Vendors shortlisted for issue of RFP would be intimated.

10. The Government of India invites responses to this request only from Original Equipment Manufacturers (OEM)/ Authorised Vendors/ Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not permit direct export by OEMS). The basic QRs for the Firm/ Vendor to respond to the RFI is placed at ***Annexure I*** to ***Appendix 'B'***. The end user of the equipment is the Indian Navy.

11. This information is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part thereof at any stage. The Government of India also reserves the right to withdraw the RFI or RFP, should it be so necessary, at any stage.

12. The acquisition process would be carried out under the provisions of DAP 2020.

13. The Draft Defence Acquisition Plan 2020 (DAP-20) has been published in Ministry of Defence Website https://www.mod.gov.in/defence-procurement-procedure. The DAP will be promulgated shortly and the same would be applicable for all the cases with effect from 01 Sep 20.

PART – III

14. **Categorisation**. Procurement of defence equipment under DAP-20 will be based on the six (06) categories. There is no embargo on a vendor qualifying in a higher category to participate in the lower category in case all requirements of the lower category are met. In decreasing order of priority, the priority of categories will be as follows:-

(a) Buy (Indian - IDDM).

(b) Buy (Indian).

(c) Buy and Make (Indian).

(d) Buy and Make.

(e) Buy (Global - Manufacture in India).

(f) Buy (Global).

15. Details of the categorisation are available in the Chapter I of DAP - 2020. Based on the RFI responses from the vendors, a 'Competency Map' of the indigenous manufacturing industry and raw material producers will be prepared will be used as an input for categorising the procurement of the Hydrogen Generator.

16. **Indigenous Content (IC).** The category wise summary of IC as per cost of the Base Contract Price i.e. Total Contract Price less taxes and duties will be as under:-

Ser	Category	IC
(a)	Buy (Indian - IDDM).	Indigenous design and ≥ 50%
(b)	Buy (Indian)	In case of indigenous design ≥ 50%, otherwise ≥ 60%
(c)	Buy and Make (Indian)	≥ 50% of the 'Make' portion
(d)	Buy and Make	≥ 50%
(e)	Buy (Global - Manufacture in India)	≥ 50%
(f)	Buy (Global)	Foreign Vendor – Nil Indian Vendor ≥ 30%

17. Guidelines for Framing Criteria for Vendor Selection/ Pre-Qualification in Buy Indian (IDDM), Buy (Indian) and Buy & Make (Indian) Cases is placed at Appendix E to this RFI.

(TS Ramanathan)
Commander
Commander (NOM)

Appendix A
{Refers to Sub-Para 7(e)}

OPERATIONAL REQUIREMENTS/ SPECIFICATIONS

1. **Aim**. To procure 'Hydrogen Generator' to ensure continuous supply of Hydrogen gas for Indian Naval Air Stations.

2. **Utility**. The generated Hydrogen gas when stored in a storage cylinder having a capacity to hold **5 (five) CuM** of hydrogen gas at **10 (ten) bar pressure** (or more) will be used to fill Meteorological balloons with specifications 200 gm, 250 gm, 300 gm and 350 gm.

3. **Features**. The generator should be compact, easy to handle, economical, non-hazardous and environmental friendly.

4. **Operational Characteristics**. The hydrogen generation should be based on the principle of Solid State Electrolysis. The system should use water feed of the Naval Air Stations as one of the consumables for generation of pure hydrogen. It should be amenable to operate with the Naval Air Stations' power source. The generator should have a capacity to fill (***without a compressor)*** a storage cylinder (***of capacity 500 litres water***) with around ***5.0 m^3 of usable hydrogen gas*** at ***10.0 bar(g)*** or more within 14 hrs of operation or less. With consumption of Hydrogen gas after every use, a simple switch on/ off operation or an auto replenishment option on the system should ensure replenishment of the storage cylinder with hydrogen to the said pressure. The storage cylinder's outlet should have a gas hose of approximately 100 meters length with the other end connected to the balloon filling unit used for filling of Meteorological balloons. The system should not generate any hazardous chemical waste, and provision should exist for safe discharge of generated waste/ by product.

5. **Other Features**. The proposed Hydrogen Generator integrated into a single package consisting of all controls, hydrogen production & leak detection, rectifiers and purification unit and the associated sub systems/ assemblies should be amenable to be mounted in a 10 ft x 10 ft room/ compartment with ventilation. The storage tank should be standalone connected to the hydrogen generator with suitable connector hoses to filling up of the cylinder. Suitable booster/ compressor mechanism (if necessary) may be provisioned to cater for transfer the gas from the generator to the cylinder which may separated by around 100 meters laterally or otherwise. Provision should exist for transfer of gas from the storage tank through a hose and a pressure regulator to the balloon filling unit {along with compressors (if necessary)} which would be physically separated. The following additional features are envisaged:-

(a) Customisation of hydrogen cylinder to the Naval Air Station's requirement based on the availability of space.

(b) Inbuilt BITE system to check the health of the system.

(c) High safety features with auto cut-off features including on-board leak detection of Hydrogen gas with integral safety shutdown of the entire system upon leak detection.

(d) Safety certifications (national/ international) for the equipment iaw prevailing industrial fire safety norms and should be in possession of requisite licences from a recognised agency for installation (if necessary).

(e) Minimal/ easy maintenance.

(f) Generation of pure and dry hydrogen.

(g) The system shall not generate any hazardous chemical waste and should have mechanism to vent out the by-product (oxygen/ any eco-friendly product) into the atmosphere.

(h) Facility of auto stop and shutdown during malfunction of the system.

(j) The system should have 100% turn down capability.

(k) The system should have an automatic device to control the filling of the storage tank.

(l) The generator should have an automatic device to verify the flow rate of hydrogen production and pressure of the storage tank.

(m) It should perform automatic replenishment of the water in the generator.

(n) The system should have a cold start-up time of less than 20 minutes.

(p) The system should be designed for use in unclassified space, and must not change the hazard rating of the space where installed.

(q) System should be free of hazardous materials or discharges including free of all caustics such as Potassium Hydroxide and/ or Sodium Hydroxide and Asbestos.

6. **Environmental Conditions**. The equipment should maintain the safety standards in all weather conditions at the respective Naval Air Stations. The components which are exposed to weather should have enclosures with IP65 or better features. The system must not generate more than 80 dB noise while working.

Appendix B
{Refers to Sub-Paras 7(e)}

QUESTIONNAIRE FOR DETAILS IN RESPECT OF HYDROGEN GENERATOR *IN* MET OFFICES

The questionnaire seeking the details of the technical parameters sought from the prospective Firm(s)/ Vendor(s) for the 'Hydrogen Generator for IN Met Offices' are as follows:-

Ser	Information Required	Vendor Information	Essential Parameter A or B or Enhanced Performance Parameter [1]
1.	What are the main components of the Hydrogen Generator? (should include particulars of all the components which includes permanent nature item and consumables)		
2.	Does the system cater for the Operational Requirements mentioned at **Appendix 'A'** to this RFI? Compliance to each requirement projected at **Appendix 'A'** should be given in a separate sheet (point wise).		
3.	What will be the configuration of Hydrogen Generator and its sub-systems? Give details of each sub assembly/ component.		
4.	What are the environmental conditions required for mounting and operationalisation of the Generator and its sub-systems?		
5.	Please provide details of Manufacturer's Recommended List of Spares (MRLS) and Base & Depot Spares (B&D Spares) for maintenance of the equipment/ system.		
	Operational & Physical Parameters		
6.	What is the principle used for generation of Hydrogen gas?		
7.	What are the physical characteristics of the Hydrogen Generator (dimensions &		

[1] As per the provisions of Para 14 of Chapter II of DAP 20

Ser	Information Required	Vendor Information	Essential Parameter A or B or Enhanced Performance Parameter [1]
	weight)?		
8.	What are the physical characteristics of essential elements/ assemblies/ sub-assemblies constituting the Hydrogen Generator (dimensions & weight)?		
9.	What would be the expected purity of the Hydrogen being generated?		
10.	What is the rate of generation of Hydrogen gas and how long will it take to fill a cylinder of *500 ltr* capacity to store *5.0* m^3 hydrogen gas at *10.0 bar(g)*?		
11.	How much raw material (Consumable) is required to generate usable Hydrogen gas of *5 cubic meter capacity*?		
12.	Does the system cater for easy switch off/ switch on facility for replenishment of Hydrogen gas after every use?		
13.	Which all safety measures are inbuilt in the system?		
14.	Is the system compact? If so, what is the area required for fitment of the system?		
15.	Is the system ruggedized for field conditions? Can the system withstand all weather conditions in the mentioned five locations?		
16.	Does the system have inbuilt power back up? If so, how long can it sustain during power breakdown?		
17.	What is the general shelf life of System (please include the details for each component of the system)?		
18.	What are the safety standards of the equipment including compressor/ booster (if applicable)? Give details of the requisite certifications from authorised Laboratories.		

Ser	Information Required	Vendor Information	Essential Parameter A or B or Enhanced Performance Parameter [1]
19.	What are the safety features of the storage cylinder?		
20.	What are the connecting arrangements between (a) Hydrogen generator and storage cylinder? (b) Storage cylinder and the balloon filling unit of UASS?		
21.	What would be the maximum permissible separation between (a) Hydrogen generator and the storage cylinder? (b) Storage cylinder and balloon filling unit of UASS for direct transfer of hydrogen?		
22.	Is a compressor/ booster required to transfer the gas from (a) Hydrogen generator and the storage cylinder? (b) Storage cylinder and the hydrogen filling unit to attain requisite pressure?		
	Reliability and Endurance		
23.	Is the system designed to detect and display malfunctions?		
24.	Is there a Built in Feature incorporated with On-line and Off-line Built In Test Equipment (BITE), which identifies the defective sub unit? If so give details		
25.	What is the Mean Time Between Failure (MTBF) of the system?		
26.	What is the Mean Time To Repair (MTTR) of the system?		

Ser	Information Required	Vendor Information	Essential Parameter A or B or Enhanced Performance Parameter [1]
Firm Profile			
27.	What is the name and address of the Firm?		
28.	Is the Firm independent or a consortium of firms?		
29.	Is your company the OEM or authorised vendor of the equipment? If not OEM, provide details of MoU with foreign OEM or proof of partnership.		
30.	Please provide details of the customers to whom you have supplied said/ similar equipment?		
31.	Can the Firm handle additional orders over and beyond the quantities mentioned in this document?		
32.	Was the Firm blacklisted during the past 5 yrs by MoD/ any government agency?		
33.	What is the turnover of the Firm/ OEM?		
34.	Does your firm comply with the QRs mentioned in ***Annexure I*** to this document?		
General Requirements			
35.	Can the Hydrogen generator and its sub-components be customised for fitment within restricted/ limited space?		
36.	Is the Generator and its sub-systems amenable to easy maintenance/ repair methodologies for 'O' level maintenance?		
37.	How many operators are required for operating the system?		
38.	What is the operational life of the complete system? (please add details of requirement of consumables)		
39.	What are the warranty conditions of the		

Ser	Information Required	Vendor Information	Essential Parameter A or B or Enhanced Performance Parameter [1]
	Generator and its sub-systems?		
40.	What are the safety standards viz. Bureau of Indian Standards (BIS), International Organisation of Standardisation (ISO), International Safety Equipment Association (ISEA) Standards etc. which can be provided for the system and the subcomponents?		
41.	To ensure Repair and Maintenance support, what is the proposed methodology for 'Operator (O)', 'Intermediate (I)' and 'Depot (D)' Level repairs and maintenance?		
42.	What is the preferred mode of repair and maintenance support – Engineering Support Package, Comprehensive Annual Maintenance Contract (including spares and consumables), Annual Maintenance Contract (AMC) or Rate Repair Contract (RRC)?		
43.	What is the type of training and its duration to enable the personnel to operate and undertake O, I and D level maintenance of the Hydrogen Generator and its components?		
44.	Will the system be maintainable by non-technical / non-maintenance experts?		
45.	Will you be able to provide 'Do-it-Yourself (DIY)' videos for trouble shooting and Operator level training?		
46.	What is the type and depth of documentation that would be offered for training, operation and maintenance of the Hydrogen Generator and its sub-systems?		
47.	What is the proposed training schedule/ content of Field Evaluation Team, Operators and maintainer?		
48.	Are you willing for Field Evaluation Trial of		

Ser	Information Required	Vendor Information	Essential Parameter A or B or Enhanced Performance Parameter [1]
	the equipment in India on a No Cost No Commitment basis?		
49.	What is 'Trial Methodology' for the FET proposed by you?		
50.	Will your Firm be interested in executing the same contract in other locations, beyond the contracted quantity under *Option clause* iaw *Appendix N to Schedule I to Chapter II* of DPP 16/ *Appendix P to Schedule I to Chapter II* of DAP-20 (on promulgation)		
51.	Will your firm be able to provide 'Changes in technical details, drawings repair and maintenance techniques along with necessary SMTs /STEs/ Test Jigs as a result of upgradation/ alterations free of cost, in case of obsolescence/ upgradation/ indigenisation as per Para 6.2 Article 6 of Chapter VI 'Standard Contract Document' of DPP 16/ Para 7.2 Article 7 of Chapter VI 'Standard Contract Document' of DAP 20 (on promulgation)?		
52.	What is the estimated overall cost (BQ) of the Project? Give itemised breakdown of cost. Cost of Comprehensive Annual Maintenance Contract (CAMC) for 10 yrs post warranty needs to be provided additionally (*Refer Para 7(f) of the RFI document*).		
53.	What is the envisaged delivery & installation timeline for undertaking the contract post signing of the Contract?		
54.	What are the restrictions related to export and time taken for necessary export clearances in your respective country (in case of foreign vendors)?		
Indigenous Content			
55.	Is any or part of the equipment/ system		

Ser	Information Required	Vendor Information	Essential Parameter A or B or Enhanced Performance Parameter [1]
	Indigenously Designed, Developed and Manufactured in Indian market? If yes, what is the percentage of indigenous content?		
56.	What are the applicable Key Technologies and materials required for manufacturing the equipment and what is the extent of its availability within India?		
57.	In case the key technology is not available in India, what is the accessibility?		
58.	Post concluding of Contract under Buy (Indian-IDDM), what are the delivery and installation timelines for each system?		
59.	Is Indigenization possible for the Critical technology? Else, specify the items and technology envisaged for import/ technology transfer.		
60.	Are there any suggestions for alternatives to meet the same objective as mentioned in RFI?		
Transfer of Technology			
61.	Are you willing to provide Transfer of Technology (ToT)?		
62.	If yes, what is the scope of ToT?		
63.	What is scope for Transfer of Production?		

ANNEXURE I
(Refers to Para 10 of RFI and Sl 34 of ***Appendix 'B'***)

BASIC MINIMUM QRs FOR PARTICIPATING FIRMS/ VENDORS

1. Participants should be either OEM or OEM authorized partners. For an OEM authorized Firm/ Vendor, an authorisation certificate should be submitted along with the Bid.

2. The participating Firm/ Vendor/ OEM should have their service centres in India and ***should offer a proven solution***.

3. The participating Firm/ Vendor should have previous experience with a minimum of three installations of similar equipment in Defence/ Government Organisations/ PSUs/ scientific organisations (locally or internationally). Experience of installation of the system in a non-commercial factory environment is desirable.

4. The participating Firm/ Vendor should be capable of offering extended onsite Comprehensive Annual Maintenance Contract (CAMC) (including spares and consumables) for the offered equipment for long periods.

5. The participating Firm/ Vendor should offer product support to the system and its subsystems/ components during its service life (minimum 15 yrs).

Appendix C
(Refers to Paras 9(a) of RFI)

INFORMATION PROFORMA
(INDIAN VENDORS)

1. **Name, Address and Unique ID (if any) of the Vendor/ Company/ Firm.** _____ (Company profile, in brief, to be attached). In the eventuality of the firm emerging as L1, Contract will be concluded in the **name and address** of the firm, as indicated here). Vendors are to submit an undertaking that any subsequent proposal for change in name of firm or address, will be intimated to IHQ MoD (N) at the first available opportunity and supporting documents be furnished within five working days of approval by relevant competent authority.

2. **Type (Tick the relevant category).**

Original Equipment Manufacturer (OEM) Yes/ No

Authorised Vendor of foreign Firm Yes/ No (attach details, if yes)

Other (give specific details) _____

3. **Contact Details.**

Postal Address: _____

City : _____ State : _____

Pin Code : _____ Tele : _____

Fax : _____ URL/ Web Site : _____

Email : _____

4. **Local Branch/ Liaison Office in Delhi (if any).**

Name & Address: _____

Pin Code: _____ Tel: _____ Fax: _____ Email: _____

5. **Financial Details.**

(a) Category of Industry (Large/ Medium/ Small Scale): _____

(b) Annual Turnover: _____ (in INR)

(c) Number of employees in firm: _____

(d) Details of manufacturing infrastructure:_____

(e) Earlier Contracts with Indian Ministry of Defence / Government agencies:-

Contract Number	**Equipment**	**Quantity**	**Cost**

6. **Certification by Quality Assurance Organisation.**

Name of Agency	**Certification**	**Applicable from (Date & Year)**	**Valid till (date & Year)**

7. **Details of Registration.**

Agency	**Registration Number**	**Validity (Date)**	**Equipment**
DGS&D			
DGQA / DGAQA / DGNAI			
OFB			
DRDO			
Any other Government Agency			

8. **Membership of FICCI/ASSOCHAM/CII or other Industrial Associations.**

Name of Organisation: _____

Membership Number: _____

9. **Equipment/ Product Profile (to be submitted for each product separately).**

(a) Name of Product: _____

(Should be given category wise for e.g. all products under night vision devices to be mentioned together)

(b) Description (attach technical literature):_____

(c) Whether OEM or Integrator: _____

(d) Name and address of Foreign collaborator (if any):_____

(e) Industrial Licence Number: _____

(f) Indigenous component of the product (in percentage): _____

(g) Status (in service / design & development stage): _____

(h) Production capacity per annum: _____

(j) Countries/ agencies where equipment supplied earlier (give details of quantity supplied): _____

(k) Estimated price of the equipment _____

10. Alternatives for meeting the objectives of the equipment set forth in the RFI.

11. Any other relevant information: _____

12. **Declaration.**

(a) It is certified that the above information is true and any changes will be intimated within five (05) working days of occurrence.

(b) It is certified that design and development is indigenous and belongs to the _____ (Vendor) and/ or _____ (its Indian Sub Vendor). The Indigenous Content in the said equipment is _____% as on date and is likely to be raised to _____% by _____ (date). The certification for the same is enclosed.

(c) It is certified that the complete set of design and production drawing are available and source code for all software applications/ programmes are also available with the _____ Vendor and that these would be produced for verification when required.

Note: *Certification for 12(b) and (c) is required only if claiming IDDM category.*

(d) It is certified that in the past that _____ (name of firm) has never been banned/ debarred for doing business dealings with MoD/ GoI/ any other Government organization and that there is no inquiry going on by CBI/ ED/ any other Government agency against the firm.

Note: *Para 44 and Appendix F of Chapter II of DPP 16/ Para 124 and Appendix K to Chapter II of DAP 20* may *be referred*

(Authorised Signatory)

INFORMATION PROFORMA
(FOREIGN VENDORS)

1. **Name, Address and Unique ID (if any) of the Vendor/ Company/ Firm**. _____ (Company profile, in brief, to be attached. In the eventuality of the firm emerging as L1, Contract will be concluded in the **name and address** of the firm, as indicated here). Vendors are to submit an undertaking that any subsequent proposal for change in name of firm or address, will be intimated to IHQ MoD (N) at the first available opportunity and supporting documents be furnished within five working days of approval by relevant competent authority.

2. **Type (Tick the relevant category)**.

Original Equipment Manufacturer (OEM)	Yes/ No
Government sponsored Export Agency registration to	Yes/ No (Details of be provided)
Authorised Vendor of OEM	Yes/ No (give specific details)
Others (give specific details)_____	

3. **Contact Details**.

Postal Address: _____

City : _____ Province : _____

Country : _____ Pin/ Zip Code: _____

Tele : _____ Fax : _____

URL/ Web Site: _____ Email : _____

4. **Local Branch/ Liaison Office/ Authorised Representatives, in India (if any)**.

Name & Address: _____

City : _____ Province : _____

Pin Code : _____ Tel: _____ Fax: _____

Email : _____

5. **Financial Details**.

(a) Annual turnover: _____ USD

(b) Number of Employees in firm _____

(c) Details of manufacturing infrastructure available_____

(d) Earlier Contracts with Indian Ministry of Defence/ Government agencies:

Agency	Contract Number	Equipment	Quantity	Cost

6. **Certification by Quality Assurance Organisation (If Applicable)**.

Name of Agency	Certification	Applicable from (Date & Year)	Valid till (Date & Year)

7. **Equipment/ Product Profile (to be submitted for each product separately)**.

(a) Name of Product: _____ (Should be given category wise for e.g. all products under night vision devices to be mentioned together)

(b) Description (attach technical literature): _____

(c) Whether OEM or Integrator: _____

(d) Status (in service/ Design development stage): _____

(e) Production capacity per annum: _____

(f) Countries where equipment is in service: _____

(g) Whether export clearance is required from respective Government: _____

(h) Any collaboration/ joint venture/ co-production/ authorized dealer with Indian Industry (give details):

Name & Address : _____

Tel : _____

Fax : _____

(j) Estimated price of the equipment _____

8. Alternatives for meeting the objectives of the equipment set forth in the RFI.

9. Any other relevant information. _____

10. **Declaration**. It is certified that:-

(a) It is certified that above information is true and any changes will be intimated within five (05) working days of occurrence.

(b) The _____ (name of firm) has never been banned/ debarred for doing business dealings with MoD/ GoI/ any other Government organization and that there is no inquiry going on by CBI/ ED/ any other Government agency against the firm.

Note:- *Para 44 and Appendix F of Chapter II of DPP 16/ Para 124 and Appendix K to Chapter II of DAP 20 may be referred*

(Authorised Signatory)

Appendix D
(Refers to Para 9(a) of RFI)

SUGGESTED CRITERIA FOR VENDOR SELECTION/ PRE QUALIFICATION

1. **Technical Parameters**.

(a) Number of years of experience in manufacturing of same/ similar product.

(b) Details of manufacturing infrastructure for manufacturing the equipment.

(c) Quality Plan maintained by Vendor.

(d) Details of certification by Quality Assurance Agencies.

(e) Industrial License details at the time of submission of bid.

(f) Annual production capacity and capability to increase the production capacity to meet the delivery schedule requirements of Services.

2. **Financial Parameters**.

(a) **Turnover**. Turnover of Rs _____ Crs in last three years.

(b) **Capital Assets**. Capital Assets of _____.

(c) **Profit**. Profit/ Loss in last three years.

(d) **Tax Return**. Copy of Income Tax Return filed during last three years.

3. **Additional Parameters**. In addition, information on credentials and status of the entity/ Vendor may be obtained covering the following:-

(a) Projects/supply orders successfully executed in last five years.

(b) Annual reports of last five years.

(c) Shareholder information.

(d) Details of promoters, associated, allied and JV companies.

(e) Details of vigilance action viz ongoing investigation and suspension/ debarment/ blacklisting actions against the company, if any.

4. **Undertaking**. Prospective Vendors must submit an undertaking that information provided by them is correct.

Appendix E
(Refers to Para 17 of RFI)

GUIDELINES FOR FRAMING CRITERIA FOR VENDOR SELECTION/ PREQUALIFICATION IN 'BUY (INDIAN-IDDM)' 'BUY (INDIAN)' AND 'BUY & MAKE (INDIAN)' I.R.O 'PROCUREMENT OF HYDROGEN GENERATORS FOR INDIAN NAVY'

1. The success of a procurement scheme largely depends on the capability of the vendor. A judicious process is required to identify potential vendors who have the requisite capability, infrastructure, technical knowhow and capacity to supply the required defence equipment. These guidelines are to enable finalisation of pre-qualification criteria for vendors participating in procurement schemes under Buy (Indian-IDDM), Buy (Indian) & Buy & Make (Indian) categories.

2. Accordingly, the guidelines which will be followed by the Indian Navy (*IN*) for short-listing/ pre-qualification of Indian vendors in Buy (Indian-IDDM), Buy (Indian) & Buy & Make (Indian) in respect of 'procurement of six Hydrogen Generators for *IN* Met Offices', are enumerated in the succeeding paragraphs. Para 3 deals with the parameters that may be considered for short-listing of vendors, whereas Para 4 amplifies the process for applying selected parameters to the process of Vendor Short listing. These guidelines may be read in conjunction with Annexure IV of Appendix A to Chapter II of DAP 2020 where relevant.

3. **Parameters**.

(a) **General Parameters**.

(i) Applicant Entity should be an Indian Vendor as defined at Paragraph 21 of Chapter I of DAP 2020.

(ii) Business dealing with applicant Entity or any of its allied entities should not have been suspended or banned, by MoD/ Service Headquarters (SHQ)/ *IN* or any Government Department or organization (as defined in Guidelines for Penalties in Business Dealings with Entities issued vide Ministry of Defence, D (Vigilance) MoD ID No 31013/I/2006-D(Vig) Vol II dated 21 Nov 2016). None of the Promoters and Directors of applicant entity should be a wilful defaulter.

(iii) "Entities" will include companies, with whom the Ministry of Defence has entered into, or intends to enter into, or could enter into contracts or agreements.

(iv) "Applicant entity" may be a company, subsidiary, an associate company (as defined in the Companies Act, 2013), a consortium or a Joint Venture (JV).

(b) **Technical Parameters**.

(i) Vendor shall be a manufacturing entity or a system integrator of defence equipment and not a trading company, except in cases where the OEM participates only through its authorised Vendors.

(ii) Minimum two years' experience in manufacturing and supply of industrial gases, manufacturing and integrating systems for Hydrogen Gas generation or if not, then cumulative experience of at least three years in any field of industry, which results in gaining of competence for manufacturing the Hydrogen Generator.

(iii) Where product involves integration, previous experience of not less than one year/ one project in integration of systems/ equipment shall be required.

(c) **Financial Parameters**.

(i) **Insolvency**. The entity should not be under insolvency resolution as per Indian Bankruptcy Code at any stage of procurement process from the issuing of RFP to the signing of contract.

(ii) **Rounding Off**. The turnover and net worth of the vendor shall be rounded off to the nearest lower ten/ hundred crore so as to keep the estimated cost of procurement confidential.

(d) **Other Parameters**.

(i) **Industrial License (IL)**. Vendors should be either holding a valid defence industrial license or should have applied for the same before responding to RFP. In any case the vendor must confirm holding of IL before commencement of FET. (Items requiring IL will be as per DIPP Press Note 3 of 2014 as amended from time to time).

(ii) **Registration**. Registered for a minimum of two years (one year for SMEs). Minimum number of years not applicable for JVs constituted specifically for a project.

4. **Stipulations for Applying Parameters**.

(a) Details of experience manufacturing, technology solution providing, relevant to the supply manufacturing of 'Hydrogen Generator', referred to at Para 3(b)(ii) should be defined and indicated by the Firm/ Vendor.

(b) In case the Applicant Entity is unable to meet the Financial Parameters by itself, it may rely on its Holding Company (as defined in the Companies Act, 2013 and amendments thereof) ("Companies Act") for fulfilment of the Financial Parameters, in which case reliance must be placed on the Holding Company towards fulfilment of ALL the Financial Parameters.

(c) In case the Applicant Entity is unable to meet one or more of the Technical Parameters by itself, it may rely on a Group Company(ies) for

fulfilment of the Technical Parameters. A Group Company in relation to the Applicant Entity may be:-

(i) A company of which the Applicant Entity it is an Associate Company. Such company should have ownership, directly or indirectly, of at least 26% of the voting shares of the Applicant Entity.

(ii) A company which is an Associate Company of the Applicant Entity. The Applicant Entity should have ownership directly or indirectly, of at least 26% of the voting shares of such Associate Company.

(iii) A Company with whom the Applicant Entity is commonly owned, directly or indirectly, for at least 26% of the voting shares by another company. For example: An Applicant Company A is an Associate Company of Company B, in which B holds at least 26%. Further, C is also an Associate Company of B, in which B holds at least 26%. In this case the Applicant Company may use the credentials of C as well.

(iv) The Holding Company and Subsidiary Companies (as defined under the Companies Act) of the Applicant Entity.

(d) The Applicant entity may be a single entity or a group of entities (the "Consortium"), coming together to implement the project. In such case:-

(i) The credentials of only those members or their related entities may be counted, who have at least 26% equity stake in the Consortium.

(ii) Each Consortium should have a designated Lead Member.

(iii) For Technical Parameters, any of the Consortium members or their Group Companies may meet the criteria.

(iv) For Financial Parameters; the Turnover and Net Worth of the Consortium Member shall be reckoned proportionate to Consortium Member's equity stake in the Consortium, and each Consortium member should meet the other criteria pertaining to Insolvency and Credit Rating. In case the Consortium Member relies on its Holding Company for any one of the above-mentioned Financial Parameters; then reliance must be placed on the Holding Company for meeting all the financial Parameters.

(e) Vendors should provide all necessary self-authenticated documentation in support of their achievement of criteria. Such documentation should inter-alia include:-

(i) Details of projects/ supply orders successfully executed in the last two years.

(ii) Annual reports for three years of applicant entity, parent and associate companies, consortium and JV partners.

(iii) Details of shareholders, promoters, associated, allied and JV companies.

(iv) Details of vigilance action, viz. ongoing investigation and suspension/ debarment/ blacklisting actions against the applicant entity or any of its allied entities, parent company or consortium and JV partners, if any by any Department/agency of Central Government.

(v) A certificate from CA/ CS indicating the financial parameters for the last three years as per Para 3(c).

(Note: If a vendor is already a supplier to MoD and/ or has already provided the above documents in such cases, it should be necessary for the vendor to resubmit only such documentations as is necessary to update the above).

(f) Any vendor furnishing false information will be liable for action under Para 122 of Chapter II of DAP 2020.

(g) Based on these generic parameters, more specific criteria will be evolved by the *IN* with regard to Technical and Financial parameters {Paras 3(b) and 3(c) above} keeping in view the overall need to ensure wider vendor participation. The specific criteria evolved by the SHQ, as per these guidelines, will be approved by the competent authority before including the same in the RFPs.

5. **Start Ups/ MSMEs**. Start ups would be defined as per G.S.R. 127 (E) dated 19 Feb 2019 (as amended from time to time). For procurement cases where the estimated cost is not exceeding Rs 100 Crores/ year based on delivery schedule at the time of seeking AoN or Rs 150 Crores, whichever is higher, to encourage the Start Ups/ MSMEs and build Industrial ecosystem, the recognized Start Ups/ MSMEs in the relevant fields may be considered for issue of RFP without any stipulation of Financial parameters, except Para 3(c)(i) above (Insolvency) and with General and Technical parameters to be decided on case to case basis. (Note: Start Ups should not be confused with 'new entrants' who may be high/ mid-sized groups having financial support and manufacturing experiences and now venturing into Defence Production).

6. The criteria for vendor selection shall be clearly stipulated in RFPs so as to maintain transparency.