

Call for Proposal (CfP)

for

“Funding of testing facilities, infrastructure, and institutional support for development of Standards and Regulatory framework under the National Green Hydrogen Mission”



National Institute of Solar Energy (NISE)

Gwal Pahari, Faridabad Highway

Gurugram – 122003, Haryana

hydrogen@nise.res.in

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1. BACKGROUND:

The National Green Hydrogen Mission (NGHM), hereafter mentioned as the 'Mission', was launched on 4th January 2023 with an outlay of Rs. 19,744 Crore with an aim to make India a global hub for production, usage and export of Green Hydrogen and its derivatives. It will contribute to India's goal to become Aatmanirbhar (self-reliant) through clean energy and serve as an inspiration for the global clean energy transition. The Mission will lead to significant decarbonization of the economy, reduced dependence on fossil fuel imports, and enable India to assume technology and market leadership in Green Hydrogen. Under the mission, along with other initiatives, the Ministry of New & Renewable Energy (MNRE) proposes to provide support for the creation of suitable testing facilities to test, validate and certify technologies and processes in the Green Hydrogen value chain.

Green Hydrogen (GH₂) is expected to play an important role in India's journey towards decarbonization and energy security. To ensure quality, sustainability, and safety in GH₂ production and trade, development of robust quality and performance testing facilities has been kept as an integral part of the Mission. This encompasses all activities which would provide confidence that the technologies/ applications promoted and developed under the Mission will meet the expectations of consumers, investors, and other stakeholders. These include activities related to Standards, metrology, testing, certification, inspection, accreditation and quality management systems for the production and trade of GH₂.

In this regard, MNRE has notified a Scheme dated 04th July 2024 on "Funding of testing facilities, infrastructure, and institutional support for development of Standards and Regulatory framework" under the NGHM for implementation during the period 2024-26 at a total cost of Rs. 200 crores. The objectives of the scheme are:

- a) To identify the gaps in the existing testing facilities for components, technologies and processes being used in the value chain of Green Hydrogen and its derivatives.
- b) To create new testing facilities/infrastructure to test, validate and certify technologies, and processes in the value chain of Green Hydrogen and its derivatives.
- c) To upgrade existing testing facilities available with different testing agencies.
- d) To ensure safe and secure operations of equipment/instruments used in the Green Hydrogen Value Chain.
- e) To encourage participation from private as well as Government entities for establishment of world class testing facilities in India.

2. OBJECTIVES OF CALL:

The main objectives of the Call are:

- i) Development of new testing Infrastructure for the various components/ technologies/ processes in the production, storage, transportation & utilization of Green Hydrogen & its derivatives.
- ii) Upgradation of existing testing facilities for testing of equipment /instruments to be used in the GH2 value chain.
- iii) Technology mapping and information dissemination on quality and performance of systems, components and processes under GH2 ecosystem.
- iv) Other activities to support testing and quality assurance ecosystem for GH2 in the country

3. FOCUS:

- i) The testing infrastructure has to be strengthened in line with the increasing production capacity & usage of Green Hydrogen & its derivatives in various applications.
- ii) Testing centres developed and upgraded under the Scheme will bridge the gap in the testing infrastructures for Green Hydrogen Value Chain in the country.
- iii) The Scheme will lead to establishment of new testing facilities and upgradation of existing ones so as to achieve self-sufficiency in the areas of testing & certification for Green Hydrogen value chain.
- iv) Projects with an intention to develop testing & certification infrastructure for the components of Green Hydrogen value chain will be supported under the scheme.
- v) The scheme will also support creation of center(s) of Excellence covering a gamut of Testing facilities, on a case-to-case basis.
- vi) Testing facilities set-up or upgraded under the Scheme shall be open to all potential users and shall not be a captive unit of any one organization or a group of organizations.
- vii) An indicative list of model tests for Hydrogen are given in **Annexure – I**.

4. WHO CAN APPLY:

- i) Proposal can be submitted by any Government organizations, private organizations/entities (including Joint Venture/Public and Private Companies/Limited Liability Partnerships/ Corporate entity/Proprietorship/ Partnership Entity) intending to set up/upgrade its existing hydrogen testing or certification facility in India.

- ii) The parties submitting the Project Proposal through this CfP shall be referred to as the 'Applicants', which shall act as the Executing Agency (referred as EA) after its successful selection.
- iii) In case of a consortium/ partnership-based proposal, a lead agency should be mentioned, which shall function as Executing Agency (EA) for that project.
- iv) The Executing Agency (EA) will identify the Lead Person executing the project, herein, referred as "Lead Executer" and the consortium partners will identify their nodal persons, herein, referred as "Collaborator(s)".
- v) The necessary accreditations/ approvals and capabilities, as specified in CfP need to exist with the EAs for taking forward the supported testing infrastructures towards commercialization.
- vi) If Hydrogen testing activities relating to value chain are not indicated as one of the objectives in the by-laws/ Memorandum of Association/ Articles of Association of the organisation (for private as well as government entities) it should be inserted within one month of sanction of grant.

5. FUNDING AND DISBURSEMENT

5.1 The quantum of Central Financial Assistance (CFA) under the CfP is:

- i) Government entities - funding up to 100% of the capital cost for equipment, installation, and commissioning of the equipment.
- ii) Non-Government entities - funding up to 70% of the capital cost for testing equipment, installation, and commissioning of the equipment.
- iii) Up to 15% of the total financial support provided under the Scheme may be used for supporting operational expenses spread over a period up to 4 years from the date of completion of the project, as approved by Project Appraisal Committee (PAC).

- iv) The CFA shall be provided towards capital cost for equipment, installation, and commissioning of the equipment only. CFA shall not be used for other capital expenses including land, building infrastructure, etc.
- v) Before release of instalments of grants-in-aid claimed by Executing Agency (EA), MNRE may get the project visited and verified by authorised entities.

5.2 Stages of disbursement of Central Financial Assistance (CFA):

Installments	Milestone* %	Percentage of CFA to be released
1 st Instalment	On Selection (acceptance of the Project by EA)	20%
2 nd Instalment		
Part I	25% completion of Project Work as per sanction	40%
Part II	75% completion of Project Work as per sanction	30%
3 rd Instalment	On completion	10%

*Milestones to be clearly defined in the proposal

6. TIMELINES AND PENALTY PROVISIONS

- i) The grant released shall be exclusively earmarked for the allocated project and shall not be diverted for any other purpose.
- ii) Projects for setting up of new testing and certification facilities shall be completed in 18 months from the date of release of 1st instalment.

- iii) Projects for upgradation of existing testing & certification facilities shall be completed in 12 months from the date of release of 1st instalment.
- iv) Extension up to six months may be granted for the completion of the Project on the basis of adequate justification and as recommended by Project Appraisal Committee (PAC).
- v) Any extension beyond six months shall only be granted with the approval of Hon'ble Minister of New & Renewable Energy, with penalty @1% of the financial support released by MNRE. The period of delay will be the time span between due date for project completion as per Letter of Award and the date of acceptance of Project Completion Report by MNRE.

7. MONITORING FRAMEWORK

8.1 Steering Committee

- i) Overall monitoring of the Scheme will be carried out by a Steering Committee (SC) under the chairmanship of Secretary, MNRE and other members nominated by MNRE.

8.2 Project Appraisal Committee

- i) A Project Appraisal Committee (PAC) under the Chairpersonship of Mission Director, NGHM and other members as nominated by MNRE shall monitor/review/evaluate the project proposals and recommend projects for sanction of CFA.
- ii) The PAC shall monitor sanctioned projects on a regular basis for the allocation of funds based upon the progress of the project. The release of CFA will be as per the recommendation of PAC.
- iii) Selected EAs will be recommended by PAC to MNRE for issuing sanction. The Letter of Award (LoA) shall be issued to EA by NISE upon receipt of administrative sanction from MNRE.

- iv) Schedule of charges for the tests to be conducted by the testing labs supported under the Scheme will be finalized in consultation with PAC.

8. FEE

- i) The entities applying for financial assistance are required to submit a Demand Draft as a non-refundable processing fee of Rs. 5000/- (Rupees Five Thousand Only) in favour of "National Institute of Solar Energy" payable at Gurugram.

9. SUBMISSION OF PROPOSAL:

- i) Executing Agency (EA) is to submit a physical copy of the Proposal in the prescribed format as given at **Annexure - II** to NISE, Gurugram at: National Institute of Solar Energy (NISE) Gwal Pahari, Faridabad Highway Gurugram – 122003, Haryana and also a scan copy of the complete proposal via email on **hydrogen@nise.res.in**
- ii) Applicants are required to submit following documents along with the application:
- (a) Certificate of incorporation/ registration, Memorandum and Article of Association, Bye laws of the Society, Registered Partnership deed, PAN, and TAN.
 - (b) A Detailed Project Report of the Proposal.
 - (c) Biodata/ background/ experience of the entity relevant to the scheme.
 - (d) Detailed list of available relevant manpower for the testing facility including Scientists / Ph.Ds / Managers / Testing engineers/ Technical Staffs etc., along with their biodata, roles, responsibilities etc.
 - (e) Annual Reports and Audited Financial Statement of Accounts for last two years (if applicable).
 - (f) Details of land (on ownership basis or registered leasehold) along with relevant documents.
Note: Self-attested English/ Hindi version needs to be submitted in case such document is in regional language.
 - (g) Proof of submission of requisite fee.
 - (h) Quotations from Original Equipment Manufacturer (or its authorised dealer/ supplier) in respect of proposed equipment for the project.

- (i) In case of up-gradation proposals, annual reports, and audited statement of accounts for last two years, with Goods and Service Tax Registration Number. The applicant shall also submit proof of Regulatory Recognition under Integrated Assessment specifying regulatory body(ies).
- (j) Debt Service Coverage Ratio (DSCR) of the project proposal from a schedule commercial bank.
- (k) Tentative layout of the proposed building Plan for Testing Laboratory (working section-wise).
- (l) Item-wise details of proposed laboratory equipment with specifications and cost as per **Annexure-III**.
- (m) Item-wise and cost-wise details of proposed Technical Civil Work (TCW) and Furniture & Fixtures (F&F) as per **Annexure-IV**.
- (n) Item-wise list of existing equipment with complete details as per **Annexure-V**.
- (o) Notarized Affidavit on Rs.100 non-judicial stamp paper as per **Annexure-VI**.

Note:

- (a) All pages of all documents submitted online must be self-attested by the applicant or its authorised signatory. Supporting documents for such authorisation is required.*
- (b) Any proposal submitted beyond the prescribed time limit will not be entertained. Incomplete information or deficient documents submitted/ uploaded by the applicant may lead to rejection of proposals.*
- (c) Mere submission of application (with required documents) against this 'Call for Proposal' does not confer any right on the applicant for claim of grants-in-aid under the Scheme.*
- (d) When original documents are in regional language, they should be accompanied by self-certified English/Hindi translation.*
- (e) All pages of the proposal are to be properly numbered and the proposal should contain an Index as first page of the proposal indicating the various documents submitted along with page number, failing which the proposal is likely to be rejected.*

10. IMPLEMENTATION METHODOLOGY

- i) The call for Proposals will be valid for a period of 30 days from the date of issuance of the call.
- ii) Evaluation and Award: Proposals received against the call will be evaluated by the Project Appraisal Committee (PAC) on the basis of technical parameters as well as Assessment Criteria (**Annexure - VII**). Evaluation of Proposals submitted by the committee as per Assessment Criteria will be weighted as 70%. Remaining 30% weightage would be as per evaluation by the PAC.
- iii) EAs or its authorized representatives shall make a presentation regarding its proposal to the PAC.
- iv) Selected EAs will be recommended by PAC to MNRE for issuing sanction. The Letter of Award (LoA) shall be issued to EA by NISE upon receipt of administrative sanction from MNRE.
- v) The decision of the PAC shall be final in respect of eligibility or otherwise of the proposals, selection of proposals for grants-in-aid and quantum of grants-in-aid approved.
- vi) LoA will be issued to the selected applicants giving, inter alia, details of project, total project cost, eligible project cost, approved grants-in-aid, completion schedule of the approved project and other relevant details.
- vii) Once LoA is issued by NISE, the applicant has to provide Acceptance Letter as per prescribed format (**Annexure-VIII**) along with their bank details allocated specifically for the project and countersigned copy of LoA.
- viii) Execution and Commissioning: The work shall be executed by EA as per the approved scope of work and completion schedule of the Project and other details as mentioned in the LoA. EA shall provide monthly reports to NISE on the Project progress.

- ix) **Technical and Regulatory approvals:** Executing Agency (EA) shall be solely responsible for obtaining the safety, environmental and regulatory approvals, as required.
- x) **Testing and Certification:** Execution Agency (EA) shall get necessary testing and certification compliances and accreditations from the appropriate authorized agencies. Laboratory shall get accreditation from NABL as per ISO/IEC 17205:2017.
- xi) **Monitoring of Testing Facility after inception:** The testing facility developed under the scheme shall submit yearly report stating the operational status of the testing facility for a period 5 year from completion of project as per **Annexure - IX**. NISE/ MNRE/ any other authorised entity may conduct periodic visits/audit to ascertain operational status of the facility.

11. RELEASE OF GRANTS-IN-AID

- i) The grants-in-aid will be released in instalments as per table mentioned above at 5.2 of the CfP.
- ii) Before release of every instalment of grants-in-aid claimed by EA, NISE may get the project visited and verified by NISE/ MNRE/ or any other authorised entity.
- iii) All the transactions out of the grants-in-aid shall be monitored by the Ministry.
- iv) EA (Private entity) needs to open three dedicated bank accounts with respect to (i) contribution by EA (ii) term loan from the bank and (iii) grants-in-aid from the Ministry for implementation of the project. Expenditure on the implementation of the project shall be from these accounts only. Govt. entities are required to open only two accounts namely (i) contribution by EA, and (ii) grants-in-aid from the Ministry for implementation of the project.

- v) Every page of documents submitted to NISE for claiming release of grants-in-aid shall be signed by the EA or its authorized representative.
- vi) Before release of the final instalment, a signage has to be prominently displayed on the front of the Lab/Testing facility - "Project is funded under National Green Hydrogen Mission".
- vii) The final instalment of grants-in-aid will be released after comparison of the approved and actual cost for the already approved items will be compared and lower of the two will be considered for re-calculation of grants-in-aid.

12. REQUIREMENT OF DOCUMENTS BEFORE RELEASE OF EACH INSTALMENT

The EA shall submit request letter for release of Milestone based Payment as described at 5.2 for release of funds. The following list of documents, shall be submitted by the EA along with the request letter:

- i) Utilization Certificate for the grants-in-aid released for the previous instalment signed by Authorised Signatory and Chartered Accountant (by Controller of Accounts /CFO/FO/Chief Accountant /Accounts Officer in case of Government organizations) along with seal. **Annexure X.**
- ii) Progress report and achieved timeline activities (till date) against the approved scope of work as mentioned in the Sanction Letter.
- iii) Declaration regarding completion of work as per approved milestone in the sanction letter.
- iv) Proof of all the necessary safety, environmental and regulatory approvals (as required at each stage of Project) obtained by the EA for the Testing facility.
- v) Proof of all the necessary testing and certification compliances and accreditations from the appropriate agencies (as required at each stage of the Project) obtained by the EA for the Testing facility.

- vi) Building plan/ Lay-out/ photo of the building showing the progress of Project.
- vii) Geo-tagged photographs of the project from various angles and locations.
- viii) Detailed list of approved equipment procured and installed indicating the approved cost and actual cost as per **Annexure-X (a)**.
- ix) Details of Technical Civil Work and Furniture and Fixture purchased/Done in the Hydrogen Testing Laboratory as per **Annexure-X (b)**.
- x) Copies of Bank statements giving details of payment made to the suppliers.
- xi) Final term loan sanction letter from the Bank (as applicable).
- xii) Project completion Report along self-declaration letter (**Annexure - XI**) and proof of the signage prominently displayed on the front of the Lab/Testing facility - "Project is funded under National Green Hydrogen Mission" – for release of last milestone payment.
- xiii) Compliance of any other terms & conditions mentioned in the Sanction Letter.
- xiv) NISE reserves the right to ask for any other relevant documents as deemed necessary, apart those mentioned above, from the EA for release of milestone payment.

13. CHANGE/MODIFICATION TO THE PROJECT

- i) Any change/modifications in the sanctioned Project including components or cost of the project shall require the approval of the Project Appraisal Committee (PAC).

14. NON-IMPLEMENTATION OR DELAY IN IMPLEMENTATION OF PROJECT AND ADJUSTMENT, DEDUCTION AND RECALL OF GRANTS-IN-AID

- i) EA shall make all possible efforts to complete the project as per the stipulated timelines.
- ii) In case of non-adherence to the stipulated timeline and extension beyond six months of the sanctioned timeline, penalty @1% of the financial support released by MNRE will be applicable. The period of delay will be the time span between due date for project completion as per Letter of Award and the date of acceptance of Project Completion Report by MNRE
- iii) NISE reserves the right to retract sanction or cancel or short-close projects in consultation with PAC in cases where the project(s) face unreasonable delays or fail to comply with the objectives/ provisions of this Scheme or the Mission.
- iv) If the EA fails to utilize the grant for the purpose for which it has been sanctioned or failed to complete the project as per the LoA, it shall refund the entire amount of the grant, with interest as per the GFR rules to NISE.
- v) If at any point of time, it comes to the notice of NISE that grant-in-aid has been availed by manipulation/ concealment of information/ facts, such grants-in-aid released by NISE has to be refunded along with interest as per the GFR rules. Manipulation/ concealment of information/ facts may also attract other civil/ criminal liabilities as per the prevailing laws.
- vi) In the event of EA withdrawing from executing the project, the grants-in-aid amount released to it (along with interest as per the GFR rules) by NISE shall be returned by EA to the Ministry within 30 days of communication for refund of such grants-in-aid.
- vii) In case of failure on part of EA to refund the grants-in-aid amount (or interest thereon) as directed by NISE, the due amount will be recovered as per applicable laws.

15. GUIDELINES FOR SAFEGUARD OF INTELLECTUAL PROPERTY:

- i) EA shall submit signed copy of **Annexure – XII** for the safeguard of any Intellectual Property Rights such as Publications, Patents, Registered Designs or Trademarks etc. which are generated through the projects funded under this scheme.

16. MISCELLANEOUS PROVISIONS

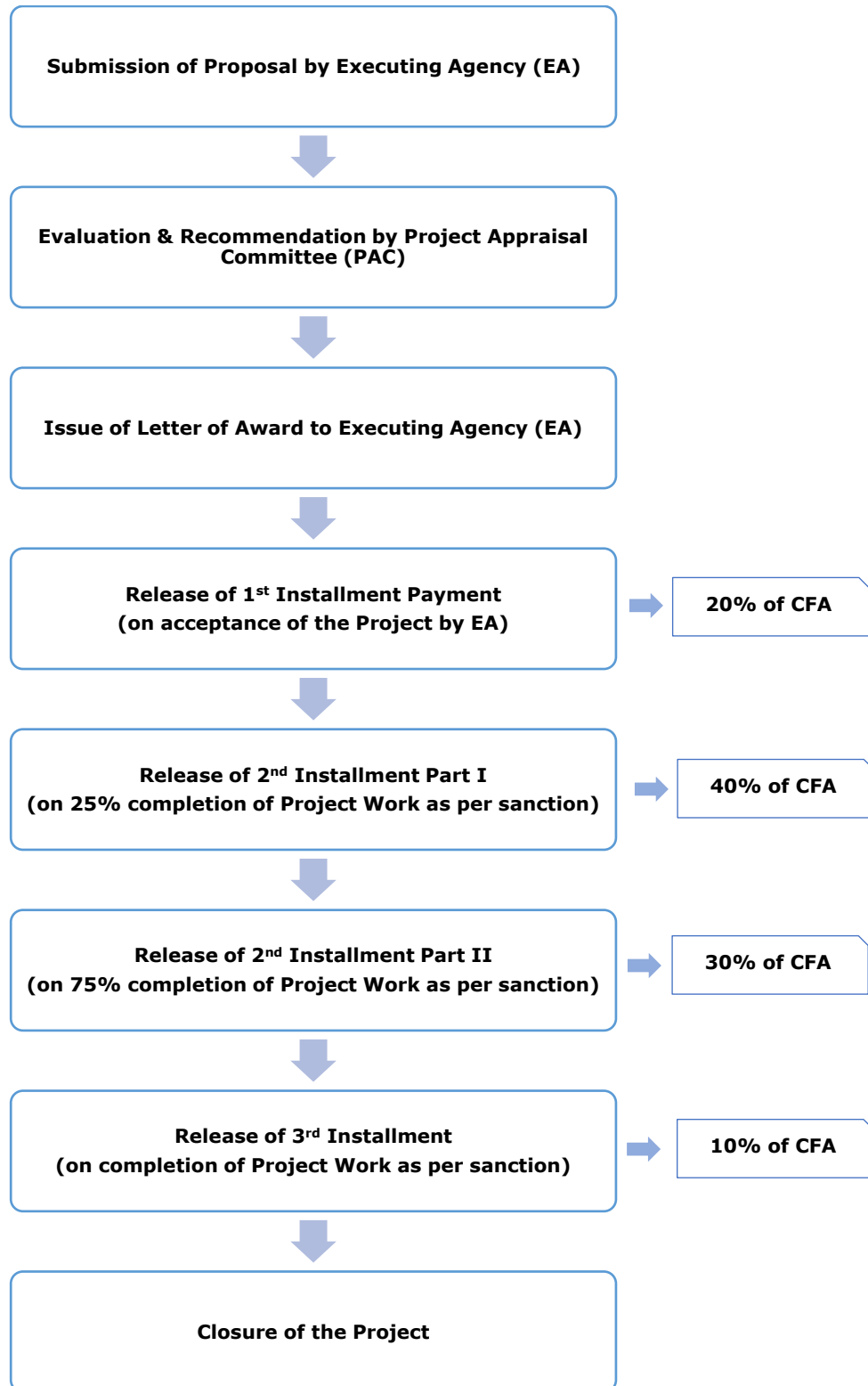
- i) Interpretation of NISE as regards to provisions of the Call for Proposal and/or Letter of Award issued shall be final and binding on EA.

- ii) NISE may seek any clarification or direct to submit any document/ information from the applicant or the EA at any stage of implementation of the project.

17. JURISDICTION OF COURT

- i) Any dispute, including selection of proposals or release of financial assistance, arising out of implementation of the CfP/Scheme will be subject to courts/ tribunals having jurisdiction over Delhi.

18. Project Execution Flowchart



19. Important Dates:

- i) Floating of Call for Proposal (CfP) : 15/08/2024

- ii) Online stakeholder meeting for queries : 30/08/2024
and response (Applicants are requested to
visit NISE website for the
link)

- iii) Last date for submission of physical copy : 04:00 PM; 14/09/2024
of the proposal at NISE, Gurugram

Contact person:

Kishore K. Menon
Deputy Director
Hydrogen and Fuel Cell Division
National Institute of Solar Energy
Email: hydrogen@nise.res.in
Mob: 99900 76236

Indicative list of Model Tests for Hydrogen

Components	Tests Performed
Hydrogen Production <ul style="list-style-type: none"> ▪ Electrolyzers 	i. Performance test <ul style="list-style-type: none"> ▪ Critical tests to verify critical parameters of the stack such as H₂ production rate, H₂ purity at the outlet of separator stack, specific power consumption, H₂ output pressure, etc. ▪ Startup test to check cold and hot start-up time of the stack ▪ H₂ Pressure Mapping test to verify the pressure range corresponding to the stated efficiency of the system. ▪ Ramp Up and ramp down tests. ii. Safety test <ul style="list-style-type: none"> ▪ Turndown Ratio Mapping test to verify the safe operating limits of the electrolyzer stack. ▪ Oxygen Back Pressure Test to check the maximum allowable O₂ vent pressure ▪ Hydrogen - Oxygen cross over test iii. Integrity Test <ul style="list-style-type: none"> ▪ Pressure tests to identify any potential leaks. ▪ Temperature cycling to simulate real world operating conditions ▪ Performance degradation in stack performance for every 1000hrs. of operation. ▪ Hydrogen purity at different levels are required for different applications. You may want to accommodate that.
Compressed Hydrogen Storage --Type 4 Cylinder	i. Material Tests for Metal Fuel Tanks and Liners ii. Material test for plastic liners iii. Resin Properties iv. Hydrostatic Burst Pressure Test v. Ambient Temperature Pressure Cycling

Components	Tests Performed
	<ul style="list-style-type: none"> vi. Leak-before-break (LBB) Test vii. Bonfire Test viii. Penetration Test ix. Chemical Exposure Test x. Composite Flaw Tolerance Test xi. Accelerated Stress Rupture Test xii. Extreme temperature pressure cycling test xiii. Impact Damage Test xiv. Permeation test xv. Boss Torque xvi. Hydrogen gas cycling xvii. Tests to check embrittlement
Liquid H ₂ Storage Tanks	<ul style="list-style-type: none"> i. Pressure Test (Hydrostatic and Pneumatic) ii. Boil off tests iii. Tests to check embrittlement iv. Vacuum tests
H ₂ Dispensers	<ul style="list-style-type: none"> i. H₂ Flow tests ii. Pressure tests iii. Communication and Control tests
Health, Safety, and Environment (HSE) -Flame detector -Odour inducing chemicals -Colour changing tapes - H ₂ leakage sensors	<ul style="list-style-type: none"> i. Sensitivity tests ii. Performance tests
High Pressure Piping and Valves	<ul style="list-style-type: none"> i. Pressure Test (Hydrostatic and Pneumatic) ii. Performance tests iii. Tests to check embrittlement

Components	Tests Performed
H2 Fuel Cell	<ul style="list-style-type: none"> i. H2 leak tests ii. Load tests iii. Safety tests iv. Output power control system test v. Mechanical load control system test <ul style="list-style-type: none"> ▪ The subsystem should be strong enough to apply required mechanical load under test conditions to increase contact among components in cell/stack vi. Electrodes System Test <ul style="list-style-type: none"> ▪ Anode/Cathode gas flow rate test ▪ Anode/cathode gas pressure and temperature test ▪ Anode/cathode impedance test to ensure performance over entire frequency range vii. Performance Test <ul style="list-style-type: none"> ▪ Rated Power test for verifying output of the cell/stack assembly unit under rated conditions ▪ Current-Voltage characteristics test to determine dependency of current and voltage under pressing conditions ▪ Effective fuel utilization dependency test to ensure maximum efficiency under operating conditions ▪ Long term durability test for evaluating performance degradation (for every 1000 hrs) ▪ Thermal cycling durability test to ensure thermal cycles shall be within specifications ▪ Internal reforming performance test to evaluate working under open-circuit/hydrocarbons conditions ▪ Resistance components identification test to identify and evaluate ohmic and non-ohmic components of total resistance of cell/stack

Application Form/DPR for Setting up/ up-gradation of Hydrogen Testing Laboratory

Sl. No	Particulars	Details
1	Name and Address of entity including Telephone, Fax, email and contact details	
2	Name and Address/Location of Hydrogen Testing Laboratory including Telephone, fax, email with contact details etc.	
3	Type of Organization; i. In case of Govt., Central /State Government, Public sector, Autonomous, Statutory etc. ii. In case of Private, Joint Ventures Private Companies /Limited Liability Partnerships, Corporate Entity / Proprietorship / Partnership Entity, etc.	
4	Background of the entity and their activity	
5	Proposal Type (<i>please check appropriate box</i>)	<input type="checkbox"/> New Testing Facility <input type="checkbox"/> Upgradation of Existing Testing Facility
6	Objectives of the proposed project	
7	Types of tests and total testing capacity of the proposed laboratory in terms of number of samples to be handled by Utilizing the proposed equipment	

8	<p>In case of up-gradation of existing lab, details of present capacity, capacity utilization, the equipment available and their utilization with products and parameters being tested, the gap proposed to be filled up in terms of meeting the demand and techno economic analysis of the proposed up-gradation.</p>	
9	<p>Number of green hydrogen Industries situated/proposed in the nearby areas and other potential users who may avail testing facilities.</p> <p>Attach separate list indicating names & address of units along with their products</p>	
10	<p>Details of lab equipment available and their utilization with products and parameters being tested</p> <p>Annexure-V</p>	
11	<p>Total Project cost (i + ii):</p> <p>i. Laboratory Equipment (for funding under the Scheme)</p> <p>a) Total cost of equipment:</p> <p>b) Fund sought under the Scheme:</p> <p>Details of equipment and cost for which funding is sought along with budgetary quote as per Annexure - III</p>	

	<p>ii. Other cost (not eligible for funding under the Scheme)</p> <p>a) Technical civil work - including area required for housing the lab equipment, storage of samples/chemicals/consumables.</p> <p>b) Non-technical civil work - such as office area, library, roads, boundary wall, canteen, guest house etc.</p> <p>c) Furniture & Fixtures</p> <p>d) Recurring Expenditure – Consumables, Salaries & Wages etc.</p>	
11	<p>Means of Finance</p> <p>a. Promoters Contribution</p> <p>b. Grant from MNRE</p> <p>c. Term Loan from bank</p> <p>Total</p> <p>(unsecured loan will not be considered)</p>	
12	<p>Details of Equipment, Technical civil work and Furniture and Fixture proposed to be installed in the laboratory indicating specifications, make, quantity, cost</p> <p>(Please furnish quotations for each proposed equipment)</p> <p>Annexure- III and Annexure-IV</p>	

13	Total no. of Technical/ professional manpower available and to be employed (with their qualifications and experience)																															
14	Layout of laboratory building Plan (Attach separate document)																															
15	Implementation Schedule (Attach separate Bar chart/ Mile Stone Chart/ PERT chart)																															
16	Cash flow projections for the next five years/ Basic Revenue Projections from the Testing Facility	<table border="1"> <thead> <tr> <th>Items</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>Revenue</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cost of Operations</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Debt Servicing</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Gross Profit</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Items	1	2	3	4	5	Revenue						Cost of Operations						Debt Servicing						Gross Profit					
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17	In case of up-gradation of lab, Proof of Regulatory Recognition specifying regulatory body (ies.). (attach Proof)																															
18	Any other relevant details																															

Encl: List of documents attached

Signature of the Applicant /Lead Promoter

**Name and Designation Seal of
the Organization**

Date:

Annexure - III

**Certified cost estimates of the proposed equipment with
reference to products and parameters to be tested**

Eligible for funding under the Scheme

Sl. No	Name of the equipment	Specification(s)	Quantity	Cost in Foreign currency (in case of		Cost in Rupees/ lakh		Products to be tested from the equipment	Purpose/ Parameters of the respective products	Funding sought (Rs.)
				Basic Cost	Taxes	Basic Cost	Taxes			

Please furnish quotations for each proposed equipment

Signature of the Applicant /Lead Promoter

**Name and Designation Seal
of the Organization**

Date:

**Certified cost estimates of the proposed Technical Civil Work
(TCW) and Furniture and Fixtures (F&F)**

Not eligible for funding under the Scheme

Sl. No.	Name of the TCW and F&F specific to equipment proposed	Purpose	Qty.	Cost in Rupees/ Lakh	
				Basic Cost	Taxes

Signature of the Applicant /Lead Promoter

**Name and Designation Seal
of the Organization**

Date:

Details of laboratory equipment and infrastructure available and their utilization with products and parameters being tested

Sl. No.	Name of the equipment	Year of purchase	Make/Model	Capacity utilization	Green Hydrogen component tested	Parameters tested of the respective product

Details of Infrastructure available:

Signature of the Applicant /Lead Promoter

**Name and Designation Seal
of the Organization**

Date:

(TO BE PRINTED IN Rs.100/- STAMP PAPER (Non-Judicial))

and to be NOTARIZED

AFFIDAVIT SUBMITTED ON BEHALF(Name of EA)

I,(Name of the authorized representative of EA), Son/
Daughter of (father's name), aged about
years, having my office at (Address), do hereby solemnly
affirm and sincerely state as follows:

1. I am the (Designation) of the (Name of EA). I have
been authorized by the (Name of EA) vide Board Resolution /
Power of Attorney / Authorization Letter datedto sign this affidavit
on behalf of the company.
2. I hereby confirm that I am duly authorized in my own right/ by management
vide its resolution no..... datedto apply
and sign this undertaking on behalf of (name of EA); and am
fully aware of the facts relating to Setting up/Up-gradation of hydrogen testing
laboratory at (location of the project) for
..... (activities to be undertaken by
project).
3. **In case of a consortium/ partnership-based proposal:** I state that the
Proposal is being submitted in collaboration with (Name
of collaborators), wherein (name of organization) will act
as the 'Lead Agency' and shall function as the Executing Agency (EA) on
approval of the proposal.

4. I confirm that the term and conditions of the **“Funding of testing facilities, infrastructure, and institutional support for development of Standards and Regulatory framework under the National Green Hydrogen Mission”** scheme of the MNRE under which an application is made by (name of EA) have been properly read and understood by..... (name of Lead Executer) and I affirm that the proposal complies with all the terms and conditions of the approval letter (letter of award) and provisions enshrined in the scheme guidelines.

5. **In case of Joint Venture Company:** I state that the(name of organization) is a Joint Venture Company betweenand The share holding pattern in the Joint Venture is as follows (if applicable).

6. I state that there are no insolvency proceedings either initiated or pending against(name of EA) or its Collaborator.

7. I state that(name of EA) undertakes and has made provisions in the Collaboration Agreement for retaining all the required documentation, tools, equipment and other necessary infrastructure required to carry out the Operation and Maintenance of the installed Testing Facility in case of termination of the Collaboration Agreement.

8. The proposed activities to be undertaken under the proposal are covered under the above-mentioned scheme of MNRE and no part of the scheme/ infrastructure of the project is designed or assigned to be used for any activity other than the activities specified in the application at present or in the near future.

9. The grant released shall be exclusively earmarked for the allocated project and shall not be diverted for any other purpose.

10. I hereby confirm that the testing facilities set-up or upgraded under the Scheme shall be open to all potential users and shall not be a captive unit of any one organization or a group of organizations.

11. It is certified that (name of EA) has not obtained or applied for grants for the same project, component, purpose or activity from any other Ministry or Department of the Government of India or State Government or their agencies.
12. It is to certify that (name of Lead Executer) has not incurred any expenditure on the eligible components of grants-in-aid of the project before the date of issue of approval letter by MNRE.
13. It is to certify that disbursement and utilisation of term loan sanctioned by bank for the project has been done after the date of issue of approval letter by the Ministry.
14. In case of concealment of any facts in this regard, the MNRE would have right to reject my application at any stage and recall grants-in-aid released, if any.
15. (name of EA) will meet, from its own resources, any shortfall due to less admissibility of grants-in-aid or any future reduction in grants-in-aid or any escalation in cost of the project.
16. I shall not dispose-off or encumber or utilize the assets created wholly or substantially out of grants-in-aid for purpose other than those for which they have been sanctioned, without obtaining the prior approval of MNRE.
17. Before completion of the project, any change in ownership of the project, name of the entity, promoters of the entity, loan sanctioning Bank, loan amount will be brought to notice of MNRE at the earliest.
18. Before addition/deletion/replacement in the approved equipment/TCW and Furniture & Fixtures, change of location of Laboratory and request for clubbing of instalments, prior permission of Ministry will be obtained.
19. I understand that if some details/documents are not mentioned in the CFP and are found to be necessary during the evaluation of the Proposal, same may be asked to be submitted by the me during the evaluation process.

20. In case of non-implementation/ delayed implementation of the project, MNRE have absolute right to cancel the approved grants-in-aid, recall the released grants-in-aid along with interest as per the scheme guidelines or en-cash the Bank Guarantee.
21. All the information furnished in the application and Detailed Project Report with respect to the eligibility conditions are true and correct to the best of my knowledge and belief and nothing material has been concealed therefrom.
22. I agree that in the event of any particular information given being found false or incorrect or any discrepancy at any point of time, our application is liable to be rejected or cancelled.

Signature of the Applicant /Lead Promoter

**Name and Designation Seal of
the Organization**

Date:

Criteria for Evaluation of proposals under Call for Proposal for “Funding of testing facilities, infrastructure, and institutional support for development of Standards and Regulatory framework under the National Green Hydrogen Mission”

The proposals found prima facie eligible based on conditions stipulated in the guidelines, will be evaluated as per the following assessment criteria:

A. Creation of New Testing Facilities:

Sl. No.	Criteria for Evaluation of proposals	Marks
1	Experience & Credentials of the Executing Agency	30
2	Availability of Land/ Building for setting up testing facility	20
2.1	Own Land with building available	20
2.2	Land and building available on long lease	18
2.3	Own land available without building	15
2.4	Land available on long lease without building	12
3	Economic Viability of the proposal (based on bank appraisal)	25
3.1	DSCR >= 3.0	25
	2.5 <= DSCR <= 2.9	22
	2.0 <= DSCR <= 2.4	20
	1.5 <= DSCR <= 1.9	10
	1.5 < DSCR	5
4	Financial Commitment of the Executing Agency (towards CAPEX)	15
5	Equipment & Infrastructure (Available and proposed equipment/ infrastructure)	10

B. Upgradation of Existing Testing Facilities:

Sl. No.	Criteria for Evaluation of proposals	Marks
1	Accreditations	20
1.1	NABL + Other national/ international accreditation	20
1.2	NABL only	15
2	Status of Land/Building	30
2.1	Own Land with building available	30
2.2	Land and building available on long lease	25
2.3	Own land available without building	20
2.4	Land available on long lease without building	15
3	Economic Viability of the proposal (Based on Bank Appraisal)	25
3.1	DSCR >= 3.0	25
	2.5 <= DSCR <= 2.9	22
	2.0 <= DSCR <= 2.4	20
	1.5 <= DSCR <= 1.9	10
	1.5 < DSCR	5
4	Availability of Technical Manpower in related to Hydrogen (Details of the Staff need to be provided)	20
4.1	Manpower needed for upgraded lab available	20
4.2	Manpower needed for upgraded lab not available	10
5	Availability of Hydrogen testing in the existing lab (Details to be provided in Annexure-V)	5
5.1	Lab proposed to be upgraded is already conducting tests related to hydrogen	5

[ACCEPTANCE LETTER]

(To be submitted on the letter Head of entity within 7 days of receipt of approval letter)

To,

**Director General
National Institute of Solar Energy (NISE)
GwalPahari, Faridabad Highway
Gurugram – 122003, Haryana**

Subject: Proposal of M/s _____ for grant-in-aid for --- (setting
_____ up----- /up-gradation)
_____ of ----- Testing Laboratory
_____ at (address of main location)
under the (Name of scheme) -reg.

Sir,

With reference to the approval letter No. _____ dated
_____ of the Ministry of New and Renewable Energy, Government of India, on
the captioned subject I, _____ (Lead Promoter of EA
_____) have carefully gone through the provisions of Scheme
Guidelines and undertake to abide by the same.

2. I hereby also confirm that all terms and conditions mentioned in the aforesaid approval letter is unconditionally acceptable to the EA (name of EA). Further, in no case the approved equipment/TCW/Furniture and Fixture will be changed without prior approval of the Ministry.

(Name & Signature with seal)
(Promoter Director/Proprietor/Partner)

Note: This acceptance is to be signed only by the Lead Promoter and not by the Authorized Signatory.

Monitoring of Testing Facility

Financial Year: 20.. to 20..

Sl. No	Type of Testing	Vendor Name	Date of Testing	Sample Qty	Price

Chartered Accountant Certificate

(Letter Head of the Chartered Accountant along with membership/ registration number)

This is to certify that % of the promoter's equity,% of the term Loan and% of the Grants-in-aid released as installment have been spent on the project after date of issue of Approval letter. The certification is based on the verification of books of accounts, bills, invoices, work orders, bank statements, etc. related to the (name of the project).

Sr. No	Name of the Component	Proposed project Cost	Approved PAC cost	Eligible Cost considered by MNRE for calculation of Grant-in-aid	Grant Approved by MNRE	Grant released by MNRE	Actual Expenditure as on date
1	Equipment						
2	TCW						
3	Non-TCW						
4	Furniture & Fixtures						
5	Recurring Cost						
6	Other Expenditure (Please specify)						
	Total						

Means of Finance:

Sr. No	Item	Proposed Means of Finance	Approved Means of Finance as per PAC	Grant released	Actual Expenditure as on date.....
1	Promoter's contribution				
2	Grant from MNRE				
3	Bank Loan				
	Total				

Signature of CA with date and Seal

Counter signature of authorized signatory of EA

In case of Government organizations, Comptroller of Accounts /CFO/FO/Chief Accountant /Accounts Officer etc may certify it.

Details of equipment purchased and installed under grant-in-aid released by Ministry of New and Renewable Energy in the hydrogen testing laboratory:

1. Name of the Laboratory:

2. Location of the lab:

Sl. NO.	Name of the PAC approved equipment	Price in US \$/EURO, etc. + Custom Duty, Service Tax, etc. (if applicable). (In the case of Imported equipment)	Exchange Rate as on (Date)	Price / Value in Rupees + VAT /Service Tax etc., (if applicable)	Make / Model	Serial Number of the equipment	No. and Date of Invoice (No and date of Purchase order and Proforma invoice will not be accepted)	Date of Installati on of The equipment In the laborato ry	Purpose of the equipmen t and whether functional or not	Amount utilized Out of grant in- Aid re lease d By MNRE for Purchas e of equipme nt

It is certified that all the above equipment has been procured as per the above certified cost. The invoice no, date and serial number mentioned against each equipment have been verified. All above equipment has been installed on the above lab location.

Signature of CA (with date and Seal)

Counter signature of authorized signatory with Seal

In case of Government organizations, Comptroller of Accounts CFO/FO/Chief Accountant /Accounts Officer etc may certify the statement

Details of Technical Civil Work (TCW) and Furniture & Fixtures purchased/ done in the Hydrogen Testing Laboratory under grant-in-aid released by Ministry of New and Renewable Energy

SI. No.	Name of the TCW and Furniture & Fixture as approved by PAC	Purpose	No. and Date and of Invoice (No and date of Purchase order and Proforma invoice	Whether completed / installed or not	Expenditure incurred	Amount utilized out of grant-in-aid released by MNRE

It is certified that the expenditure on above TCW and Furniture & Fixtures have been verified from the invoice carrying the given number and date.

Signature of CA (with date and Seal)

Counter signature of authorized signatory with Seal

in case of Government organizations, Comptroller of Accounts CFO/FO/Chief Accountant /Accounts Officer etc shall certify the statement

Project Completion Report
Self-Declaration (Letter Head)

Name of the Project:

Date of Award:

Date of Completion:

Date of Commercial operation start:

I (Head of the Organization) Mr./Mrshereby declare that the "Proposal of for Up-gradation/Setting-Up of Hydrogen Testing Laboratory" as approved by Ministry of New and Renewable Energy vide letter No.....dated.....has been completed and operationalized with effect from All the approved equipment/TCW/Furniture and Fixture have been procured and installed successfully and the details of such equipment are as follows:

S.No.	Name of the Equipment	Date of completion of installation of instrument	Date of commercial operation started
1			
2			
3			
4			

Signature of the Head of the Organization with seal

Date:

Place:

Protection of Intellectual Property Rights

The Executing Agency (EA) are required to seek protection of Intellectual Property Rights for the results/output of the funding scheme and shall share royalty/ proceeds of sale of IPR in accordance with the guidelines given below:

- i) The IPR will belong to the contributing parties (including the MNRE) in proportion to their contributions.
- ii) The Government of India/Govt. bodies (including its PSUs, Govt. autonomous societies & section 25 companies) shall have right to obtain a royalty-free license for the Intellectual Property for deployment/use of the same.
- iii) The Union Government shall have a royalty-free license/ March-in Rights for the use of the Intellectual Property. Accordingly, MNRE may grant the patent license(s) to other parties as decided by MNRE. Entities having license to market the developed product in India shall manufacture the product domestically.
- iv) In case, the Executing Agency (EA) is unable to file a patent, MNRE or its nominated institution may file the patent.
- v) The Executing Agency (EA) shall provide a copy of the 'Full Text Document' of the Patent within one month of its publication.
- vi) A portion of the benefits and earnings arising out of the IPR may be retained for plough back to pursue research/research related activities in the Green Hydrogen sector.
- vii) The IP Rights to use the technology may be sold to another institution/industry, for commercialization, on terms and conditions as mutually agreed to between the parties such transactions shall be done through a formal agreement between the joint owners of the IPR and the proposed licensee and intimated to MNRE within a period of 6 weeks from conclusion of the agreement.
- viii) Notwithstanding the above, MNRE reserves the right to take over ownership of the rights of the Intellectual property arising out of the projects under the Scheme, in the national interest, without any compensation to the Executing Agency (EA).

**Signature of the Applicant /Lead Promoter
Name and Designation Seal of
the Organization**

Date: