

**F.No. 353/61/2023 -NT part (2)**  
**Ministry of New & Renewable Energy (MNRE)**  
**Government of India**  
**Hydrogen Division**

Atal Akshay Urja Bhawan  
Lodhi Road, New Delhi-110003  
Dated: July, 2025

**OFFICE MEMORANDUM**

**Subject: "Second Call for Proposals" under Research and Development Scheme of National Green Hydrogen Mission (NGHM)- regarding**

The Ministry is implementing the NGHM R&D Scheme which aims at scaling up the R&D effort for promoting indigenous technology development for wide spread deployment of Green Hydrogen and its derivatives in an efficient and cost-effective manner across the country. The scheme will strengthen research and innovation capacity of the country and will be implemented in accordance with the policy and guidelines.

2. Under this scheme, the first round of R&D proposals were invited in 2024 and the selected R&D projects have been awarded with the approval of the Advisory Group of the NGHM.
3. Under this scheme, the second round of proposals are invited. The proposals submitted in the first round may be re-submitted, if there is specific improvement or modification. The details of the Call for Proposals indicating eligibility, financing, application form etc. are given in the **Appendices**. The last date of submission of applications is 21.8.2025.
4. The proposals may be submitted online on <https://research.mnre.gov.in>. For any further details, Mr. Sujit Pillai, Scientist-F, MNRE (email: [sujit.pillai@gov.in](mailto:sujit.pillai@gov.in)) may be contacted.
5. This has the approval of competent authority.



(Sujit Pillai)  
Scientist-F

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To:

1. All the State Nodal Agencies (SNAs)
2. Chairman, All India Council for Technical Education (AICTE), New Delhi
3. Chairman, University Grants Commission (UGC), New Delhi
4. Director, Indian Institute of Technology (IITs)/National Institute of Technology (NITs).
5. MD, CMD and ED of all the Central Public Sector Units.

6. Directors General, NISE, NIBE, NIWE

Copy for information to:

1. All Joint Secretaries/ Advisers/Scientist-G/Economic Advisers
2. Sr. PPS to Secretary (MNRE)
3. NIC Cell (for publishing on the Ministry's website)

Encl. : As above



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**Appendix I**

**Second Call for Proposals under Research and Development Scheme of the National Green Hydrogen Mission (NGHM)**

**1. Background**

1.1. The National Green Hydrogen Mission (hereafter referred to as "the Mission") was launched on 4th January 2023 with an outlay of Rs. 19,744 crore, with the vision to transform India into a Global Hub for the production, usage, and export of Green Hydrogen and its derivatives. The Mission supports India's transition towards energy self-reliance (Aatmanirbharta) and a low-carbon future.

1.2. Out of the total Mission outlay, Rs. 400 crore has been earmarked for Research and Development (R&D) activities. To support this, an R&D Roadmap was launched on 7th October 2023, followed by the operationalization of the R&D Scheme on 15th March 2024 (vide Order no. 353/61/2023-NT). The Scheme aims to scale up R&D efforts to foster indigenous, cost-effective, and scalable Green Hydrogen technologies.

1.3 The first round of proposals under R&D scheme were invited in March 16<sup>th</sup>, 2024. The 23 projects have been supported under scheme as part of first round.

MNRE now invites proposals under the Second round from eligible organizations as specified in Para 3 below, to support focused R&D efforts aligned with national priorities.

**2. Objectives**

2.1. The proposals should align with the following objectives:

(i) Enhance affordability, safety, efficiency, and scalability of Green Hydrogen production, storage, transportation, and utilization.

(ii) Promote collaborative R&D frameworks among academia, industry, and government to foster innovation and technology transfer.

(iii) Support scaling-up and commercialization of promising Green Hydrogen technologies, leveraging supportive policy and regulatory mechanisms.

### **3. Eligible Entities**

3.1. The following types of organizations are eligible to submit proposals:

- Academic Institutions
- R&D Institutions
- Government Institutions
- PSUs
- Private Research Institutions
- Industries with adequate infrastructure for executing R&D projects in Green Hydrogen technologies

### **4. Evaluation Criteria**

4.1. Proposals will be evaluated based on:

- Relevance, clarity, and quality of the proposal
- Defined, measurable objectives and deliverables
- Technical feasibility and innovation potential
- Existing and targeted Technology Readiness Level (TRL)

### **5. Funding Pattern**

5.1. Academic, Government, and Non-Profit Research Institutions may receive up to 100% financial support, subject to caps decided by the Sectoral Sub-Committee/Advisory Group.

5.2. Private institutions/industries may receive funding up to 80% of the project cost, subject to similar caps.

5.3. Consortia of academia and industry are encouraged. The academic partner may be funded up to 100% of its share, while the industrial partner is expected to contribute financially and technically, including infrastructure and in-kind support.

5.4. Fund disbursement and monitoring will adhere strictly to the Scheme Guidelines dated 15.03.2024. MNRE reserves the right to terminate any project with inadequate progress or misuse of funds.

5.4.1 In the case of overheads, **For projects up to ₹1 crore:** 8% of the project cost will be allowed.

- **For projects above ₹1 crore and up to ₹5 crore:** 8% of the project cost or ₹15 lakh, whichever is lower

For projects exceeding ₹5 crore, the following tiered structure has been formulated:

- **Above ₹5 crore and up to ₹10 crore:** ₹15 lakh + 2% of the amount exceeding ₹5 crore
- **Above ₹10 crore and up to ₹20 crore:** ₹25 lakh + 1.5% of the amount exceeding ₹10 crore
- **Above ₹20 crore:** ₹40 lakh + 1% of the amount exceeding ₹20 crore

5.4.2 Further, the norms for **travel** and **contingency** expenditure have been reviewed and the following limits are recommended for adoption:

- **Travel:** A maximum of ₹3 lakh per annum per project shall be permissible for domestic travel.
- **Contingency:** A provision of up to 10% of the total project cost may be allocated for contingency expenses.

## 6. Scope of Activities Supported

6.1. This Call focuses on applied and translational research to bridge gaps between innovation and market deployment. The applicants should:

- Clearly define initial TRLs (should be 4 or above).
- Define target TRLs (should be 7 or above).
- Emphasize scalability and commercialization
- Address sustainability and lifecycle aspects of technologies
- Refer to the R&D Roadmap available on the MNRE website
- Align with the indicative areas listed in Appendix-II of the Scheme

## 7. Proposal Submission Guidelines

7.1. Proposals must be submitted online only at (<https://research.mnre.gov.in>) in the prescribed format.

7.2. Proposals should include:

- Defined objectives, deliverables, and timeline
- Benchmarking against national/international standards in cost/performance
- Brief CVs of Project Investigators (PIs) with relevant experience
- Clear roles/responsibilities in case of a consortium, especially for industrial partners

7.3. Industry partners must demonstrate prior R&D capabilities, investment plans, and potential for technology adoption/commercialization.

7.4. Resubmission of previously submitted proposals is permitted, provided that modifications/improvements are clearly documented.

## **8. Intellectual Property Rights (IPR)**

8.1. Grantee institutions shall be responsible for protecting IPR developed under this Scheme, as per the guidelines issued on 15.03.2024, including any future amendments.

## **9. Important Dates**

Opening Date for Submission: 14.07.2025

Closing Date for Submission: 21.08.2025

## **10. Contact Information**

For further clarification and submission support, contact:

**Mr. Sujit Pillai, Scientist-F**

**Phone: 011 20849083**

**Email: [sujit.pillai@gov.in](mailto:sujit.pillai@gov.in)**

**Problem Statements for R&D Programme**

S.No.	Category	Topic
1	Hydrogen Production (Non-Biomass)	<ul style="list-style-type: none"> <li>• New and innovative way to produce Green Hydrogen (other than biomass)</li> <li>• Development of cost-efficient indigenized electrodes and membranes for different type of electrolyzers</li> </ul>
2	Hydrogen Production (Biomass)	<ul style="list-style-type: none"> <li>• Development of modular reactor for gasification process</li> <li>• Development of new purification method</li> </ul>
3	Hydrogen Storage and Transportation	<ul style="list-style-type: none"> <li>• Development of storage material with storage capacity &gt;3Wt%</li> <li>• Development of low cost compressed Hydrogen storage</li> <li>• Feasibility of pipeline transportation of Hydrogen</li> <li>• LOHC based Hydrogen storage and transportation</li> </ul>
4	Hydrogen Applications	<ul style="list-style-type: none"> <li>• Development of low - cost Hydrogen refueling station</li> <li>• Development of new Hydrogen technologies for cooling and heating applications</li> <li>• Development of low - cost Hydrogen compression technology above 500 bar</li> <li>• Development of long duration/endurance Hydrogen based UAV</li> <li>• Identification of new Hydrogen based applications</li> <li>• Demonstrate Innovative Hydrogen power Solution for Industrial Processes</li> <li>• Development of indigenous Hydrogen power generators</li> </ul>
5	Hydrogen Safety	<ul style="list-style-type: none"> <li>• Development of low - cost sensors</li> <li>• Development of low - cost local leak detection device</li> <li>• Indigenization of sensor and leak detection device.</li> <li>• Development of low cost indigenized Hydrogen valves, tubes and fittings.</li> </ul>

**Appendix-III**

## Ministry of New and Renewable Energy

Proforma for Submission of Proposals for R&D Projects

Sl.No	Item	Details
1.	Project Title:	
2.	Project type	
3.	Objectives	
4.	Summary (About a paragraph)	
5.	Total cost with MNRE share requested	
6.	Duration	
7.	Principal Implementing Organization(s)	
8.	Category of the Implementing Institution(s)	(A) Academic Institutions (B) R&D Institutions (C) Government Institutions and PSUs (D) Private Research Institutions (E) Industry
9.	Collaborating Institution(s), if any	
10.	Principal Investigator (Name and Contact details including telephones, fax and email) (CV to be enclosed)	



11.	Co-Principal Investigator(s) (Name, address and contact details including telephones, fax and email) (CV to be enclosed)	
12.	Share of implementing /Participating Institutions in the total cost	
13.	Need of the Project with proper assessment for viability of the product/ outcome	
14.	Status of Work being done in other National/International Institutions/ Industries (To be properly referenced with citations in peer reviewed scientific Journals wherever possible):	
15	Details of Research Methodology	Detailed methodology including schematics, diagrams, all relevant technical details and rationale etc. to be provided.

	Proposed cost: (Details of equipment along with justification to be provided separately)	Sl. No.	Item	Amount (Rs.)			
				Total Cost	First Year	Second Year	Third Year
		1	Equipment				
		2	Manpower				
		3	Consumables				
		4	Contingencies/ Other Costs				
		5	Travel				

16.	in the Format as per Annexure I)	6	Institutional Overhead charges				
		<b>Total</b>					
17.	Project Deliverables (products/process/papers/IPR)						
18.	Timelines (in terms of Work Plan)						
19.	Potential Users and suggested Plan of action for utilization of expected Project Output with proper analysis for scalability and bankability						
20	Other information	<p>The following information is to be provided as per Annexures:</p> <ul style="list-style-type: none"> <li>• Certificate from the Principal Investigator and Grantee organization. [Annexure-II(A)]</li> <li>• Infrastructural facilities available at the host institution (e.g. telecommunication, Internet, Electrical/ Mechanical Workshop, Laboratory space, power supply including back up arrangement, etc.) [Annexure-II(B)]</li> <li>• Availability of equipment which are relevant for the project. [Annexure-II(C)]</li> <li>• CVs of PI and all co PIs, which would include details of other R&amp;D projects implemented, their cost, status (completed/ under implementation) and sponsors. [Annexure-II(D)]</li> </ul>					

## ANNEXURE-I

**Details of Costs of Various Components and Justification****a) Cost of Equipment:**

Sl. No.	Name of the Equipment along with make & model	Imported/ Indigenous	Estimated Costs (in Foreign Currency also for imported equipment)*	Justification
1.				
2.				
3.				

\*Including transport, insurance and installation charges.

**b) Manpower Cost**

Sl. No.	Designation/ Numbers	Justi- fication	Monthly Emoluments	Amount (Rs.)			
				1st Yr (m. m.*)	2nd Yr (m. m.)	3rd Yr. (m. m.)	Total (m. m.)

\*Man months to be given within brackets before the budget amount.

**c) Cost of Consumables:**

Sl.No.	Item	Quantity & Cost	Amount (Rs.)			
			First year	Second year	Third year	Total
1.		Quantity/ Number				
		Total cost (Rs.)				
		Foreign Exchange Component (US \$)				
2.						
3.						
	Total:	Total Cost: Rs.				
		Foreign Exchange: Component (US \$)				

**d) Travel Cost:**

Si. No	Travel (Domestic/ International )	Justification	Amount (Rs.)			
			First year	Second year	Third year	Total
1.						
2.						
3.						

**Certificate from the Principal Investigator (On the letter head of the Organization)**

**Project Title:**

1. I am submitting the above titled project proposal to MNRE for financial support.
2. I agree to abide by the terms and conditions of the MNRE research grant.
3. I have not submitted the project proposal elsewhere for financial support.
4. I have requested for funds for the items, which are not available with the institution for the proposed work and are absolutely essential.
5. I will not proceed on long term/ study leave/ deputation during the period of project implementation, without prior permission from MNRE
6. I have enclosed the following documents/ materials:
  - i) Similar certificate from Investigator(s) from other participating institutions (if any):
  - ii) Name and address of up to five experts/institution interested in the subject/output of the project:

Date:

Place: Name and signature of Principal Investigator

**Endorsement by the Head of the Institution**

Certified that Project Proposal entitled " ----- " is prepared by Dr/Shri/Smt/Kum -----and has not been submitted to any other institution for funding.

The institute will provide necessary regular staff and infrastructure facilities for the project work and such facilities have not been requested in the proposal. The institute will ensure compliance of the terms and conditions of the financial grant by MNRE and other conditions of the project.

**Place & Date**

**Name, Signature and Seal  
Head of the Grantee Organization**

**ANNEXURE-II(B)**

**INFRASTRUCTURAL FACILITIES AVAILABLE AT THE HOST INSTITUTION**

ITEM	YES	NO	Not Required
a) Workshop			
b) Water & Electricity			
) Standby power supply			
c) Laboratory Space & furniture			
d) Air-Conditioned room for equipment			
e) Telecommunication			
f) Transportation			
g) Administrative & Secretarial support			
h) Library facilities			
i) Computational facilities			
j) Any other (Please mention)			

**Availability of equipment which are relevant for the project**  
**(Including test & measuring, calibration etc. and accessories relevant to the project)**

S.No.	Name of the equipment and accessories	Model and make	Remarks
1.			
2.			
3.			
4.			
5.			

NOTE: Please make sure that the aforementioned facilities and equipment will be available for the project.

## BIODATA OF PI/ Co-PIs

- a) Name
- b) Date of Birth
- c) Academic qualifications
- d) Areas of expertise
- e) Experience
- f) Awards received, if any
- g) Publications (Nos.)
  - Books
  - Research papers
  - Patents
- h) List of publications (Papers published during last 10 years)
- i) List of project completed indicating briefly title, sponsoring agency, duration and outcome of project
- j) Details of materials/prototype/device already developed in past

S.No.	Position Held (Designation)	Place of work	Duration	Areas of work
1.				
2.				
3.				
4.				