

353/61/2023-NT
Government of India
Ministry of New and Renewable
Energy (Hydrogen Division)

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Bhawan, Lodhi
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110003

To,

Date: 04/07/2024

Pay and Accounts Officer
Ministry of New and Renewable
Energy

Sub: Scheme Guidelines for funding of testing facilities, infrastructure, and institutional support for development of Standards and Regulatory framework under the National Green Hydrogen Mission

Sir/Madam,

I am directed to convey that sanction of the President of India for the Scheme on "Funding of testing facilities, infrastructure, and institutional support for development of Standards and Regulatory framework" under the National Green Hydrogen Mission (NGHM) for implementation during the period 2024-26 at a total cost of Rs. 200 crores.

2. Objectives:

- i. 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.
- ii. To create new testing facilities/infrastructure to test, validate and certify technologies, and processes in the value chain of Green Hydrogen & its derivatives.
- iii. To upgrade existing testing facilities available with different testing agencies.
- iv. To ensure safe and secure operations of equipment/instruments used in the Green Hydrogen Value Chain.
- v. To encourage participation from private as well as government entities for establishment of world class testing facilities in India.

3. Implementation Methodology: The Scheme will be implemented as per the detailed Scheme Guidelines at Annex.

4. The expenditure on this scheme will be met from the budget provisions given under the National Green Hydrogen Mission Head.

5. This issues in exercise of the powers conferred on this Ministry and with the concurrence of IFD vide their Diary. No. 136 dated 04/07/2024.

6. This issues with the approval of Hon'ble Minister of New and Renewable Energy.



Sujit Pillai
Scientist F

Enclosed: Annex

Copy to:

1. All Central Government Ministries and Departments
2. All Members of the Empowered Group under the Mission
3. All Members of the Advisory Group under the Mission
4. CEO, NITI Aayog, Sansad Marg, New Delhi
5. State Nodal Agencies (SNAs) of all States/UTs
7. Major Public Sector Enterprises operating in Renewable Energy/Power Sector
8. Principal Director of Audit, Scientific Audit-II, DGCAR, IBP. Estate, Delhi-11002
0. Director General (Local Bodies), Office of the Comptroller & Auditor General, Deendayal Upadhyay Marg, New Delhi
6. Solar Energy Corporation of India (SECI), 6th floor, Plate-B, NBCC office, Block tower-2, East Kidwai Nagar, New Delhi. 110023
9. Indian Renewable Energy Development Agency Limited (IREDA), 3rd floor, August Kranti Bhavan, Bhikaji Cama place, New Delhi-110066

Internal distribution

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Sujit Pillai
Scientist F

Annex

Ministry of New & Renewable Energy (MNRE) Government of India

Scheme Guidelines for funding of testing facilities, infrastructure, and institutional support for development of Standards and Regulatory framework under the National Green Hydrogen Mission

1. Introduction

1.1. 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.

1.2. 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.

2. Development of Testing Facilities:

2.1. Para 7.10 (d) of Mission document states that creation of suitable testing facilities to certify and validate technologies will be supported. Formulation and

regular revision of testing protocols relevant to Indian conditions will be undertaken in collaboration with premier National and International research institutions. These will be updated periodically with emergence of new technologies and applications. Knowledge and experience gained from evaluation of established and new technologies will be disseminated appropriately.

2.2. Thrust areas under the Scheme for enabling robust quality and testing ecosystem, commensurate with the specified standards/guidelines, in the GH2 sector are as follows:

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

3. Objectives of the Scheme

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

4. Budgetary Outlay: Rs. 200 Crore till FY 2025-26

5. Rationale and the Salient Features:

5.1. Testing centres developed and upgraded under the Scheme will bridge the gap in the existing testing infrastructures for various components Green Hydrogen Value Chain in the country.

5.2. 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.

5.3. The testing infrastructure has to be strengthened in line with the increasing production capacity and usage of Green Hydrogen & its derivatives in the country.

5.4. Salient features of the Scheme are given below:

- i. Projects with an intention to develop testing & certification infrastructure for the components of Green Hydrogen value chain will be supported under the Scheme. The Scheme will also support the upgradation of existing testing facilities available with private and government entity.
- ii. National Institute of Solar Energy (NISE) will be the Scheme Implementation agency (SIA). The SIA will be eligible for service charges at 0.5% of the financial support utilized for the projects sanctioned under the Scheme.
- iii. The SIA shall issue the Call for Proposals (CfP) for setting up of the testing infrastructure under the Scheme through a transparent process.
- iv. MNRE will issue administrative sanctions for the projects under the Scheme based on the recommendations of Project Appraisal Committee (PAC).
- v. The SIA will monitor, facilitate and share knowledge gathered under the projects through project completion report, monitoring reports, workshop(s), and publications to disseminate findings, best practices and lessons learnt.
- vi. The Scheme aims to leverage existing testing resources and infrastructure available with different agencies.
- vii. The Scheme will fund capital expenditure required for establishment of new testing infrastructure as well as upgradation of existing testing facilities.
- viii. Financial support for the establishment of testing infrastructure will be evaluated and granted taking into consideration the specific requirement and merits, on case-to-case basis.
- ix. 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.
- x. The scheme will also support creation of Center(s) of Excellence covering a gamut of Testing facilities, on a case to case basis.

6. Implementation Methodology

6.1. **Selection of Testing Infrastructure:** The SIA will identify the test facilities to be supported under the scheme based on the thrust areas mentioned in para 2.2.

6.2. **Call for proposals:** The Scheme Implementing agency (SIA) will issue call for proposals in consultation with MNRE for establishment of testing facilities. The proposal shall be submitted directly to the SIA. In case of a consortium/ partnership-based proposal, a lead agency should be mentioned, which shall function as Executing Agency (EA) for that project.

- i. The eligible EAs would include 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.

- ii. 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.

6.3. Evaluation and Award: The proposals will be evaluated by a Project Appraisal Committee in accordance with the criteria specified in the CfP. Selected agencies will be recommended by PAC to MNRE to issuing sanctions. The Letter of Award shall be issued to EA by SIA upon receipt of administrative sanction from MNRE.

6.4. Execution and Commissioning: Work shall be executed as per the approved scope of work.

6.5. Technical and Regulatory approvals: The EA shall be solely responsible for obtaining the safety, environmental and regulatory approvals, as required.

6.6. Testing and Certification: The EA shall get necessary testing and certification compliances and accreditations from the appropriate agencies.

7. Funding and Disbursement

7.1. Quantum, break-up and frequency of release of funds are as given below:

- a. For Government entities, MNRE will fund up to 100% of the capital cost for equipment, installation, and commissioning of the equipment.
- b. For Non-Government entities, MNRE will fund up to 70% of the capital cost for testing equipment, installation, and commissioning of the equipment.
- c. 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 PAC.
- d. The grants-in-aid will be released in three (3) instalments as per table mentioned in point 7.2.
- e. Before release of instalments of grants-in-aid claimed by Executing Agency (EA), MNRE may get the project visited and verified by SIA/ Ministry officials.

7.2. Stages of disbursement of Central Financial Assistance (CFA) are given below:

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Installment	Milestone	Percentage of CFA to be released
1st instalment	On Selection	20%
2nd instalment	On milestones basis*	70%
3rd instalment	On completion	10%
	Total	100%

* The milestones-based disbursement of funds shall be specified in the CfP to be issued by the SIA.

7.3. Funds will be released to SIA by MNRE on the recommendation of the PAC.

8. Timelines and Penalty Provisions

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

8.2. If the EA fails to utilize the grant for the purpose for which it has been sanctioned, it shall refund the entire amount of the grant, with interest to MNRE, as per the applicable rules.

8.3. Projects for setting up of new testing & certification facilities shall be completed in 18 months from the date of sanction by MNRE. Projects for upgradation of existing testing & certification facilities shall be completed in 12 months from the date of sanction by MNRE.

8.4. Extension up to six months may be granted by SIA for the completion of the facilities on the basis of adequate justification with the approval of the Steering Committee without any penalty. Any extension beyond six months shall only be granted with the approval of Hon'ble Minister of New & Renewable Energy, with suitable penalties which shall be specified by the SIA in the CfP.

8.5. MNRE reserves the right to retract sanction or cancel or short-close projects in consultation with the Steering Committee in cases where the EA(s) or the project(s) face unreasonable delays or fail to comply with the objectives/ provisions of this Scheme or the Mission.

9. Monitoring Framework

9.1 Steering Committee

9.1.1 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.

9.1.2 In case of any ambiguity in the interpretation of any of the provisions of this scheme, the decision of MNRE shall be final. The SC will also facilitate / recommend measures to resolve difficulties, if any.

9.2 Project Appraisal Committee

9.2.1 A Project Appraisal Committee (PAC) under the chairpersonship of Mission Director, NGHM and other members nominated by MNRE shall monitor/review/evaluate the project proposals and recommend projects for sanction of CFA. 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. Schedule of charges for the tests to be conducted by the testing labs supported under the Scheme will be finalized in consultation with PAC.

9.3 The SIA shall also devise a monitoring mechanism to track the progress of the projects. The same may be shared with MNRE.

9.4 Quarterly monitoring reports shall be submitted by the SIA to MNRE.

9.5 Expenditure of funds will be monitored by MNRE. Utilization Certificates shall be provided by the SIA as per the provisions of GFR.

10. Project Completion

The SIA shall submit the Project Completion Report (PCR), in prescribed format, to MNRE through PAC, within one month from the completion of project. PCR shall include the following:

- i. Technical aspects of the project, including the hardware, software, and other technologies used.
- ii. Technical challenges encountered during the project, and how they were overcome.
- iii. Outcome of the project comprising of technical knowhow generated along with the data collected during the execution of the project.
- iv. Recommendations for future projects, based on the lessons learned from project.

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