



## **GENERAL INFORMATION**

The Department of Science and Technology (DST) is pleased to announce the India–Netherlands Hydrogen Fellowship Programme for Human and Technical Capacity Building. Building on DST’s Hydrogen and Fuel Cell (HFC) initiatives, this programme aims to strengthen the skilled workforce and technical expertise required to support the development and implementation of India’s emerging hydrogen economy.

### **2. Need for this Call**

At COP26 in Glasgow (2021), India announced the *Panchamrit* strategy, committing to:

1. 500 GW of non-fossil energy capacity by 2030,
2. meeting 50% of energy requirements from renewable energy by 2030,
3. reducing projected carbon emissions by 1 billion tonnes by 2030,
4. lowering the carbon intensity of the economy by 45% by 2030 (relative to 2005), and
5. achieving net-zero emissions by 2070.

In parallel, India has set a goal of achieving energy independence by 2047, enabling a transition from fossil fuels to clean and sustainable energy systems. Meeting these national commitments requires rapid decarbonisation across the transport, chemical, steel, and power sectors while ensuring long-term energy security. Owing to its high energy density and versatility across production, storage, transport, and end-use, hydrogen is a critical enabler of this transformation.

To realize this potential, India must develop a highly skilled workforce capable of designing, implementing, operating, and maintaining hydrogen technologies across the full value chain. Structured capacity-building and international exposure are crucial for equipping India’s emerging hydrogen workforce with globally benchmarked technical knowledge and operational expertise. Successful skill development will also accelerate indigenisation, technology development, and commercialisation of hydrogen systems, enabling domestically developed solutions that directly contribute to the vision of Atmanirbhar Bharat.

This Call therefore seeks to support advanced training, collaborative research, and human resource development through engagement with leading hydrogen research ecosystems in the Netherlands, strengthening India’s readiness for a hydrogen-based economy.

### **3. Netherlands – Hydrogen Preparedness and University of Groningen**

The Netherlands is widely recognised as a European leader in hydrogen deployment, supported by advanced infrastructure, strong policy frameworks, and close integration with industrial and port ecosystems. The Port of Rotterdam, Europe’s largest, is rapidly evolving into a major global hub for green hydrogen import, processing, and distribution, enabled by large-scale electrolyser projects, international supply corridors, and hydrogen-ready transport infrastructure.

The Northern Netherlands hosts Europe’s first operational Hydrogen Valley and several innovation platforms that enable end-to-end development across production, storage, transport, and industrial

applications. These capabilities provide a mature, real-world environment for hydrogen R&D, demonstration, and systems engineering.

Within this ecosystem, the University of Groningen plays a central academic and research role through interdisciplinary hydrogen programmes and strong linkages with Hydrogen Valley initiatives. Under this Call, all fellows will be hosted at the University of Groningen, gaining access to cutting-edge research facilities and live hydrogen deployment projects.

The University of Groningen will offer Joint (Double) Ph.D. and Joint (Double) Postdoctoral positions to eligible fellows in collaboration with its partner institutions under the existing Memorandum of Understanding.

#### **4. Scope of Call**

The Call aims to strengthen India's preparedness for large-scale hydrogen deployment by developing skilled human resources, research capability, and institutional readiness. The scope includes:

1. Providing Indian hydrogen researchers and academicians with first-hand exposure to the implementation, operation, and management of hydrogen technologies across production, storage, transport, and end-use systems.
2. Enabling the learning and adaptation of international best practices, technical standards, and safety frameworks to support India's emerging hydrogen infrastructure.
3. Supporting the development of academic curricula, specialised training modules, and test facilities that will accelerate the reskilling and upskilling of India's workforce for the hydrogen transition.
4. Fostering collaborative research and long-term partnerships with leading Dutch hydrogen ecosystems to accelerate India's technology adoption, localisation, and system-level integration.
5. Strengthening India's capabilities in designing, validating, and deploying hydrogen supply-chain elements—including electrolyser systems, storage solutions, refuelling infrastructure, and industrial-use pathways.
6. Enhancing India's institutional capacity to undertake techno-economic assessments, safety analyses, and regulatory alignment required for hydrogen infrastructure roll-out.
7. Facilitating the indigenisation and commercial readiness of hydrogen technologies by exposing Indian researchers to advanced R&D facilities, industry clusters, and integrated hydrogen deployment models in the Netherlands.

#### **5. Research Topics**

**Table 1: Doctoral / Post doctoral Fellows**

<b>S. No.</b>	<b>Research Theme</b>	<b>Brief Elaboration</b>	<b>University of Groningen (submit your area interest)</b>
<b>1</b>	Mapping of hydrogen vs electricity energy flows	Comparative analysis of hydrogen pathways vs electric pathways across production, storage, and mobility sectors	dstfellowships.groningen@rug.nl
<b>2</b>	Socio-techno-economics of hydrogen production	Cost, regulatory landscape, deployment barriers for electrolyser and reforming-based	

		H <sub>2</sub> production	
<b>3</b>	Socio-techno-economics of hydrogen storage	Economic, safety, and regulatory aspects of compressed, LOHC, and solid-state hydrogen storage ...	
<b>4</b>	Socio-techno-economics of hydrogen transport	Pipeline vs trailer transport, blending models, logistics, and regulatory compliance	
<b>5</b>	Socio-techno-economics of hydrogen utilization	Policy, safety, and cost aspects of fuel cells, industrial burners, refuelling stations	
<b>6</b>	Hydrogen export & port economics	Techno-economic and policy considerations for green hydrogen export through ports	
<b>7</b>	Hydrogen inequity & societal impacts	Hydrogen adoption impacts on social equity, affordability, and regional development	
<b>8</b>	Regulatory frameworks for hydrogen applications	Standards for mobility, blending, industrial applications, and permitting pathways	
<b>9</b>	Advanced electrolyser testing stations	High-end electrolysers: degradation, diagnostics, performance evaluation	
<b>10</b>	Reforming-based hydrogen testing stations	Testing of methane/biogas reforming systems for high-efficiency H <sub>2</sub> generation	
<b>11</b>	Agrowaste-to-hydrogen demonstrator	Conversion of agricultural residues to H <sub>2</sub> ; design + field deployment of demo systems	
<b>12</b>	SOFC/SOEC/rSOC degradation	Long-term degradation mechanisms and performance decay modelling in ceramic cells	
<b>13</b>	SOFC/SOEC/rSOC – new materials	Material innovations for electrodes, electrolytes, and interconnects for reversible cells	
<b>14</b>	SOFC/SOEC/rSOC – new cell types & applications	Novel cell designs and applications, such as hybrid cycles, grid integration, and sector coupling	
<b>15</b>	Hydrogen-Compatible Materials and Fracture Mechanics for H <sub>2</sub> / H-CNG Infrastructure	Development and testing of hydrogen-compatible steels, polymers and composite materials for pipelines, storage vessels and refuelling components, including fracture mechanics, hydrogen embrittlement, fatigue, crack	

		propagation and long-term integrity under pure hydrogen and H-CNG operating conditions relevant to Indian and Dutch infrastructure.	
<b>16</b>	Cradle-to-Gate LCA of Green Hydrogen Production Routes	Evaluation of PEM/alkaline/SOEC/rSoC pathways under Indian energy mixes; benchmarking with Dutch datasets.	
<b>17</b>	LCA of Hydrogen Storage & Refuelling Systems	Comparative environmental impacts of compressed, LOHC and cryogenic storage; refuelling station infrastructure LCA.	
<b>18</b>	Comparative LCA: Fuel Cell vs Battery Electric Mobility	Life-cycle emissions and resource use for buses/urban fleets under Indian duty cycles; sensitivity for 2030 grids.	
<b>19</b>	LCA of Hydrogen Carriers for Transport & Port Operations	Ammonia, methanol, LOHC pathways; port handling emissions and India–EU corridor comparisons.	
<b>20</b>	Integrated LCA–TEA Modelling of Full Hydrogen Value Chains	Multi-sector modelling connecting production–storage–transport–use; India 2047 vs EU 2050 scenarios.	
<b>21</b>	Component & System-Level LCA of SOEC/SOFC/rSOC Technologies	Manufacturing, degradation, material hotspots, and end-of-life modelling using Dutch datasets and India adaptations.	
<b>22</b>	Port-Centric LCA for Hydrogen Export/Import Corridors	Rotterdam-style liquefaction, shipping, carrier handling and terminal operations; adaptation for Indian ports.	
<b>23</b>	Consequential/Hybrid LCA for Industrial Hydrogen Transition	Steel, ammonia, refineries; marginal emissions modelling, rebound effects, and sector-coupling pathways.	
<b>24</b>	Digital Twin for Hydrogen Systems – Forecasting, Predictive Maintenance and Cost Optimisation	Development of digital twins for hydrogen production, storage, transport and utilisation systems that run in parallel with real assets, enabling real-time forecasting of hydrogen output, efficiency and degradation, predictive maintenance of electrolyzers, compressors and SOEC/rSOC stacks, utilization units (FC etc), BoP and continuous tracking and	

		optimisation of operating expenditure (electricity, water, maintenance, downtime) and hydrogen production cost under Indian conditions.	
25	Hybrid Physical–Digital Twins for Integrated Hydrogen Networks	Creation of hybrid physical–digital twins that combine sensor data, physics-based models and techno-economic parameters to simulate hydrogen networks in real time, allowing optimisation of hydrogen flows, storage and utilisation while minimising system-level OPEX, energy losses and emissions, and supporting investment and scale-up decisions for large-scale hydrogen deployment	

Doctoral and Postdoctoral fellows may work on the same research themes at different technical depths, enabling vertically integrated research teams.

**Table 2: Faculty Fellows (Curriculum, Facility Development & India-Relevant Translation)**

S. No.	Theme	Purpose for India (Based on Topics)	University of Groningen (submit your area interest)
1	Development of hydrogen curriculum & academic modules	Convert research themes into teaching syllabi, lab modules, and workforce skilling programmes	dstfellowships.groningen@rug.nl
2	Establishment of hydrogen testing facilities	Translate advanced testing station concepts (electrolysers, reformers, SOFC/SOEC) into Indian academic labs	
3	Standards, regulation & safety frameworks	Adapt NL best practices for safety, blending regulations, mobility, storage & port operations	
4	India–Netherlands collaborative research framework	Build long-term Indo–NL networks for industry-linked hydrogen R&D	
5	Hydrogen export infrastructure planning	Apply port-based hydrogen export learnings (Rotterdam model) to Indian ports	
6	Socio-economic transition & policy studies	Equity, affordability, policy frameworks, and sector transition planning	

<b>7</b>	Development of LCA Curriculum & Training Modules for Hydrogen Systems	Creation of academic courses, laboratory modules, and workforce skilling content on attributional, consequential, and hybrid LCA methods using Indo–NL datasets.	
<b>8</b>	Establishment of LCA & TEA Modelling Facilities in Indian Institutions	Designing India-relevant LCA modelling labs; adapting Dutch tools/datasets (ecoinvent, ELCD, regional LCI data) for Indian hydrogen value-chain studies.	
<b>9</b>	LCA Frameworks for National Hydrogen Standards & Policy	Developing LCA-based guidelines, environmental benchmarks, and sustainability indicators to support Indian regulatory and certification frameworks (green H <sub>2</sub> definitions, GH <sub>2</sub> emissions).	
<b>10</b>	Port-Based LCA Methodologies for Hydrogen Import/Export Corridor	Translating Rotterdam port LCA methods (liquefaction, shipping, carrier handling, storage) to Indian port contexts for long-term hydrogen export planning.	

## 6. Number and duration of Fellowships Positions

**Table 3: Categories**

<b>Sno</b>	<b>Category</b>	<b>Number of Positions</b>	<b>Duration</b>	<b>Host Institution</b>
<b>1</b>	Doctoral	10	Up to 12 months	University of Groningen
<b>2</b>	Postdoctoral	5	12 months	University of Groningen
<b>3</b>	Faculty	5	12 months	University of Groningen

Note: The numbers/duration indicated in this Call for Proposals are indicative. DST may revise the number of fellowship positions at any stage, depending on the merit of the applications received and/or the availability of funds.

## 7. Fellowship amount

**Table 4: Fellowship**

<b>Sno</b>	<b>Category</b>	<b>Amount (Euro) per month</b>	<b>Funding Agency</b>	<b>Add on (Euro) per month</b>
<b>1</b>	Doctoral	1500	DST	375 (University of Groningen)
<b>2</b>	Postdoctoral	2000	DST	Nil

3	Faculty	1000	DST	Nil
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7.1 The minimum subsistence requirement under the Dutch Immigration and Naturalisation Service (IND) is €1,875 per month.

7.2 The University of Groningen will not levy any bench fees for fellows supported under this Programme.

7.3 Selected fellows will be awarded a Joint (Double) Doctoral Degree or Joint (Double) Postdoctoral Certification by the University of Groningen and the Indian parent institution, in accordance with the applicable joint degree or joint supervision regulations of the University of Groningen and the respective Indian university. Fellows under such arrangements shall be jointly supervised by faculty from both institutions and shall be required to defend their thesis or postdoctoral work before the academic committees of both institutions, as prescribed under the relevant joint (double) degree or supervision framework. Doctoral candidates selected under the Joint (Double) Ph.D. track shall receive an additional non-contractual subsistence top-up of €375 per month from the University of Groningen. Indian universities that do not currently have a joint (double) degree or joint supervision MoU with the University of Groningen may enter into such an agreement at the time of selection or thereafter, subject to the internal approvals of both institutions and mutual consent.

7.4 Faculty Fellows shall be provided a fellowship only to the extent specified in Table 5. Any shortfall between the fellowship amount provided under this Programme and the minimum monthly subsistence requirement prescribed by the Dutch Immigration and Naturalisation Service (IND) shall be met by the Indian parent institution and/or the University of Groningen. The Indian parent institution shall furnish an undertaking confirming that the required subsistence level will be maintained for the full duration of the fellowship. DST shall not bear any financial liability beyond the fellowship amount specified in Table 4.

## 8. Funding Mechanism

Funds disbursement will be through a Scheme Implementing Agency, to be nominated by DST. To receive and manage DST funds under this Programme, the Indian parent institute must have an active PFMS account.

DST will provide a one-time lump-sum grant to Doctoral and Postdoctoral Fellows to cover visa, travel, health insurance, and relocation expenses, among others. This lump-sum support shall NOT be provided to Faculty Fellows and may instead be borne by (jointly/independently) the parent or host institution or by the faculty themselves.

Doctoral, Postdoctoral, and Faculty Fellows shall continue to draw their existing fellowship or salary from their parent institution in India. The overseas fellowship provided under this Programme is exclusively for subsistence and research support during the stay in the Netherlands.

**Table 5: Funding milestone**

Sno	Milestone	Fund
1	Sanction order receipt	One-time lump sum amount
2	The fellow submits a copy of the visa, travel tickets, and	Commencement of monthly

	health/travel-insurance documents to the SIA.	fellowship disbursement - Eighty percent (80%) of the sanctioned monthly fellowship amount shall be released every month. The remaining twenty percent (20%) of the monthly fellowship shall be paid by the Indian parent institution and shall be reimbursed upon successful completion of the fellowship, submission of the Final Technical Report, and approval by the DST–National Expert Advisory Committee (Milestone 3)
3	The fellow submits the Final Technical Report and presents/defends the work before the DST–National Expert Advisory Committee (NEAC). The Indian parent institution submits the Utilization Certificate (UC) and Statement of Expenditure (SoE) in the prescribed format to SIA.	Reimbursement of the remaining twenty percent (20%) of the sanctioned fellowship amount.

### **8.1 In-Kind Support and Open-Access Publication Costs (University of Groningen)**

As part of its in-kind contribution, the University of Groningen will provide access to laboratories, research facilities, supervision, and academic resources without charging bench fees, and will additionally bear the cost of open-access publication charges (APCs) for jointly produced research publications. No APCs or bench fees shall be claimed from the parent institute/fellow/DST. This support is in addition to the non-contractual monthly top-up of €375 provided to Joint (Double) Doctoral Fellows.

## **9. Selection Process**

Applicants must obtain a conditional acceptance letter from the host institution (University of Groningen), confirming willingness to host the fellow for the proposed duration and research theme, before submission of the application. The submitted applications will follow the process.

The selection will follow a Two-Tier Evaluation System, conducted by the DST–National Expert Advisory Committee (NEAC).

### **- Tier I – Preliminary Evaluation**

The NEAC shall undertake an offline screening of all eligible applications based on (but not limited to) the following criteria:

- Compliance with the requirements of the Call for Proposals (CfP).
- Quality, clarity, and scientific merit of the proposed research work.
- Relevance of the topic to India’s hydrogen priorities, transition pathways, and ecosystem needs.

- Preparedness and capability of the applicant, Indian parent institution, and proposed host research group.
- Potential for skill development, indigenization, and technology adaptation for Indian conditions.
- Completeness, accuracy, and authenticity of the documents submitted.

Shortlisted applicants will be invited for Tier II evaluation.

- **Tier II – Presentation and Interaction**

Shortlisted candidates shall present and defend their proposed research work before the DST–NEAC. This evaluation may include a technical interaction to assess:

- Depth of domain knowledge and understanding of research methodology.
- Innovation potential, feasibility, and expected impact of the proposed work.
- Potential contribution to India’s hydrogen deployment, capacity-building needs, and Atmanirbhar Bharat objectives.
- At the discretion of the DST–NEAC, applicants may also be given a problem statement or scenario during the interaction, which they will be required to analyse, defend, and propose a solution for. This assessment will form part of the overall evaluation of the applicant’s technical competence, problem-solving ability, and suitability for the fellowship
- DST-NEAC shall finalise the expected outcomes for each selected fellow in accordance with the approved research topic and the outcome framework specified in Clause 10. These outcomes shall be formally endorsed by DST and shall form the basis for monitoring, evaluation, and final approval of the fellowship.

Based on the evaluation, the DST–NEAC will recommend applicants for the award. The final decision regarding the selection and number of fellowships shall rest solely with DST.

## **10. Application Submission and Role of the Scheme Implementing Agency (SIA)**

Applicants must first obtain a conditional acceptance letter from the University of Groningen confirming the willingness to host the proposed research. While seeking this acceptance, applicants shall select an appropriate research theme from Clause 5 (Research Topics). The University of Groningen will designate a programme contact or coordinating office to guide applicants regarding the relevant research group, required documents, and host-supervisor identification ([dstfellowships.groningen@rug.nl](mailto:dstfellowships.groningen@rug.nl)).

Only after obtaining this acceptance may the application be submitted under this Call for Proposals.

DST will designate a Scheme Implementing Agency (SIA) to coordinate and manage the application, evaluation, and award processes. The SIA will facilitate communication between DST, the University of Groningen, and the applicant’s Indian parent institution.

Applicants with conditional acceptance from University of Groningen must be submitted online through the portal specified in the CFP notification.

## How Applications Will Be Processed

After submission:

Preliminary Screening:

- The SIA will verify completeness, eligibility, and compliance with the CfP and Scheme Guidelines.

Forwarding to NEAC:

- All eligible applications will be compiled and forwarded to the DST–National Expert Advisory Committee (NEAC) for detailed evaluation.

## Evaluation

Evaluation shall be carried out as described in Clause 9. Shortlisted and selected applicants will be notified accordingly.

## Post-Selection Formalities

For selected candidates:

- Additional documents such as updated acceptance letters, No-Objection Certificates (NOCs), and visa-related details may be requested.
- The SIA will coordinate joining formalities between the fellow, the Indian parent institution, and the University of Groningen.

## Fund Flow

- DST will release fellowship funds to the SIA, which will further disburse them to the Indian parent institution as per Section 8: Funding Mechanism.
- The Indian parent institution shall submit the Utilization Certificate (UC) and Statement of Expenditure (SoE) for financial closure.

## Completion Requirements

At the end of the fellowship, fellows must submit:

- Final Technical Report
- Presentation before DST–NEAC (if required)
- Any additional documents requested for closure

## 11. Outcomes

The Doctoral and Postdoctoral Fellowships are intended to generate measurable scientific and techno-economic outcomes that directly support India's hydrogen ecosystem. The expected outcomes shall include, but are not limited to, the following:

1. **Cost and Competitiveness Improvements**

Fellowship outputs shall identify and quantify pathways for reducing the cost of hydrogen production, storage, transport, or utilisation under Indian conditions, including implications for domestic supply as well as for hydrogen exports from India.

2. **Increased Use of Indian Resources and Supply Chains**

The research shall demonstrate increased utilisation of domestically available renewable electricity, raw materials, components, or manufacturing capabilities within hydrogen value chains, contributing to reduced import dependence and enhanced Indian value addition.

3. **Technology Readiness for Indian Deployment**

The work shall improve the readiness of at least one hydrogen-related technology, component, or system for deployment under Indian climatic, grid, industrial, or infrastructure conditions.

4. **Reduction in Energy Losses and Environmental Footprint**

Fellowship outputs shall include quantified improvements in energy efficiency, reduced losses, water use, or greenhouse-gas emissions across hydrogen systems relevant to India.

5. **Export and Logistics Competitiveness**

Where applicable, the research shall contribute to lowering the cost or improving the logistics of hydrogen export from India, including port-based handling, storage, conversion, or transport.

6. **Safety, Standards, and Operational Readiness**

The work shall generate inputs toward improved safety practices, risk mitigation, or standards development for hydrogen production, storage, transport, refuelling, or use in India.

7. **Knowledge and Skill Development**

Each fellowship shall result in new data, models, experimental results, or analytical tools that strengthen India's human resource base in hydrogen technologies.

Faculty Fellowships are intended to create durable institutional, regulatory, and human-capacity outcomes that enable India's long-term hydrogen transition. The expected outcomes shall include, but are not limited to, the following:

1. **Development of Indian Human Capital**

The fellowship shall result in the creation of academic or training material, courses, or modules that support the education and up/reskilling of India's future hydrogen workforce.

2. **Establishment of Testing, Modelling, or Demonstration Capability**

Faculty fellows shall develop concepts, designs, or operating frameworks for hydrogen test facilities, laboratories, simulation platforms, or demonstration systems relevant to Indian needs.

3. **Strengthening of Policy, Regulatory, and Standards Frameworks**

The fellowship shall produce India-relevant guidelines, policy notes, or regulatory frameworks for hydrogen safety, certification, blending, mobility, storage, trade, or industrial use.

4. **Support for Hydrogen Clusters and Port-Based Systems**

Where applicable, faculty work shall contribute to regional hydrogen cluster planning, port-based hydrogen hubs, or export-oriented hydrogen value chains in India.

5. **Life-Cycle Assessment (LCA) and Techno-Economic Analysis (TEA) Capability for India**

The fellowship shall build Indian capability in LCA, TEA, and the sustainability evaluation of hydrogen systems.

6. **International and Institutional Linkages**

Faculty fellowships shall result in strengthened Indo-Dutch research partnerships, joint project pipelines, or institutional cooperation frameworks.

7. **Support for Indigenisation and Atmanirbhar Bharat**

The cumulative outputs shall directly contribute to indigenous development, localisation, and commercialisation of hydrogen technologies in India.

## **12. Fellowship Completion**

At the end of the fellowship, each Fellow will be required to submit a final technical and outcomes report endorsed by both the host institution and the Indian parent institution. Selected Fellows may also be asked to make a presentation before the DST–National Expert Advisory Committee (NEAC). The satisfactory completion and acceptance of this report by DST–NEAC will be a condition for formal closure of the fellowship and for processing of any final financial settlements by the Indian parent institution through the SIA.

## **12. Intellectual Property Rights**

All Intellectual Property (IP), including but not limited to patents, copyrights, trademarks, industrial designs, software, databases, and know-how, arising from research conducted under this Programme shall be governed by the applicable DST Guidelines and norms, as amended from time to time. Such IP shall vest with the Indian parent institution and the host institution in accordance with their respective contributions and institutional policies, subject to the Government of India retaining a royalty-free, non-exclusive, irrevocable right to use the IP for governmental and public-interest purposes.

The Indian parent institution shall be responsible for filing, prosecution, and maintenance of IP protection in India. Any costs associated with IP protection in India or abroad shall be borne by the participating institutions as per their mutual agreement. DST shall not bear any IP-related costs.

## **13. Power to Amend CfP**

DST may make the necessary amendments in the CfP, as and when required, with the approval of the Hon'ble Minister, Science and Technology.

## **14. General Provisions and Applicability of Scheme Guidelines**

This Call for Proposals is issued under the approved Scheme Guidelines of the India–Netherlands Hydrogen Fellowship Programme. All provisions, eligibility criteria, financial norms, and administrative conditions etc not explicitly stated in this Call shall be governed by the Scheme Guidelines. Applicants are advised to carefully review the Scheme Guidelines before submitting their proposals.

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## **Eligibility Restriction – Concurrent and Repeat Support**

### **1. Concurrent Support Prohibited**

Applicants who are, at the time of application, receiving any fellowship, grant, or financial support that provides comparable international research mobility, living allowance, or research funding from any Government, institutional, or international source shall **not be eligible** to apply under this Fellowship.

### **2. Repeat Availment Prohibited**

An individual who has previously availed the India–Netherlands Hydrogen Fellowship Programme under any category (Doctoral, Postdoctoral, or Faculty) shall **not be eligible** to apply again under any category in future Calls for Proposals (CfPs).

### **3. Exception Clause**

Any deviation from the above shall be permitted only if explicitly notified by the Department of Science and Technology (DST) through a formal amendment to the Scheme Guidelines or a specific provision in a future CfP.

## **PROCEDURE FOR SUBMISSION OF PROJECT PROPOSALS**

1. Apply to University of Groningen with interested area of research at - [dstfellowships.groningen@rug.nl](mailto:dstfellowships.groningen@rug.nl)
2. Applicants with conditional approval from University of Groningen may apply - the Fellowship application, conditional approval along with annexure I documents through **ONLINE MODE ONLY** (<https://onlinedst.gov.in/Login.aspx>) **NO HARDCOPY** of the project proposal should be submitted.

Application received without the complete documents will not be entertained. **A soft copy in pdf format is also to be emailed to [ranjith.krishnapai@gov.in](mailto:ranjith.krishnapai@gov.in)**

**Opening date: 06<sup>th</sup> February 2026**

**Closing date: 06<sup>th</sup> March 2026 (11:59 pm).**

**Contacts:** Any inquiries to this call should be directed to: (Include subject: India-Netherlands Fellowship Program DST)

### **Dr. Ranjith Krishna Pai**

Scientist 'F'/ Senior Director

Program Officer – Hydrogen and Fuel Cell /Hydrogen Valley Innovation Cluster

The Climate, Energy, and Sustainable Technology (CEST) division

Old S&T Block, Room No: 16B

Department of Science and Technology (DST)

Ministry of Science and Technology, Govt. of India

Technology Bhavan, New Mehrauli Road

New Delhi-110016

Ph: 011-26590475

E-mail: [ranjith.krishnapai@gov.in](mailto:ranjith.krishnapai@gov.in)

## Annexure I

### APPLICATION FORM

#### *India–Netherlands Hydrogen Fellowship Programme*

#### Department of Science and Technology (DST), Government of India

(Please use BLOCK LETTERS)

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#### 1. Category Applied For

- ☐ Doctoral Fellow  
☐ Postdoctoral Fellow  
☐ Faculty Fellow

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#### 2. Personal Details

Field	Information
Full Name	
Sex (M/F/O)	
Nationality	
Date of Birth	
Email ID	
Mobile Number	
Aadhaar / Passport No. (for ID)	
Present Address	
Permanent Address	

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#### 3. Academic & Professional Qualifications

Degree	Subject	University/Institution	Month & Year of Passing	Grade/CGPA

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#### 4. Current Academic/Professional Status

Category	Details
PhD Scholar / Postdoc / Faculty	
Department	
Institution	
Date of PhD Registration (if applicable)	
Expected Thesis Submission Date (Doctoral only)	
PhD Award Date (Postdoc only)	

Designation & Date of Appointment (Faculty only)	
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## 5. Title of PhD Thesis / Current Research

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## 6. Specialization

Broad Area	Exact Area

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## 7. Publications & Patents

Type	Number
Papers Published	
Papers Accepted	
Patents Filed	
Patents Granted	

*(Attach list separately)*

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## 8. Proposed Fellowship Details

Item	Details
Selected Research Theme (as per CfP Clause 5)	
Title of Proposed Work	
Host Supervisor (University of Groningen)	
Duration Proposed	

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### **9. Research Proposal Summary (Max 500 words)**

Problem Statement, Objectives, Methodology, Expected Outcomes relevant to India's hydrogen ecosystem.

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## **10. Relevance to India**

Explain how the work contributes to:

- ☐ Cost reduction
- ☐ Indigenisation
- ☐ Safety/Standards
- ☐ Export competitiveness
- ☐ LCA/TEA capability
- ☐ Technology readiness
- ☐ Other please specify:

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## **11. International Exposure Justification**

Why the Netherlands ecosystem / University of Groningen is essential.

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**12. Fellowships/Grants Currently Held**

Fellowship	Agency	Period	Amount

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**13. Declaration of Non-Concurrent Support**

I confirm I am not receiving overlapping international mobility support.

Signature: \_\_\_\_\_

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**14. List of Documents Attached**

Sl. No.	Document	Attached (Y/N)
1	Applicant Declaration	
2	Supervisor Recommendation (Doctoral)	
3	Statement of Purpose (Postdoc)	
4	NOC from Parent Institution	
5	Cost Sharing Undertaking	
6	Faculty Cost Sharing Undertaking	
7	Compliance Undertaking	
8	Conflict of Interest Declaration	
9	Host Conditional Acceptance (University of Groningen)	
10	CV	
11	Publications List	

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**15. Applicant Declaration**

I certify that the information provided is true. I agree to abide by DST rules and fellowship conditions.

Name:

Signature:

Date:

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## 16. Certification by Head of Parent Institution

Certified that the applicant is affiliated with this institution and information provided is correct.

Name & Signature

Seal

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### List of Documents

#### 1. DECLARATION BY APPLICANT (All Categories)

I, **[Name of Applicant]**, **[Designation/Status: Ph.D. Scholar / Postdoctoral Fellow / Assistant Professor / Associate Professor]**, currently affiliated with **[Name of Indian Parent Institution]**, hereby declare that:

1. I am an Indian national and meet all eligibility criteria prescribed under the *India–Netherlands Hydrogen Fellowship Programme* of the Department of Science and Technology.
2. My area of research falls within the eligible disciplines, and I am engaged in work relevant to hydrogen energy technologies and allied fields.
3. I have obtained a conditional acceptance/host confirmation from **[Name of Host Institution, Netherlands]** for the proposed research period.
4. I am not currently availing any international fellowship, grant, or financial support of a similar nature that overlaps with the proposed fellowship period.
5. During the fellowship period abroad, I shall:
  - Not undertake any paid employment, consultancy, or teaching assignment.
  - Not receive any salary, honorarium, or contractual payment from the host institution.
  - Utilize the fellowship exclusively for approved subsistence and research purposes.
6. I undertake to return to India and continue/complete my academic or research responsibilities at my parent institution after the fellowship.
7. All information provided by me is true and correct. I understand that any misrepresentation may lead to cancellation of the fellowship and recovery of funds.

#### Signature

Name:

Date:

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#### 2. RECOMMENDATION BY Ph.D. SUPERVISOR (Doctoral Fellows)

This is to certify that **Mr./Ms. [Name]** is registered as a Ph.D. scholar in the Department of **[Dept Name]**, **[Institution Name]**, w.e.f. **[Registration Date]**.

#### Thesis Title:

“ ..... ”

The candidate has demonstrated strong research capability in the field of **[Area]**, and the proposed fellowship in the Netherlands is:

- Scientifically essential for the doctoral research
- Aligned with the thesis objectives
- Expected to significantly strengthen the quality and international relevance of the dissertation

The expected thesis submission date is **[Date]**, which is more than eight months after the proposed fellowship completion.

I strongly recommend the candidate.

**Supervisor Name & Signature**

Designation:

Institution:

Date:

**3. STATEMENT OF PURPOSE** (Postdoctoral Fellows)

I, **[Name]**, Postdoctoral Fellow at **[Institution]**, outline below the purpose of the proposed fellowship:

- Summary of completed research
- Ongoing research focus
- Relevance to hydrogen technologies
- Expected scientific/technological impact
- Justification for collaboration with host institution

I confirm this fellowship is essential for advancing my postdoctoral research and capacity building in hydrogen science and technology.

Signature

Date

**4. NO OBJECTION CERTIFICATE**

This is to certify that **[Applicant Name]**, **[Status/Designation]**, is affiliated with **[Institution Name]**.

The institution has **no objection** to the applicant undertaking the India–Netherlands Hydrogen Fellowship for the approved duration while retaining:

- Ph.D. registration / Postdoctoral registration / Employment status

The institution confirms the applicant will resume duties after completion.

**Head of Institution**

Seal

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## 5. UNDERTAKING FOR COST-SHARING (Doctoral/Postdoctoral)

This institution agrees to provide **20% of the fellowship amount** to **[Applicant Name]** during the approved fellowship period.

The institution also undertakes to submit:

- Utilization Certificates (UCs)
- Statements of Expenditure (SoE)
- Any documents required by DST/SIA

We understand reimbursement of this share will be subject to approval of completion reports by DST-NEAC.

**Head of Institution**

Seal

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## 6. UNDERTAKING BY PARENT / HOST INSTITUTION COST SHARING (Faculty Fellowship)

This is to certify that [Name of Institution], the parent/host institution of Dr./Mr./Ms. [Name of Faculty Fellow], hereby agrees to provide the remaining share of the fellowship amount, which shall be not less than fifty percent (50%) of the total sanctioned fellowship, under the *India–Netherlands Hydrogen Fellowship Programme* of the Department of Science and Technology.

The institution understands and confirms that:

1. The Department of Science and Technology (DST) shall provide up to fifty percent (50%) of the sanctioned fellowship amount.
2. The balance contribution committed by this institution shall be borne from institutional/project resources.
3. This institutional share is non-reimbursable and shall not be claimed from DST at any stage.
4. The funds shall be released to the Fellow as per the approved fellowship duration and in accordance with the programme guidelines.
5. The institution shall comply with all financial, audit, and reporting requirements prescribed by DST or the Scheme Implementing Agency.

Name of Head of Institution

Designation

Institution Seal  
Date

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## 7. Compliance Undertaking (All Categories)

I undertake to comply with:

- DST financial norms
- Audit requirements
- Return-to-India obligation
- No dual fellowship rule

### Signature

Name:

Date:

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## 8. DECLARATION – CONFLICT OF INTEREST

I have read the “Policy on Conflict of Interest” (Annexure II of DST) applicable to the Reviewer / Committee Member / Applicant / DST Scheme or Program Officer and agree to abide by the provisions thereof.

- ☐ I hereby declare that I have no conflict of interest of any form in relation to the proposed grant.  
☐ I hereby declare that I have a conflict of interest in relation to the proposed grant.

*(Tick whichever is applicable)*

If yes, details of the conflict of interest may be provided below:

**Name of the Applicant:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

## Annexure I – Document Format & Letterhead Requirement

Sl. No.	Document Name	To be Issued By	On Official Letterhead?	Remarks
1	Declaration by Applicant	Applicant	No	Personal eligibility & compliance declaration
2	Recommendation by Ph.D. Supervisor (Doctoral)	Ph.D. Supervisor / Dept.	Yes	Must certify registration date, thesis title, and timeline
3	Statement of Purpose (Postdoctoral)	Applicant	No	Academic statement
4	No Objection Certificate (NOC)	Indian Parent Institution	Yes	Permission to undertake fellowship while retaining status
5	Undertaking for Cost Sharing (20%) – Doctoral/Postdoc	Indian Parent Institution	Yes	Institutional financial commitment + UC/SoE compliance
6	Undertaking for Cost Sharing (≥50%) – Faculty	Parent/Host Institution	Yes	Institutional financial liability; non-reimbursable share
7	Compliance Undertaking	Applicant	No	Personal undertaking to follow DST norms
8	Conflict of Interest Declaration	Applicant	No	Personal ethics declaration
9	Conditional Host Acceptance	University of Groningen	Yes	<b>Must be on University of Groningen official letterhead</b>

**Note:** DST/SIA reserves the right to request additional documents, clarifications, or undertakings at any stage of the application, evaluation, or award process.

## Annexure II

### DEPARTMENT OF SCIENCE AND TECHNOLOGY (POLICY ON CONFLICT OF INTEREST)

#### FOR APPLICANT

Issues of Conflicts of Interest and ethics in scientific research and research management have assumed greater prominence, given the larger share of Government funding in the country's R&D scenario. The following policy about general aspects of Conflicts of Interest and code of ethics are objective measures that are intended to protect the integrity of the decision-making processes and minimize bias. The policy aims to sustain transparency, increase accountability in funding mechanisms, and provide assurance to the general public that processes followed in the award of grants are fair and non-discriminatory. The Policy aims to avoid all forms of biases by following a system that is fair, transparent, and free from all influence/ unprejudiced dealings, before, during, and after the currency of the program is entered into to enable the public to abstain from bribing or any corrupt practice to secure the award by assuring

them that their competitors will also refrain from bribing and other corrupt practice and the decision makers will commit to preventing corruption, in any form, by their officials by following transparent procedures. This will also ensure a global acceptance of the decision-making process adopted by DST.

### **Definition of Conflict of Interest:**

Conflict of Interest means "any interest which could significantly prejudice an individual's objectivity in the decision-making process, thereby creating an unfair competitive advantage for the individual or to the organization which he/she represents". The Conflict of Interest also encompasses situations where an individual, in contravention of the accepted norms and ethics, could exploit his/her obligatory duties for personal benefits.

### **1. Coverage of the Policy:**

- a) The provisions of the policy shall be followed by persons applying for and receiving funding from DST, Reviewers of the proposal, and Members of Expert Committees and Programme Advisory Committees. The provisions of the policy will also apply to all individuals including Officers of DST connected directly or indirectly or through intermediaries and Committees involved in the evaluation of proposals and subsequent decision-making process.
- b) This policy aims to minimize aspects that may constitute actual Conflicts of Interest, apparent Conflicts of Interest, and potential Conflicts of Interest in the funding mechanisms that are presently being operated by DST. The policy also aims to cover, although not limited to, Conflicts of interest that are Financial (gains from the outcomes of the proposal or award), Personal (association of relative / Family members), and Institutional (Colleagues, Collaborators, Employer, persons associated in a professional career of an individual such as Ph.D. supervisor, etc.)

### **2. Specifications as to what constitutes a Conflict of Interest.**

Any of the following specifications (non-exhaustive list) imply a Conflict of Interest if,

- i. Due to any reason by which the Reviewer/Committee Member cannot deliver a fair and objective assessment of the proposal.
- ii. The applicant is a direct relative or family member (including but not limited to a spouse, child, sibling, or parent) or personal friend of the individual involved in the decision-making process or if any relative of an Officer directly involved in any decision-making process / has influenced interest/ stake in the applicant's form etc. The applicant for the grant/award is an employee or employer of an individual involved in the process as a Reviewer or Committee Member; or if the applicant to the grant/award has had an employer-employee relationship in the past three years with that individual.
- iii. The applicant to the grant/award belongs to the same Department as that of the Reviewer/Committee Member.
- iv. The Reviewer/Committee Member is the Head of an Organization from where the applicant is employed.
- v. The Reviewer /Committee Member is or was, associated with the professional career of the applicant (such as Ph.D. supervisor, Mentor, present Collaborator, etc.)
- vi. The Reviewer/Committee Member is involved in the preparation of the research proposal submitted by the applicant.
- vii. The applicant has joint research publications with the Reviewer/Committee Member in the last three years.

- viii. The applicant/Reviewer/Committee Member, in contravention to the accepted norms and ethics followed in scientific research has a direct/indirect financial interest in the outcomes of the proposal.
- ix. The Reviewer/Committee Member stands to gain personally should the submitted proposal be accepted or rejected.
- x. The Term "Relative" for this purpose would be referred to in section 6 of the Companies Act, 1956.

### **3. Regulation:**

The DST shall strive to avoid conflict of interest in its funding mechanisms to the maximum extent possible. Self-regulatory mode is however recommended for stakeholders involved in scientific research and research management, on issues about Conflict of Interest and Scientific Ethics. Any disclosure about the same must be made voluntarily by the applicant/Reviewer/Committee Member.

### **4. Confidentiality:**

The Reviewers and the Members of the Committee shall safeguard the confidentiality of all discussions and decisions taken during the process and shall refrain from discussing the same with any applicant or a third party unless the Committee recommends otherwise and records for doing so.

### **5. Code of Conduct**

#### **5.1 To be followed by Reviewers/Committee Members:**

- (a) All reviewers shall submit a conflict of interest statement, declaring the presence or absence of any form of conflict of interest.
- (b) The reviewers shall refrain from evaluating the proposals if the conflict of interest is established or if it is apparent.
- (c) All discussions and decisions about conflict of interest shall be recorded in the minutes of the meeting.
- (d) The Chairman of the Committee shall decide on all aspects of the conflict of interests.
- (e) The Chairman of the Committee shall request that all members disclose if they have any conflict of interest in the items of the agenda scheduled for discussion.
- (f) The Committee Members shall refrain from participating in the decision-making process and leave the room concerning the specific item where the conflict of interest is established or is apparent.
- (g) If the Chairman himself/herself has a conflict of interest, the Committee may choose a Chairman from among the remaining members, and the decision shall be made in consultation with Member Secretary of the Committee.
- (h) It is expected that a Committee member including the Chairperson will not seek funding from a Committee in which he/she is a member. If any member applies for a grant, such proposals will be evaluated separately outside the Committee in which he/she is a member.

### **5.2 To be followed by the Applicant to the Grant/Award:**

- (a) The applicant must refrain from suggesting referees with potential Conflict of Interest that may arise due to the factors mentioned in the specifications described above in Point No.2.
- (b) The applicant may mention the names of individuals to whom the submitted proposal should not be sent for refereeing, clearly indicating the reasons for the same.

### **5.3 To be followed by the Officers dealing with Programs in DST:**

While it is mandatory for the program officers to maintain confidentiality as detailed in point no. 6 above, they should declare, in advance, if they are dealing with grant applications of a relative or family member (including but not limited to a spouse, child, sibling, parent) or thesis/ post-doctoral mentor or stands to benefit financially if the applicant proposal is funded. In such cases, DST will allot the grant applications to the other program officer.

## **6. Sanction for violation**

### **6.1 For a) Reviewers / Committee Members and b) Applicant**

Any breach of the code of conduct will invite action as decided by the Committee.

### **6.2 For Officers dealing with Program in DST**

Any breach of the code of conduct will invite action under the present provision of CCS (Conduct Rules), 1964.

## **7. Final Appellate authority:**

Secretary, DST shall be the appellate authority in issues about conflict of interest and issues concerning the decision-making process. The decision of the Secretary, DST in these issues shall be final and binding