Call for Proposal (CfP)

to Support

Start-up Incubation in Renewable Energy (RE) Sector

National Institute of Solar Energy (NISE)

In Collaboration with

National Solar Energy Federation of India (NSEFI)

Atal Incubation Centre (AIC) IIT Delhi

Brings an Opportunity for Start-up Incubation in Renewable Energy (RE) Sector

National Institute of Solar Energy

(An Autonomous Institute of Ministry of New and Renewable Energy, Government of India)

Gurugram-Faridabad Road, Gwal Pahari, Gurugram - 122003 (Haryana

Call for Proposals (CfP)

Start-up Incubation in Renewable Energy (RE) Sector

1. Introduction

The **National Institute of Solar Energy (NISE)**, in collaboration with the **National Solar Energy Federation of India (NSEFI)** and **Atal Incubation Centre (AIC) IIT Delhi Sonipat Innovation Foundation, Haryana**, is pleased to announce a dedicated program to support and accelerate start-up-led innovation in the **Renewable Energy (RE) sector**. This initiative is aimed at fostering the development and commercialization of indigenous renewable energy solutions and technologies that contribute to India's clean energy transition.

The program is uniquely designed to provide value-added support in collaboration with industry associations, technical bodies, and government stakeholders. Selected start-ups will receive assistance in **pilot demonstration, product testing, validation, and establishing industry linkages**, helping them move from lab-scale innovation to market-ready solutions.

The initiative aligns with national priorities in the field of renewable energy and India's commitment to building a clean, green, and sustainable energy future. It supports the broader vision of Atmanirbhar Bharat (Self-Reliant India) in the energy sector and contributes to the realization of Viksit Bharat (Developed India) through the widespread adoption of indigenous, low-carbon, and environmentally responsible energy solutions. The program focuses on supporting start-ups engaged in the development of **solar energy systems**, **green hydrogen technologies**, **battery storage**, **smart energy management**, **AI/ML in RE**, **EV integration**, **small hydro, wind** and **decentralized renewable applications**, among others.

Through this Call for Proposals, start-ups will have the opportunity to:

- Translate **prototypes or proof-of-concepts** into **commercially viable products**
- Access to **state-of-the-art testing facilities** and expert mentorship of NISE and AIC IIT Delhi.
- Build industry connections through NSEFI's vast solar and clean energy network
- Participate in pilot and demonstration projects with real-world application potential

- Establish and strengthen local supply chains for renewable energy components and systems

This joint initiative aims to enhance the competitiveness of Indian clean-tech start-ups by supporting innovation at the component, sub-system, and system levels — thereby contributing to the nation's goal of energy independence and sustainability.

About NISE

NISE is an autonomous specialized institute under the Ministry of New and Renewable Energy (MNRE), Government of India, mandated for research and development, solar component testing and certification, capacity building, and development of solar products and applications. The technical support of NISE complements the requirements of MNRE to become a self-reliable renewable power producing nation and accept the series of challenges intervened in amidst of implementation of the National Solar Mission (NSM). NISE has established in the solar energy sector through continuous efforts by developing newer technologies, developing standards, and catering to the changing needs in the industry. Furthermore, NISE envisions in accelerating the proliferation of the renewable energy sector by intently working together with the Government of India.

NISE is situated at Gwal Pahari on Gurugram-Faridabad Road in Gurugram, Haryana. The institute has a 200-acre campus which is registered as a society under the Haryana Registration and Regulation of Societies Act 2012 (Registration No. is HR-018-2013-01092). NISE has set up state-of-the-art laboratories with advanced equipment for carrying out Research & Testing in PV cell, PV module, Solar Thermal, Green Hydrogen and allied applications. Beyond standard testing, NISE is engaged in the research and standardization of solar energy systems, fostering innovation through experimental and theoretical projects that aim to enhance the performance and reliability of solar technology systems for the industry. NISE testing facilities include (i) Solar Cell Characterization Lab (ii) Solar PV Module Testing (Indoor & Outdoor) Lab (iii) Power Electronic Laboratory (iv) Battery Testing & Characterization Lab (v) Advanced Solar PV system & lighting Lab (vi) Solar Water Pumping System Testing Lab (vii) Solar Powered Cold Storage Testing Facility (viii) Solar Radiation Calibration Laboratory & R&D Facility.

About NSEFI

NSEFI has been India's leading Renewable Energy policy advocacy body for the past decade and is an umbrella organisation representing renewable energy (RE) companies that are active along the whole RE value chain comprising leading International, National, and regional

companies including Developers, manufacturers, EPC Contractors, Installers, System Integrators, Small and Medium Enterprises etc. NSEFI works in a complimentary manner with Central and State Governments to achieve India's Renewable Target of 500 GW by 2030. NSEFI's efforts have culminated into making India's solar a successful growth story where India is today the 5th Largest country in terms of installed solar capacity.

As an industry body, NSEFI is at the helm of policy advocacy for the growth of RE in India. NSEFI engages with multiple government stakeholders on a regular basis based on the feedback from its members and provides its inputs on the policies pertaining to various subsectors of the Indian RE sector namely Solar, Wind, Hydro, Biomass and Green Hydrogen. NSEFI's member base grew steadily from a humble number of 6 in 2013 to 142 in 2023, which makes NSEFI the world's 5th largest Solar Association and South East Asia's Largest RE advocacy body. NSEFI members today represent almost 95% of India's Solar market in terms of installed capacity.

NSEFI has made significant and pivotal contributions to India's RE policy landscape in the last decade. Ranging from Reverse Bidding, Net metering, and Curtailment accountability to the Production Linked Incentive (PLI) Scheme. NSEFI's united industry inputs have successfully advocated for reforms which have transformed India's Renewable Energy Generation Ecosystem. NSEFI serves on various committees set up by MNRE that work on key issues of various subsectors of the RE Industry ecosystem including Determining Bench Mark Costs, PV Recycling, Agri-PV, Solar Rooftop Awareness etc.

While being active in the Domestic Policy framework, NSEFI has also expanded its wings globally leaving a mark on the international RE Policy front. NSEFI recently acquired the UN ECOSOC special consultative status. NSEFI is one of the co-founders and key members of the Global Solar Council, NSEFI now chairs the IRENA Coalition for Action Working Group on Renewables in Agriculture – Chaired by NSEFI CEO. NSEFI has strategic partnerships with its partners and counterparts in Europe (Solar Power Europe), Germany(BSW), Spain (UNEF), South Korea(KPIA), Israel(GEAI) and the USA(SEIA). NSEFI in 2020 Signed a Memorandum of Cooperation (MoC) with Vietnam Clean Energy Association in the presence of the Prime Ministers of India and Vietnam. NSEFI recently secured a 1 million EUR grant in 2021 for 3 years for a joint Indo-German Association Level Partnership supported by the German Ministry of Economy(BMZ).

About AIC IIT Delhi

Atal Incubation Centre IIT Delhi Sonipat Innovation Foundation, a section-8 company under the Companies Act, 2013, having its Corporate Identity Number, bearing U74999HR2019NPL077902 and established by the Indian Institute of Technology Delhi (IITD) at its Technopark, Sonipat Satellite Campus (hereinafter referred to as "AIC IITD", which expression shall unless repugnant to its subject or context, mean and include its representatives, successors and permitted assigns).

AIC IIT Delhi is a unit established by FITT & IIT Delhi supported by NITI Aayog under the Atal Innovation Mission, is committed to nurturing innovation, supporting startups, industry collaboration and providing a comprehensive ecosystem that facilitates entrepreneurship, capacity building, and commercialization of novel ideas and technologies, thereby contributing to national development and technological advancements.

2. Scope of the Call for Proposal

The program aims to accelerate the transition of renewable energy innovations from **early-stage prototypes (TRL 3-4)** to **market-ready solutions (TRL 6-8)** by enabling real-world deployment, pilot demonstrations, and commercialization support. The initiative focuses on addressing critical gaps in the clean energy innovation ecosystem, including **R&D, product development, testing, validation, standardization, and market access**.

Proposals are invited from start-ups that have demonstrated indigenous capability in developing technologies, components, or sub-systems in areas such as **solar energy, green hydrogen, energy storage, DRE applications, small hydro, wind, smart grids, and clean mobility solutions**. Selected start-ups will be supported in scaling their innovations, establishing supply chains, and reducing dependence on imported technologies.

The goal is to foster **local manufacturing, reduce costs**, and enable the deployment of high-impact renewable energy technologies that align with India's goals of **Atmanirbhar Bharat** and **Viksit Bharat**. The final outcomes should demonstrate industry-grade prototypes suitable for commercial adoption and integration across the energy value chain.

Objectives

The objective of this call for proposals is to identify and support innovative RE start-ups by providing access to technical, financial, and strategic resources to accelerate the development, validation, and commercialization of clean energy solutions.

- To identify and support innovative start-ups working on transformative technologies and business models in the RE sector.
- To accelerate the development and commercialization of clean energy solutions by providing access to technical, strategic, and financial support.
- To facilitate access to state-of-the-art R&D, prototyping, and testing infrastructure available at NISE for product development and validation.
- To build a robust ecosystem by connecting start-ups with expert mentors, investors, industry leaders, and government agencies for scale-up and market entry.
- To promote self-reliance and sustainability by encouraging the development of indigenous technologies aligned with national clean energy goals.

Focus Areas

The identified thrust areas for this call for proposals focus on advancing innovation in key segments of the RE sector. These include solar energy technologies, green hydrogen, energy storage systems, decentralized renewable applications, smart energy management, and circular economy solutions. Start-ups working on emerging technologies aligned with clean energy goals are encouraged to apply. The list is indicative and may be expanded to include other relevant areas.

Thrust Area	Sub-Domains
Application of AI & Machine Learning in Renewable Energy	• Resource Assessment • Forecasting • Grid Management • Smart Energy Management Systems • AI-driven Energy Trading Platforms • Peer-to-Peer Trading • Advancements in Operation & Maintenance
Intelligent and Smart Manufacturing in the Energy Sector	• Smart Grid Components & Intelligent Systems Manufacturing • Advanced Materials & Processes for RE Components • AI and Robotics in RE Manufacturing • New Materials & Machines

Advanced Energy Storage Solutions and BMS	• Next-gen Battery Chemistries • New Materials • Low-cost, Scalable Fabrication Techniques • Thermal Management • EV Charging Stations • Technologies for BMS
Green Hydrogen	• Electrolyser Technologies • Purification System, Balance of Plant • Innovations in Hydrogen Storage • Innovations in Transportation
New and Innovative Technologies	• AgriPV • Floating PV • Building-Integrated Photovoltaic (BIPV) Systems • Small Hydro • Geothermal • Solar Thermal • Ocean/Tidal • Innovation in wind technology
Promoting Circular Economy in RE Technologies	• Recycling Technologies • Eco-design Principles • Development of Biodegradable Materials • New Business Models • Lifecycle Analysis & Carbon Footprint Tools • Secondary Market Cycle
Decentralised Renewable Energy (DRE) Applications	• Solar Cold Storage • Solar Dryer • Solar Water Pumping • Other Off-grid Solar Applications
Utilization of Alternative Fuels for Sustainable Energy	• Bio-fuels • Synthetic Fuels • Sustainable Aviation Fuel

3. Facilities and Support Offered under the call for proposal

The following facilities and support are envisaged under this Call for Proposals, to be provided by NISE, NSEFI, AIC IIT Delhi and other stakeholders.

i. **Access to State-of-the-Art Infrastructure:**

- Start-ups will have access to NISE's advanced laboratories, R&D facilities, and testing infrastructure for solar PV, energy storage, solar thermal, green hydrogen, and related technologies.
- Selected start-ups will also have access to AIC IIT Delhi's incubation facilities, co-working spaces, and sectoral support infrastructure, as per the terms and conditions laid out by AIC IIT Delhi under its incubation framework.

ii. **Technical Mentorship:**

Start-ups will receive expert guidance from **NISE scientists, domain specialists, and NSEFI industry partners** on technology development, product validation, and performance optimization. In addition, they will benefit from the mentorship of **AIC IIT Delhi's expert network**, comprising professionals with deep expertise in renewable energy, product innovation, and business scalability.

iii. **Industry Mentorship:**

Interactive sessions will be organised with distinguished industry leaders who have successfully scaled their ventures, to offer strategic guidance and mentorship to incubated start-ups.

iv. **Co-working and Incubation Space:**

- Dedicated workspace within the NISE campus, equipped with essential amenities for collaborative innovation and day-to-day operations.
- Additionally, AIC IIT Delhi may offer its two-year physical incubation program to a few selected start-ups, providing working space, mentoring, and strategic support as per its incubation guidelines.

v. **Product Standardisation & Certification:**
Access to advisory support on navigating government policies through standardisation, and certification requirements of the newly developed product/process/services.

vi. **Business and Market Linkages:**
Support to connect start-ups with industry stakeholders, project developers, manufacturers, and RE investors for partnerships and scale-up.

vii. **Opportunities for Seed Funding and Grant:**
Assistance will be provided to identify and apply for relevant funding schemes from MNRE and other funding agencies including industry partners, enabling access to grants for product development, pilot projects, and market deployment.

viii. **Pilot and Demonstration Opportunities:**
Facilitation of field trials, pilot projects, and real-world demonstrations in collaboration with industry and government bodies.

ix. **Capacity Building and Networking Events:**
Participation in workshops, pitch sessions, webinars, site visits and investor meet-ups hosted by NISE, NSEFI and AIC IIT Delhi to build capacity and enhance visibility.

x. Collaborative Ecosystem and Institutional Support
NISE will collaborate with academic and research institutions, incubation centres, and other relevant stakeholders to create a stronger support ecosystem and provide additional technical, strategic, and capacity-building assistance to the start-ups.

4. Eligibility Criteria for Start-ups

Start-ups applying for support under the NISE RE Start-up Incubation Program must meet the following eligibility conditions:

i. The applicant must be a start-up recognized by the **Department for Promotion of Industry and Internal Trade (DPIIT)** at the time of application. If not registered, funding will only be disbursed after successful DPIIT recognition.

ii. The start-up must be an Indian entity as per the Companies Act, 2013, with **at least 51% shareholding held by Indian promoters** at the time of application. The Intellectual Property (IP) developed under the project should reside in India.

iii. The proposed solution should be at **Technology Readiness Level (TRL) 3–4** (i.e., proof of concept or lab-validated prototype), with clear potential to scale to **TRL 6–8** (market-ready stage) during the incubation period.

iv. The start-up should require to submit the declaration stating the prior funding sought from any other central government scheme in the last five years for the same project.

v. The start-up must be using technology as a core part of its product or service offering aimed at solving a real-world challenge in the RE sector.

vi. Each start-up or **Project Leader (PI)** may submit only **one proposal** under this call. Multiple submissions will result in disqualification.

vii. **Project Leader (PI) Requirements:**

- A qualified **Project Leader** must be identified, who will be responsible for the technical and managerial execution of the project.
- The PI must have completed at least an undergraduate degree in any relevant discipline.
- The PI should be a shareholder or founder in the start-up.
- The PI must personally present the proposal if shortlisted and will be responsible for signing the project agreement upon selection.

What is not supported

(a) Basic research Projects below TRL 3

(b) Exploratory research/project studies

(c) Project having low element of novelty

(d) Project with the same objectives which has already been supported by other Govt Ministries.

5. Selection Process

The selection of start-ups under the NISE Incubation Program will follow a structured, multi-stage process:

i. **Eligibility Screening and Initial Review:**
All received proposals will be screened for eligibility based on the criteria outlined in the call. Eligible proposals will be assessed for completeness, technical soundness, and relevance by a **Preliminary Review Committee**.

ii. **Expert Evaluation:**
Shortlisted proposals will be reviewed by **subject matter experts** for innovation, feasibility, and potential impact. Selected applicants will be invited to present their proposals before an Expert Panel.

iii. **Final Evaluation by Advisory Committee:**
The **Program Advisory Committee (PAC)** will make the final selection based on expert scores and thematic alignment.

iv. **Due Diligence & Approval:**
Selected start-ups will undergo **technical, financial, and legal due diligence**, including verification of claims and project feasibility. Final milestones, budget, and funding terms will be defined before onboarding.

Note: Prior to the final evaluation round, a Boot Camp may be organized for a few shortlisted start-ups. This optional camp will focus on pitch refinement, mentoring, and business model validation to better prepare start-ups for their final presentations. If deemed unnecessary by the organizing committee, this step may be cancelled without prior notice.

6. How to Apply

The Project Proposal could be submitted as per the following instructions:

i. Step 1 - The applicant is requested to fill the application form (.docx) provided at Annexure I and convert the same into .pdf document.

ii. Step 2- A soft copy in pdf format (with all enclosures/documents) to be emailed to incubation@nise.res.in on or before **26th August, 2025, 11:59 PM IST.**

iii. NO HARDCOPY of the project proposal should be submitted.

iv. Application received without the above documents with incomplete information will not be entertained.

7. Terms and Conditions

i. The start-up will initially be supported for a period of 2 years, which may be extended by up to 1 year (2 extensions of 6 months each) based on performance review and justified requirements.

ii. A separate Memorandum of Agreement (MoA) will be signed between NISE and each selected start-up to define the terms and conditions of the engagement, including provisions related to intellectual property rights, revenue sharing, and other relevant aspects

iii. NISE, as the implementing agency, reserves the right to terminate the project at any stage if unsatisfactory progress is observed or misuse of funds is reported. Unspent funds must be returned as per government financial rules.

iv. Any disputes arising in connection with the implementation of the project shall be resolved by the competent authority at **NISE**, whose decision shall be final and binding.

v. NISE reserves the right to modify or update the eligibility criteria or terms of the grant, if required, in the interest of better implementation and impact.

Annexure I

Format for Submission of Startup Application for seeking support under NISE Incubation centre

Startup Details:	
Startup Name:	
Date of Incorporation:	
CIN Number:	
Name of Project Leader:	
Registered Address:	
Is your Startup DPIIT registered? – Yes/No Please provide DPIIT Registration Number:	
Is the startup incubated anywhere? Provide Details	
Startup website, if any	
Annual turnover of the Startup as on 31st March 2025 & likely turn over in 2025-26	
Personnel Details:	
Project Lead (PI) Details: Name: Designation: Date of Birth: Gender: Aadhar Number: PAN Number: Mobile Number: Email ID:	
Details of Founder(s)/ Cofounder(s)/ Promoters(s) of the Start-up (Name, Designation and Contact Details)	
Details of Mentor(s)/Advisor(s) of Start-up **(Name, Designation, Affiliation and Contact Details)**	

Innovation Details:	
Please provide a detailed document on the proposed innovation (maximum 10-page) (the following pointers may be used to build the document) (i) Innovation details – problem and solution; future potential of technology/innovation with a market landscape (ii) Need and Justification on consideration of the proposal (iii) Team Strengths A Roadmap along with timelines	
TRL Status: (3 to 9 scale) Please refer to Annexure-II regarding definition of TRLs.	
Intellectual Property (IP) details, if any – owners and IP/application number	
Potential Customer Segment:	
Competitors details:	
Funding Details:	
Funds required to advance TRLs and the innovation value chain. Please provide a complete itemized split-up year wise; bifurcated into Capex & Opex.	
Provide the details of total funds/grants received by the startup this may include funds raised through boot strap, grants, equity, Angle funding or venture capital from govt and external investment sources	
Collaborators Details if any:	
Academic Institute/University Name including faculty name and their role :	
Industry partner name and role:	
International collaborations:	
Details of any other organisation involved and their role:	

Startup Pitch (Business Plan):	
A 10-slide PowerPoint presentation of the Startup Pitch covering problem statement, solution, investment requirement, roadmap with timelines, company shareholding and valuation, team	
Declaration by the Startup Promoter	
Are you looking for Physical Incubation for your startup	**Yes/No**
Are you available to dedicate full-time for development of proposed technology or product for your startup	**Yes/No**
Attachments & Enclosures	
Resume of all founders/directors	**Yes/No**
Resume of Mentor/Advisor/Faculty Member	**Yes/No**
Certificate of Incorporation of the company	**Yes/No**
MoA of the company	**Yes/No**
AoA of the company	**Yes/No**
DPIIT Registration Certificate	**Yes/No**
SME/MSME/Udhayam Registration Certificate, if applicable	**Yes/No/NA**
Startup Proposal Document	**Yes/No**
Startup Pitch	**Yes/No**
IP supporting document	**Yes/No/NA**
Annual Financial Statements (Last 2 years)	**Yes/No**
Income Tax Statement	**Yes/No**
Startup Profile/Brochure	**Yes/No**
Supporting documents towards funds raised so far by the startup	**Yes/No**
I agree to abide by the terms and conditions and policies of Incubation centre of NISE	**Yes/No**
Name	
Designation	
Signature	
Place	

Annexure II

TECHNOLOGY READINESS LEVELS (TRL)

RESERACH DEVELOPMENT DEPLOYMENT	**TRL 9**	ACTUAL SYSTEM PROVEN IN OPERATIONAL ENVIRONMENT
	TRL 8	SYSTEM COMPLETE AND QUALIFIED
	TRL 7	SYSTEM PROTOTYPE DEMOSTRATION IN OPERATIONAL ENVIRONMENT
	TRL 6	TECHNOLOGY DEMOSTRATION IN RELEVENT ENVIRONMENT
	TRL 5	TECHNOLOGY VALIDATION IN RELEVENT ENVIRONMENT
	TRL 4	TECHNOLOGY VALIDATION IN LAB
	TRL 3	EXPERIMENTAL PROOF OF CONCEPT
	TRL 2	TECHNOLOGY CONCEPT FORMULATION
	TRL 1	BASIC PRINCIPLES OBSERVED

Instructions

1. The last date for submission of application is **26th August, 2025, 11:59 PM IST.**
2. A soft copy of the Startup Proposal in pdf format with all enclosures/documents) to be emailed to **incubation@nise.res.in on or before 26th August, 2025 (11:59 pm).**
3. Attachments/Enclosures as detailed in the form are required for consideration of the proposal by the evaluation committee.

For any queries, please contact the following officials from NISE:

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