GREEN HYDROGEN AND STORAGE STARTUP CHALLENGE 2026

ABOUT THE CHALLENGE

The challenge is being implemented by the International Solar Alliance (ISA), in collaboration with ICF Consulting India Private Limited, under the GHIC initiative. It aims to find and support green hydrogen and storage startups with **innovative, scalable, and commercially viable solutions** for **storage and end-use applications.** This platform will help these startups incubate and grow.

The challenge welcomes applications from eligible startups at the **ideation (pre-seed)** and **market validation (proof of concept or seed) stages**. Selected startups will receive seed grants and potential strategic acceleration support.

OBJECTIVE

To identify and support startups in the green hydrogen and storage space across the globe.

OUTLINE

The challenge will invite applications from eligible startups, and the shortlisted startups will receive seed grants & strategic acceleration support.

IMPACT

Serve as a global platform to support innovative green hydrogen and storage startups in ideation and market validation stage

KEY OUTCOMES

Building a global ecosystem of green hydrogen and storage startups to identify and scale impactful solutions that advance global decarbonization efforts.

1. Startups to get access to ISA member countries so that they can gain from **technology transfer** and scale up.
2. Providing required **acceleration support** to the selected startups

ANNOUNCEMENT & OUTREACH
Official announcement in Q4 2025

LAUNCHING of GREEN HYDROGEN & STORAGE STARTUP CHALLENGE

SHORTLISTING & SELECTING STARTUPS
Technical evaluations – Q3 2026

ANNOUNCEMENTS OF WINNERS AT COP31

ACCELERATION PHASE
Post CoP31

What are the Major Green Hydrogen Market Drivers?

GLOBAL GREEN HYDROGEN TARGETS AND INCENTIVES

- More than 50 National Green Hydrogen Strategies and Roadmaps announced.
- Global target for electrolyzer capacity is ~ 140-150 GW by 2030 (IEA).

INCREASED INVESTMENTS

- Increasing public & private investments in green hydrogen technologies & infrastructure development.
- Cumulative private sector commitments to green hydrogen projects amount to ~USD 300 billion, with an estimated total investment requirement of USD 1,200 billion by 2050 (IEA).

TECHNOLOGY ADVANCEMENT

- Advancements in electrolyzer efficiency and technological innovations in hydrogen production are anticipated to reduce the production costs of green hydrogen.

Why Focus on Hydrogen End-Use Sectors?

The largest impact of green hydrogen is its potential to decarbonize hard-to-abate sectors, which account for **nearly 90% of its decarbonization potential** (IRENA). This offers a vital route to reduce industrial and mobility emissions where electrification is difficult. **To accelerate the hydrogen economy, approximately 85% of the projected low-carbon hydrogen supply by 2030 must be used by these sectors**, including steel, transport, fertilizers, refining, and chemicals (IEA).

Why is Scaling Up Green Hydrogen Storage Critical for the Energy Transition?

Hydrogen production's intermittency (from variable renewable energy) conflicts with continuous industrial demand, demanding robust storage for reliability. Balancing grid and industrial needs and achieving scale requires both short- and long-duration storage, plus reserve capacity. **Global bulk storage capacity is projected to reach nearly 300 TWh by 2035 (IEA). Furthermore, the global hydrogen storage market is expected to grow significantly, from $1.93 billion in 2024 to about $16.98 billion by 2035 (CAGR ~21.9%).**

ABOUT KEY PARTNER AGENCIES

The International Solar Alliance (ISA), in collaboration with ICF Consulting India Private Limited, is implementing the Global Green Hydrogen Startup Challenge, under the GHIC initiative.

The International Solar Alliance (ISA) is an inter-governmental organization headquartered in Gurugram, India. It currently comprises 106 active member countries and 18 signatory countries. The ISA is an action-oriented, member-driven, collaborative platform for increased deployment of solar energy technologies as a means for bringing energy access, ensuring energy security, and driving energy transition in its member countries.

ISA, in partnership with ADB under India's G20 Presidency, launched the virtual **Green Hydrogen Innovation Centre** (https://isa-ghic.org/) to promote green hydrogen production, utilization, trade, and knowledge sharing. **This challenge is being launched under GHIC initiative.**

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