The Top Three Key Asks from Hydrogen Ireland in 2026

Introduction

As Ireland enters a pivotal phase in its clean-energy transition, Hydrogen Ireland has identified three core priorities that must shape national policy, investment and system planning in 2026. These asks reflect the realities of Ireland's rapidly expanding renewable base, the urgency of building a coherent hydrogen ecosystem, and the opportunity for Ireland to lead in hydrogen innovation during the EU Presidency window and beyond. Together, they outline a clear pathway for converting renewable growth into national value, strengthening system resilience, and positioning Ireland as a global hydrogen leader.

Level 1 Asks

1. Convert Renewable Growth into a National Hydrogen Asset

Ireland's rapidly expanding renewable capacity is already generating significant curtailment, and this will intensify as offshore wind accelerates. Hydrogen Ireland's first priority is to ensure that curtailed and constrained renewable electricity becomes a strategic national resource, not a system loss. This means deploying green hydrogen production minimising curtailment, enabling long-duration storage, flexible generation, and power-to-X pathways that support transport, industry, heat, and export markets. By integrating hydrogen into the renewable expansion plan, Ireland can unlock full system value, strengthen energy security, and create new economic opportunities.

2. Build an Integrated Hydrogen System That Supports Ireland's Energy Transition

Hydrogen Ireland's second priority is to develop a coherent, scalable hydrogen ecosystem that underpins Ireland's net-zero ambitions. This includes sector coupling across electricity, heat, transport, and industry; enabling hydrogen clusters; supporting biorefinery integration; and ensuring that infrastructure, regulation, and market design

evolve in parallel with renewable deployment. A hydrogen-enabled system will provide the flexibility, resilience, and storage capacity required for a high-renewables future, ensuring that Ireland's energy transition is technically robust, economically viable, and socially supported.

3. Strengthen Ireland's Leadership in Hydrogen R&D, Innovation and Skills

Ireland can become a global leader in hydrogen innovation, particularly in electrolyser optimisation, P2X, biorefinery integration, maritime fuels, digital twins, and system modelling. Hydrogen Ireland's third priority is to expand national R&D capacity, deepen international collaboration, and build a skilled workforce capable of delivering the hydrogen economy. This includes supporting universities, industry partners, and research centres; enabling testbeds and demonstration projects; and ensuring that Ireland's innovation ecosystem aligns with REPowerEU, Horizon Europe, and global hydrogen standards. A strong R&D and skills base will allow Ireland not only to adopt hydrogen technologies but to develop, export, and lead them.

Level 2 – supporting detail

Sub-Intro — Level 2 Supporting Goals

To underpin these three primary asks, Hydrogen Ireland has developed a set of six detailed Level-2 goals that reflect the full breadth of our members' work and the association's mission. These goals provide the technical, regulatory, social and innovation-driven foundations required to deliver Ireland's hydrogen ambition. Together, they translate high-level strategy into practical action, shaping how Ireland builds its hydrogen ecosystem, strengthens international positioning, and ensures a people-centred, skills-driven transition.

a. Build a Fully Integrated Clean Hydrogen Ecosystem for Ireland

Hydrogen Ireland's foremost priority is to accelerate the development of a complete, end-to-end green hydrogen ecosystem that supports Ireland's net-zero ambitions. This includes scaling renewable-to-hydrogen production, enabling power-to-X pathways, integrating hydrogen into biorefineries, and supporting sector coupling across

transport, heat, industry, and energy storage. We aim to ensure Ireland becomes a leader in flexible, resilient, and decarbonised energy systems, maximising curtailed renewables, strengthening energy security, and creating new industrial opportunities.

b. Establish Ireland as a Strategic Player in the European and Global Hydrogen Economy

We are committed to positioning Ireland at the centre of the European hydrogen transition through active participation in REPowerEU, Fit for 55, Hydrogen Europe, and global hydrogen networks. Our goal is to secure Ireland's role as a trusted partner in international hydrogen supply chains, research collaborations, and technology development. This includes supporting the emergence of Irish hydrogen clusters, attracting investment, and enabling Ireland to contribute meaningfully to global innovation in electrolysers, P2X, maritime fuels, and advanced manufacturing.

c. Build Public Understanding, Skills, and Workforce Capacity for a People-Led Transition

Hydrogen Ireland believes the clean-energy transition must be people-led. Our priority is to expand public awareness, education, and skills development so that communities, workers, and young people can actively participate in and benefit from the hydrogen economy. Through mentoring, university partnerships, summer schools, outreach programmes, and national campaigns, we aim to develop the next generation of hydrogen professionals and ensure Ireland has the talent pipeline required for long-term success.

d. Turn Curtailment into National Value Through Green Hydrogen Production

Ireland's rapidly expanding renewable fleet, particularly offshore and onshore wind is already producing significant curtailment, with volumes expected to grow sharply as more capacity connects to the grid. Hydrogen Ireland's top priority is to ensure that this "lost" renewable energy becomes a strategic national asset. We aim to accelerate the deployment of green hydrogen production where curtailment is highest, enabling long-duration storage, flexible generation, and new industrial uses. This includes supporting electrolyser deployment, grid-support services, and power-to-X pathways that convert excess renewable electricity into fuels, feedstocks, and export opportunities. By doing so, Ireland can strengthen energy security, reduce system waste, and create new economic value from renewable resources that would otherwise be constrained.

e. Build a Scalable Hydrogen System That Supports Ireland's Growing Renewable Ambition

Ireland's renewable targets for 2030 and 2040 require a flexible, integrated energy system capable of absorbing and utilising very large volumes of variable generation. Hydrogen Ireland's second priority is to ensure that hydrogen becomes a core enabler of this expansion—supporting grid stability, providing seasonal storage, decarbonising transport and industry, and enabling sector coupling across heat, power, and mobility. This includes shaping policy, regulation, and infrastructure planning so that hydrogen clusters, storage, pipelines, and maritime routes develop in parallel with renewable growth. Our goal is to ensure that Ireland's renewable expansion is not limited by system constraints but instead supported by a hydrogen backbone that unlocks full national potential.

f. Strengthen Ireland's R&D, Innovation and Skills Leadership in Hydrogen Technologies

Ireland can become a global leader in hydrogen research and innovation, particularly in areas such as electrolyser optimisation, P2X, biorefinery integration, maritime fuels, digital twins, and system modelling. Hydrogen Ireland's third priority is to expand national R&D capacity, connect Irish researchers with European and global programmes, and support the development of a skilled workforce capable of delivering the hydrogen economy. This includes fostering collaboration between universities, industry, and government; supporting testbeds and demonstration projects; and ensuring that Ireland's innovation ecosystem is aligned with REPowerEU, Horizon Europe, and international hydrogen standards. By building strong R&D foundations, Ireland can move from being a technology adopter to a technology developer and exporter.