Green Hydrogen Standard: pre-qualification of green hydrogen projects

Companies developing green hydrogen projects (including green hydrogen derivatives) are invited to submit their projects for pre-qualification under the Green Hydrogen Standard.

Pre-qualification under the Green Hydrogen Standard provides an independent evaluation of the expected greenhouse gas emissions associated with the project undertaken in accordance with the IPHE methodology[1], including a specific estimate of the project's expected emissions (kg CO2 / kg H2) on a well-to-gate and well-to-consumption gate basis (taken as an average on an annual basis). This includes an evaluation of the project's alignment with emerging standards relating to temporal matching, geographic matching, additionality and utilization of subsidies (see Figure 1) and the project's alignment with global standards on social, environmental and governance (see Figure 2).

The Green Hydrogen Organisation (GH2)[2] is working with assurance and risk management leader DNV to support the assessment. DNV brings vast experience and energy sector expertise. The pre-qualification offer draws on experience from piloting the Green Hydrogen Standard in Australia, Brazil, China, India and the United States.

The results can be used to secure support from investors, offtakers, government agencies and other stakeholders, demonstrating that the project/s will deliver green hydrogen (and green hydrogen derivatives) in conformity with emerging regulations being put in place by governments (e.g. the EU's RFNBO Delegated Acts and the US Inflation Reduction Act).

> "The Green Hydrogen Standard sets a benchmark for what can be considered Green Hydrogen, and we plan to implement it across our global portfolio of green hydrogen projects."
>
> **Mark Hutchinson**
> CEO, Fortescue Future Industries

> "We were the first company in the region to sign on and champion this global measure – We are thrilled to see that DNV has partnered with GH2 in order to drive transparency and certainty for the green hydrogen industry."
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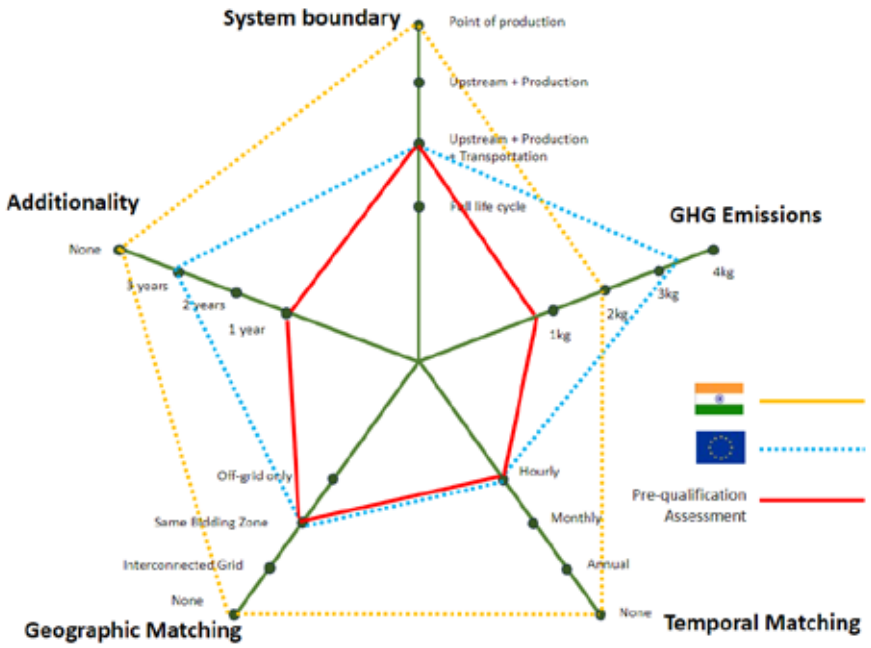
> **Laura L. Luce**
> CEO, Hy Stor Energy

Figure 1 – Example of pre-qualification findings



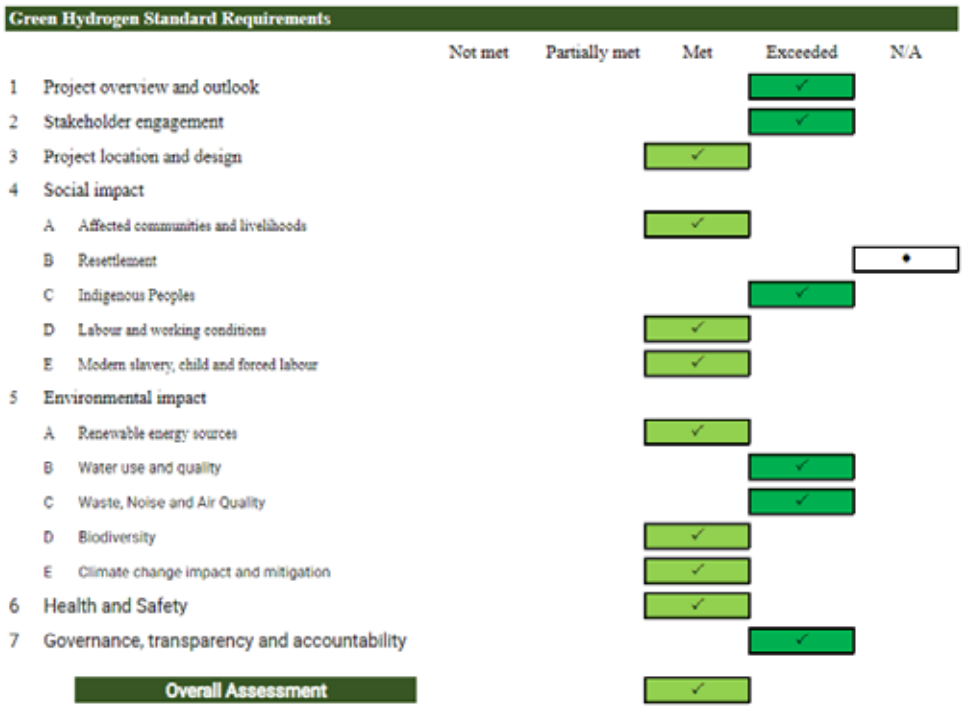
This pre-qualification assessment illustrates a project's expected alignment (in red) with the regulatory requirements for Green Hydrogen projects in India (in yellow) and the requirements for designation as "renewable hydrogen" in the EU (in blue). The assessment can be modified for other jurisdictions, as agreed with the project developer. Additional criteria (e.g., on state aid) can be included.

1. The International Partnership for Hydrogen and Fuel Cells in the Economy (2023) Methodology for Determining the Greenhouse Gas Emissions Associated with the Production of Hydrogen. https://www.iphe.net/iphe-wp-methodology-doc-jul-2023. The methodology used in the EU to define "renewable hydrogen" as a renewable fuel of non-biological origin (RFNBO) differs from the IPHE method, as does the expected eligibility requirements for subsidies in accordance with the United States' Inflation Reduction Act (2022). Where alignment with these definitions are relevant, this will be a key focus of the pre-qualification assessment.

2. The mission of GH2 is to dramatically accelerate the production and utilisation of green hydrogen across a range of sectors globally. It will push to rapidly decarbonise industries like steel, cement, fertilisers, shipping and aviation that have so far made limited progress reducing their emissions. In addition to its office in Geneva it is present in London, Perth, and Sydney.

Pre-qualification includes an assessment of the environmental, social and governance aspects of green hydrogen production, including the development impacts and opportunities associated with the project (see Figure 2).

Figure 2 – Example of pre-qualification findings



Projects that are on track to meet the Green Hydrogen Standard will be designated as **Pre-qualified in accordance with the Green Hydrogen Standard™** and will then have an opportunity to undergo full certification once the project/s enter the production phase.

The work is carried out in three phases:

Phase 1 Inception	**Phase 2** Assessment and risk identification	**Phase 3** Pre-qualification Report
• Introduces the project concept, options under consideration, prospective markets and offtakers, and known risks & opportunities. • GH2 presents the Green Hydrogen Standard, including key risks and success factors. • Identification of the priority issues for more detailed investigation.	• Alignment with national or regional regulations (including eligibility for subsidies, where applicable). • Review of renewable electricity utilisation (including additionality, market and temporal matching where applicable). • GHG emissions measurement, including storage and transportation. • Alignment with essential ESG performance criteria, including land use planning, water resource management and human rights.	• Evaluation of the expected greenhouse gas emissions, including applicable standards relating to temporal matching, geographic matching, additionality and utilization of subsidies. • Overall assessment of the project's alignment with the Green Hydrogen Standard, including priorities and options for derisking project development.

Timing and Cost

Subject to confirming the scope of the work, contract and non-disclosure agreement, the assessment can be completed in three weeks. The fee varies depending on the size and complexity of the green hydrogen project and is cost between USD 25 000 and USD 50 000, including the cost of engaging a specialist assurance provider. GH2 will ensure that appropriate safeguards are in place to address confidentiality, competition and anti-trust obligations.

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