



Minutes: 3rd GH2 Board meeting

3rd GH2 Board meeting (videoconference)
Thursday 21 April 15.00-16.30 CEST

Board Meeting Agenda

Time (CEST)	Agenda Item
15:00	1. Green hydrogen policy updates and CEO report
15:20	2. The Green Hydrogen Standard
16:00	3. The Green Hydrogen Global Assembly and Exhibition, Barcelona 17-18 May
16:20	4. AOB, including the GH2 Diary
16:30	Meeting ends

Meeting objectives and outcomes

- Approval of the Green Hydrogen Standard.
- Board input on the agenda for the Green Hydrogen Assembly.

1. Welcome

Malcolm Turnbull opened the meeting by welcoming Kristian Rokke as a member of the GH2 Board. Malcolm noted that it was the first meeting of the Board since Russia's invasion of Ukraine. The response from the majority of the international community had been unprecedented, in particular as Europe tries to wean itself off Russian energy. Martina Merz noted that the politics of energy security was inextricably linked to the conflict, bring even greater urgency to the energy transition that was already underway. Todd Clewett, observing the meeting on behalf of Andrew Forrest, highlighted FFI's recent deal with E.on to deliver 5 million tons of green hydrogen a year by 2030, noting that the Barcelona Assembly in May was perfectly timed as GH2 looked to scale up its activities.

2. CEO Report

Jonas Moberg presented a brief CEO update, highlighting the progress on the Green Hydrogen Standard and the Barcelona Assembly as key current projects. The Assembly was a catalyst for increasing corporate membership and strengthening collaboration with governments. GH2 will launch the "100 by 2030 campaign" in Barcelona. The Green Hydrogen Charter and online policy portal will create leadership amongst countries to agree more ambitious national targets and share good practices.

3. The Green Hydrogen Standard

Sam Bartlett introduced two recommendations from the Green Hydrogen Standard Technical Committee that had been formed in December. The Committee recommended that the GH2 Board adopts the Green Hydrogen Standard (“the Standard”), to be launched in Barcelona. Green hydrogen projects that meet the Green Hydrogen Standard would be licensed to use the label “GH2 Green Hydrogen” and be eligible to obtain and trade GH2 certificates of origin for green hydrogen and derivatives such as green ammonia. The Committee also recommended that the Board establishes a multi-stakeholder advisory group to support and advise the GH2 Board on the further development of the Standard.

Sam briefed the Board on the issues that had been most contentious during the Technical Committee deliberations. The Technical Committee recommended a definition of green hydrogen: “hydrogen produced through the electrolysis of water with 100% or near 100% renewable energy with close to zero greenhouse gas emissions”. The reference to “100% or near 100% renewable energy” allows for up to 5% of “grey” backup, so long as the agreed emissions threshold is met. It includes energy sourced from hydropower, wind, solar, geothermal, tide, wave and other ocean energy sources. It excludes hydrogen produced from other sources, such as nuclear, biomass and waste to energy. The rationale was that GH2 should focus on the renewable energy technologies that are the leading candidates for scaling up green hydrogen production, and not seek to cover other hydrogen production pathways with very different characteristics and impacts.

The “additionality” of renewable energy was a controversial issue, especially in Europe. The Green Hydrogen Standard allows green hydrogen producers to count electricity taken from the grid as fully renewable if they have concluded one or more power purchase agreements (PPAs) and make use of credible guarantee of origin certification schemes (or similar proofs) where available. The Standard does not include an “additionality” requirement for grid connected projects (unless this is a national requirement). Instead, the Standard requires a broader assessment of the impact of grid-connected projects on the grid, and the identification of technically feasible and cost-effective measures.

The Technical Committee recommended a “close to zero emissions” threshold of $\leq 1\text{kg CO}_2\text{e/Kg H}_2$. The emissions measurement approach builds on the methodology proposed by the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE), an international governmental partnership consisting of 21 member countries and the European Commission formed in 2003. The IPHE methodology includes “scope 1” emissions from production (including desalination), and “scope 2” emissions from on site or purchased renewable electricity. Building on the IPHE’s approach, the Standard also expects green hydrogen producers to measure the emissions associated with conversion and transportation and encourages green hydrogen producers to quantify upstream embodied emissions.

The Board discussed the following issues:

- Nienke Homan welcomed the inclusion of environmental, social and governance (ESG) considerations and the need to consider the impact of projects on the achievement of the Sustainable Development Goals (SDGs). Sam noted that some Technical Committee members thought these requirements were too onerous, while others argued for stronger requirements. Jonas commented that as an industry, we need to demonstrate that we respect and take human rights, water and land issues seriously.
- Maria Paz de la Cruz asked about the costs for project developers and the time needed for accreditation. Sam responded that this depended on the scale of the project, and that the cost would have to be quantified through further testing. The Technical Committee had agreed some general principles to ensure a focus on the most significant impacts and to avoid duplication with national standards. The goal was to ensure that small projects with limited impact could be accredited quickly, whereas large projects with substantial impacts should be subject to careful scrutiny.
- Adair Turner, Marco Alvera and SeungCheol Lim, observing the meeting on behalf of Tae Won Lim, questioned the exclusion of nuclear power, noting that several countries had committed to nuclear power as a low emissions technology. Martina, on the other hand, commented that nuclear power was not renewable, and involved a number of other security, safety and environmental issues.

It was agreed that the Standard should be amended:

- (1) to acknowledge that some countries were pursuing nuclear energy to accelerate the shift from more polluting activities, such as coal generation,
- (2) that nuclear power raises some specific environmental and safety related issues, which the Standard is not designed to address,
- (3) that GH2 welcomes if the Green Hydrogen Standard inspires further rules and standards also for nuclear and other forms of energy production with close to zero emissions.

- Adair queried whether 1 kg CO₂e per kg H₂ was too high, noting that if we produce 800 mt, we have 800 mt of CO₂ emissions, which is substantial. Sam noted that the Technical Committee expected some projects to have substantially lower emissions, but that prudence was needed until actual project performance could be validated. The Standard included a provision that “the GH2 Board will review the performance of GH2 accredited projects on an annual basis, with the expectation that the boundaries of the emissions assessment framework can be widened, and that the emissions thresholds can be lowered in accordance with emerging best practice”. It was agreed to modify the Standard to state that “the emissions thresholds will be lowered in accordance with emerging best practice”.

The Board agreed:

(1) to adopt the Green Hydrogen Standard, subject to the two amendments noted above, and

(2) to establish a multi-stakeholder advisory group to support and advise the GH2 Board on the further development of the Standard.

4. Green Hydrogen Global Assembly and Exhibition

Joe Williams provided an update on the Green Hydrogen Global Assembly & Exhibition which will be an unprecedented gathering from all sectors of society under the banner of leading together in the green hydrogen age.

5. AOB. Malcolm concluded the meeting by thanking all board members and the GH2 team.

Participation

Board members:

- Mr Marco Alvera, CEO of Snam, Italy
- Ms Maria Paz de la Cruz, CEO of H2 Chile, Chile
- Mr Yu Gan, Co-Chairman, Board of Trustees, Daxing International Hydrogen Energy Demonstration Zone, China
- Ms Nienke Homan, Sustainable Hydrogen Club, the Netherlands
- Mr James Josling, Independent, Switzerland
- Dr Frannie Léautier, CEO of Southbridge Investments, Rwanda
- Ms Martina Merz, CEO of ThyssenKrupp, Germany
- Mr Kristian Røkke, CEO of Aker Horizons, Norway
- Mr Jonas Moberg, CEO and Company Secretary of GH2 (ex-officio), Switzerland
- Hon. Malcolm Turnbull, Inaugural Chair of GH2, Australia
- Lord Adair Turner, Former Chair of the UK Financial Services Authority and Chair of the Energy Transitions Commission, United Kingdom

Apologies:

- Dr Andrew Forrest AO, Chairman of Fortescue Metals Group & the Munderoo Foundation, Australia
- Mr Yun Choi, CEO of Korea Zinc Company, Ltd., South Korea
- Dr Tae Won Lim, Executive VP & Head of the Hydrogen and Fuel Cell Business Centre of Hyundai Motor Group, South Korea

Observers:

- Todd Clewett, Director, External Affairs, Fortescue Future Industries. Pty Ltd
- SeungCheol Lim, Hyundai Motor Group, South Korea
- Daniel Kim, Chief Executive Officer, Ark Energy

GH2 staff and advisors:

- Dr Sam Bartlett, Director of the GH2 Standard and the CEO Roundtable, GH2, Norway
- Ms Inês Schjøllberg Marques, Director for the Green Hydrogen Development Plan, Norway
- Mr Erik Solheim, Senior advisor and chair of the Green Hydrogen Development Plan
- Mr Joe Williams, Director of Strategy and Communications, GH2, United Kingdom