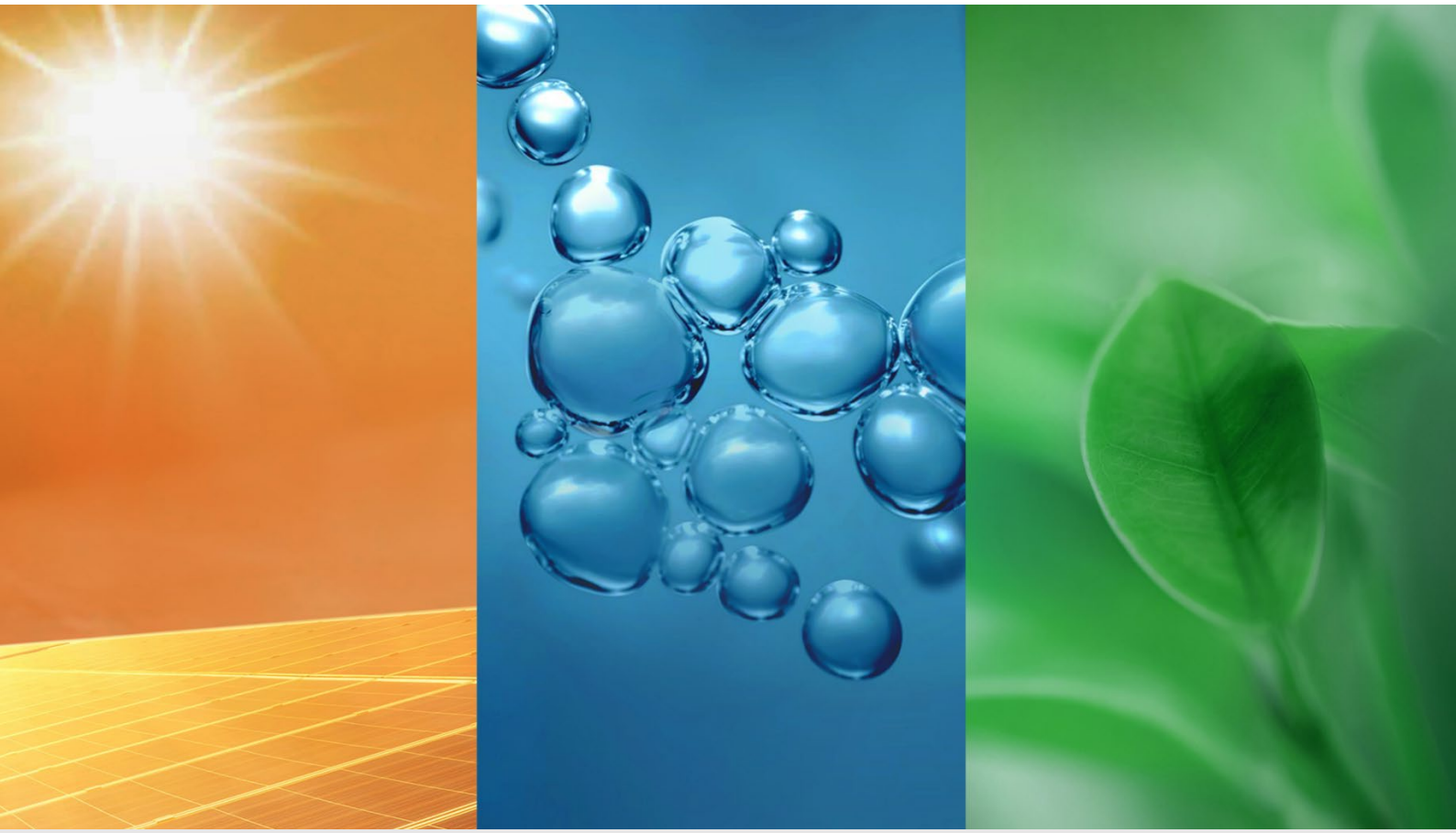
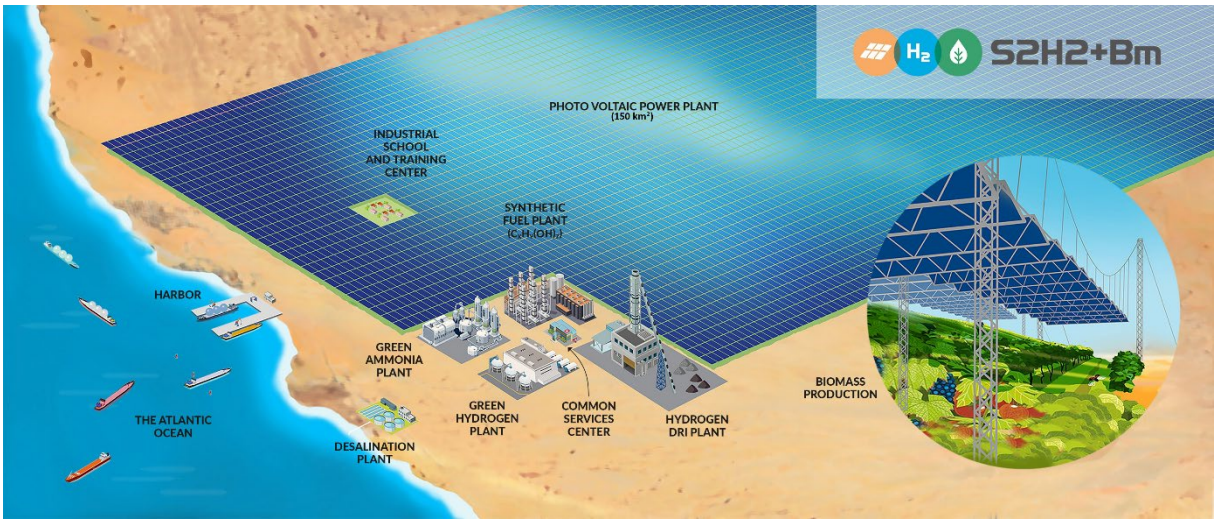


WHITE PAPER ON A GAME-CHANGING GREEN HYDROGEN CONCEPT – Q2 2025

The S2H2 Team, June 2025

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EXECUTIVE SUMMARY: Delivering 5% of the EU's projected 2035 imports of Green Hydrogen and its derivatives – abating 8-million-ton CO2 pa



For over a century mankind has invested gazillions to perfect and optimize the various fossil value chains, from extraction to exhaust. For our planet – not so perfect.

We must now develop something different, and we have much less than a century to do it.

We need to develop alternatives where green hydrogen can compete head on with fossils. Such competitive alternatives will create huge momentum for green industrial transitions, which is exactly what the planet needs.

Global media and its laymen readers are looking for a silver bullet. Something easy to comprehend and elicit hope that the extremely complex problem of the climate crisis has been solved. But there is no such single solution. Green Hydrogen will not fix everything, but it can solve a big portion of our problems, especially in hard-to-abate processes such as the reduction of iron ore into iron.

The transformation of our fossil dependent systems and value chains into greener alternatives is young but progressing on many parallel frontiers. Regulations, tariffs and subsidies alone cannot drive the transformation. They are necessary short-term mechanisms, but are too slow in driving real, vast, market-based change. What is needed is sustainable solutions that are commercially attractive on their own merits.

The S2H2's Green Hydrogen based Industrial Hub will provide GH2 for co-located off-takers at a cost that is commercially attractive – providing a substantial competitive advantage and creating the green hydrogen momentum the world is desperately looking for. Our cost-advantage comes primarily from the chosen optimal location for PV-power production, and from what we don't do. We don't transport energy, neither electricity nor hydrogen. And a few additional things we will do create financial benefits that are hard to duplicate.

In addition, we will enable huge areas for biomass production in the partial shade beneath our PV-panels. Areas which today are arid, sunbaked, and unsuitable for food production, thus improving living conditions for the people in the community, our community.

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1. The Challenge

If we, together, are going to meet the International Energy Agency's (IEAs) 2050 Net Zero Emission scenario, about 500 million tons of green hydrogen (GH2) need to be produced annually, abating CO2 emissions (and methane) in various applications.

The challenge is not the production volume per se but producing green hydrogen at a Levelized Cost of Hydrogen (LCOH) reasonable for off-takers, the users of this hydrogen. In a hydrogen-bus or truck, a reasonable price at the fueling station for GH2 is $4.50/kg according to Swedish truck owners. At that price they would swap their diesel trucks to fuel cell technology using GH2. Today this price is $12/kg in Sweden.

In the case of steelmaking, reduction of iron ore with hydrogen instead of coal/NG/oil, LCOH will have to be at $2/kg for head-on competition with conventional blast-furnaces using fossil reductants.

The cost of green hydrogen at a specific location has a couple of interesting main ingredients:

1. CAPEX and non-energy OPEX: Financial cost of the investment needed for the hydrogen production plant, plus operating cost except energy – where top-performers can achieve as low as $1/kg GH2 or just above.
2. Energy cost: The cost of approximately 50kWh needed for the electrolysis per each kg of GH2 produced. This cost has two components, transmission cost and the cost per kWh, of which the first is often neglected. Electricity is by far the most expensive form of energy to transport, 15 times more expensive than e.g., natural gas in a pipeline. In the EU it is and will be unlikely, or even impossible, to achieve an unsubsidized cost of energy lower than $0,08/kWh, adding $4/kg GH2.
3. GH2 logistics cost, i.e., storage and transport cost, between production of hydrogen and off-takers will easily be another $1/kg of green hydrogen.

In summary, achieving an off-taker price for GH2 below $6/kg is and will be a substantial challenge, leading to a too slow and completely subsidized-driven development of the various green hydrogen value chains we urgently need. Which is exactly what we see happening in EU and elsewhere.

2. The S2H2 Concept and Solution

Our solution to this dilemma is quite simple and has three main components.

1. Produce PV-generated energy in direct vicinity to the hydrogen plant, and at a location with world-class PV-potential, e.g., Morocco, resulting in a levelized cost of energy (LCOE), at or below $20/MWh. No transportation of electricity.
2. Co-locate the off-takers creating an industrial hub based on green hydrogen avoiding transport of hydrogen and additional advantages such as available low-cost thermal energy.
3. A technical solution enabling seamless scalability and independence from electrolyser OEMs.

Our Concept will produce green hydrogen at a levelized cost of hydrogen at $2/kg, enabling us to offer co-located off-takers financially attractive long-term green hydrogen purchase agreements. This is our contribution to solving a global challenge.

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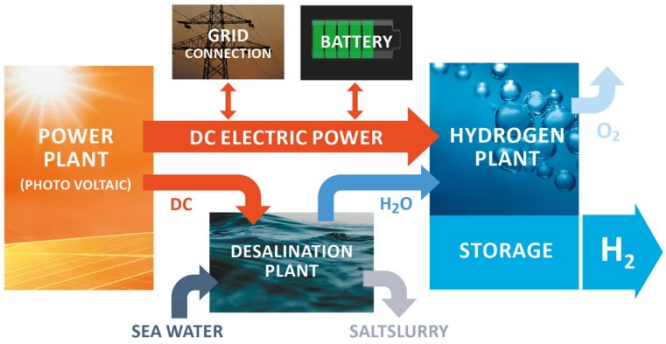
3. The Plan – 5% of EU demand by 2035

S2H2+Bm will disrupt the green hydrogen market, offering a scalable solution that surpasses the limitations of current projects. In 2027 we will start production in demonstration scale, and in 2035 have our first green hydrogen plant in Morrocco producing 500 kton annually, with a second and possibly a third plant under ramp up. This corresponds to 5% of the predicted EU imports of GH2 and GH2-derivatives by 2035. It also corresponds to a CO2 abatement of about 8 million ton per annum, 20% of total Swedish emissions.

Encompassing the plant will be off-takers utilizing the low-cost green hydrogen and other services. S2H2+Bm will thus facilitate large-scale production of green direct reduced iron, green methane, ethane or any carbon hydroxide, green ammonia, to name a few.

We will also ship our product. In the beginning, using high pressure tubes arranged in standard-size containers, which will also serve as storage for our customers. Later, when available, large-scale shipping will be done with e.g., purpose-built hydrogen tankers.

The start will be humble, a 15MWp PV-plant serving a 3.1MW hydrogen plant up and running in 2027. It will include all components of the concept, thus de-risking the overall project, and provide a perfect learning and training ground for new employees, partners and our concept design engineers. The plant will produce 500 ton GH2 per year (initial run-rate).



4. A Significant Concept Uniqueness: Shade

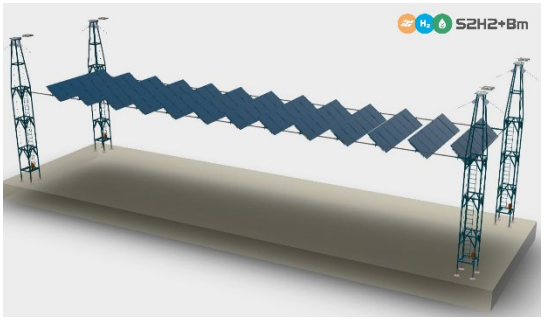
The Bm in our company name stands for biomass. Green hydrogen production is combined with enabling vast areas for biomass-production, combined with a dedicated desalination plant. Thereby, S2H2+Bm facilitates regeneration of unused land and fosters local economic development, as well as natural carbon-capture, turning our CO2 footprint from zero to negative.

The key is shade. Shade is created from the high-mounted panels on suspension bridges with up to 6-meter free operating height below the deck of PV-panels.

The land below receives optimal conditions as the sunlight and shade alternate during the day, reducing incoming radiation with approximately 50%. Excessive sunlight and evaporation are avoided, resulting in a higher production rate using less water.

The high-mounted panel solution results in a lower LCOE than standard racks directly on the ground.

- Requires no or minimal ground preparation.
- Avoids the cost of land acquisition, e.g., farming can continue (or start).
- Low ratio of steel weight versus installed power.



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- Reduces the problem of wind carried sand.
- Results in lower operating temperature of the panels, thus delivering higher output.
- Reduces the problem of panel thefts.
- Is a truly sustainable method in all aspects; no cement, producing energy in harmony with nature, and provides for natural carbon capture.

5. Focus and Scale

The concept also provides a unique interlinking of focus, scalability and scale.

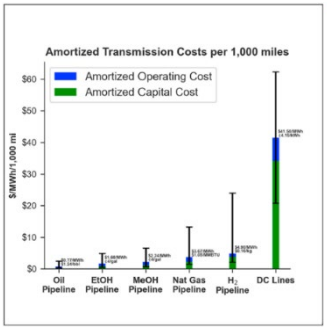
We are building the largest integrated energy-water-hydrogen-industrial-hub in the world, focusing on only this. Focus makes a difference. A difference, which in the end is reflected by the lowest available LCOE, LCOW and LCOH.

The concept is ideal from a scalability point of view. We start very small and scale up seamlessly to meet demand and off-taker agreements. Ammonia plants or DRI shafts do not scale very well at all, why projects based on a fixed predetermined single off-taker demanding a fixed amount of hydrogen from day one have a problem we don't.

Large-scale production is, with very few exceptions, an advantage. Both capex and opex for the latest installed capacity will be lower than the previous. Inviting several co-located off-takers combined with shipment of hydrogen will, everything else equal, result in a lower LCOH than other smaller production units.

6. Cost of transporting Energy

Most people intuitively regard electricity as a form of energy that is easy and cheap to transport. It is quite the opposite; electricity is by far the costliest form of energy to transport. E.g., over 15 times more expensive than natural gas in a pipeline per kWh. The second most expensive is hydrogen. This is why we in our hydrogen hub concept avoid both.



7. Market View

When the supply chains of green hydrogen are developed green hydrogen will become a commodity, just like many others.

We reason that a European market price will bottom out based on the cost for European-produced green hydrogen, which in turn will be based on European energy cost, plus transport of that electricity. The future best-in-class LCOH in EU will be $4.5 per kg GH2 without subsidies, with $5.5 per kg being a more reasonable low-end number. Most other organizations predict a substantially higher LCOH for EU produced green hydrogen.

To conclude; with an LCOH at $2/kg GH2 we will attract off-takers to co-locate with us in Morocco, but can also sell our product with a healthy margin anywhere in Europe from day one.

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8. Status and Way Forward

S2H2+Bm recently completed our Round 7 fund raising: new share issue totaling 2MSEK at a 30MSEK valuation pre money. It can be noted that we in total have raised just south of 10 MSEK, have a conservative valuation above three times higher than that, and have a corresponding quite amazing ratio of actual progress versus money spent.

Four patents regarding our pergola and suspension bridge panel mounting solutions have been granted and published by the Swedish Patent Office. Three of them have also been approved internationally, with the fourth pending but with a preliminary positive notice received. One of these patents is of particular value, granting us wide and general rights for the suspension bridge solution.







In early May we completed the erection of our scale 1:1 one-bridge (36 m) Glava demonstration installation at the Glava Energy Center. It has gained substantial interest in Sweden as well as internationally, proving the dual-use case, and significantly reducing the risk in our Morocco project.

A second larger installation is being planned together with a major Swedish ferry harbor for their ramp-up area. By 2030 all EU harbors are required to provide electricity to moored ships, and all moored ships will be forbidden to run their onboard fossil-fueled generators, which will create a significant market for our dual-use PV-solution.

Since its inception, the company has maintained contact with Masen and several ministries in Morocco and has engaged in a dialogue with the Swedish Ministry for Foreign Affairs, particularly with the ambassador in Rabat, but also in Stockholm. These contacts intensified during Q4 2024, and on March 4–6, State Secretary Håkan Jevrell and his delegation visited Rabat, where several meetings were held with representatives from various Moroccan ministries. Discussions focused on closer cooperation between the countries in various forms and across different sectors. The S2H2 project was also discussed, and an oral statement regarding land allocation was given by the head of the Ministry of Energy: “S2H2 is in a good position.”.

During the spring we have worked on a Mauretania case, similar to the proposed project in Morocco. We have mapped out the process, which is quite straight forward, and are ready to start a process which will provide a land grant in 6-9 months. Decision to move forward yet to be made.

As previously stated, we plan to start our project small, enabled by the seamless scalability of the Concept and thus reducing risk for Morocco and all other stakeholders to a minimum. Ramboll Sweden AB and ABB GmbH have together with S2H2 now completed a conservatively developed Basic Engineering study for our green hydrogen demonstration plant based solely on PV energy and oceanic water. The conclusion of the report is in line with our earlier assumptions, albeit with a higher than estimated capex. The report further strengthens our position in discussions with the Moroccan government, as well as off-takers and financing partners.

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At the company's Annual General Meeting in April, it was decided to do a new preferential share issue – Round 8. It will close in July 2025, raising 2 MSEK in additional capital. Details of this investment opportunity have been communicated to current shareholders. Other interested parties can receive information on request.

For inquiries or further information, please contact Magnus Pousette at mapo@s2h2plusbm.com, or/and visit our website at www.s2h2plusbm.com.

Stockholm in June 2025,
The S2H2-Team