

Hitachi Energy and H2 Green Steel partner to leverage electrification, digitalization and hydrogen for green steel production

Memorandum of Understanding outlines collaboration to support the decarbonization of the steel industry by using disruptive technology and reduce carbon emissions

Zurich, 20 July, 2022 – Hitachi Energy today announces that it has signed a Memorandum of Understanding (MoU) with H2 Green Steel to leverage electrification, digitalization and hydrogen to support the decarbonization of the steel industry.

H2 Green Steel, a Swedish industrial start-up, is on a mission to accelerate the global steel industry's greatest technological shift by eliminating almost all of carbon dioxide (CO₂) emissions from the steel production process. It is planning to build its first fossil free steel plant in Boden, Sweden, alongside a giga scale electrolyzer plant for the production of green hydrogen.

The MoU outlines a collaboration which is built on 3 pillars: 1) Hitachi Energy's equity investment in H2 Green Steel; 2) products and services from Hitachi Energy that are needed to construct and improve the electrical infrastructure to power steel production and giga scale electrolyzer plants; 3) green steel to be used in the manufacturing of Hitachi Energy's products, once H2 Green Steel starts production.

Over the past decade, expanding steel production has increased total energy demand and CO₂ emissions^{*1}, which contributes to about eight percent of the world's global industrial carbon emissions^{*2}.

*1 IEA, Iron and Steel(<https://www.iea.org/reports/iron-and-steel>)

*2 McKinsey, Decarbonization challenge for steel (World Steel Organization)(<https://www.mckinsey.com/industries/metals-and-mining/our-insights/decarbonization-challenge-for-steel>)

Starting with the plant in Boden, H2 Green Steel will leverage Hitachi Energy's capabilities to optimize customers' value chain to plan, build, operate and maintain the power infrastructure that includes IT and operational technology (OT). The steel production in Boden will use green hydrogen instead of coal in a fully integrated process using end-to-end digitalization, which reduces up to 95 percent CO₂ emissions compared to traditional steelmaking. This will be equivalent to removing 3 million passenger cars per year from road^{*3}.

*3 Based on average 160 g CO₂/km and average distance of 15,000 km(<https://www.eea.europa.eu/highlights/average-co2-emissions-from-new-cars-vans-2019>)

"Achieving carbon-neutrality globally requires efforts from all industries to speed up the energy transition through collaborations," says Johan Söderström, Head of Europe, Middle East and Africa at Hitachi Energy. "This collaboration with H2 Green Steel is a pioneering example of how we are working together and creating additional benefits for our customers. We are supporting H2 Green Steel's electrification project and at the same time, we are able to secure green steel for our products, which is in line with our Purpose "Advancing a sustainable energy future for all," he added.

"The partnership we have entered into with Hitachi Energy is further reinforced by an equity investment in H2 Green Steel. The partners we choose to work with need to share our values, make a real commitment to live up to the Paris Agreement and to work tightly together to leverage each other's strengths. In Hitachi Energy we have that, as well as their long history, broad experience and innovative offerings," says Henrik Henriksson, CEO of H2 Green Steel.

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About Hitachi Energy Ltd.

Hitachi Energy is a global technology leader that is advancing a sustainable energy future for all. We serve customers in the utility, industry and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, we pioneer technologies and enable the digital transformation required to accelerate the energy transition towards a carbon-neutral future. We are advancing the world's energy system to become more sustainable, flexible and secure whilst balancing social, environmental and economic value. Hitachi Energy has a proven track record and unparalleled installed base in more than 140 countries. Headquartered in Switzerland, we employ around 38,000 people in 90 countries and generate business volumes of approximately \$10 billion USD.

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About Hitachi, Ltd.

Hitachi drives Social Innovation Business, creating a sustainable society with data and technology. We will solve customers' and society's challenges with Lumada solutions leveraging IT, OT (Operational Technology) and products, under the business structure of Digital Systems & Services, Green Energy & Mobility, Connective Industries and Automotive Systems. Driven by green, digital, and innovation, we aim for growth through collaboration with our customers. The company's consolidated revenues for fiscal year 2021 (ended March 31, 2022) totaled 10,264.6 billion yen (\$84,136 million USD), with 853 consolidated subsidiaries and approximately 370,000 employees worldwide. For more information on Hitachi, please visit the company's website at <https://www.hitachi.com>.

About H2 Green Steel

H2 Green Steel (H2GS AB) was founded in 2020 with the ambition to accelerate the decarbonization of the steel industry, using green hydrogen. Steel, which is one of the world's largest carbon dioxide emitters, is the company's first business vertical. The founder and largest shareholder of H2 Green Steel is Vargas, which is also co-founder and one of the larger shareholders in Swedish battery maker Northvolt. H2 Green Steel is headquartered in Stockholm, Sweden, with its first green steel plant under development in Boden, northern Sweden. www.h2greensteel.com

Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.
