SIEMENS

Press

Erlangen, October 08, 2026

Siemens to digitalize one of Europe's largest renewable hydrogen projects

- **Siemens deploys its software portfolio for hydrogen at industrial scale, shaping the future of digitally optimized renewable hydrogen production**
- **Physics-based digital twin and real-time optimization**
- **100 MW facility to produce up to 15,000 tons of renewable hydrogen per year, targeting 110,000 tons of CO_2 reduction per year**

Siemens and Portugal-based Galp Energia are collaborating to digitalize GalpH2Park in Sines, Portugal. The plant will be one of Europe's largest renewable hydrogen plants once it starts operating at year-end. For the 100 MW hydrogen facility of the first project phase, Siemens is deploying its software portfolio for the hydrogen industry, enabling smarter operations and optimizing the value of the plant. With this deployment, Galp and Siemens are shaping the future of digitally optimized renewable hydrogen production on an industrial scale.

Digital twin at the heart

Central to the collaboration is Siemens' Hydrogen Performance Suite (HPS) – an advanced digital cockpit designed to continuously enhance renewable hydrogen plant operations. At its core lies a predictive Digital Process Twin: a high-fidelity model built on physics-based modeling that delivers operational insights via real-time optimization for faster and data-driven decision-making. To power the digital twin, Siemens deploys an integrated software stack for process modelling, data analytics and real-time visualization – translating complex plant data into clear, actionable insights for operators.

Siemens AG
Communications
Head: Christiane Ribeiro

Werner-von-Siemens-Straße 1
80333 Munich
Germany

By seamlessly integrating the digital twin with live plant data and external sources, such as grid operators and energy markets, the HPS gives Galp's operators end-to-end visibility of their facility. The result is smarter production scheduling, and optimized energy procurement. Siemens estimates that the HPS can deliver energy savings of up to 15 percent – a significant lever for both cost competitiveness and sustainability.

"GalpH2Park is a lighthouse for Europe's energy transition", said Axel Lorenz, Executive Vice President Automation Process Industries at Siemens. "We are convinced that digital innovation is the key to making renewable hydrogen economically viable and accelerating the decarbonization of industry. Siemens is turning this ambition into industrial reality – at scale."

Reducing greenhouse gas emissions

Powered by renewable electricity sourced through long-term supply agreements and Galp's own renewable generation capacity, the GalpH2Park plant is set to produce up to 15,000 tons of renewable hydrogen per year. This is expected to reduce greenhouse gas emissions by approximately 110,000 tons of CO_2 equivalent per year (Scope 1) – a meaningful contribution to Portugal's and Europe's decarbonization targets.

Siemens offers a comprehensive portfolio of digital and automation solutions for the hydrogen industry – spanning monitoring and control systems, industrial automation, digital twin, power protection and distribution, and drives. With a holistic approach that integrates electrification, advanced instrumentation, and state-of-the-art digital services, Siemens is actively accelerating industrial decarbonization and the global energy transition.

Siemens will digitalize the 100 MW hydrogen plant in Sines, Portugal

For more information about Siemens' portfolio for the hydrogen industry, please visit: https://www.siemens.com/h2

This press release can be found at: https://press.siemens.com/global/en/pressrelease/siemens-will-digitalize-100-mw-hydrogen-plant-sines-portugal

Contact for journalists:
Christoph Krösmann
Phone: +49 162 7436402
Email: christoph.kroesmann@siemens.com

Follow us at: blog.siemens.com and linkedin.com/siemens-industry

Siemens Digital Industries (DI) empowers companies of all sizes within the process and discrete manufacturing industries to accelerate their digital and sustainability transformation across the entire value chain. Siemens' cutting-edge automation and software portfolio revolutionizes the design, realization and optimization of products and production. And with Siemens Xcelerator – the open digital business platform – this process is made even easier, faster, and scalable. Together with our partners and ecosystem, Siemens Digital Industries enables customers to become a Digital Enterprise. Siemens Digital Industries has a workforce of around 70,000 people worldwide.

Siemens AG (Berlin and Munich) is a leading technology company focused on industry, infrastructure, mobility, and healthcare. The company's purpose is to create technology to transform the everyday, for everyone. By combining the real and the digital worlds, Siemens empowers customers to accelerate their digital and sustainability transformations, making factories more efficient, cities more livable, and transportation more sustainable. A leader in industrial AI, Siemens leverages its deep domain know-how to apply AI – including generative AI – to real-world applications, making AI accessible and impactful for customers across diverse industries. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a leading global medical technology provider pioneering breakthroughs in healthcare. For everyone. Everywhere. Sustainably.
In fiscal 2025, which ended on September 30, 2025, the Siemens Group generated revenue of €78.9 billion and net income of €10.4 billion. As of September 30, 2025, the company employed around 318,000 people worldwide on the basis of continuing operations. Further information is available on the Internet at www.siemens.com