NEWS RELEASE

Asahi Kasei Enters Collaboration With De Nora for Development and Sale of Small-Scale Containerized Electrolyzers for Hydrogen Production

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TOKYO & NEW YORK & DÜSSELDORF, Germany--(BUSINESS WIRE)-- The Japanese technology company Asahi Kasei has signed a memorandum of understanding (MOU) with De Nora, an Italian multinational company, leader in sustainable technologies, and a manufacturer of electrolyzer cells, small scale electrolyzers, and other components for the production of green hydrogen through water electrolysis. The MOU concerns the joint development, study, evaluation, and sale of small-scale pressurised alkaline water electrolyzers.

Paolo Dellachà of De Nora (left) and Kenji Takeda of Asahi Kasei (right) at the MOU Signing Ceremony at Asahi Kasei's Headquarters (Photo: Business Wire)

De Nora possesses technical expertise and knowledge in high-performance electrode catalysts for the electrochemical field, and is a leading company in the development, manufacture, and sale of electrodes and electrolyzers for several industrial electrochemical processes. This MOU was signed with the aim of leveraging the long-standing experience and know-how of both companies in the chlor-alkali electrolysis field to establish a close cooperation framework for development, production, and sales/support in the water electrolysis field.

Demand for green hydrogen produced by water electrolysis as a clean energy alternative to fossil fuels is growing. According to the Hydrogen Council, the global installed capacity of water electrolyzers is forecasted to expand rapidly to a cumulative total of approximately 300 GW by 2030.

Under such circumstances, an increasing number of companies are newly entering the water electrolysis field. In particular, there is growing demand for compact production systems with reduced costs, installation space, and delivery time serving several industrial sectors, including mobility.

To meet this growing demand for smaller hydrogen production systems, Asahi Kasei has now entered into a collaboration with De Nora, covering technical support, sales, operation, and after-sales service for small-scale containerized electrolyzers in the range of 1 to 7.5 MW. By doing so, Asahi Kasei expands its portfolio into the range of small-scale containerized pressurized electrolyzers, covering the emerging diversified needs of customers across the entire hydrogen market.

Leveraging existing sales channels

Asahi Kasei's alkaline-water electrolysis business is based on nearly five decades of experience of construction, supply, and long-term operation of chlor-alkali electrolyzers worldwide. This enables the company to provide support to customers who lack adequate experience in electrolysis technology.

Asahi Kasei entered the partnership with De Nora in anticipation of synergies with De Nora's knowledge of electrodes for electrolysis and small sized pressurised electrolyzers for hydrogen production.

This collaboration is another important cornerstone of Asahi Kasei's holistic business model to become a one-stop solution provider in the field of electrolysis. This model comprises technological development capabilities for membranes, electrodes, electrolytic cells, and other components involved in the electrolysis process. Going beyond mere technical expertise, it also includes supply chain construction, as well as operation technology and know-how to achieve large-scale production, monitoring technology to ensure long-term plant operability and reliability, as well as maintenance and support systems.

Kenji Takeda, Executive Officer of Asahi Kasei responsible for Business Development of its Green Solution Project, comments: "The efforts of both companies to deploy the new water electrolysis systems will lower the hurdle for customers to adopt water electrolysis and contribute broadly to the development of the hydrogen market. We believe that the combination of De Nora's technological expertise and experience as a world leader in the field of electrolysis for many years, together with Asahi Kasei's customer experience-oriented business model cultivated through chlor-alkali electrolysis, will play an important role in the development and deployment of this system in the addressable markets."

De Nora's CEO Paolo Dellachà commented: "We are proud to announce the commencement of a collaboration with Asahi Kasei to develop small-scale electrolyzers for green hydrogen generation, marking a significant step towards sustainable energy solutions. This partnership leverages the strengths of two leading companies in a strategic field, addressing the global market's growing demand for small-scale hydrogen production systems through our

combined expertise. The strategic partnership with Asahi Kasei will enable De Nora to further develop its small scale containerized electrolyser technology for hydrogen production, designed to supply hydrogen to various applications, including mobility, metallurgy, and other hard-to-abate sectors. It effectively supports decentralized hydrogen production in areas identified as 'Hydrogen Valleys,' progressively eliminating the dependency on fossil fuels. In addition this collaboration will accelerate the ramp-up of production at our Italian Gigafactory, our newest electrolyzer manufacturing hub currently under construction."

About De Nora

Industrie De Nora is an Italian multinational company listed on the Euronext Milan stock exchange specializing in electrochemistry, a leader in sustainable technologies, and plays a vital role in the industrial green hydrogen production chain. The company has a portfolio of products and systems to optimize the energy efficiency of critical industrial electrochemical processes and a range of products and solutions for water treatment. Globally, Industrie De Nora is the world's largest supplier of electrodes for the major industrial electro-chemical processes (serving a broad portfolio of customers operating in the fields of chlorine and caustic soda production, components for electronics, and surface finishing). Industrie De Nora is among the world's leading suppliers of water filtration and disinfection technologies (for the industrial, municipal, swimming pool and marine sectors). Leveraging its well-established electrochemical knowledge and proven manufacturing capability, the Company has developed and qualified a portfolio of electrodes and components to produce hydrogen through the electrolysis of water, which is critical for the energy transition. In this sector, the company holds 25.85% of thyssenkrupp nucera AG & Co. KGaA, a joint venture formed with thyssenkrupp group. Founded in 1923, Industrie De Nora generated total revenues of around EUR 856 million and an Adjusted EBITDA of approximately EUR 171 million in 2023. The Company's growth process has developed organically through its continuous innovation as regards external lines through acquisitions in the U.S., Asia, and Europe. De Nora's intellectual property portfolio currently includes more than 281 patent families with more than 2,800 territorial extensions. The De Nora family owns 53.3% of the company's share capital. Snam S.p.A. is a minority shareholder with about 21.6% of the capital. For more information, visit **https://www.denora.com//**

About Asahi Kasei

The Asahi Kasei Group contributes to life and living for people around the world. Since its founding in 1922 with ammonia and cellulose fiber businesses, Asahi Kasei has consistently grown through the proactive transformation of its business portfolio to meet the evolving needs of every age. With more than 49,000 employees worldwide, the company contributes to a sustainable society by providing solutions to the world's challenges through its three business sectors of Material, Homes, and Health Care. Its Material sector, comprised of Environmental Solutions, Mobility & Industrial, and Life Innovation, includes a wide array of products from battery separators and biodegradable textiles to engineering plastics and sound solutions. For more information, visit **https://www.asahi-kasei.com/** .

Asahi Kasei is also dedicated to sustainability initiatives and is contributing to reaching a carbon-neutral society by 2050. To learn more, visit **https://www.asahi-kasei.com/sustainability/** .

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