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Press Release

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HyGear partners with Nedstack and Strukton for Off-Grid Filler-Charger project

HyGear, a specialist in on-site hydrogen generation and supply, announced it will cooperate with Nedstack Fuel Cell Technology, a leading player in the PEM fuel cell industry and Strukton Civiel Noord & Oost, an expert in rail and civil engineering works to develop a flexible hydrogen filling station with electric charging capabilities for off-grid locations.

While most hydrogen filling systems and (fast) battery charging systems are targeting densely populated area's or highways, there are no solutions for rural areas. The main challenge in such areas is that the power grid is underdeveloped and not suitable for charging battery electric vehicles, let alone generating hydrogen from the grid by electrolysis. In these areas the gas network is usually adequate enough to provide the energy for both functions.

In this project, an off-grid Filler-Charger system will be developed and tested. The system will be refuelling Fuel Cell powered vehicles (FCEV) and battery powered vehicles (BEV) without a connection to the electricity grid.

Tapping into the expertise of the consortium, Nedstack will develop the fuel cell system to produce electricity for fast charging battery vehicles while Strukton Civiel Noord & Oost will design the overall filling/charging station. And HyGear will leverage on its experience in Steam Methane Reforming (SMR), to generate hydrogen for the filling station as well as the fuel cell system, where it is converted to power for fast charging. The new system will be equipped with pre combustion CO_2 capture and liquefaction in order to assure no local emissions occur.

The ultimate objective of this project is to make cost-effective hydrogen filling and fast charging solutions available throughout the world, without limitations imposed by existing infrastructures

"This project is a great example of the opportunities created by cooperation in the clean energy sector. By combining the known-how of the partners into an energy solution that puts minimal demands on the existing infrastructure, we are creating solutions that can boost the energy transition," says Jos Lenssen, CTO of Nedstack

"We see developments of hydrogen refuelling and electric charging in the 'automotive sector' following each other at a rapid pace and realize that this also has consequences for the infrastructure of tomorrow. We see it as a great task to work on this with Hygear and Nedstack," says Niek van Bentheim, Project Manager at Strukton Civiel Noord & Oost

‘It is a pleasure to work with strong partners like Nedstack and Strukton where we can combine their strengths and our world-leading hydrogen solutions. This partnership is recognized by the East Netherlands Development Agency to deliver new energy solutions in off-grid and low-grid areas,” comments Ellart de Wit, CTO of HyGear.

This project is supported by the European Fund for Regional development (EFRO) under the Op.Oost program with an amount of €1,950,000.

About HyGear
HyGear’s mission is to establish local hydrogen sources globally. The company developed cutting-edge technologies for on-site generation of industrial gases and recycling of spent gases from the end-user’s process. By combining these technologies with traditional supply methods, HyGear guarantees the most optimal hydrogen supply in terms of cost, reliability and environmental impact. These services are provided in the existing industrial gases market as well as the upcoming market of hydrogen energy.

HyGear has offices in The Netherlands and Singapore. The company is listed on the Dutch NPEX stock exchange (HYG). For more information, www.hygear.com.

About Nedstack
Nedstack is a Dutch independent, and one of the world’s leading, fuel cell manufacturer, producing Proton Exchange Membrane (PEM) fuel cells for PEM power plants, the market for heavy duty transport, as well as marine applications. Founded in 1998 as a spin-off of Akzo Nobel, Nedstack has been able to deploy significant numbers of PEM fuel cell stacks in the world, gaining extensive experience on PEM fuel cell operation for different applications. Nedstack has shown very long lifetimes of their products in PEM power plants.

To know more about Nedstack, visit www.nedstack.nl

About Strukton
Strukton is a Dutch contractor. Our mission is to contribute to the safety, quality and sustainability of rail transport, road infrastructure and technical installations and buildings. That means developing technologies and integrating solutions. It also encourages clients to choose contract forms with room for innovation. We stand for a careful, honest and sustainable way of doing business and want to stimulate the sector in this. We combine this way of doing business with attention to functionality, quality, longevity and good value for money.

To know more about Strukton, visit www.strukton.com