



Press release

November 23, 2021

Neste, ENGIE and partners of the MultiPLHY project proceed into execution phase, aiming to demonstrate production of green hydrogen at Neste's Rotterdam refinery



Photo: Neste Corporation

The MultiPLHY project started in early 2020 and since then the conceptual design has been completed while detailed engineering is being finalized. In the next phase, Neste will proceed with the construction works. In addition to Neste and Sunfire, the MultiPLHY consortium partners include CEA, a French public research organization; Paul Wurth, an engineering company and technology provider; ENGIE, a global reference in low-carbon energy and services.

“As part of Neste’s growth strategy we continue to focus on innovation, in which renewable hydrogen and Power-to-X are two of our key development areas. Demonstrating green hydrogen production at our Rotterdam refinery within the MultiPLHY project is one of the



initiatives enabling us to further drive the development of new sustainable technologies,” says Lars Peter Lindfors, Senior Vice President of Innovation at Neste.

Demonstrating the high-temperature electrolyzer technology is an important step forward in the field of Power-to-X. In the scope of the project, electrolysis company Sunfire will supply the multi-megawatt electrolyzer based on the innovative SOEC (solid oxide electrolysis cell) technology, operating at high temperatures of 850 °C. Due to the utilization of heat, the high temperature electrolyzer requires significantly less electricity to produce one kilogram of green hydrogen.

"We look forward to realizing the implementation and commissioning of our SOEC electrolyzer. Together with the strong MultiPLHY consortium, we will demonstrate an innovative solution on how the refining industry can become more sustainable," says Sunfire CEO Nils Aldag.

“Renewable hydrogen is an essential low-emission technology for the decarbonization of industrial processes. Accelerating concrete hydrogen projects, like MultiPLHY, is key to identifying potential disruptors and making this SOEC technology operationally and commercially viable at scale,” says Michèle Azalbert, Managing Director at ENGIE Green Hydrogen.

The MultiPLHY project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 875123. This Joint Undertaking receives support from the European Union’s Horizon 2020 research and innovation programme, Hydrogen Europe and Hydrogen Europe research.

About ENGIE

Our group is a global reference in low-carbon energy and services. Together with our 170,000 employees, our customers, partners and stakeholders, we are committed to accelerate the transition towards a carbon-neutral world, through reduced energy consumption and more environmentally-friendly solutions. Inspired by our purpose (“raison d’être”), we reconcile economic performance with a positive impact on people and the planet, building on our key businesses (gas, renewable energy, services) to offer competitive solutions to our customers.

Turnover in 2020: 55.8 billion Euros. The Group is listed on the Paris and Brussels stock exchanges (ENGI) and is represented in the main financial indices (CAC 40, Euronext 100, FTSE Eurotop 100, MSCI Europe) and non-financial indices (DJSI World, DJSI Europe, Euronext Vigeo Eiris - Eurozone 120/ Europe 120/ France 20, MSCI EMU ESG, MSCI Europe ESG, Stoxx Europe 600 ESG, and Stoxx Global 1800 ESG).

ENGIE HQ Press contact:

Tel. France: +33 (0)1 44 22 24 35

Email: engiepress@engie.com

 [ENGIEpress](https://twitter.com/ENGIEpress)

Investor relations contact:

Tel.: +33 (0)1 44 22 66 29

Email: ir@engie.com

ENGIE Headquarters

Tower T1 - 1 place Samuel de Champlain - Faubourg de l'Arche - 92930 Paris La Défense cedex - France

ENGIE – A PLC WITH CAPITAL OF 2 435 285 011 EUROS - RCS NANTERRE 542 107 651 - Tel. +33 (0)1 44 22 00 00

[engie.com](https://www.engie.com)



Neste in brief

Neste (NESTE, Nasdaq Helsinki) creates solutions for combating climate change and accelerating a shift to a circular economy. We refine waste, residues and innovative raw materials into renewable fuels and sustainable feedstock for plastics and other materials. We are the world's leading producer of renewable diesel and sustainable aviation fuel, developing chemical recycling to combat the plastic waste challenge. We aim at helping customers to reduce greenhouse gas emissions with our renewable and circular solutions by at least 20 million tons annually by 2030. As a technologically advanced refiner of high-quality oil products with a commitment to reach carbon-neutral production by 2035, we are also introducing renewable and recycled raw materials such as waste plastic as refinery raw materials. We have consistently been included in the Dow Jones Sustainability Indices and the Global 100 list of the world's most sustainable companies. In 2020, Neste's revenue stood at EUR 11.8 billion, with 94% of the company's comparable operating profit coming from renewable products. Read more: neste.com

Further information:

Lars Peter Lindfors, Senior Vice President, Innovation. Please contact Neste's media service, tel. +358 50 458 5076 / media@neste.com (weekdays from 8:30 a.m. to 4:00 p.m. (EET)).

About Sunfire

Sunfire is a global leader in the development and production of industrial electrolyzers based on alkaline and solid oxide (SOEC) technologies. With its electrolysis solutions, Sunfire is addressing a key challenge of today's energy system: Providing renewable hydrogen and fuels from renewable electricity, water, and CO₂ as climate-neutral substitutes for fossil energy. Sunfire's innovative and proven electrolysis technologies enable the transformation of carbon-intensive industries that are currently dependent on fossil-based oil, gas, or coal. The company employs more than 270 people located in Germany, Norway, and Switzerland. For further information please visit www.sunfire.de

About CEA

The CEA is a French public research organization, working in four main areas: energy transition (nuclear and renewable), digital transformation for industry, future health technologies, defense and security. Based on an excellent fundamental research, the CEA participates in the organization of cooperation projects with a wide range of academic and industrial partners. It also carries out sovereign missions, entrusted by the French State. The CEA is the only French research organization in the Top 100 of the innovation players in the world, according to the Clarivate ranking (2018) and the leading research organization filing patents in France and Europe.

With its 20,000 employees and its research centers with impressive infrastructures, the CEA is a major player in European research and is strengthening its international presence where it supports the deployment of French innovative companies.

Its Institute CEA-Liten, employing 1000 people, is fully dedicated to the activities on new technologies for renewable energy and energy efficiency. It is involved in various national and EU research and demonstration projects related to high temperature electrolyzers and/or fuel cells (SOEC/SOFC) and their integration on the electric system in presence of large renewable energy sources.

Further information at www.liten.cea.fr

About Paul Wurth

Headquartered in Luxembourg, the Paul Wurth Group can look back on 150 years of excellence, during which the firm has developed into an international engineering company and an established technology provider for the global ironmaking industry. Paul Wurth is a leading market player for the design and construction of complete blast furnace and coke oven plants. Direct reduction plants, environmental protection solutions and recycling technologies complete Paul Wurth's product portfolio. Presently, the company is focusing on the development of innovative solutions for leading the transformation of the steel industry towards carbon-free steel production. With more than 1500 employees, Paul Wurth is active worldwide, operating entities and affiliated companies in the main iron and steelmaking regions of the world. Paul Wurth is a member of SMS group. Further information at www.paulwurth.com