

PRESS RELEASE

Paris, September 14, 2023

## Air Liquide takes a further step in developing the hydrogen sector in France:

- investment of over 400 million euros to build its Normand'Hy electrolyzer to contribute to the decarbonization of the Normandy industrial basin and mobility
- signature of an agreement with TotalEnergies to supply their Gonfreville refinery with renewable and low-carbon hydrogen.

On the occasion of the signing of a Memorandum of Understanding to supply the TotalEnergies refinery in Gonfreville, Normandy, France, with renewable and low-carbon hydrogen, Air Liquide announces an investment of over 400 million euros for the construction of its Normand'Hy electrolyzer, with a capacity of 200 MW. The cooperation between Air Liquide and TotalEnergies is part of the development of a renewable and low-carbon hydrogen sector on the *Axe Seine*, to contribute to decarbonizing industry in the Normandy region.

As part of this agreement, the <u>Air Liquide Normand'Hy</u> electrolyzer will deliver to TotalEnergies' refinery in Gonfreville, over the long term, from the second half of 2026, renewable and low-carbon hydrogen equivalent to an electrolysis capacity of 100 MW. The remaining 100 MW will be dedicated to customers in the Normandy industrial basin, as well as for the development of low-carbon mobility.

To supply Air Liquide Normand'Hy, TotalEnergies will generate up to 100 MW renewable electricity to power the electrolyzer, volume corresponding to the hydrogen delivered to its refinery. For the remainder of the electrolyzer's electricity needs, Air Liquide plans to sign long-term renewable Power Purchase Agreements (PPA), completed with low-carbon energy from the French power grid.

Air Liquide Normand'Hy is the largest PEM electrolyzer ever built. Based on Proton Exchange Membrane (PEM) electrolysis technology, it will integrate equipment produced in the framework of the joint venture between Air Liquide and Siemens Energy. Avoiding up to 250,000 tons of CO<sub>2</sub> emissions per year, it will be located in the Port-Jérôme industrial zone in Normandy, France, and will be part of Air Liquide's local hydrogen network<sup>1</sup>.

Air Liquide Normand'Hy will represent an investment of over 400 million euros for the Group. Within the framework of the Important Project of Common European Interest (PIIEC) approved by the European Commission, the project has received the support of the French government for an amount of 190 million euros, as part of the *"Plan de Relance"*.

**Pascal Vinet**, Executive Vice President and a member of Air Liquide's Executive Committee, supervising notably Europe Industries activities, stated: *"This Memorandum of Understanding with TotalEnergies illustrates our ability to offer concrete decarbonization solutions to our customers. Air Liquide Normand'Hy will contribute to the decarbonization trajectory of our assets; it is also in line with our commitment to accompany the industry and mobility sectors in their path to reducing their carbon footprint. Our collaboration with TotalEnergies also strengthens hydrogen development in Normandy. Supported by the French State and the European Union, the Air Liquide Normand'Hy project confirms our commitment to develop renewable and low-carbon hydrogen production by electrolysis technology at industrial scale."* 

**Bernard Pinatel**, President, Refining & Chemicals, TotalEnergies, added: *"This partnership with Air Liquide marks a new stage in TotalEnergies' ambition to decarbonize the hydrogen consumed by its refineries in Europe by 2030. By powering the electrolyzer with renewable electricity from solar and wind projects, TotalEnergies is leveraging its position as an integrated electricity player."* 

<sup>&</sup>lt;sup>1</sup> The Air Liquide network already includes two production units - the hydrogen unit at the TotalEnergies refinery in Gonfreville and the hydrogen unit at Port-Jérôme, where the Group has installed its  $CO_2$  capture solution Cryocap<sup>TM</sup>.



As part of the Hy2Use Major Project of Common European Interest (PIIEC) approved by the European Commission, the project has received support from the French government to the tune of 190 million euros, financed by the European Union - Next generation EU and by the French government as part of France 2030 and the *"Plan de Relance"*.



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A world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 73 countries with approximately 67,100 employees and serves more than 3.9 million customers and patients. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide's scientific territory and have been at the core of the company's activities since its creation in 1902.

Taking action today while preparing the future is at the heart of Air Liquide's strategy. With ADVANCE, its strategic plan for 2025, Air Liquide is targeting a global performance, combining financial and extra-financial dimensions. Positioned on new markets, the Group benefits from major assets such as its business model combining resilience and strength, its ability to innovate and its technological expertise. The Group develops solutions contributing to climate and the energy transition—particularly with hydrogen—and takes action to progress in areas of healthcare, digital and high technologies.

Air Liquide's revenue amounted to more than 29.9 billion euros in 2022. Air Liquide is listed on the Euronext Paris stock exchange (compartment A) and belongs to the CAC 40, CAC 40 ESG, EURO STOXX 50, FTSE4Good and DJSI Europe indexes.

www.airliquide.com