

Air Liquide enters a long-term partnership to secure its supply of helium-3

Air Liquide has entered into a long-term agreement with Laurentis Energy Partners, a leader in the clean-energy industry, to produce and distribute helium-3 (^3He). This molecule is a rare isotope of helium used in quantum computing, quantum science, astrophysics, neutron detection, medical imaging and, in the future, fusion. Thanks to this new partnership, Air Liquide will be able to deliver large quantities of helium-3 to its customers around the world.

Laurentis Energy Partners will extract helium-3 as a by-product of the energy produced by the Darlington power generating station in Canada. As an expert in gas management and extreme cryogenics, Air Liquide will purify the molecule, then package and distribute it to its customers globally. The production will start by the end of this year.

Helium-3 is a very rare and stable isotope of helium. Compared to the most common isotope (helium-4), helium-3 has unique physical properties, such as a lower liquefaction temperature. Thanks to this, helium-3 has a wide range of applications, from neutron detection for security gates to deep science where helium-3 allows to reach temperatures close to absolute zero. In particular, helium-3 is necessary to produce the ultra cold required by quantum computers that harness quantum physics to process exponentially more data compared to classical computers. The promise of quantum computing is accelerated development in many fields including the search for new drugs, the discovery of new materials, and even cyber defense. As a medical isotope, He-3 can also be used to produce highly detailed Magnetic Resonance Imaging (MRI) of airways in the lung.

Emilie Mouren-Renouard, Member of the Air Liquide Executive Committee, in charge of Innovation, Digital and IT, Intellectual Property and the Global Markets & Technologies World Business Unit, said: ***"One year after the acquisition of CryoConcept, specialized in technologies allowing to reach very low temperatures (close to absolute zero), this major agreement reinforces our core competencies when it comes to extreme cryogenics and deep tech, and illustrates our ambition to push back the frontiers of science. In particular, it enables us to offer our customers an ever more comprehensive range of products and services including helium-3 rare gas. It also confirms the willingness of Air Liquide to take part in the growing market driven by the quantum revolution and serve customers leveraging its expertise in the field of ultra low temperatures."***

Global Markets & Technologies

The GM&T World Business Unit delivers technological solutions - molecules, equipment and services - to support the markets of energy transition and deep tech, in order to drive Air Liquide sustainable growth. GM&T employs 2,200 people worldwide, and generated a 2020 revenue of 579 million euros.

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A world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 78 countries with approximately 64,500 employees and serves more than 3.8 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.

Air Liquide's ambition is to be a leader in its industry, deliver long term performance and contribute to sustainability - with a strong commitment to climate change and energy transition at the heart of its strategy. The company's customer-centric transformation strategy aims at profitable, regular and responsible growth over the long term. It relies on operational excellence, selective investments, open innovation and a network organization implemented by the Group worldwide. Through the commitment and inventiveness of its people, Air Liquide leverages energy and environment transition, changes in healthcare and digitization, and delivers greater value to all its stakeholders.

Air Liquide's revenue amounted to more than 20 billion euros in 2020. Air Liquide is listed on the Euronext Paris stock exchange (compartment A) and belongs to the CAC 40, EURO STOXX 50 and FTSE4Good indexes.