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Paris, March 9th, 2023

Reference: your letter dated 28/02/2023.

Dear ShareAction group,

We acknowledge receipt of your letter dated 28/02/23. We appreciate your attention to this most serious subject and agree that the urgency of action to tackle the threat climate change poses is intensifying. In this letter, we will address your 3 requests and shed light on the actions implemented by the Group to decarbonize its value chain.

As you may be aware, in March 2022, Air Liquide unveiled its 2025 strategic plan - ADVANCE, which places Sustainable Development at the heart of the Group's strategy and firmly sets Air Liquide on course for a comprehensive performance by combining financial performance and extra-financial performance. In addition to the financial targets (5-6% growth in sales and >10% ROCE by 2023), the Group remains resolutely committed to continue reduction of its carbon emissions intensity, as well as begin reducing its absolute CO2 emissions around 2025 on a path to achieve 33% reduction in absolute emissions by 2025 and carbon neutrality by 2050. This will be enabled by a significant increase in investments (16 Bn Euro during 2022-25), of which ~50% will be dedicated to energy transition.

(1) Will the company set an intermediate scope 3 target covering both upstream and downstream emissions that is consistent with 1.5°C low/no overshoot pathways?

We recognize that decarbonizing our entire value chain - upstream, our own operations, and downstream - is critical for achieving Net Zero targets by 2050. In 2022, we achieved a major milestone with SBTi validating our 2035 CO2 trajectory as qualified and aligned with climate science. As we prepare our Net Zero targets (which are consistent with 1.5 degree pathway, and cover all scopes, including Scope 3 emissions), we are participating in the SBTi led Expert Advisory Group (EAG) to develop a Sector Decarbonization Approach (SDA) for the chemical sector. This project sets out to develop standardized methods and best practices for emissions accounting and target setting, with a focus on critical Scope 3 categories, for the chemical industry, which has many heterogeneous, yet interconnected subsectors. We believe that the output of this project will inform and guide the structuring of our Scope 3 objectives using globally harmonized accounting practices.

Since 2020 we account for and report our Scope 3 emissions across the different categories, with increasing accuracy and rigor, and to progressively start taking objectives on relevant categories of such emissions. Noteworthy is our first Scope 3 objective that we have undertaken in 2022 to address CO₂ emissions downstream of our operations. Recognizing that our ability to decarbonize our customers' operations will require close partnerships and selectivity, we have set the objective to have 100% of Top 50 customers committed to 2050 Carbon neutrality by 2035 (75% by 2025).

We remain committed to setting objectives for additional Scope 3 categories as the standard methodologies specific to the chemical sector become available from SBTi's work group.

- (2) Will the company set out and disclose a plan over the short, medium and long term, with intermediate targets, to;
- A) phase in electrified chemical production processes, with the aim of transitioning to 100% electrified processes by 2050 (whether for your own production or where enabling third party production); and
 - B) increase energy consumption from renewable energy sources, with the aim of transitioning to 100 per cent renewable energy by 2050 (whether for your own production or where enabling third party production)?

Our assets for production of air gases are already >95% electrified. The only exception are a select few steam driven ASUs (Air Separation Units) which are integrated into customers' process, and for which we are building progressive electrification plans (with investment decisions taken in 2022), working closely with the customers, with an aim to achieve 100% electrification by 2050 for air separation processes.

As for hydrogen, the main current production process is based on reforming natural gas. The Group is developing electrification of the hydrogen production through the development of electrolysis. In that respect, we have already started electrolysis plants with increasing capacity, such as the [Becancour 20 MW plant](#) (Canada) started in 2021 and larger projects under development have been announced, such as the [Normand'Hy](#) (200 MW, France) or the [Elygator and CurtHyl](#) (200 MW each, The Netherlands) projects. In March 2021 we set an objective to invest in 3 GW of electrolysis projects by 2030.

Procuring massive volumes of renewable energy is a key pillar of our decarbonization plan, and the Group has been making significant progress on this front. Since the availability, accessibility and affordability of renewable energy will require significant infrastructure and regulatory developments, we are contributing to its development by signing Power Purchase Agreements (PPAs). By sourcing renewable electricity directly from the producers of new capacities with our long-term PPAs, we foster investment from energy producers and we are contributing to greater renewable electricity availability around the world. In 2022, we signed 4 major PPAs, such as the 115 MW [PPA with Vattenfall](#) for offshore wind in the Netherlands, and the [PPA jointly signed with Sasol](#) in South Africa to procure renewable power from Enel Green Power for a total capacity of 220 MW, representing 1.1 TWh of renewable electricity available for our operations when these projects are completed. In February 2023, we announced the signing of [another PPA with Sasol](#) in South Africa for a total capacity of 260 MW of renewable energy.

- (3) *Will the company set out and disclose a plan over the short, medium and long term, with intermediate targets, to phase in non-petrochemical feedstocks that are emissions-neutral over their entire lifecycle, with the aim of transitioning to 100 % emissions-neutral feedstocks by 2050?*

First, it is important to recall that Air Liquide's business and operations are in a very specific subsector (industrial gases) within the broader chemical sector. As such, it has a limited set of products and inputs, with a very limited share of petro-chemical inputs in our operations.

For production of air gases such as nitrogen, oxygen and argon, the primary feedstock are air and electricity. Therefore, transitioning to renewable energy for such production remains our primary focus. For production of hydrogen, while the classical process utilizes natural gas (in the Steam Methane Reforming - SMR - process), the emergence of large-scale electrolysis of water using renewable electricity is seeing increased adoption. Air Liquide commissioned the first 20 MW PEM (Proton Exchange Membrane) electrolyzer in Becancourt, Canada in 2021, and has recently been selected by the European Innovation Fund for two large scale electrolyzer projects in Europe (Normand'Hy in France, CurtHyl and Elygator projects in the Netherlands, each with a capacity of 200 MW). While we see electrolysis as the future of hydrogen production, we are also committed to reducing the footprint of existing natural gas based production units by either using alternative feedstock such as biomethane, or by using carbon capture (where biomethane availability is limited). It should be noted that as the only Industrial Gas company producing biomethane, Air Liquide is a fully committed and an active contributor to the sustainable development of alternative feedstock fuels.

If you wish additional information, details of our [ADVANCE strategic plan](#) and our 2021 [Corporate Sustainability Report](#) (2022 report will be available on March 24, 2023) are available on our website for public observation.

Yours faithfully,



François Jackow
Chief Executive Officer

