

Green Bond Allocation & Impact Reporting 2022



May 2022

“ The success of this inaugural green bond issuance illustrates the investors’ confidence in **Air Liquide’s ability to implement projects that will contribute to building a sustainable future**. It is in line with the ambitious sustainable objectives we announced in March, particularly in terms of reducing CO₂ emissions, and will allow us to materialize them. With the ambition to become a regular issuer of sustainable bonds, Air Liquide is more than ever committed to put performance and ESG at the heart of its growth strategy. ”



©Mourad Mokrani

Fabienne Lecorvaisier (May 2021), Executive Vice President and member of Executive Committee, in charge of Sustainable Development, Public and International Affairs, the supervision of Societal Programs and General Secretariat

Highlights:

€500m issued in
May 2021

10 year maturity

0.375%
coupon rate

17 green projects
financed

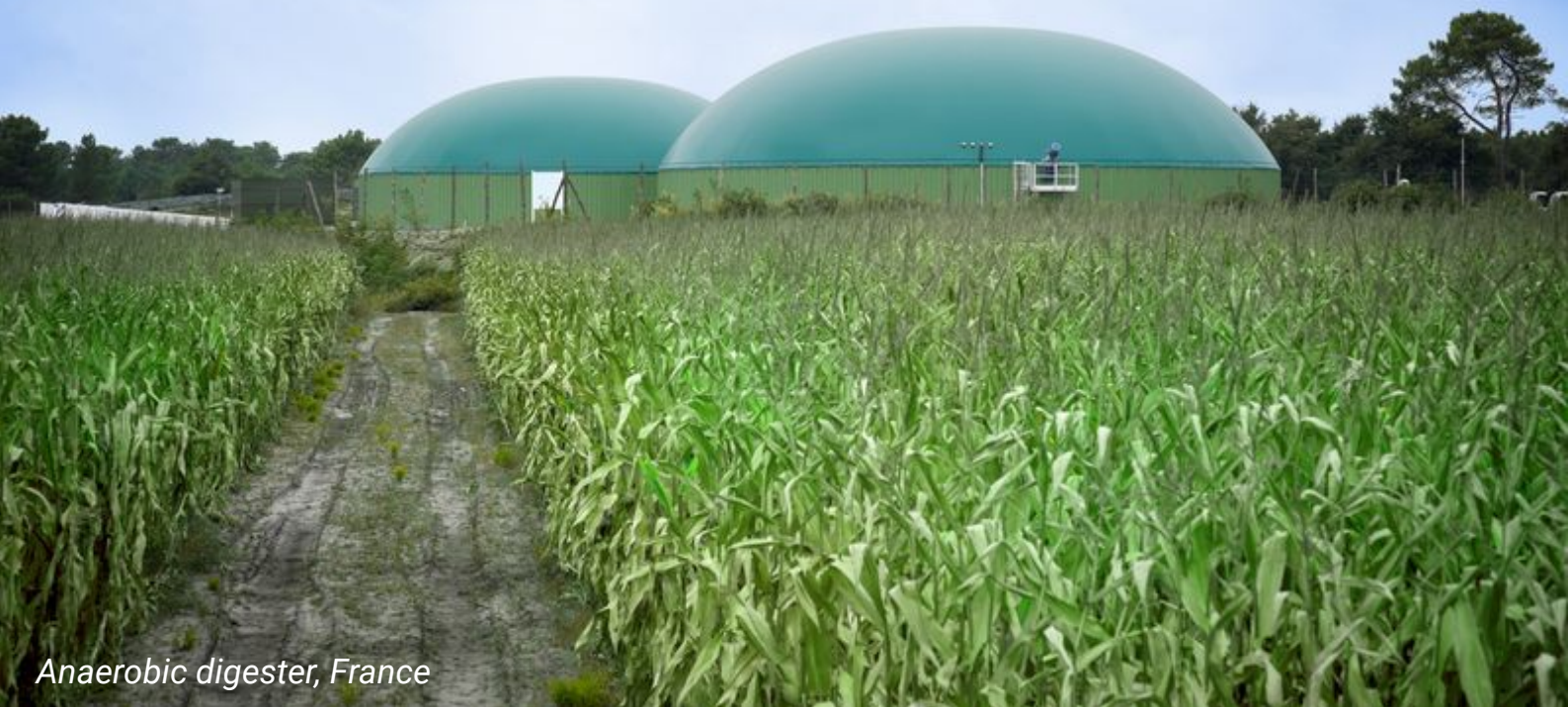
€403m allocated as
of 31 December 2021

101 investors of which
66% Green



Becancour PEM electrolyzer, Canada

Content



Anaerobic digester, France

1	Air Liquide's Sustainable Business and Financial Strategy	p. 4-7
2	Sustainable Financing Framework at a glance	p. 8-9
3	Inaugural Green Bond Issuance Summary	p. 10
4	Allocation Reporting	p. 11-12
5	Impact Reporting	p. 13
6	Case Studies	p. 14-16
	<i>Independent limited assurance report</i>	<i>p. 17-19</i>

1 Air Liquide's Sustainable Business and Financial Strategy

Air Liquide as a pioneer



AL issues the **first ISR bond** ever to finance Healthcare acquisitions of LVL and Gasmedi.

2012

AL links its **2.5 €bn** Syndicated Credit Facility to three **ESG KPIs**.

2019

March - AL presents its plan for a sustainable future
- First Air Gases corporate to announce **carbon neutrality objective** for 2050.

2021

May - AL releases its **Sustainable Financing Framework** and issues its first **€500m green bond**.

March - AL presents **ADVANCE**, its new **strategic plan** for 2025 combining **financial and extra-financial performance**.

2022

May - AL publishes its first **Green Bond Allocation and Impact reporting**.

CO₂ emissions start decreasing in absolute value

2025

30% reduction in carbon intensity

2035

33% reduction in CO₂ absolute emissions (Scope 1 & 2)

2050

Reach **Carbon Neutrality by 2050**

1 Air Liquide's Sustainable Business and Financial Strategy

Extra financial performance

- ★ Air Liquide is recognized and placed in the **top quartile of most leading extra financial ratings agencies**.
- ★ The ratings obtained by the Group in 2021 confirm its ranking as the **leader in its industry on environmental issues**.

Air Liquide has been recognized by Sustainalytics as an **"ESG Industry Top Rated"** company. Sustainalytics has assessed Air Liquide as being at **low risk** of experiencing material financial impacts related to ESG factors.

 SUSTAINALYTICS
Top rated

For the fourth consecutive year, Air Liquide has been named on the Carbon Disclosure Project's (CDP) **"A Leadership"** level, scoring **A-** for climate change and **A-** for water security.


A-


A

Air Liquide's **A** rating in the MSCI indices places it in the **top 22%** of responding companies.

For the fifth consecutive year, Air Liquide has been awarded a **gold medal** by EcoVadis.




C+

The **C+** rating awarded by ISS places Air Liquide in the **top 10%** of companies in the running for this rating and gives it ISS "Prime" status.



In January 2022, the French Sustainable Investment Forum and A2 Consulting awarded Air Liquide the **Best Progress Award** for its Vigilance Plan published in 2021, after an assessment by a multistakeholder jury of the plans of CAC 40 companies.

3 pillars of our engagement



1 Air Liquide's Sustainable Business and Financial Strategy

Focus on Low-carbon Society



Air Liquide's CO₂ emissions

15.5
Mt CO₂⁽¹⁾

Scope 1 – direct emissions generated by Air Liquide operations

20.8
Mt CO₂

Scope 2 – indirect emissions related to the production of electricity or steam purchased by the Group

22.2
Mt CO₂

Scope 3 – other indirect emissions related to the life cycle of products purchased and sold by Air Liquide

Avoided emissions

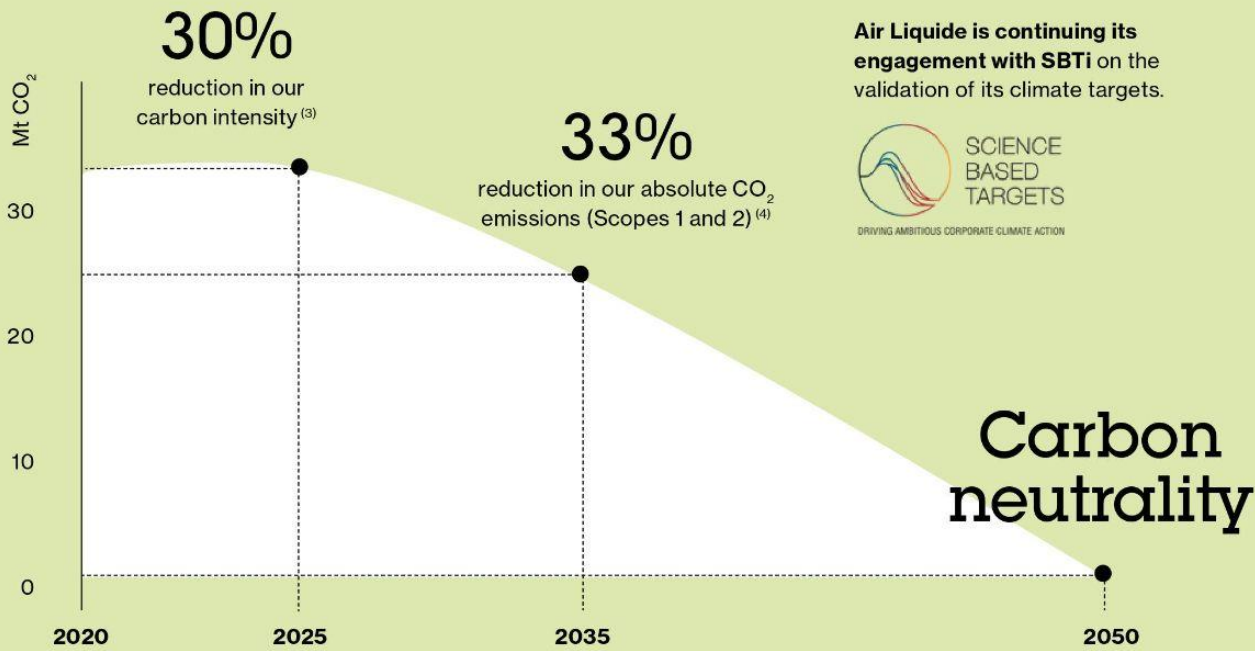
Avoided emissions are emissions reductions achieved by activities, products or services that emit lower volumes of greenhouse gases than would have been emitted in a reference scenario.

15.1
Mt CO₂

Avoided emissions through efficiencies in our assets and through Air Liquide's applications at customers' sites

79.3
Mt CO₂

Avoided emissions including the application of hydrogen in the production of ultra-low sulfur diesel⁽²⁾



3 GW⁽⁵⁾
of **Electrolyzer capacity** by 2030

~€8bn
Invested in the **hydrogen supply chain** by 2035

(1) Million tonnes of CO₂-equivalent
 (2) This application avoids carbon black emissions, which can contribute to global warming
 (3) Versus 2015, in kg CO₂-equivalent/euro EBITDA
 (4) Versus 2020
 (5) Gigawatts







2 Sustainable Financing Framework at a glance

Overview Of Air Liquide's Green projects

In line with its sustainability strategy and its new '**ACT for a Sustainable future**' program published in 2021, Air Liquide published in May 2021 a Sustainable Financing Framework aligned with best market practices to finance sustainable projects with a **clear benefit to environment (green projects) and society (social projects)**.

Air Liquide Green Eligible Projects are primarily capital expenditures but may also include maintenance costs, equity shares and investment in dedicated funds as well as R&D and innovation expenses for projects related to the **Abatement of CO₂ emissions pillar of its ACT priorities**.

Presentation of the eligible project categories:

Biogas	 Air Liquide develops industrial systems designed to purify the biogas that comes from sanitary landfills or anaerobic digesters. The objective is to generate biomethane that is produced in compliance with clear sustainability criteria and is commercialized to displace fossil fuel.
Energy efficiency	 Air Liquide deploys new processes, implements digital tools and develops Smart Innovative Operations (SIO) to optimize the Group's energy consumption.
Air gases	 Through its outsourcing business model, Air Liquide implements highly efficient, state-of-the art technologies with reduced footprint and for the benefit of its customers.
Hydrogen	 Air Liquide deploys hydrogen production and supply technologies across the entire value chain, from production to storage, to distribution, to support the wider use of hydrogen in the Energy Transition.
Green buildings	 Air Liquide invests in buildings designed to reduce energy consumption and environmental impact. As part of our sustainable development approach, those buildings are aiming for high level of recognized certifications.
Carbon capture	 Air Liquide develops and deploys full range of carbon capture proprietary technologies that enable the customers in hard-to-abate sectors to decarbonize their operations.



The eligible categories listed above will generate positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 7, 9, 11 and 13.

2 Sustainable Financing Framework at a glance

Evaluation summary



A dedicated governance - The Air Liquide Sustainable Financing working group, which evaluates and selects the eligible projects, is chaired by the Group CFO and made up of various business heads from throughout the Company. This working group meets at least once a year plus once at the upstream of each new bond issuance.



Management of proceeds - Air Liquide's Treasury Department is in charge of the eligible proceeds tracking managed on a portfolio basis. The Sustainable Register including the amount of allocation per eligible project category is annually reviewed by the Sustainable Financing working group.



Reporting - Air Liquide hereby reports on its annual performance, both in terms of the allocation of funds and the positive impact achieved or expected. This reporting will provide an annual update until the full allocation of the proceeds.

Air Liquide Sustainable Financing Framework is aligned with the **Green Bond Principles** (2018), **Green Loan Principles** (2020), **Social Bond Principles** (2020), **Social Loan Principles** (2021) and **Sustainability Bond Guidelines** (2018).



SUSTAINALYTICS

"Sustainalytics is of the opinion that the Air Liquide Sustainable Financing Framework is robust and transparent. Sustainalytics is confident that Air Liquide is well-positioned to issue green, social, and sustainability bonds".

3

Inaugural Green Bond Issuance Summary

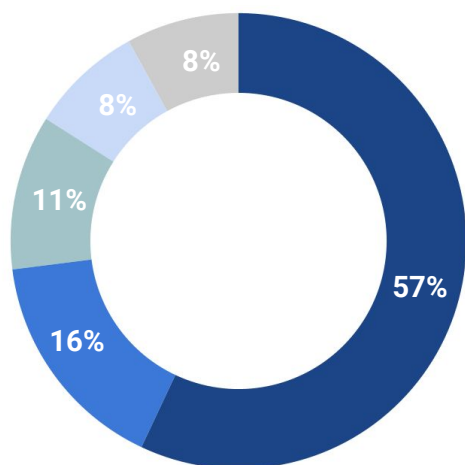
Key figures

In May 2021, after several days of roadshows presenting its Sustainable Financing Framework, Air Liquide successfully launched its **inaugural green bond issuance** with a **ten year maturity** and an **annual coupon of 0.375%**.

Issuer / Guarantor	Air Liquide Finance (the "Issuer"), guaranteed by L'Air Liquide S.A. (the "Parent Guarantor")
Form of Issue	Green bond Senior, Unsecured Global Notes
Documentation	EMTN programme
Active Bookrunners	Crédit Agricole, BNP Paribas, HSBC, Société Générale, Natixis
Tenor	10-year
Re-offer yield / Spread	0.461% / MS + 28bps
Indicative size	500m€
ISIN	FR0014003N69
Second Opinion	Sustainalytics

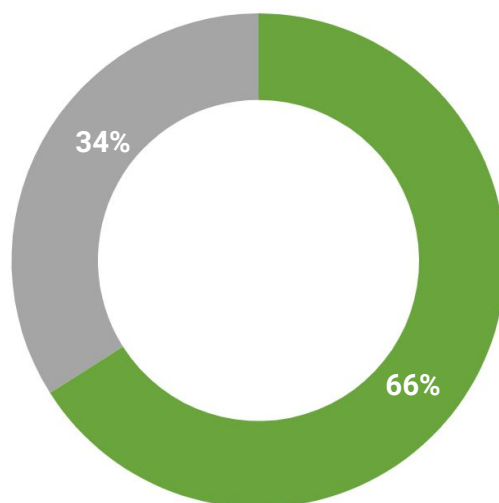
This new bond was largely **oversubscribed** (3.5x) and attracted a **majority of Green investors (66%)**, predominantly **Fund managers (57%)**. The purpose of this inaugural Green Bond is to contribute to the financing of the ambitious sustainable projects the Group announced on March 23, 2021 (*Sustainability day*) and reaffirmed on March 22, 2022 (*Capital Markets day*).

Investor profile



● Fund managers ● Insurers & PFs ● CBs & Ois
● Banks & PBs ● Corporates

Share of green investors

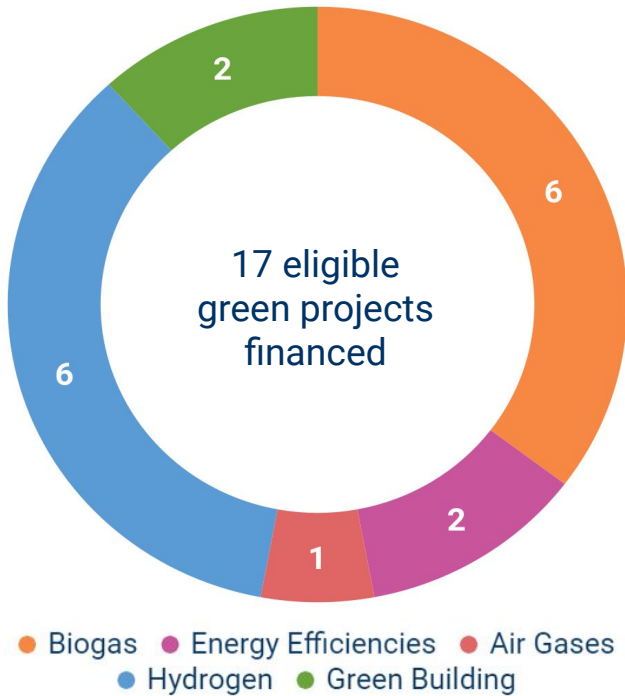


● Green investors ● Other investors

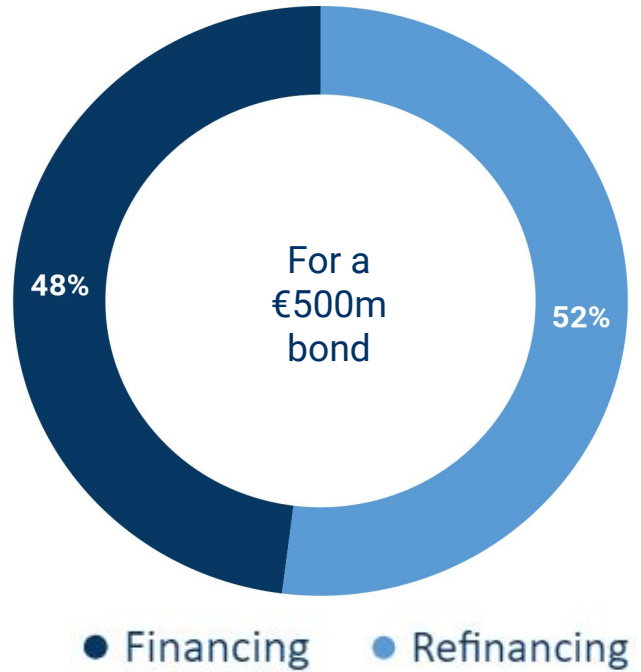
4 Allocation reporting

A Well Balanced Portfolio for Inaugural Green Bond

Number of project by category



Financing and Refinancing breakdown



17 Projects located all over the world



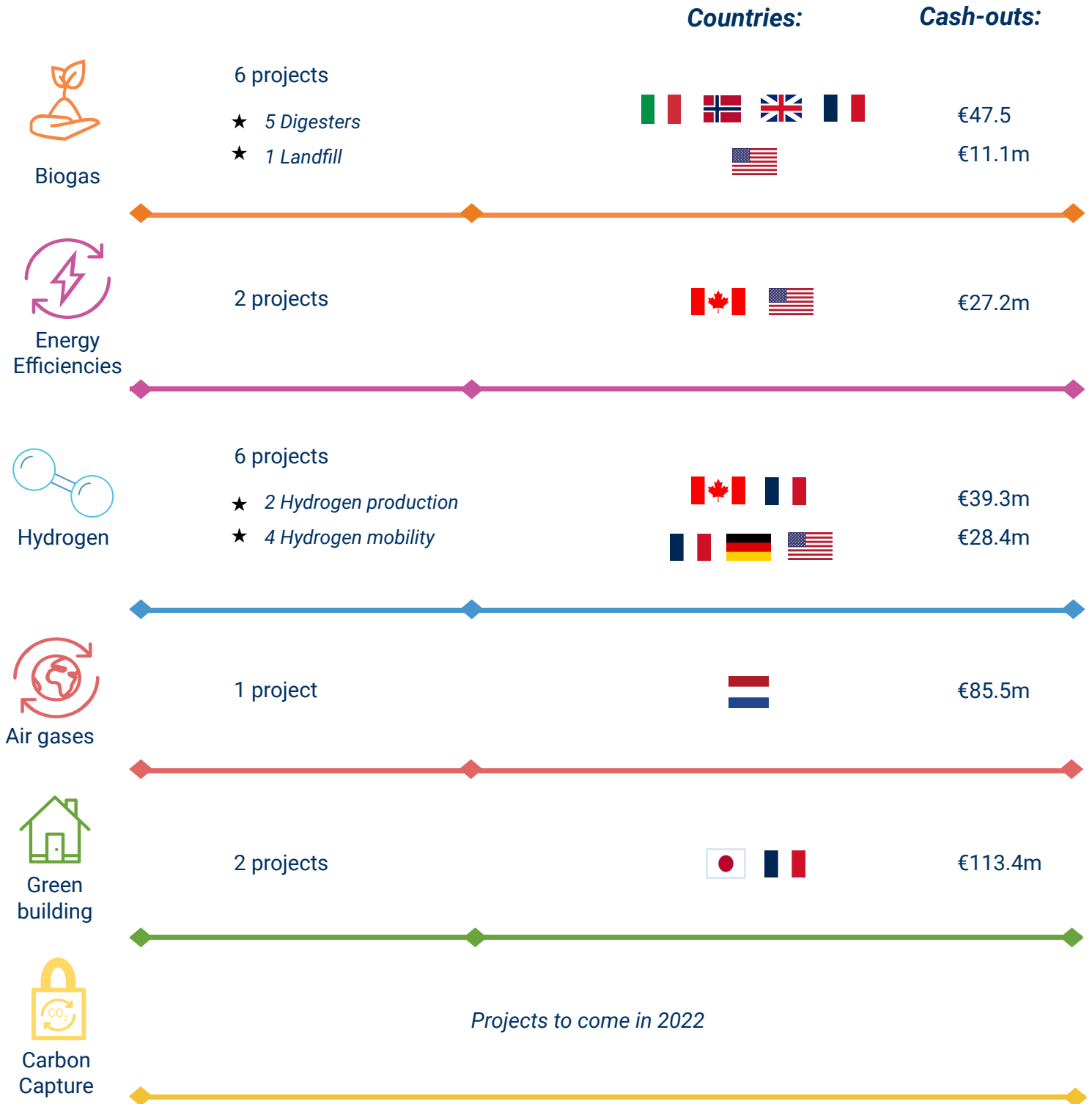
* Case studies of these projects bellow

4

Allocation reporting

€403m allocated as of December 31, 2021

As of 31 December 2021, **€403m** out of the €500m raised through the inaugural green bond have been allocated.



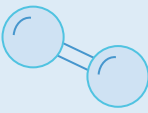




In addition, €50.6m were assigned to R&D OpEx for the above project categories, leading to a total amount allocated of **€403m** as of December 31, 2021.

5

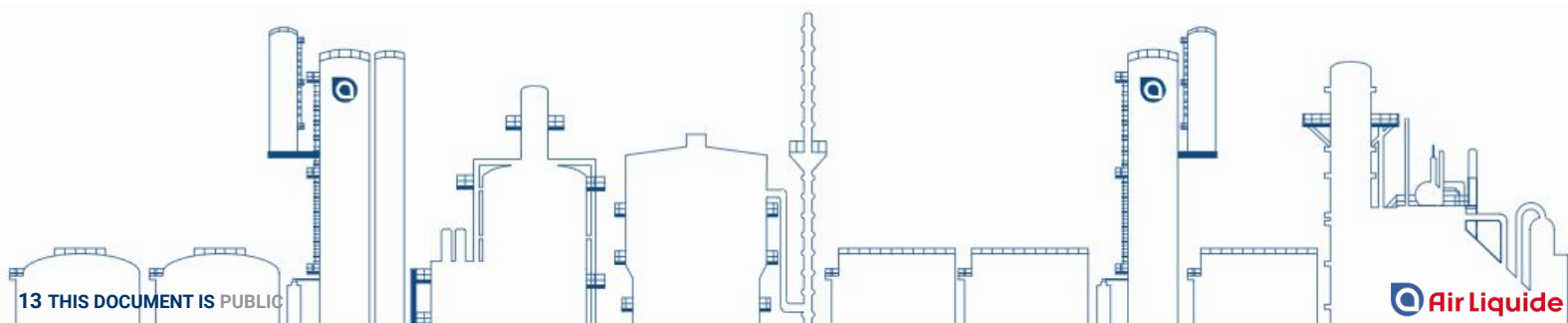
Impact reporting

Output indicators and CO2 emissions avoided by project

Eligible Project Category	Output indicator	Impact indicator Estimated CO2 emissions avoided*, when operating at nominal load
 Biogas	Annual production of biogas	520,300 MWh 104,060 tCO2eq/y
	Annual amount of landfill gas produced	135,000 MWh 21,700 tCO2eq/y
 Energy efficiencies	Annual reduction of energy consumption	17,520 MWh 7,008 tCO2eq/y
 Hydrogen	Annual hydrogen production	2,952 tH2 27,572 tCO2eq/y
	Number of HRS (Hydrogen Refuelling Station) installed	51 HRS 67,109 tCO2eq/y
 Air gases	Energy saving of the ASU	25,000 MWh 9,200 tCO2eq/y
 Green buildings	Surface area	23,000m2 983 tCO2eq/y

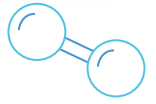
*Avoided emissions are the greenhouse gas emissions, expressed in tCO₂ equivalent, that are avoided by the financed projects (when feasible) ; they are estimated by comparing with a reference case for each category of project or, when a generic reference is not available, an estimate of savings based on energy savings realized.

Total:
237,632 tCO₂eq/y
avoided



6 Case studies - *Green Production*

Zoom on the Becancour electrolyzer, Canada



Over 1,500 tonnes of renewable hydrogen sold in 2021.



Capacity of **20 megawatts** powered by hydraulic energy



Production of up to 8.2 tonnes of renewable hydrogen per day



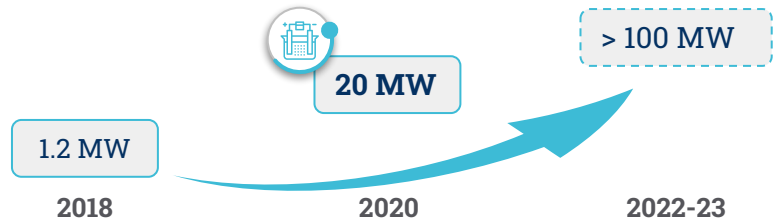
Integration in existing **AL basin**, with H₂ liquefier



For **industrial** use and **mobility**



The largest PEM (Proton Exchange Membrane) electrolyzer running on hydropower (started in Q4 2020).



Zoom on the Fontanella anaerobic digester, Italy

From tons of manure to fertilizer and truck fuel.



An Air Liquide investment in the **overall biomethane value chain**, in partnership with DIS, long term Air Liquide partner.



23 GWh/y biomethane capacity equivalent to the yearly consumption of 35 Heavy-Duty Vehicles .



Participates to make Air Liquide leader as producer and distributor of bioLNG in Lombardy and Veneto basins.

A circular economy project leading to transform agricultural wastes into a fertilizer and bioLNG valorized locally.

6

Case studies - *Core business efficiencies*

Zoom on Moerdijk Air Separation Unit (ASU)



1st world-scale oxygen production plant fit to accommodate renewable energy in the grid.



Production capacity of **2,200 tons** of oxygen per day



Highly efficient plant: 10% less electricity consumption



Built with the proprietary **solution Alive**



For **industrial, food and medical** markets



The first world-scale ASU for oxygen production with an energy storage system that helps facilitate more renewable energy on the electricity grid. This project illustrates Air Liquide's strategy to grow in strategic industrial basins, and the Group's ability to design and implement innovative solutions contributing to the energy transition.



Zoom on Hamilton Basin energy efficiencies

Improving site efficiency and CO₂ emissions through modernizing old equipment.



Site power consumption to decrease by **2MW**



Indirect CO₂ Emissions reduction by 1.3kt/y



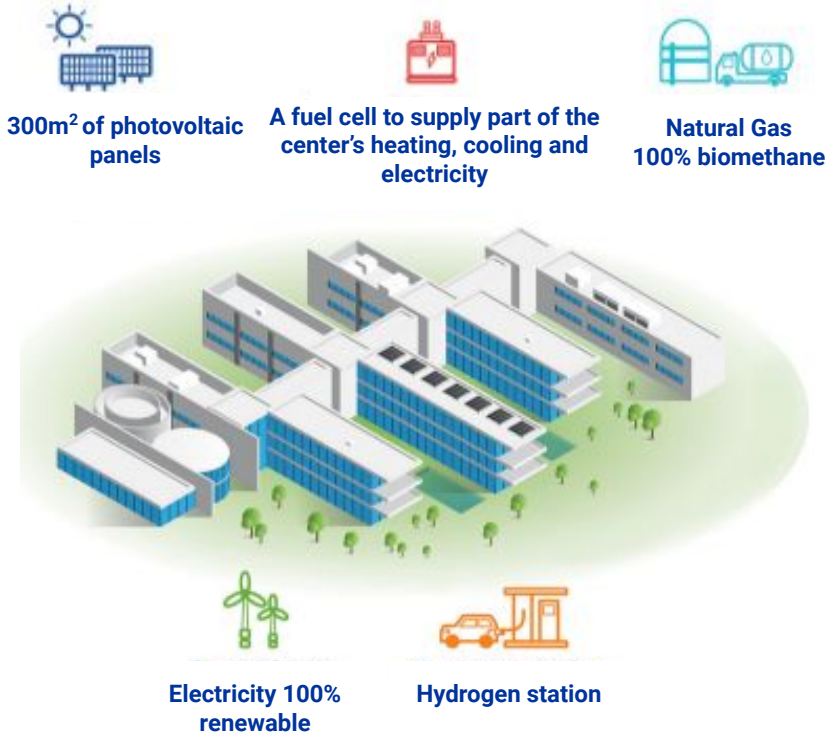
Energy Savings initiative recognized by the Ontario's independent Electricity System Operator

The installation of a new single compressor will reduce power consumptions and indirect CO₂ emissions along with increased compressor agility to avoid high cost energy peaks. In line with Group ambition and with Provincial Government support, the project is also enabling SIO readiness compressor configuration.

6 Case studies - *Innovation on ecosystems*

Zoom on Saclay innovation campus

Air Liquide's new Paris R&D Center has been fully renovated.

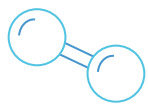


The facility is the Group's largest R&D Center and brings together almost 500 people, including 350 researchers, and **48 laboratories** as well as pilot platforms to design and test technologies at larger scale.



The R&D Center is also a **sustainable development innovation flagship**, as it is a high-performance energy building allowing to test new clean energies.

"Excellent" BREEAM certification



Zoom on H2M hydrogen refuelling stations

Invest, build and operate a network H₂ refuelling stations in Germany.

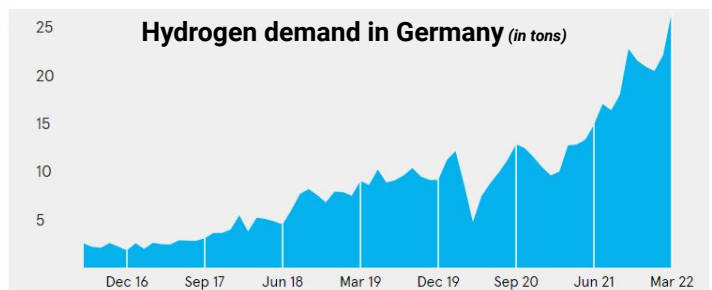


Air Liquide brings its **technology and experience** to support the deployment of hydrogen stations in Germany.



With the ramp-up of the number of vehicles, up to 400 hydrogen stations should ensure a nationwide supply (from 40 stations in operation in July 2018).

Air Liquide is involved in the entire hydrogen value chain. The Group has already installed 100 hydrogen stations worldwide.



Independent limited assurance report on the Identified Information in Air Liquide's Green Bond Allocation & Impact Reporting

To the Directors of Air Liquide Finance

In our capacity as Statutory Auditor of Air Liquide Finance (hereinafter the "entity"), appointed as an independent external auditor in accordance with 3.5 *Post issuance external review* of the *Sustainable Financing Framework* published in May 2021, we have undertaken a limited assurance engagement on:

- the information related to the allocation as at December 31, 2021 in respect of the Green bond with a ten year maturity issued on May 27, 2021 by the entity for a total amount of 500M€ (ISIN FR0014003N69) ("the "Green Bond") as set out in note 4 of the *Green Bond Allocation & Impact Reporting* to the projects presented in note 4 of the above mentioned report (the "Eligible Projects");
- the eligibility of the Eligible Projects in the light of the *Sustainability Financing Framework*;

(the 'Identified Information').

Our assurance does not extend to information in respect of earlier periods or to any other information included in the *Green Bond Allocation & Impact Reporting* or linked to from the Identified Information or from the *Sustainable Financing Framework*, including any images, audio files or embedded videos.

Our Limited Assurance Conclusion

Based on the procedures we have performed as described under the section 'Summary of the work we performed as the basis for our assurance conclusion' and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Identified Information presented in section 4 of the *Green Bond Allocation & Impact Reporting* as at December 31, 2021 is not prepared, in all material respects, in accordance with the Sustainability Financing Framework used (see below under 'Understanding how the entity has prepared the Identified Information').

We do not express an assurance conclusion on information in respect of earlier periods or on any other information included in the *Green Bond Allocation & Impact Reporting* or linked to from the Identified Information or from the *Sustainable Financing Framework*, including any images, audio files or embedded videos.

Understanding how the entity has Prepared the Identified Information

The absence of a commonly used generally accepted reporting framework or a significant body of established practice on which to draw to evaluate and measure the Identified Information allows for different, but acceptable, measurement techniques that can affect comparability between entities and over time.

Consequently, the Identified Information needs to be read and understood together with the *Sustainability Financing Framework* in particular the basis of preparation set out in section 3.1 titled *Use of Proceeds* ('the Criteria'), which the entity has used to prepare the Identified Information.

Management Responsibilities

Management of the entity are responsible for:

- selecting or establishing suitable Criteria (including for preparing the Identified Information);
- selecting the Eligible Projects in light of the Criteria;
- the preparation of the Identified Information in accordance with the Criteria; designing, implementing and maintaining internal control over information relevant to the preparation of the Identified Information that is free from material misstatement, whether due to fraud or error.

Our Responsibilities

We are responsible for:

- planning and performing the engagement to obtain limited assurance about whether the Identified Information is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to the Directors of the entity.

As we are engaged to form an independent conclusion on the Identified Information as prepared by management, we are not permitted to be involved in the preparation of the Identified Information as doing so may compromise our independence.

Professional Standards Applied

We performed our limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised), *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the French Code of Ethics (code de déontologie) and the *International Code of Ethics for Professional Accountants (including International Independence Standards)* issued by the International Ethics Standards Board for Accountants (IESBA Code), which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our work was carried out by an independent and multidisciplinary team including assurance practitioners and sustainability experts.

Summary of the Work we Performed as the Basis for our Assurance Conclusion

The procedures performed were based on our professional judgement. Given the circumstances of our engagement, in performing the procedures listed below, we:

- through inquiries, obtained an understanding of the process for selecting, collecting and reporting the Identified Information; including inspection of Minutes of the *Sustainable Finance Working Group*
- obtained the internal listing of Eligible Green Projects to which the proceeds from the Green Bond were allocated as of December 31, 2021, and confirmed that this was consistent with the disclosure in the *Green Bond Allocation & Impact Reporting*
- Performed limited substantive testing on a selective basis of the Identified Information to verify that the identified Eligible Green Projects were in line with the Criteria and that the allocated amounts had been appropriately measured, recorded, collated and reported, including:
 - inspecting the purpose of Eligible Green Projects to confirm that the use of proceeds was consistent with the Criteria; and
 - performing the necessary reconciliations between the allocated amounts and the accounting records, verifying that the information agrees with the data used to prepare the consolidated financial statements for the year ended 31 December 2021, 2020 or 2019.
- validated that the total amount of proceeds not allocated as of December 31, 2021 is less than the total amount of cash and cash equivalents of the entity as of December 31, 2021;
- Considered the disclosure and presentation of the Identified Information.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Neuilly-sur-Seine, May 5, 2022

Statutory auditor

Sébastien Lasou



May 2022

Group Financing and Rating



Guillaume Serey

guillaume.serey@airliquide.com

+33 (0)1 40 62 56 70

Thomas Lemée

thomas.lemee@airliquide.com

+33 (0)1 40 62 58 25

Chloé Audrin

chloe.audrin@airliquide.com

+33 (0)1 40 62 56 64

www.airliquide.com

Follow us on Twitter **@AirLiquideGroup**

Corporate Headquarters:

75, Quai d'Orsay

75321 Paris Cedex 07