



GENERATING A CLEANER FUTURE

Sustainability Report 2024



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Letter from **Seifi Ghasemi**, Chairman, President and CEO



Motivated by our Higher Purpose and with Sustainability as the foundation, the people of Air Products are committed to generating a cleaner future for our world.





Letter from **Seifi Ghasemi**, Chairman, President and CEO

With Our Customers

The issue of climate change is bigger than one company, or even one country. It's a global challenge that requires global collaboration.

I am encouraged to see so many customers moving forward on ambitious sustainability journeys. We are proud to be partnering with them around the globe and bringing a broad portfolio of offerings to reduce greenhouse gas emissions, improve efficiency and yields, and enable them to make real progress toward their sustainability goals.

We see this every day in our industrial gases business, as our products, technologies and applications expertise are put to work to improve customers' operations in dozens of industries. Meanwhile, for customers in hard-to-abate sectors, clean hydrogen is the only way to decarbonize at scale. There is no other practical option.

That is why, as the leading global hydrogen supplier with more than 65 years of expertise, we have led the way with our \$15 billion dollar investment in energy transition megaprojects – primarily clean hydrogen – in key locations around the world. We see significant demand for clean hydrogen, such as our recent 15-year agreement with TotalEnergies to supply green hydrogen to decarbonize its Northern European refineries.

The momentum for clean hydrogen continues to grow as supportive policies and regulations further drive the critical shift toward net zero.

Within Our Company

Our people work hard to continually improve the environmental footprint of our assets and conserve resources.

This year, we have strengthened our previously announced environmental goals while setting additional ambitious goals, including:

- Updating the baseline year for our “Third by ‘30” carbon intensity goals for Scopes 1 and 2, and Scope 3 GHG emissions to 2023 while keeping the same 2030 target. In other words, we are committed to reducing carbon intensity by 33% by 2030 versus a more recent baseline, making our goals more ambitious.
- Quadrupling renewable energy used to make our products by 2030 compared to a 2023 baseline, exceeding the pledge to “triple up” renewables by 2030 made by world leaders at COP28. By way of comparison, this four-fold increase in renewable energy is equivalent to about one quarter of London's total power consumption today.
- Committing to develop water management plans by 2026 for priority facilities with implementation by 2030.

By Our People

Making all of this happen are the more than 23,000 Air Products' employees who continue to foster our culture of safety, diversity, inclusion and collaboration.

Prioritizing safety above all else, our goal remains to be the safest industrial gas company in the world, with zero accidents and incidents. We also want to be the most diverse and inclusive, where employees know they belong and matter, as we advance toward our 2025 goals for women globally and minorities in the United States in professional and managerial roles.

In our operating communities, we are working hard to maintain our relationships and build new ones. Whether it is a community where Air Products' people have lived and worked for decades or a new location, we are making step-changes in our community engagement so we can be a force for positive change.

As always, thank you for your interest in our Company, and I hope you will take some time to learn more by exploring this report. With sustainability as the foundation of what we do [with our customers](#) and [within our company](#), I am sure you will find the [people of Air Products](#) are deeply committed to generating a cleaner future.

All the best,

Seifi Ghasemi
Chairman, President and Chief Executive Officer of Air Products



About us

Air Products is a world-leading industrial gases company operating for over 80 years focused on serving energy, environmental, and emerging markets.

We provide essential industrial gases, such as oxygen, nitrogen, argon, hydrogen and helium to customers across dozens of industries around the world. Industrial gases are ubiquitous and in many cases enable our customers to increase operational efficiency, and reduce resource consumption, waste and greenhouse gas emissions.



Here are some examples:

O₂ **Oxygen** for steel production, medical facilities, water treatment plants, and many other applications. Oxygen has strong oxidizing properties that can benefit many industries by improving yields, optimizing performance, lowering costs and reducing carbon footprint.

N₂ **Nitrogen** produced by Air Products is used in electronics and industrial facilities for blanketing purposes, and for food freezing. Given the extremely low temperatures of its liquid state, nitrogen is an ideal gas for cryogenic cooling and freezing. In addition, nitrogen improves the quality and shelf-life of air-sensitive materials such as food, pharmaceuticals and electronics.

Ar **Argon** is common in the metals industry for metal production, processing and fabrication. It can be used as a pure gas for certain shielding, blanketing, annealing and hot isostatic pressing applications. Its inert properties make argon essential in other industries such as the glass industry for double glazing, the food industry for removing oxygen from wine barrels, and analytical laboratories that use it as a gas carrier in gas chromatography and in ICP-MS equipment.

H₂ **Hydrogen** is used in the metals industry to reduce metal oxides and to prevent oxidation during the heat-treating process. In the chemical, pharmaceutical and food industries, hydrogenation processes are used to combine hydrogen molecules with other compounds to help extend shelf life, modify properties or conduct highly selective transformations. A primary use of hydrogen is to enable refineries to make lower sulfur, cleaner burning transportation fuels to reduce air pollution.

He **Helium** and high purity medical gases help sustain life. The extremely low temperature of liquid helium is used to maintain the superconducting properties of magnets in applications such as Magnetic Resonance Imaging (MRI), Nuclear Magnetic Resonance spectroscopy, and particle physics research.

Additionally, our **equipment businesses** provide important solutions for the energy transition – such as membranes for biomethane production – enabling customers to further reduce their operations’ environmental footprint.

H₂ As the leading global hydrogen supplier today, Air Products has committed \$15 billion in **low- and zero-carbon hydrogen** projects, which are essential to decarbonizing the hardest-to-abate sectors, such as steelmaking, chemicals and heavy transportation. Air Products is executing the world’s largest clean hydrogen projects across the whole value chain, including production, transportation, storage and dispensing. Once on-stream, these projects will deliver significant decarbonization benefits for decades to come.

We welcome an opportunity to share our approach to sustainability and our progress with you. Working collaboratively with our customers, employees, communities and other stakeholders, we are excited to play an important role in **GENERATING A CLEANER FUTURE.**

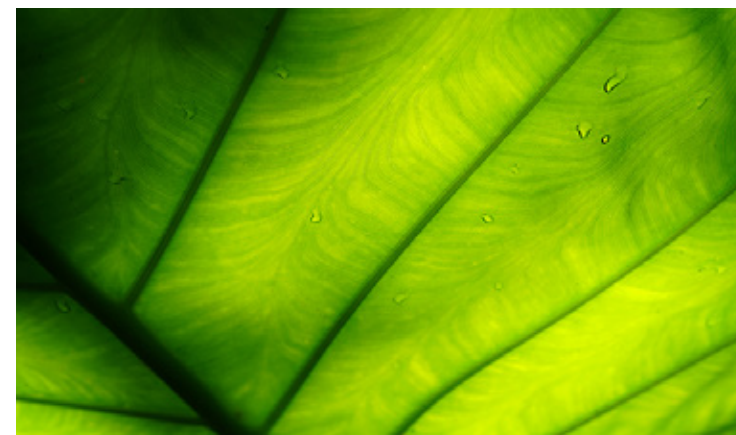




About us



>8
.....
decades in business



750+
.....
facilities in ~50 countries

>250,000
.....
customers



30+
.....
industries served



~23,000
.....
employees



\$15 billion
.....
committed to energy transition projects



Generation-defining challenge: **GENERATING A CLEANER FUTURE**

Today's world faces an unprecedented sustainability challenge.

Scientific assessments by the Intergovernmental Panel on Climate Change indicate our planet has warmed by more than 1 degree Celsius since the Industrial Revolution due to use of fossil fuels, deforestation, and growing resource consumption. The risks and impacts from climate change are expected to increase as global temperatures rise. To avoid increasingly severe impacts of climate change and prevent global warming from surpassing 1.5 degrees Celsius, the world needs to **rapidly decarbonize** and achieve **Net Zero** by 2050.

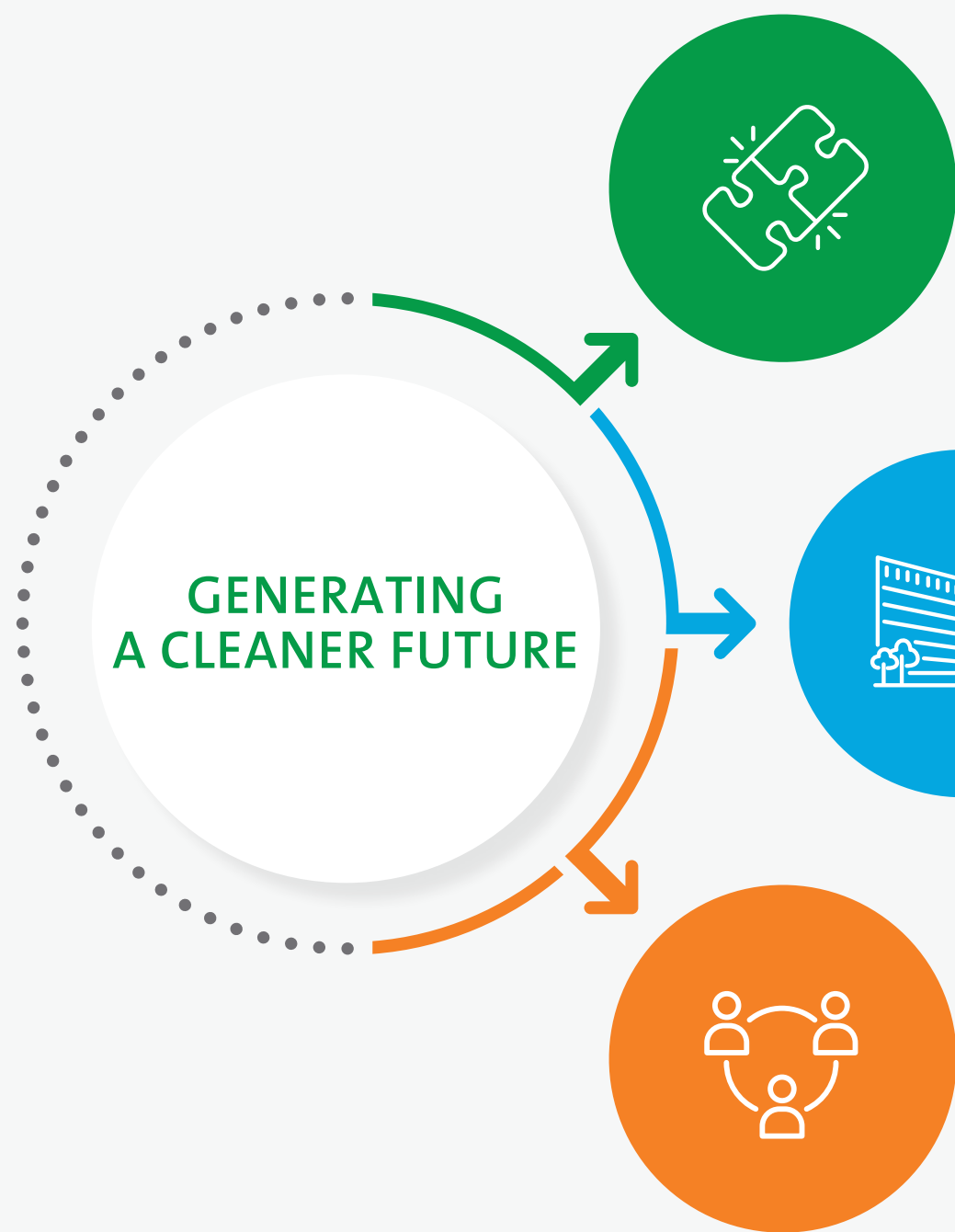
Our **Higher Purpose**

Bringing people together to **collaborate** and **innovate** solutions to the world's most significant energy and environmental sustainability challenges





Our sustainability approach



With our Customers

We enable customers in dozens of industries to decarbonize, improve efficiency and yields, and operate more sustainably.

By applying our expertise and investments in clean hydrogen and clean fuels projects (\$15B), we will enable the hardest-to-abate sectors to decarbonize.

Within our Company

Through our industrial gas and technology solutions, we work hard to continually improve the environmental footprint of our assets and conserve resources. We have established ambitious goals and developed roadmaps to achieve them.

We conduct business and operations in a responsible and transparent manner.

By our People

Our committed people are at the heart of our efforts to innovate solutions to the world’s most significant energy and environmental challenges for our customers and within our company.

We continue to foster our culture of safety, diversity, inclusion and collaboration.



How we **execute** our sustainability approach



With our Customers

How we do it

- Offer a broad portfolio of decarbonization and sustainability-enhancing offerings for our customers
- Execute our \$15 billion pipeline of energy transition megaprojects
- Focus R&D efforts on energy and sustainability

Goals

- **\$15B** capital commitment to first-mover energy transition projects through 2027



Within our Company

- Improve energy efficiency
- Increase use of renewable energy
- Develop and deploy new carbon-reducing technologies
- Decarbonize our global fleet of 2,000 trucks
- Reduce other environmental impacts of our operations (water, waste, etc.)

- **Updated** – Third by '30: **33% reduction** in Scope 1 and 2, and Scope 3 carbon intensity by 2030 versus 2023 baseline¹
- **New** – **Quadruple** the amount of renewable electricity used to make our products² by 2030
- **Net Zero** by 2050
- **New** – **Water management plans** at high-priority facilities³, developed by 2026 and implemented by 2030



By our People

- Maintain focus on our safety-first culture
- Position resources globally to support our growth strategy and sustainability priorities
- Promote diversity and inclusion, employee development and well-being
- Engage with and support our communities and other stakeholders

- **28%** female representation in global professional and managerial roles by 2025
- **30%** minority representation in U.S. professional and managerial roles by 2025

1. Baseline reset to 2023 – see details on page 59. 2. Includes all products sold by Air Products vs. 2023 baseline 3. High priority facilities are those withdrawing 13 million gallons (50,000 m³) or more per year from basins with high to extremely high water stress as determined by Aqueduct Tools from the World Resources Institute. See more information in the Detailed Disclosures section of this Report.



Our progress



With our Customers

Goals

- **\$15B** capital commitment to first-mover energy transition projects through 2027

Progress

- Executing major projects in Canada, Europe, Saudi Arabia, and the United States

Status



Within our Company

- Third by '30: **33% reduction** in Scope 1 and 2, and Scope 3 CO₂e emissions intensity by 2030 versus 2023 baseline
- **Quadruple** the amount of renewable electricity used to make our products by 2030
- **Net Zero** by 2050
- **Water management plans** at high-priority facilities, developed by 2026 and implemented by 2030

- **Updated goal** – baseline reset to 2023
- **New goal** – will report progress beginning next year
- Transition plan in development
- **New goal** – will report progress beginning next year



NEW



NEW



By our People

- **28%** female representation in global professional and managerial roles by 2025
- **30%** minority representation in U.S. professional and managerial roles by 2025

- **26%** in 2023
- **25%** in 2023



Achieved In progress



Recognitions



Air Products was named an Energy Transition Changemaker at COP28 for our landmark net-zero hydrogen energy complex in Edmonton, Alberta, Canada and the world-scale NEOM green hydrogen project, of which Air Products is a partner.



MSCI ESG

Air Products has been upgraded to an A in MSCI's ESG Ratings assessment



ISS ESG

Top performer in the global corporate universe by ISS-oekom



Forbes

One of America's Best Employers for Diversity for 2023



BARRON'S

100 Most Sustainable Companies List



FTSE4Good

FTSE4Good

FTSE4Good Index Series



ETHIBEL

Constituent of the ETHIBEL Sustainability Index (ESI) Excellence Global



China's Top 100

Named one of China's Top 100 Most Attractive Employers for 2023 by university students majoring in natural sciences



ETHIBEL

ETHIBEL Pioneer and ETHIBEL Excellence Investment Registers



Air Products enables customers in dozens of industries to improve efficiency and yields and operate more sustainably. We are proud to partner with our customers on their sustainability journeys and work hard to help them reach ambitious decarbonization targets and sustainability goals.

The issue of climate change is bigger than one company, or even one country. It's a global issue that requires collective collaboration to achieve our goal of a cleaner, more sustainable future.

GENERATING A CLEANER FUTURE

**WITH
OUR
CUSTOMERS**



GENERATING A CLEANER FUTURE **with our Customers**



Sustainable Offerings

Broad portfolio of offerings helping customers to decarbonize and operate more sustainably



Clean hydrogen at scale

\$15B commitment for first-mover, world-scale energy transition megaprojects, primarily green and blue hydrogen



Research and development

R&D focused on sustainability to continually broaden the breadth and depth of our decarbonization offerings and sustainable solutions portfolio



Examples of our Decarbonization Offerings for Customers

For details visit: airproducts.com/industries/industrial-decarbonization



SECTORS:

- Manufacturing
- Agriculture and Food
- Electricity
- Transportation
- Heating and cooling of buildings

OFFERINGS:

- 1** Clean hydrogen for the production of Direct Reduced Iron (DRI) for use in steelmaking
- 2** Oxygen enrichment of cement kilns and precalciners
- 3** Oxy-fuel combustion systems for glass production
- 4** Oxy-fuel combustion systems and smart technologies for non-ferrous metal recycling
- 5** Gases for solar/photovoltaic industry (N₂, Ar, others) to improve yield and cell efficiency
- 6** Turbine generator cooling with hydrogen
- 7** Food freezing with liquid nitrogen to reduce food waste
- 8** Modified Atmosphere Packaging (MAP) to increase food shelf life
- 9** Membrane systems for biomethane production from agricultural and other waste
- 10** Liquefying biogenic CO₂ for further use
- 11** Membrane systems for dual-fuel ships
- 12** Clean hydrogen for fuel cell ferries
- 13** Clean ammonia as marine fuel
- 14** Clean hydrogen for port equipment
- 15** Clean hydrogen for trains
- 16** Gases enabling battery production for electric vehicles (N₂, Ar, others)
- 17** Hydrogen refueling station for fuel cell trucks
- 18** Clean hydrogen for renewable low-carbon fuels production (e.g., renewable diesel, Sustainable Aviation Fuel)
- 19** Argon used in filling of windows for better thermal insulation
- 20** Biomethane produced by Air Products' membrane systems for heating
- 21** BioCO₂ for treatment of cooling water for data centers



SUSTAINABLE OFFERINGS IN ACTION

Oxy-fuel technology spurs sustainability savings for CertainTeed

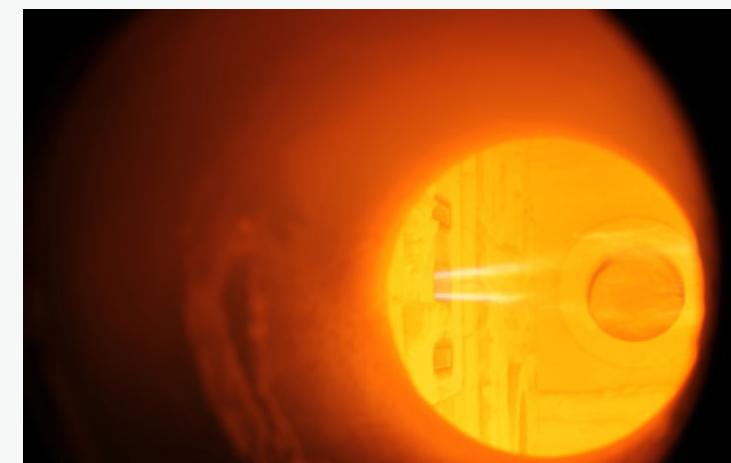


IMPACT:

Oxy-fuel combustion can play a key role in decarbonizing and improving the sustainability of glass manufacturing operations. Oxy-fuel combustion contributes to these goals because it provides 10 to 25% fuel savings over air-fuel combustion and a reduction in carbon emissions.

The Integrated O₂ VSA – Cleanfire HR_x combustion system proved to be an efficient, cost effective and reliable step on the path to decarbonization. The Integrated system provided benefits for two key subsystems of the glass plant: the oxygen generation system and the melter, both of which significantly impact the facility's carbon footprint.

The system reduced the power consumption of the O₂ VSA by 30%. The integrated system also increased furnace efficiency by transferring more heat into the glass melt. This was evident by the lower furnace crown temperatures and higher bottom temperatures. In addition, nitrogen oxide (NO_x) emissions were reduced by 18% on average. Overall, the integrated system was estimated to lower the CO₂ emissions at the facility by 11% annually.



30% reduction
in power consumption

18% reduction
in NO_x emissions

11% reduction
in CO₂ emissions annually

Customer's challenge:

CertainTeed, a subsidiary of Saint-Gobain and North America's leading brand of exterior and interior building projects, was seeking a solution to reduce the amount of power used during production at its fiberglass manufacturing operations.

Air Products' Decarbonization Offering:

Air Products has developed a new burner configuration with an integrated oxygen supply system that can supply oxygen at much lower pressure. Air Products conducted a trial of its Integrated PRISM® Oxygen Vacuum Swing Adsorption/Cleanfire®HR_x™ combustion system at CertainTeed's Chowchilla, California facility.



SUSTAINABLE OFFERINGS IN ACTION

Nordsol and Air Products Membrane Solutions collaborate on bio-LNG system



Customer's challenge:

Nordsol was seeking to develop a unique biogas upgrading system that would take raw biogas from municipal waste and purify the methane content utilizing a novel and proprietary combination of membrane and liquefaction technology to convert the upgraded biomethane into bio-LNG.

Air Products' Sustainable Offerings:

Air Products Membrane Solutions provided hollow fiber membrane separators that selectively separate methane and CO₂, along with the engineering support for a successful system implementation.

IMPACT:

This development enables the energy transition from fossil fuels such as diesel since bio-LNG could be used to fuel various modes of transportation, such as trucks or cargo ships. This is the first application of PRISM® membrane separators in Nordsol's innovative bio-LNG process scheme to produce extremely pure biomethane ready for liquefaction.

"Air Products' PRISM membrane separators are an essential component in our bio-LNG plant. Nordsol has developed its own, proprietary iLNG process to convert biogas originating from anaerobic digestion of biomass waste into bio-LNG and CO₂," said Nordsol CTO, Michiel van Aken. "Air Products' technical experts have been very helpful assisting our engineers during the design phase of this project, and we expect bio-LNG to be a big part of the energy transition. We have several more projects like this, utilizing PRISM® membranes, in the design, construction, and commissioning phases, and we look forward to this continued partnership with Air Products."

By working with technology development companies like Nordsol, Air Products Membrane Solutions has continued to push the energy transition forward. Enabling innovation to get the most out of biogas upgrading and liquefaction operations will be an essential element in reducing the impact of climate change. Membrane Solutions looks forward to continued development of new solutions.



Air Products' technical experts have been very helpful assisting our engineers during the design phase of this project, and we expect bio-LNG to be a big part of the energy transition.

Michiel van Aken
Nordsol CTO

130% reduction
in GHG emissions using bio-LNG compared to diesel



SUSTAINABLE OFFERINGS IN ACTION

Air Products and Tandom making aluminum more sustainable with **Smart Technology**



IMPACT:

Air Products, which was already an oxygen supplier for Tandom, teamed with the company to conduct a 10-month study to determine how smart technology such as equipment sensors and analytics could be used to boost productivity, improve yield during aluminum recycling and reduce carbon emissions.

A Digital Twin model was implemented on a tilt rotary furnace used to remelt aluminum and dross materials. Data was analyzed to determine aluminum oxidation losses over a large number of cycles and regression analysis showed an exponential relationship between yield loss and metal tapping temperature.

Baseline data was compared with data from cycles that were completed using the digital twin system, which found that an accurate model of end-of-melt prediction, combined with timely burner shutdown control, provided significant benefits in production and yield, as well as energy savings and a reduction in carbon emissions.



We were really pleased. It not only improved our yield, but also reduced carbon emissions by 15% and achieved the same amount of energy savings.

Mike Dines
Director at Tandom Metallurgical Group, Ltd.

Customer's challenge:

Tandom Metallurgical Group, Ltd., one of the United Kingdom's leaders in metal recycling that produces aluminum alloys, master alloys and recycled aluminum products from scrap and dross, was seeking a process to improve efficiency and reduce carbon emissions associated with the aluminum recycling process.

Air Products' Decarbonization Offering:

Air Products' Smart Technology is designed to monitor and control a combustion system, tracking key process parameters. Air Products developed a Smart Process Advisor/Digital Twin concept system that provides a unique way to improve process performance. The system calculates when the aluminum inside the furnace has reached tapping temperature, providing a way to predict when the melting portion of the cycle is complete.

15% energy savings

15% reduction in CO₂ emissions



SUSTAINABLE OFFERINGS IN ACTION

Air Products assists CATAGEN in its purpose to clean and decarbonize the air



IMPACT:

Utilizing liquid bulk tanks and the telemetry system provided by Air Products, CATAGEN has continued to expand its operations. CATAGEN works with a wide range of global automotive engineers and recently moved into the testing of reformer catalysts. This has allowed CATAGEN to advance the durability testing and understanding of reformer catalysts, aiding in industries such as solid oxide fuel cells and petrochemicals.



Air Products is one of our key partners for catalyst aging and after treatment testing services.

Recently, Air Products installed two bulk tanks at our Belfast facility. We were very impressed with the efficient installation focused on safety and professional service, minimizing our downtime and catering to our needs.

Daniel McAfee
CATAGEN engineer

Customer's challenge:

CATAGEN, a leading expert in automotive emissions helping to age catalysts and after treatment testing systems, needed industrial gases and expertise to expand catalyst testing at its Belfast, Northern Ireland facility. To support expansion the company needed a reliable supply of industrial gases.

Air Products' Sustainable Offering:

Air Products provided several products to CATAGEN, including nitrogen, oxygen, and a number of specialized gases. Air Products also installed cryogenic tanks, including a telemetry system. Air Products' telemetry system monitors the volume in the tanks, which ensures a continuous supply to CATAGEN.

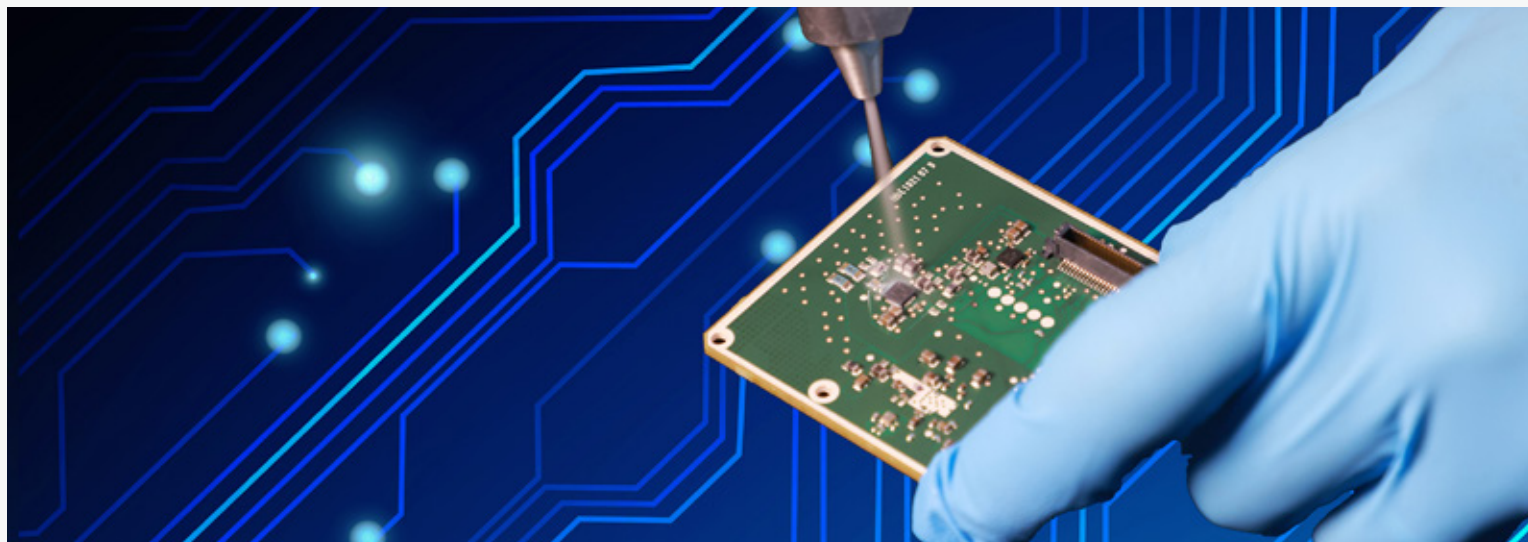


Watch Video



SUSTAINABLE OFFERINGS IN ACTION

Air Products helps Continental remove contaminants and save water



Customer's challenge:

Continental Group is a global leader in the Transportation industry. Its subsidiary, Continental Automotive Systems (Shanghai) Co., was seeking an eco-friendly solution to remove oil and other contaminants from printed circuit boards and other components before the assembly process and packaging. Previously, Continental used flammable acetone or alcohol, which may cause safety issues for the working environment. That process also consumed clean water to eliminate the residues and power to dry the circuit boards.

Air Products' Sustainable Offering:

Air Products offered a cleaning solution based on CO₂, which it has supplied to Continental since 2019 including integrated solutions for CO₂ storage and supply pipelines for Continental's automotive electronic devices production process. The CO₂ cleaning process is dry and touchless. It does not utilize any solvents or water, and no wastewater is released during the cleaning process. The CO₂ cleaning solution also included a specially designed pressure and temperature control system to provide a stable, consistent CO₂ cleaning performance. As a result, the process saves energy and water, and improves safety, compared to solvent-based cleaning.

IMPACT:

CO₂ has proved to be an excellent cleaning media for the removal of contaminants from printed circuit boards. "As a partner of Continental, we are thrilled to see the savings in natural resources and energy with improved product quality and reduced overall production costs," said Jan Yu, Air Products' Asia Electronics Application Technology Engineer.



Driven by our Higher Purpose, Air Products has been developing innovative gas application solutions that benefit the environment. As a partner of Continental, we are thrilled to see the savings in natural resources and energy with improved product quality and reduced overall production costs.

Jan Yu
Air Products' Asia Electronics
Application Technology Engineer



SUSTAINABLE OFFERINGS IN ACTION

Uzbekneftegaz collaborates with Air Products to produce cleaner burning fuels



Conventional diesel

GTL diesel

Customer's challenge:

The Government of the Republic of Uzbekistan and Uzbekneftegaz JSC (UNG) were seeking to maximize the potential of Uzbekistan's energy market and generate cleaner burning fuels to improve air quality and reduce emissions.



Air Products' Sustainable Offering:

In 2023, Air Products signed an investment agreement with Uzbekistan and UNG to acquire, own and operate a natural gas-to-syngas processing facility in Qashqadaryo Province, Uzbekistan. The facility includes two ASUs – the largest in Air Products' portfolio - two large-scale auto-thermal reforming units, and a hydrogen production unit within the Uzbekistan gas-to-liquid (GTL) complex, and supplies oxygen, nitrogen, hydrogen and syngas to UNG.

Air Products provided its extensive expertise in executing world-scale projects to help UNG efficiently produce 1.5 million tonnes per year of high value-add synthetic fuels for domestic use and potential export. Specifically, UNG wanted to convert natural gas into liquid synthetic fuels, such as GTL diesel, which burns cleaner and produces significantly less emissions.

IMPACT:

The transition to more sustainable fuels is a crucial step in mitigating the environmental impact of the transportation sector. GTL fuels present a viable alternative to conventional fuels produced from crude oil, offering significant reductions in harmful emissions and improvements in engine performance.

For example, compared to conventional diesel combustion, GTL fuel lowers nitrogen oxides (NO_x) emissions by 35%, particulate matter emissions by about 60%, and carbon monoxide (CO) emissions by 36%.¹

“Cooperation between the Uzbekistan GTL plant and Air Products is of great importance as it represents a partnership that promises to unleash the enormous potential of the energy sector of the Republic of Uzbekistan,” said Bakhodirjon Sidikov, the Chairman of the Board of Uzbekneftegaz JSC.

¹ Based on lifecycle assessments and peer-reviewed studies of GTL processes.



We are starting to work together to achieve common creative goals, such as increasing production efficiency, reducing the final cost of products and reduction of harmful emissions.

Bakhodirjon Sidikov
Chairman of the Board of Uzbekneftegaz JSC

35% reduction
in nitrogen oxides (NO_x) emissions

up to 60% reduction
in particulate matter (PM) emissions

36% reduction
in carbon monoxide (CO) emissions

Clean hydrogen plays an essential role in our decarbonization portfolio

To reach net-zero, the world needs solutions for deep decarbonization of the hardest-to-abate sectors, such as steelmaking, chemical production and heavy-duty transportation.

Clean hydrogen is the solution for those markets. It is an effective lever to decarbonize sectors of the economy where electrification is not practical or cannot be deployed at scale. Clean hydrogen can serve as a feedstock for chemical processes, a source of high-temperature industrial heat, or replace – directly or in the form of a derivative fuel – fossil fuels for heavy-duty transportation.

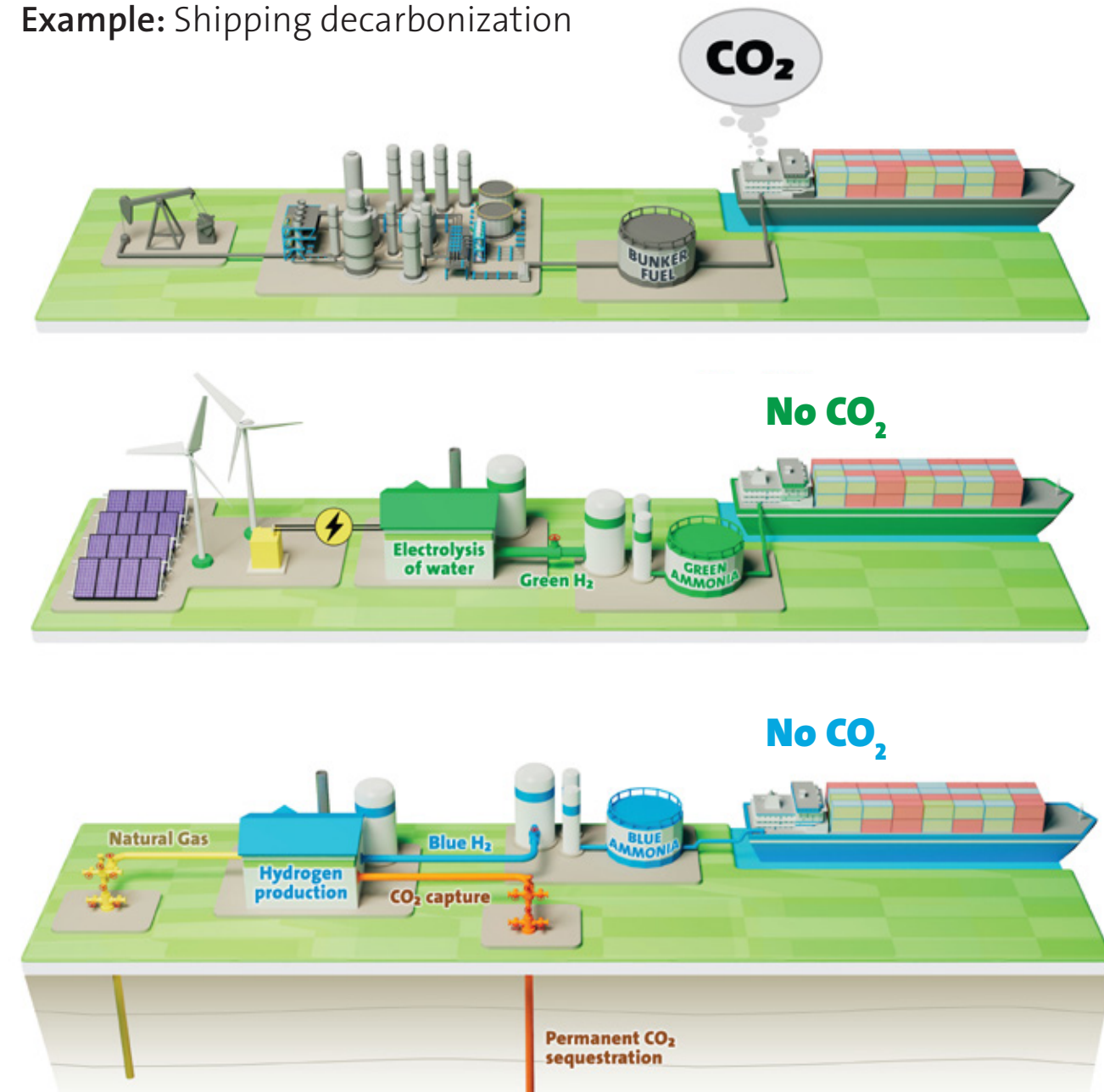
Clean hydrogen can be produced in two ways.

Green – produced through electrolysis powered by renewable energy, such as solar or wind. Green hydrogen has zero-carbon emissions.

Blue – produced using fossil fuels, such as natural gas, and paired with carbon capture and sequestration to produce low-carbon hydrogen. Using advanced carbon capture and sequestration more than 95% of CO₂ emissions can be captured and permanently sequestered underground.

Clean hydrogen can be produced in numerous locations with favorable conditions and delivered to the customers via pipeline, in the form of ammonia, or – where practical – via truck as a gas or liquid.

Example: Shipping decarbonization





Decarbonization of Northern European refineries with green hydrogen



Air Products' Chairman, President and CEO Seifi Ghasemi and TotalEnergies' Chairman and CEO Patrick Pouyanné sign the agreement.

TotalEnergies and Air Products have announced the signing of a 15-year agreement for the annual supply in Europe of 70,000 tonnes of green hydrogen starting in 2030. This long-term deal follows TotalEnergies' call for tenders for the supply of 500,000 tonnes per year of green hydrogen to decarbonize TotalEnergies' European refineries.

Under the agreement, Air Products will deliver green hydrogen from Air Products' global supply network to TotalEnergies' Northern European refineries. This hydrogen will eliminate around 700,000 tonnes of CO₂ each year. The contract awarded to Air Products is a first step towards achieving TotalEnergies' objective of reducing net greenhouse gas emissions from its operated oil and gas operations (Scope 1+2) by 40 percent by 2030 compared to 2015 levels.



We always believed that if we made clean hydrogen available at commercial scale, the demand would be there. This contract validates our long-term strategy. Clearly the demand is here, and it will grow significantly as we move forward, playing an essential role in decarbonizing heavy industry and other sectors.

Seifi Ghasemi
Air Products' Chairman, President and CEO

70,000 tonnes
of green hydrogen supplied annually



This deal with Air Products is a steppingstone towards our goal of decarbonizing the hydrogen used in TotalEnergies' refineries in Northern Europe by the end of the decade. We are proud to partner with Air Products, a pioneer in low carbon hydrogen production.

Patrick Pouyanné
Chairman and CEO of TotalEnergies

700,000 tonnes
of CO₂ avoided annually through use of green hydrogen



Air Products is committed to producing clean hydrogen at a large scale

To significantly reduce global GHG emissions, clean hydrogen is required at a large scale – this is why we are progressing multiple clean hydrogen projects around the world.



- 1 Kingdom of Saudi Arabia**
 - NEOM Green Hydrogen Company (NGHC), a joint venture of ACWA Power, Air Products and NEOM
 - World's largest green hydrogen project, 600 t/d capacity
 - Recognized as Energy Transition Changemaker project at COP28

- 2 New York, USA**
 - 35 tonnes per day of liquid green hydrogen production
 - For mobility and industrial markets in U.S. Northeast

- 3 Arizona, USA**
 - Liquid green hydrogen
 - For mobility and industrial markets in the U.S. West

- 4 Louisiana, USA**
 - >750 mscf of blue hydrogen produced daily
 - World's largest CO₂ capture for permanent sequestration facility
 - ~95%, or >5 million t/a of CO₂ captured and permanently sequestered underground

- 5 Edmonton, Canada**
 - World-scale net-zero hydrogen energy complex
 - >90% of CO₂ captured and sequestered underground
 - Recognized as Energy Transition Changemaker project at COP28

- 6 Rotterdam, Netherlands**
 - Largest blue hydrogen facility in Europe
 - Retrofit of a gray hydrogen facility – see more on page 32

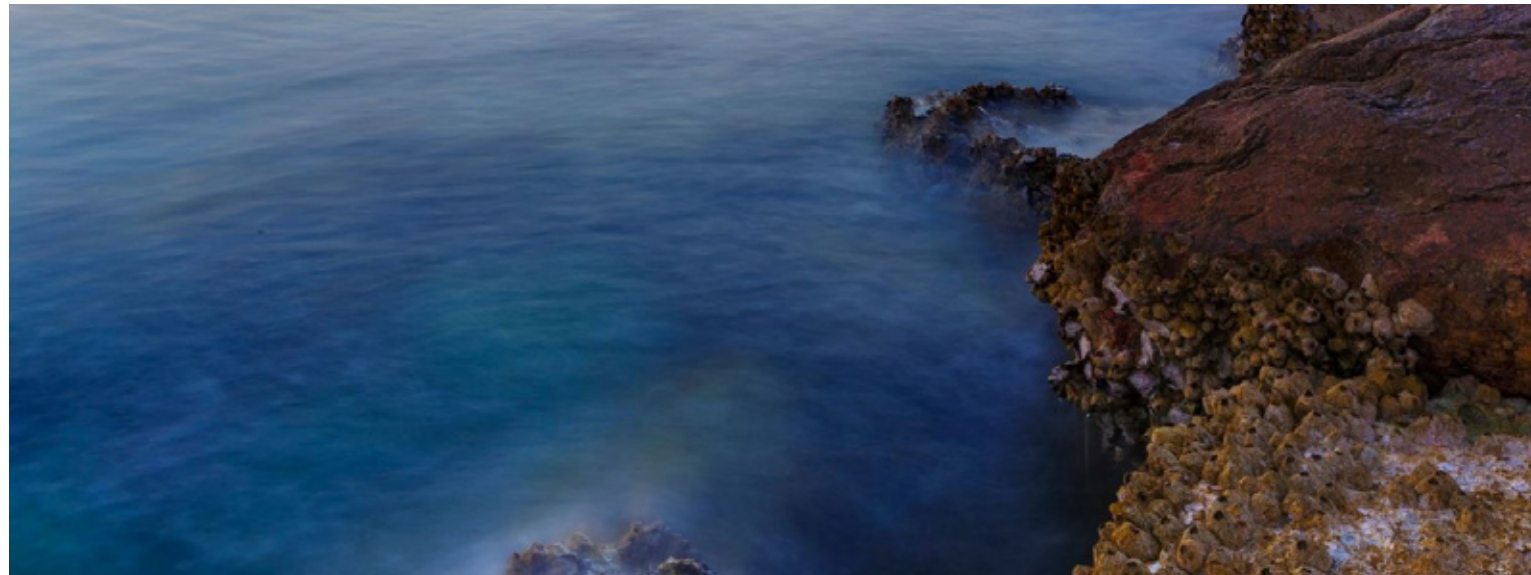
- 7 Hamburg, Germany; Rotterdam, Netherlands; Immingham, UK**
 - Renewable hydrogen facilities
 - Production from renewable energy in the form of ammonia

For the latest on Air Products' clean energy projects visit

airproducts.com/energy-transition



Major clean hydrogen projects – highlights



Kingdom of Saudi Arabia

NGHC is building the world's largest green hydrogen plant. The facility will integrate as much as 4 GW of solar and wind energy to produce up to 600 tonnes per day of carbon-free hydrogen for industrial applications and heavy-duty transportation around the world.

Construction is well underway with over 10,000 workers at the job site currently.

Air Products will be the exclusive off-taker of green hydrogen in the form of green ammonia produced at the facility.

~5 million tonnes

of CO₂e saved annually

>10,000 trucks

can be powered with green hydrogen produced

Louisiana, United States

The Louisiana Clean Energy Complex is Air Products' largest investment in the United States. The complex will produce over 750 million standard cubic feet of low-carbon hydrogen daily and will include the world's largest carbon dioxide capture for permanent sequestration facility. Approximately 95% of the CO₂ generated at the facility will be captured, compressed and transported safely by pipeline for permanent sequestration.

A portion of the blue hydrogen from this project will be supplied to customers by Air Products' extensive U.S. Gulf Coast hydrogen pipeline network, the world's largest, stretching more than 700 miles from Galveston Bay, Texas to New Orleans, Louisiana. Blue hydrogen will also be used to produce blue ammonia for global markets.

>5 million tonnes

per year of CO₂ captured and permanently sequestered

750 mmscfd

(1,800 tonnes) per day of blue hydrogen



Major clean hydrogen projects – highlights



Alberta, Canada

Air Products is building a net-zero hydrogen energy complex that will make Edmonton, Alberta the center of western Canada's hydrogen economy. The facility will deploy advanced technology – auto-thermal reforming – that enables over 90% of the CO₂ generated to be captured and safely and permanently stored underground. The facility will use biogenic renewable off-gas as a feedstock in addition to natural gas, reducing the overall carbon emissions profile.

In addition, the complex will include a 100% hydrogen fueled power generation unit, which will power the production facility and enable export of excess power to the Alberta grid. This unique combination of integrating the renewable off-gas feedstock from an adjacent refinery, associated carbon capture, and export of clean power more than offsets the remaining emissions not directly captured. This means this landmark facility can achieve net-zero emissions. Air Products has announced a long-term contract with Imperial Oil Limited to supply hydrogen to Imperial's proposed renewable diesel complex at its Strathcona refinery near Edmonton.

Air Products' work on its net-zero hydrogen energy complex continues to progress. Construction is in progress, and we expect site activity and contractor employment numbers to continue to increase throughout 2024.

>90%
of CO₂ captured and sequestered

100%
hydrogen fueled power generation



Renewable hydrogen facilities, Europe

Air Products continues to work with key partners to progress plans for renewable hydrogen facilities in the United Kingdom, the Netherlands, and Germany. Clean ammonia would be imported into these facilities and used to produce renewable hydrogen locally.

Air Products is partnering with Associated British Ports to bring the UK's first large-scale renewable hydrogen facility to the Port of Immingham. In the Netherlands, Air Products signed a joint development agreement with Gunvor to build a renewable hydrogen facility in the Port of Rotterdam, this facility will receive funding under the European Commission's Important Projects of Common European Interest (IPCEI) for hydrogen. In Germany, Air Products signed a similar agreement with Mabanaft, through its subsidiary Oiltanking Deutschland, to build Germany's first renewable hydrogen facility in the Port of Hamburg.



Our clean hydrogen megaprojects will deliver **significant decarbonization**

Clean hydrogen from Air Products' megaprojects will help the world avoid 250 to 500 million tonnes of CO₂e over their lifetime, depending on the mix of hydrogen applications.

250 to 500 million
tonnes of CO₂e avoided

Equivalent to New York City producing no greenhouse gas emissions for five years

Based on New York City's (NYC) calendar year 2022 Scope 1 and 2 emissions of 53.7 million tonnes of CO₂e, per data published by the NYC Mayor's Office of Climate and Environmental Justice.





HYDROGEN IN ACTION

Hydrogen Powering CPKC trains in Calgary, Canada



IMPACT:

Air Products was selected by CPKC to supply hydrogen to fuel locomotives stationed in Calgary, Alberta, Canada. The locomotives, which were originally powered with diesel engines, were retrofitted with hydrogen fuel cells, enabling them to operate without generating any carbon or other climate-harming air emissions. Air Products is providing hydrogen utilizing its proprietary mobile fueling technology specifically designed for heavy-duty vehicles like locomotives.



Customer's challenge:



Canadian Pacific Kansas Limited (CPKC) has set a goal to reduce its own greenhouse gas emissions by decarbonizing rail operations. As part of its efforts, CPKC was seeking to conduct a trial using clean hydrogen to replace diesel operated engines in three CPKC locomotives.

Air Products' Decarbonization Offering:

Air Products supplied a hydrogen mobile fueler, which converts liquid hydrogen to gaseous hydrogen to provide a fueling experience similar to traditional diesel trains.



Air Products is proud to collaborate with CPKC on this exciting project to continue the decarbonization of heavy-freight in western Canada.

We will continue to take steps to help Canada achieve its sustainability and climate goals. With an abundance of natural resources and a supportive approach between government and business, Canada is well positioned to be a global leader in the clean energy future.

Rachel Smith
Air Products' Vice President and
General Manager, Canada



HYDROGEN IN ACTION

Saint-Gobain utilizing hydrogen to reduce CO₂ in glass production



Customer's challenge:

As part of Saint-Gobain's commitment to reach net-zero by 2050, the company has engaged in a major transformation process that includes the reduction of the carbon footprint of flat glass production. While electrification is an effective method, it is not feasible at this scale. The company was seeking other ways to decarbonize glass production at a large scale.

Air Products' Decarbonization Offering:

Air Products teamed with Saint-Gobain on five day-long trials at its plant in Herzogenrath, Germany where it produces 500 tonnes of flat glass per day. For the fusion of raw materials needed to create flat glass, the temperature of the furnace reaches about 1,560 degrees Celsius. Today, the required heat is created through the combustion of natural gas, resulting in greenhouse gas emissions.

For the trial, Saint-Gobain tested how hydrogen can be used as a fuel for the glass furnace instead of natural gas, injecting 30% hydrogen in the energy mix of its float glass furnace.

Air Products' team of hydrogen experts designed and built the entire gas supply system for the trial including the installation of four vaporizers, laying 350 meters of pipeline and the installation of two control skids. Air Products also supplied the hydrogen needed for the trial, over 30 tonnes of liquid hydrogen in all, delivered by trailer, and conducted hazard and operability analysis and training for Saint-Gobain employees.

Jörg Hömberg, general manager Air Products GmbH, said "This trial shows to decarbonize industrial applications, it's critical for hydrogen to be delivered safely and reliably in the large volumes needed. In Germany we've announced plans to build the country's first large-scale, renewable hydrogen production facility in Europe.

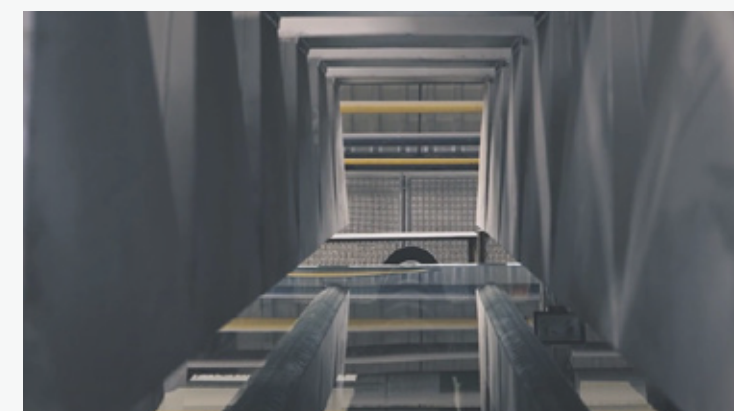
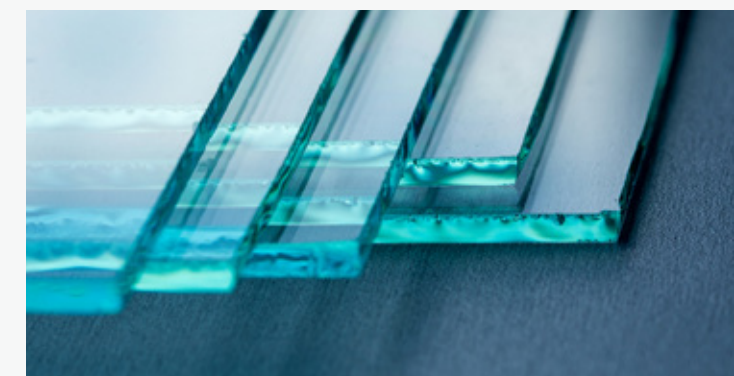
IMPACT:

The trial was successful, and emissions were significantly reduced.



The most efficient way to decarbonize the flat glass production would be to use direct electrical heating with electrodes inside the glass melt. Unfortunately for a furnace of this size and with the high requirements on glass quality, full electrification is not feasible. Therefore, heat will be partly provided by a flame resulting from green hydrogen production.

Jan Köhler,
Project Engineer Decarbonization – Saint-Gobain



[Watch Video](#)



Research and development

In 2023, our Technology teams at our six state-of-the-art R&D centers located around the world continued to broaden our decarbonization offerings portfolio, and improve the efficiency of our core industrial gases business and technologies.

Nearly 70% of total R&D spend in 2023 was dedicated to advancing the energy transition and sustainability and included programs in the following areas:

- ➔ Improved design and operation of our core industrial gases equipment and facilities to reduce their carbon footprint and increase benefits for customers
- ➔ Technologies to scale production of green hydrogen from renewable power via electrolysis
- ➔ State-of-the-art CO₂ capture and permanent sequestration technologies
- ➔ Technologies enabling safe transportation and storage of hydrogen at scale (including transportation as ammonia)
- ➔ Industry-leading hydrogen refueling stations for transportation markets

INNOVATION STORY

Using artificial intelligence to maximize production of zero-carbon hydrogen

As the world's leading hydrogen supplier, Air Products continues to find solutions to advance world-scale production of the clean hydrogen needed for a successful energy transition.

Air Products has developed its patented H₂.ai™ technology to maximize the utilization of intermittent renewable energy for optimal production of zero-carbon hydrogen. This process involves using advanced computational models to predict available power, performance, and future trends based on historic and predicted weather conditions and plant performance data.

This cutting edge technology enables optimal design and operation of our hydrogen production facilities and the most efficient use of renewable power available.



~70%
of total R&D spend dedicated to energy transition and sustainability

>100
new patent applications related to sustainability and/or energy transition filed in the past three years



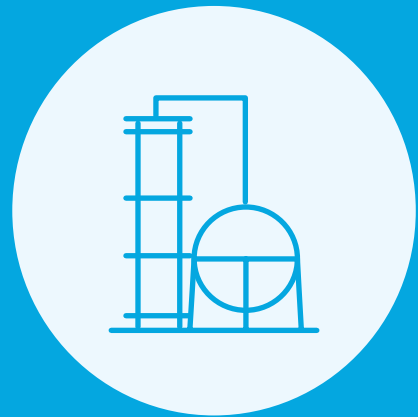
Air Products works hard to continuously improve the environmental footprint of our assets and conserve resources. We conduct business and operations in a responsible and transparent manner.

GENERATING A CLEANER FUTURE

WITHIN
OUR
COMPANY



GENERATING A CLEANER FUTURE **within our Company**



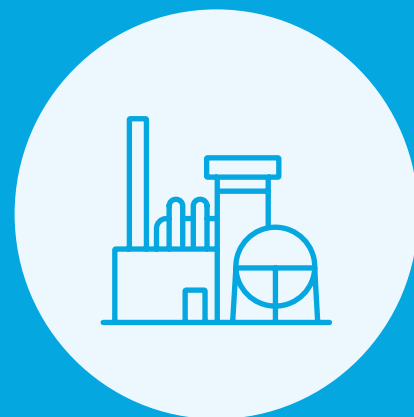
Energy efficiency

Improving design and operation of our plants to consume less power per unit of output



Renewable electricity

Continuously increasing the amount of renewable power used to make our products



Carbon capture

Retrofitting our plants to ensure CO₂ is safely captured and permanently sequestered or utilized



Fleet decarbonization

Converting our ~2,000 trucks to zero-emissions



Minimizing other impacts

Promoting responsible use of water, minimizing waste and engaging suppliers on sustainability



Energy efficiency

The production of industrial gases is energy intensive. An air separation unit (ASUs) requires electricity or steam to compress air so it can be cryogenically distilled into oxygen, nitrogen, and argon. Likewise, the operation of our hydrogen and carbon monoxide (HyCO) units consumes natural gas, and in some cases refinery gases, as feedstock and/or fuel in the production process.

Given the high energy intensity, it is important to continuously increase the energy efficiency of our plants. Consuming less energy to produce the same output is an effective way to reduce emissions.

Efficiency improvements are realized through:



Higher plant utilization



Development of new, larger, and more efficient facilities



Facility improvement projects



SPOTLIGHT STORY

Energy efficiency in action

For decades, Air Products has driven improvements in energy efficiency to reduce energy consumption and lower greenhouse gas emissions that contribute to climate change. In 2023, we developed a new, larger-scale ASU capable of replacing two ASUs that were already among our largest. The new plant uses less energy for production while also reducing the materials and footprint of the other facilities.

Likewise, we designed new larger ASUs that enable better capture of rare gases – xenon, krypton, and neon – from the air, which brings these gases closer to key markets and reduces energy and emissions related to purification and transportation. We also are retrofitting many of our ASUs to capture these gases.

For example, at our ASU in El Morell, Spain, we modified our facility so that it could run in campaign mode. This enabled the facility to maximize the use of renewable energy sources and reduce greenhouse gas emissions.

Renewable electricity

As part of Air Products’ effort to reach our goal of net-zero by 2050, we are continually seeking opportunities to increase the amount of renewable electricity used in our operations.

We have set a new goal, committing to quadruple the amount of renewable electricity used to make our products¹ by 2030 compared to a 2023 baseline. This commitment exceeds the pledge to “triple up” renewables by 2030 made by world leaders at COP28 and assumes a 15x increase in active renewable electricity that is purchased or generated by Air Products.

Air Products currently utilizes renewable power to generate electricity at several of its facilities around the world including: Araraquara and Belo Horizonte, Brazil; Pyeongtaek, South Korea; Tainan and Kuanyin, Taiwan; and Air Products’ global headquarters in Allentown, Pennsylvania, U.S.

Our commitment:

Air Products will **quadruple** the amount of renewable electricity used to make our products¹ by 2030 vs 2023.

This new goal includes a **15x increase** in active renewable electricity purchased or generated.

This increase in renewable electricity is equivalent to **about a quarter** of London’s annual current electricity consumption.²

SPOTLIGHT STORY

Steps to increase renewable electricity

In early 2024, Air Products signed a power purchase agreement with Eneco to provide solar electricity for the majority of Air Products’ merchant business energy consumption for liquid nitrogen and oxygen production in the Netherlands.

Most recently, TotalEnergies and Air Products signed a memorandum of understanding for the supply of renewable power, which entails the signing of a first Power Purchase Agreement (PPA) for **150 MW** produced at a solar project in Texas. The parties also plan to explore together further PPA opportunities in the UK, Poland, and France.

23%
of electricity consumed in
2023 was renewable



1. Includes all products sold by Air Products. See page 58 for additional details. 2. Based on the London Energy and Greenhouse Gas Inventory published by the Greater London Authority.



Carbon capture

Air Products is a leader in creating technology solutions for capturing CO₂ before it reaches the atmosphere.

Air Products created the first retrofit technology for steam methane reformers (SMR) to capture carbon on a massive scale. This achievement was described by the U.S. Department of Energy as a milestone in its Industrial Carbon Capture and Storage program. Since 2013, Air Products has captured and recovered approximately one million tonnes of CO₂ annually from two hydrogen facilities in Port Arthur, Texas, U.S.

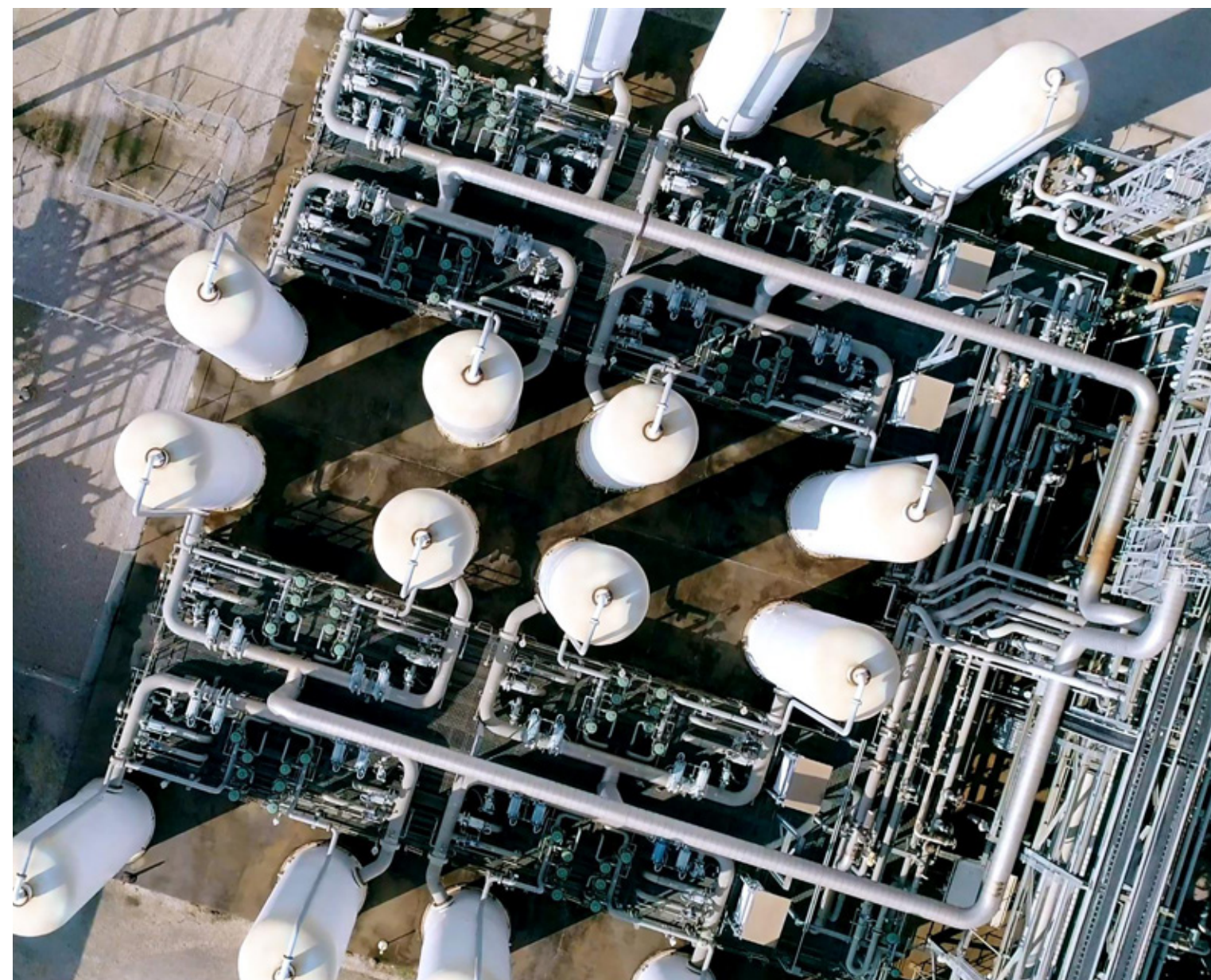
Air Products has continued to innovate in the area of carbon capture and is building the largest blue hydrogen facility in Europe.

SPOTLIGHT STORY

Largest blue hydrogen facility in Europe

For this project, Air Products is retrofitting an existing hydrogen production facility with a state-of-the-art carbon capture and CO₂ treatment facility in Rotterdam, the Netherlands. The retrofitted facility will substantially reduce emissions. The carbon capture retrofit will capture CO₂ from Air Products' existing hydrogen plant and ExxonMobil's Rotterdam refinery.

The plant will be connected to the Porthos system, a consortium developing the first large-scale CO₂ transport and storage system in the Netherlands. The captured CO₂ will be transported to depleted gas fields in the North Sea, about 20 kilometers off the coast, where it will be permanently stored at over three kilometers beneath the seabed.





Fleet decarbonization

Air Products is actively taking steps to decarbonize its fleet of ~2,000 trucks. During the past year Air Products has taken the following steps to begin decarbonizing its fleet:

- ➔ Taken part in a pilot project with Accelera™ by Cummins to gather real-world data on the experience of using hydrogen fuel cell trucks
- ➔ Added its first Kenworth hydrogen fuel cell truck to its permanent fleet in California. This truck is used daily to make emissions-free deliveries of industrial gases to customers in Southern California
- ➔ In Germany, Air Products will take part in a hydrogen fuel cell truck demonstration with Daimler Truck. Air Products is one of five companies taking part in Daimler Truck’s customer trials utilizing a Mercedes-Benz GenH2 Truck

Over the next several years, Air Products will continue to expand the number of hydrogen fuel cell trucks in its fleet.

Our commitment:

Convert our fleet of **~2,000 trucks** to zero-emissions fuel cell vehicles





Reducing other environmental impacts

Water

Water is a vital resource and crucial to the health of every living thing on our planet. With populations and temperatures increasing, fresh water is becoming even more scarce. As a result, water conservation is needed to ensure there is enough of this critical resource for everyone, now and into the future.

Water is essential for Air Products' operations. We use water primarily for cooling, to make hydrogen through electrolysis and steam methane reforming, and to provide steam and water to our customers. Because of these uses, our water consumption is tied closely to energy use; therefore, improvements in energy efficiency can reduce water consumption. We also use water for safety systems, cleaning and for employee consumption and sanitary purposes.

We have made significant progress in decreasing our water use intensity since 2009 when we set our first intensity goal, including cumulative water efficiency improvements of 23% for 2009-2015 and 26% for 2015-2020. We define water use intensity as the amount of water consumed per unit of production.

Much of our freshwater conservation has been realized through improved cooling tower operations and converting to recycled water for production use in our plants, particularly in Southern California where water supply can be stressed. We have also used air-cooling as an alternative to reduce water consumption.

Reducing other environmental impacts and waste management

Air Products strives to reduce the environmental impacts of its operations. Our procurement teams are working with our energy suppliers to identify opportunities to procure renewable energy and reduce our emissions. We are also engaging with our hauliers to optimize product deliveries and routes that reduce transportation emissions.

While industrial gas production does not generate significant waste, Air Products has waste management procedures that are aimed at preventing pollution, generating less waste, and promoting the use of environmentally friendly technologies and products. We identify and implement best management practices for reducing the volume and/or the toxicity of waste, following a hierarchy that includes waste reduction at the source, recycling, and treatment or energy recovery.

¹See pages 61-62 for details.

Our commitment:

Air Products will develop and implement **water management plans** at our facilities in water-stressed areas that withdraw significant amounts of water. Plans will be developed by **2026** and implemented by **2030** for our high-priority facilities around the world.¹





Air Products is building a global, diverse and committed workforce to provide excellent service to our industrial gas customers and execute our flagship megaprojects. We are fostering a culture of safety, diversity, inclusion and collaboration.

GENERATING A CLEANER FUTURE

**BY
OUR
PEOPLE**



GENERATING A CLEANER FUTURE **by our People**



Safety

Nothing is more important than safety. Our goal is to be the safest industrial gas company in the world, with zero accidents or incidents



Talent & Culture

Creating a workplace culture globally where employees know they belong and matter and can reach their full potential



Communities

Helping our host communities thrive by building relationships, driving employment, providing strategic support and volunteerism



Safety

We believe safety is a moral obligation and want our employees to return home to their families safe and healthy every day.

We have made significant progress since 2014 when we set our goal of being the safest industrial gas company, but our overarching goal is zero safety incidents. We strive to continually improve safety and health for our colleagues, contractors, customers and host communities.

Since fiscal 2014, we have achieved a 58% improvement in the employee lost-time injury rate and a 50% improvement in the employee recordable injury rate.

SAFETY IN ACTION



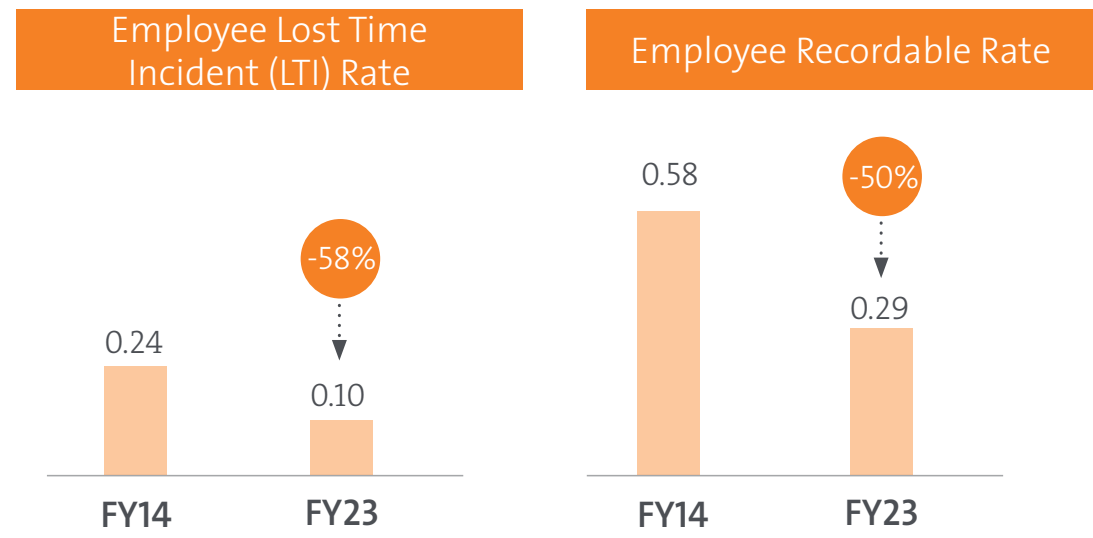
Gresik, Indonesia plant

Received the Zero Accidents Award from the Ministry of Manpower and Governor of East Java.



LaPorte, Texas and Plaquemine, Louisiana

Received the Platinum Facility Safety Award for achieving two million hours or 40 years without a lost-time accident.



*Rates are per 200,000 hours worked.





Talent and culture

In 2023, we demonstrated our commitment to embed our diversity, inclusion and belonging framework throughout the organization and advance diversity conversations through company-wide signature events, such as our annual Week of Inclusion.

We continue to grow our leadership capabilities to reflect the importance of diversity, inclusion and belonging as a cornerstone of our company culture.

In 2020, we announced goals to increase the percentage of women and U.S. minorities in professional and managerial roles at the Company by 2025. Since that time, we have increased the representation of women in these roles to 26%, and the representation of minorities in these roles to 25% as of the end of fiscal 2023.



Employee development

Air Products updated its approach to performance management in 2023 to enable a consistent standard of excellence. Our Way of Leading Performance (OWLP) has three clear steps in an annual cycle – Setting Direction, How Are You Doing, and What Now/What Next. Setting Direction focuses on the way we set objectives. It follows the strategic direction set by our Executive Leadership. Organizational goals are aligned with strategic priorities, and individual employees formulate their goals in accordance with relevant organizational goals.

Throughout the year through How Are You Doing conversations, there are team reviews of organizational goals and one-on-one conversations to review goals, leadership practices and employee well-being. In What Now/What Next formal reviews are conducted mid-year and at year-end and include development of next steps on performance.

OWL Performance - How it works



SPOTLIGHT STORY

Week of Inclusion – Ownership

Air Products hosted its third annual global Week of Inclusion in May 2023. This event focused on the theme of “Ownership in Diversity, Inclusion and Belonging,” highlighting the role every employee plays in creating an inclusive workplace that celebrates our differences.

To kick off the week, Air Products’ executives engaged employees by sharing their thoughts and personal insights on how everyone can take steps to build an inclusive workplace culture. Employees were challenged to take an active role in creating a culture of inclusion and belonging.

Throughout the week, more than 25 sessions were held, conducted in six languages.

The 2024 Week of Inclusion focused on “Belonging” in the workplace and the community.



Talent and culture

Employee Resource Groups (ERGs)

Air Products has 12 ERGs with 19 chapters and four Diversity and Inclusion Councils around the globe that form our Inclusion Network. This network partners with our leadership to create supportive communities for raising cultural awareness, attracting and retaining talent and serving as a think tank for people development and problem-solving.

Our ERGs play a pivotal role in building a positive employee experience in our company and we are consistently recognized as a diversity leader amongst our peers. They support business growth and innovation for the Company and provide cultural insights and solutions for our businesses.



SPOTLIGHT STORY

Empowering Inclusion: Air Products' ERGs leading the way

In 2023, we held our annual Inclusion Summit and Diversity, Inclusion and Belonging (DIB) Awards, centered on the theme of "Sharing Our Stories." The event honored the achievements of our 12 Employee Resources Groups (ERGs), which have been instrumental in driving community impact, fostering business solutions and nurturing people connections through supportive networks.

In January, we celebrated Martin Luther King Jr. Day, recognizing it as both an Air Products' holiday and a Day of Service, where we give back to our communities. Our ERGs took the lead in giving back through various activities such as organizing donations, feeding the homeless, volunteering at community centers and cleaning up parks and nature reserves.

Our Women's Success Network (WSN) has been pivotal in addressing the unconscious bias challenges our female employees could face, particularly in obtaining properly fitting personal protective equipment (PPE). By collaborating with the Environmental Health and Safety and Procurement departments, WSN has managed to address this safety concern effectively, reducing company costs and reaffirming our commitment to safety.

Additionally, our Spectrum ERG, along with our Veterans Network and allies, proudly raised the Pride flag not only at our Allentown headquarters but also at multiple plant locations across the U.S. This act symbolizes our ongoing efforts to build connections and actively embrace the intersectionality of our diverse employee population.

Finally at our Inclusion Summit, we celebrated the recipients of our DIB awards; Executive Sponsor, Mark Garret; Brilliant Team, Texas City Operations; Community Impact, China Government Relations team; and ERG of the Year, the Hispanic Organization of Latinos and Amigos (HOLA). Our annual DIB awards sets Air Products apart as a leader in diversity.

Diversity in Air Products' workforce FY23

23%	Women in the workforce	28%	U.S. minorities in the workforce
22%	Women in management	26%	U.S. minorities in management
20%	Women in senior leadership	21%	U.S. minorities in senior leadership
19%	Women in executive roles	33%	U.S. minorities in executive roles



Communities

For over 80 years, Air Products has built relationships and contributed to the well-being of the communities where we have operations around the world.

Through financial contributions from the Air Products Foundation, in-kind donations, employee directed giving and employee volunteerism with non-profit organizations, Air Products strives to be a force for positive change in the communities where we live and work.

We work closely with community partners to identify the highest impact opportunities in the areas of education and workforce development, diversity and inclusion, health and human services, community and economic development, arts and culture, and environment and safety.

SPOTLIGHT STORY

Black and Latino male college readiness program



In the summer of 2023, Moravian University, in partnership with Air Products, provided 33 students from high schools surrounding our Global Corporate Headquarters community with the opportunity to take part in the 2nd Annual Black and Latino Male College Readiness Program of the Lehigh Valley.

The program was designed to empower and inspire high-school-age males on their journey toward higher education. As part of the five-day program students took part in multiple sessions on topics including “Entrepreneurship and Financial Literacy” and “How to Engage Your Professor in Class.” Students learned life skills from mentors and professionals from throughout the community.

“We’re able to bring rising 10th, 11th and 12th graders to campus for five days to provide young men of color information about what that college experience is going to look like,” said Dr. Chris Hunt, Vice President & Dean for Equity and Inclusion at Moravian University. “We started this program to show models of excellence and give these young men something to aspire to be.”

The program was free for those attending and included housing, meals, social gatherings, mentorship and networking opportunities. Professional headshots were taken of all attendees and each student received a suit, dress shirt, tie and pocket square to wear for future interviews and school visits.

As part of the program, the students also visited Air Products’ Global Headquarters to learn about the industrial gases industry and Air Products’ role in the energy transition. Students also had the opportunity to connect with Air Products’ executives.



At Air Products, we’re proud to support programs like this because, first of all, we’re not only a leader in our industry, but we’re a leader in our communities.

We have a huge, vested interest in the youth in this area because they will grow up, they’ll support the area, and they may even come work for us someday.

Raymon Williams

Air Products’ Director of Renewable Energy Projects



SPOTLIGHT STORY

Air Products' STEM program in the UK reaches over 60,000 students



During 2023 more than 8,000 school students from 43 schools took part in The National Careers Challenge, which is sponsored by Air Products' STEM program in the UK and delivered by The Inspirational Learning Group on our behalf.

The students compete in small teams within their school to present their ideas on the important role hydrogen can play in the energy transition. Their task is to present ideas for market uses for low-carbon hydrogen, such as using hydrogen fuel cell buses for public transportation or using hydrogen fuel cells to power municipal garbage trucks.

Teams of 11- and 12-year-old students take part in daylong workshops focused on hydrogen, sustainability and employability skills such as problem-solving and communication skills. The best teams from each school take part in the grand final event.

Air Products' STEM (Science, Technology, Engineering and Math) program initiates a variety of STEM-related educational activities for students from primary school to students preparing to enter a university. Lynn Willacy, an Air Products' employee who oversees the program, said The National Careers Challenge has just completed its fourth year and is one of the company's largest STEM initiatives.



Last year, more than 50 Air Products' employees helped to 'inspire the next generation' by taking part in onsite and virtual educational opportunities, including webinars and career fairs. For all UK-wide STEM initiatives, Air Products also collaborates with leading educational organizations to develop programs and age-appropriate content for students, reaching over 60,000 students throughout the academic year.

In addition to The National Careers Challenge, other program activities include:

- **SATRO** – an educational charity supported by Air Products for many years. The Problem Solving Challenge gives students, ages 10-to-16, the task of solving a challenge linked to sustainability. During 2023, 566 students took part in the program, which showcased the problem-solving skills, ingenuity and creativeness of students and brings STEM subjects and sustainability closer to students, encouraging them to explore careers in these areas. Our colleagues also attend 'SATROFest' each year, delivering hands on STEM activities and career information. Last year, over 1,000 students attended the event.
- **WISE** (Women in Science and Engineering) – an organization created to inspire women and girls to pursue STEM careers. Air Products is a member of the organization and 14 employees currently share their education and career history on the WISE 'My Skills My Life' website, to serve as role models for students. Air Products' leadership team also supported WISE by speaking at events and webinars focused on diversity and inclusion.

Every activity funded through the STEM program must fit one of four pillars:

- ➔ **Spark interest** of students starting school through pre-college
- ➔ **Build capabilities** for college and university students, enriching their learning
- ➔ **Sharpen skills** of our employees, develop new skills and provide personal development opportunities
- ➔ **Engage communities** where Air Products operates





Community support

Air Products is committed to making a positive impact on the communities where we live and work. Our employees bring this commitment to life through volunteering on community projects around the world, many of which are further supported by the Air Products Foundation.

The mission of the Air Products Foundation is to build meaningful relationships with charitable organizations that share the values inherent in our Higher Purpose and to enhance positive relationships with Air Products' employees, communities, customers and shareholders. In 2023, Air Products contributed more than \$9 million to non-profit organizations.

>1,000 PROJECTS

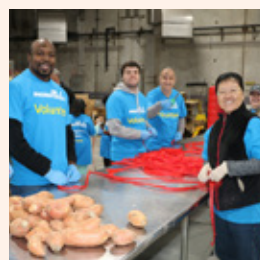
in the past 3 years

\$9 MILLION

contributed in 2023

SPOTLIGHT STORIES

North America:



Air Products' employees from our Texas region participated in volunteer events in support of the Houston Food Bank. Our volunteers sorted and loaded almost 10,000 pounds of food which provided over 8,000 meals to families in need. Food insecurity affects

many families in our communities, and Air Products is proud to work together to support our neighbors.

South America:



Air Products provided support to expand the Epon School in Ensenada, in the south of Chile, to include an educational center. Ensenada is a rural area that had only an elementary school, so older students would need to travel as much as two hours to access

educational centers in bigger cities, like Puerto Varas and Puerto Montt, where Air Products' facilities are located and supply aquaculture companies and local businesses with gases, promoting local development. The new educational center will serve approximately 200 students.

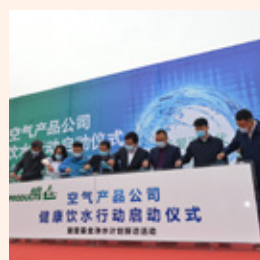
Europe:



Poland: Air Products created a clean hydrogen refueling station model as part of Minicity, an interactive, innovative educational space for children ages 7-to-15-years-old in Warsaw, Poland. At Minicity, children can take on various professional roles and

participate in activities to boost interest in the areas of economics, engineering, medicine, new technologies, entrepreneurship and social responsibility.

Asia:



The Air Products Foundation continued to provide healthy drinking water to students at schools in rural China through its collaboration with One Foundation, a recognized public welfare fund in China. The Safe and Healthy Drinking Water Program

installs water purification equipment at schools and provides drinking cups to students, as well as training and equipment maintenance. Since its inception in 2020, the program has installed more than 160 sets of water purification equipment at 145 schools, benefiting over 100,000 students and teachers.

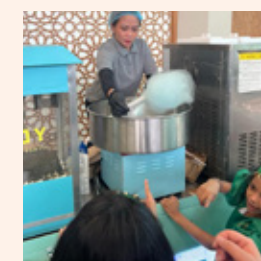
India:



Air Products supported several community efforts throughout India. We provided three bilevel positive airway pressure machines to assist patients with respiratory issues at a community health center in Kochi.

In Vadodara, a rural childcare center, known as an Anganwadi, was set up near a local village to support childcare and education. The center was equipped with furniture and infrastructure, as well as an indoor and outdoor play area.

Middle East:



As part of a volunteer initiative, Air Products' employees in the Kingdom of Saudi Arabia partnered with the Alber Foundation for Orphans to provide an event including educational opportunities, games and team building activities. The event was

scheduled to take place close to Saudi National Day and included an "Al Ardha" group that performed a traditional Saudi parade.



We believe that an investment in Air Products – and indeed, in any company – can only be earned by operating with integrity and accountability.

Our governance approach and procedures help us operate in ways aligned to these core values.

| GOVERNANCE





Corporate governance

Board of Directors

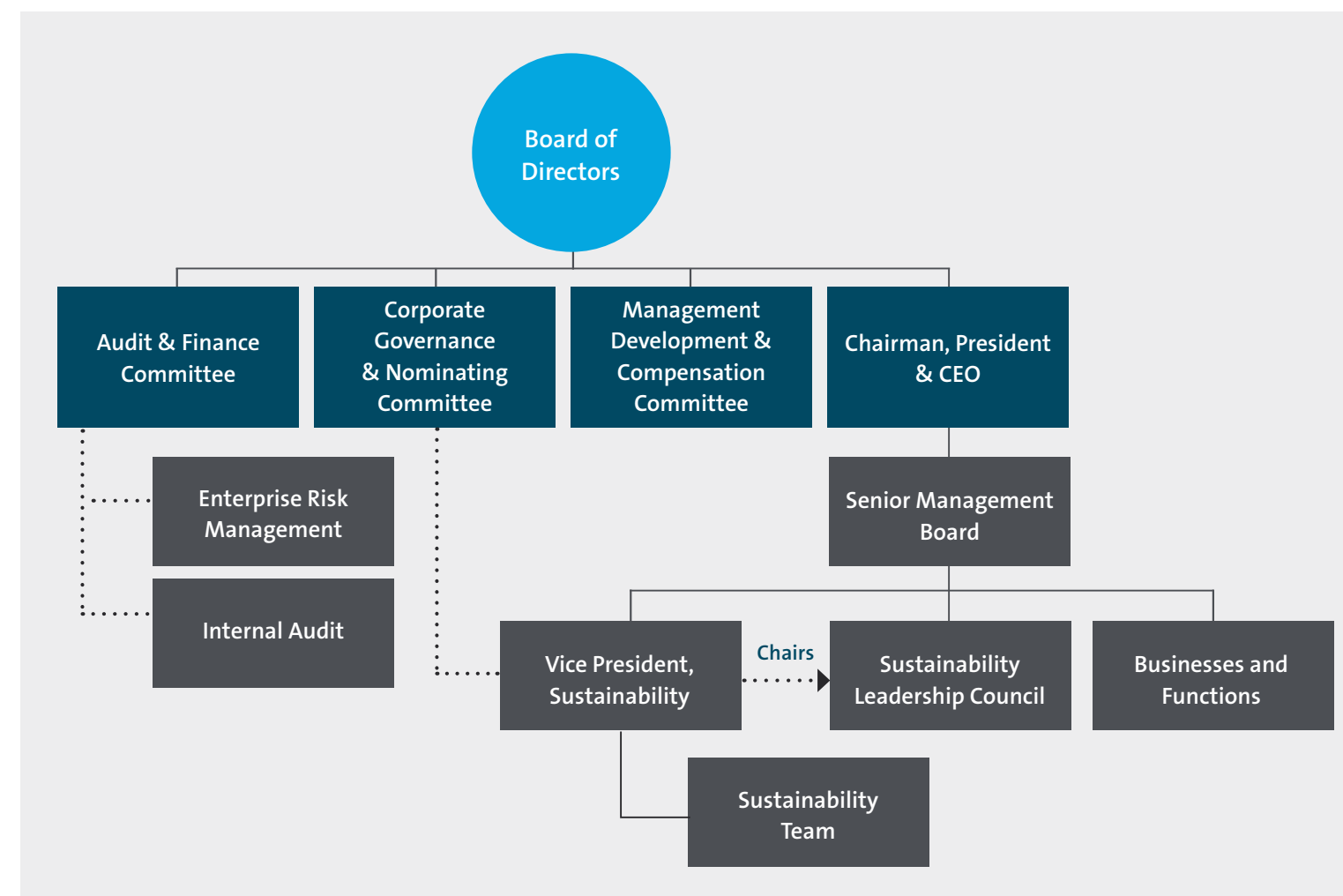
Air Products’ Board of Directors is composed of a diverse group of leaders in their respective fields. Our directors have leadership experience at major domestic and international companies with operations inside and outside of the United States. Our directors also have experience on the boards of other companies, which provides an understanding of different business processes, challenges, strategies, and approaches to problem-solving.

The Board of Directors has accountability for oversight of environmental and safety performance, which it reviews at least quarterly. Business ethics, climate change and the energy transition, diversity, and talent management are key subjects related to sustainability that are routinely discussed by the Board. The Board also reviews sustainability-related targets and the Company’s progress towards them.

The Sustainability Leadership Council

The Sustainability Leadership Council (SLC) is comprised of senior executives who lead our businesses and functional areas. The SLC sets Air Products’ sustainability approach, including our goals and programs, and supports the assessment of sustainability risks and opportunities. The Council also reviews our Sustainability Priorities/ Materiality Matrix and annual Sustainability Report. The SLC is chaired by the Vice President of Sustainability who reports on sustainability progress to the Corporate Governance and Nominating Committee.

The Sustainability Team reports to the Vice President of Sustainability and supports the implementation of Air Products’ sustainability programs, monitors progress including goals, tracks external developments and stakeholder concerns, and prepares sustainability reports. Businesses and functions support sustainability programs, goals, and the integration of sustainability across the Company.





Looking ahead

Over the past year, we have seen increasing momentum among governments, businesses, and communities to embrace the energy transition. Collaboration within the global community to reach our collective climate and sustainability goals is charting the path to a cleaner, more sustainable world.

We are proud to play an important role to enable and accelerate the energy transition. As always, we welcome an opportunity to engage with you and continue working together to **GENERATE A CLEANER FUTURE.**





This section of our Sustainability Report provides additional details on Air Products' sustainability programs and progress in 2023.

DETAILED DISCLOSURES



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Sustainability data

Data	Year	Units	2021	2022	2023
Economic Data					
Revenues	FY	\$MM USD	\$10,323	\$12,699	\$12,600
Customer Avoided Emissions	CY	MM tCO ₂ e	82	86	99
Sustainable Revenues	CY	%	56%	56%	52%
%R&D for Energy and the Environment	FY	%	70%	70%	70%
Environmental Performance Data					
Energy Consumption					
Fuels	CY	TWh	43.2	42.6	44.8
Electricity	CY	TWh	16.3	17.1	17.9
Steam	CY	TWh	8.5	8.8	8.7
Total	CY	TWh	68.0	68.5	71.4
Renewable electricity	CY	%	24%	25%	23%
Renewable electricity goal	CY	TWh			4.2
Energy intensity	CY	TWh/\$Bn USD	6.2	5.3	5.7
Energy intensity change	CY	%		-14%	8%
GHG Emissions					
Scope 1	CY	MM tCO ₂ e	16.0	15.9	16.4
Scope 2 (location-based)	CY	MM tCO ₂ e	10.3	10.7	10.7
Scope 3 (total)	CY	MM tCO ₂ e	8.6	8.1	8.3
Category 3: Fuel and energy related activities	CY	MM tCO ₂ e	3.5	3.4	3.8
Category 11: Use of sold products	CY	MM tCO ₂ e	3.1	2.9	2.5
Category 15: Investments	CY	MM tCO ₂ e	2.0	1.8	1.9
Total GHG emissions (Scope 1, 2 and 3)	CY	MM tCO ₂ e	35.0	34.6	35.3
Third by '30 Carbon Intensity for Scope 1&2	CY	kg CO ₂ e/MM BTU			87
Third by '30 Carbon Intensity for Scope 3	CY	kg CO ₂ e/MM BTU			27
Total GHG emissions intensity	CY	MM tCO ₂ e/\$Bn USD	3.2	2.7	2.8
Water					
Water Withdrawals					
Surface water	CY	Megaliter (ML)	3,930	2,970	1,500
Ground water	CY	ML	5,040	3,810	4,410
Third-party water	CY	ML	54,460	64,600	62,110
Total withdrawals	CY	ML	63,440	71,380	68,020
Total withdrawal intensity	CY	ML/\$MM USD	5.8	5.5	5.5

Environmental Performance Data	Year	Units	2021	2022	2023
Water Discharges					
Surface water	CY	ML	3,510	3,630	3,430
Ground water	CY	ML	410	10	60
Third-party water	CY	ML	15,040	18,390	21,580
Total discharges	CY	ML	18,950	22,030	25,070
Biochemical Oxygen Demand (BOD)	CY	MT	2.3	3.2	2.7
Chemical Oxygen Demand (COD)	CY	MT	62.5	72.9	80.3
Water Consumption					
Total water consumption	CY	ML	44,490	49,350	42,950
Total consumption intensity	CY	ML/\$MM USD	4.1	3.8	3.5
Water intensity change	CY	%		-6%	-10%
Waste					
Generated					
Hazardous waste	CY	MT	8,100	8,030	10,670
Non-hazardous waste	CY	MT	13,760	21,450	18,000
Hazardous waste diverted					
Hazardous waste recycled	CY	MT	2,990	2,930	4,450
Percent hazardous waste recycled	CY	%	37%	36%	42%
Hazardous waste disposed					
Incinerated	CY	MT	630	810	490
Treated	CY	MT	230	420	320
Landfilled	CY	MT	4,240	3,870	5,410
Hazardous waste intensity	CY	MT/\$MM USD	0.7	0.6	0.9
Non-hazardous waste intensity	CY	MT/\$MM USD	1.3	1.7	1.4
Air Emissions					
Nitrogen oxides	CY	MT	1,288	1,410	1,444
Sulfur oxides	CY	MT	65	61	75
TRI releases	CY	MT	99	123	N/R
Volatile organic chemicals	CY	MT	88	87	N/R
Hazardous air pollutants	CY	MT	42	42	N/R



Sustainability data

Social Data	Year	Units	2021	2022	2023
Safety Performance					
Employees					
Recordables	FY	#	80	83	72
Recordable Rate	FY	#/200K hr	0.39	0.36	0.29
Lost Time Incidents (LTI)	FY	#	14	22	24
LTI Rate	FY	#/200K hr	0.07	0.10	0.10
Fatalities	FY	#	0	0	0
Contractors					
Recordables	FY	#	69	48	62
Recordable Rate	FY	#/200K hr	0.43	0.26	0.29
LTIs	FY	#	9	12	11
LTI Rate	FY	#/200K hr	0.06	0.06	0.06
Fatalities	FY	#	1	0	1
Talent & Culture					
Number of employees	FY	Number	>20,000	~22,000	~23,000
Employees – percent by gender					
Male	FY	%	78%	78%	77%
Female	FY	%	22%	22%	23%
Women in the workforce	FY	%	22%	22%	23%
Women in management	FY	%	22%	22%	22%
Women in senior leadership	FY	%	20%	23%	24%
Women in executive roles	FY	%	17%	17%	19%
U.S. minorities in the workforce	FY	%	26%	28%	28%
U.S. minorities in management	FY	%	23%	26%	26%
U.S. minorities in senior leadership	FY	%	17%	20%	21%
U.S. minorities in executive roles	FY	%	27%	28%	33%
Members of Collective Bargaining Units	FY	%	18%	20%	23%
Work arrangements – percentage full-time	FY	%	>98%	90%	>90%

Social Data	Year	Units	2021	2022	2023
Turnover rate (voluntary and involuntary combined)	FY	%	7.7%	11.1%	9.2%
Employees – percent by region					
Americas	FY	%	38%	36%	37%
Asia	FY	%	32%	33%	32%
Europe	FY	%	30%	31%	22%
Middle East and India	FY	%	N/R	N/R	9%
Employees – percent by age					
<30	FY	%	12%	12%	12%
30-50	FY	%	63%	63%	63%
>50	FY	%	25%	25%	25%
Communities					
Charitable Contributions	FY	\$MM USD	\$7	\$7	\$9
Governance					
Total number of security incidents and allegations of misconduct	FY	#	469	570	684
Total number of allegations requiring further investigation	FY	#	171	217	210
Total number of substantiated investigations	FY	#	76	105	110

Find out more about how selected values were calculated in the [Data Methodology and Controls section](#).



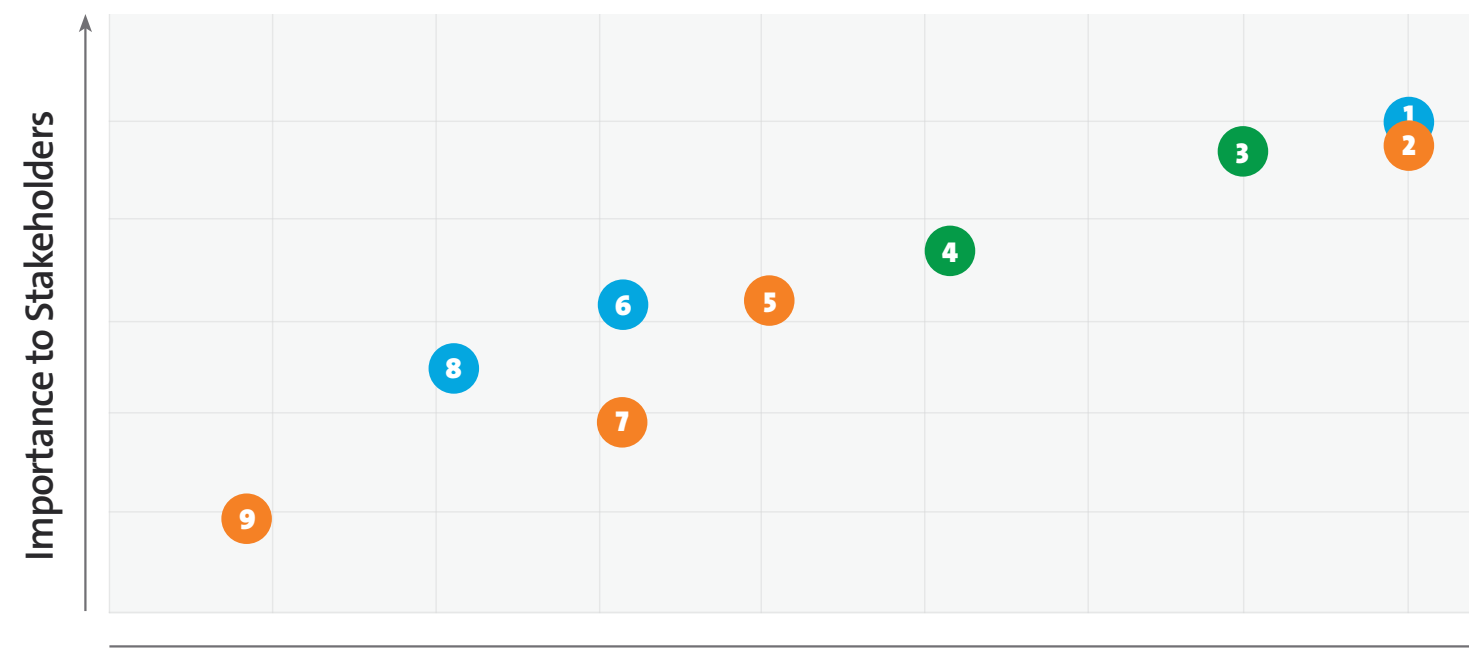
Sustainability priorities

Air Products’ sustainability priorities align with our sustainability approach as described on pages 6-7 of this Report. The priorities are informed by a materiality assessment process that considers what is most important to our stakeholders and where we can have the most impact.

Materiality assessment

Each year Air Products prepares a materiality assessment to ensure our sustainability priorities align with our most important business impacts and stakeholder considerations, to identify and address sustainability risks, and to guide our reporting. It is important to note that the terms “material” and “materiality” used in the context of sustainability are not the same as these terms defined by the U.S. Securities and Exchange Commission or as used in financial reporting.

Our sustainability priorities / materiality matrix



- 1 Energy & Climate/GHGs
2 Safety & Health
3 Ethics & integrity

 Generating a Cleaner Future with our Customers
- 4 Sustainable Products & Innovation
5 People & Culture
6 Water Conservation

 Generating a Cleaner Future within our Company
- 7 Supply Chain Sustainability
8 Responsible Production & Consumption
9 Community Support

 Generating a Cleaner Future by the Committed People of Air Products

For the past two years, we have sought stakeholder feedback through proactive surveys and dialogue covering key topics. These topics are sourced from emerging reporting requirements, sustainability frameworks, and organizations that rate companies on sustainability (see right). Emerging reporting requirements, particularly from the European Union, were new and key sources of topics for our 2023 materiality assessment.

For this Report, Air Products obtained feedback from nearly 2,000 key stakeholders to understand their most significant concerns and seek input on areas where Air Products can have the most significant impact. We surveyed employees, customers, and suppliers, and engaged with communities and government authorities in key jurisdictions. Investor perspectives were provided through ongoing dialogue.

The topics rated by the stakeholders with the highest level of importance and impact are included in our Sustainability Priorities / Materiality Matrix and frame our sustainability reporting. These priorities were reviewed and approved by our Sustainability Leadership Council and provide the framework for this Report.

Sources for materiality assessment topics

Reporting Requirements

- Corporate Sustainability Reporting Directive (CSRD)
- European Sustainability Reporting Standards (ESRS)
- International Financial Reporting Standards (IFRS) from the International Sustainability Standards Board (ISSB)

Frameworks

- Global Reporting Initiative (GRI)
- Sustainability Accounting Standards Board (SASB)
- Task Force for Climate-related Financial Disclosures (TCFD)
- UN Global Compact
- UN Sustainable Development Goals

Sustainability Raters

- CDP (formerly the Carbon Disclosure Project)
- EcoVadis
- ETHIBEL
- FTSE4Good
- Institutional Shareholder Services (ISS)
- MSCI
- S&P Global’s Dow Jones Sustainability Index (DJSI)
- Sustainalytics



Stakeholder engagement

We work closely with our key stakeholder groups to understand and respond to their concerns and collaborate for shared benefit. The stakeholder groups have been identified based on their potential impact on our business success and the potential impacts of our business activities on them.

Our key stakeholder groups:

Communities	The stronger the local communities where we operate, the stronger and more stable platform from which we can run our business and create positive impact. We strive to be a good neighbor and demonstrate our commitment to the health and vitality of the local communities in which we live and work. Our plant management and other personnel communicate with stakeholders on a regular basis and solicit feedback on our processes and procedures, the safe use of our products, and key issues in the community.
Customers	Customers come to Air Products for innovative thinking and solutions to their most pressing operational challenges. It's our commitment to quality, reliability, safety, fairness, mutual respect, and integrity that keep them coming back. Key sustainability needs of our customers vary by business, but typically focus on how our products can help them improve energy efficiency and reduce environmental impact.
Employees	Air Products is committed to creating a work environment where our employees know they belong and matter. We are cultivating a workplace culture where employees can grow, thrive, and work together to innovate solutions to the world's greatest environmental and sustainability challenges. We provide career development opportunities and continuous learning. We engage in regular communication with our employees in person and through a variety of channels, and provide extensive information through our Company intranet and employee newsletters.
Government Regulators	Public policy decisions and regulations have a direct impact on our license to operate. Air Products supports fair, balanced, and realistic policy decisions that will help us achieve our sustainability goals and serve the interests of the many stakeholders to whom we are accountable. We maintain open channels of dialogue with the local, regional, and national government entities where we operate. In many cases, our employees provide expertise and input to proposed legislation. We recognize that through cooperation and coordination with governments and regulators, we can more productively address global sustainability challenges.
Investors	The only way to serve our customers with excellence, develop and reward our employees, and support our communities is to have a profitable company with satisfied shareholders. We hold public quarterly earnings calls and actively engage investors in numerous sell-side conferences and one-on-one investor meetings. We have a robust investor relations program to ensure the effective communication of our messages and the investment community's perspectives are fully understood.
Suppliers	Every year, we spend billions on energy, equipment, materials, and services from more than 31,000 suppliers worldwide. As an extension of our company, Air Products' suppliers play a crucial role in being able to reliably deliver to our customers every day. We look for suppliers who share our values and commitment to sustainability and hold them to the same high standards expected from Air Products. We engage with suppliers on sustainability matters as part of our supplier relationship management programs.

For more information on how our Board of Directors engages with stakeholders, please see our 2024 Proxy Statement on page 21.

We also seek feedback from stakeholders as part of our materiality assessment process.



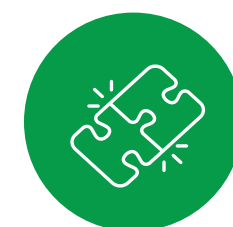
We also completed a preliminary double materiality assessment for future compliance with the EU's Corporate Sustainability Reporting Directive. The assessment considered impacts, risks, and opportunities (IROs) aligned with material topics from the European Sustainability Reporting Standards. Potential and actual, as well as positive and negative IROs were assessed. Below are examples of the highest priority IROs. Additional details on IROs will be provided in future reports as required by Corporate Sustainability Reporting Directive (CSRD).

	Actual	Potential
Positive	<ul style="list-style-type: none"> Clean hydrogen for the energy transition and Sustainable Offerings for customers Workforce development, diversity, and inclusion 	<ul style="list-style-type: none"> Access to new markets and partnerships Innovation in the recycling and reclamation of valuable gases
Negative	<ul style="list-style-type: none"> Safety accidents and incidents Resource consumption and emissions from manufacturing 	<ul style="list-style-type: none"> Disruption in operations and/or value chains due to climate change Regulatory changes that increase complexity and/or costs

United Nations Sustainable Development Goals

Established by the United Nations in 2015, the Sustainable Development Goals (SDGs) aim to create a world without poverty, inequality, unrest, and environmental stress. Businesses can play a critical role in providing solutions to these sustainability concerns while also generating new opportunities.

Air Products contributes to the SDGs across nine areas aligned with our sustainability framework. Additional details on how we contribute to the SDGs are provided throughout this Report with applicable SDGs indicated in each section.



With our Customers



Within our Company



By our People



Sustainable Offerings for our customers

2023 results

In 2023, Air Products' gases and equipment helped customers decarbonize and improve sustainability. Approximately half of our sales were related to our Sustainable Offerings as we helped our customers and downstream users avoid 99 million tonnes of CO₂e. At the same time, we continued to make significant progress on our hydrogen megaprojects that will enable further decarbonization, while investing nearly 70% of our R&D on projects related to energy and the environment.

Related SDGs



Why it's important

The innovation and development of products that have sustainability benefits will play a key role in helping the world address climate change while continuing to provide the offerings and services people need. The European Union Joint Research Commission estimates that over 80% of all product-related environmental impacts are determined during the design phase, emphasizing the need for innovative product design.¹ Likewise, sustainable products provide opportunities for business growth driven by increasing customer demands and regulatory incentives.

¹[Sustainable Product Policy](#) - European Commission (europa.eu)

Our commitments

Air Products is committed to enabling our customers to enhance their sustainability and to driving decarbonization of industrial sectors and heavy transportation that are hard to electrify by investing in megaprojects to produce low- and zero-carbon hydrogen. We announced an industry-leading capital commitment to accelerate the energy transition with more than \$15 billion in capital expenditures between 2018 and 2027 on first-mover projects.

Our approach

Through our core industrial gases business, we supply customers in dozens of industries with critical products and expertise that lower greenhouse gas (GHG) emissions and increase efficiency and productivity. Through our blue and green hydrogen projects we are helping to drive the energy transition and decarbonize hard-to-abate sectors. Both are supported by our focus on clean technologies.



We also:

- Construct facilities on or near customer sites so that products can be distributed efficiently through pipelines that significantly reduce delivery emissions, to enable use of customer by-product gases, and to recycle steam and water.
- Conduct life-cycle assessments of products and processes to determine environmental impacts.
- Provide gasification technologies for various feedstocks, including sustainable biomass and waste materials, with the goal of incorporating carbon capture and storage.
- Dedicate efforts to continually improve our quality performance and customer satisfaction, which ranged from 84% to 97% across our regional businesses in 2023.

Every day around the world we help our customers make their operations and products more efficient, productive, and sustainable.

Our Sustainable Offerings include gases, equipment, technologies, and applications that enable our customers and their customers to improve sustainability performance or address significant societal needs. Air Products evaluates these offerings using a consistent life-cycle derived approach that compares the offerings to equivalent benchmark technologies across key environmental and social criteria such as resource use, emissions, safety, and customer productivity. Offerings have been evaluated across all segments of our business, and over 100 offerings have been reviewed by our Sustainability and Customer Technology teams. The offerings that have the most significant positive impacts on sustainability are categorized as Sustainable Offerings.





Examples of Sustainable Offerings:

- Hydrogen for enabling customers in hard-to-abate sectors to conserve energy and reduce emissions and for producing cleaner transportation fuels.
- Oxy-fuel combustion technologies used in energy-intensive applications to increase production, lower fuel use and costs, reduce emissions, and optimize efficiency.
- Gases and equipment that safely extend the shelf-life of food, improve taste, reduce waste, and help reduce production costs.
- Helium and medical gases that help sustain life.

Oxygen, carbon dioxide, and technology solutions for treating wastewater and drinking water that improve water quality and availability, reduce costs, lower emissions, and increase the environmental sustainability of water treatment processes.

We track results related to Sustainable Offerings through avoided GHG emissions that our customers and their customers would otherwise emit if not for the products we provide. In 2023, we increased customer avoided emissions from 86 to 99 million tonnes of CO₂e and over 50% of our revenues were related to Sustainable Offerings.



Types of avoided emissions

- ➔ **Direct Emissions Reductions** – The use of several of Air Products’ Sustainable Offerings avoid direct emissions of greenhouse gases into the atmosphere. For example, low-carbon hydrogen can offset the use of conventional fuels resulting in a significant reduction in life-cycle carbon emissions. Additionally, the use of hydrogen in refining for ultra-low sulfur and renewable diesel fuels enables the production of fuels with lower carbon intensities than benchmark fuels.
- ➔ **Efficiency Improvements** – The use of our products leads to efficiency gains for our customers or other users further downstream in the value chain. The increased energy efficiency and reduced waste are associated with avoided emissions across several industries and applications. For example, oxy-fuel applications can increase efficiency for energy intensive industries such as steel, glass, and cement manufacturing and thereby reduce CO₂e emissions. Food supply chains also benefit from our gases and equipment that reduce food waste and related emissions.
- ➔ **Customer Integration** – Many of our largest facilities are built on or near customer sites that enable us to eliminate delivery emissions, use by-product gases, and recycle resources between facilities. For example, we use customer by-product gases as feeds to our processes and provide customers with efficiently produced by-product steam from our hydrogen plants.



Clean hydrogen's critical role in our decarbonization portfolio

Related SDGs



Building a cleaner, more sustainable energy future is one of the most critical issues facing our world today. The promise of renewable energy and electrification is real, but that alone cannot accommodate all the needs of daily living in the 21st century, while simultaneously growing our economy and achieving our climate goals.

Air Products aims to drive decarbonization through first-mover low- and zero-carbon intensity hydrogen megaprojects. The hydrogen produced by these projects will enable customers in hard-to-abate sectors including heavy industry and heavy-duty transportation to transition away from fossil fuels and reduce their direct and indirect GHG emissions. Our industry-leading capital commitment for hydrogen amplifies our ambition.

We also support these strategic projects and initiatives by driving clean technology innovation through our energy- and sustainability-focused research and development programs.



Why hydrogen?

Hydrogen is a simple and versatile molecule. It can store and transport energy, making it an essential low-carbon solution to address emissions from sectors requiring a high-density energy source, such as steelmaking, refining, the production of chemicals, and heavy transportation where electrification is not feasible or practical at scale. As a result, global demand for hydrogen is expected to grow significantly.

Hydrogen can be produced from renewable power via water electrolysis (green hydrogen) or from fossil fuels such as natural gas with carbon capture and sequestration (blue hydrogen). These types of hydrogen are often referred to as zero- and low-carbon hydrogen, reflecting their carbon intensity characteristics.

Progress continues on our first-mover hydrogen projects:

We are advancing major clean hydrogen projects around the world including NEOM, the world's largest green hydrogen plant, our Louisiana Clean Energy Complex, our net-zero hydrogen energy complex in Alberta, Canada, and renewable hydrogen facilities in Europe. Read more about these projects on pages 21-24 of this Report. Below are details on additional hydrogen projects.

Green hydrogen project in New York State, United States

In October 2022, Air Products announced plans to build, own, and operate a 35 tonnes per day facility to produce green liquid hydrogen at a greenfield site in Massena, New York, as well as liquid hydrogen distribution and dispensing operation to support the zero-emissions transportation market in several states in the Northeast that have adopted California's Advanced Clean Truck rule. This rule is aimed at accelerating a large-scale transition of medium- and heavy-duty vehicles to zero-emissions. The project will help avoid >6 million tonnes of CO₂e over the project's lifetime.

Plans to build the first mega-scale green hydrogen production facility in Texas

Air Products and The AES Corporation have announced plans to build, own, and operate a green hydrogen production facility in Wilbarger County, Texas. This mega-scale renewable power to hydrogen project would include approximately 1.4 gigawatts of wind and solar power generation, along with electrolyzer capacity capable of producing over 200 tonnes per day of green hydrogen, making it the largest green hydrogen facility in the United States.

Technology to produce hydrogen from ammonia

Air Products has developed high-efficiency ammonia crackers to enable global transportation of low- and zero-carbon hydrogen in the form of ammonia. Successful development of ammonia crackers goes hand-in-hand with our development of renewable hydrogen facilities around the world.

Hydrogen refueling infrastructure

Air Products has hands-on operating experience in over 250 hydrogen fueling station projects in 20 countries, and the company's technologies are used in over 1.5 million fueling operations annually. In 2023, we continued developing hydrogen refueling infrastructure globally:

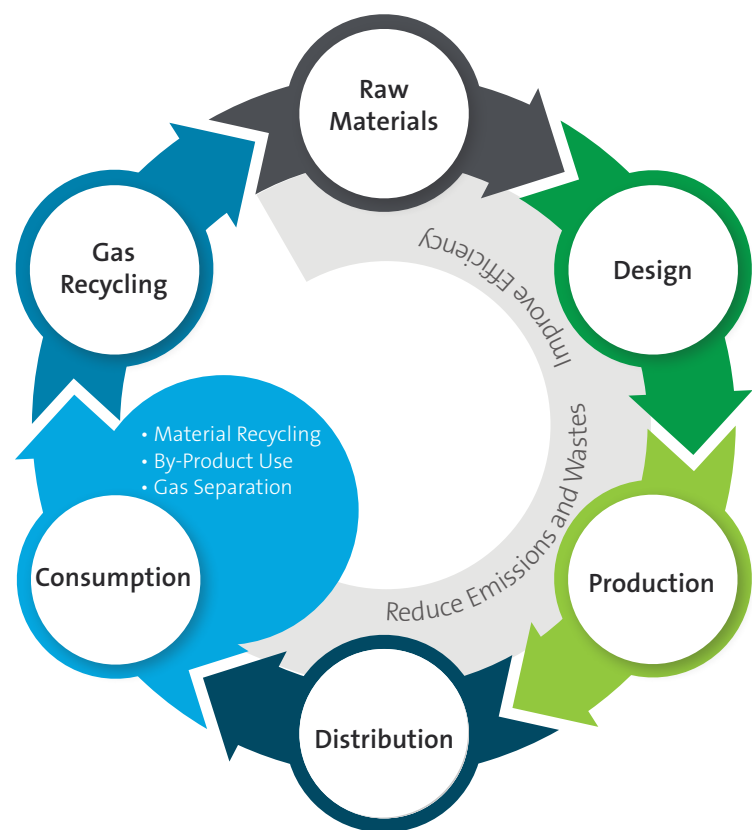
- Working with Chengzhi Shareholding Co. Ltd., a Chinese state-owned high-tech industry group, we launched the first commercial-scale hydrogen fueling station in Changshu city, Jiangsu province, capable of fueling city buses and heavy-duty trucks.
- We signed an agreement with Aers Energy België to develop a multi-fuel, hydrogen refueling station for trucks in the port of Zeebrugge, Belgium.
- We announced plans to build a multi-modal hydrogen refueling stations connecting Edmonton and Calgary, Alberta, Canada. The first station in the network is under construction and will be located near the Air Products' net-zero hydrogen energy complex in Edmonton.
- Selected by Edmonton International Airport as the hydrogen and technology provider for Alberta's first hydrogen fuel cell passenger vehicle fleet.



Circular economy

While industrial gases are typically consumed in our customers' processes, they contribute to the circular economy by enabling our customers to use or recycle resources. For example, hydrogen enables waste oil recycling, and liquid nitrogen used for cryogenic grinding enables efficient recycling of materials. Several of our gas products, such as hydrogen, carbon dioxide, and helium, are produced by purification of industrial by-products, which reduces emissions and waste.

We also supply our products via reusable transportable pressure vessels including tankers and tube trailers, via pipelines, and for small-scale supply in certain regions of the world, in cylinders with typical life spans of 10 to 25 years that are typically recycled after years of use.



Examples of our technologies and equipment that contribute to the circular economy include our Cryo-Condap® process that collects volatile organic chemicals from emission streams so the substances can be reused, and our biogas membrane separators to produce methane from farm waste, manure, or municipal waste and enable methane use in other applications.

In support of the circular economy, Air Products will continue to collaborate with our customers to improve productivity and energy efficiency and support their circularity efforts by leveraging our products and technologies, including hydrogen. We will also continue to seek alternative raw material sources for our businesses, such as bio-feedstocks and biogas, and to increase use of renewables.



Research and development focused on energy and sustainability

Research and development (R&D) focuses on new or improved production methods, delivery of industrial gases, and applications for industrial gas products that help our customers improve sustainability. R&D is conducted principally at our Technology Centers in:

- The United States (Allentown, Pennsylvania)
- The United Kingdom (Basingstoke, Hershams and Carrington)
- China (Shanghai)
- Saudi Arabia (Dhahran)

Air Products also funds and cooperates in R&D programs conducted by world-renowned universities and other technology organizations.

In 2023, our Technology teams continued to strengthen our sustainable product offerings, the efficiency of our core industrial gases business, and technologies needed for the success of our world-scale energy projects. About 70% of total R&D spend was dedicated to the energy transition and sustainability and included programs in the following areas:

- Design and operation of our core industrial gases equipment and facilities to reduce their carbon footprint and increase climate benefits for customers.
- Technologies to scale production of green hydrogen from renewable power via electrolysis.
- State-of-the-art carbon dioxide capture and permanent sequestration technologies.
- Technologies enabling safe transportation and storage of hydrogen at scale (including transportation as ammonia).
- Industry-leading hydrogen refueling stations for transportation markets.
- Collaborating with institutes of higher education on technology research.



Environmental performance

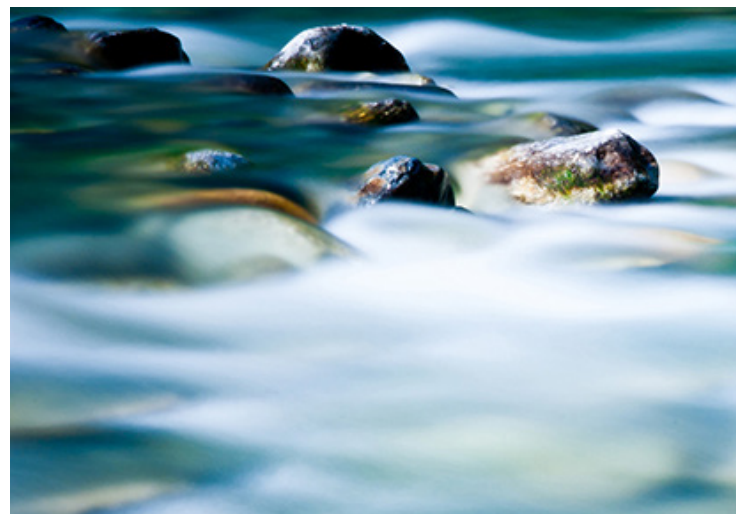
Air Products needs clean air, water and sufficient energy to create products that are used by thousands of customers to produce fuels, food, water, pharmaceuticals, and other goods that sustain and enhance life.

One of the most significant environmental challenges facing the world is the need for clean, sustainable energy. Air Products has made significant investments to accelerate the energy transition through the production of low- and zero-carbon hydrogen that will decarbonize transportation and industrial processes. These projects are described throughout this Report.

Related SDGs



At the same time, we recognize our businesses can impact the environment, from the resources we consume to our emissions and wastes. We strive to continually improve our environmental performance and reduce the impacts of our activities as outlined in our [EHS policy](#) and codified in our EHS Management System standards.



EHS management system

Air Products' Global EHS Management System puts our core EHS values into practice and enables our commitment to be an industry leader in EHS performance. The system integrates controls driven by our policies and governmental regulations, and supports the principles promoted by international standards such as ISO 14001 and ISO 45001. In addition, we pursue ISO certifications where mandated by regulatory or contractual obligations. When our requirements and local standards are not aligned, we apply the higher standard.

Environmental management at Air Products includes:

- Our Global EHS Policy
- CO₂e emissions intensity reductions through our “Third by ‘30” and net-zero goals
- Quadrupling the amount of renewable electricity used to make our products
- Our commitments to energy efficiency improvements
- Promoting the responsible use of water through water management plans at facilities with high levels of water intake and stress
- Our Global EHS Management System, applicable to all operations, which contains environmental standards and procedures and which supports the principles of ISO 14001
- Employee training based on job function
- Risk assessment processes for products, operations, and regulatory requirements, including an escalation process for engaging our EHS Risk Council
- Compliance audits conducted by our EHS Assurance Team
- Review of performance by our Board of Directors, Sustainability Leadership Council, businesses and operations, and members of our Environmental Teams at least annually
- Internal reporting to senior management of results each month
- External reporting on environmental performance through our annual Sustainability Report, public website, and responses to various stakeholders
- Management engagement with key shareholders on sustainability



Resources used

The principal raw materials for making atmospheric gases and hydrogen are air and energy in the forms of electricity or steam, and natural gas. In 2023, 93% of the raw materials (on a weight basis) used to make atmospheric gases, carbon dioxide, and hydrogen were from renewable sources. Packaging is not a significant issue for Air Products because we supply most of our products in reusable two-way bulk or semi-bulk containers, or via pipelines. For small-scale supply in certain regions of the world, we use cylinders that are long life, returnable, and reusable transportable pressure vessels with typical life spans of 10 to 25 years.



Energy consumption and efficiency

2023 results

In 2023, Air Products consumed 71 TWh of energy, an increase of 4% from prior year. The increase was primarily driven by higher production at major facilities. Energy intensity on a revenue basis also increased, due in part to lower revenues driven by lower energy cost pass-through to customers and other factors. Renewable electricity represented 23% of electricity consumed in 2023.

Also in 2023, the Company conducted a comprehensive review of its energy and environmental inventory processes and methodologies and updated the list of covered facilities. This resulted in the inclusion of a fuel source, refinery fuel gas, that had been partially considered in the past. Fuel values for 2021 and 2022 were updated based on this source. Additional details are provided in the Data Methodology and Controls section of the Report.

Related SDGs



Why it's important

The production of industrial gases is energy intensive. Air separation units (ASUs) require electricity or steam to compress air so it can be cryogenically distilled into oxygen, nitrogen, and argon. Likewise, operation of hydrogen/carbon monoxide (HyCO) units consumes natural gas, and in some cases refinery gases, as feedstock and/or fuel in the production process. Improving energy efficiency not only reduces energy consumption but also lowers emissions.

Our commitment

Air Products is committed to continuously improving the energy efficiency of our operations. We aim to increase energy efficiency, defined as energy consumption per unit of gas production, on an annual basis. This approach builds on two sets of prior energy intensity goals that were met for our atmospheric gas production units, including cumulative energy efficiency improvements of 8% for 2007-2015 and 2.6% for 2015-2020.

We have set a new goal to quadruple the amount of renewable electricity used to make our products by 2030 from a 2023 baseline of 4.2 TWh. The goal covers all gases and equipment that Air Products sells to customers and considers active renewable electricity that is purchased or produced by Air Products, and passive electricity from power grids. We expect the goal to be achieved primarily through active purchases and generation of renewable electricity.

Our approach

Air Products carefully tracks and manages energy use. Our conservation programs are focused on continually improving energy efficiency across our plants, particularly larger facilities. Efficiency improvements are realized through higher plant utilization, increased production at new, larger, and more efficient facilities, and through facility improvement projects. Several of our facilities have been certified to the ISO 50001 Energy Standard.

Increasing energy efficiency also lowers greenhouse gas emissions that contribute to climate change. Because Air Products' water consumption is tied closely to energy use, improvements in energy efficiency also reduce water usage.

Energy data

	2021	2022	2023
Consumption (TWh)^a			
Fuels	43.2	42.6	44.8
Electricity	16.3	17.1	17.9
Steam	8.5	8.8	8.7
Total	68.0	68.5	71.4
Renewable Electricity ^a	24%	25%	23%
Energy intensity (per unit revenue) ^b	6.2	5.3	5.7
Energy intensity change ^c		-14.5%	8.0%

^a Updated for 2021-2022. ^b Total consumption in TWh per \$ billion revenue. ^c Energy intensity change compares the energy intensity of the reporting year to the energy intensity of the prior year.

Find out more about how these values were calculated in the Data Methodology and Controls section.

Climate change and greenhouse gases

2023 results

In 2023, Air Products’ Scope 1, 2 and 3 GHG emissions increased due to higher production. Our GHG emissions intensity as measured by total GHG emissions per unit revenue also increased due to lower energy cost pass-through to customers and other factors.

Related SDGs



Why it’s important

Scientific assessments by the Intergovernmental Panel on Climate Change indicate that our planet has warmed by more than 1°C since the preindustrial era due to the use of fossil fuels, deforestation, and unsustainable resource consumption. Climate change is causing weather and climate extremes around the world – including heatwaves, major storms, and droughts – and leading to adverse impacts and damages. The risks and impacts from climate change are expected to increase as global temperatures rise.¹ Limiting climate change requires rapid decarbonization across industries and economies, while meeting the needs of an increasing global population. Clean hydrogen plays a significant role in the energy transition to limit climate change.

¹IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001.

Our commitments

Because carbon emissions represent our most significant environmental impact, we have set goals to invest billions in the energy transition, to reach net-zero in our operations by 2050, reduce our carbon intensity, and increase our use of renewable electricity.

Capital commitment	Air Products has an industry-leading capital commitment to accelerate the energy transition with more than \$15 billion in capital expenditures through 2027 on first-mover projects.
Net Zero	Our long-term goal is to achieve net-zero carbon emissions in our operations by 2050 by investing in megaprojects that support the energy transition, managing our assets, continuing to increase our use of renewable energy, improving energy efficiency, and converting our trucks to zero-emission vehicles. ^a
Third by '30 Carbon Intensity reduction^b	We aim to reduce the intensity of our Scope 1 and 2 CO ₂ e emissions by 1/3 by 2030, and the intensity of our Scope 3 categories 3, 11, and 15 CO ₂ e emissions by 1/3 by 2030, from 2023 baseline values of 87 and 27 kg CO ₂ e/MMBTU, respectively.
Renewable electricity goal	Our goal is to quadruple the amount of renewable electricity used to make our products by 2030 from a 2023 baseline of 4.2 TWh.

^aAchieving this goal will require strong policy and regulatory frameworks that promotes the adoption of key technologies to address the pace and scale required to support a net-zero future. ^bIntensity is defined as the CO₂e emissions divided by the energy we export in million British Thermal Units (BTUs).

We are committed to continually improving our sustainability goals. This commitment is illustrated by our new renewable electricity goal and our updated “Third by ’30” carbon intensity (CI) reduction goals. For the CI goals we shifted the baseline years from 2015 to 2023 while keeping the same target date of 2030. Making them more ambitious because the 2030 target carbon intensities have been reduced. For example, by the end of 2023 we had reduced our Scope 3 CI by over 20% since 2015. Resetting the baseline year to 2023 means a one-third reduction commitment versus the new, lower base that we achieved in 2023. Overall, the 2030 target carbon intensities for the combined Scope 1 and 2 goal shift from 62 to 58 kg CO₂e/MM BTU, and from 23 to 18 kg CO₂e/MM BTU for the Scope 3 goal.

Our progress on these goals will be non-linear and will accelerate in the second half of this decade as our hydrogen megaprojects come onstream and other sustainability efforts come to fruition. We have developed roadmaps to meet these updated challenges that include bringing our blue and green hydrogen megaprojects onstream, increasing our use of renewable electricity, converting our fleet of trucks to use hydrogen, and improving the efficiencies of our operating facilities. The Scope 3 goal baseline and target do not include emissions from Jazan, a non-consolidated joint venture (JV). We will consider reporting on these emissions in line with emissions reporting by the JV.

Our approach

Energy consumption drives our GHG emissions. Scope 1 emissions are primarily from hydrogen, carbon monoxide, and syngas production. Scope 2 emissions are due in large part to the electricity and steam we consume in our air separation units. Scope 3 emissions consider three categories: upstream emissions related to the energy we consume (category 3); emissions related to sold products that are GHGs (category 11); and emissions for non-consolidated joint ventures (category 15).

In 2023, we continued to engage with the Science Based Targets Initiative (SBTi) on the Sectoral Decarbonization Approach (SDA) for the chemicals sector, which includes hydrogen. Since hydrogen is a significant driver of our sustainability goals, we continue to believe that having a clear methodology for hydrogen is a prerequisite to any potential commitment to a science-based target.

Risks and opportunities

GHG emissions contribute to climate change, which represents risks and opportunities for Air Products. Climate change risks cover two main areas – transition and physical risks. Transition risks relate to policy and legal drivers that may impact Air Products, as some of our operations are in jurisdictions that have or are developing regulations governing emissions of GHGs that could negatively impact our growth, increase our operating costs, or reduce demand for certain of our products.

We monitor climate transition and physical risks through our Enterprise Risk Management system and other risk processes including climate scenario analysis. Risks are also identified by regional environmental experts who share the information with potentially impacted businesses. Physical risks, primarily due to the increased severity of storms, have also been identified as potentially impacting operating costs.

Risks are communicated across regions, shared with the Company’s Sustainability Leadership Council, and elevated to the Board of Directors, as appropriate.

Regulation of GHG emissions also provides new opportunities for us, particularly for our products and technologies that help our customers improve their sustainability performance and operations. Likewise, proposed rules ensure subsidies from governments provide support for the development of clean hydrogen projects that are critical for the energy transition. We use carbon intensity as a surrogate for carbon pricing when evaluating potential project opportunities that support the transition to a low-carbon economy.

Climate scenario analysis

Scenario analysis is a tool for evaluating the potential effects of future events on an organization, such as climate change. Air Products has continued to evaluate climate scenarios that are in line with the recommendations of the Intergovernmental Panel on Climate Change (IPCC) and Task Force for Climate Related Financial Disclosure (TCFD), examining potential climate-related risks and opportunities on our businesses.



Actions to drive decarbonization

We are taking the following actions to drive decarbonization within our company:

Renewable electricity

We plan to quadruple the amount of renewable electricity used to make our products by 2030 compared to 2023. This commitment represents a 15x increase in actively purchased or generated renewable electricity.

Energy efficiency

We are committed to continuously improving the energy efficiency of our operations, and consuming less energy to create more products is an effective way to reduce emissions.

Carbon capture

We are developing innovative solutions in carbon capture and sequestration and advocating for the development and use of carbon capture technologies.

Fleet conversion to fuel cell trucks

In 2021, Air Products and Cummins announced the signing of a memorandum of understanding to work together to accelerate conversion of Air Products’ fleet of ~2,000 trucks to fuel cell vehicles. In 2023, we received the first vehicles and have been preparing them for use.

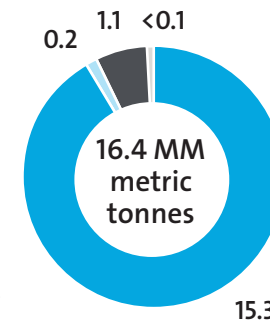
Performance details

In 2023, our direct (Scope 1), indirect (Scope 2) and indirect value chain (Scope 3) emissions totaled 35.3 million tonnes. Our emissions for 2021 and 2022 were updated due to the comprehensive review of our energy and environmental inventories we completed in 2023.

Air Products has verified GHG emissions since 2010. For this Report, 2023 GHG emissions for Scope 1, 2 and category 3 of Scope 3 were externally verified by an independent third-party, GHD Limited. The verification was conducted to a limited level of assurance and prepared in general accordance with ISO 14064.

Scope 1 Emissions*

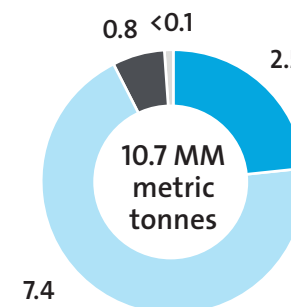
- Americas
- Asia
- E&A
- MEET



*Values do not equal total due to rounding.

Scope 2 Emissions

- Americas
- Asia
- E&A
- MEET



	2021	2022	2023
GHG Emission (million tonnes CO₂e)			
Scope 1 ^a	16.0	15.9	16.4
Scope 2 (location-based) ^a	10.3	10.7	10.7
Scope 3 (total)	8.6	8.1	8.3
Category 3: Fuel and Energy Related Activities (not incl. in Scope 1 or 2) ^a	3.5	3.4	3.8
Category 11: Use of sold products	3.1	2.9	2.5
Category 15: Investments ^a	2.0	1.8	1.9
Total GHG emissions (Scope 1, 2 and 3) ^a	35.0	34.6	35.3
Third by '30 Carbon Intensity for Scope 1 and 2 ^b			87
Third by '30 Carbon Intensity for Scope 3 ^b			27
Total GHG emissions intensity ^c	3.2	2.7	2.8

^a Updated for 2021-2022. ^b Baseline year reset to 2023 for which data is provided in kg CO₂e/MM BTU energy. ^c Million tonnes per \$B revenue.

Find out more about how these values were calculated in the [Data Methodology and Controls section](#).



Water stewardship

2023 results

In 2023, Air Products' water consumption declined by 7% compared to 2022. This was due to a combination of less water being brought into the facilities (withdrawals) and more water being discharged back to sources. We also established a new goal to develop and implement water management plans at our facilities in water stressed areas that withdraw significant amounts of water.

Related SDGs



Why it's important

Water is a vital resource and crucial to the health of every living thing on our planet. With populations and temperatures increasing, fresh water is becoming even more scarce. As a result, water conservation is needed now more than ever to ensure there is enough of this critical resource for everyone, now and into the future.

Our commitment

Air Products has a long-standing commitment to reduce water use intensity through energy efficiency improvements and conservation projects in areas where water is stressed. Our new water management goal will help focus our efforts on ~40 high priority facilities located around the world. High priority facilities withdraw >13 million gallons (>50,000 m³) of water annually from water basins with high or extremely high water stress. Water stress levels are based on WRI's Aqueduct Water Risk Atlas and have been evaluated for all facilities globally. We aim to develop the water management plans for these facilities by the end of 2026 and implement the plans by the end of 2030. We will also continue to increase our understanding of the water required for our hydrogen megaprojects and identify areas where we can make meaningful progress in conserving water. Likewise, we will look for opportunities to use alternative water sources.

Our approach

Water is essential for Air Products. We use water primarily for cooling, to make hydrogen through electrolysis and steam methane reforming, and to provide steam and water to our customers. Because of these uses, our water consumption is tied closely to energy use; therefore, improvements in energy efficiency can reduce water consumption. We also use water for safety systems, cleaning, and for employee consumption and sanitary purposes.

Risks and opportunities

Air Products has identified operational risks related to water, including reduced water availability and quality, which is exacerbated by climate change, and increased regulatory and permitting requirements. Energy availability or costs may also be impacted by water availability, because the production of energy requires water and industrial gas production is energy intensive.

Air Products assesses water risks for its facilities on an annual basis using the World Resources Institute's Aqueduct Tools. Results of this assessment are used to identify the facilities for which water management plans will be developed and implemented. In addition, regional environmental staff identify and review regulatory and physical risks related to water for their regions. Water risks are also considered when evaluating new projects and facility expansions.

We construct facilities on or near customer sites, enabling us to eliminate delivery emissions, use by-product gases, and recycle steam and water between facilities. As a result, some of our operations are in water stressed areas, particularly those where the baseline water stress is high or extremely high according to the Aqueduct Water Risk Atlas. In 2023, 31% of our facilities, based on our overall number of sites, were in areas with high and extremely high water stress.

The increasing need to treat wastewater and potable water provides opportunities to beneficially use our products, particularly oxygen and carbon dioxide. These products and related technology solutions improve water quality and availability, reduce costs, lower emissions, and increase the environmental sustainability of water treatment processes.

Water withdrawals and discharges

We obtain freshwater from various sources, including surface water, groundwater, and third parties (municipalities and customers). We look for opportunities to use recycled ("gray") water in our plants, particularly those in water-stressed areas, and seek to improve our overall water recycling rate. Across our plants, we estimate that 21% of our water was from recycled sources in 2023.

Direct discharges from our air separation units are mainly cooling tower blowdown and atmospheric condensation streams with low chemical oxygen demand (COD) and low biochemical oxygen demand (BOD). Our HyCO operations often generate higher COD wastewater streams; however, these are primarily transferred to nearby regulated facilities where COD is effectively treated prior to the water being discharged.

Air Products has established requirements for the proper management of wastewater and stormwater discharges at our facilities, such as complying with all discharge standards, prohibiting discharges that can create hazards or interfere with the operation of treatment facilities, and sending wastewater only to authorized facilities for treatment. Our facilities are encouraged to implement best management practices for reducing the volume and/or toxicity of water discharges. Air Products discharges wastewater into eight Conservation International Biodiversity Hotspots, but discharge volumes are insignificant.



Performance details

In 2023, our water consumption totaled 42,950 megaliters or ~11 billion gallons. Our water use intensity on a revenue basis declined by 10% from 2022, continuing a downward trend.

We have made significant progress in decreasing our water use intensity since 2009 when we set our first intensity goal, including cumulative water efficiency improvements of 23% for 2009-2015 and 26% for 2015-2020 as measured by the amount of water consumed per unit of production. Much of our freshwater conservation has been realized through improved cooling tower operations and converting to recycled water in our plants, particularly where water is stressed.



	2021 (Total)	2022 (Total)	2023 (Total)	2023 (Water-stressed areas)
Water Withdrawals (megaliters)^a				
Surface water	3,930	2,970	1,500	10
Groundwater	5,040	3,810	4,410	110
Third-party water	54,460	64,600	62,110	14,660
Total withdrawals	63,440	71,380	68,020	14,780
Total withdrawal intensity ^b	5.8	5.5	5.5	
Water Discharges (megaliters)^a				
Surface water	3,510	3,630	3,430	720
Groundwater	410	10	60	60
Third-party water	15,040	18,390	21,580	4,550
Total discharges	18,950	22,030	25,070	5,330
Biochemical oxygen demand (tonnes)	2.3	3.2	2.7	
Chemical oxygen demand (tonnes)	62.5	72.9	80.3	
Water Consumption (megaliters)^a				
Total water consumption	44,480	49,350	42,950	9,450
Total consumption intensity ^b	4.1	3.8	3.5	
Water intensity change		-6%	-10%	

^a Values updated for 2021 and 2022. ^b Intensity in megaliters per \$ million of revenue.

Find out more about how these values were calculated in the [Data Methodology and Controls section](#).

Collaborating to improve water treatment

Water is critical to Air Products' operations and in many cases requires pre-treatment prior to use and treatment prior to discharge. Air Products' Water Treatment Community of Practice (COP) creates a forum for water treatment specialists throughout Air Products' global organization to share information, collaborate, and communicate about lessons learned, common issues and challenges related to water treatment. COP members also share ideas on reusing water and promoting zero- or partial zero-liquid discharge. Selected research areas of the COP in collaboration with Global Technology include phytoremediation of wastewater to enable water reuse for agriculture, alternative cooling water treatment solutions and hybrid cooling to reduce evaporative water losses, and the use of CO₂ for cleaning processes that could replace chemical cleaning.



Waste management

2023 results

In 2023, the amount of hazardous waste generated and landfilled by Air Products increased due to the replacement of cooling tower fill at an Air Products' facility. The fill material improves heat transfer and helps manage system temperatures in cooling towers. The disposed cooling tower waste was considered hazardous according to applicable rules and disposed of in accordance with local regulations. Also in 2023, the amount of hazardous waste recycled increased due to activities at a facility in Spain that enabled materials to be recycled rather than disposed.

Related SDGs



Why it's important

According to the World Bank, more than two billion tonnes of waste are generated each year, and global annual waste generation is expected to increase 70% by 2050 due to growing populations and rapid urbanization.¹ Waste, if not properly addressed, can have significant impacts on the environment and public health. Effective waste management practices can minimize the impacts on the environment and public health while reducing company exposure and potential liabilities, which can be severe.

¹Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development. © Washington, DC: World Bank. <http://hdl.handle.net/10986/30317> License: CC BY 3.0 IGO

Our commitments

Air Products' waste management procedures are aimed at adopting practices that prevent pollution, generate less waste, comply with relevant legislation and Air Products' policies and procedures, minimize third-party offsite disposal liability, and promote the use of environmentally friendly technologies and products. Company facilities are required to identify each type of waste generated, classify the wastes according to applicable regulations, maintain a hazardous waste inventory (as applicable), and appropriately manage wastes. Likewise, Air Products' facilities are required to identify and implement best management practices for reducing the volume and/or toxicity of waste generated. Facilities are encouraged to periodically evaluate waste for reduction opportunities considering the following hierarchy: 1) reduce at source; 2) reduce or recycle; 3) treatment and/or energy recovery; and 4) disposal.

Our approach

Industrial gas production does not generate significant waste due to the raw materials used to make the gases (e.g., air and energy) and the use of long-life, reusable packaging or pipelines for product distribution. Routine wastes generated by plant operations include spent catalysts, used oils and spent solvents, waste paint-related materials, and materials used to clean up small spills. Acetylene manufacturing results in a by-product lime slurry that is often beneficially reused in other processes, such as water neutralization, brick production, and in stabilizing materials at landfills. In some jurisdictions these wastes may be regulated as a hazardous waste. Non-hazardous wastes related to plant operations typically include trash, cardboard and wood. Offices may also generate non-hazardous waste, particularly trash and recyclables.

All waste is managed and treated in accordance with the regulatory requirements of the jurisdiction in which the waste is generated. Only Air Products-approved suppliers may be used for treatment, storage, disposal, and recycling of waste. Facilities in jurisdictions with mandatory recycling programs are required to comply with program requirements.

Performance details

	2021	2022	2023
Waste (tonnes)^a			
Waste generated			
Hazardous waste	8,100	8,030	10,670
Non-Hazardous waste	13,760	21,450	18,000
Hazardous waste diverted			
Hazardous waste recycled	2,990	2,930	4,450
Percent hazardous waste recycled	37%	36%	42%
Hazardous waste disposed			
Incinerated	630	810	490
Treated	230	420	320
Landfilled	4,240	3,870	5,410
Hazardous waste intensity ^b	0.7	0.6	0.9
Non-hazardous waste ^b	1.3	1.7	1.4

^a Values updated for 2021-2022. ^b Tonnes per \$million revenue.

Find out more about how these values were calculated in the [Data Methodology and Controls section](#).



Releases to air and soil

2023 results

In 2023, Air Products' emissions of nitrogen oxides (NO_x) and sulfur oxides (SO_x) increased due to higher natural gas consumption. Twenty-six reportable spills were recorded across our global operations in FY23.

Related SDGs



Why it's important

Increased pollution released to the air, water, and land can impact the health of people and ecosystems. According to the World Health Organization, nine out of 10 people breathe air that contains high levels of pollutants, and air pollution causes approximately seven million deaths globally each year.¹ Health can also be negatively impacted by contaminated water and soil. Environmental regulations and policies have been implemented around the world to address pollution and drive progress.

¹World Health Organization Health topics/Air pollution (<https://www.who.int/health-topics/air-pollution>)

Our commitment

We strive to continually improve our Environmental, Health, and Safety (EHS) performance and reduce the impacts of our activities as outlined in our EHS policy and codified in our EHS Management System procedures. We are committed to applying pollution prevention principles when designing and operating our facilities and distribution systems.

Our approach to air

Most of our non-GHG air emissions result from hydrogen manufacturing and utility operations that support our facilities. Criteria pollutants such as NO_x and SO_x are products of combustion and are primarily from fuel used in our boilers and steam methane reformers that produce hydrogen. Other air emissions result from the minor loss of materials used in our processes or solvents used in the maintenance of equipment. These include substances covered by the U.S. Environmental Protection Agency (EPA) Toxic Release Inventory (TRI) program and other criteria pollutants such as carbon monoxide, volatile organic chemicals (VOCs), and hazardous air pollutants (HAPs).

Our facilities are required to develop and maintain an inventory of air emission sources and respective pollutants. We monitor and report air emissions in accordance with applicable regulations. Air permit requirements are evaluated for new facilities, modifications to existing facilities, and when air regulations change. Air permits must be obtained, and we prohibit the operation of any

air emissions source exceeding permit rates or limits. Facilities are encouraged to implement best management practices for reducing the volume and/or toxicity of air emissions.

Air Products does not manufacture ozone depleting substances, fluorinated gases, or refrigerants. We sell gas mixtures that contain small quantities of these substances, as well as some pure refrigerants, if permitted by applicable regulations. We also recover, recycle, and reclaim fluorinated gases for destruction.

Performance details

	2021	2022	2023
Air Emissions (tonnes)			
Nitrogen oxides	1,288	1,410	1,444
Sulfur oxides	65	61	75
TRI releases ^a	99	123	
Volatile organic chemicals (VOCs) ^a	88	87	
Hazardous air pollutants (HAPs) ^a	42	42	

^a Values updated for 2021. TRI data is reported one year in arrears. VOCs and HAPs are estimated in part on TRI data and are also one year in arrears.

Find out more about how these values were calculated in the [Data Methodology and Controls section](#).

Our approach to soil

Air Products has strong environmental protection performance standards aimed at preventing unintentional discharges of environmentally hazardous substances to surface waters or onto land. These standards cover the design, installation, and operation of storage tank systems and ancillary equipment for all Air Products' facilities. An adequate supply of spill cleanup materials is maintained at each facility for use in the event of a spill. In addition, specialist third parties are engaged to assist in the event of any unintentional discharge requiring additional capabilities.

A risk review is required according to our procedures prior to onsite land disposal of waste. New third-party hazardous waste service providers and disposal facilities are evaluated for environmental performance and other aspects as part of our qualification process. We are involved in legal proceedings under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA," the federal Superfund law) and Resource Conservation and Recovery Act ("RCRA") relating to the designation of certain sites for investigation or remediation. We continually monitor sites for which we have environmental exposure and provide details on the status of significant sites in our [Annual Report](#) on Form 10-K.



Biodiversity and ecosystems

2023 results

In 2023, Air Products reconfirmed that its operations do not have a significant impact on biodiversity based on the Company’s environmental risk assessments and evaluation of Key Biodiversity Areas (KBA). These assessments show that energy use has the highest potential for ecosystem impact followed by water consumption. Approximately 34% of our hydrogen facilities, which are among our largest consumers of energy and water, are within a 10-kilometer buffer zone of a KBA. Less than 1% of our facilities within 10 km of a KBA have a high level of water intensity and water stress.

Related SDGs



Why it’s important

As reiterated by the Taskforce on Nature-related Financial Disclosures, societies and economies depend on healthy ecosystem services to thrive. In fact, the future – of all living things and our prosperity – depends on nature and its resilience. However, biodiversity is declining, and economies are already operating outside the bounds of processes that maintain Earth’s stability. As a result, nature has become a strategic risk management issue alongside climate change.¹

¹Taskforce on Nature-related Financial Disclosures, “Recommendations of the Taskforce on Nature-related Financial Disclosures,” September 2023.

Our commitment

Air Products’ commitment to biodiversity is embodied in our [EHS Policy](#) through which we commit to designing and operating our facilities and distribution system to promote pollution prevention principles and reduce environmental impacts. Underpinning this policy is Air Products’ EHS Management System, which contains numerous procedures designed to protect the environment and minimize potential ecosystem impacts.

Our approach

The principal raw materials for making atmospheric gases and hydrogen are air, energy in the forms of electricity or steam, and natural gas. Air Products has identified energy sourcing as the area with the most significant potential for impact on biodiversity in our supply chain. We have initiated a program to evaluate the biodiversity efforts of our key energy suppliers. We are also evaluating measures to increase energy efficiency and, where applicable, renewable energy procurement which may have indirect benefits on biodiversity.

Our products are supplied by reusable, transportable pressure vessels including tankers and tube trailers, via pipelines, and for small-scale supply in certain regions of the world, in cylinders with typical life spans of 10 to 25 years. Our packaging does not require wood or land clearing and therefore does not have significant impact on deforestation. Likewise, our principal raw materials do not have a significant impact on deforestation.

We will continue to evaluate the risks associated with biodiversity and ecosystems, considering locations, frameworks, dependencies, and impacts for our operations and value chains, and develop policies and procedures, as appropriate.

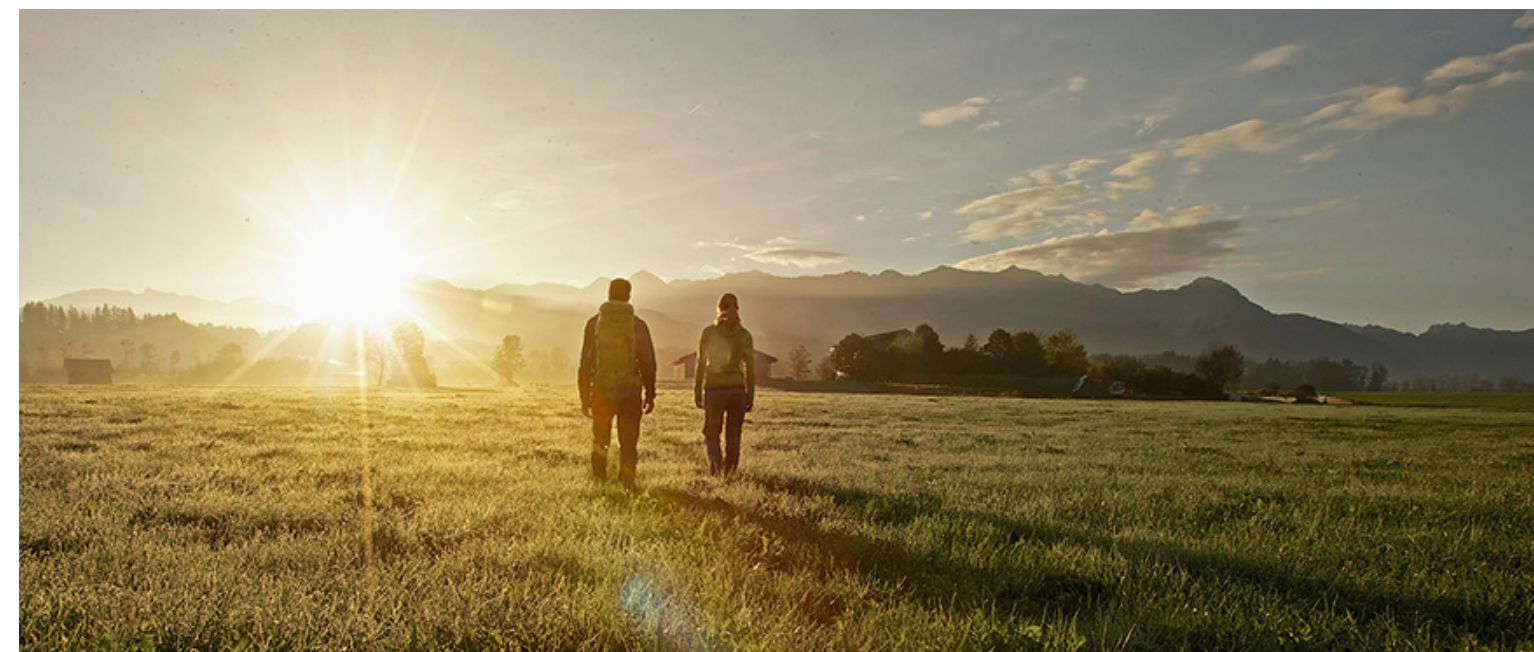
Environmental justice

Air Products views environmental justice as an opportunity to engage with our host communities in inclusive and transparent dialogue, enabling our neighbors to inform us and be informed of activities and policies that may impact them. This approach is grounded in our belief that when companies and communities work together, local issues can be more effectively identified and addressed. It’s also why we have been building relationships and contributing to the well-being of our

communities for over 80 years. We are committed to protecting the environment and the health and safety of our employees, contractors, and communities as stated in our [EHS Policy](#). The EHS Policy also demonstrates our commitment to comply with all applicable environmental, health, and safety laws and regulations while continually improving our performance in these areas. We believe these commitments, to our communities and to EHS, provide a strong foundation to engage and address environmental justice.

Environmental compliance

Regulatory fines and notices of violation both decreased in FY23 to \$26,000 and 23, respectively.





Suppliers

2023 results

In 2023, we formalized our Supplier Code of Conduct and expanded our supplier sustainability assessments with the use of a third-party assessor.

Related SDGs



Why it's important

Suppliers are an integral part of our operations, enabling us to provide products and services to our customers and supporting our sustainability initiatives. Air Products wants to do business with suppliers that share our values.

Our commitment

We want to work with quality suppliers who help Air Products deliver value and excellent service to our customers and who share our commitment to sustainability. In 2023 we codified our sustainability expectations and related requirements for suppliers in a new [Supplier Code of Conduct](#) that includes our expectations for business conduct, environmental protection, and social responsibility. The Code is being incorporated into our global terms and conditions and contracts as they are renewed.

Our approach

In total, Air Products spent over \$11.6 billion on energy, equipment, materials, and services with nearly 31,000 unique suppliers and service providers in 2023. Energy is the primary raw material purchased to manufacture industrial gases, particularly electricity and steam for our ASUs, and natural gas for our HyCO plants. Steel, aluminum, and capital equipment subcomponents are the primary materials procured for our equipment business. There were no significant changes in our supply chain year-over-year.

Supplier assessments and management

Our supplier management process is a combination of prequalification and ongoing monitoring of supplier performance. New suppliers are qualified using criteria including commercial and technical evaluations. If non-compliance or systematic issues are identified for an existing supplier through ongoing monitoring, our procurement teams work with the supplier to take proper corrective actions and rectify the issue. This allows for a continuous improvement process that enhances strategic relationships with suppliers.

Our Supplier Code of Conduct and our terms and conditions set our expectations of our suppliers. We expect suppliers to comply with all applicable laws and regulations related to business conduct, environmental protection, health and safety, and human rights. Suppliers are expected to avoid conflicts of interest, not engage in any form of bribery or corruption, refrain from influencing third parties, prohibit actions that may restrain trade, and ensure goods and materials sold to Air Products do not contain prohibited materials. We also expect suppliers to use natural resources responsibly, track and continually

improve their environmental performance, and support Air Products' goals and programs related to energy, carbon dioxide reduction and water conservation. Suppliers are expected to make safety a priority, implement health and safety or similar policies and systems aimed at creating safe work environments, protecting employees and preventing accidents and incidents, following Air Products' safety procedures when working at our facilities, track and continuously improve safety performance and maintain business continuity plans to mitigate exposure to human-caused and natural disasters. In addition, suppliers are expected to comply with all applicable human rights-related laws and regulations, not discriminate in any manner, ensure respectful work environments free of any manner of physical and verbal harassment, not use or tolerate the use of slavery, human trafficking or forced or child labor of any kind, respect employees' rights to voluntary freedom of association and collective bargaining and provide compensation in compliance with all laws and offer fair wages, reasonable work hours and proper compensation for overtime. Our General Terms and Conditions of Purchase also require our suppliers to abide by our Human Rights Policy and all laws, rules, and regulations in effect in the countries and jurisdictions in which they do business.

Each year, Air Products evaluates its top global suppliers based on spend against sustainability criteria to identify which suppliers have sustainability commitments. In 2023, nearly 80% of our top suppliers on a spend basis had sustainability programs, including 96% of our top energy providers. We continue to look for opportunities to work with our energy suppliers, particularly those with sustainability commitments, on procuring renewable energy.

We are expanding our supplier sustainability assessments with the use of EcoVadis, a third-party assessor of company sustainability. EcoVadis is a subscription-based

service that uses a questionnaire and scoring to assess the sustainability efforts of suppliers across key sustainability topics, including:

- Environmental topics such as energy consumption and GHGs
- Social considerations including employee health and safety, diversity, and human rights
- Ethics topics such as corruption and anti-competitive practices
- Sustainable procurement concepts including supplier environmental and social practices

In 2023, we focused our assessment efforts on strategic/critical suppliers in our industrial gas business in Europe. As part of this campaign, nearly a third of our suppliers had existing scorecards with EcoVadis, including 23% of suppliers that had carbon emissions scorecards. Six percent of suppliers require corrective actions. We are building on these efforts in 2024, establishing key performance indicators based on EcoVadis scores, providing feedback to suppliers on improving sustainability performance, and enhancing sustainability criteria in selection of certain suppliers.

We also enhanced our supplier sustainability risk assessment process in 2023. The updated process considers: 1) supplier spend; 2) industry-level risks related to the environment, labor and human rights, ethics, and sustainable procurement; and 3) country-level risks related to the environment, health, and social considerations, human rights and ethics. These assessments enable us to understand and develop programs to address risks, as well as engage with specific suppliers to address major areas of concern. This risk assessment process augments the annual human rights assessments for our supply chain that we have completed for several years. For 2023, no allegations of human rights violations were reported through our IntegrityLine.



Local suppliers

Because Air Products operates regionally, our procurement teams are primarily local to our businesses and work with regional and local suppliers. In addition, our corporate team supports procurement of capital equipment to construct large industrial gas production facilities and other global projects. We must also comply with applicable regulations related to suppliers, which for the U.S. include programs for diversity, sanctions, and conflict minerals.

Supplier diversity

It is our policy and practice to provide maximum practical opportunities to diverse suppliers. In 2023, approximately 14% of our procurement in the U.S. was from diverse suppliers, including small, socially- and economically-disadvantaged, and other minority- and women-owned U.S. businesses that can provide competitive sources of materials and services. We also offer advice and guidance to assist minority business firms in building relationships and becoming successful suppliers to us.



Supplier controls

As a U.S. company, Air Products must ensure it does not transact with prohibited and sanctioned companies and countries. The Company uses a screening tool to vet its vendors and customers, which includes daily updates of prohibitions and sanctions lists. The tool is tied into Air Products' enterprise resource planning process (SAP) and automatically blocks transactions with companies engaged in forced labor as well as sanctioned parties.

Conflict minerals

Air Products evaluates its supply chain on an annual basis for the presence of [conflict minerals](#) in accordance with the U.S. Securities and Exchange Commission's Conflict Minerals Rule. The Rule requires companies to perform and disclose due diligence on the source of certain minerals within its supply chain to ensure that the purchase of those materials does not support armed conflict and the associated emergency humanitarian crisis in the Democratic Republic of Congo. In addition to this due diligence, Air Products discloses the results in our annual [Conflict Minerals Report](#) and includes conflict minerals clauses in our standard contractual terms and conditions.





Safety

2023 results

Since fiscal 2014, we have achieved a 58% improvement in the employee lost-time injury rate and a 50% improvement in the employee recordable injury rate.

Related SDGs



Why it's important

Ensuring the safety of our employees and customers and the communities where we work is fundamental to maintaining a license to operate and to our continued success as a company. Excellent safety performance can lower business costs related to missed work, productivity impacts and workers' compensation. It also has been shown that safe workplaces build employee trust, reduce absenteeism and result in higher quality products that enhance business.

Our commitment

Safety is a core value and fundamental to our Company goal of being the safest, most diverse, and most profitable industrial gas company in the world. We believe safety is a moral obligation, and we want our employees to return home to their families safe and healthy every day.

Our overarching safety goal is zero accidents and incidents. We strive to continually improve safety and health for our colleagues, contractors, customers, and host communities.



Our approach

Air Products uses a multidisciplinary approach to safety and health.

Safety and health management at Air Products includes:

- Our Global [EHS Policy](#)
- Goals for employee, contractor, and transportation safety
- Our Global EHS Management System, applicable to all operations, which contains safety and health standards and procedures and which supports the principles of ISO 45001
- Employee training based on job function
- Risk assessment processes for workers, operations, products, transportation and regulatory requirements, including an escalation process for engaging our EHS Risk Council
- Compliance audits conducted by our EHS Assurance Team
- Review of performance by our Board of Directors, Sustainability Leadership Council, businesses and operations, and members of our Safety and Health Centers of Excellence at least annually
- Internal reporting of results on a monthly basis
- External reporting on safety performance through our annual Sustainability Report, public website, and responses to various stakeholders
- Management engagement with key shareholders on sustainability and safety



Worker safety

Our Basic Safety Process (BSP) provides the framework for employee engagement in upholding and continually strengthening our safety performance. BSP is focused on preventative activities, such as inspections, observations, and behavior-based activities. Employees at all levels of the Company, including those under collective bargaining agreements, engage in coordinated BSP activities, such as sequential safety meetings that are held monthly for supervisors and their employees.

Our “Master the Basics” mindset takes BSP one step further by giving employees a mental checklist to use before undertaking any task. That checklist includes being aware of surroundings, knowing physical limitations, following procedures, using the proper personal protective equipment (PPE), and thinking before acting. This mindset makes safety personal and actionable.

In FY23, Air Products worked with over 19,000 full-time equivalent contractors through many different disciplines including construction, information technology, and engineering, to name a few. This was higher than the prior year and driven by our zero- and low-carbon hydrogen and other projects. All contractors must be properly screened and trained, comply with defined requirements, and complete an environmental, health, and safety induction before beginning work. Contractors must also be monitored while on site, participate in safety meetings, and report accidents and incidents so the events can be investigated per Company procedures.

Performance details

	FY21	FY22	FY23
Worker Safety Performance^a			
Employees			
Recordables	80	83	72
Recordable rate	0.39	0.36	0.29
Lost time incidents (LTI)	14	22	24
LTI rate	0.07	0.10	0.10
Fatalities	0	0	0
Contractors			
Recordables	69	48	62
Recordable rate	0.43	0.26	0.29
LTIs	9	12	11
LTI rate	0.06	0.06	0.05
Fatalities	1	0	1

^a Rates are per 200,000 hours worked

Find out more about how these values were calculated in the [Data Methodology and Controls section](#).

Process safety

Staying on top of potential process safety hazards is one of the most important aspects of managing safety. To promote process safety, we apply sound engineering principles to design, construct, operate, and maintain our plants and equipment while minimizing potential process related hazards. Our program considers regulatory requirements, such as the Occupational Safety and Health Administration’s (OSHA) Process Safety Management in the U.S. and the European Union’s Seveso Directive, and includes procedures, training, hazard assessments, and quantified risk analysis.

Product safety

Air Products is committed to producing, distributing, and managing our products in a way that safeguards people, protects the environment, and meets the needs of our customers. Essential to product safety is ensuring that customers and others handling our products have complete safety information. To prepare this information, Air Products has conducted product safety reviews for our commercial products. These reviews include characterizing the intrinsic environmental and health hazards of the products, examining product uses, and creating management actions to address potential concerns. We do not conduct animal testing.

Likewise, our phased process for new technology development has been used to identify and address potential risks of new products and applications. These processes support the intent of the Precautionary Principle. Air Products has conducted Life Cycle Assessments (LCAs) of our major products and processes, such as hydrogen, nitrogen, and oxygen production technologies, to assess potential environmental risks and impacts. We also use LCAs to quantify the environmental footprints of products and technologies for comparison to new and competitive offerings.

We evaluate customer end-uses that are new and “high-risk,” such as near-consumer uses and food contact through an additional risk review process. Air Products has stringent pre-sale industrial gas product approval guidelines in place for customer-indicated uses of our commercial industrial gas products. Through our Business and EHS Risk Review processes, we establish where certain end-uses of our products are prohibited. For these prohibited end-uses, sales may not be pursued, including through distributors. To help manage the security and risks of our highest hazard products, we have instituted

customer qualification requirements. Before a customer can receive certain products, the customer must be evaluated against specific criteria to assess qualifications for handling the product.

Safety information from our product safety reviews is used in safety data sheets, which are a primary vehicle for communicating hazards information. We also share product hazards through labels that are compliant with the Globally Harmonized System, as well as internally developed [Safetygrams](#) and customer training.

The majority of Air Products’ high-volume liquid/bulk industrial gas products are not toxic, and all products can be handled safely with the appropriate procedures, equipment, and training. Typically, less than 2% of our annual revenues are from sales of toxic substances. Air Products does not have any substances of very high concern (SVHCs) registered under the [EU’s REACH regulation](#). We also monitor and evaluate opportunities to eliminate products from our portfolio that are considered highly hazardous. We phased down our products that contained ozone depleting substances and fluorinated gases in accordance with regulatory requirements.

Transportation safety

Air Products’ drivers are the “face of the Company” to our customers and the public. Driver safety is supported through the safety features of our delivery vehicles, driver training, and our Data Enabled Driver Coaching Program (DEDC). The DEDC utilizes safety performance and vehicle efficiency data that is collected, recorded, and transmitted by event recording cameras in our trucks. DEDC coaches use the data, including the videos, to help drivers be even safer and more efficient through preventative coaching and training.



EHS assurance

Air Products’ EHS Assurance program is fundamental to our commitment to ensure compliance with applicable EHS laws, regulations, company requirements, and more. During the past two years, we added two auditors to our global EHS Assurance Team to help support changes in our asset portfolio, including our megaprojects as they come onstream. In a typical year, our EHS Assurance Team audits 40-50 facilities around the world for compliance with governmental requirements and the policies and procedures in our EHS Management System. Our auditors have EHS functional and operational expertise that enables effective assessments of our facilities. In addition, our full-time, U.S.-based auditors are certified through the Board for Global EHS credentialing, and one of our full-time Asia-based auditors is certified in ISO 14001 auditing.

Emergency preparedness and crisis management

Air Products is committed to maintaining effective response and preparedness capabilities to manage potential emergency and crisis situations as stated in our EHS Policy and supported by procedures in our EHS Management System. To ensure preparedness for on-site emergencies, each facility is required to document and maintain a site-specific emergency action plan as well as train on and practice the plan. The plan must include preparations for plausible events that may happen at the facility, methods to notify personnel on- and off-site, and methods for evacuation and emergency system shutdown, among other requirements. Emergency plans may include actions by Air Products’ emergency responders/teams.

Written emergency plans are also required to ensure preparedness for off-site emergencies involving company products or wastes. Systems must be in place to receive and respond to reports of emergencies and provide information, advice, and assistance to those who are dealing with the emergency. Reports are received by Emergency Response Centers (ERCs) that are available 24/7 for all countries where Air Products conducts business and for which phone numbers are provided on company safety data sheets, labels, and vehicles.

If a site or product emergency escalates to a crisis, Air Products’ Crisis Management System is activated through our Global Security Operations Center (GSOC). The GSOC, which is located at our Global Headquarters and staffed 24/7, is the critical communication hub for Air Products’ global emergency and crisis response. The GSOC applies Air Products’ Global Crisis Management Plan and Process to marshal the resources and skills necessary to address crisis situations. All crises and emergencies are investigated in accordance with company procedures.

The Vice President of Environmental, Health, Safety, and Quality has overall responsibility and oversight of emergency management for the company as well as administration of the Global Crisis Management Plan and Process. Additional responsibilities are defined in applicable procedures in our EHS Management System.

Security

Ensuring our assets and the communities where we operate are safe and secure is of paramount importance to Air Products. Leading this effort is our Global Asset Protection (GAP) team, a diverse group of asset protection managers who are tasked with executing the foundational elements of risk and threat mitigation strategies for the corporation. GAP team members are strategically positioned in Asia, Europe, the Middle East, and South America in support of our regional businesses.

Many of the services provided by our security resources are coordinated through our GSOC at our Global Headquarters in Allentown, Pennsylvania, U.S. Other regional security operations centers are in Santiago, Chile and Dammam, Saudi Arabia.



Employee health and wellness

We are committed to creating work environments and behaviors that sustain the health, safety, and wellness of our people. Our Global Health and Wellness Team (GH&W), consisting of medical professionals globally, works closely with our Human Resources and EHS organizations to integrate preventive and promotional health programs.

Every day, GH&W manages employee health cases and occupational health surveillance activities. Expansion of the Company’s businesses in new territories has required our team to oversee and manage increasingly complex medical provisions. The team is also involved in deploying and sustaining key initiatives, including our global wellness program “Breathe Freely” and voluntary driver sleep apnea programs in North America and the United Kingdom. In addition, the GH&W Team supports improvements to industrial and workstation ergonomics and our International Travel Program that is aimed at keeping employees safe and healthy when traveling outside their home country.

Talent and culture

Related SDGs



We strive to create a work environment where every employee knows they belong and matter, are free to be their authentic selves, and proud of the work they do. By utilizing robust talent pools, and fostering an inclusive culture, employees feel empowered to seek out diverse perspectives, confidently express their viewpoints, and create meaningful change in support of our Higher Purpose. Our successful efforts in fostering a positive work culture and being a first mover in the energy transition have grown our workforce to ~23,000 employees worldwide in 2023.

In 2023, we took additional steps to embed our Diversity, Inclusion and Belonging (DIB) framework throughout the organization and to advance diversity conversations through companywide events, such as our annual Week of Inclusion. We continue to grow our leadership capabilities to reflect the importance of diversity, inclusion, and belonging as a cornerstone of our company culture.

Our DIB strategy, Talent Management processes, Employee Development approach and Total Rewards offerings center on attracting, building, and retaining a world-class and highly skilled workforce capable of delivering our growth ambitions and excellent service to our customers.

Diversity, Inclusion and Belonging (DIB)

2023 results

Air Products held steady at 26% female representation in global professional and managerial roles, while seeing a 0.5% incremental increase with more hires at the managerial levels in the Americas. We maintained 25% U.S. minority representation in the same populations with continued strong hiring at the managerial levels, realizing a 0.5% increase. We saw external recognition for our DIB efforts. *Forbes* honored us with a notable fourth-place position in their ranking of America’s Best Employers for Diversity, placing us at the top of our industry. *Forbes* also acknowledged Air Products as one of America’s Best Employers for Women.

Related SDGs

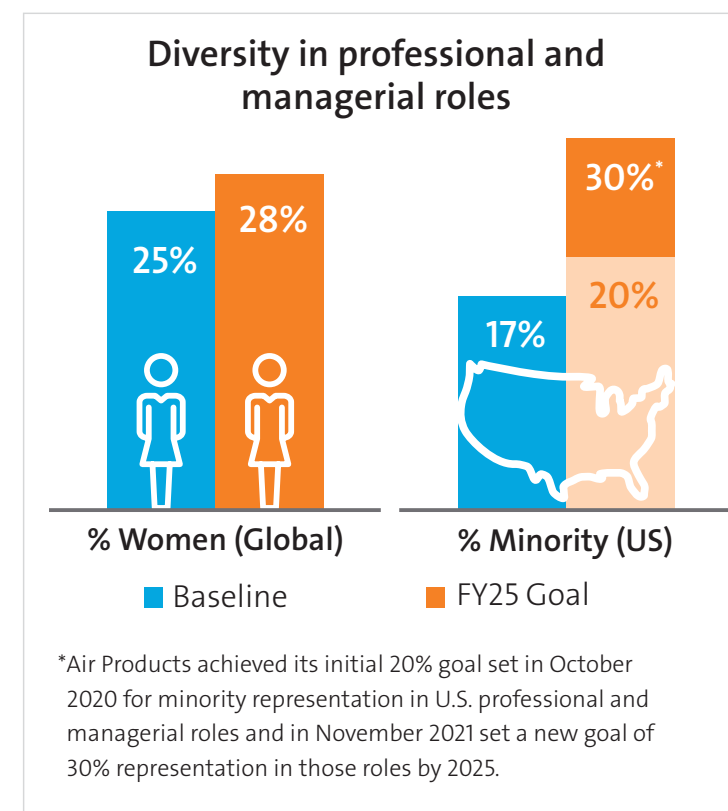


Why it’s important

Our people are not only our greatest asset, but they also create our greatest competitive advantage. Our employees effectively work with customers, execute large projects, and produce and deliver the products that make a difference in people’s lives around the world and address the world’s most significant environmental and sustainability challenges. We continue to provide exciting opportunities for our employees so they can expand their capabilities and impact, and so we can sustain our leadership position in the market.

Our commitment

Our continued leadership in competitive markets and achieving our Higher Purpose requires setting transparent, measurable diversity goals. In 2020, we announced new goals to increase the percentage of women and U.S. minorities in professional and managerial roles at the Company by 2025. Since that announcement we increased the representation of women in global roles to 26%, and the representation of U.S. minorities in that target workforce is 25%.



Our approach

To lead in diversity, we take a multi-pronged, data-driven approach, focused on the employee experience, to move us forward in our diversity journey. We prioritize ongoing and active learning and inspire inclusive behavior through leadership commitment.

We continue to engage with diversity partners to support talent and development within our organization. Examples of our External Diversity Partners include:

- Catalyst
- National Action Council on Minorities in Engineering (NACME)
- National Society of Black Engineers (NSBE)
- Out and Equal
- Society of Hispanic Professional Engineers (SHPE)
- Society of Women Engineers (SWE)
- Women in Manufacturing (WIM)
- Women in Trucking



Employee resource groups

Air Products’ strength and diversity continued to grow in 2023 through our Employee Resource Groups (ERGs). The Company has 12 ERGs with 19 chapters and four Diversity and Inclusion (D&I) Councils around the world that form an Inclusion Network. The Inclusion Network partners with our leadership to create supportive communities for raising cultural awareness, attracting and retaining talent, and serving as a think tank for people development and problem-solving.

Our ERGs provide linkages and build affinity between broader groups of employees and enable exposure to different career paths. They also support growth and innovation for the Company by providing critical insights for our business. For example, our ERG network enables the Company to better understand different cultures and connect with customers around the world.

Throughout the year, the Inclusion Network and ERGs sponsor activities and programs for all employees including workshops, panel discussions, awareness training, and professional development sessions.

Our ERGs include:

- **AERO** (Asian Employee Resource Organization)
- **BERG** (Black Employee Resource Group)
- **EDGE** (Ethnically Diverse Gulf Employees)
- **Enable** (Valuing employees of all abilities)
- **Fulcrum** (Ethnically and Culturally Diverse Employees and their Allies)
- **HOLA** (Hispanic Organization of Latinos and Amigos)
- **ISERO** (Indian Subcontinent Employee Resource Organization)
- **MEERG** (Middle East Employee Resource Group)
- **NextGen** (Promoting Understanding Among Different Generations of Employees)
- **Spectrum** (LGBTQ+ Resources Group)
- **UDAAN** (Women’s Group in India)
- **Veteran’s Network** (Connection and Support for Veterans and their Families)
- **WSN** (Women’s Success Network)

Our D&I Councils Include:

- **China D&I Council**
- **Taiwan D&I Council**
- **Korea D&I Council**
- **South East Asia D&I Council**

Diversity in Air Products’ workforce FY23

23%	Women in the workforce	28%	U.S. minorities in the workforce
22%	Women in management	26%	U.S. minorities in management
20%	Women in senior leadership	21%	U.S. minorities in senior leadership
19%	Women in executive roles	33%	U.S. minorities in executive roles

Members of collective bargaining units¹

23%

Work arrangement

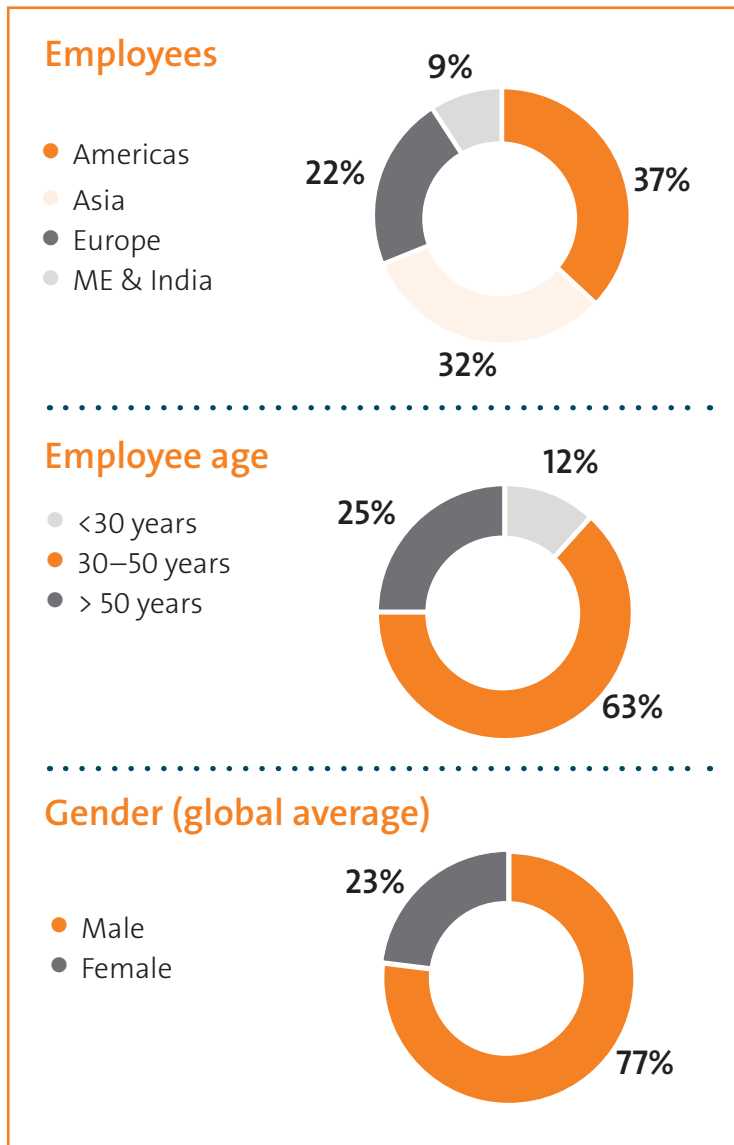
>90%
Full-Time

Turnover rate

9.2%
Voluntary and
Involuntary Combined

Find out more about how these values were calculated in the [Data Methodology and Controls section](#).

¹ Approximately 23% of our global workforce is covered by collective bargaining agreements. We collaborate with Works Councils and unions representing our employees around the world as necessary and required by law to mutually benefit our business and our employees. Many collective bargaining agreements include provisions relating to working conditions.



Talent attraction and management

Talent management is an investment in our current and future workforce and requires developing and delivering a competitive talent attraction strategy. We use innovative recruiting strategies and have long-standing partnerships with diversity recruiting organizations to strengthen our available pipeline of world-class diverse talent. In FY23, Air Products filled over 3,500 new and existing positions, of which 14% were filled by internal candidates.

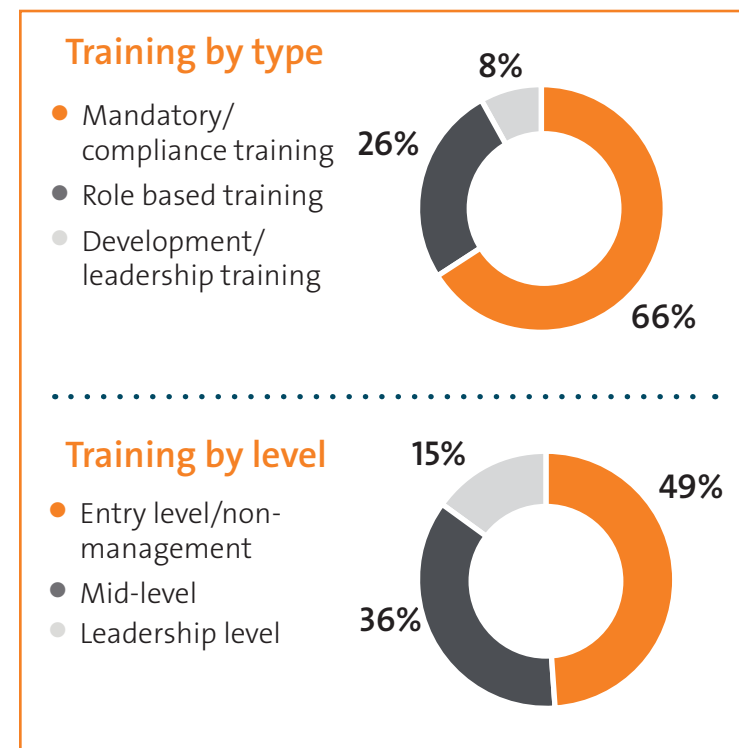
Through thoughtful and intentional workforce planning, we ensure existing and new employees possess the skills and capabilities our business needs to deliver now and in the future. In 2023, as we expanded work on our world-scale clean energy projects, our employee population continued to grow.

A key part of our recruitment and development strategy is our Career Development Program (CDP). Each year, select college graduates and young professionals participate in the program that provides broad exposure to the Company through two to three job assignments. After completing the program many CDP participants stay with Air Products. In 2023, 39% of our college hires were women and 32% were U.S. minorities.

Employee development

Air Products offers a variety of opportunities for employees to develop their capabilities, talents, and careers. Employees are aligned to their roles and responsibilities that support current and future business needs. The Company continues to invest in new learning platforms and learner-centric experiences that encourage employee development and skills retention. One example is Udemy for Business, a new learning content library launched in 2023 that covers personal development, project management, technology, leadership and management, data science, and finance.

Employees have access to thousands of training courses including engineering, operations, human resources, sales, and more. On average, employees completed over 17 hours of training in 2023 including mandatory, role based, and development training across all levels of the Company.



Results of an analysis of training by gender and age showed that training was consistent in these areas with employee demographics (see left).

Many of our training courses relate to engineering and operations. For example, we have ~40 courses on energy efficiency that employees can take to improve their understanding of our facilities and how they can help make our operations more efficient. One course, Improving Hydrogen Plant Efficiency, helps employees understand the many factors that impact HyCO plant energy consumption and yields, including operational changes and the importance of equipment operating limits. Most HYCO engineers have taken this and related courses and have helped improve energy efficiency significantly over the years.

Courses are also available for leadership development. For example, when Air Products instituted Our Way of Leading Performance in 2023 (see page 38), we updated our successful leadership training programs to further invest in our people leaders. Four new development opportunities were created for new and experienced front-line leaders and managers. Employees were nominated for the programs that required a time investment of 20 to 80 hours spread over several months. Topics covered in the training were broad and ranged from leadership expectations, to providing meaningful feedback and coaching, to understanding and executing the Company's strategy. In 2023, 1,096 leaders were prioritized and completed their training journeys that helped them develop new skills and advance the Company's strategy and culture.



Total rewards

Our Total Rewards approach consists of compensation that is fair and equitable and includes benefits to enable our employees to have physical, emotional, and financial wellness. Diversity and inclusion are integral to our total rewards approach and reinforce our belief that all employees belong and matter.

Compensation

Fair and equitable pay is needed to ensure a work environment where people know they belong and matter. Our pay practices apply equally to all employees irrespective of gender, race, religion, disability, age, national origin, or any other form of personal difference.

We strive to pay competitively in local markets where we do business and compete for talent. We benchmark our compensation to ensure we are keeping pace with the market to provide competitive pay and benefits.

While our benefits vary around the globe and across positions, some of the base benefits for full-time employees include:

- Accident insurance benefits
- Bereavement leave
- “Breathe Freely” employee well-being program benefits
- Calm subscription
- Dental benefits
- Dependent care (child and adult) benefits
- Disability benefits
- Educational assistance program
- Electric bike lease benefits
- Employee Assistance Program benefits
- Employee recognition programs
- Employee referral program
- Flexible work arrangements
- Leaves of absence for medical, personal, family, military, and educational purposes
- Legal advocacy program
- Life Insurance benefits
- Medical benefits
- Paid vacation and holidays
- Parental leave
- Personal financial education
- Retirement benefits
- Training and development

Benefits

Our benefit offerings are intended to create a work environment and drive behaviors that sustain the health, safety, and well-being of our people. This holistic approach to well-being encompasses four key dimensions: work-life harmony, communities, security (financial), and health (physical and emotional). Our “Breathe Freely” workplace well-being program continues to evolve, improve and impact employee experience. Our mission is to create a culture of inclusion and belonging at Air Products, encouraging open communication and a healthy work environment for all employees.

In the design of our benefit plans, we are mindful of the Company’s goal to be the safest, most diverse, and most profitable industrial gas company in the world, providing excellent customer service. The benefits strategy is designed to ensure the safety of all employees through offering benefits which provide for physical, emotional, and financial wellness. The Company has embraced diversity by offering benefits where possible which consider the values of all individuals and families and are not limited by traditional definitions of “family” and traditional roles within a family. We also look to local values and customs to enhance our offerings.

Promoting human rights

Air Products is committed to safeguarding the human rights of our employees and others in our business interactions. Our [Human Rights Policy](#) reflects our commitments and expectations for equal opportunity, respectful work environments, prohibition of discrimination, freedom of association, prohibition of forced and child labor, compensation and working time, Environmental, Health, and Safety, security, and anti-corruption. An anonymous call line, the [IntegrityLine](#), is always available for anyone who would like to report a potential issue, including human rights concerns. Air Products upholds a firm promise of non-retaliation for those who, in good faith, report violations or suspected violations.

We complete annual human rights assessments for our operations and supply chains. In 2023, we conducted a review of the potential for human rights issues in the highest risk countries in which we operate. There were no allegations of human rights violations reported to our IntegrityLine in 2023.

Communities

2023 results

In 2023, the Air Products Foundation contributed more than \$9 million to non-profit organizations located around our facilities in the U.S. and globally.

Related SDGs



Why it's important

Working together, companies and communities can more effectively identify and address social issues and help improve quality of life. Collaboration also builds trust, which is fundamental to the continued growth and operation of companies and the ability to give back to the communities where employees live and work.

Our commitments

Air Products is committed the health and vitality of the local communities in which we work and live. As an employer, we look to partner with local commerce boards to support economic development and jobs creation. Air Products also gives back to local communities through philanthropic endeavors and ongoing involvement in workforce development.

Our approach

For over 80 years, Air Products has been building relationships and contributing to the well-being of our host communities around the world. We do this in a variety of ways: through financial contributions from the Air Products Foundation, the Company, our local operational businesses, in-kind donations, employee directed giving, and employee volunteerism with non-profit organizations. Our support priorities include education and workforce development, diversity and inclusion, health and human services, community and economic development, arts and culture, and environment and safety.

We develop stakeholder outreach plans aimed at addressing high priority needs and maintaining positive relationships with the communities where we live and work. We work closely with community partners, including non-profit organizations, emergency responders, elected officials, and education, business, and community leaders to identify the highest impact opportunities. We provide opportunities for community members to express their opinions and concerns either directly to Air Products or through our long-standing 24/7 IntegrityLine.

The Air Products Foundation

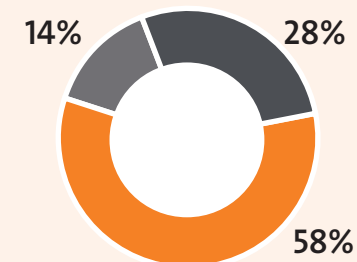
The mission of the Air Products Foundation is to build meaningful relationships with charitable organizations that share the values inherent in our Higher Purpose and to enhance positive relationships with Air Products' employees, communities, customers, and shareholders.

Using its mission as a guide, the Air Products Foundation supports programs in our host communities throughout the U.S., in global locations where we have employees and operations, at colleges and universities where we are strategically engaged, in national organizations committed to diversity and inclusion, and through employee- and retiree-directed matching gifts programs.

In fiscal 2023, the Air Products Foundation made more than \$9 million in cash contributions including grants to organizations near our headquarters, throughout the U.S., and in international communities. These grants reinforced our community outreach plans, responded to community needs, and supported eligible non-profits. Totalling more than \$3 million USD, the matching gift portion of the donations was distributed based on employee and retiree giving, thereby reflecting the organizations most important to our people.

In addition, the Air Products Foundation, consistent with its priority to support education and workforce development, provided talent grants to eligible institutions and organizations that help us attract, develop, and retain diverse talent.

FY23 contributions



- HQ Communities
- US Field/International Communities
- Talent

Find out more about how these values were calculated in the [Data Methodology and Controls section](#).



Science, Technology, Engineering and Math (STEM)

Many of our employees directly support STEM activities in collaboration with educational organizations including schools, colleges, universities, and community groups. By attracting people to STEM careers, we help build future career paths and develop strong talent pools. For those reasons, our STEM efforts target diverse groups, including students at different education levels, workers, and community members. In 2023 we reached over 70,000 people globally through our STEM efforts and events.

See more about our STEM programs on page 41 of this Report.



Charities for Safety Excellence (CHASE)

Air Products’ employees in Europe have linked our desire to support local communities with our goal to lead the industrial gas industry in safety under our CHASE program. Through CHASE, charities chosen by employees are rewarded based on the region’s safety performance, and better safety performance means higher donations to local charities.

Employees in our United Kingdom and Ireland region implemented the program in fiscal year 2015. Based on its positive impact on safety performance and charities, CHASE was adopted in fiscal year 2018 by employees in our Northern Continent region that includes Belgium, France, Germany, and the Netherlands. In fiscal year 2023, CHASE was introduced in our Southern European region that includes Spain and Portugal. Food banks, hospitals, emergency services, hospices and more have received CHASE donations.

In 2023, Air Products donated over \$95,000 to 71 charities in Europe in celebration of our safety performance.

Partnerships

2023 results

In 2023, we continued to work with numerous organizations to help us advance our sustainability programs and goals with our customers, within our company, and for our people.

Related SDGs



Why it’s important

Solving the energy and environmental challenges of today and tomorrow requires ambition, ingenuity, and collaboration. Partnerships between businesses, governments, and civil society bring people together to address the key sustainability issues facing people and our planet and to deliver on the United Nations’ Sustainable Development Goals (SDGs).

Our approach

Air Products engages with companies and organizations around the world on key sustainability matters. These collaborations align with the SDGs where we can have the most impact. As we expand our businesses in the developing world, we share our technologies, engineering expertise, and safety, environmental, and diversity standards and approaches with our new partners.

A sampling of partnerships includes:

- Construction of a landmark net-zero hydrogen energy complex in Edmonton, Alberta to help meet the climate goals of the Government of Canada and the Province of Alberta.
- Working with Baker Hughes to develop next generation hydrogen compression to improve efficiency and accelerate the adoption of hydrogen as a zero-carbon fuel.
- Working with customers and governments in several regions to develop carbon capture, use and permanent storage projects.
- Partnering with institutes of higher education on technology research, such as the King Abdullah University of Science and Technology in the Kingdom of Saudi Arabia.
- Teaming with companies to enable the use of recycled water in water stressed regions, such as Southern California in the U.S.
- Collaborating with local emergency responders, providing access, training and preparedness drills, and activities in areas and regions where we operate.
- Supporting gender equality through engagement in organizations and initiatives, such as the CEO Action for Diversity & Inclusion™.
- Engaging with Chambers of Commerce throughout the world to promote business growth.

We also participate in numerous trade associations, including these and others where Air Products was active in 2023:

- American Institute of Chemical Engineers (AIChE)
- Asia Industrial Gases Association (AIGA)
- Carbon Capture Coalitio
- China Industrial Gases Industry Association (CIGIA) n
- Compressed Gas Association (CGA)
- European Association of Energy-Intensive Industries (IFIEC)
- European Industrial Gases Association (EIGA)



Governance

2023 results

In 2023, all employees completed training and certified their understanding of our Code of Conduct and Business Ethics. A total of 684 security incidents and allegations of misconduct were reported in accordance with the Code, and 210 allegations developed into multi-functional investigations. We did not experience any material information security breaches or material expenses from cybersecurity incidents, including those arising at third parties, and again had no material complaints regarding breaches of privacy, infringement of privacy rights, or losses of customer data.

Related SDGs



Why it's important

We believe that an investment in Air Products—and indeed, in any company—can only be earned by operating with integrity and accountability. These core values are at the foundation of everything we do. Our governance approach and procedures outlined below are aligned with these core values.

Our approach

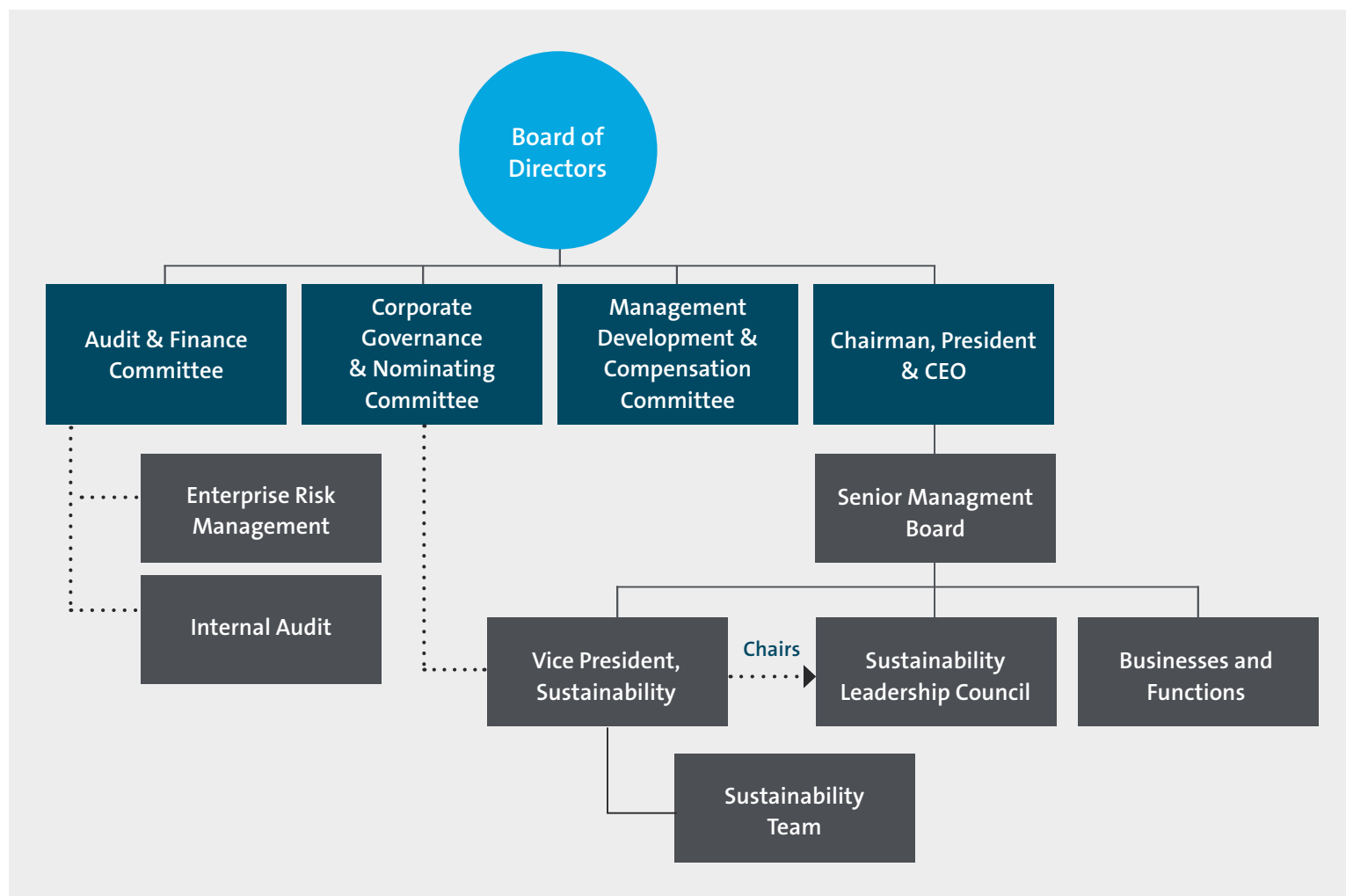
Air Products' approach to governance includes our well-defined organizational structure, as well as policies and procedures used to direct and manage our businesses. Governance begins with our Board of Directors and cascades through the organization to each employee.

Corporate governance

Air Products' Board of Directors is composed of a diverse group of leaders in their respective fields. Our directors have leadership experience at major domestic and international companies with operations inside and outside of the United States. Our directors also have experience on the boards of other companies, which provides an understanding of different business processes, challenges, strategies, and approaches to problem-solving.

The Board of Directors has accountability for oversight of environmental and safety performance, which it reviews at least quarterly. Business ethics, climate change and the energy transition, diversity, and talent management are key subjects related to sustainability that are routinely discussed by the Board. The Board also reviews sustainability-related targets before they have been finalized and the Company's progress on the targets.

The Board has four committees: the Audit and Finance Committee, the Corporate Governance and Nominating Committee, the Executive Committee, and the Management Development and Compensation Committee. The Audit and Finance Committee provides oversight of the Company's external financial reporting process, all systems and processes relating to the integrity of financial statements, internal audit process, programs for compliance with laws and regulations and our Code of Conduct and Business Ethics, and enterprise processes for risk assessment and management. The Corporate Governance and Nominating Committee of the Board has responsibility for monitoring our response to important public policy issues, including sustainability, which the Committee reviews on a regular basis. All Board members are invited to attend most committee meetings, and Board members who do not attend committee meetings receive information about committee activities and deliberations at regular full Board meetings. Governance guidelines and Committee charters are available on Air Products' [website](#).



Air Products’ Chairman, President, and CEO is focused on setting the strategy and policies of the Company, developing leadership, and meeting shareholder commitments. The Senior Management Board provides strategic and operational leadership to the Company, including goal setting, strategy development and execution, and continued development of the Company’s culture. Businesses and functional areas of the organization report into members of the Senior Management Board.

The Sustainability Leadership Council (SLC) is comprised of senior executives and functional experts. The SLC sets Air Products’ sustainability approach and engages in evaluation of sustainability risks and opportunities. The SLC also supports the development of our sustainability goals and reviews programs, performance, and reporting, including the Company’s Sustainability Priorities and annual Sustainability Report. The SLC is chaired by the Vice President of Sustainability who reports on sustainability progress to the Corporate Governance and Nominating Committee.

The Sustainability Team reports to the Vice President of Sustainability and supports the implementation of Air Products’ sustainability programs, monitors progress including goals, tracks external developments and stakeholder concerns, and prepares sustainability reports. Businesses and functions support the sustainability programs, goals, and the integration of sustainability across the Company.

Ethics, integrity and business conduct

Integrity is a core value at Air Products. We do not tolerate ethics violations and have strong policies and programs in place to prevent, detect, report, and address these issues. This includes Air Products’ Code of Conduct and Business Ethics ([Code of Conduct](#)).

Our Code of Conduct guides us in how we behave and requires strict compliance with the letter and spirit of the Code of Conduct and all applicable laws. The Code of Conduct covers many aspects of ethical business, including but not limited to conflicts of interest, bribery and corruption, financial accounting and reporting accuracy, fair dealing, equal opportunity and prevention of harassment, and environmental, health, and safety.

The Code of Conduct applies to all full- and part-time company employees at all operations, the Company’s Board of Directors, and our subsidiaries, affiliates, operating units, and divisions worldwide. Every full- and part-time employee is required to comply with the Code of Conduct, complete mandatory training, and annually certify understanding of the Code of Conduct as a condition of employment. All employees met this commitment in 2023.

We expect our agents, consultants, contractors, distributors, joint venture partners, and other third parties with whom we have business relationships to adhere to these standards, as well.

The Code of Conduct is managed by Air Products’ Law Department and periodically reviewed and updated. Supporting the Code of Conduct is a series of internal governance policies, standards, and guidelines aligned with the elements of the Code.

The Company conducts periodic reviews and testing to ensure continuing effectiveness of compliance programs/controls. Global processes have been established for significant compliance risks that have been identified. These include relationships and transactions with governmental authorities and the use of third-party intermediaries.

Reporting

Air Products encourages individuals to report, as allowed by local law, misconduct, or ethics violations. Our IntegrityLine is available in 26 different languages and provides a web-based reporting capability as well as country specific toll-free telephone-based service for anyone who would like to report a potential issue. Individuals may make reports confidentially and anonymously 24 hours a day, seven days a week. Air Products upholds a firm promise of non-retaliation for those who, in good faith, report violations or suspected violations.

Air Products examines every allegation raised and takes necessary actions where appropriate including the application of a well-defined disciplinary decision process. During this process, a lead investigator is appointed to complete the investigation confidentially and independently while coordinating with Global Asset Protection and the Legal Department.



Where the allegations are substantiated, findings are reported to the Global Investigation Council and senior business and/or functional executives who recommend disciplinary actions consistent with human resources and legal requirements. Appropriate actions include, as warranted, a written disciplinary warning, employee termination, contractor separation, and the filing of criminal charges with the appropriate law enforcement agency. Furthermore, Air Products severs contracts with vendors and blacklists customers who violate our Code, which prevents them from conducting future business with the Company.

Outcomes of the process are communicated to managers of impacted employees for sharing with their teams and through scheduled communications cascaded throughout the Company by regional presidents and functional leaders. In addition, employee electronic newsletters are issued quarterly to provide information on detecting and reporting fraud, key integrity messages, and managing common threats to Air Products.

In 2023, the total number of allegations requiring further investigation was 210 and 110 of these matters were substantiated. The allegation substantiation rate for FY23 was 54% versus 49% in FY22 and 44% in FY21. Air Products views the annual increase in reports as a positive sign that our communications regarding the importance of ethics, integrity, and reporting misconduct are expanding the awareness of our stakeholders.

Policy commitments

In addition to our Code of Conduct, Air Products has other important policies that guide how we work.

Our [Environmental, Health, and Safety Policy](#) outlines our commitment to being an industry leader in EHS performance. It builds on our core EHS values and personal

accountability for EHS and is supported by our EHS management system and objectives. The policy outlines the EHS principles we use to manage our businesses worldwide, from ensuring compliance, through EHS risk management, to understanding and addressing stakeholder EHS concerns.

Our [Human Rights Policy](#) reflects our commitment and expectations for equal opportunity, respectful work environments, prohibition of discrimination, freedom of association, prohibition of forced and child labor, compensation and working time, EHS, security, and anti-corruption. Air Products' approach to human rights has been designed to align with the United Nations' Global Compact and core elements of the United Nations' Universal Declaration of Human Rights and the International Labor Organization's Declaration on Fundamental Principles and Rights at Work. Through adherence to our Human Rights Policy and our Code of Conduct and Business Ethics, we strive to uphold human rights in our operations, businesses, communities and supply chains. In furtherance of our commitment to human rights, we require suppliers, vendors and contractors to certify or contractually agree to abide by all laws, rules and regulations in effect in the countries and jurisdictions in which they do business. We may also require suppliers, vendors and contractors to agree to abide by our Human Rights Policy or demonstrate a commitment to human rights via their own policies. This is outlined in our Supplier Code of Conduct. We also have related policies on [Conflict Minerals](#) and [Human Trafficking and Slavery](#).

Air Products engages with government officials in matters that can impact our businesses and operations, striving to maintain their support, confidence, and timely permitting of our projects. The Corporate Governance and Nominating Committee of the Board monitors the Company's political activities through annual reports from members of management responsible for the activities. As permitted by law, corporate resources are also used to support the administrative functions of Air Products' employee Political Action Committee (PAC). In 2023, the employee PAC disbursed \$4,500.

Air Products has established a [Global Data Privacy Policy](#) to ensure that personal information is collected, handled, and stored in a secure manner. The policy also notes that the Company does not sell personal information to third parties or retain personal information longer than necessary.

Risk assessment and management

Effective governance requires sound risk management and internal controls. Likewise, risk management is key to developing relevant programs and goals and protecting stakeholder value. Air Products assesses and manages risks using an integrated process that spans our global organization and covers various types of risks across the Company.

Risk governance

The CEO and other members of senior management are responsible for assessing and managing the Company's risk exposure. The Board of Directors and its committees provide oversight in connection with those efforts. Evaluation of risk is inherent in the Board's consideration of the Company's long-term strategies and in the transactions and other matters presented to the Board. The

Board reviews risk management processes, policies, and outcomes of the Company's Enterprise Risk Management (ERM) process.

Committees help the Board carry out this responsibility by focusing on specific key areas of risk inherent in our business. The Audit and Finance Committee oversees matters related to risk assessment and management processes, including the ERM process and Internal Audit program. The Corporate Governance and Nominating Committee oversees risks associated with the Company's response to public policy issues, including sustainability.

Enterprise Risk Management

Management is responsible for assessing and managing the Company's risk exposures on a day-to-day basis, including through the creation of appropriate risk management programs and policies. Operational and strategic risks are reviewed annually through the ERM process that considers macroeconomic trends and external risk themes, trends in audit findings from the prior fiscal year, and emerging risks. The reviews are led by the ERM Committee that is comprised of executives and senior leaders. The ERM Committee engages with senior leaders to identify risks, determines which risks are most significant based on likelihood and impact, and considers appropriate risk levels and strategies. Mitigation plans are developed for the most significant risks, and progress on mitigation plans is monitored quarterly by the ERM Committee.

For the ERM assessment completed in 2023, potential sustainability risks over the short-, medium- or long-term include the changing regulatory environment, increasing focus on greenhouse gas emissions, geopolitical risks, supply chain constraints, talent sourcing and cybersecurity.



Enterprise Risk Management

Air Products' Enterprise Risk Management program is sponsored by the Chief Operating Officer (COO) and run operationally by the Vice President and Chief Audit Executive (CAE). The annual process is overseen by the ERM Committee which includes the COO, CAE and the:

- Senior Vice President and Chief Financial Officer (CFO)
- Executive Vice President, General Counsel and Secretary
- Senior Vice President and Chief Human Resources Officer
- Senior Vice President, Chief Information Officer

ERM Committee members are independent of the businesses except for the COO.

The ERM Committee executes and monitors risk management practices that cover operational and strategic risks, including risks related to environment, social and governance (ESG) matters. The ERM process considers macroeconomic trends and external risk themes, audit finding trends from the prior fiscal year, and emerging risks. It further includes:

- Determining which enterprise risks are most significant considering risk likelihoods and impacts, financial impacts and considering appropriate risk level and strategy.
- Developing mitigation plans for the most significant risks, including resource identification and improvement actions.
- Reviewing and monitoring mitigation progress on a quarterly basis.

Five-point scales are used to assign risk impacts and likelihoods, resulting in a heat map that enables the company to focus on the most significant risks.

The ERM and audit planning processes are interrelated, with each informing the other as the processes proceed. Internal Audit employs an ongoing, iterative risk assessment process to identify auditable risks, and considers the risk of fraud during the execution of its audits. The Company conducts periodic reviews and testing to ensure continuing effectiveness of compliance programs/controls.

Air Products assesses risks across functions, such as safety, health, the environment (including water), climate, finance and information technology. Our EHS Risk Council assesses the potential impacts of proposed business activities/projects on the Company's overall EHS Risk portfolio and makes recommendations on whether or how to proceed. Due to the regional nature of our businesses and unique regulatory requirements in the regions or countries in which we operate, we also routinely assess regulatory compliance and controls.

Risk reporting

At least annually, the ERM Committee reviews with the Board of Directors our enterprise risks; the processes, procedures, and controls in place to manage the risks; and the overall effectiveness of the risk management process. Each quarter Internal Audit reports to the Audit and Finance Committee and provides the Board with a status update on primary risks.

The ERM process also supports Air Products' annual reporting. For example, Air Products reports in its [Annual Report](#) on Form 10-K its business risks that are informed by the ERM process and the sensitivity of financial instruments to market risks. Likewise, relevant ERM risks are considered for Air Products' materiality assessment that is used for the Company's sustainability strategy as well as annual sustainability reporting. Risks identified at the functional and/or regional level are communicated

across the Company to share lessons learned and effectively manage risk.

Air Products supports a risk management culture that encourages the identification and sharing of risks, collaboration to assess risk impacts and develop corrective actions, and implementation of mitigation plans. We encourage employees and stakeholders to report any operational, safety, health, environmental, climate, or other risks, including through our IntegrityLine, so that they can be addressed through our management systems. We will maintain or enhance our risk assessment processes, provide training where needed, and ensure resources are allocated for risk management and mitigation.

Cybersecurity and data privacy

Cybersecurity risk and oversight are of utmost importance to the Company to maintain the trust and confidence of our customers, employees, and stakeholders. Our Chief Information Officer and Chief Information Security Officer advise our Board of Directors at least quarterly on our cybersecurity incidents and on any risks related to our information and our operational technology systems. The Company continuously assesses industry best practices, frameworks and standards and leverages them to advance its cybersecurity risk management maturity with a focus on utilizing such practices and standards to predict, prevent, detect, and respond to potential security threats.



Air Products maintains an updated information security policy and incident response plan. As part of the Company's information security training program, all employees participate in various cybersecurity awareness activities, including an annual Information Security Awareness training module and simulated email phishing events that occur at least monthly. In 2023, we achieved our primary cybersecurity risk management objective of no material cybersecurity incidents. Over the past three years we have not experienced any material information security breaches and have not incurred material expenses from cybersecurity incidents, including those arising at third parties.

We understand it is our responsibility to safeguard, in accordance with applicable laws, the personal information of our employees, customers, partners, suppliers, and contractors. This commitment is documented in our [Global Data Privacy Policy](#). In fiscal 2023 we again had no material complaints regarding breaches of privacy, infringement of privacy rights, or losses of customer data.



Tax policies

Air Products' operations, assets, sales, and supply chains are primarily local. Accordingly, Air Products earns and reports our taxable profits in the same jurisdictions where we economically earn them. The Company does not generate a disproportionate amount of taxable income in countries with very low tax rates, and we do not actively use tax havens in our planning. We are committed to complying with all applicable tax laws, in line with our Code of Conduct.

Air Products has policies in place to ensure that our tax planning is appropriate. Air Products' transfer pricing policy is aligned with the Organization for Economic Co-Operation and Development (OECD) guidelines and the laws of the various countries where we operate. A breakdown of our income and taxes on a country-by-country basis is made available to the taxing authorities in the countries where we do business. Additional details about taxes are provided in our FY23 [Annual Report](#), Note 23 Income Taxes.

Air Products' Corporate Tax Department, led by the Vice President of Tax, manages tax matters on a day-to-day basis with support from external advisors when necessary. Our Chief Financial Officer is ultimately responsible for the Company's tax matters. The Audit and Finance Committee of Air Products' Board of Directors provides oversight of the tax function through review of material tax matters with the Vice President of Tax and Chief Financial Officer, typically on a quarterly basis. We maintain robust internal controls related to tax matters and reporting of taxes on our financial statements. These internal controls are reviewed regularly with Air Products' internal and external auditors.

ISO 26000

Air Products Europe, following successful audits by Intertek, received a certificate of conformance for the effective implementation, monitoring and coordination of the Social Responsibility (SR) principles in ISO 26000: 2010 International Guide.

ISO 26000 is an international standard that addresses seven core subjects of social responsibility: organizational governance, human rights, labor practices, the environment, fair operating practices, consumer issues and community involvement and development, and provides guidelines and instructions to be followed in everyday business practices.

The most recent audit included Air Products' businesses in France, Germany, and the United Kingdom. Businesses in Belgium, Poland, Spain, Portugal, and Ireland were audited the prior year.

Air Products is one of the few companies in Europe that has received this confirmation of its alignment with these important social responsibility principles.



About our report

Air Products has reported on its sustainability performance annually for the past 21 years, building on a previous decade of environmental, health, and safety reporting. This is our 15th consecutive year reporting in accordance with GRI, which we believe is the most comprehensive reporting standard for our sustainability strategy and performance. We also provide summaries of how our sustainability efforts are aligned with the reporting recommendations of SASB and TCFD on pages 90-95 of this report.

Air Products has been tracking developments of emerging sustainability and climate change reporting requirements, such as the European Union’s Corporate Responsibility Reporting Directive (CSRD) and the U.S. Security and Exchange Commission’s (SEC) proposed rule on Climate Disclosures. The Company has a foundation for compliance with the new requirements when they come into force, having reported on EHS matters for 30 years and carbon emissions for over a decade. In addition, the rules are aligned with TCFD recommendations about which Air Products has published information for several years.

This Report has been prepared in accordance with the GRI standards. This Report also contains supplemental information not specified by GRI that illustrates additional aspects of our sustainability efforts and impacts. No GRI sector standard exists for our industry; however, we have attempted to provide best possible disclosures based on the nature of our business and the related risks and opportunities.

This Report covers Air Products’ fiscal year 2023 (October 1, 2022 to September 30, 2023), except where noted that calendar year (January 1, 2023 to December 31, 2023) data is provided. Our prior year report was issued in June 2023 and reported on fiscal and calendar year 2022.

The scope of this Report is global for continuing operations including operations where we have controlling interest and as reported in our consolidated audited financial statement. We exclude less than controlling interests in joint ventures or equity affiliates. Additional information about affiliates and subsidiaries is available in our 2023 [Annual Report](#). There were no significant changes to operational boundaries or scope compared to prior year. Measurement methods were improved in 2023 as stated in the Data Methodology and Control section of this Report. For this Report, Air Products updated historical data related to energy and environmental metrics.

Resources have been cited throughout this Report to provide additional information on our policies, positions, programs and performance related to sustainability. The policies and position statements can be readily access through our [website](#).

Our Sustainability Director was accountable for overseeing the preparation of this Report, with significant data contributions provided by business, functional, and sustainability related teams throughout the Company. The Report was prepared in conjunction with our Sustainability Leadership Council, which sets our sustainability approach, reviews programs and performance, and is engaged in evaluating risks and opportunities.

Questions or comments about this Report can be directed to Evgeny An, Air Products’ Vice President, Sustainability, at anea@airproducts.com.

Data methodology and controls

Air Products uses a financial control boundary, consistent with its financial reporting, for reporting on sustainability data. Air Products does not include the following in its Scope 1 and 2 GHG emissions and other energy and environmental inventories: facilities accounted for as a finance lease, or where utilities are provided free of charge, or where customers provide and maintain ownership of raw materials for processing on their behalf. GHG emissions for non-consolidated joint ventures are in Scope 3 category 15.

In 2023, Air Products conducted a comprehensive review of its energy and environmental inventory processes and methodologies and updated the list of covered facilities. The review covered detailed calculations and considered regional and global guidance documents. The Company also enhanced the governance and controls for sustainability data, including automating data requests, requiring attestations on the accuracy and completeness of data, and improving data approval processes.

Revisions

Revisions may be required for data for which a goal has been established, or for data that is reported over several years. We require revisions when data changes are significant, specifically 5% or more compared to previously published data for the same timeframe. We may choose to revise for changes less than 5%.

Revisions are typically due to acquisitions, divestitures, methodology changes, and/or correction of inaccuracies. After an acquisition has been integrated into Air Products’ EHS systems, data for the acquired facility is incorporated into the Company’s metrics, including adjustments to

relevant baseline year data. Data for divested facilities is removed from the metrics associated with the facility, including from the baseline year of any environmental goals.

Inaccuracies can occur due to the manual nature of data collection and calculations. Air Products will recalculate metrics if the change between the original and updated metrics exceeds the significance threshold.

Energy

Fuels for 2023 are comprised primarily of natural gas, refinery fuel gas, diesel, and gasoline. Refinery fuel gas (RFG), a mixture of hydrocarbons and hydrogen that is produced in customers’ refineries and provided to Air Products, had not previously been included in the Company’s energy and emissions inventory and is the major contributor to the update of data for 2021 and 2022. Fuels, electricity, and steam consumption are based on invoice quality data for large facilities and estimated for small facilities based on historical energy consumption and billing. Renewable electricity represents a combination of country- or state-level electricity grid factors and renewable electricity purchased or produced by the Company.

Energy intensity on a revenue basis is computed as the ratio of total consumption in TWh to revenue. Energy intensity improvement is computed as the ratio of reporting year energy consumed to reporting year production, divided by same ratio of the prior year. Using a ratio allows the reported results to be dimensionless and protects confidential production data.



Renewable Electricity

Air Products includes active and passive renewable electricity in our energy reporting and for our new renewable electricity goal. Active renewable electricity is purchased or generated by Air Products. Passive renewable electricity reflects the content of renewable electricity in power grids. The percentage of renewable electricity we report is calculated as the total amount of renewable electricity consumed from all sources divided by total electricity. Our new goal to quadruple the amount of renewable electricity used to make our products by 2030 (from a 2023 baseline) covers all gases and equipment that Air Products sells to customers. The goal considers both active and passive renewable electricity and we expect the goal to be achieved primarily through active purchases and generation of renewable electricity.

GHG emissions

The comprehensive review of Air Products’ energy and environmental inventory processes and methodologies in 2023, and the inclusion of RFG in the inventories, resulted in revisions to historical emissions and carbon intensity data.

GHG emissions for Scope 1 and 2 include the following applicable gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), hydrofluorocarbons, and perfluorocarbons. CO₂e represents the combined carbon emissions of these gases. We use the World Resources Institute (WRI) / World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol standard for our GHG inventory. Emissions factors are obtained primarily from two sources: the U.S. Environmental Protection Agency (EPA) and when not available from EPA, from the International Energy Agency (IEA). GWPs (Global Warming Potential) are also obtained from EPA sources.

Scope 1 emissions result from combustion of fuels; physical or chemical processing; transportation; and fugitive emissions. Emissions from the combustion of fuels (including for transportation) are calculated by multiplying the amount of each fuel type by an appropriate emissions factor and summing all the emissions. Processing emissions for HYCO facilities are calculated in accordance with applicable reporting rules (e.g., U.S. Mandatory Reporting Rule and EU Emissions Trading Scheme) that vary slightly by jurisdiction. For non-regulated processing, the Company assumes that all carbon entering a facility is released as CO₂. Fugitive emissions are related to products that are GHGs (nitrous oxide (N₂O), carbon dioxide (CO₂), and refrigerants) and calculated as the sum of the gas volumes emitted multiplied by their global warming potentials.

Scope 2 emissions result from the use of purchased electricity and steam. Some of Air Products’ ASUs are subject to mandatory reporting rules for GHG emissions. For these facilities, the emissions reported to authorities are used in Air Products’ GHG inventory. To quantify emissions associated with purchased electricity Air Products applies location-based emission factors to activity-level electricity consumption data by site and sums the emissions. Calculations of emissions associated with purchased steam are based on heat and energy balances or are estimated based on steam consumed and mandated emissions factors. While our Scope 2 emissions are currently location-based we intend to report market-based emissions in the future and will include this approach in our GHG emissions reporting and carbon intensity reduction goals.

Air Products currently reports on three categories of Scope 3 emissions and continues to evaluate reporting on other categories. Category 3, fuel and energy related activities, includes the upstream emissions related to utilities consumed by Air Products. In general, these emissions

are calculated by multiplying the amount of fuel and energy consumed by an appropriate emissions factor and summing the emissions.

Category 11, emissions from use of sold products, considers sales of CO₂, N₂O, and refrigerants. It is assumed that the products sold are emitted in the reporting year except CO₂ sold for enhanced oil recovery that is permanently sequestered. Emissions are calculated for each product based on sales volumes and global warming potentials and summed.

Category 15, investments, includes emissions related non-consolidated joint ventures (JV). These primarily involve the production of atmospheric gases using ASUs. The emissions are calculated by determining a carbon intensity per dollar revenue from Air Products’ ASUs and multiplying it by the revenue recognized from the non-consolidated ASU JVs. To this total is added emissions for a non-consolidated JV HYCO facility where the emissions are estimated based on the natural gas consumed and Air Products’ percent ownership of the JV.

Our “Third by ’30” Carbon Intensity (CI) reduction goals are focused on reducing CO₂e emissions relative to the amount of energy we deliver to the world. The CIs are calculated for Scope 1 and 2 GHG emissions combined, and for three categories of Scope 3 emissions (categories 3, 11, and 15). The emissions are from our GHG inventory reporting. The denominators of the goals represent the total energy we export, including energy related to HYCO products (H₂, CO, and syngas) plus energy exported as steam and electricity. In 2023, Air Products reset the baseline year for these goals from 2015 to 2023 without changing the one-third reduction target, making the goals more ambitious. As a result, the 2030 CI target for Scope 1 and 2 goal shifted from 62 to 58 kg CO₂e/MM BTU, and from 23 to 18 kg CO₂e/MM BTU for the Scope 3 goal. Avoided GHG emissions are estimated by comparing emissions for a reference case

to a case where a company product is used to help reduce energy consumption or emissions. For example, hydrogen used to desulfurize crude oil results in cleaner diesel fuel that emits substantially lower GHG emissions when used. The avoided emissions are the difference between emissions without and with the use of hydrogen and are calculated by methods consistent with industry practice. Total emissions avoided are based on the emissions avoided per unit of industrial gas and then multiplied by the amount of industrial gas sold in a year.

Water

Water data is based primarily on water bills and/or metered data. Engineering estimates are used for some facilities. Data excludes once-through non-contact cooling water that is returned to source. Surface water is primarily freshwater with ≤1,000 mg/L total dissolved solids. Third-party water includes recycled water.

Water-stressed areas include water basins where the baseline water stress is high or extremely high according to the World Resources Institute Aqueduct Water Risk Atlas.

Water intensity on a revenue basis is computed as the ratio of water consumed in million gallons to revenue. Water intensity improvement is computed as the ratio of reporting year water consumption to reporting year production, divided by same ratio of the prior year. Using a ratio allows the reported results to be dimensionless and protects confidential production data.



Waste

Hazardous waste data is collected from operating facilities globally and subject to attestations and approvals. Data is rolled up to the corporate level for review and reporting. Non-hazardous waste is collected from waste disposal firms in North America and reviewed prior to reporting.

In 2023, Air Products identified an additional non-hazardous waste stream that should be included in the inventory. Inclusion of this waste resulted in updates to data for 2021 and 2022. We plan to refine our processes related to waste reporting in the coming year.

Air emissions

Air Products monitors and reports air emissions in accordance with applicable regulations and following prescribed methodologies. The Toxic Release Inventory (TRI) is a U.S. EPA program for tracking toxic chemicals that may pose a threat to human health and the environment. Each year, U.S. facilities in different industry sectors must report how much of each chemical is released to the environment and/or managed through recycling, energy recovery, and treatment.

TRI data is reported during the summer following the reporting year, and so the data reported is one year in arrears in our annual sustainability reporting. Emissions of volatile organic chemicals (VOCs) and hazardous air pollutants (HAPs) are based in part on TRI reporting, and also reported one year in arrears. Values for TRI, VOC, and HAP emissions were updated for 2021 to solely include emissions to air.

Employee data

Employee data is extracted primarily from SAP using Qlik reports. Employee data for businesses not in SAP is collected manually from responsible stakeholders. All data is rolled up to the corporate level and reviewed by management.

Safety performance

Air Products has a global system for reporting safety and environmental incidents. The system is also used to track root causes, action items, and closure of incidents. Data in this system is reviewed and reported internally at least monthly. Fiscal year data is extracted from this system and reported in our Annual Report and Sustainability Report.

Charitable contributions

Air Products uses Benevity, a global platform for charitable donation management, to capture expenditures from the Air Products Foundations. Reports from Benevity are used to prepare year end totals that are shared with the Air Products Foundation Trustees and reported in the Sustainability Report.

Allegations of code of conduct violations

Air Products uses a third-party hosted, web-based incident management tool to record and track allegations of Code of Conduct violations. Incident reports are entered into the system through a direct feed from Air Products' IntegrityLine, or manually entered as required by our Global Asset Protection Team. Data from this system is used for internal reporting on a quarterly basis and collected annually for the Sustainability Report.

Assurance

Deloitte & Touche LLP audited Air Products' consolidated balance sheets, consolidated income statements, comprehensive income statements, statements of equity, and statements of cash flows for each of the three years in the period ended September 30, 2023, and Air Products' internal control over financial reporting as of September 30, 2023. For additional information, please see Air Products' FY23 [Annual Report](#) on Form 10-K (pp 54-55).

As noted in the [GHG emissions section](#) of this Report, Scope 1, 2, and one category of Scope 3 GHG emissions for 2023 were verified by [GHD Limited](#).



Key terms

Active Renewable Electricity	Renewable electricity that is purchased directly or generated by Air Products.
Allegations of Misconduct	Includes misappropriation of company assets, business integrity concerns, legal violations, improper accounting matters, safety and health issues, or workplace environment concerns.
ASU	Air separation unit, the technology used to make atmospheric gases including nitrogen, oxygen, and argon.
Blue Hydrogen	Hydrogen produced from hydrocarbons with CO ₂ captured and utilized or permanently stored.
BSP	Air Products' Basic Safety Process.
Carbon Capture	The activity of capturing CO ₂ from gas streams that would otherwise be emitted.
Carbon Capture and Storage (CCS)	The activity of capturing CO ₂ from gas streams that would otherwise be emitted, for the purposes of transport and geological permanent storage in a storage site.
Carbon Capture and Use (CCU)	The capture of anthropogenic CO ₂ and its subsequent use in a process that transforms the CO ₂ into another product.
CDP	A not-for-profit organization with a global disclosure system for carbon and other environmental information (formerly Carbon Disclosure Project).
CFC	Chlorofluorocarbon
Carbon Intensity (CI)	The amount of CO ₂ e generated per unit of energy produced in units of kg CO ₂ e/MM BTU.
Clean Hydrogen	Hydrogen with zero- or low-carbon intensity, including green and blue hydrogen.
CO₂	Carbon dioxide
CO₂e	The universal unit of measurement of GHG emissions to indicate the global warming potential (GWP) of each of the six GHGs, expressed in terms of the GWP of one metric ton of carbon dioxide (MTCO ₂ e).
Decarbonization Offerings	Products and offerings that enable customers to decarbonize their operations or products.
DEDC	Data Enabled Coaching Program
EHS	Environmental, Health, and Safety
EPA (or U.S. EPA)	Environmental Protection Agency (U.S.)
GHG	Greenhouse gases, including the six Kyoto-regulated gases (CO ₂ , CH ₄ , N ₂ O, SF ₆ , PFCs, HFCs).
Gray Hydrogen	Hydrogen produced from fossil fuels without CCS.
Green Hydrogen	Hydrogen made using water electrolysis and renewable electricity, or by reforming biogas, or by biochemical conversion of biomass; has the lowest carbon footprint of hydrogen produced.
GRI	Global Reporting Initiative
HAPs	Hazardous air pollutants



Key terms

HFCs	Hydrofluorocarbons
HyCO	Hydrogen/carbon monoxide (syngas) units.
LNG	Liquefied natural gas
LTI	Injuries or illnesses resulting in missed or restricted work.
Net Zero	A state condition where a reporting entity has reduced or offset its GHG emissions to zero.
NOV	Notice of Violation, which is a deviation from a regulation or permit requirement that is formally cited by a government agency.
NOx	Oxides of nitrogen including nitric oxide (NO) and nitrogen dioxide (NO ₂).
ODS	Ozone depleting substances
OSHA	Occupational Safety and Health Administration (U.S.)
Passive Renewable Electricity	Renewable electricity that reflects the renewable content in power grids.
PFCs	Perfluorocarbons
Recordable Rate	A work-related injury that requires medical care beyond basic first aid treatment.
Scope 1 emissions	Direct GHG emissions that occur from sources owned or controlled by a company, for example, emissions from combustion or chemical production.
Scope 2 emissions	Indirect GHG emissions from the generation of purchased energy (electricity and steam) consumed by the company.
Scope 3 emissions	Other indirect GHG emissions that are a consequence of the activities of the company but occur from sources not owned or controlled by the company.
SDGs	United Nations' Sustainable Development Goals
SOx	Oxides of sulfur including sulfur oxide, sulfur dioxide and others.
SMR	Steam methane reforming, the most economical way to produce large volumes of hydrogen.
Sustainable Offerings	Products and applications that improve energy efficiency, reduce environmental impact, and/or address a significant societal need.
Syngas	A mixture of hydrogen and carbon monoxide.
TRI	U.S. EPA Toxic Release Inventory
VOCs	Volatile organic chemicals



Reporting frameworks

GRI index

GRI Disclosure	Reference	Omissions
GRI 1: Foundation 2021		
Reporting Principles and Requirements	p 82	
GRI 2: General Disclosures 2021		
The Organization and its Reporting Practices		
2-1 Organizational details	FY23 Annual Report on Form 10K, pp 5-9	
2-2 Entities included in the organization’s sustainability reporting	p 82	
2-3 Reporting period, frequency and contact point	p 82	
2-4 Restatements of information	pp 82-84	
2-5 External assurance	p 84	
Activities and Workers		
2-6 Activities, value chain, and other business relationships	FY23 Annual Report on Form 10K, pp 5-9	
2-7 Employees	pp 71-73	Breakdowns of employee demographics are not available for all employee categories.
2-8 Workers who are not employees	p 69	
Governance		
2-9 Governance structure and composition	pp 77-79	
2-10 Nomination and selection of the highest governance body	2024 Proxy Statement , pp 9, 15-17; Board Governance Guidelines , section 3	
2-11 Chair of the highest governance body	2024 Proxy Statement , pp 9-10, 12, 22	
2-12 Role of the highest governance body in overseeing the management of impacts	2024 Proxy Statement , pp 19-20; Corporate Governance and Nominating Committee Charter , item 3.1.5(g)	
2-13 Delegation of responsibility for managing impacts	2024 Proxy Statement , pp 19-20; Management Development and Compensation Committee Charter , item 4.1; Corporate Governance and Nominating Committee Charter , item 4.1	
2-14 Role of the highest governance body in sustainability reporting	pp 77-78	
2-15 Conflicts of interest	2024 Proxy Statement , p 22; Code of Conduct pp 1-2	
2-16 Communication of critical concerns	pp 50-51, 2024 Proxy Statement , pp 19-20	
2-17 Collective knowledge of the highest governance body	2024 Proxy Statement , p 10, Board Governance Guidelines item 16.1	
2-18 Evaluation of the performance of the highest governance body	2024 Proxy Statement , p 24; Corporate Governance and Nominating Committee Charter , item 3.1.4; Board Governance Guidelines , item 17.1	
2-19 Remuneration policies	2024 Proxy Statement , pp 26-60	
2-20 Process to determine remuneration	2024 Proxy Statement , pp 26-60	
2-21 Annual total compensation ratio	2024 Proxy Statement , p 55	
Strategy, Policies and Practices		
2-22 Statement on sustainable development strategy	p 2	
2-23 Policy commitments	p 79	
2-24 Embedding policy commitments	p 79	



Reporting frameworks

GRI index

Strategy, Policies and Practices		
2-25 Processes to remediate negative impacts	p 79	
2-26 Mechanisms for seeking advice and raising concerns	Code of Conduct pp 1-2; IntegrityLine	
2-27 Compliance with laws and regulations	FY23 Annual Report on Form 10K, p 19	
2-28 Membership associations	p 76	
Stakeholder Engagement		
2-29 Approach to stakeholder engagement	pp 50-51	
2-30 Collective bargaining agreements	p 72	
GRI 3: Material Topics		
3-1 Process to determine material topics	p 50	
3-2 List of material topics	p 50	
3-3 Management of material topics	See relevant report sections	
GRI 200 Economic Performance Standards Series		
GRI 201: Economic Performance 2016		
201-1 Direct economic value generated and distributed	FY23 Annual Report on Form 10K, p III	A breakout of employee wages and benefits (including substantial payroll taxes and social security contributions) and payments to governments by country are not provided because these values are not disclosed in financial reporting.
201-2 Financial implications and other risks and opportunities due to climate change	pp 59-60	
GRI 205: Anti-Corruption 2016		
205-1 Operations assessed for risks related to corruption	pp 78-79	
205-2 Communication and training about anti-corruption policies and procedures	p 78	
GRI 206: Anti-competitive Behavior 2016		
Disclosure 206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	FY23 Annual Report on Form 10K, p 19	
GRI 300 Environmental Standards Series		
GRI 301: Materials 2016		
301-1 Materials used by weight or volume	p 58	
GRI 302: Energy 2016		
302-1 Energy consumption within the organization	p 58	Electricity and steam sold are confidential. Heating and cooling are not sold by Air Products.
302-3 Energy intensity	p 58	
302-4 Reduction of energy consumption	p 58	
GRI 303: Water 2018		
303-3 Water withdrawal	pp 61-62	
303-4 Water discharge	pp 61-62	Discharges to water bodies other than those listed are not consolidated. Air Products does not discharge high priority substances of concern from operating facilities.
303-5 Water consumption	pp 61-62	Water storage is omitted as it does not have a significant impact.



Reporting frameworks

GRI index

GRI 305: Emissions 2016		
305-1 Direct (Scope 1) GHG emissions	pp 59-60	Biogenic CO ₂ emissions are not reported separately.
305-2 Energy indirect (Scope 2) GHG emissions	pp 59-60	
305-3 Other indirect (Scope 3) GHG emissions	pp 59-60	
305-4 GHG emissions intensity	p 60	
305-5 Reduction of GHG emissions	p 60	
305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	p 64	Air Products does not track or report on Persistent Organic Pollutants (POPs) or Particulate Matter (PM).
GRI 306: Waste 2020		
306-3 Waste generated	p 63	A breakdown of waste composition is not available.
306-4 Waste diverted from disposal	p 63	A breakdown of waste composition is not available.
306-5 Waste directed to disposal	p 63	A breakdown of waste composition is not available.
GRI 308: Supplier Environmental Assessment 2016		
308-1 New suppliers that were screened using environmental criteria	p 66	The percentage of suppliers screened for environmental criteria is not consolidated at the Company level.
GRI 400 Social Standards Series		
GRI 403: Occupational Health and Safety 2018		
403-1 Occupational health and safety management system	p 68	
403-9 Work-related injuries	p 69	
GRI 405: Diversity and Equal Opportunity 2016		
405-1 Diversity of governance bodies and employees	pp 71-73; 2024 2024 Proxy Statement , pp 10-15	
GRI 413: Local Communities 2016		
413-1 Operations with local community engagement, impact assessments, and development programs	p 75	
414 Supplier Social Assessment 2016		
414-1 New suppliers that were screened using social criteria	p 66	The percentage of suppliers screened for social criteria is not consolidated at the Company level.
414-2 Negative social impacts in the supply chain and actions taken	p 52	



TCFD Matrix

Air Products' Alignment with the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

Governance	Strategy	Risk Management	Metrics and Targets
<p>Disclose the organization's governance around climate-related risks and opportunities.</p>	<p>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</p>	<p>Disclose how the organization identifies, assesses, and manages climate-related risks.</p>	<p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</p>
<p>a) Describe the board's oversight of climate-related risks and opportunities.</p> <p>Air Products' Board of Directors has responsibility for risk oversight generally as well as over sustainability, including climate-related risks and opportunities and our environmental and safety performance, which it reviews at least quarterly. The Board of Directors oversaw the establishment of our sustainability goals, including our "Third by '30" goals that are focused on our Scope 1 and 2 combined and Scope 3 emissions, our commitment to invest at least \$15 billion in energy transition projects through 2027, and our goal to achieve net-zero CO₂ emissions in our operations by 2050. The Board of Directors also reviews our progress towards such goals. The Corporate Governance and Nominating Committee of the Board of Directors has responsibility for monitoring our response to sustainability-related risks and opportunities, as well as corporate governance matters and important public policy issues, which it reviews on a routine basis. Air Products' Chairman, President and CEO has leadership responsibility for the development and execution of the company's sustainability strategy.</p> <p>CDP C1.1, pp 3-4, C1.2a, p 5 2024 Proxy Statement, pp 17-18 2024 Sustainability Report, pp 77-78</p>	<p>a) Describe the climate-related risks and opportunities the organization has identified over the short-, medium-, and long-term.</p> <p>Over the short-, medium-, and long-term time horizon, regulatory regimes governing emissions of greenhouse gases (GHGs) may potentially increase operating costs and may also provide opportunities for our products and technologies that improve energy efficiency and reduce GHG emissions.</p> <p>Regulation of GHGs may also produce new opportunities for Air Products. In particular, we have a sustainability-driven, two-pillar growth strategy that includes expansion and efficient operation of our core industrial gases business and execution of projects that provide world-scale clean hydrogen. We are continuing to develop technologies to help our facilities and customers lower energy consumption, improve efficiency and lower emissions. We see significant opportunities for hydrogen for transportation and the energy transition, as well as opportunities for carbon capture technologies and gasification.</p> <p>CDP C2.1- 2.4, pp 7-16 2023 Annual Report, pp 5-6, 15-16 2024 Sustainability Report, pp 1-2, 5-8, 19, 21-24, 59-60</p>	<p>a) Describe the organization's processes for identifying and assessing climate-related risks.</p> <p>Management is responsible for identification, assessment and management of risks, while the Board of Directors and its committees exercise oversight over their efforts. Operational and strategic risks are reviewed annually through the Company's Enterprise Risk Management (ERM) process that considers macroeconomic trends and external risk themes, trends in audit findings from the prior fiscal year, and emerging risks.</p> <p>Physical risks are identified and assessed at the corporate level for existing facilities, and by engineering for new facilities, based on facility locations.</p> <p>CDP C2.2, pp 8-10 2024 Sustainability Report, pp 59-60, 79</p>	<p>a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.</p> <p>Air Products assesses energy consumption, GHG emissions, and progress against our emissions goals. The Company also estimates the CO₂ emissions avoided by our customers and their customers through certain of our products and sales of offerings that enable customers to be more sustainable.</p> <p>CDP C4.1-4.2, 9.1, pp 21-28, 53-55 2024 Sustainability Report, pp 7-8, 59-60</p>



TCFD Matrix

Air Products' alignment with the recommendations of the task force on climate-related financial disclosures (TCFD)

Governance	Strategy	Risk Management	Metrics and Targets
<p>Disclose the organization's governance around climate-related risks and opportunities.</p>	<p>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</p>	<p>Disclose how the organization identifies, assesses, and manages climate-related risks.</p>	<p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</p>
<p>b) Describe management's role in assessing and managing climate-related risks and opportunities.</p> <p>Risk assessment and management is overseen by the Board of Directors.</p> <p>Climate-related risks and opportunities have been reviewed with the Board for input.</p> <p>Air Products' Sustainability Leadership Council sets the company's sustainability strategy, reviews programs and performance, and is engaged in identifying and managing risks and opportunities related to climate change.</p> <p>CDP C1.2, pp 5-7 2024 Sustainability Report, pp 77-78</p>	<p>b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.</p> <p>Our strategy focuses on creating value in the markets we serve, particularly energy, environmental and emerging markets. The Company develops, engineers, builds, owns and operates some of the world's largest industrial gas and carbon capture projects; and world-scale low- and zero-carbon hydrogen projects for global transportation, industrial markets and the broader energy transition.</p> <p>A significant and growing portion of Air Products' business involves clean hydrogen, carbon capture, gasification and other large-scale projects and we believe there will be additional opportunities ahead. Our business planning processes consider growth opportunities related to climate change as well as climate risk management through energy efficiency and GHG emissions reduction efforts. We have committed to invest at least \$15 billion in energy transition projects through 2027.</p> <p>CDP C2.3-2.4, pp 10-16 2024 Sustainability Report, pp 1-2, 5-8, 19, 21-24, 59-60</p>	<p>b) Describe the organization's processes for managing climate-related risks.</p> <p>Operational and strategic risks are reviewed annually through the Company's ERM process.</p> <p>Regulatory risks are managed at the regional level as regulations vary by jurisdiction. Regional experts assess the risks and work with potentially impacted businesses to address them.</p> <p>Physical risks are addressed through plant design and engineering aimed at minimizing severe weather impacts. The Company's Business Continuity Planning process supports the response to severe weather events.</p> <p>Risks are also communicated across regions, shared with the Company's Sustainability Leadership Council, and elevated to the Board of Directors as and its committees as appropriate.</p> <p>CDP C2-C3, pp 8-21 2024 Proxy Statement, pp 17-18 2024 Sustainability Report, pp 59-60, 79</p>	<p>b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.</p> <p>Data for calendar year 2023:</p> <p>Scope 1: 16.4 million MT CO₂e</p> <p>Scope 2: 10.7 million MT CO₂e</p> <p>Scope 3: 8.2 million MT CO₂e</p> <p>CDP C6.1- 6.5, 6.10, pp 35-41 2024 Sustainability Report, pp 59-60</p>



TCFD Matrix

Air Products' alignment with the recommendations of the task force on climate-related financial disclosures (TCFD)

Governance	Strategy	Risk Management	Metrics and Targets
<p>Disclose the organization's governance around climate-related risks and opportunities.</p>	<p>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</p>	<p>Disclose how the organization identifies, assesses, and manages climate-related risks.</p>	<p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</p>
	<p>c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.</p> <p>Air Products is examining several climate scenarios, which are in line with the recommendations of the Intergovernmental Panel on Climate Change (IPCC) and TCFD, to understand the potential implications of climate-related risks and opportunities on our businesses.</p> <p>CDP C3.2, pp 17-19 2024 Sustainability Report, pp 59-60</p>	<p>c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.</p> <p>The Company uses a multi-disciplinary approach to identify, assess and manage risk, including climate-related risks. In addition to the processes described above, the Company reviews climate-related developments and the need to assess specific climate risks as part of its internal audit program. We also incorporate climate-related risks into annual financial reporting.</p> <p>CDP C2.2, pp 8-10 2023 Annual Report, pp 15-16 2024 Sustainability Report, pp 59-60, 79</p>	<p>c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.</p> <p>Air Products has established aggressive goals geared towards enabling and accelerating the energy transition through investments in innovative world-scale zero- and low-carbon hydrogen projects, alongside decarbonization of our own operations. These goals include:</p> <ul style="list-style-type: none"> • Committing to invest \$15 billion in energy transition projects through 2027 • Reaching net-zero emissions from our operations by 2050 • Reducing our Scope 1 and 2 combined and Scope 3 CO₂e emissions intensities by one-third by 2030 • Engaging with the Science Based Targets initiative to develop a target-setting methodology for the chemicals sector <p>In addition, the Company realized the following results in 2023 compared to prior year:</p> <ul style="list-style-type: none"> • Customer avoided emissions increased by 15% • Energy use intensity increased by 8% • GHG emissions intensity increased by 4% • Water use intensity improved by 10% <p>CDP C4.1-4.2, pp 21-28 2024 Sustainability Report, pp 7-8, 58-62</p>



SASB Matrix

Air Products' alignment with the Sustainability Accounting Standards Board (SASB) disclosures

Values are for calendar year 2023 unless otherwise noted.

Metric	Category	Value/Unit	Additional Information	SASB Code
Organizational Profile				
Gross global Scope 1 emissions, Percentage covered under emissions-limiting regulations	Quantitative	16,400,000 tonnes (MT) CO ₂ e 97%	2024 Sustainability Report, pp 59-60	RT-CH-110a.1
Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis	Scope 1 emissions are direct emissions from owned and controlled sources. The Company has goals to reduce CO ₂ intensity by one-third by 2030 for Scope 1 and 2 combined and for Scope 3. Air Products also has a goal to reach net-zero in our operations by 2050.	CDP C4.1-4.2, pp 45-48 2024 Sustainability Report, pp 59-60	RT-CH-110a.2
Air Quality				
Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O) (2) SO _x (3) Volatile organic compounds (VOCs) (4) Hazardous air pollutants (HAPs)	Quantitative	1,444 MT NO _x 75 MT SO _x 87 MT VOCs (CY22) 42 MT HAPs (CY22)	2024 Sustainability Report, p 64	RT-CH-120a.1
Energy Management				
(1) Total energy consumed (2) Percentage grid electricity (3) Percentage renewable (4) Total self-generated energy	Quantitative	256,900,000 Gigajoules (GJ) >99.9% 23% <0.1%	Electricity is sourced primarily from the grid with self-generated electricity representing approximately <0.1% of electricity consumed and exported. Renewable electricity represents a combination of self-generated electricity, renewable electricity purchases, and grid electricity. 2024 Sustainability Report, p 58	RT-CH-130a.1
Organizational Profile				
(1) Total water withdrawn (2) Total water consumed Percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	68,020 in 1,000 m ³ , 22% 42,950 in 1,000 m ³ , 22%	In 2023, 31% of our facilities were in areas with high or extremely high baseline water stress. The percentages of water withdrawn and consumed in areas of high or extremely high baseline water stress were both 22%. 2024 Sustainability Report, pp 61-62	RT-CH-140a.1
Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Quantitative	2	Of the 23 notices of violation across Air Products' global operations in 2023, two were related to water. 2024 Sustainability Report, p 65	RT-CH-140a.2
Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and Analysis	Air Products monitors water risks on an ongoing basis and has set goals to develop and implement water management plans at our facilities in water stressed areas that withdraw significant amounts of water.	2024 Sustainability Report, pp 61-62	RT-CH-140a.3



SASB matrix

Metric	Category	Value/Unit	Additional Information	SASB Code
Hazardous Waste Management				
Amount of hazardous waste generated, Percentage recycled	Quantitative	10,670 MT 42%	2024 Sustainability Report, p 63	RT-CH-150a.1
Community Relations				
Discussion of engagement processes to manage risks and opportunities associated with community interests	Discussion and Analysis	The Company has stakeholder outreach plans aimed at addressing high priority needs and maintaining positive relationships with the communities near our largest operations globally. In fiscal 2023, the Air Products Foundation made \$9 million in cash contributions that reinforced our community outreach plans, responded to community needs, and supported eligible non-profits.	2024 Sustainability Report, pp 40-42, 75-76	RT-CH-210a.1
Workforce Health and Safety				
(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	Quantitative	TRIR employees – 0.29 (FY23) TRIR contractors – 0.29 (FY23) Fatality rate employees – 0 (FY23) Fatality rate contractors – 0.005 (FY23)	2024 Sustainability Report, pp 68-69	RT-CH-320a.1
Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	Discussion and Analysis	Air Products has extensive processes to manage potential exposures of employees and contractors.	2024 Sustainability Report, pp 68-69	RT-CH-320a.2
Product Design for Use-phase Efficiency				
Revenue from products designed for use phase resource efficiency	Quantitative	\$6.6 bn (FY23)	The Company estimates that >50% of its revenues in 2023 were derived from Sustainable Offerings, which are products that improve energy efficiency, reduce environmental impact and/or address a societal need.	RT-CH-410a.1
Safety & Environmental Stewardship of Chemicals				
(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	Quantitative	<2% by revenue (FY23) 85%	2024 Sustainability Report, p 69	RT-CH-410b.1
Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	Discussion and Analysis	Not relevant	The majority of Air Products' high-volume liquid/bulk industrial gas products are not toxic, and all products can be handled safely with the appropriate procedures, equipment and training. 2024 Sustainability Report, p 69	RT-CH-410b.2



SASB matrix

Metric	Category	Value/Unit	Additional Information	SASB Code
Genetically Modified Organisms				
Percentage of products by revenue that contain genetically modified organisms (GMOs)	Quantitative	Not applicable	Air Products does not manufacture GMOs.	RT-CH-410c.1
Management of the Legal and Regulatory Environment				
Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Discussion and Analysis	Air Products engages with government officials in matters that can impact our businesses and operations, striving to maintain their support, confidence, and timely permitting of our projects.	2024 Sustainability Report, p 79	RT-CH-530a.1
Operational Safety and Emergency Response				
Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	Quantitative	Not reported	To promote process safety, we apply sound engineering principles to design, construct, operate and maintain our plants and equipment while minimizing process related hazards. Process safety incident data is not publicly disclosed.	RT-CH-540a.1
Number of transport incidents	Quantitative	Not reported	Transportation safety is supported through the safety features of our delivery vehicles, driver training and coaching. Transportation incident data is not publicly disclosed.	RT-CH-540a.2
Production				
Production by reportable segment	Quantitative	Not reported	Production data is company confidential.	RT-CH-000.A



EEO-1 report

Each year, Air Products must report to the U.S. Equal Employment Opportunity Commission (EEOC) workforce data categorized by race, ethnicity, sex, and job category in an Employer Information Report EEO-1. The data below is from our most recent EEO-1 Report and reflects demographics in the U.S. as of September 31, 2023*. The EEO-1 Report mandates the use of specific job categories, which differ from how our workforce is structured.

JOB CATEGORIES	HISPANIC OR LATINO		NOT HISPANIC OR LATINO												OVERALL TOTALS	
	Male	Female	Male						Female							
			White	Black or African American	Asian	Native Hawaiian Pacific or Islander	American Indian or Alaskan Native	Two or more Races	White	Black or African American	Asian	Native Hawaiian Pacific or Islander	American Indian or Alaskan Native	Two or More Races		
Executive/SR Officials & Mgrs	2	0	11	0	3	0	0	0	4	1	0	0	0	0	0	21
First/Mid Officials & Mgrs	73	18	694	40	68	0	3	18	191	14	27	0	0	9	1155	
Professionals	114	58	947	69	219	1	3	22	397	45	89	1	1	12	1978	
Technicians	22	4	155	2	6	0	0	2	38	1	3	0	0	1	234	
Sales Workers	7	1	83	9	4	0	1	3	45	1	3	0	0	1	158	
Administrative Support Workers	9	32	103	4	4	0	0	1	207	18	12	0	0	3	393	
Craft Workers	196	10	868	140	68	4	9	22	41	21	2	1	0	4	1386	
Operatives	84	5	517	154	14	2	1	14	6	9	0	1	0	0	807	
Laborers & Helpers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Service Workers	1	0	4	1	0	0	0	0	2	0	0	0	0	0	8	
Current 2023 Reporting Year Total	508	128	3382	419	386	7	17	82	931	110	136	3	1	30	6140	
Prior 2022 Reporting Year Total	458	113	3197	393	344	4	15	72	875	88	117	3	1	22	5702	

*Updated July 2024

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Forward-looking statements

This Sustainability Report (this "Report") contains "forward-looking statements" within the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on management's reasonable expectations and assumptions as of the date of this Report and are not guarantees of future performance. Actual performance may differ materially from projections and estimates expressed in the forward-looking statements because of many factors, including, without limitation, the risk factors described in the Company's Annual Report on Form 10-K for its fiscal year ended September 30, 2023 and subsequent filings with the U.S. Securities and Exchange Commission. Except as required by law, the Company disclaims any obligation or undertaking to update or revise any forward-looking statements contained herein to reflect any change in the assumptions, beliefs or expectations or any change in events, conditions or circumstances upon which any such forward-looking statements are based.

Unless noted, all values in this report are for calendar year 2023 and all dollar amounts are in U.S. dollars.

GENERATING A CLEANER FUTURE

