

Making our world more productive



Linde ESG Data Overview (2021 Data Year)

A Summary for Investors
October 2022

Table of Contents

Introduction..... 5

Linde’s Business Model..... 5

Creating Economic, Environmental and Social Value 7

Linde’s 2028 Targets 9

Reports and Reporting Frameworks..... 10

Policies and Position Statements 10

Climate Change 11

Environment..... 12

Safety and Health 13

Our People 13

Community 14

Governance 14

Mission, Vision and Values

Our Vision

We are committed to fulfilling our vision to be the **best performing global industrial gases and engineering company**, where our people deliver innovative and sustainable solutions for our customers in a connected world.

Our Mission

We live our mission of making our world more productive every day. Through our high-quality solutions, technologies and services we are making our customers more successful and **helping to sustain and protect our planet**.

Our Values

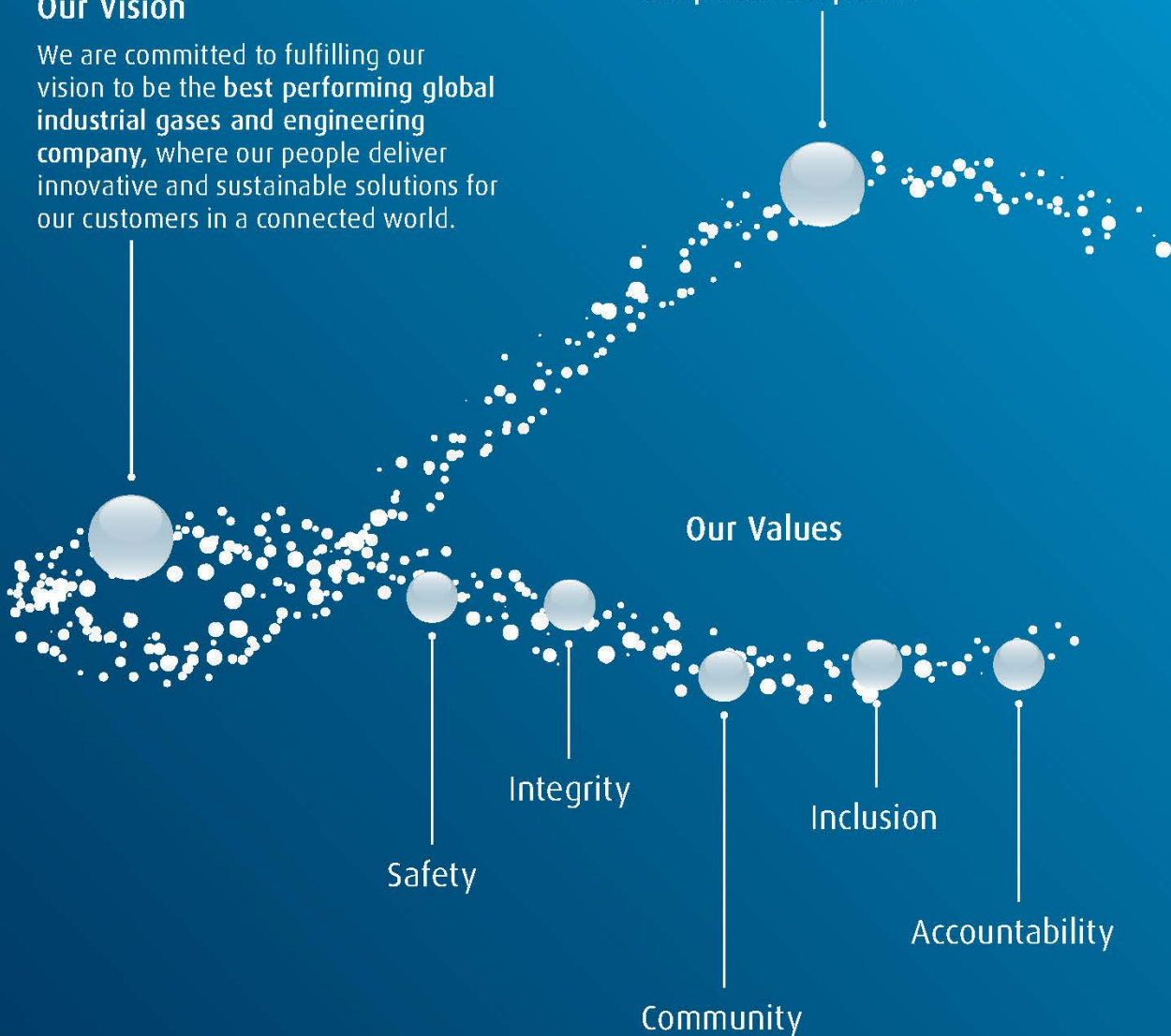
Safety

Integrity

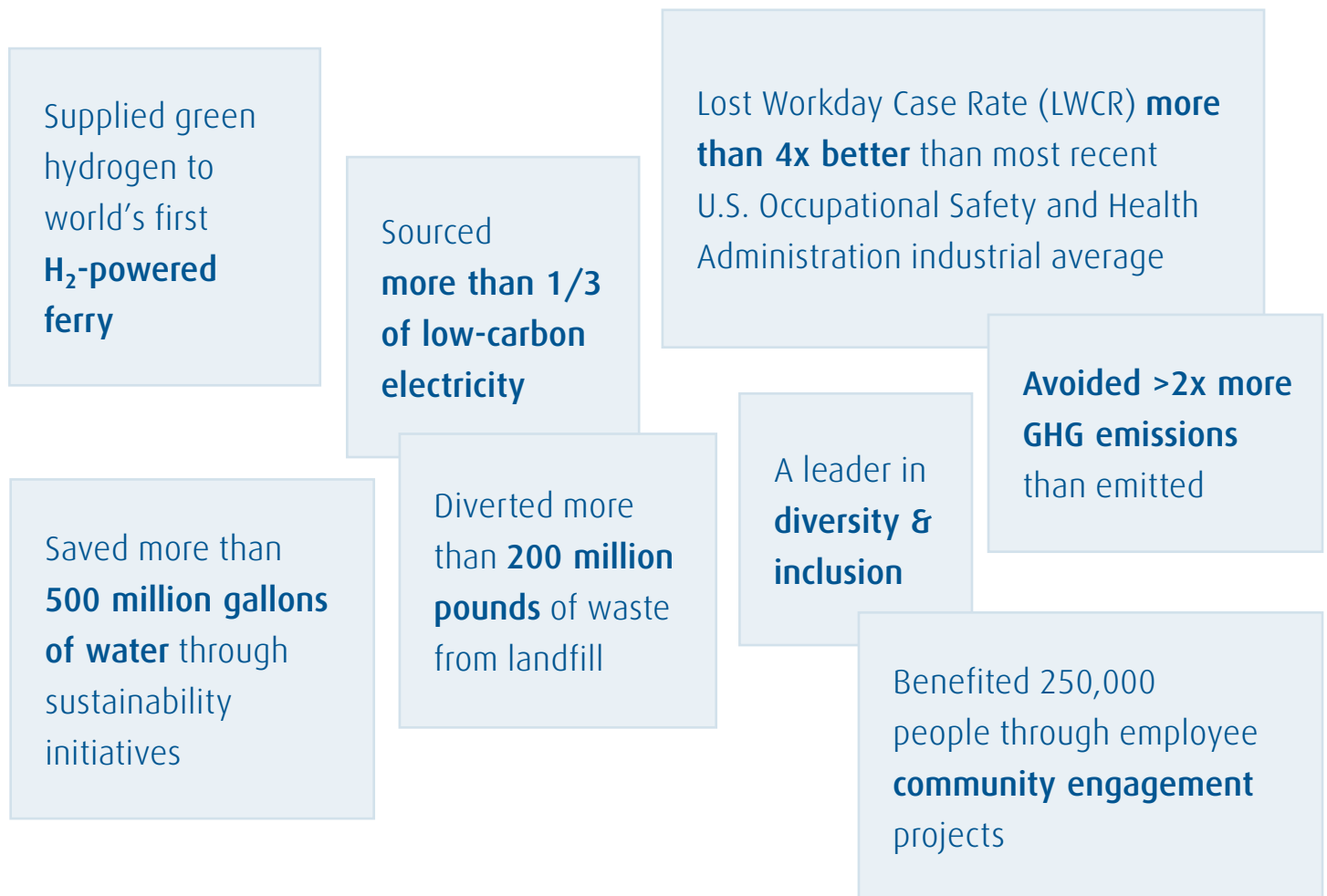
Community

Inclusion

Accountability



Sustainable Development



Awards & Recognition

Climate Change & Environment

- CDP Climate Change Leadership level (A-)
- CDP Water Security, A List
- DJSI Environmental Dimension: 99th percentile

People & Community

- DiversityInc Noteworthy Company
- Forbes' America's Best Employers for Diversity
- 100 Best Corporate Citizens

Integrity & Compliance

- 2021 World's Most Ethical Companies

Introduction

This ESG Data report provides a consolidated overview of Linde plc's non-financial performance. Metrics cover the company's activities during the period January 1 to December 31 for the year indicated.

Linde plc was formed in 2017 in accordance with the requirements of the business combination agreement, dated June 1, 2017, as amended, among Linde plc; Praxair, Inc. (Praxair); and Linde Aktiengesellschaft (Linde GmbH). Effective October 31, 2018, the business combination was completed, and Linde plc is comprised of the businesses of Praxair and Linde GmbH. For 2018, pro forma data was calculated for numerous non-financial metrics to reflect what performance would have looked like had the merger been effective for all of 2018. In the tables on the following pages, if a 2018 cell is greyed out, a pro forma value was not calculated for that metric.

Consistent with Linde's financial reporting, all financial figures are reported in US Dollars.

Each year, Linde has various metrics externally audited. The most recent audit covers the 2021 data year. The audit assurance letters can be found in Linde's [Reporting Center](#).

Linde's Business Model

Linde's business model is to transform air and other process gases into applications that, in many cases, help customers become more energy- and resource-efficient or provide social benefits.

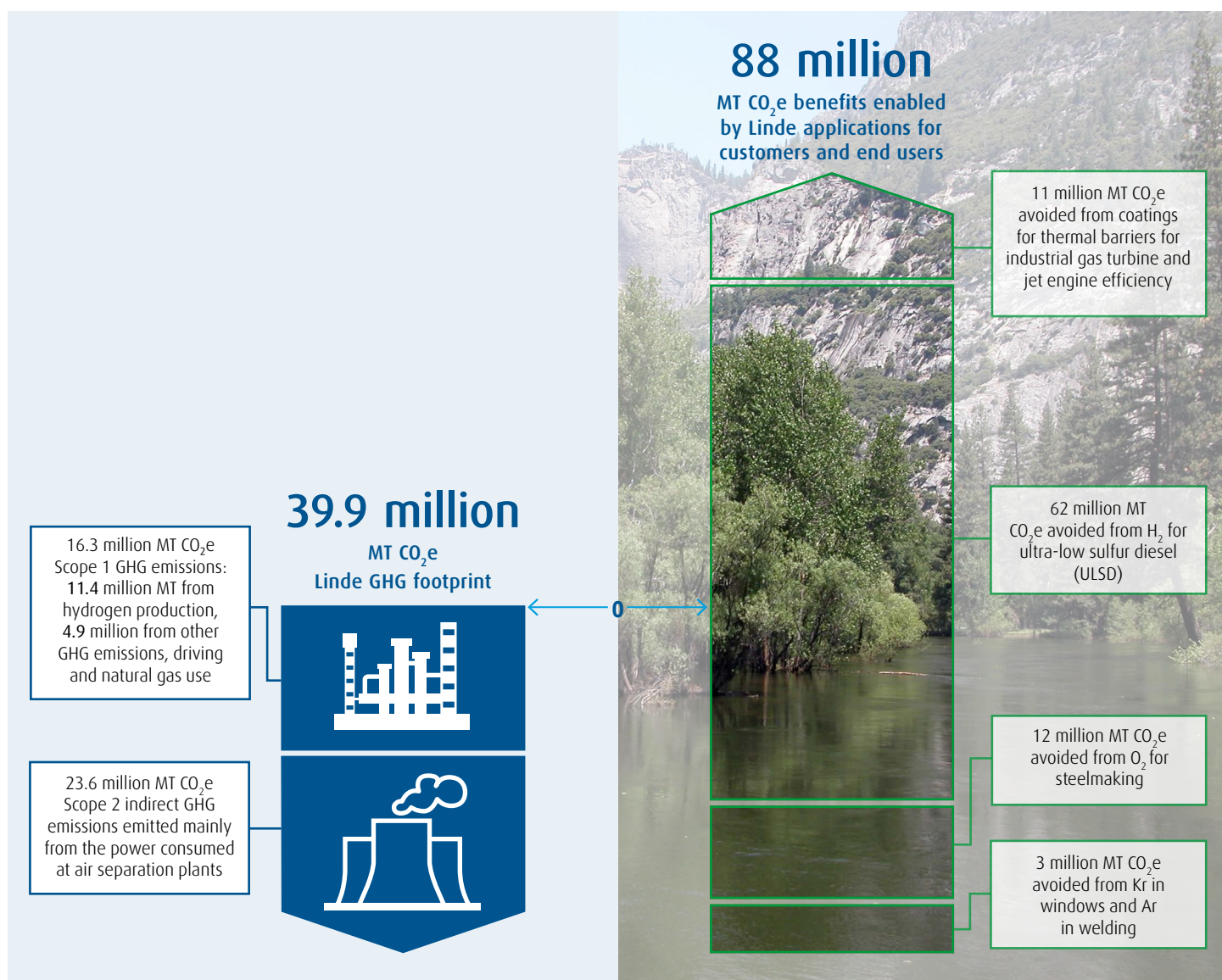
Linde's industrial gas processes transform natural resources into environmental and social value and impact. Principal business operations are to make atmospheric gases from raw materials in the air and electricity, and process gases, principally hydrogen, from natural gas or industry by-products, together with steam. The outputs of these processes, or our product applications, serve multiple end-markets. More than two-thirds of sales are underpinned by fixed fees or resilient end-markets (e.g., healthcare, food and beverage, and electronics as well as portions of sales to chemical and energy, metals, and manufacturing), which provide some protection from market swings.

Many of Linde's applications bring environmental, economic and social benefits to its customers, communities and the planet. For example, Linde's oxygen helps steelmakers save energy, allows sustainable aquaculture to thrive and serves hundreds of thousands of patients needing medical oxygen. Its hydrogen helps oil refiners to make ultra-low sulfur diesel (ULSD), which helps improve air quality, thereby improving the environment and human health. Linde's high-performance surface coatings help improve energy efficiency in jet engines and machine turbines. These outcomes deliver multiple longer-term impacts and sustainable business value.

Linde Applications Enable 2.2x Carbon Productivity

Linde is a company in the business of resource transformation in a world that is dealing with climate change. Below are our 2021 actual results as reported by Linde plc entities. We demonstrate that a subset of Linde applications allow our customers or their end users to avoid more than twice the GHG emissions of all Linde operations. In 2021, total GHG emissions were 39,9 million MT CO₂e, versus 88 million MT CO₂e avoided by our customers or end users, based upon several applications as shown below.

Again in 2021, a subset of Linde applications enabled more than twice the GHG benefit than was emitted in all global operations.



Values are based on 2021 reported and consolidated results from Linde plc subsidiaries following Linde plc reporting standards.

CO₂e = CO₂ equivalents

Creating Economic, Environmental and Social Value

Linde's business model creates additional enduring value that amplifies our mission of making our world more productive. The table on the facing page shows a range of Linde's inputs and activities, and the output and outcomes of these. For example, Linde values the safety of its employees and contractors and invests approximately 5 million hours on safety training each year. One outcome of this effort is that Linde's safety record is several times better than industry benchmarks, which gives us confidence that our employees and contractors return home safely at the end of their day.

Linde's products contribute positively to the health and wellbeing of our customers. Homecare and hospital patients worldwide benefit from our medical gases, devices, services and therapies, especially in respiratory care. For example, during the COVID-19 pandemic, Linde medical oxygen was crucial to healthcare responders and their patients in many countries. In the United States, Lincare is a leading provider of home respiratory-therapy products and services.

Linde gases also play an important role in tackling the global challenge of access to clean water. An ever-growing population and industrial activity, along with stringent environmental regulations, put additional pressure on wastewater treatment plants across the globe to treat increasing volumes of wastewater – adding oxygen effectively increases plant capacity. As access to drinking water becomes more scarce, the market for desalination has expanded, particularly in drought-susceptible areas. Carbon dioxide, which is often sourced from industry byproducts, can be used in the re-mineralization step as a safer alternative to mineral acids. In Australia and other areas, for example, Linde carbon dioxide helps desalinate water used for municipal water supplies. In 2021, Linde gases enabled more than 225 million people to have access to safe drinking water, more than half of whom were in APAC (approximately 130 million people).

The long-term impact of these activities is difficult to measure or attribute directly to one company. However, we can demonstrate how they contribute to the 17 global UN Sustainable Development Goals (UN SDGs) introduced by the UN to eradicate poverty, protect the planet and guarantee prosperity for all by 2030. The "Impact" column of the table on the next page shows the SDGs most relevant to Linde, which are referenced in Linde's 2028 Sustainable Development Targets.

An example of how Linde's activity contributes towards the SDGs is for SDG 12: Responsible Production and Consumption. Target 12.2 is "By 2030, achieve the sustainable management and efficient use of natural resources." Linde's broad range of resource intensity targets addresses this issue. Linde also takes direct action on Target 12.6: "Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle."

Another example is for SDG Goal 7, Target 7.2: "Increase the share of renewable energy by 2030." Linde will actively contribute to this target by doubling the purchase of low carbon energy by 2028.

INPUT AND ACTIVITIES →	OUTPUT AND OUTCOMES →	IMPACT
Employees		UN SDG*
A global corporation with a presence in approximately 100 countries	<ul style="list-style-type: none"> Supported 72,327 employees globally, with personnel expenses totaling \$5.9 billion in 2021, including salaries, benefits, Social Security contributions and pensions, and share-based compensation Positive trend in employee engagement based upon global survey 	3 GOOD HEALTH AND WELL-BEING 
Committed to Diversity and Inclusion	<ul style="list-style-type: none"> 27% female employees worldwide; (28% female professional employees worldwide) Trained approximately 1,200 leaders on unconscious bias Consistently listed on major Diversity and Inclusion indices 	
Commitment to Safety: Approximately 5 million hours of safety training delivered in 2021 to employees and contractors	<ul style="list-style-type: none"> Achieved Lost Workday Case Rate (LWCR) 4X better than the U.S. Occupational Health and Safety Administration all industries industrial average 	
Customers and Investors		
Shareholder focus	<ul style="list-style-type: none"> Delivered 29 consecutive years of dividend growth 	8 DECENT WORK AND ECONOMIC GROWTH 
Customer-centric, capital-intensive operations	<ul style="list-style-type: none"> Adjusted after-tax return on capital**: 17.7% Industry-leading sale of gas project backlog of \$3.5 billion 	
Local business model	<ul style="list-style-type: none"> Linde manufactures and distributes nearly all its products and manages 2+ million industrial customers on a regional basis 	
Innovation		
Technology Innovation	<ul style="list-style-type: none"> Conducted first-ever commercial scale trial for low-carbon steel heating with hydrogen, which enables substantial reductions in carbon emissions Delivered 55% of revenue from applications that bring environmental and social benefits Commenced construction of the world's first hydrogen station for fuel-cell powered passenger trains Demonstrated electrolysis expertise: currently building world's largest PEM electrolyzer (24 megawatts) 	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 
Natural Resources		
Resource productivity	<ul style="list-style-type: none"> Delivered productivity in line with business strategic objectives Realized \$187 million savings from sustainable productivity, including avoiding >500 million gallons of water usage and 696,000 MT CO₂e*** 	12 RESPONSIBLE CONSUMPTION AND PRODUCTION 
39.9 million MT CO ₂ e direct and indirect GHG**** emissions	<ul style="list-style-type: none"> 17 TWh low-carbon energy sourced (40% of all energy) Enabled 88 million MT CO₂e to be avoided by customers from five of Linde's key technologies 	7 AFFORDABLE AND CLEAN ENERGY 
80 million m ³ water consumed	<ul style="list-style-type: none"> Enabled more than 225 million people to have access to safe drinking water through gases used for water treatment and desalination 	
Society		
Commitment to Ethics and Integrity	<ul style="list-style-type: none"> Maintained strong compliance culture through Code of Business Integrity, which has been implemented globally 	16 PEACE, JUSTICE AND STRONG INSTITUTIONS
\$9.7 million in funding for social projects and initiatives	<ul style="list-style-type: none"> Supported more than 1,150 organizations in 50 countries 	8 DECENT WORK AND ECONOMIC GROWTH
60,000 employee volunteer hours contributed	<ul style="list-style-type: none"> Impacted 250,000 people, including 100,000 children and students, through employee community engagement projects 	
Healthcare business	<ul style="list-style-type: none"> Provided crucial support to hospitals and healthcare facilities during the COVID-19 pandemic Cared for 165,000 COVID-19 patients at home in the U.S. through Lincare's respiratory care services 	

* UN SDG: United Nations Sustainable Development Goals

** Adjusted after-tax return on capital is a non-GAAP measure. For definition and reconciliation, please see Appendix to the Investor Teleconference Presentation Fourth Quarter 2021.

*** CO₂e: CO₂ equivalents

**** GHG: Greenhouse gas

Linde's 2028 Targets

Linde's ambitious Sustainable Development 2028 (SD2028) Targets are our roadmap and plan for the coming 10 years. The targets are organized in four categories that we consider relevant to the company and its internal and external stakeholders. The targets are consistent with Linde's business model, mission and values, and the strategic business objectives named by the Board of Directors as a basis for variable compensation. Linde's businesses and functions are accountable for achieving these targets – they are embedded into our businesses and operations. Each target is a business KPI and managed as part of the business.

Priority Factors	Linde Targets*	2018	2019	2020	2021	Target	Status
Climate Change	Invest in decarbonization initiatives, cumulative \$ million	14	66	128	299	1,000	↗
	Direct >33% of R&D budget to decarbonization, cumulative %	23	25	26	27	>33	↗
	Contribute >50% revenue from sustainability portfolio, annual %	n/a	53	54	55	50	↑
	Enable >2x GHG benefits, annual	2.5x	2.7x	2.3x	2.2x	>2.0x	↑
	35% absolute reduction in Scope 1 and 2 emissions by 2035, 2021 baseline, cumulative % (million tons CO ₂ e)	n/a	n/a	n/a	n/a	-35% (25.9)	n/a
	35% Improvement in GHG intensity vs. EBITDA, cumulative %, (intensity MMT CO ₂ e/\$ billion)	(5.3)	-8.1% (4.9)	-16.1% (4.5)	-26.2% (3.9)	-35% (3.5)	↗
	4% HyCO GHG intensity improvement, cumulative %	0	-3.4	-7.1	-9.3	-4.0	↗
	7% ASU energy intensity improvement, cumulative %	0	-0.6	-0.5	-1.7	-7.0	↗
	10% fleet GHG intensity improvement, cumulative %	0	-0.9	-7.2	-7.5	-10.0	↗
	10% absolute reduction in other GHG emissions, cumulative %	0	0	-9.3	-38	-10.0	↑
	>2x low-carbon power sourcing, primarily from active renewable electricity, cumulative TWh	14	14.3	15.3	17.0	>28.0	↗
Safety, Health & Environment	\$1.3 billion in sustainable productivity, cumulative \$ million	92	176.5	310	497	1,300	↗
	Water Management Plans (WMPs) at high-water-use sites in areas of high-water stress (# sites in scope, % WMPs implemented)	n/a	22 (73%)	67 (20%)	67 (36%)	100%	↗
	Achieve Zero Waste to Landfill at 450 sites	217	210	286	360	450	↗
	Annually achieve operational safety better than industry levels for Lost Workday Case Rate (LWCR)	0.32	0.23	0.21	0.22	1.00	↑
	Annually achieve annual operational safety better than industry levels for Total Recordable Case Rate (TRCR)	0.74	0.57	0.51	0.54	3.10	↑
	Annually achieve Commercial Vehicle Incident Rate (CVIR) of <2.5 per million kilometers driven	2.05	2.17	1.7	2.08	<2.50	↑
	Zero global sales of coating slurries that contain hexavalent chrome by 2029 (Surface Coatings)	On track, see reporting section following					↗
Ethics & Integrity	100% employee certification to Linde Code of Business Integrity (CBI), annual % employees certifying	100	100	100	99	100	↗
People & Community	Achieve 30% representation of women globally by 2030 (% all employees)	n/a	27	27	27	30	↗
	550 employee community engagement projects completed	410	367	317	389	550	↗
	Community impact assessments in engineering project development at all new sites (U.S. only). (% complete): Target commences in 2021	n/a	n/a	n/a	n/a	100	n/a
	Increase environmental/climate-related philanthropic spend by 50% (annual \$ '000, % total)	\$555k	\$654k (18%)	\$684k (23%)	\$884k (59%)	\$832k (50%)	↑
Legend	*All Targets terminate in 2028, unless specified otherwise ↑ achieved; ↗ on track; ↘ behind target						

For detailed information on Linde's target performance, visit the "Performance Towards Targets" section of Linde's [2021 Sustainable Development Report](#).

Reports and Reporting Frameworks

List of Reports

Copies of Linde's current and past sustainable development reports can be found in Linde's Reporting Center. The most recent sustainability reports are:

- [2021 Sustainable Development](#)
- [2022 CDP Climate Change Response](#)
- [2022 CDP Water Response](#)

Reporting Frameworks

Linde uses a number of frameworks to guide the company's sustainability reporting, including:

- [Linde SASB Index \(2021 Data Year\)](#)
- [Linde TCFD Index \(2021 Data Year\)](#)

Policies and Position Statements

Governance

- [Corporate Governance Guidelines](#)

Ethics

- [Code of Business Integrity](#)
- [Human Rights Policy](#)
- [Modern Slavery Policy Statement \(UK\)](#)
- [Diversity & Inclusion Guidelines](#)
- [Responsible Animal Testing Policy](#)
- [Conflict-Free Materials Supply Policy](#)
- [Supplier Code of Conduct](#)

Compliance

- [Anti-Bribery & Anti-Corruption Compliance Policy](#)
- [Competition Law Policy](#)
- [Policy on Doing Business with the Government](#)
- [Political Contributions and Lobbying Policy](#)

Health, Safety and Environment

- [Health, Safety & Environmental Policy](#)
- [Position Statement on the Importance of Ecosystems](#)
- [Responsible Care Policy](#)
- [Position Statement on Sustainable Development and Climate Change](#)
- [GHG Emissions Recalculation Policy](#)
- [Water Position Statement](#)
- [Position Statement Regarding Chemicals of Concern](#)

Climate Change

Metric	Unit	2018	2019	2020	2021
Innovation					
Investment in decarbonization activities	\$ million	14	66	128	299
R&D budget for decarbonization	% of total R&D budget	23	25	26	27
Revenue from Sustainability Portfolio	\$ billion		13.5	13	15
% Revenue from Sustainability Portfolio	% of total revenue		53	54	55
GHG benefits enabled by select Linde applications	Million MT CO2e	94	100	85	88
GHG Emissions					
GHG Intensity (over EBITDA)	Million MT CO2e/\$ billion	5.3	4.7 (-8.2%)	4.5 (-16.1%)	3.9 (-26.2%)
GHG Intensity (over revenue)	MT CO2e/thousand \$ million	1.44	1.37	1.41	1.30
Total Scope 1 + Scope 2 emissions ¹	Million MT CO2e	40.390	38.711	38.546	39.894
Scope 1 (direct) GHG emissions	Million MT CO2e	16.872	16.461	16.247	16.321
Scope 1 emissions covered by emissions-limiting regulations	Million MT CO2e		1.5	1.5	1.6
Scope 2 (indirect) GHG emissions (market-based)	Million MT CO2e	23.518	22.250	22.299	23.573
Scope 3 GHG emissions ²	Million MT CO2e	14.849	15.412	14.403	21.261
Fuel- and energy-related activities	Million MT CO2e	5.060	5.590	5.290	7.430
Purchased goods and services	Million MT CO2e	1.540	1.540	1.640	4.250
Capital goods	Million MT CO2e	0.965	0.965	0.931	0.810
Investments	Million MT CO2e	4.460	4.460	3.930	5.450
Business Travel	Million MT CO2e				0.021
Downstream leased assets	Million MT CO2e	2.163	2.280	2.050	2.520
Downstream distribution (contractor driving)	Million MT CO2e	0.661	0.577	0.562	0.780
Energy Use					
Energy consumption	Million MWh	68.526	69.137	69.277	72.943
Fuel consumption ³	Million MWh	21.034	21.246	21.298	21.012
Steam consumption	Million MWh	5.943	6.012	6.357	9.152
Electricity consumption	Million MWh	41.549	41.879	41.622	42.779
Actively sourced renewable energy	Million MWh	2.507	2.431	2.493	2.780
Low carbon ⁴ electricity	Million MWh	14.0	14.3	15.3	17.0
Portion of electricity originating from the grid	%	>99	>99	>99	>99
Renewable energy portion of electricity (active only)	%	6	6	6	6.5
Low carbon portion of electricity (active + grid)	%	35	35	39	40

¹ Calculated using the financial control approach.

² Linde reports Scope 3 emissions from its 7 most relevant categories. See the SDR for more information on our Scope 3 reporting.

³ This figure includes non-renewable fuels only. Linde did not consume any renewable fuel.

⁴ Low carbon includes both active (generated or purchased through a PPA) and passive (grid supplied) sourcing. Low carbon includes all forms of renewable electricity as well as nuclear.

Environment

Metric	Unit	2018	2019	2020	2021
Water					
Water ⁵ withdrawn	Million m3		801.9	833.2	971.6
Portion withdrawn in regions with high or extremely high baseline water stress	%			4	3
Fresh water withdrawn	Million m3	512.1	456.0	427.9	457.2
Water consumed	Million m3		82.9	73.7	80.4
Portion consumed in regions with high or extremely high baseline water stress	%			23	20
Fresh water consumed	Million m3	92.5	101.2	93.1	99.5
Fresh water consumption intensity (over revenue)	Million m3/\$ billion	0.0033	0.0036	0.0034	0.0032
Sites in regions with high or extremely high water stress that have implemented Water Management Plans (WMPs)	% of applicable sites		22 (73%)	67 (20%)	67 (36%)
Water incidents of non-compliance	# of incidents	0	0	0	0
Waste					
Non-hazardous waste generated	MT	77,400	63,700	59,628	47,769
Non-hazardous waste disposed	MT	32,100	28,700	24,698	15,939
Non-hazardous waste disposal intensity (over revenue)	MT/\$ million	1.14	1.01	1.13	0.52
Non-hazardous waste recycled	MT	45,300	35,000	34,929	31,830
Hazardous waste ⁶ generated	MT	30,000	34,100	29,800	25,500
Hazardous waste disposed	MT	27,800	27,300	24,900	21,500
Hazardous waste disposal intensity (over revenue)	MT/\$ million	0.99	0.97	0.91	0.70
Hazardous waste recycled (marketable only)	MT	2,200	6,800	4,900	4,000
Zero waste sites	#	217	210	286	360
Air Emissions (non-GHG)					
NOx emissions	MT	10,003	10,596	12,030	12,236
NOx emissions intensity (over revenue)	MT/\$ million	0.356	0.375	0.442	0.391
SOx emissions	MT	591	730	790	714
SOx emissions intensity (over revenue)	MT/\$ million	0.021	0.026	0.029	0.023
VOC emissions	MT	1,185	1,158	1,141	948
VOC emissions intensity (over revenue)	MT/\$ million	0.047	0.046	0.039	0.031
Other					
Sustainable productivity savings	\$ million	92.0	84.5	133.0	187.0
Environmental expenditures ⁷	\$ million	40.0	47.0	54.1	55.0
Environmental fines ⁸	\$ million	0	0.14	0	0.05
Sites externally verified to be in conformance with ISO 14001	% sites by revenue		87	87	87
Conformance to Linde global health, safety, environment and security requirements and management system, in alignment with Responsible Care® and international standards ISO 14001, OHSAS 18001/ ISO 45000, FSSC 22000 and ISO 9001	% sites	100	100	100	100

⁵Includes fresh water + industrial/recycled water. Does not include brackish water.

⁶Hazardous waste values include waste defined as hazardous by regulatory authorities in each country we operate.

⁷Environmental expenditures = capital investment + operational expenditures

⁸Linde reports significant fines (those costing more than \$10,000) in the year the violation occurred (not the year the fine was paid).

Safety and Health

Metric	Unit	2018	2019	2020	2021
Operational Safety					
Lost workday case rate (LWCR), employees and contractors	# of incidents per 200,000 hours worked	0.32	0.23	0.21	0.22
Total recordable case rate (TRCR), employees and contractors	# of incidents per 200,000 hours worked	0.74	0.57	0.51	0.54
Fatalities, employees and contractors	#	7	4	1	4
Vehicle Safety					
Commercial vehicle incident rate (CVIR), employees and contractors	# of incidents per million km driven	2.05	2.17	1.7	2.08
Process Safety					
Tier 1 process safety events	# of events per 200,000 hours worked	0.03	0.037	0.035	0.039
Product Safety					
Products that undergo a hazard assessment	%	100	100	100	100

Our People

Metric	Unit	2018	2019	2020	2021
Employment					
Total employees	#	80,820	79,886	74,207	72,327
Voluntary turnover	%		6.3	5.4	6.7
Diversity and Inclusion					
Women at executive levels	%		16	17	18
Women at management level and above	%		19	20	23
Women in workforce (salaried employees)	%		27	27	27

Community

Metric	Unit	2018	2019	2020	2021
Corporate Foundation and other giving	\$ million	6.2	8.0	9.4	9.7
Environmental- and climate-related philanthropic spend	\$ million	0.55	0.65	0.68	0.88
Diversity- related philanthropic spend	\$ million	0.65	0.76	0.94	0.97
Business involvement in community engagement	% of major sites		100	100	100
Community engagement projects completed	#	410	367	317	389

Governance

Metric	Unit	2018	2019	2020	2021
Board of Directors					
Women on the board	# (%)	3 (25)	3 (25)	3 (25)	2 (20%)
Number of meetings	#		5	5	5
Board attendance	% of all meetings		100	97	100
Related party transactions	% of revenue	0.019	0.065	0	0
Members of Audit Committee that are independent	%	100	100	100	100
Political Involvement					
Direct Political Contributions	\$	0	0	0	0
Total contribution and other spending ⁹	\$ million	1.6	1.5	3.8	3.3
Compensation					
Incentives for non-financial performance (payout factor)	%		160	160	185
Performance period covered by executive compensation plan	# years	5	3	3	3
Time vesting period for CEO	# years	3	3	3	3
Taxation					
Effective tax rate ¹⁰	%	28.5	26.3	25.0	24.7
Audit					
Audit and audit-related fees paid to auditor	\$	16,217,000	18,750,000	24,378,000	20,000,000
Non-audit fees paid to auditor	\$	4,867,000	1,440,000	832,000	140,000

⁹Including contributions to from Linde to trade associations, tax-exempt organizations and to lobbying firms; and from the U.S. employee political action committee (PAC)

¹⁰The tax rate for 2018 is pro forma and includes both Linde GmbH and Praxair.

