

Making our world more productive



Why Linde





Outline

1. Introduction to Industrial Gases
2. Introduction to Linde
 - 2.1 Overview
 - 2.2 Gases
 - 2.3 Engineering
3. Strategy
4. Capital Allocation Policy
5. Through an ESG Lens
6. Summary
7. Appendix



1

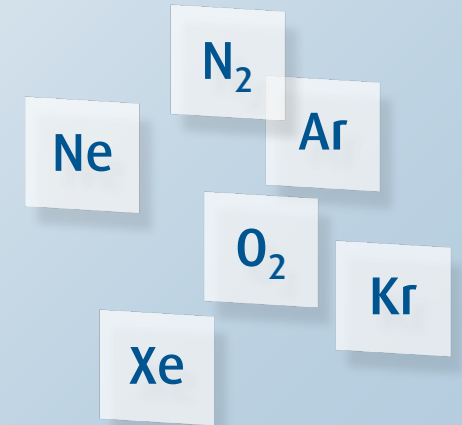
Introduction to Industrial Gases

Industrial Gases – Primary Products



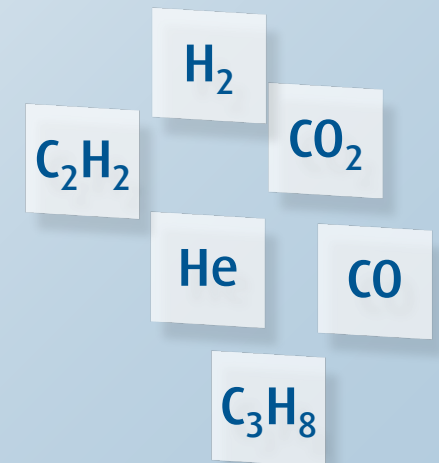
— Atmospheric Gases

- Nitrogen
- Oxygen
- Argon
- Rare gases:
 - Krypton
 - Neon
 - Xenon



— Process Gases

- Hydrogen
- Carbon dioxide
- Helium
- Carbon monoxide
- Acetylene
- Propane



Industrial Gases – Introduction



What Are Industrial Gases?

- Most **common industrial gases** are oxygen, nitrogen, hydrogen, carbon dioxide and argon
- **Atmosphere** consists of 78% nitrogen, 21% oxygen, 1% argon and traces of neon, krypton and xenon



How Are They Produced?

- **Atmospheric Gases:** produced when air is purified, compressed, cooled, distilled and condensed
- **Process Gases:** produced or recovered from natural gas or as by-products of chemical production



Where Are They Used?

Consumer Related

Healthcare
Food & Beverage
Electronics

Industry Related

Chemicals & Energy
Manufacturing
Metals & Mining



Who Are the Global Players?

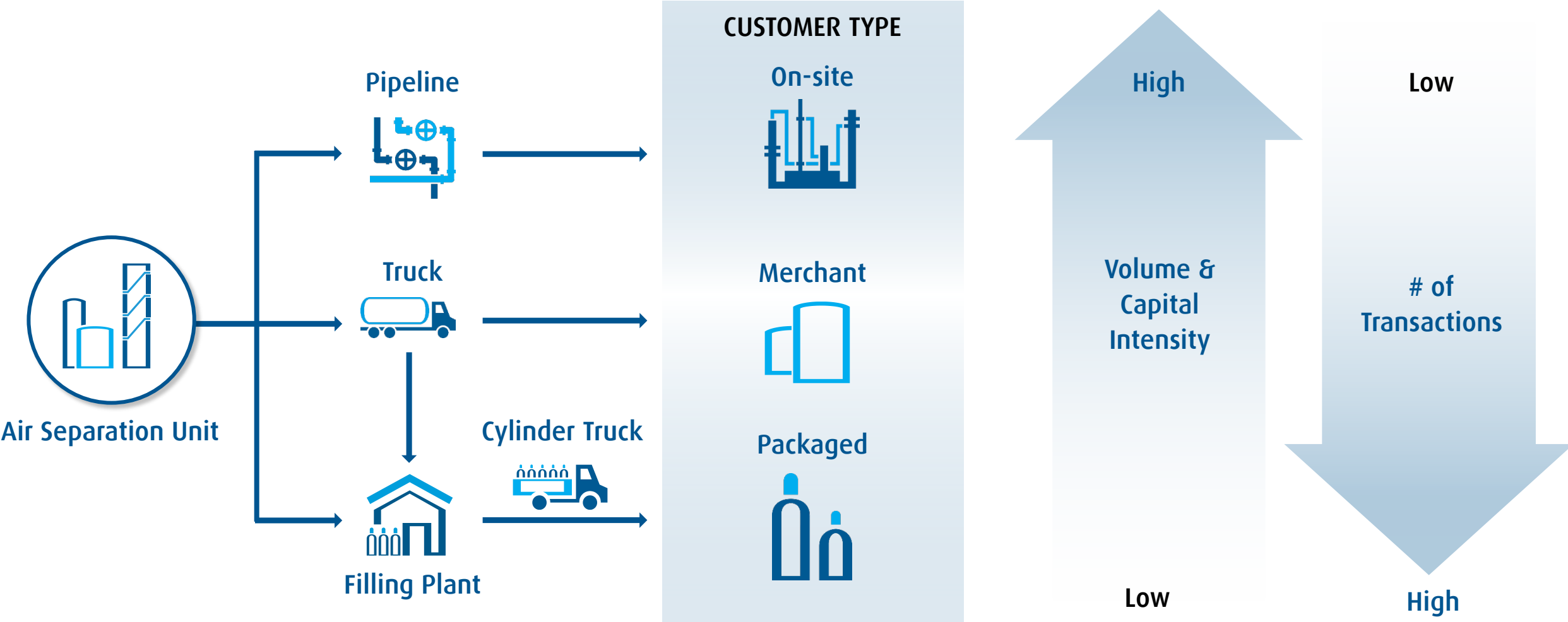


TAIYO NIPPON SAN SO
The Gas Professionals



Industrial Gas Market Size: \$100+ Billion


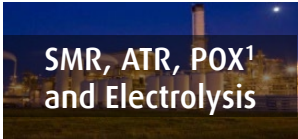





Industrial Gases – Distribution Modes



Industrial Gases – Product Overview



Products Primary Sources Feedstock Distribution Modes

Local	Oxygen			Air + Power			
	Nitrogen						
	Argon						
National	Hydrogen			Hydrocarbons/Power or Crude Hydrogen			
	Carbon Dioxide			Crude Carbon Dioxide			
Global	Helium			Hydrocarbons Fields			
	Rare Gases			Air + Power			

1. SMR: Steam Methane Reformer; ATR: Auto Thermal Reformer; POX: Partial Oxidation.



2.1

Linde Overview

A leader in an
attractive industry
with products &
services critical to
customers

Vision, Mission & Value



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

Making our world more productive.

Our Values

Safety

Integrity

Community

Inclusion

Accountability

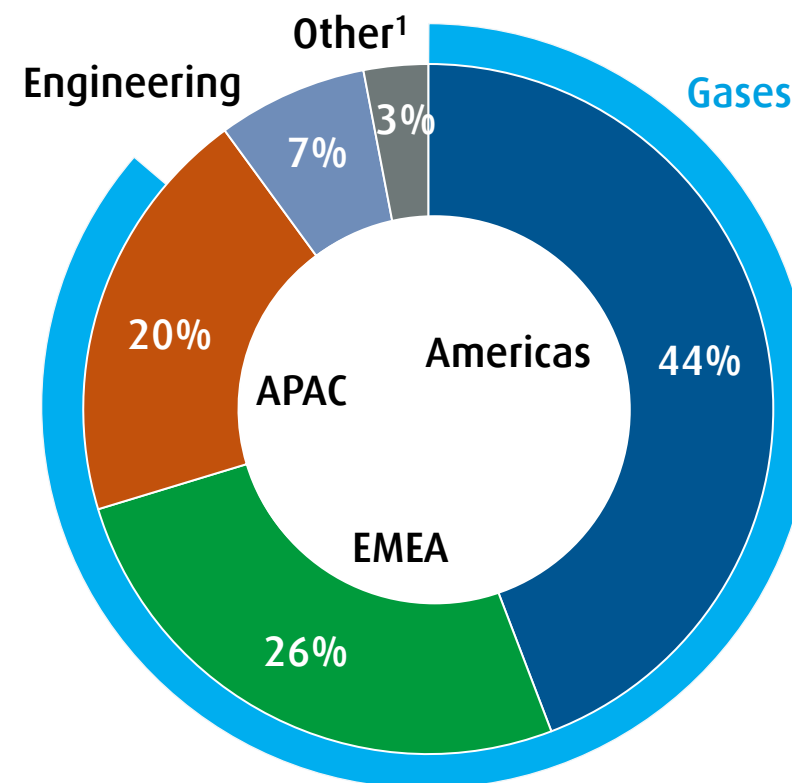
Linde Overview



2023 Key Facts

Net Sales (\$B)	33
EBIT (\$B)	9
EBIT Margin	27.6%
OCF (\$B)	9
ROC	25.4%
FTEs ('000)	66

2023 Revenue by Segment



Global Company With High-quality Results

Source: 2023 Public filing, non-GAAP figures.

1. Includes Linde Advanced Material Technologies, GIST and Global Helium & Rare Gases.



Linde Gases

Resilience and Growth

2.2



Historical Performance



Results 1993 – 2023

CAGR

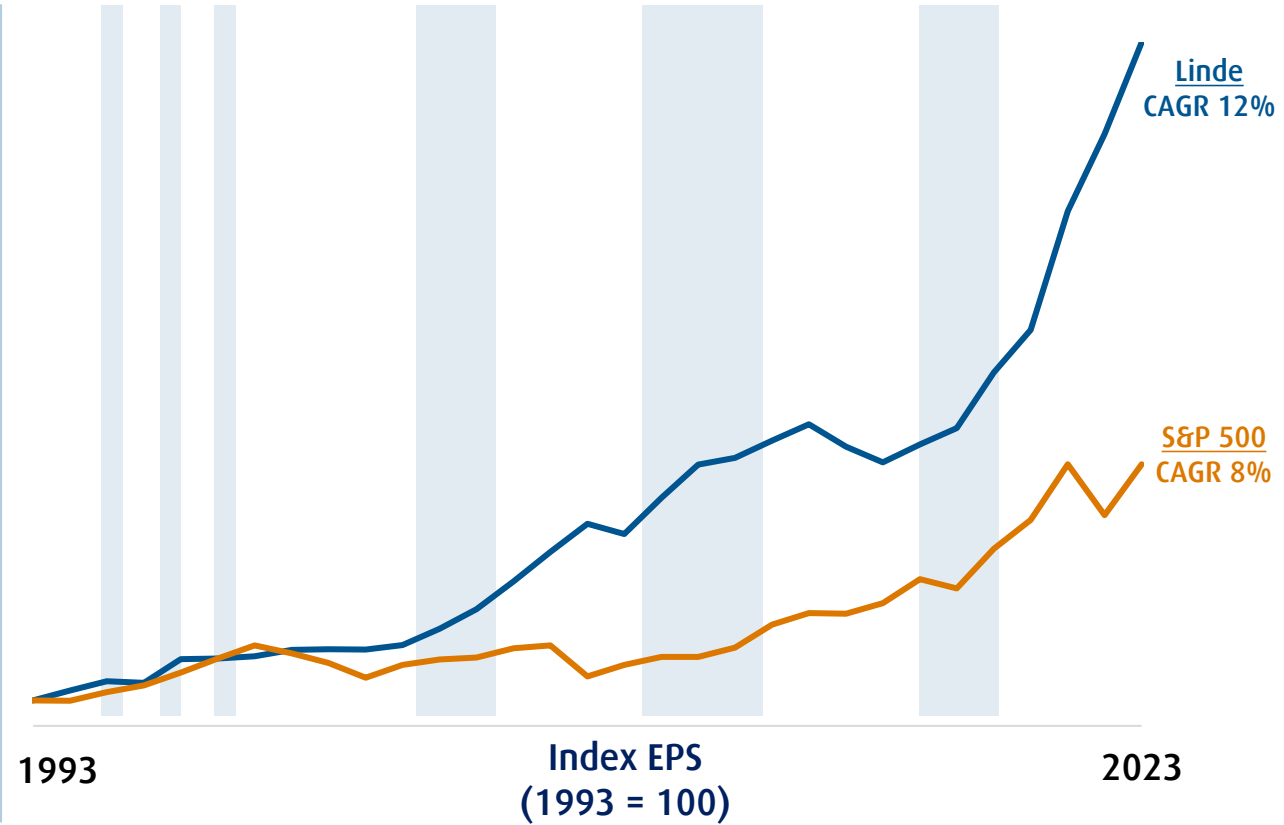
Sales

EPS

Dividend

OCF

<u>Linde¹</u>
9%
12%
13%
11%



Consistently Outperforming Peers and the Market

1. Pre-2019 (merger) data uses predecessor company Praxair, Inc.
2. Competitors include Air Liquide, Air Products & Taiyo Nippon Sanso.

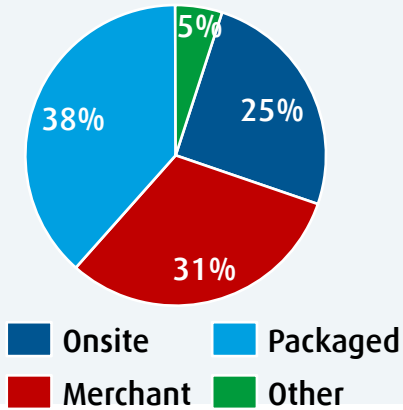
Integrated Supply Model



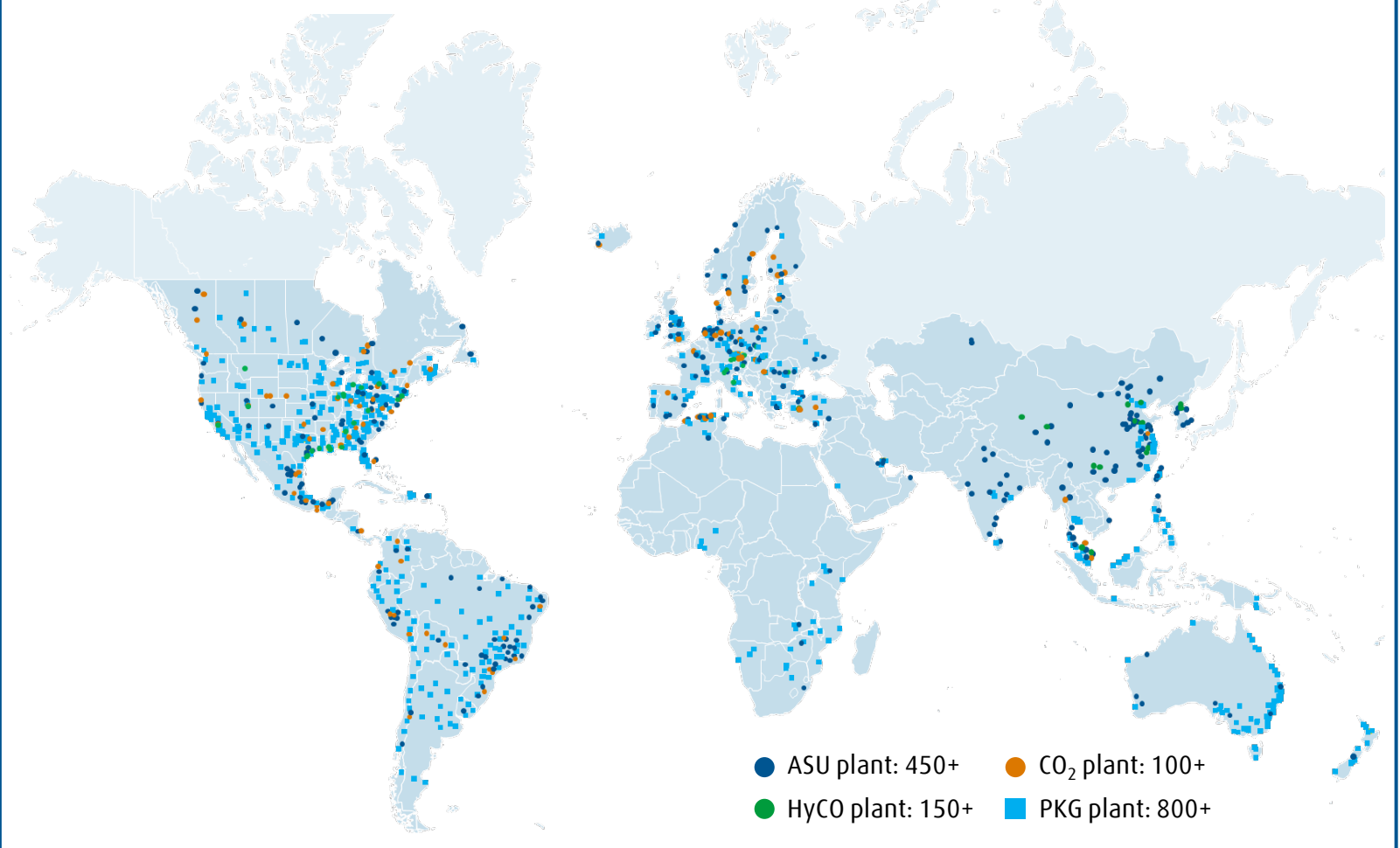
Contracts Types

- On-site: 15 – 20 years**
- Take-or-pay, guaranteed return
 - Cost pass-through
- Merchant: 3 – 7 years**
- Creates network density
 - Contracts & services
 - Scale, efficient production, distribution & low-cost energy
- Packaged: 1 – 3 years**
- Creates network density
 - Bundle offerings & services

Sales by Distribution Mode¹



Linde Worldwide



Network Density Drives Leading Returns

1. Gases only. Source: 2022 public filings. ASU: Air Separation Unit; HyCO: Hydrogen / Hydrogen-Carbon Monoxide plants; PKG: Packaged.

Sales by End Markets



Consumer Related End Markets

More Resilient

Healthcare



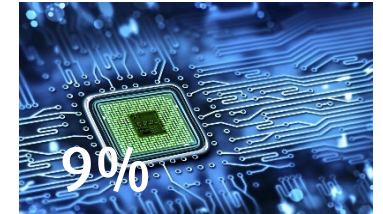
Hospitals
Medical Offices and Clinics
Homecare Customers
Diagnostic Facilities (MRI)

Food & Beverage



Beverage Companies
Food & Frozen Food Producers
Agricultural Produce & Fish
Farmers

Electronics



Semiconductor Fabricators
Solar Panel Manufacturers
Display / LED Manufacturers

Industrial Related End Markets

More Cyclical

Chemicals & Energy



Oil Companies
Chemical Companies
Syngas Users

Manufacturing



Automotive & Aerospace OEMs
Pulp & Paper Producers
Consumer Goods Manufacturers
Battery Manufacturers

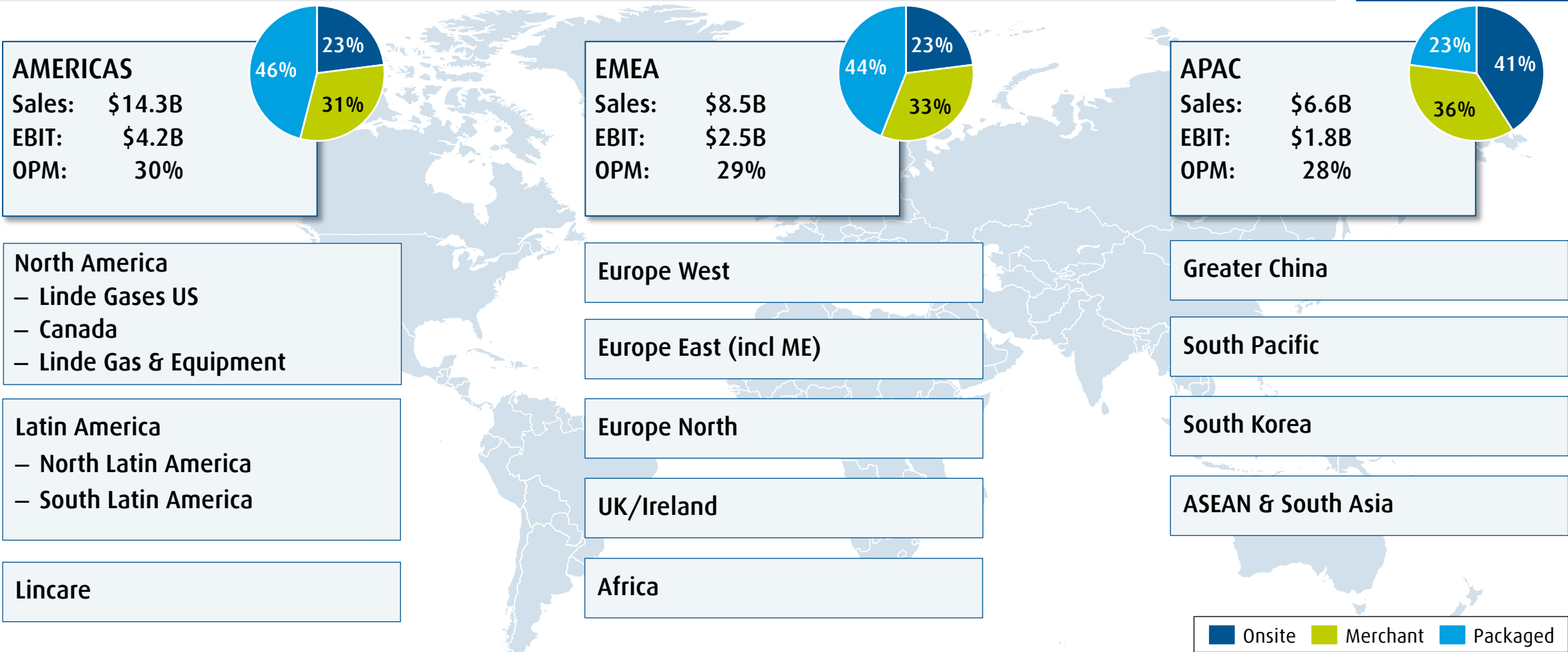
Metals & Mining



Steelmakers
Metal Recovery & Recycling
Companies
Mining Companies

A Well-Balanced Portfolio

Gases Geographic Segments



A Leader Across Segments

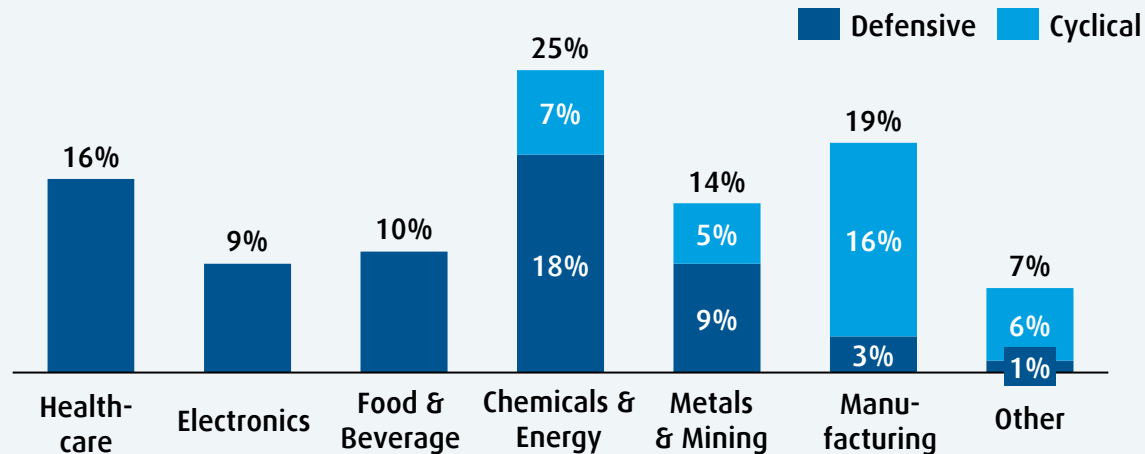
Source: 2023 Public filings, non-GAAP figures.
EBIT: Earnings Before Interest and Taxes, OPM: Operating Profit Margin.

Defensive Business Model...

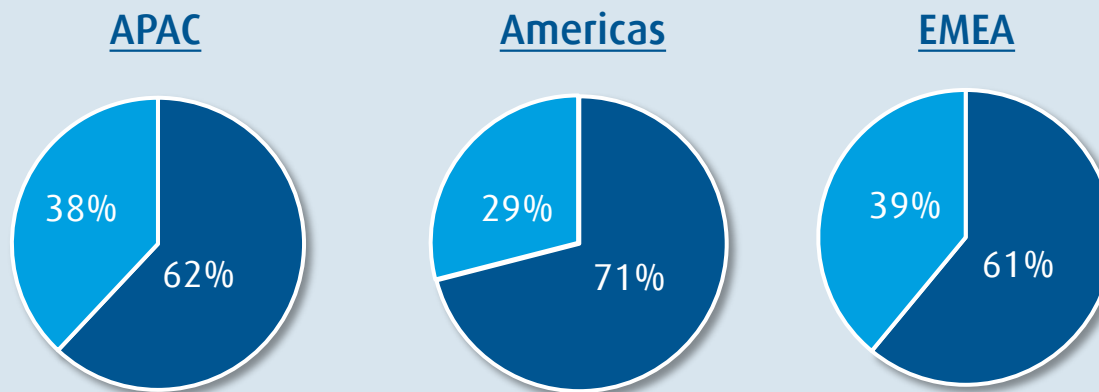
...Provides Significant Downside Protection



By End Market



By Geography



Defensive sales:

- Resilient end-markets and global footprint diversifies risk
- Long-term supply agreements with **high-quality customers** and **fixed fee** elements
- Steady **rental payments** (e.g. tanks, cylinders, equipment)

~66% of Sales¹ are Defensive



Linde Engineering

2.3

World-Class Engineering
capabilities to execute
large projects

Engineering Overview



Business Model

- **Key enabler** for onsite projects (sale of gas)
- T-EPC, **selective** E, E&P, EPC based on risk and profitability
- Full plant **lifecycle services**
- **Components** business

Technology

- **Holistic blue** and **green** hydrogen offerings
- **Best-in-class** air gases technologies
- **Decarbonization** innovations
- Partnering with **customers**

Execution

- **World-class** execution capabilities around the world
- Ability to **incorporate** any (licensed) technology
- **Outstanding** track record
- **Efficient** processes, tools & optimized organization

People

- Acknowledged **experts** in core disciplines
- Highly **skilled, innovative** and **talented** engineers
- **Strong** loyalty, knowhow retention
- **Empowered** leaders

Offering



Air Separation Units



Hydrogen and Syngas



Petrochemicals



Natural Gas

Integrator of Technologies



3

Strategy

Delivers on average
10%+ EPS growth
plus clean energy

Linde Strategy

Underpinned by Safety, Compliance, People and Sustainability



Our Strategy...



... And Its Execution



Deliver 10%+ Annual EPS Growth

Capitalize Growth

High-Quality Project Backlog \$8.5B+¹



SOP Backlog² \$3.6B



- Contractual growth
- Secure cash flow
- Double-digit IRR
- High-quality customers
- Primarily engineering & procurement services

SOG Backlog³ \$4.9B



- Contractual growth
- Secure cash flow
- Double-digit IRR
- High-quality customers
- Increases network density

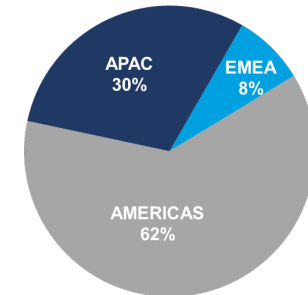
> \$2B in Decarbonization Projects

1. As of December 2023.

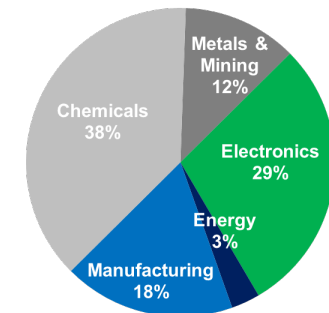
2. 3rd party sale of plant backlog. Represents future sales, secured under a signed agreement.

3. Sale of gas backlog. Represents project investments (CAPEX), supported by a long-term supply agreement.

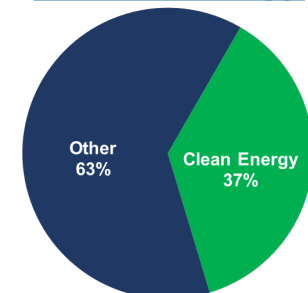
Geography



End Market



Clean Energy

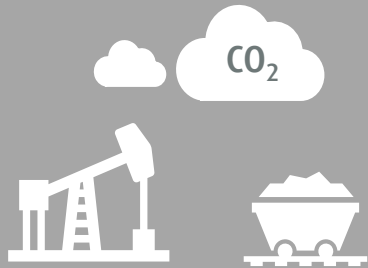


Clean Energy Transition



Today's Energy Market

>80% is Fossil Fuel based
(coal, oil & natural gas)



... with CO₂ footprint

Clean Energy Market

Blue Hydrogen
(incl. ammonia & methanol)



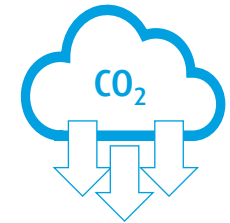
Grey H₂ production with CO₂
capture and permanent storage

Green Hydrogen
(incl. ammonia & methanol)



Water electrolysis powered by
renewable energy with no
CO₂ emission

Carbon Solutions



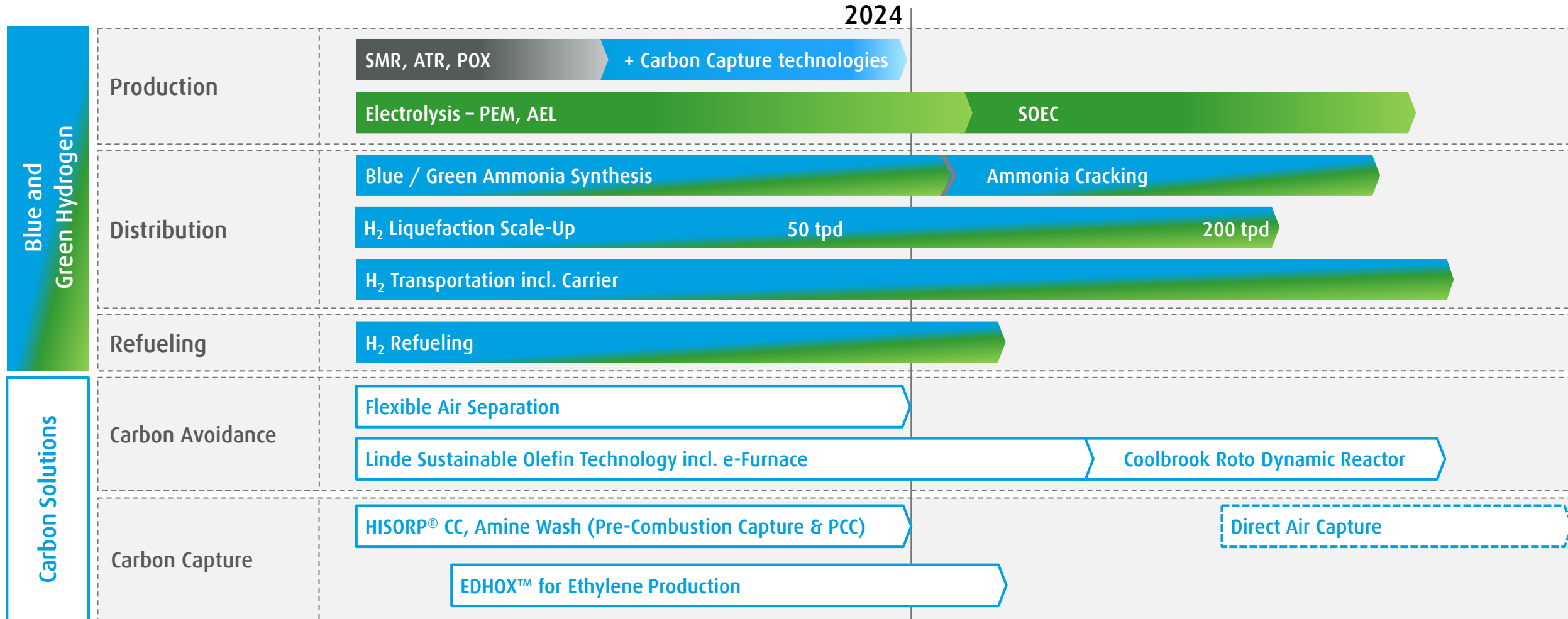
CO₂ capture from industrial
processes with permanent
CO₂ storage

A Growth Opportunity in Linde's Wheelhouse

1. Clean Energy (CE) is associated with minimal or no emissions, especially greenhouse gases like CO₂, which are responsible for climate change. Renewable Energy (i.e. wind, solar, hydro, biomass) is critical to CE, as is Carbon, Capture and Storage (CCS). At Linde we use/limit this term only in relation to hydrogen and CCS. By 2030, the Clean Energy market is expected to be \$130B (based on 38MMT of H₂ demand for new uses).

Clean Energy Technology

Full Portfolio to Support Decarbonization



Leading Technologies Enable Linde & Customers to Avoid or Capture and Store CO₂

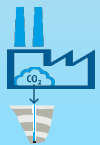
Capabilities Throughout the Value Chain



Production



SMR, ATR, POX...



...with CCS



Electrolysis

Distribution, Storage & Service



Pipelines



Underground storage



Liquefaction



Tanks



Trailers



H₂ refueling stations

Markets

Industry

- Chemicals industry
- Fertilizer
- Steel



Power

- Power generation
- NH₃ co-firing



Mobility

- Aviation
- Buses
- Marine fuel
- Rail
- Trucks



● Grey H₂ ● Blue H₂ ● Green H₂

SMR: Steam Methane Reformer; ATR: Autothermal Reformer; POX: Partial Oxidation; CCS: Carbon Capture and Storage.

Linde's Clean Energy Opportunity



Well Positioned to Invest >\$50B Globally



Strategy



Offering



Investment
in Assets



Decarbonize Linde

- Decarbonize current Linde assets e.g., SMRs, ATRs, POX
- Consistent with sustainability goals: 35% reduction by 2035, Net Zero by 2050
- Blue hydrogen
- Carbon capture & transportation



Decarbonize Customer

- Decarbonize customer processes e.g., Petrochemicals, Refining, Steel, Power Generation
- Blue & green H₂, O₂, H₂ storage, CO₂ capture & transportation
- ASUs, ATRs, electrolyzers, carbon capture & transportation, caverns



New Markets

- Enable new markets e.g., clean ammonia, sustainable fuels, mobility, carbon management
- Blue/green H₂, N₂, O₂, H₂ storage, CO₂ capture & transportation
- ASUs, ATRs, electrolyzers, H₂ liquefiers, carbon capture & transportation, caverns, HRS

Investment Opportunity Over the Next Decade



Capital Allocation Policy

4

Good stewards of
capital – no surprises

Capital Allocation Policy



Mandate

Maintain A / A2 Credit Rating
Annually increase dividend

Priority

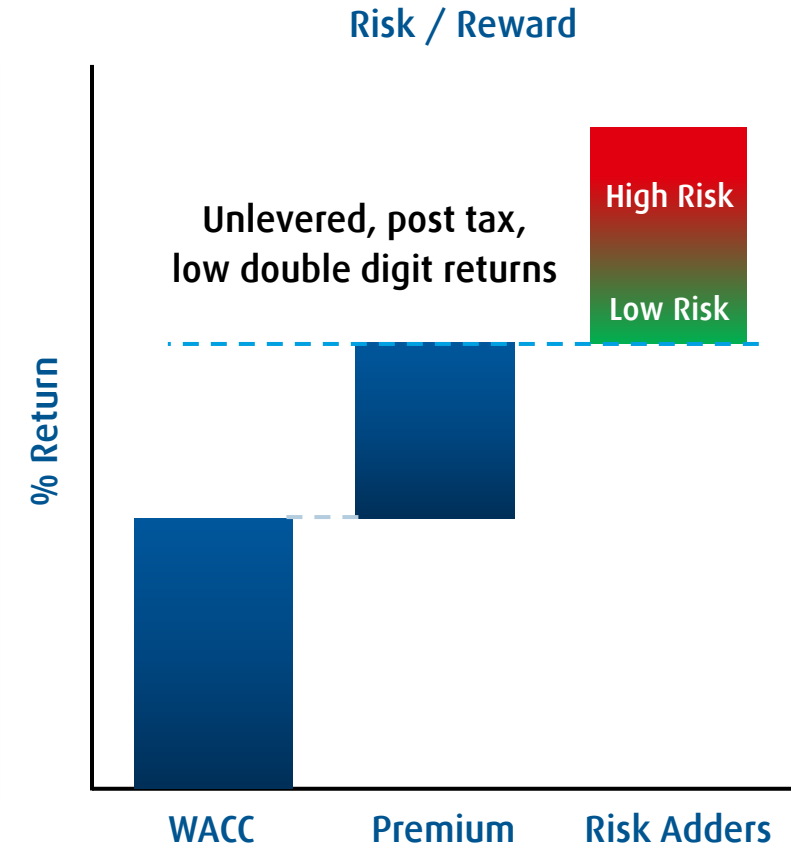
Invest in the Business

Surplus Cash

Share Buybacks

Key Drivers

- Double digit returns
- Reputable customers
- Competitive customer assets
- Strong terms and conditions
- Core geographies



Disciplined Investment Approach



5

Through an ESG Lens

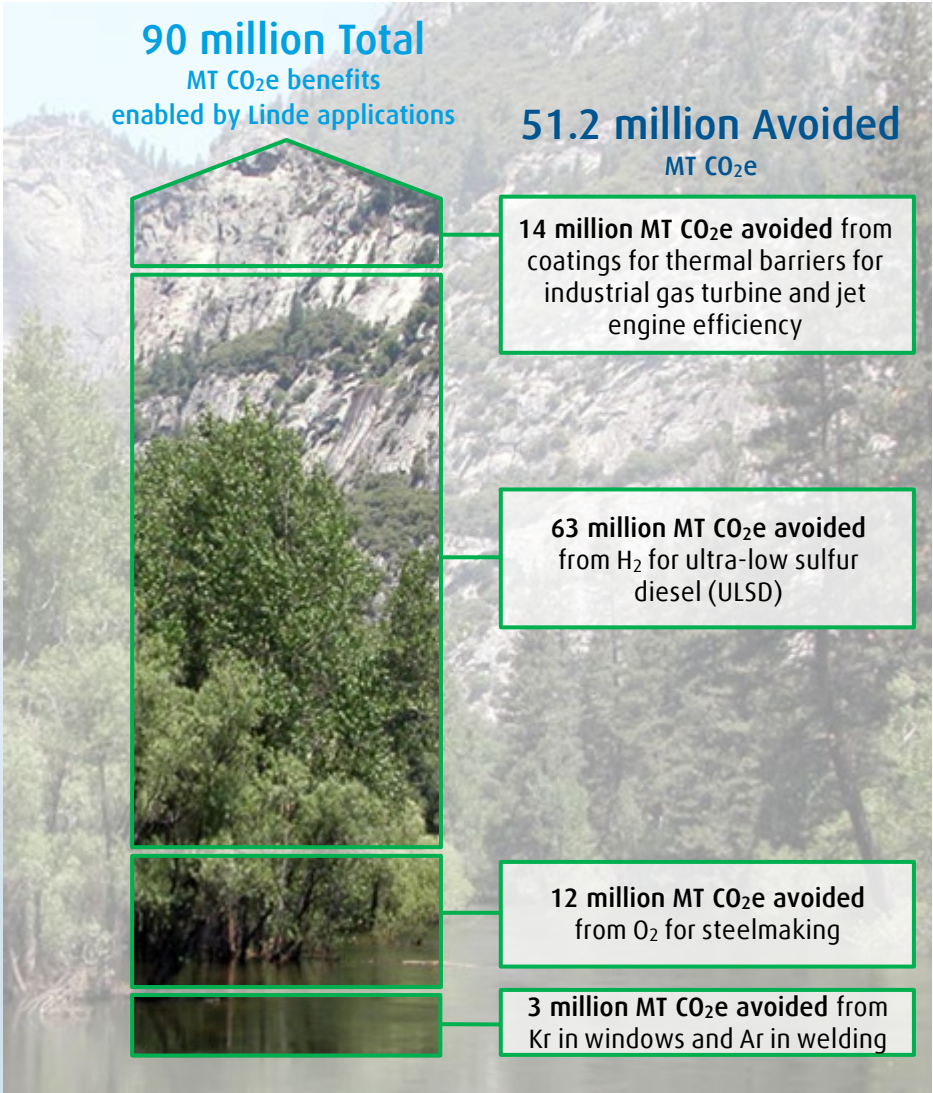
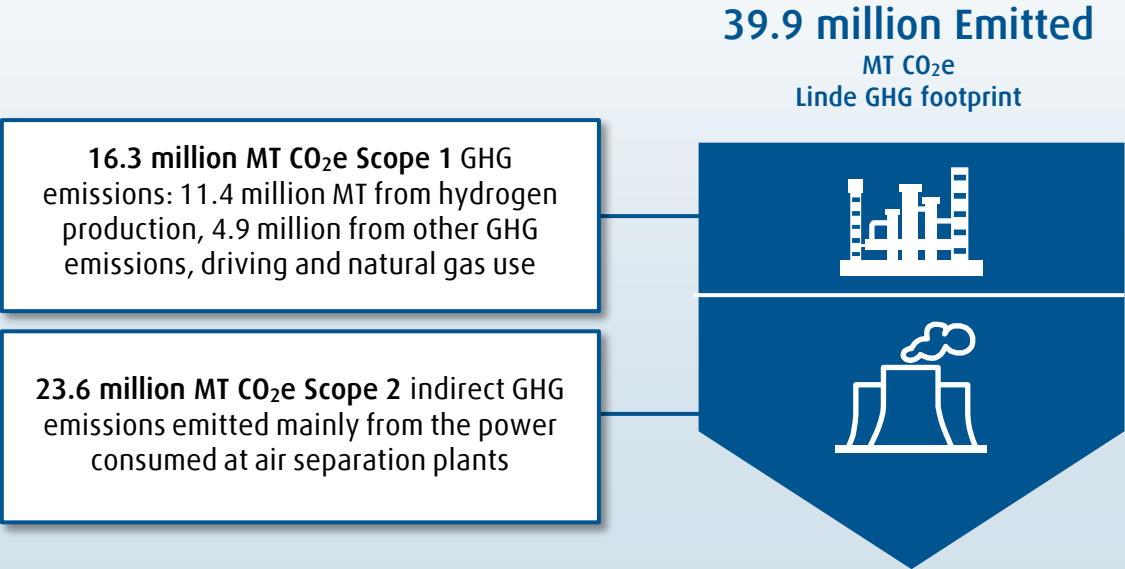
We help our
customers avoid
more than 2x our
own GHG emissions





~2.3X

Linde Applications Enable More Than
2x Carbon Productivity



Values are based on 2022 reported and consolidated results from Linde plc subsidiaries following Linde plc reporting standards.
CO₂e = CO₂ equivalents.

Environmental Road to Climate Neutrality*



2028

35% Reduction of GHG Intensity¹

Status: Ahead of Goal

Achievements include:

- Realized steady GHG intensity reduction since 2018
- Increased active procurement of renewable and low carbon energy
- Commenced discussions for several “blue and green” hydrogen projects

2035

35% Reduction of Absolute GHG Emissions

Status: Reduction Underway

Activities include:

- Developing several CCS² projects
- Investigating renewable feedstocks
- Achieved reduction toward goal in first year

2035 goal approved by:



2050

Climate Neutral³

Status: Roadmap in Place

Activities include:

- Deploy widespread use of CCS and renewable feedstocks
- Transition fleet to zero emissions
- Target sourcing of ~100% renewable / low-carbon power
- Address remainder through negative emissions projects

* Aligned with the Paris Accords. Targets relate to all of Linde’s Scope 1 and Scope 2 emissions.

1. Greenhouse gas (GHG) emissions / Adj. EBITDA.

2. Carbon capture and sequestration.

3. Requires strong policy and regulatory support.

Sustainable Development

Making Our World More Productive, Sustainably



Recognitions & Awards

Dow Jones Sustainability World Index

- Included in DJSI World for 21 consecutive years

S&P Global Corporate Sustainability Assessment

- 100th Percentile in Chemicals; #1 in Industrial Gases

CDP

- Linde named to 'A-list' for both climate change and water security

S&P Sustainability Yearbook 2023



Science-Based Target Approval

- Linde's 2035 climate change goal validated by SBTi

Terra Carta Seal: Sustainable Markets Initiative

FTSE4Good Index

- Constituent for 8th consecutive year

World's Most Ethical Companies

- Ethisphere Institute

Bloomberg 2023 Gender-Equality Index

Achievements¹



Diverted more than **200 million** pounds of waste from landfills



On track to achieve **30%** representation of women globally by 2030



Saved approximately **400 million** gallons of water through sustainability initiatives



Helped customers avoid approximately **90 million** metric tonnes of equivalent carbon dioxide



Provided philanthropic support to more than **1,000** organizations globally



Benefited **300,000** people through employee community engagement projects



Sourced more than **1/3** of electricity from low-carbon and renewable sources



Best-in-class safety performance

1. Values are based on 2022 Linde reported and consolidated results.

Social Responsibility



29% of 2022 Charitable giving funded Diversity-related initiatives



Awarded **>\$1.75 million** in scholarships and university programs in 2022



12 Employee Resource Groups with **>1,000** members



60,000 Total volunteer hours as part of 2022 community engagement efforts



First **all-women** operated packaged gases filling plant in India



Collaboration with external organizations to advance diversity



759 Sites participated in Linde's Zero Waste Program in 2022



30% Reduction in Lost Workday Cases from 2018 to 2021

Values are based on 2022 Linde reported and consolidated results.



- **Annual Election** of Directors
- **Separate Chairman and CEO** roles & a lead Independent Director
- **Board diversity:**
 - Board is **40% diverse** by gender & ethnicity
 - Appropriate **mix of newer & longer-tenured** Directors
- Significant **stock ownership guidelines** for Directors and Executives

- **Clawback policy & prohibition on hedging or pledging** Linde stock
- Dedicated **Board committees** focused on:
 - **Environment** – Sustainability Committee
 - **Social** – Human Capital Committee
 - **Governance** – Nomination & Governance Committee, and Audit Committee



Summary

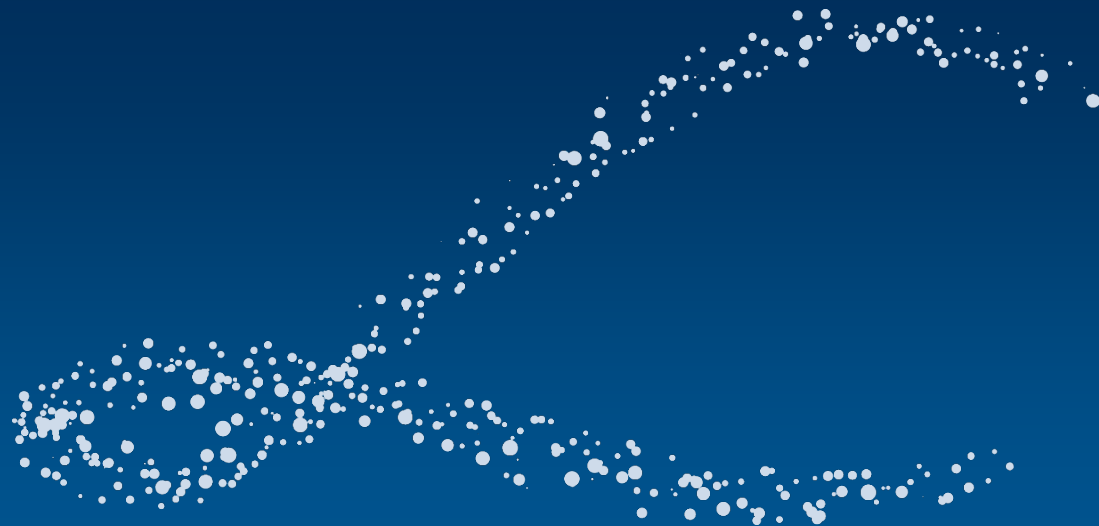
The best performing
global industrial gases
and engineering
company

Linde Because...



- Leader in an attractive industry with products & services critical to customers
- Unrivalled network density across all supply modes
- Enabling energy transition, ~\$50B investment opportunity pipeline globally
- World-class capabilities with proven track record of execution
- Providing customers with solutions that avoid >2X our GHG emissions
- Best-in-class financial performance with unwavering capital discipline
- Exceptional team with business owner mentality

... Focused on Consistently Creating Value for Stakeholders

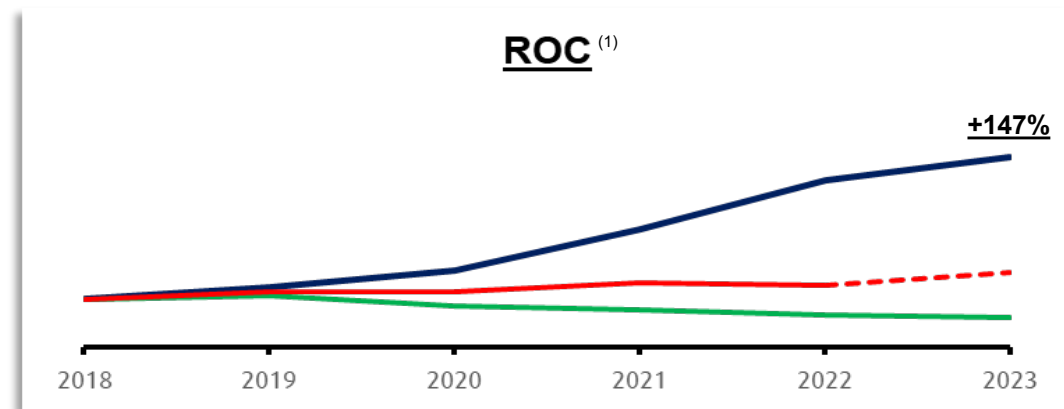
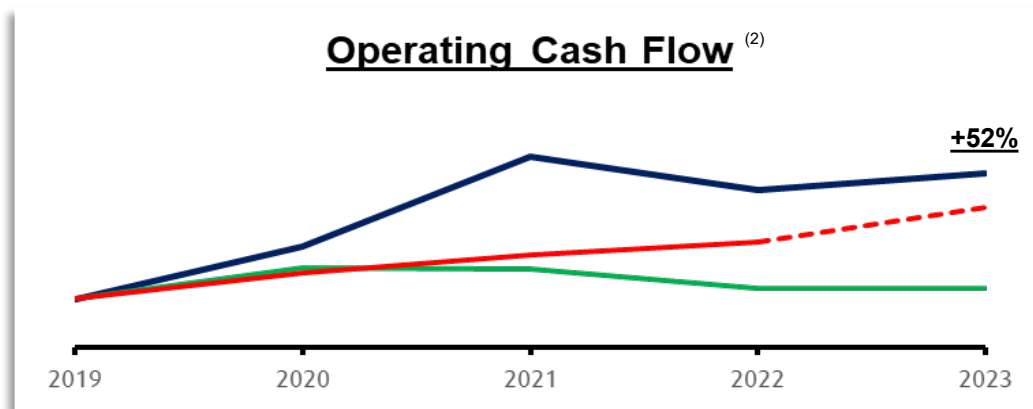
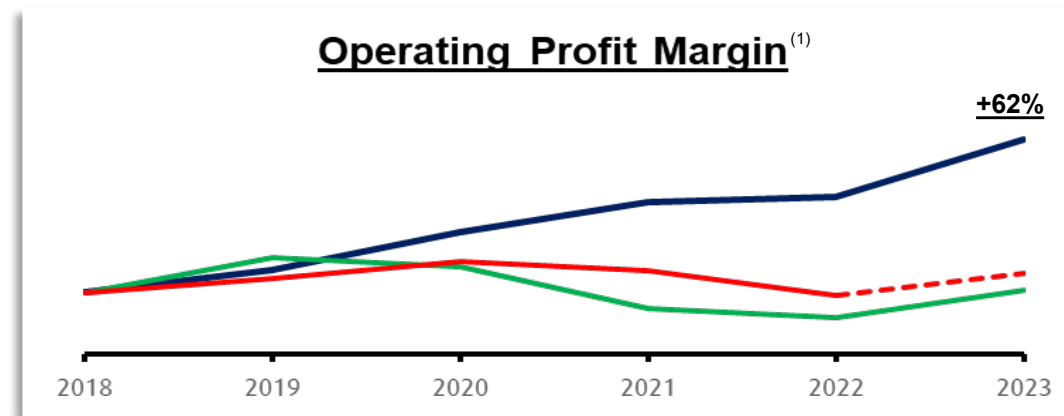
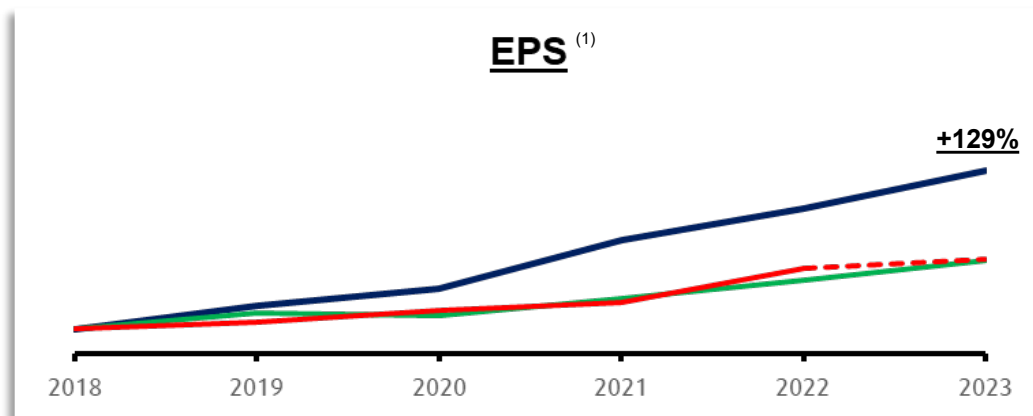


Appendix

Making our world more productive



5-Year Financial Performance



■ Linde ■ Competitor 1 ■ Competitor 2

Industry Leading Results Where It Matters Most

Source: Competitor filings and Factset. ROC calculated on a similar basis to Linde. (1) Non-GAAP measures – see appendix or prior year presentations for reconciliations. (2) Operating cash flow starts 2019 due to no 2018 proforma for Linde plc. Competitor 1 pending 2023 results. Used consensus estimates for 2023 (dotted line)

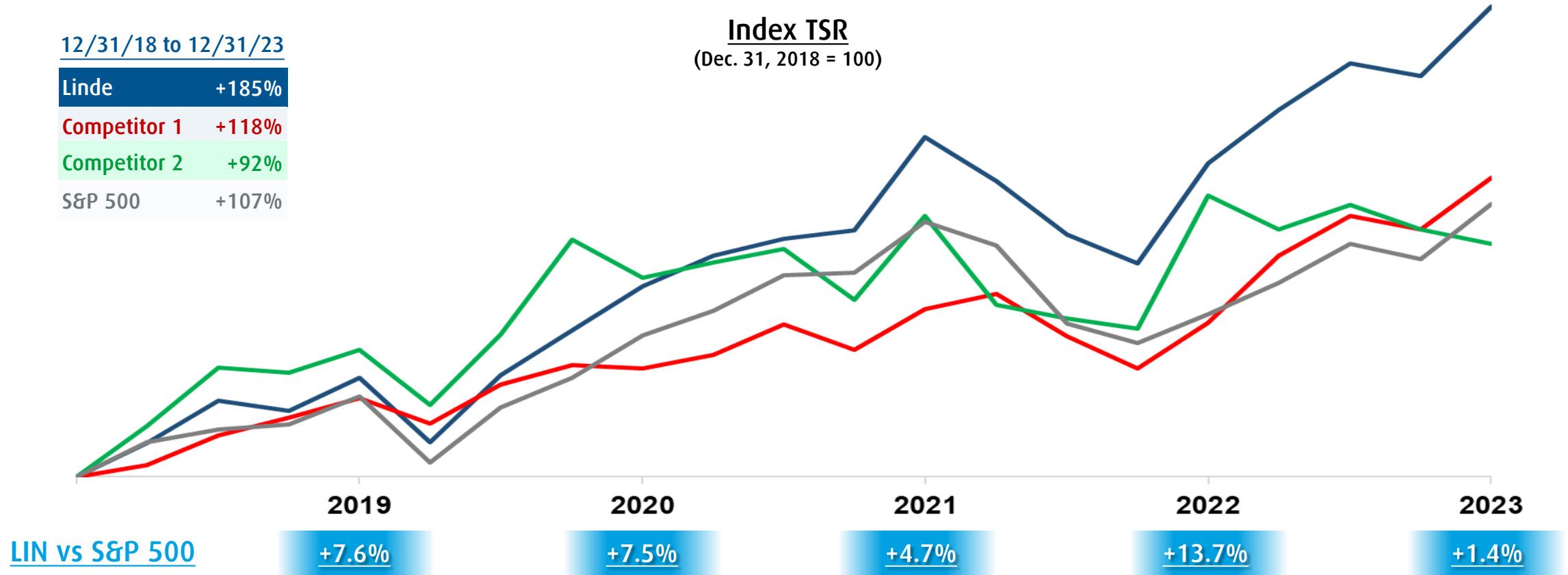
5-Year Total Shareholder Return⁽¹⁾ (TSR)



12/31/18 to 12/31/23

Linde	+185%
Competitor 1	+118%
Competitor 2	+92%
S&P 500	+107%

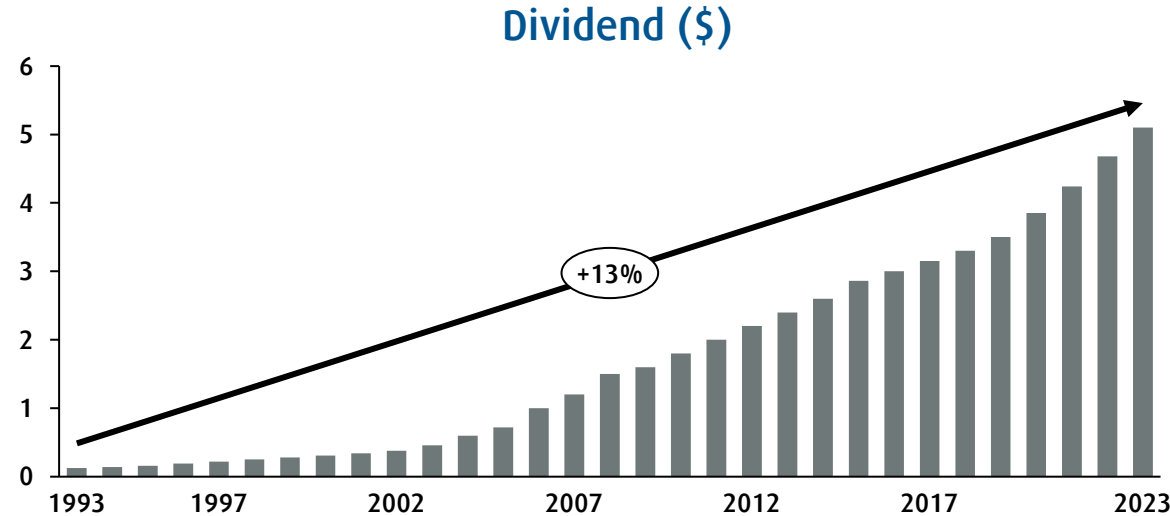
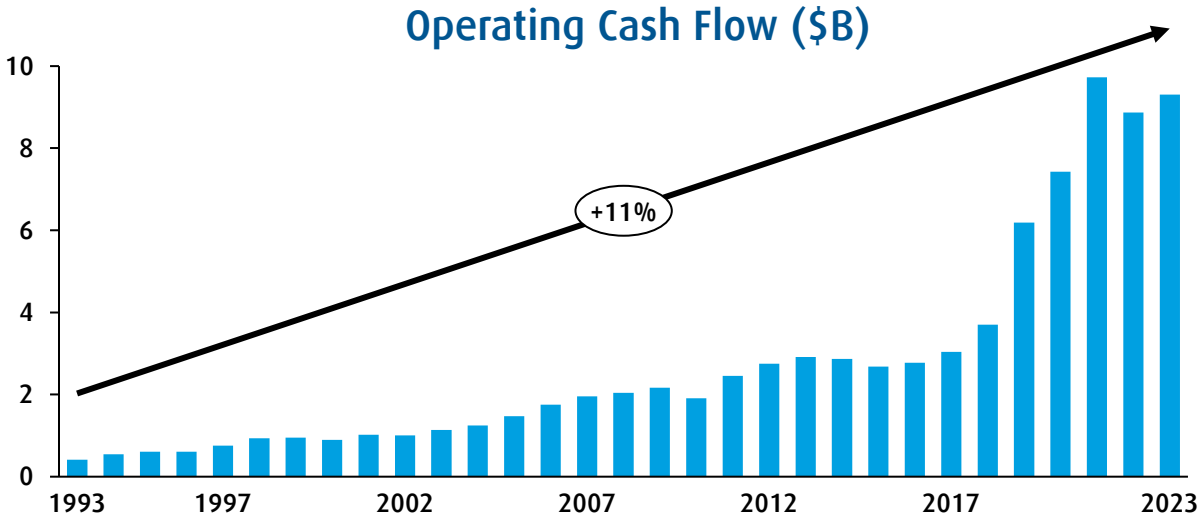
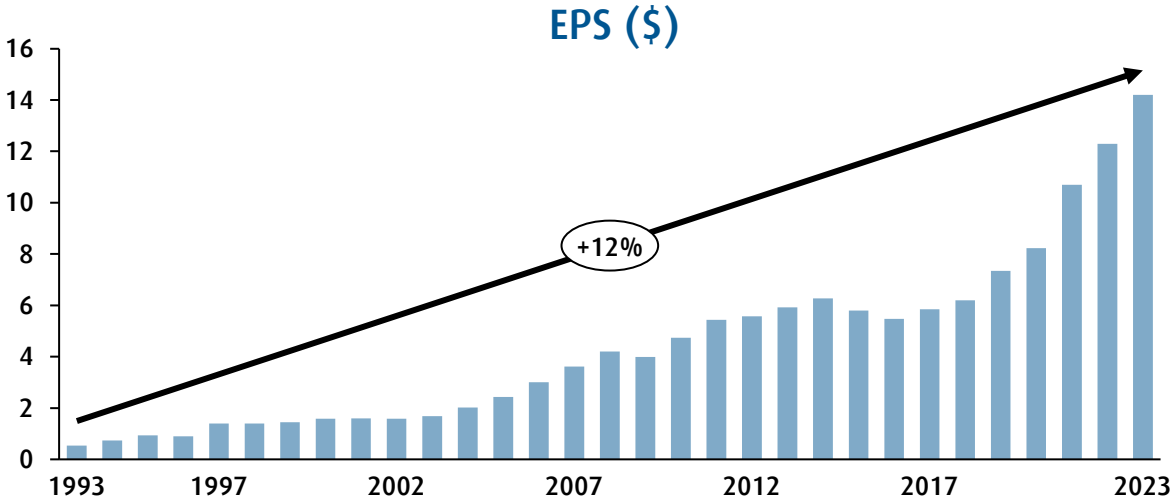
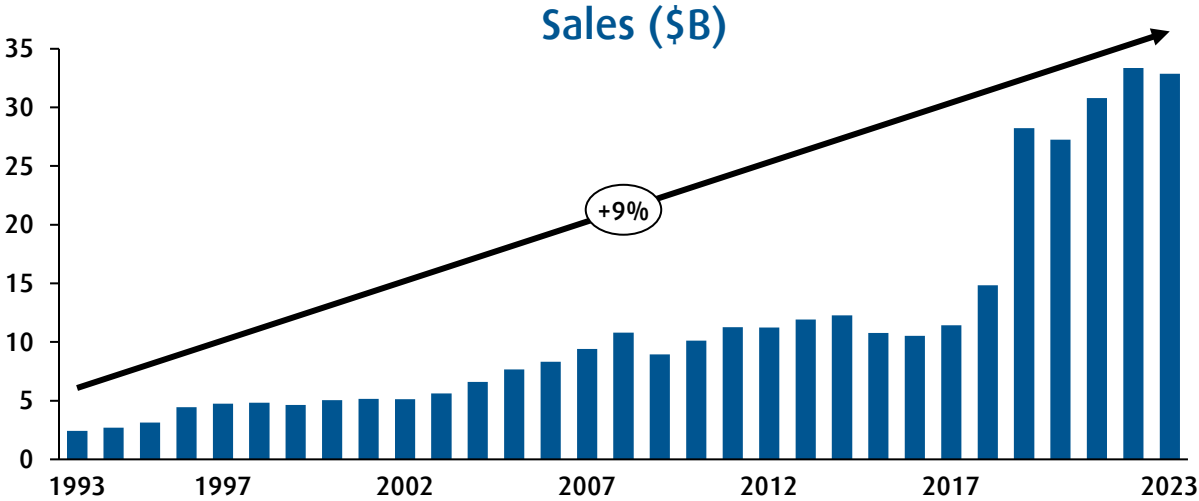
Index TSR
(Dec. 31, 2018 = 100)



Linde, one of only 12 members in S&P 500 (and only in sector) with positive alpha 5 consecutive years

A Company for All Seasons

Historical Performance*



*Information prior to merger (2019) is considered of Praxair.

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Thank you