



EESI

Environmental and
Energy Study Institute

Materials will be available at:
www.eesi.org/102225industry

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How Can We Cut Industrial Emissions?

Wednesday, October 22, 2025

About EESI



Nonpartisan Educational Resources for Policymakers

A bipartisan Congressional caucus founded EESI in 1984 to provide nonpartisan information on environmental, energy, and climate policies



Direct Assistance for Equitable and Inclusive Financing Program

In addition to a full portfolio of federal policy work, EESI provides direct assistance to utilities to develop “on-bill financing” programs



Commitment to Diversity, Equity, Inclusion, and Justice

We recognize that systemic barriers impede fair environmental, energy, and climate policies and limit the full participation of Black, Indigenous, people of color, and legacy and frontline communities in decision-making



Sustainable Solutions

Our mission is to advance science-based solutions for climate change, energy, and environmental challenges in order to achieve our vision of a sustainable, resilient, and equitable world

Polymaker Education



Briefings and Webcasts

Live, in-person and online public briefings, archived recordings, and written summaries



Climate Change Solutions

Bi-weekly newsletter with everything policymakers and concerned citizens need to know, including a legislation and hearings tracker



Fact Sheets and Issue Briefs

Timely, objective coverage of environmental, clean energy, and climate change topics



Social Media (@EESlonline)

Active engagement on Bluesky, Facebook, LinkedIn, X, and YouTube



Upcoming Briefings



4

How Can We Cut Industrial Emissions?
Wednesday, October 22, 9:00-10:00 AM EDT

Rapid Readout: The Future of FEMA
Thursday, October 30, 12:00-12:30 PM EDT

What Congress Needs to Know About COP30
November 4 – 6, 12:00-1:00 PM EST

Sign up for our *Climate Change Solutions* newsletter here: eesi.org/signup
Briefing RSVP here: eesi.org/2025climatecamps



EESI
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What did you think of the briefing?

Please take 2 minutes to let us know at:
www.eesi.org/survey

Materials will be available at:
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Wednesday, October 22, 2025

How Can We Cut Industrial Emissions?

Modernizing America's Building Materials Industry



WORLD
RESOURCES
INSTITUTE

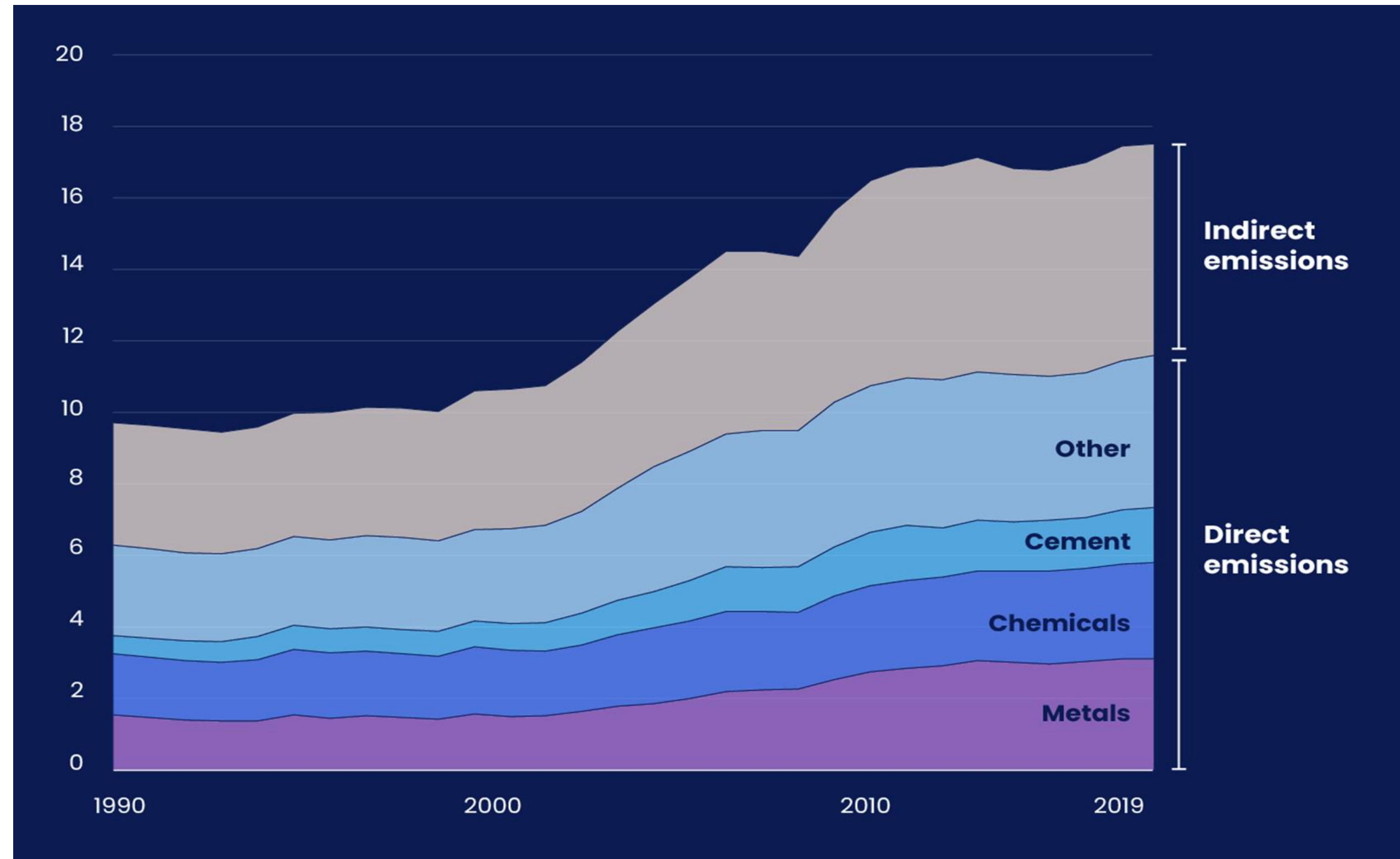
October 22, 2025

Angela Anderson, Director, Industrial Innovation

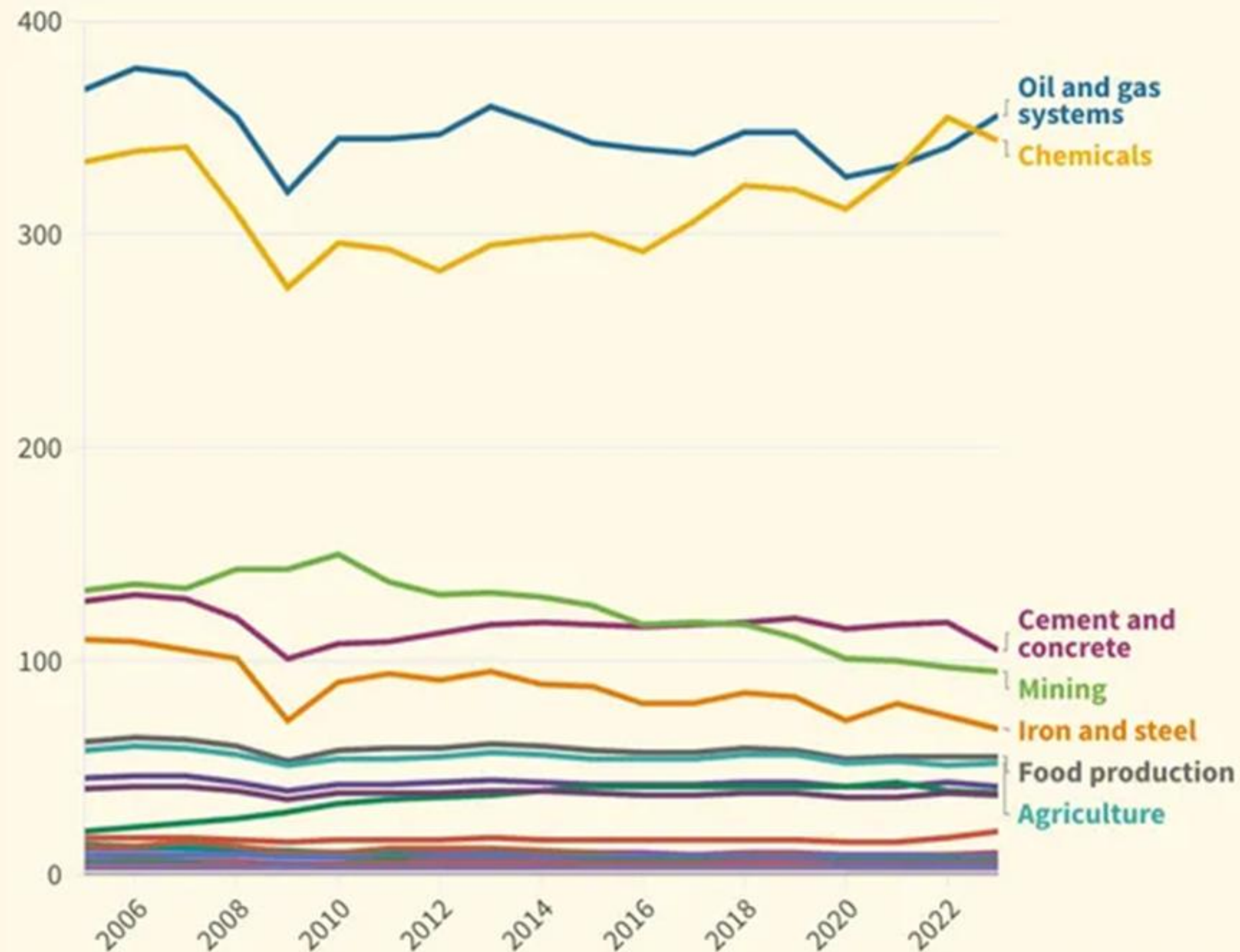
Global Emissions from Industry

Industrial activities, including mining, manufacturing, construction and waste processing, accounted for **21% of direct global emissions** in 2019.

When indirect emissions from power and heat generation are included, the number **risks to 34%**.



Direct industrial emissions by subsector in the U.S.



CANARY MEDIA | CHART OF THE WEEK

WORLD RESOURCES INSTITUTE

Cleaner Industry is Feasible, Beneficial & Globally Competitive



A large, modern conference hall with a curved wooden slat ceiling and tiered seating. A speaker is at a podium on the left, and a large audience is seated in the foreground. A large abstract mural is on the wall behind the speaker.

Momentum Gathers Towards COP30 as Close to 100 Countries Signal New Climate Targets

25 September 2025

A dark green world map is visible in the background of the slide, showing the continents of North America, South America, Europe, Africa, and Asia.

Four Important Things to know About Industrial Emissions

1

Global Trends Are Driving Decarbonization

2

Technologies Needed are Within Reach

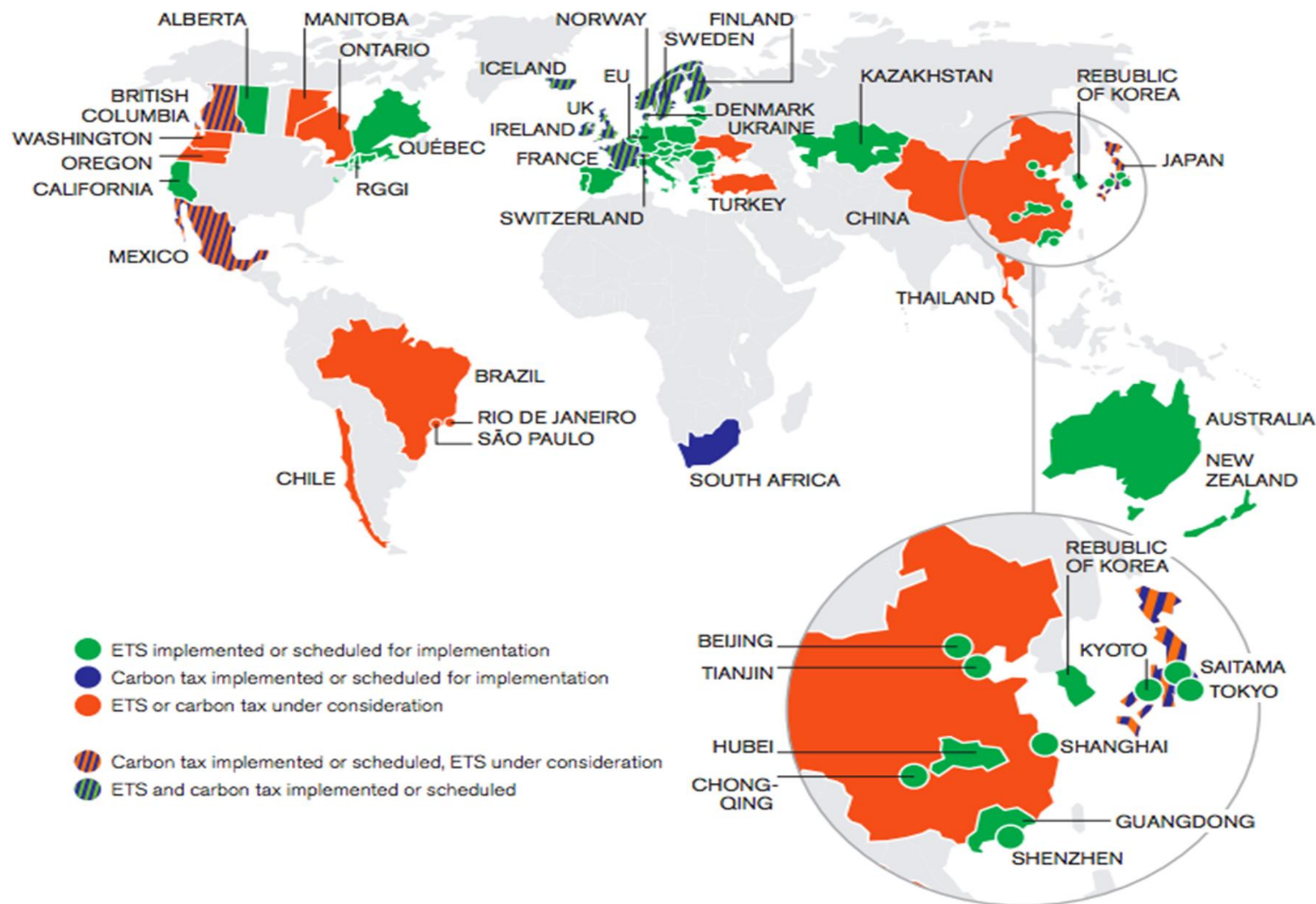
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Public Policy Can Accelerate Progress

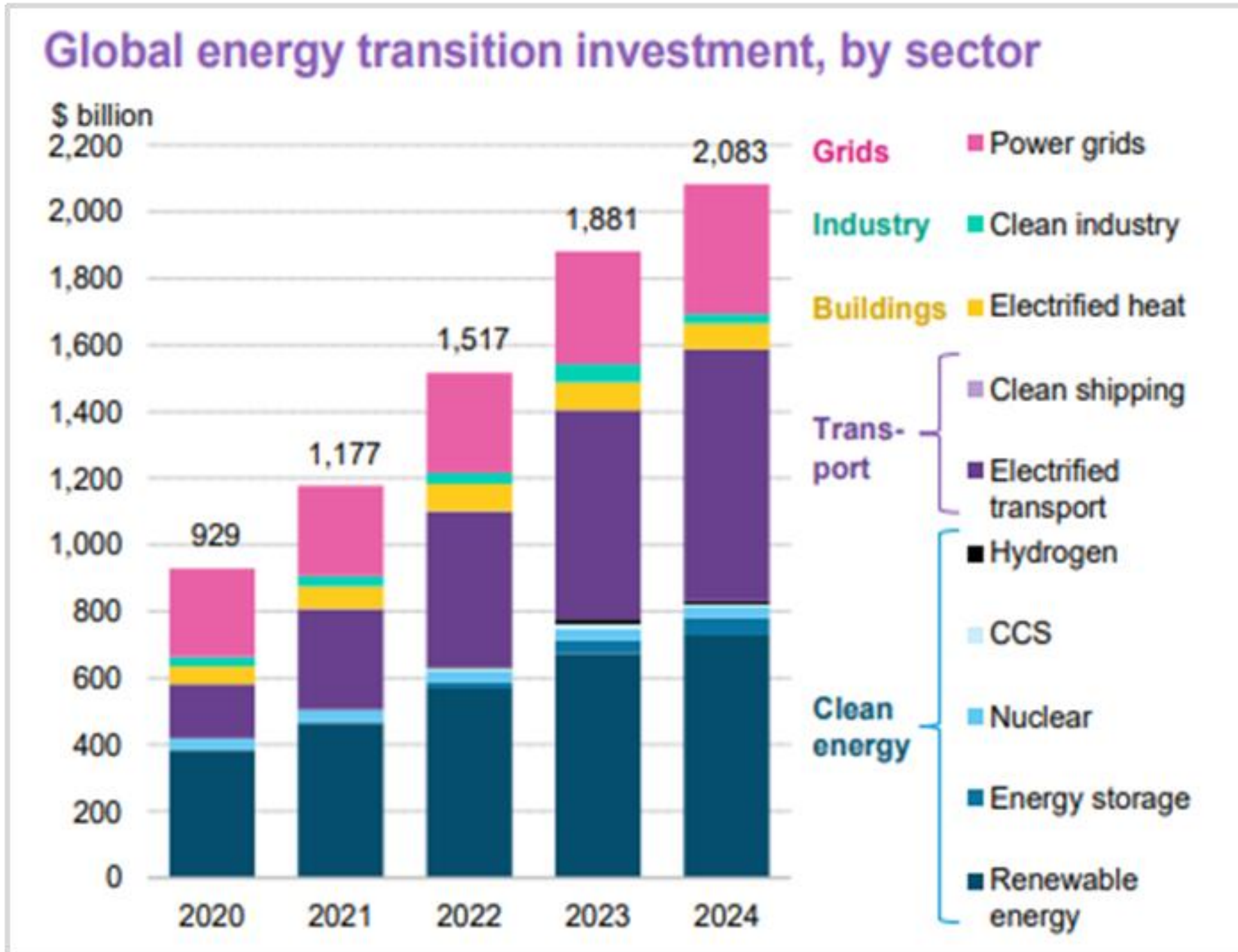
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Cleaner Industry Benefits People, Nature and Climate

Figure 1 Summary map of existing, emerging, and potential regional, national and sub-national carbon pricing instruments (ETS and tax)



Global Trends Driving Decarbonization



Global Investment Trends

Technologies are Within Reach

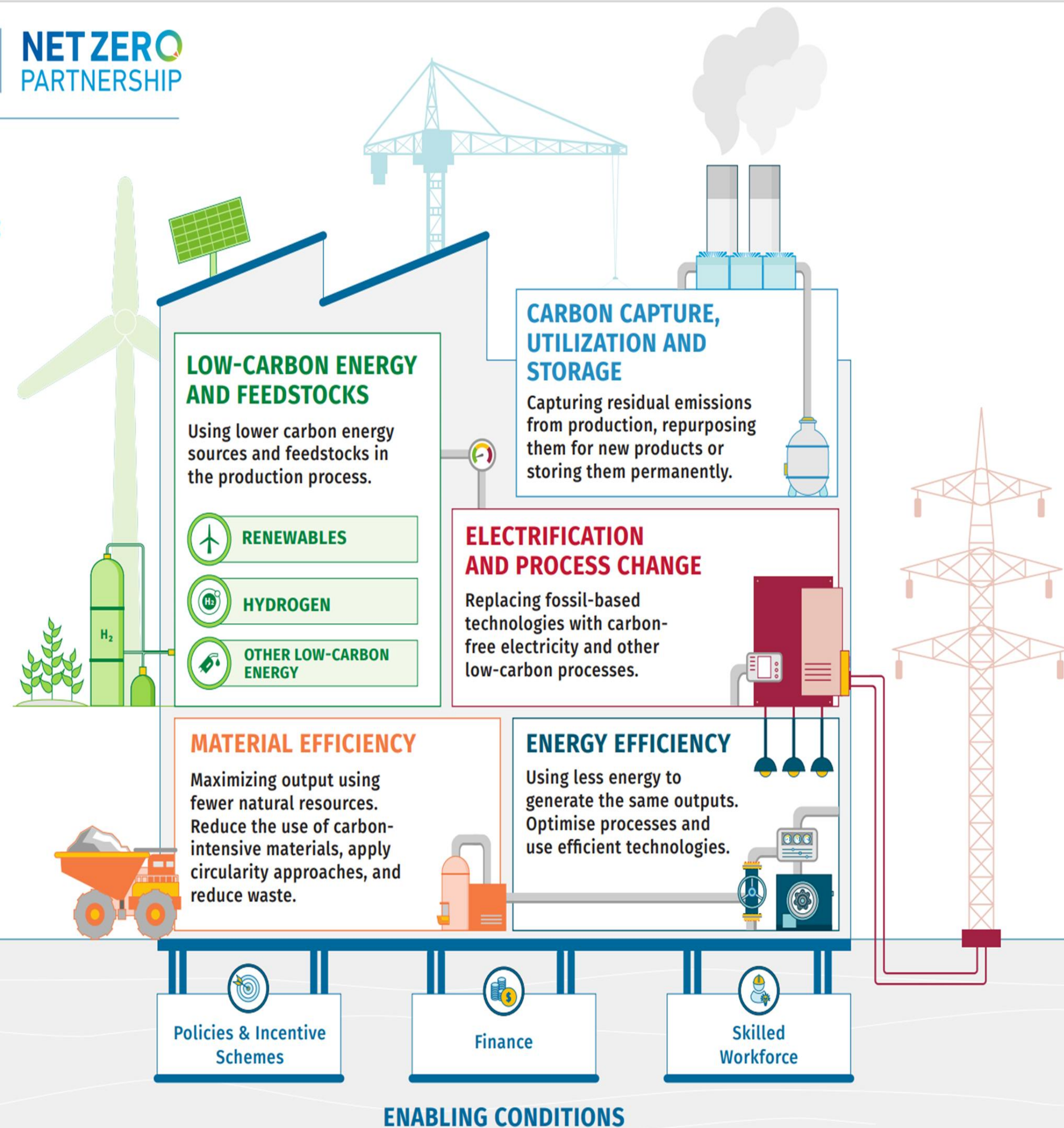


UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

NET ZERO
PARTNERSHIP

INDUSTRIAL DECARBONIZATION: 5 BUILDING BLOCKS

These five building blocks represent essential levers for industry to achieve net-zero. They should be pursued in ways that reflect each country's industrial landscape, workforce capacity and policy context, while also leveraging opportunities for optimisation through digitalisation and AI.



Supported by:



Footer
on the basis of a decision
by the German Bundestag





Public Policy Can Accelerate Progress

People, Nature & Climate Benefits

Tall Grass CO₂ Pipeline

- Landowner Protections
- Public Safety
- Community Investment



Thank You.

CONTACT US



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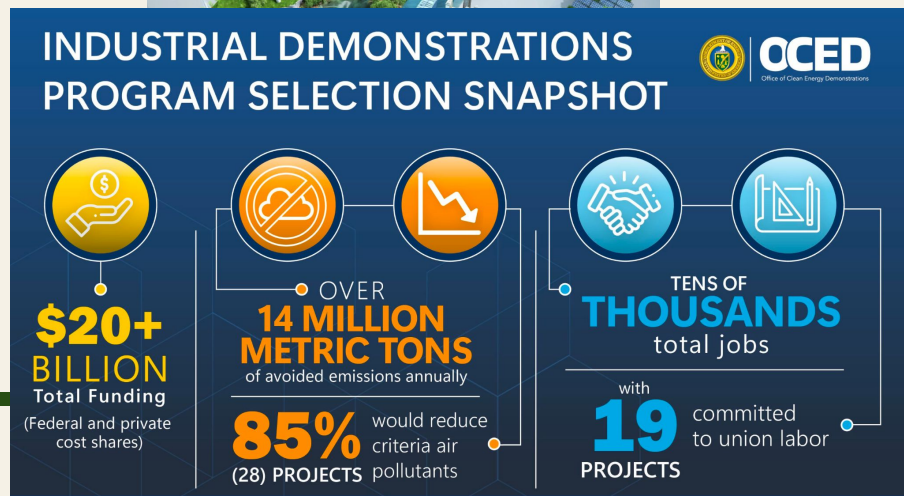
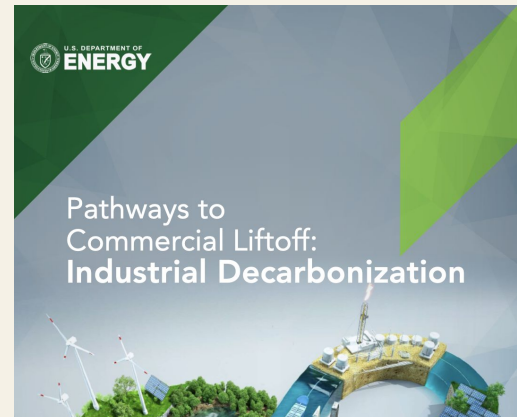
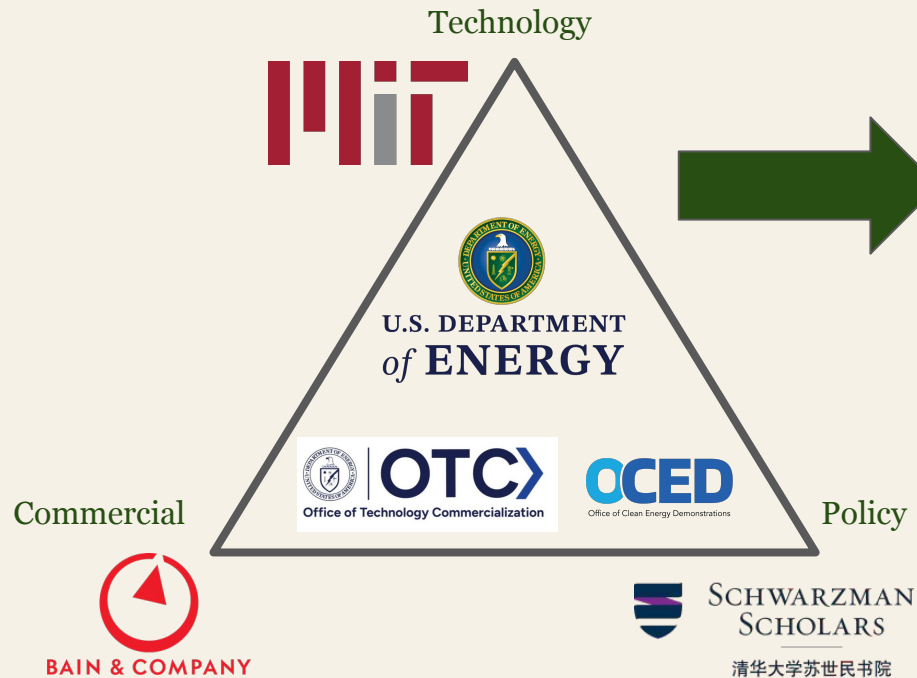
EESI: State of the Market in Industrial Emissions

Kate Scott Pavao

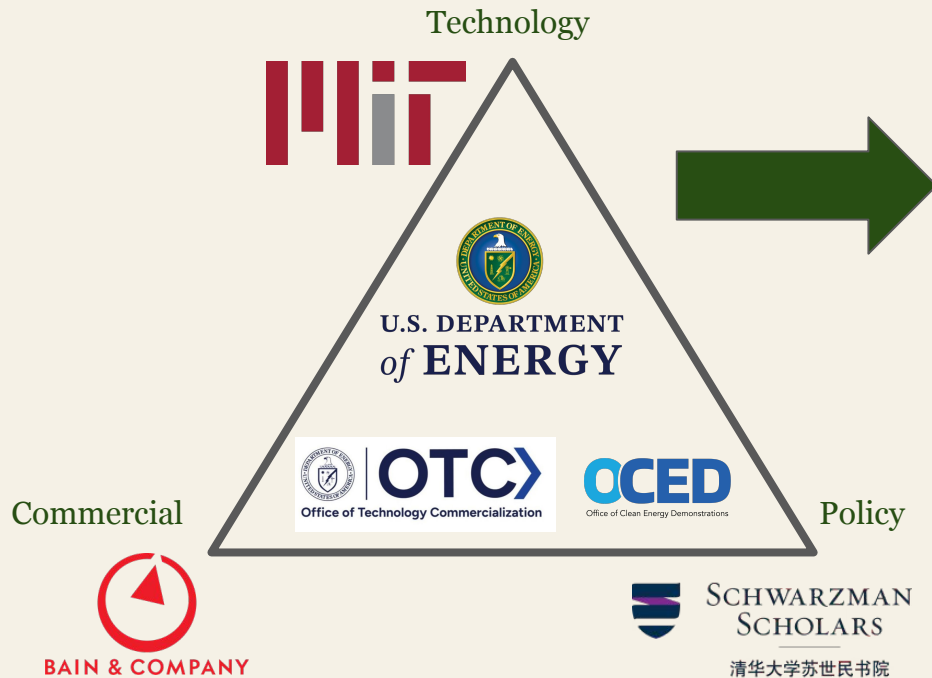
KLSP Consulting, LLC.

10/22/2025

Introduction: My passion is moving technology from lab to market



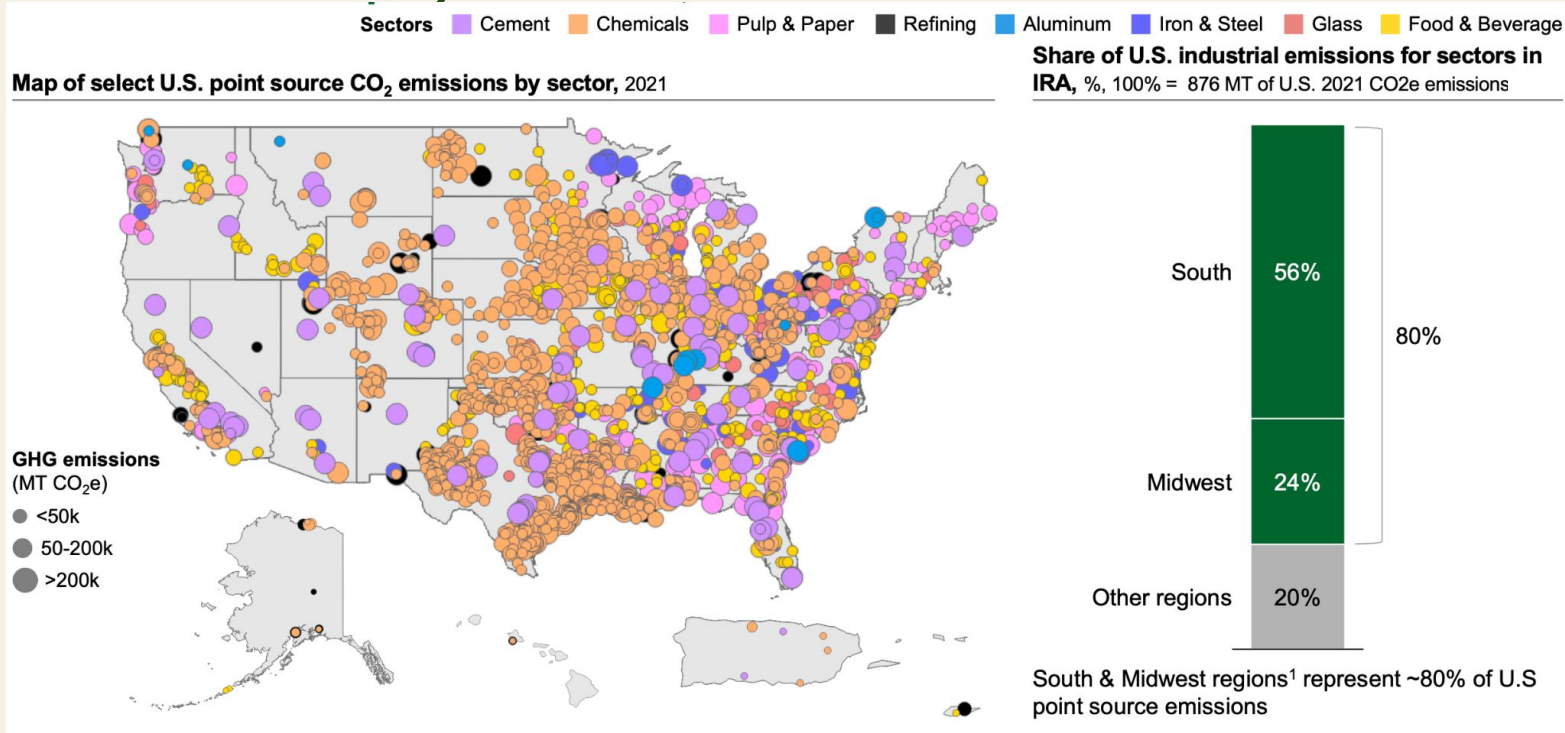
Introduction: My passion is moving technology from lab to market



Kickstarting Liftoff in Science and Policy

Working with universities, VCs, and
hyperscalers across the energy ecosystem
to commercialize technology

There are 2,500+ industrial facilities (and communities) across the United States



Technologies exist in every sector and technology area ready to be deployed in U.S. facilities

NOT EXHAUSTIVE ILLUSTRATIVE

Industrial Sector

Highest stage of U.S. development*

■ Deployable
 ■ Demo
 ■ R&D / Pilot
 Limited relevance for sector decarbonization

	Chemicals	Refining	Iron & Steel	Food & Beverage	Cement	Pulp & Paper	Aluminum	Glass
CCUS (incl. H₂ production)	Various	FCC ² , process heat, SMR ³	BF-BOF ⁴ , NG-DRI/HBI ⁵		Rotary kiln	Black liquor boiler	Smelting	Melting, forming
Industrial electrification	Low-high temp heat alternatives	Low-high temp heat alternatives	EAf ⁶ transition	Low temp heat alternatives	Pre-calc, kiln	Low-mid temp heat alternatives	Low temp, high temp, process	High temp melting
Energy efficiency	Various	Various	Various	Various	Various	Various	Various	Various
Electrolytic Hydrogen	Clean ammonia production	Hydrocracking, hydrotreating ⁹	H ₂ -HBI	Boiler	Rotary kiln	Boilers, burners	Calciner	Melting
Raw material substitutions	Recycling ¹¹	Bio-based feedstock	NG-DRI/HBI ⁵		Clinker substitution ¹⁰	Recycling	Recycling	Recycling, silica alternatives
Alt. fuel (non-H₂)				Boilers, various equipment	Rotary kiln	Boilers, burners		Melting
Alt. production methods	Bio-based plastics ¹		Ironmaking processes	Various ⁸	Electrochemical ⁷		Carbochlorination, inert anode	

Decarbonization Level

Adoption Readiness must improve to unlock industrial technology investment



Value Proposition: High delivered cost; High complexity to adopt



Resource Maturity: Lack of enabling infrastructure; Capital flow challenges



Market Acceptance: Emerging demand maturity



License to Operate: Community perception



Technology Readiness: Limited high-TRL technologies

Status of DOE Industrial Demonstration Projects

Sector	Project count (2024)	Project count (today)
Chemicals & Refining	7	2
Iron & Steel	6	2
Food & Beverage	3	0
Cement	6	1
Pulp & Paper	1	0
Aluminum & Metals	5	5
Glass	3	0
Heat	2	0
Total	33	10

Ongoing Project Sponsors



Cancelled Project States

TX, LA, OH, KY, MA, IL, VT,
MO, MN, IN, NY, TN, MI, NC,
CA, AZ

As government steps back, partnerships with hyperscalers, non-profits, and industry continue

09.19.25

Sustainable Concrete Buyers Alliance Launches to Accelerate Adoption of Low-Carbon Building and Infrastructure Materials

New RMI and Center for Green Market Activation initiative will enable Amazon, Prologis, Meta, and other leading organizations to participate in a first-of-its-kind joint purchase of sustainable concrete attribute certificates, driving investment into cutting-edge production facilities, low-carbon cement blends, and emerging technologies.



Microsoft Buys Over 600,000 Tons of Green Cement to Help Build Sustainable Materials Market



ESG Today Writing Staff

May 28, 2025



Microsoft

GreenieRE Coalition & Trellis Climate launch Vensurety for climate companies

⚡ 24th September 2025 - Author: [Saumya Jain](#) - Share



TRELLIS
CLIMATE



GreenieRE
COALITION

UPDATE

April 16, 2025

Apple unveils environmental progress, surpassing 60 percent reduction in global greenhouse gas emissions

Ahead of Earth Day, Apple hits new milestones in emissions reductions, clean energy, and recycled materials

Customers are invited to recycle devices in-store with a special offer through May 16



Thank you!

Find out more at klsp-consulting.com

Appendix: Status of DOE Industrial Demonstration Projects (1/2)

Sector	Project count (2024)	Project count (today)	Cancelled projects	Ongoing projects
Chemicals & Refining	7	2	Advanced recycling in TX, Flexible fuel burners in TX, e-Methanol production in TX, Innovative ethylene production in TX/LA	Dow Chemical CCUS on Gulf Coast BASF recycled syngas production in TX
Iron & Steel	6	2	Natural gas based direct iron reduction in OH, iron induction melting in AL, Hydrogen reduction in LA	Cleveland Cliffs steel induction melting in PA Vale Iron Ore Briquettes in LA
Food & Beverage	3	0	Onsite power and heat pumps in KY, OH, IL, VT, MO, MN, IN, NY, TN, MI	
Cement	6	1	Innovative cement production in MA & NC/CA, CCS in CA & IN,	Titan America calcined clay in VA

Appendix: Status of DOE Industrial Demonstration Projects (2/2)

Sector	Project count (2024)	Project count (today)	Cancelled projects	Ongoing projects
Pulp & Paper	1	0	Innovative membrane separations in LA	
Aluminum & Metals	5	5		Wieland Copper recycling Real Alloy aluminum recycling Century Aluminum Primary aluminum Constellium hydrogen melting Golden Aluminum electric melting
Glass	3	0	Flexible fuel burners in CA	
Heat	2	0	Waste heat systems in NY, Microgrid system in AZ	
Total	33	10		

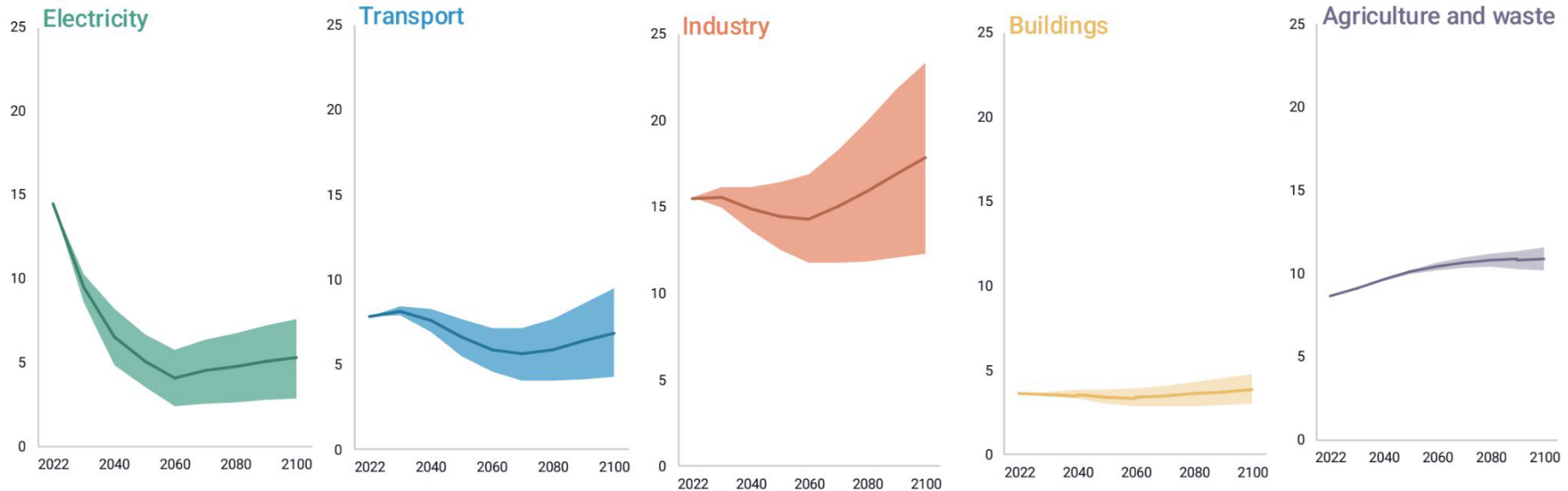


How Can We Cut Industrial Emissions?

EESI Briefing - October 22, 2025

Abigail Regitsky, Blue Horizons Foundation

Abundant, affordable, and clean industrial goods are essential to everyday life and global infrastructure development



Rhodium Group global GHG emissions projections under current policy and technology trends by sector, likely range (67%), in million metric tons CO₂e

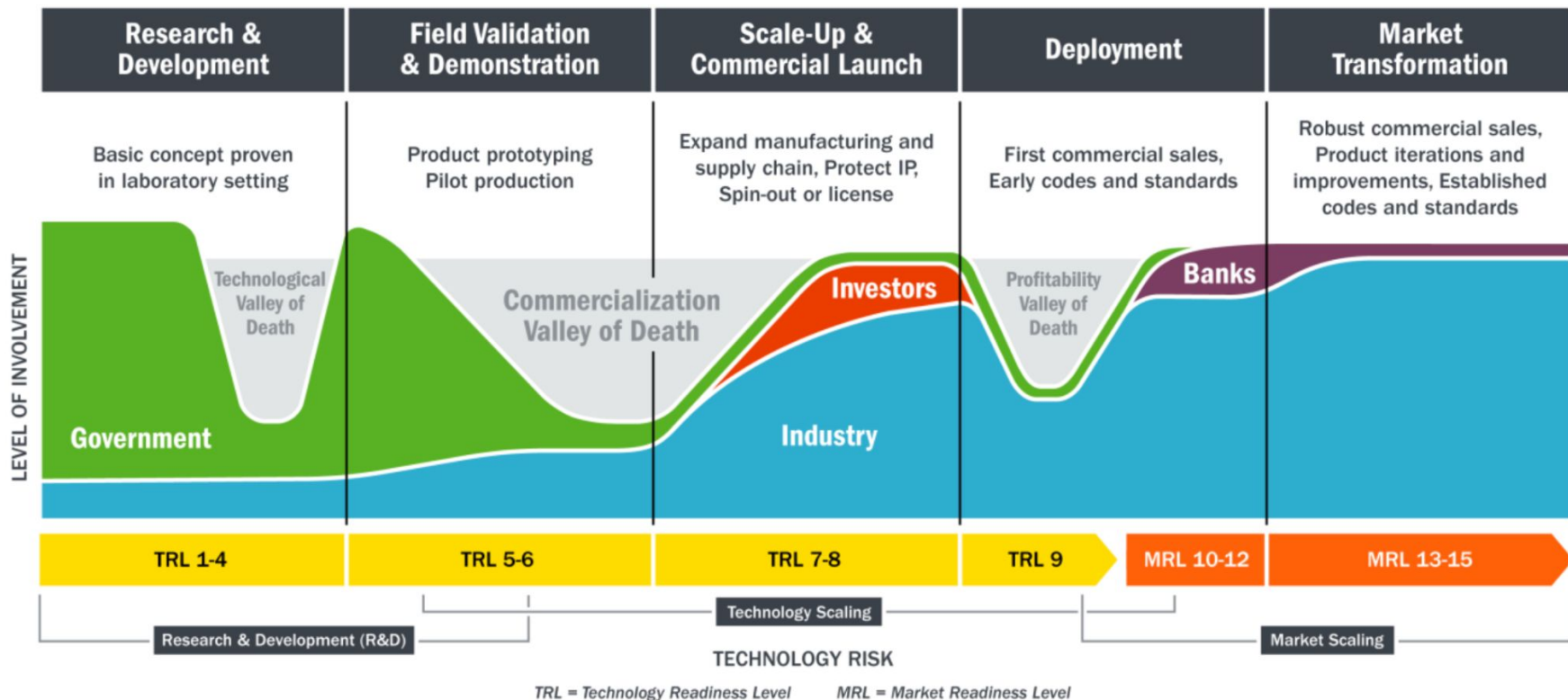
Companies producing industrial goods need to see the business case for investing in clean industrial technologies

Potential levers for encouraging investments:

- Incentivize supply
- Create demand
- Regulate

Ideally, governments and civil society will pull the levers that align with profit motives and enhance abundance and affordability.

Public policy has an important role for industrial innovation, commercialization, and deployment



Philanthropy has a role to play but cannot replace an effective federal government





Thank you!

Abigail Regitsky
Blue Horizons Foundation
aregitsky@bluehorizonsfoundation.org