



At a Glance

Decarbonizing Industry by 2050: A Federal and State Policy Blueprint

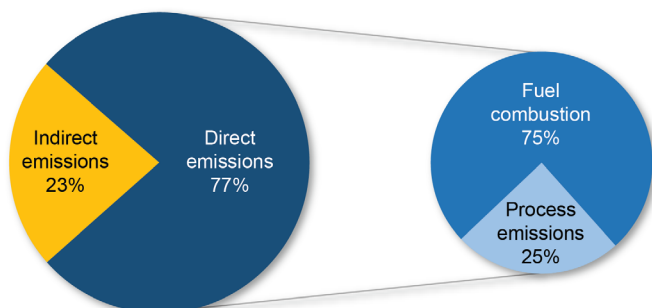


Industry is the third highest-emitting sector in the United States after transport and electricity. Decarbonizing the industrial sector is particularly challenging, due in part to the variety and complexity of processes and emission sources across industries. The industrial sector is also essential to jobs and prosperity, producing materials that are central to many aspects of our everyday lives.

Like all sectors economywide, emissions from the industrial sector need to decline significantly in the near- to medium-term for us to be on track to meet the goal of midcentury decarbonization. The path toward industrial decarbonization by midcentury is challenging but feasible. Success requires comprehensive strategies and a robust portfolio of federal and state policies to support innovation, investment, and deployment.

State and federal policies can play a role in driving investment and mitigating the costs of transitioning to lower carbon industrial production. State and federal policies can also ensure that affected communities realize local jobs and environmental benefits in conjunction with those investments.

Breakdown of industrial emissions by type and origin



Source: US EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019 (April 2021).

I³ makes the following policy recommendations to enable key decarbonization solutions:

CARBON MANAGEMENT

- Enhance the federal 45Q tax credit
- Reform and expand other federal incentives
- Responsibly accelerate the buildout of CO₂ transport and storage infrastructure
- Increase federal investment in RDD&D
- Target jobs and environmental benefits toward affected communities
- Clarify state regulatory policies and planning
- Tailor state financial incentives
- Foster state-level market development

HYDROGEN

- Provide hydrogen tax credits
- Develop hydrogen hubs
- Scale hydrogen transport and storage infrastructure
- Ensure additional financing mechanisms for hydrogen
- Fund RDD&D for hydrogen
- Strengthen and modernize electricity grids
- Include hydrogen in state sustainability plans and legislation
- Facilitate permitting for production, transport, and storage
- Offer financial incentives for low- and zero-carbon hydrogen production and use

PROCUREMENT

- Support information and disclosure policies
- Establish procurement bonus policies
- Develop public sector procurement standards
- Develop a high achievers program to increase ambition through public procurement
- Expand industrial efficiency block grant funding

ELECTRIFICATION

- Provide incentives for RDD&D
- Provide financial incentives such as tax credits or grants for deployment
- Offer workforce training programs
- Improve federal permitting procedures
- Work with utilities and their regulators to facilitate pathways to electrification
- Provide financial incentives such as state tax credits or grants for deployment
- Implement workforce training programs at the state-level
- Improve state permitting procedures

ENERGY EFFICIENCY

- Expand strategic energy management programs
- Assist facilities in conducting energy assessments
- Support RDD&D for emerging technologies
- Expand state block grants to support industrial efficiency
- Provide federal tax credits
- Implement state workforce training programs

INNOVATIVE APPROACHES

- Employ competitive grantmaking for clean industrial hubs
- Spur market innovation with competitions and challenges
- Fund and support RDD&D for innovative technologies
- Establish a state task force on industrial decarbonization

With the right state and federal policy framework in place, the US can become a leader in the deployment of technologies to achieve net-zero emissions in the industrial sector by midcentury while sustaining the viability and competitiveness of US domestic industrial production and the high-wage jobs base it provides.

The recommendations outlined in this Blueprint have the agreement and support of key stakeholders, underscoring the potential to develop and implement the kinds of transformative policies and investments needed to drive decarbonization in this essential sector.

For more information, find the full blueprint at industrialinnovation.org



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