

# State Best Practices Guide

## for Decarbonizing the Industrial Sector

December 2022

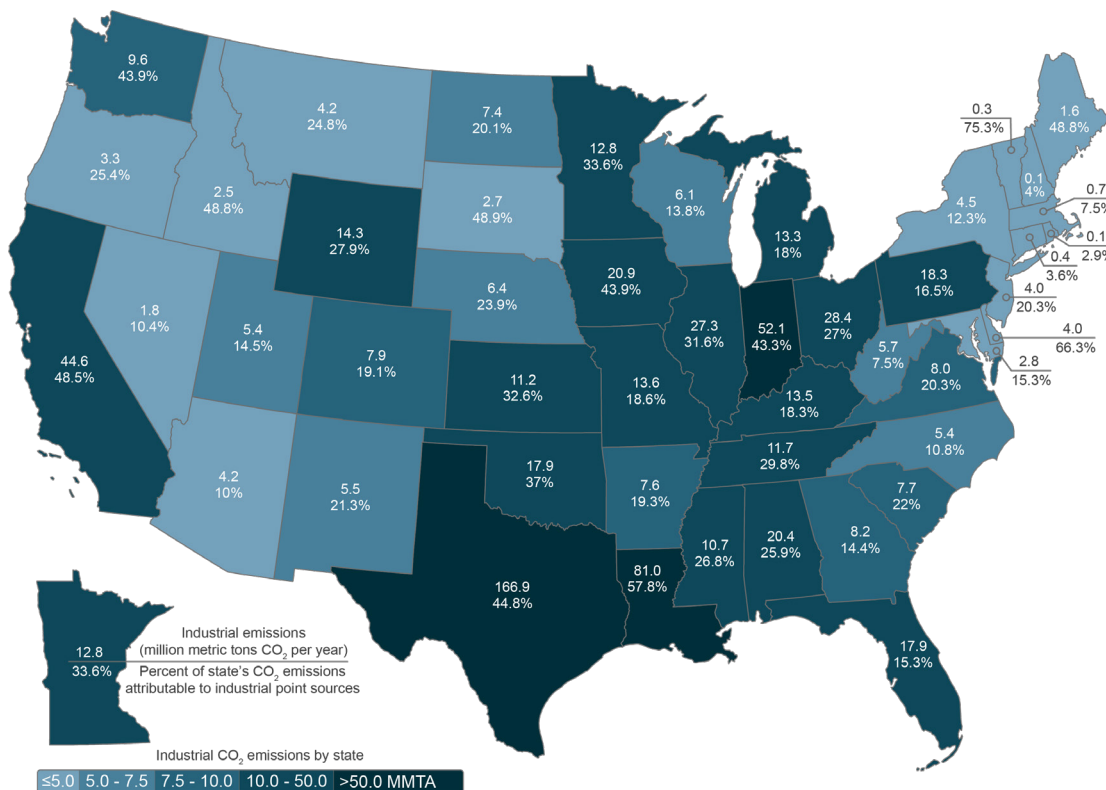


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States will play a critical role in reducing US industrial emissions. Supported by the recent influx of federal funding, states can create a regulatory and policy landscape that spurs local implementation, drives private investments, and complements federal incentives.

Industrial decarbonization is a challenge that will only be overcome should states support a full suite of policy solutions. The challenge is multifaceted. Facilities in different sectors and regions have unique needs when decarbonizing. Figure 1 shows the relative proportion of US industrial emissions on a state-by-state basis.

Figure 1. Industrial Emissions by State as a Percentage of Total State Emissions



\*MMTA = million metric tons per annum. Data sourced from US EPA GHGRP (2021). Industrial sectors include Refineries, Chemicals, Minerals, Metals, and Pulp and Paper.

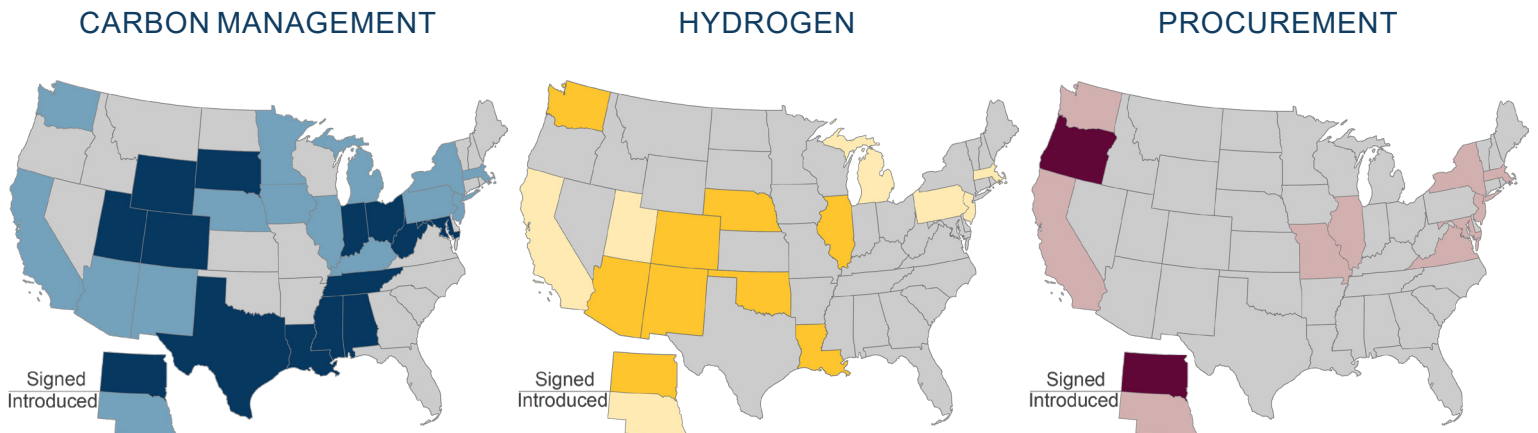
While there is no one-size-fits-all solution, carbon management, clean hydrogen, low-carbon procurement, electrification, and efficiency policies cut across industrial sectors and can be mixed and matched to greatly reduce a state's industrial emissions. Regardless of the state's available resources or emissions profile, cross-cutting statewide planning and workforce development will also be critical considerations for equitable decarbonization.

*Note: Each state in the US has a unique emissions profile. While some states may have a larger share of emissions from the industrial sector, every state will need to consider these emissions when planning for statewide decarbonization.*

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Figure 2. 2022 Legislation in States by Key Topic Areas



Source: Great Plains Institute analysis based on data from Industrial Innovation Initiative, July 2022 [Legislative Digest](#) (December 2022).

Note: Over the course of 2022 legislative sessions, states made progress in three key policy areas critical to advancing industrial decarbonization: carbon management, hydrogen, and procurement. While electrification and efficiency, statewide planning, and workforce development policies are more difficult to track, they are no less important to the overall progress that has been made to advance industrial decarbonization on a state-by-state basis.

The approaches described in this guide outline state policy options and current best practices that can help scale up industrial decarbonization solutions and positively affect local communities throughout the value chain. From retrofits to fuel switching, industrial decarbonization will have far-reaching upstream and downstream impacts on local jobs, health, and economies.

## How to Use This Guide

The following fact sheets provide a starting point for decision makers and advocates seeking to develop an industrial decarbonization policy framework. Each state must tailor its policies to best suit the unique assets and needs of its region; however, many lessons may be learned from looking to states which have already passed decarbonization legislation.

This publication pairs high-level policy considerations with examples to demonstrate the kinds of policy language and regulatory structures in use or under consideration across the United States. The topics covered herein are not in order of priority nor exhaustive but should be viewed as a menu of options from which a state may mix and match to suit its needs.

Industrial Innovation Initiative (I<sup>3</sup>) staff developed this resource with input from I<sup>3</sup> participants. I<sup>3</sup> is an ambitious coalition that aims to drive emissions reductions through policy change, supporting quality jobs and investment in key US industrial sectors. Co-convened by the Great Plains Institute and World Resources Institute, I<sup>3</sup> builds on years of stakeholder engagement and work with state officials in the Midcontinent region, as well as extensive work advancing decarbonization solutions important to the industrial sector. For more information, visit [industrialinnovation.org](https://industrialinnovation.org).

# State Planning



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While all the solutions proposed in this document have applications that cut across industrial sectors, some approaches cut across solution sets themselves. These big-picture approaches create cohesion and work as a part of the state's larger decarbonization strategy. Supporting emerging technologies and cooperation among industrial sectors can help build markets for low-carbon industrial products and technologies while considering specific place-based needs.

## Community engagement

Investments in industrial decarbonization are also an opportunity to develop and implement projects in a way that prioritizes the health, safety, and economic activity of surrounding communities.

- Engage with communities at the very beginning of a project and continue timely and frequent communication around project development.
- Solicit, consider, and respond to input from the public and affected stakeholders (e.g., impacted communities, environmental justice groups, Native nations, and labor unions, among others).
- Provide education around community safety and right to know at the local level, and supply funding and guidance for emergency response procedures and equipment.
- Align with the federal government's Justice40 Initiative to ensure 40 percent of federal investments in climate and clean energy flow to disadvantaged communities.



The [Justice40 Initiative](#), established by the Biden Administration through **Executive Order 14008**, aligns the federal government in ensuring that 40 percent of the overall benefits of certain federal investments flow to disadvantaged communities.

## Regulatory policies and planning

Establishing a task force or developing an action plan on industrial decarbonization can allow states to maximize synergies, particularly where benefits to local communities are most needed in planning clean energy infrastructure.

- Include participation across state and local officials and representatives of relevant community organizations; industrial, energy, and technology companies; environmental groups; and labor unions in task forces.
- Produce task force policy recommendations for state agencies on the opportunities, challenges, resources, and impacts associated with industrial decarbonization and develop a public outreach strategy to inform and solicit input from local communities.
- Increase staffing at the relevant state agencies to support program administration and planning.



**Colorado, Massachusetts, and Maine** have industry-specific greenhouse gas targets. **California** has a specific greenhouse gas emissions intensity target for a 40 percent reduction in the cement sector below 2019 levels by 2035, and net zero by 2045. **Louisiana, Washington, Wisconsin, and Michigan** have industry-specific decarbonization pathways in their climate or clean energy plans.

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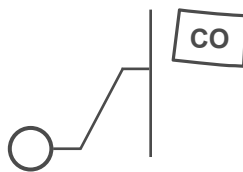


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## Financing mechanisms

Dedicated programs and funding to support industrial emissions reductions at facilities can allow companies to remain flexible in their chosen emissions reduction pathway.

- Utilize statewide green banks with carveouts for the industrial sector to accelerate the commercialization of clean energy technologies.
- Create grant programs for private entities, local governments, and public-private partnerships to pursue voluntary projects that reduce greenhouse gas emissions and criteria air pollutants from industrial and manufacturing operations.



Enacted [SB 22-193](#), establishing a grant program through which the Colorado Energy Office awards grants for voluntary projects that reduce air pollutants from industrial and manufacturing operations.

