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Buy Clean and Beyond: Policy Approaches to Decarbonize Concrete

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Broadly, there are two ways to build a new market…

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Supply Side Policy Support

- Often used to scale up nascent technologies for deep decarbonization
- Grants/awards for producers using **decarbonization technologies not yet at commercial scale**
(think: cement with CCS or electrification)
- **High costs** can be required to achieve significant impact, depending on award structure and project size
- **Risk of loss for government investments** in the event of project or technology failure

Demand Side Policy Support

- Growing use to **reduce embodied carbon in industrial products** (steel, concrete, hydrogen, etc.)
- **Useful for concrete** as the actual procured product (over cement)
- Especially useful in cases where **government has sizeable procurement/interest in increased product demand**
- Can be implemented with **low costs** while achieving a sizeable impact, particularly for products with low green premiums (e.g., concrete)

Demand for low-carbon concrete now driven by data centers, presenting a new opportunity for demand-side support

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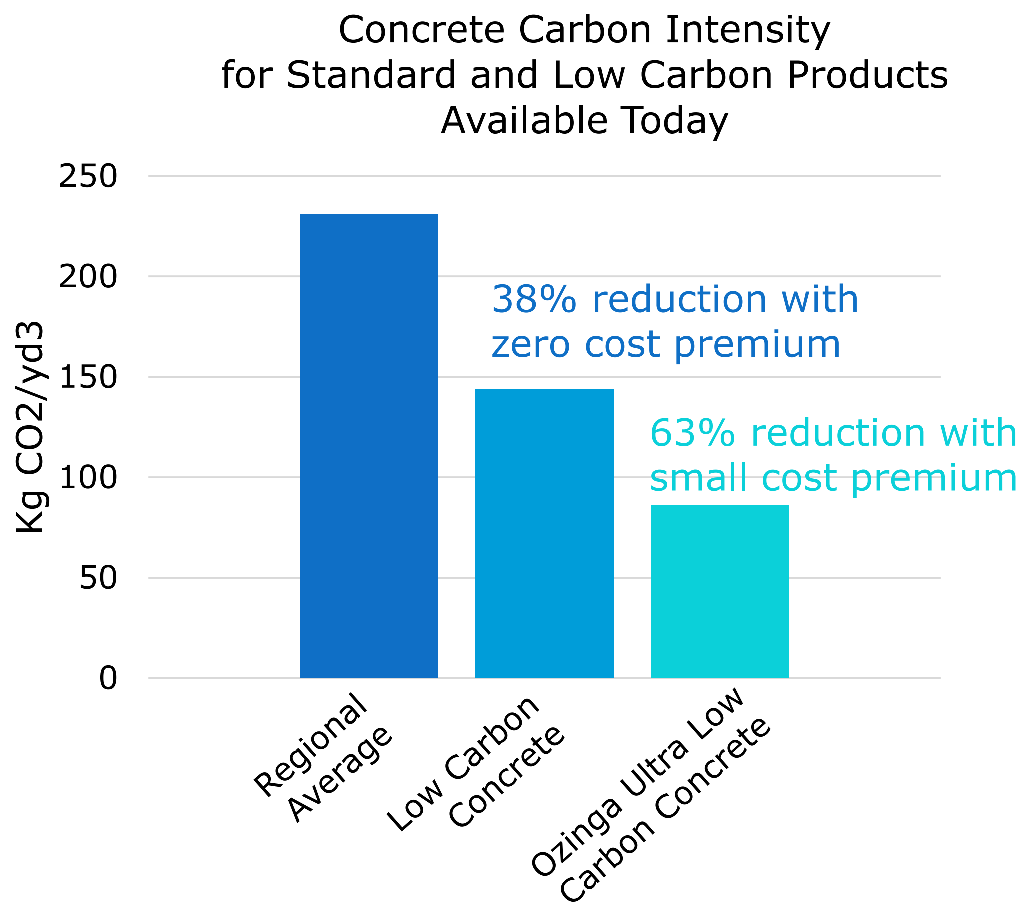
Data centers, especially hyperscaler data centers, are looking to reduce their emissions by using low carbon products in construction – including low carbon cement.

Hyperscalers are willing to pay premiums to achieve additional emissions reductions, providing a demand signal for deeply decarbonized cement.

- Microsoft has signed an Advanced Market Commitment with Sublime cement.
- Ozinga has worked with companies to create ultra low carbon concrete mixtures for data centers.

Building these new data centers with low carbon concrete already on the market and used by hyperscalers **could abate over 2.7 million tons of CO2e per year**.



We're studying where states fall on a policy development pipeline for low-carbon cement

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Planning	Data Gathering	Data Reporting	Incentives & Requirements	Reduced Emissions
Development of strategic plans	Require EPDs with procurement bids. Collect reported GWP from all bids. Pilots to test new low carbon mixes.	Determine GWP average for state procurement. Publicly report CIs and costs for state-procured concrete.	Provide incentives for bids with GWP below set threshold. Require state contracts use concrete below set GWP threshold.	

Multiple states, counties, and cities are using demand-side policies to pave the way for low carbon concrete procurement

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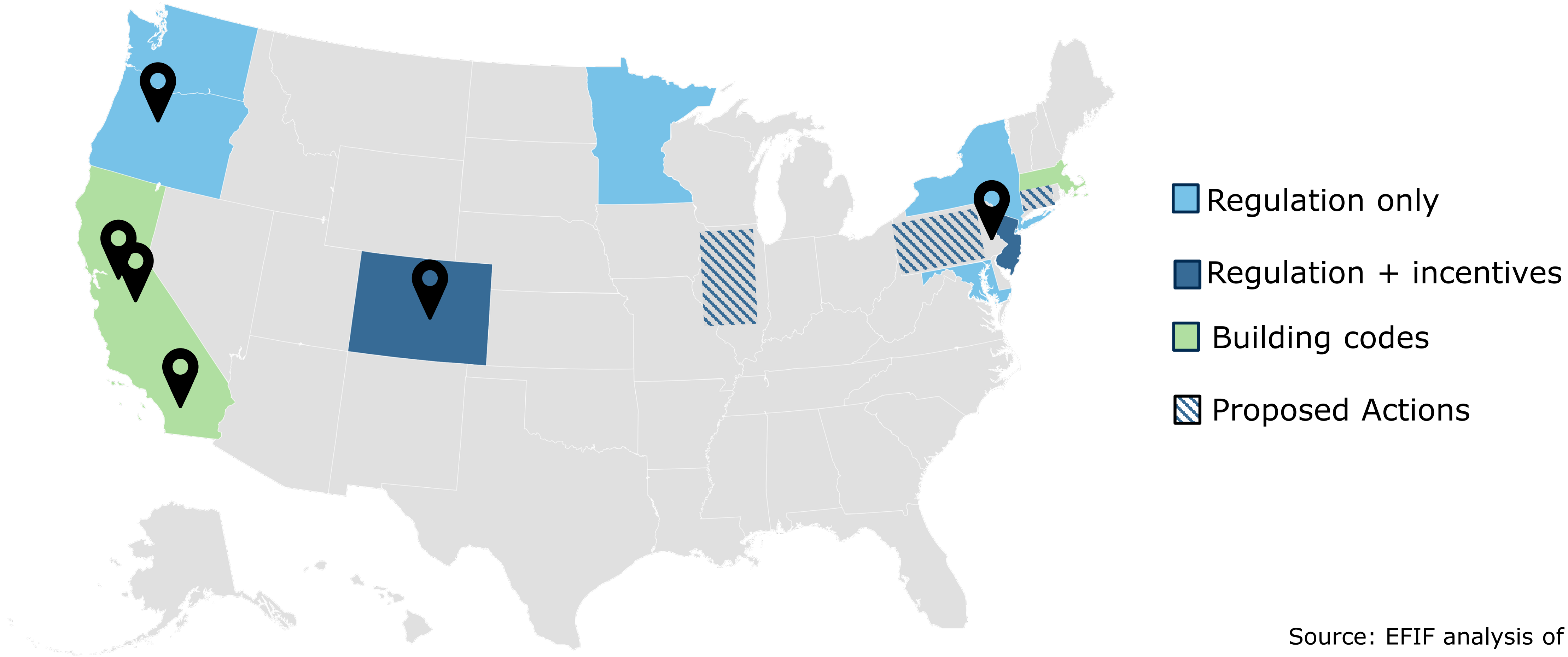
State and Local Government Action on Low-Carbon Concrete



Source: EFIF analysis of [CLF data]

How states are approaching concrete decarbonization...

Regulation only | Regulation + incentives | Building Codes

State	Policy Structure	GWP limits	Passed	Sector(s)
California	Strategy development; CALGreen building codes	175% of regional NRMCA benchmark	2023; 2022	Buildings
Colorado	PACE funding and clean tax credits for reducing embodied carbon; GWP limits for public projects	Industry average (OSA); TBD (ODOT)	2025; 2021	Buildings, infrastructure
Maryland	GWP limits for public projects	TBD - 2026	2023	Buildings
Massachusetts	Incentives in the form of Home Energy Rating System Points (proposed buy clean law)	Eastern region NRMCA benchmark	2024	Buildings
Minnesota	GWP limits for public projects & EPD grant assistance	TBD - 2026	2023	Buildings, infrastructure
New Jersey	Set GWP baseline and award performance-based tax credit for contracts below the baseline	TBD - ?	2023	Buildings, infrastructure
New York	Required GWP limits for procurement on state contracts	150% of regional NRMCA benchmark	2022	Buildings, infrastructure
Oregon	EPDs required for ODOT projects; grants for EPD prep	TBD, optional, up to DOT	2022	Infrastructure
Washington	Public projects must report EPDs	Not required	2024	Buildings

Challenges experienced across the policy development pipeline

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Planning	Data Gathering	Data Reporting	Incentives & Requirements

Lack of definition slows implementation

Inadequate resourcing allocated to develop programs

Lack of coordination between policy developers, agency implementers, and concrete producers to define the "art of the possible"

Insufficient agency resources to allocate to program development

Lack of relevant internal knowledge to decarbonize procurement of complex materials.

Inertia to change long-standing procurement practices

Unclear or **incomplete plans for data collection**

Interagency coordination challenging

Unclear plan to review and revise strategies and set emissions limits.

Ill-defined plans to use any collected data to inform emissions limit reductions.

Lack of resource and knowledge sharing between practioners and state agencies.