



ACCELERATING DECARBONIZATION OF CONSTRUCTION AND INFRASTRUCTURE

EXECUTIVE SUMMARY

Large-scale construction projects have been central to humanity's economic and cultural identity since the dawn of time. From monumental wonders like the Pyramids to the road and rail networks that enabled the modern industrial economy to the skyscrapers that define our greatest cities, these precisely engineered assemblies of stone and steel have always been synonymous with progress. As we take action to address the changing climate, our world's builders are called into service once again. Can construction—hitherto an enormous source of direct and indirect emissions—be made greener without incurring economic harm? Or, more ambitiously, can leaders in the construction and infrastructure space even find economic opportunity by driving the transition to lower-carbon projects in a thoughtful and intentional way? The Climate Board's research suggests that both answers are yes—but only with conscious effort. This Insight Note outlines the obstacles to decarbonizing large-scale construction projects and makes five recommendations for overcoming the industry's formidable structural barriers to decarbonization at scale.

The full report contains nearly 30 pages of detail on strategic pathways to decarbonization, including complete descriptions of the five recommendations, case profiles of industry leaders that exemplify the recommended practices, and a field guide to promising technological innovations.

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5 Recommendations for Building Momentum toward Decarbonization

- 1** **Treat cost-saving measures as opportunities to develop decarbonization skills.**

Many sound business decisions that create efficiencies and save resources are also inherently emissions-reducing. Use these initiatives as training grounds for counting, thinking about, and talking about carbon footprints. Doing so in no-regrets settings with obvious economic advantages will acclimate internal and external stakeholders to carbon-conscious business practices and prepare them for more difficult measures in the future.
- 2** **Seek out “springboard” projects that feature conditions well-suited to decarbonization, and use them as proof points for new materials and methods.**

Because so many stakeholders insist on familiar, time-tested materials and methods, projects that actively welcome low-carbon innovation are scarce and valuable opportunities. By actively pursuing even a few projects where traditional economics and preferences are not an outright bar to decarbonization, companies can build experience—and proof points—that will pay dividends as the broader market evolves.
- 3** **Adopt collaborative and transparent decision-making processes that facilitate carbon-conscious project design.**

The industry’s evolution from design-bid-build to design-build project delivery represented an important step forward in stakeholder collaboration, but certain perspectives remain sequestered at various points along the project life cycle decision chain. More collaborative models that engage additional stakeholders (for example, financial institutions and public agencies) earlier or later in the process than normal allow for better optimization of carbon footprints in balance with other considerations.
- 4** **Treat the carbon footprint as a fundamental design parameter.**

Decisionmakers are accustomed to making tradeoffs between price, physical properties, delivery time, and other considerations. For those decisionmakers to take decarbonization seriously, the carbon footprint associated with particular design choices has to be as well understood as those other parameters, and it must be integrated into the decision-making process on equal terms.
- 5** **Be familiar with emerging sources financial support for decarbonization, and take advantage of opportunities when they arise.**

Today’s economy features an array of incentives and instruments for defraying the cost of decarbonization activities. These include funds allocated by federal, state, and local governments, investment capital dedicated to sustainable projects or companies, and payments made for offsets generated by companies who can demonstrate durable reductions in their carbon footprints. A savvy business leader will be familiar with these options and know when it may be right to pursue them.