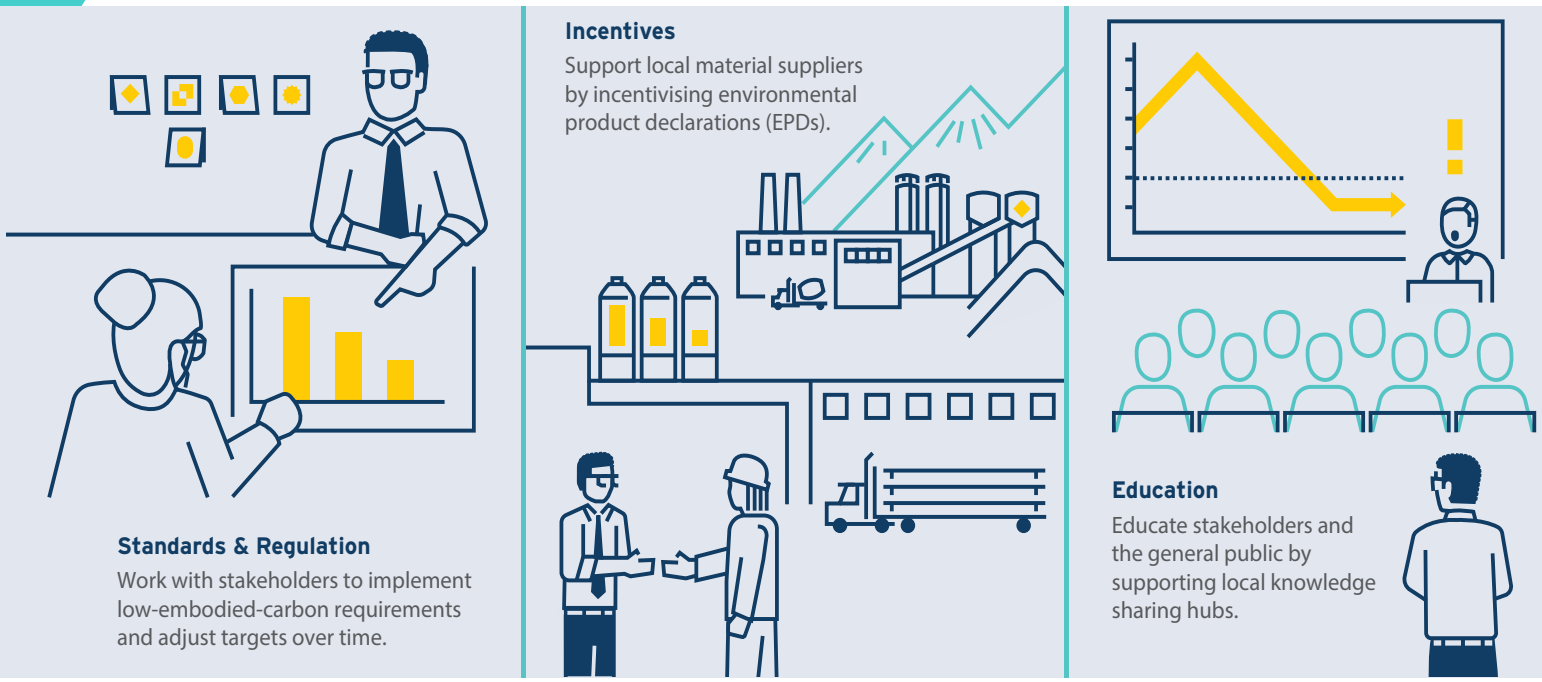
Reducing Embodied Carbon in the Built Environment

For policymakers



Understanding Embodied Carbon

Buildings account for at least 39% of energy-related global carbon emissions on an annual basis. At least one-quarter of these emissions result from embodied carbon, or the carbon emissions associated with building materials and construction.

Policymakers' Role

Policymakers can catalyze the move toward low-embodied-carbon buildings by adopting regulations or incentives that drive reductions in private-sector buildings and by setting standards for public building projects. Policies such as these can stimulate market demand for low-embodied-carbon materials and strategies, encouraging the development and commercialization of affordable solutions for reducing embodied carbon.

Why the Economics of Embodied Carbon Matter to Policymakers

Policymakers considering procurement policies, building codes, incentive programs, or other regulations around embodied carbon need to understand the economics of reducing buildings' carbon footprint. Understanding the low- and no-cost solutions for reducing embodied carbon will enable policymakers to create policy that effectively limits carbon emissions without stretching government budgets or driving up local construction costs. Furthermore, the data and resources available to policymakers around the economics of embodied carbon enable them to demonstrate the economic viability of new building codes and policies to other stakeholders.

5 Key Strategies for Reducing Embodied Carbon in Buildings through Policy

1 Procurement Policy

- Create incentives or requirements for lower-carbon building materials

2 Climate Action Plans

- Address embodied carbon in climate action strategies and overall carbon reduction targets
- Ensure embodied carbon is considered in a wide range of activities, including waste management, job creation, and historic preservation

3 Building Codes

- Introduce embodied carbon into building codes incrementally, starting with disclosures and readily achievable limits
- Codes can focus on environmental product declarations (EPDs), material-specific embodied-carbon limits, or whole-building requirements

4 Low-Carbon Design

- Add embodied carbon reductions requirements to existing zoning, land use, or other regulations
- Introduce incentives or regulations in new areas such as the deconstruction and reuse of buildings or their materials

5 Design for Longevity

- Address embodied carbon through executive orders for the building and industrial sectors
- Consider directives that create carbon sequestration tax credits or clean product standards

Tools and Resources: Evidence-Based Policy Guidance

Embodied Carbon Policy Toolkit, Carbon Leadership Forum, **https://carbonleadershipforum.org/clf-policy-toolkit/**.

Embodied Carbon Policy Framework, Carbon Neutral Cities Alliance, **https://carbonneutralcities.org/embodied-carbon-policy-framework/**.