

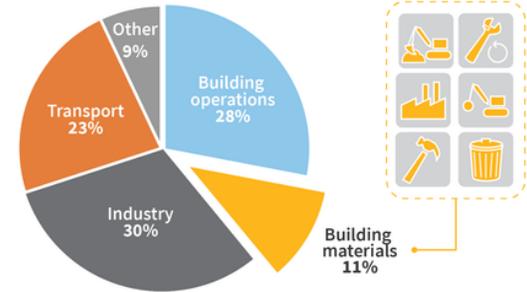
Reducing Embodied Carbon Emissions In Massachusetts



What is embodied carbon & why is it important?



- Embodied carbon is the greenhouse gas (GHG) emissions associated with the manufacturing, transportation, installation, maintenance, and disposal of building and infrastructure materials.
- **Embodied carbon accounts for between 11-23% of global annual emissions.**



Global energy-related CO₂ emissions. Adapted from the UNEP 2019 Global Status Report

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- Embodied carbon reduction is an untapped and urgent opportunity to meet climate commitments, bolster innovation in local manufacturing and construction sectors, and improve air quality and health outcomes from cleaner industrial processes.
- In order for us to transform our buildings from climate polluters to climate protectors, we must address embodied carbon as well as operational carbon.

Top Material Categories for Reducing Embodied Carbon



Case studies have found that reducing embodied carbon in many instances has no, or a very limited, price premium.

Visit MCAN's website to get involved

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STEPS TO REDUCE EMBODIED CARBON IN MASSACHUSETTS



Local Level



- Locally, communities can reduce embodied carbon by incorporating provisions into their climate action plans and zoning policies. Specifically, communities should require a Whole-Building Life-Cycle Analysis (WBLCA) as part of their zoning policies and eventually implement emissions reduction requirements.
- Additional solutions that advance building material re-use and incorporate increased LEED requirements in zoning requirements can also be implemented
- Cities like Boston, Cambridge, and Brookline have already taken steps to incorporate the reduction of embodied carbon

Example: Local Efforts Cambridge's Net Zero Plan

Action 2.2 Address Embodied Carbon through Green Building Requirements			
Description	Timeline	Description	Timeline
Assess LEED Alternative Pathways and Zero Carbon Certification	Short	Perform technical assessment of carbon impacts	Short
Design and Develop Policy to Prioritize Re-use	Short	Adopt Life Cycle Analysis/Carbon Reduction Requirements	Medium
Design Carbon Intensity Targets	Short	Adopt Enhanced Life Cycle Analysis/Carbon Reduction Requirements	Long

For more information visit: bit.ly/GreenCambridge

Take Action at the State Level

In 2023, there are three bills that aim to reduce embodied carbon:

- HD.1033/SD.840 An Act Incorporating Embodied Carbon into State Climate Policy
- HD.2668/SD.817 An Act requiring state procurement of low-carbon building materials
- SD.820 An Act relative to the use of low-embodied carbon concrete in state projects

Help advocate for the reduction of embodied carbon by asking your Representative and Senator to support and co-sponsor these critical bills

Take Action!

- Talk to your municipal officials about including the reduction of embodied carbon in your community's Climate Action Plan and zoning policies
- Ask your legislators to sign on as a co-sponsor to all three embodied carbon bills
- Sign Up for MCAN's Better Buildings Call to help us reduce embodied carbon in MA: bit.ly/MCANSignUp