

# No Buying Time for “Buy Clean”

## *Creating a New Path for Reducing Carbon Footprints in Procurement*

January 18, 2024  
AGC Construction Summit

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### MN Buy Clean Task Force

- ▶ Created by legislation in 2023
- ▶ Examine issues surrounding the implementation of a program requiring vendors of certain construction materials purchased by the state to submit environmental product declarations that assess the material production life cycle environmental impacts of the materials as part of the procurement process and meet standards established by the commissioner of administration that limit greenhouse gas emissions impacts of the materials.

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## Goals and Objectives

- ▶ (1) how to implement requirements that maximum global warming impacts for eligible materials be integrated into the bidding process for eligible projects;
- ▶ (2) incentivize structures that can be included in bidding processes to encourage the use of materials whose global warming potential is below the maximum standard (TBD);
- ▶ (3) how a successful bidder for a contract notifies the commissioner of the specific environmental product declaration for a material used on a project;
- ▶ (4) a process for waiving the requirements to procure materials below the maximum global warming potential resulting from product supply problems, geographic impracticability, or financial hardship;
- ▶ (5) a system for awarding grants to manufacturers of eligible materials located in Minnesota to offset the cost of obtaining environmental product declarations or otherwise collect environmental product declaration data from manufacturers based in Minnesota;
- ▶ (6) whether to use an industry average or a different method to set the maximum allowable global warming potential, or whether that average could be used for some materials but not others

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## Goals and Objectives (cont.)

- ▶ (7) how to create and manage a database for environmental product declaration data that is consistent with data governance procedures of the state and is compatible for data sharing with other states and federal agencies;
- ▶ (8) how to account for differences among geographical regions with respect to the availability of covered materials, fuel, and other necessary resources, and the quantity of covered materials that the department uses or plans to use;
- ▶ (9) coordinating with the federal Buy Clean Taskforce established under Executive Order 14057 and representatives of the United States Departments of Commerce, Energy, Housing and Urban Development, and Transportation; Environmental Protection Agency; General Services Administration; White House Office of Management and Budget; and the White House Domestic Climate Policy Council;
- ▶ (10) how the issues in clauses (1) to (9) are addressed by existing programs in other states and countries; and
- ▶ (11) any other issues the Taskforce deems relevant.

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## Goals and Objectives

- ▶ Make recommendations to the commissioners of Administration and Transportation for integration into a report to the Legislature by December 1, 2025.
- ▶ (1) which construction materials should be subject to the program requirements and which construction materials should be considered to be added, including lumber, mass timber, aluminum, glass, and insulation;
- ▶ (2) what factors should be considered in establishing greenhouse gas emissions standards, including distinctions between eligible material production and manufacturing processes, such as integrated versus secondary steel production;
- ▶ (3) a schedule for the development of standards for specific materials and for incorporating the standards into the purchasing process, including distinctions between eligible material production and manufacturing processes;
- ▶ (4) the development and use of financial incentives to reward vendors for developing products whose greenhouse gas emissions are below the standards;
- ▶ (5) the provision of grants to defer a vendor's cost to obtain environmental product declarations;
- ▶ (6) how to ensure that lowering environmental product declaration values does not negatively impact the durability or longevity of construction materials or built structures

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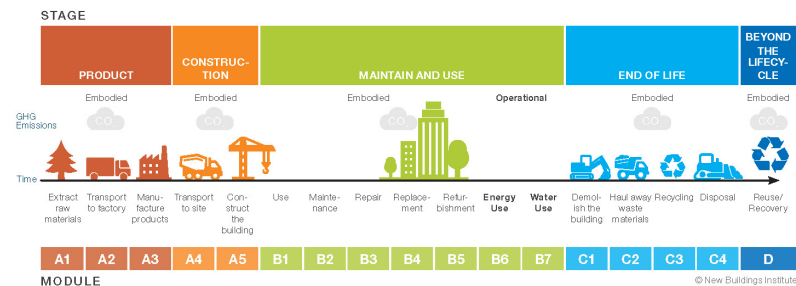
## Timeline

- ▶ October 1, 2023 – Task Force established
- ▶ July 1, 2024 - Pilot program to estimate Global Warming Potential (GWP) from vendors on projects.
- ▶ December 1, 2025 - Report to the Legislature
- ▶ January 15, 2026 - Establish a maximum Global Warming Potential (GWP) for concrete used in buildings.
- ▶ December 1, 2026 - Report to the Legislature
- ▶ December 1, 2027 - Report to the Legislature
- ▶ January 15, 2028 - Establish a maximum Global Warming Potential (GWP) or carbon steel rebar and structural steel and, after conferring with the commissioner of transportation, for asphalt paving mixtures and concrete pavement.
- ▶ December 1, 2028 - Report to the Legislature
- ▶ January 1, 2029 – Task Force ends

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## What is embodied carbon?

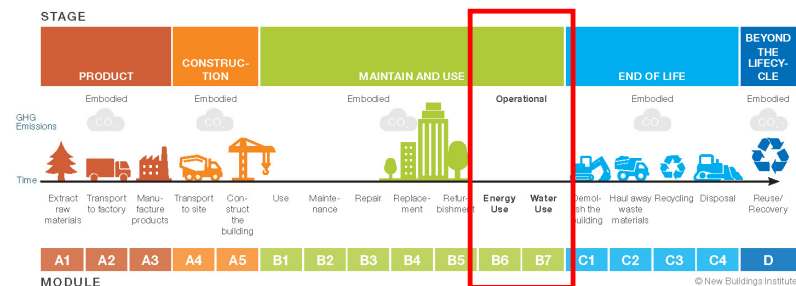
- EPA (def): Amount of GHG emissions associated with the extraction, production, transportation and manufacturing stages of a product's life. This can also include emissions associated with the use of a product and its disposal.



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## What is operational carbon?

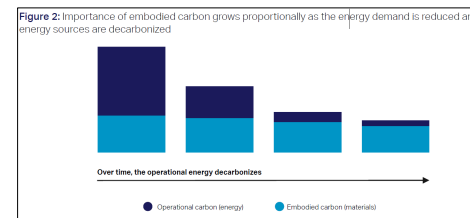
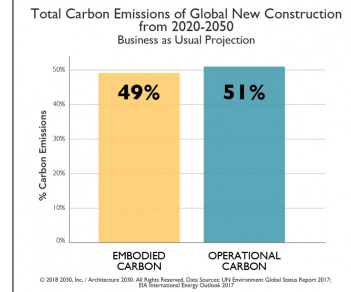
- Definition: carbon released during the ongoing operation of the building (utility consumption)



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## Why is embodied carbon a focus?

- Building performance continues to get better
- Energy codes continue to drive utility consumption downward
- Electricity grid continues to get cleaner
- Without addressing embodied carbon, world will not reach its GHG targets

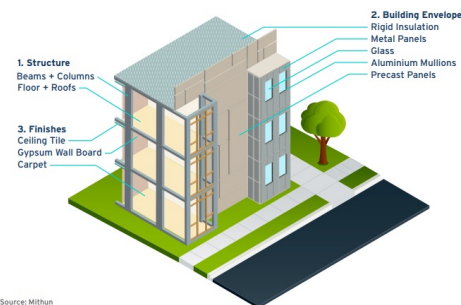


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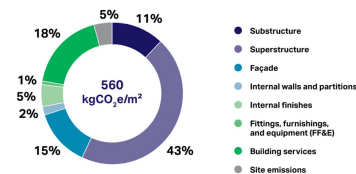
## What materials contribute most to a project's embodied carbon?

**Exhibit 2** Typical high-embodied-carbon structural elements, building envelope materials, and finish materials



1. Structure
2. Building Envelope
3. Finishes

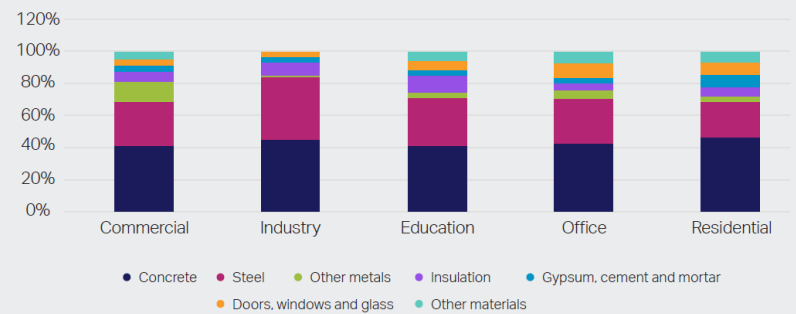
Figure 9: Upfront embodied carbon (A1-A5) average distribution across all six case studies



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## Does the project type impact embodied carbon?

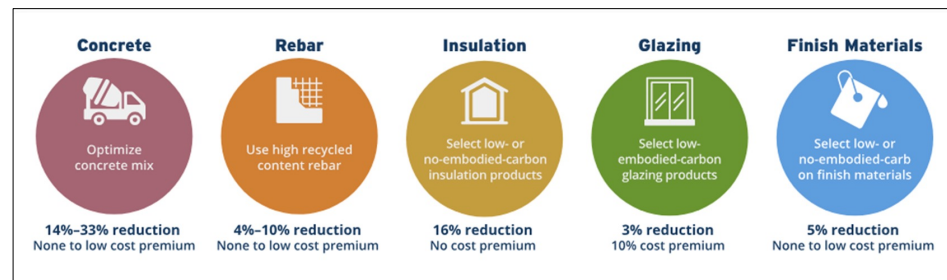
Figure 10: Embodied carbon breakdown by material for key building types<sup>17</sup>



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## What's the opportunity for impact?



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## Where can I find embodied carbon information?

- ▶ Environmental Product Declaration (EPD)
  - ▶ (Def) summary of the life-cycle assessment of a material's environmental and human health impacts
  - ▶ Primary metric for greenhouse gases: Global warming potential (GWP) reported in the following units: kgCO<sub>2</sub> / unit or quantity
  - ▶ Based on international standards, can be used for all types of goods and services, based in
- ▶ EPD includes:
  - ▶ Life-cycle assessment (LCA) results
  - ▶ Product description
  - ▶ LCA assumptions
  - ▶ The calculation rules used

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## Discussion

- ▶ What do I need to know?
- ▶ How this task force and their work impacting our work/business?

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## Resources

- ▶ Life-cycle analysis tools:
  - ▶ Athena: <https://www.athenasmi.org/what-we-do/lca-data-software/>
  - ▶ Tally: <https://www.buildingtransparency.org/tally/tallycat/>
  - ▶ One-click LCA: <https://www.oneclicklca.com/>
- ▶ EPD Databases
  - ▶ EC3: <https://carbonleadershipforum.org/ec3-tool/>
- ▶ Academic resources:
  - ▶ [Decarbonizing Construction: Guidance for Investors and Developers to Reduce Embodied Carbon](#)
  - ▶ [Reducing Embodied Carbon in Buildings: Low cost, High Value Opportunities](#)

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# Thank you!

## Questions?

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