

# CONCRETE SOLUTIONS GUIDE

# Conclusion and Resources





## Conclusion

Although concrete is frequently referred to as a "harder-to-abate" sector of the economy, opportunities abound for decarbonizing this industry using proven and scalable technologies. As producers, developers, and policymakers begin to mainstream these improved processes, they should also maintain an awareness of the rapidly developing innovations in this space, which promise to deliver further reductions in embodied carbon in the years to come.

### Resources

The solutions within this guide are a limited selection of actionable and cost-effective approaches to reducing embodied carbon in concrete. RMI continues to advance knowledge and practice of low-embodied-carbon building design, policy, and procurement. For resources related to RMI's work in embodied carbon, please visit:

https://rmi.org/insight/reducing-embodied-carbon-in-buildings

The following resources can help concrete purchasers and producers implement the opportunities highlighted in this guide:

#### Tools:

- Guide to Improving Specifications for Ready Mixed Concrete (https:// www.nrmca.org/wp-content/uploads/2020/10/GuideToSpecs.pdf)
- Embodied Carbon in Construction Calculator (EC3) (https:// buildingtransparency.org/ec3)
- SM Transparency Catalog (http://www.sustainableminds.com/)
- ZGF's Concrete LCA Calculator (https://www.zgf.com/news\_post/lcacalculator-reduces-concretes-embodied-carbon/)

#### **Reports:**

- RMI's *Reducing Embodied Carbon in Buildings* (https://rmi.org/ insight/reducing-embodied-carbon-in-buildings)
- Breakthrough Energy Manufacturing Policy Playbook: Manufacturing (https://www.breakthroughenergy.org/us-policy-overview/ manufacturing)

#### Embodied Carbon and LCA Research/Resources:

- CLF 2021 Material Baselines (https://carbonleadershipforum.org/ material-baselines/)
- Carbon Smart Materials Palette (https://materialspalette.org/ concrete/)

#### **Templates:**

- EPD Request Letter Template (https://www.buildingtransparency. org/resources/ec3-downloads/)
- Model Specifications (https://carbonleadershipforum.org/modellca-specifications/)

#### Voluntary Embodied Carbon Commitments:

- Engineers: SE2050 Commitment to Net-Zero (https://se2050.org/)
- Architects: 2030 Challenge for Embodied Carbon (https:// architecture2030.org/2030\_challenges/embodied/)
- Cities: C40 Clean Construction Declaration (https://www.c40.org/ clean-construction-declaration)

Compilation of Embodied Carbon Policy in the United States:

 CLF policy map (https://carbonleadershipforum.org/clf-policytoolkit/#map) Charles Cannon, Valentina Guido, and Lachlan Wright, *Concrete Solutions Guide: Six Actions to Lower the Embodied Carbon of Concrete*, RMI, 2021, http://www.rmi.org/concrete-solutions-guide/.

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