



SE 2050

Embodied Carbon Action Plan

2025

Dekker

DEKKER'S COMMITMENT TO SUSTAINABILITY

There is increasing pressure from scientists around the world to address the climate crisis we are in, noting that as a society we must reduce our carbon footprint to net zero much sooner rather than later. The construction industry alone is responsible for about a third of all annual global CO2 emissions each year. If we are to meet the ambitious and necessary goal of becoming carbon neutral in the coming years, the engineering behind our buildings must begin considering sustainability.

At Dekker, it's not just about the building. We pride ourselves in balancing multiple bottom lines at once to best serve the communities we impact, while also staying true to our culture. Sustainability has been a large part of that culture throughout our 60+ years of experience. We committed to the AIA 2030 Commitment in 2016 and have a dedicated sustainability team (Team Green) comprised of people from all over the firm.

Our team of architects, engineers, and designers aims to create places that not only celebrate communities, but that also honor and preserve natural resources – and ensure a healthy world that persists for generations to come. For these reasons, Dekker is excited to be a part of the SE 2050 Commitment Program.

TEAM

Dekker's in-house sustainability group, Team Green, will house our SE 2050 efforts. Team Green is comprised of representatives from all discipline areas across the firm that support and promote sustainable design.

Our Embodied Carbon Reduction Champion is Patience Dunlap of our Albuquerque office. Patience is a Structural Engineer who has spearheaded the firm's commitment to SE 2050. She is responsible for compiling embodied carbon data and ensuring that Dekker meets the SE 2050 Commitment requirements.



Contact

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From 2018-2023, Dekker avoided **50,000 tons** of carbon emissions each year. That's equivalent to:



750,417 tree seedlings grown for 10 years



1.7M incandescent lamps switched to LEDs



5.1M gallons of gasoline per year



105,000 barrels of oil per year



5.5B smartphones charged per year

Source: EPA Greenhouse Gas Equivalencies Calculator



Jefferson Green, Dekker's headquarters building – the first LEED Gold commercial building and the largest, most energy efficient LEED building in New Mexico at its opening

EDUCATION

Dekker takes pride in our commitment to sustainability and has an established infrastructure that will contribute to staff learning about embodied carbon. We are excited to better equip our engineers to approach design with a sustainability perspective.

The Embodied Carbon Reduction Champion will hold a workshop for the firm on our process for embodied carbon analysis and highlight some ways that embodied carbon can be reduced throughout a project.

Additionally, our company intranet features a page dedicated to resources for not only embodied carbon but also links to our ECAP and information about the SE 2050 initiative. This page also includes links to informational webinars, a list of the various tools used to analyze embodied carbon, and who to contact within the firm with questions or for project assistance.

Education Electives:

- **Provide a narrative of how the Embodied Carbon Reduction Champion will engage embodied carbon reduction at each office.**
- **Present at least one webinar focused on embodied carbon and make a recording available to employees.**
- Train all of your firm’s structural engineers on the core concepts and skills required to measure, reduce, and report embodied carbon.
- Create an Embodied Carbon digital resource wiki and/or forum on your firm’s internal website for staff to create, share, and discuss Embodied Carbon educational resources.

REPORTING

We plan to again submit embodied carbon data for 2 projects this year. The Embodied Carbon Reduction Champion is developing a simple tool and analysis process that will be worked into our current processes for ease of use within the project teams.

In New Mexico, we currently have limited access to regional Environmental Product Declarations (EPDs). Although, we are seeing that more local material suppliers are beginning to generate them. We will attempt to gather the most representative EPDs. In cases where we cannot find specific EPDs, we will plan to use more generic, industry average resources for EPDs (provided by organizations such as the National Ready Mix Concrete Association and the American Institute of Steel Construction).

Material quantities will be pulled from the available 3D models of the projects or estimated manually from drawings. We will perform a retrospective analysis on new construction projects that are either completed or in the construction phase. Our scope for the life cycle analysis will be focused on cradle to gate (A1-A5). We hope to expand this scope in the future.

Reporting Electives:

- **Submit a minimum of two projects per U.S. office with structural engineering services to the SE 2050 Database.**
- Include all structural material quantities in your submissions to the SE 2050 database.



Dekker Sustainable Systems Meeting



REDUCTION

Dekker has defined our internal embodied carbon baseline as the average of total estimated EC for projects completed in 2024 and before. Currently we have data for four projects that will contribute to this baseline. Our goal is to perform this analysis on six more projects this year to have 10 projects contributing to this data. We will passively continue to add to this database at time allows in future years.

Our short-term reduction target is to reduce project embodied carbon on projects this year by 5%. Our long-term reduction target is for projects to have 50% less embodied carbon as compared to the baseline by 2038.

With embodied carbon data, information, and guidelines currently in such a state of evolution and growth, we acknowledge that these targets and the baseline we are using may also evolve and grow.

Reduction Electives:

- **Set clearly stated, firmwide reduction targets in the short-term (<1 year) and long-term (>5years).**
- Update your specifications to incorporate embodied carbon performance. Include embodied carbon in your submittal review requirements.
Collaborate with your concrete supplier to reduce embodied carbon in a mix design.

ADVOCACY

Dekker will feature at least one article per year on our media platforms highlighting the firm’s commitment to SE 2050 and embodied carbon work going on within the firm. This first year, we will start a series of sustainability features on our media platforms that we envision will become a staple of our marketing efforts moving forward. We hope this sparks and encourages further conversations with clients, peers, and the public regarding sustainability.

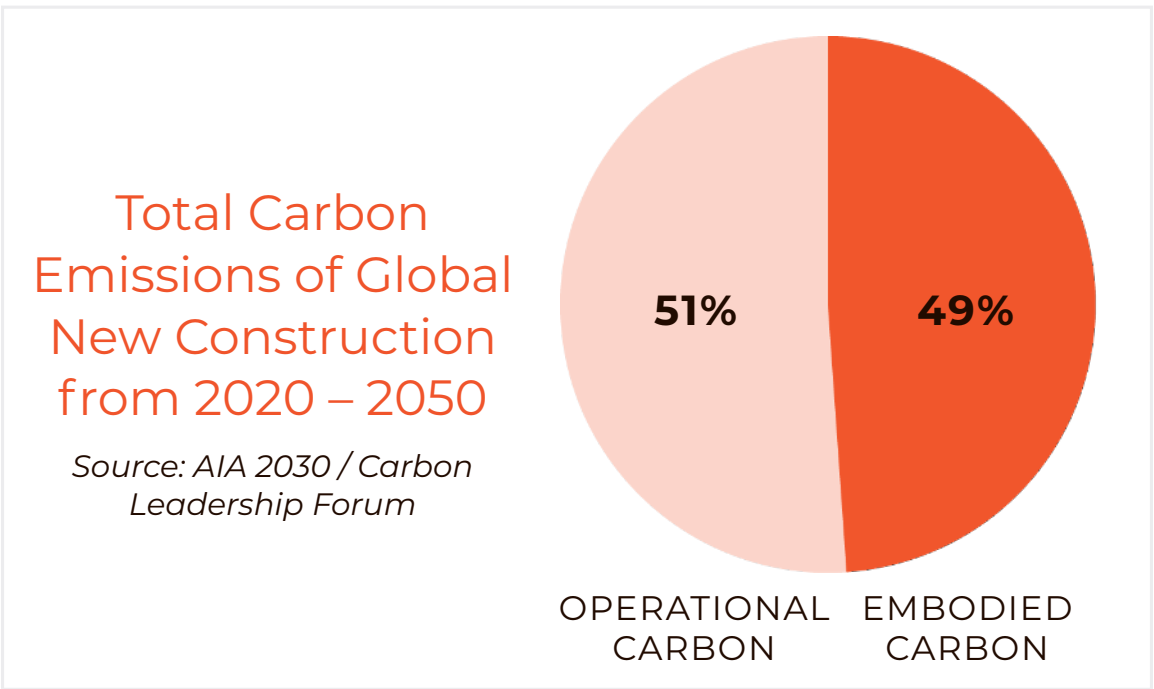
The Dekker website will feature a sustainability page with informational links regarding embodied carbon as well as this document for the public to view.

Advocacy Electives:

- Describe the value of SE 2050 to clients.
- Declare your firm as a member of the SE 2050 Commitment with boilerplate proposal language.

LESSONS LEARNED

Our firm continues to learn more about what it takes to not only perform embodied carbon analyses, but also what it takes to begin to integrate sustainability into our every day designs. We continue to work on our internal embodied carbon database and streamlining our analysis methods. We have begun to compile a library of sustainability-focused specifications. This year we aim to begin to populate our database with more than double the amount of projects and begin to request EPD’s within our specifications.



Embodied Carbon will be responsible for almost half of total carbon emissions from new construction between 2020 and 2050



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