



SE 2050 Program Requirements Guidance Document

These are the required submission items and their deadlines. Bolded items are items to be included in the Embodied Carbon Action Plan (ECAP), defined in the *ECAP Deliverables* section. Timely completion of these criteria is required to be considered a SE 2050 signatory firm. We hope to provide you with as much guidance as you need to complete these tasks. We will be contacting you about how and when to submit these items. Contact us at contact@se2050.org with questions or comments.

Immediately

- Submit a **Commitment Letter** from firm leadership
- Distribute an **Internal Announcement** announcing your firm's pledge to join SE 2050.
- Select and nominate an internal embodied carbon champion
- Declare your firm as a member of the SE 2050 Commitment
- Submit a high-resolution logo for us to include on our website
- Share embodied carbon resources with your firm
<https://se2050.org/resources-overview/embodied-carbon/embodied-carbon-resources/>

Within 6 months

- Submit your complete **Embodied Carbon Action Plan (ECAP)** including the sections below. ECAPs will be made public on the [SE 2050 website](#).
 - **Commitment Letter** (first year only)
 - **Internal Announcement** (first year only)
 - **Education Plan**
 - **Knowledge Sharing Narrative**
 - **Reduction Strategy**
 - **Reporting Plan**
 - **Elective Documentation**
 - **Lessons Learned** (each returning year)

Within 1 year

- Submit project data to SE 2050 database
- Present or host 'Embodied Carbon 101' webinar to your firm. This can be your own presentation or you can use an existing webinar, such as that from the [Boston Society for Architecture](#). Include this resource in your orientation/on-boarding program
- Electives as required in the Program Requirements Guidance Document

Returning year

- Submit updated ECAP that includes lessons learned and completion of electives from the previous year
- Update internal embodied carbon champion (if desired)
- Set a new embodied carbon reduction goal



Required ECAP Deliverables

Commitment Letter

An affirmation of your firm's commitment to the goals of the program. It must be signed by leadership of the firm and should contain:

- A statement affirming your firm is committed to the goals of the SE 2050 Commitment Program
- An explanation of your motivation behind this commitment
- A signature from a leader in the firm.

There is a [template](#) provided on the SE 2050 website. This is only required for your first year.

Internal Announcement

A notification for your employees of your firm's decision to join the SE 2050 Commitment. This is only required for your first year.

Education Plan

An outline of your firm's strategy to educate employees about embodied carbon. This internally focused communication is meant to empower your firm to take action within the scope of your commitment and beyond.

Knowledge Sharing Narrative

An outline of your firm's strategy to communicate your embodied carbon reduction work externally. This includes communicating your firm's efforts, successes, and lessons learned with clients, the design community, and the public.

Reduction Strategy

Specific and measurable goals to assess your firm's process in reducing embodied carbon in project work. You will have access to the [SE 2050 project database](#) and program resources to identify and set reduction strategies.

For the first year, this may be focused on tracking embodied carbon on all projects since you may not have established a baseline yet.

After the first year, include what you learned about embodied carbon reduction from the previous year and how you are updating your strategy.



Reporting Plan

A description of how your firm will measure, track, and report embodied carbon data. This should include a scope of how detailed your accounting will be and how many projects will be measured - a minimum of (2) projects per U.S. structural engineering office, not required to exceed 5 per firm per year. This plan should answer questions like:

- How will you calculate embodied carbon for structural materials?
- Do you have access to product- or region-specific Environmental Product Declarations (EPDs)?
- What life-cycle assessment (LCA) software(s) will you be using to quantify embodied carbon?
- What is the scope of your LCA (e.g. A1-A5, A-C, A-D)?
- How will you calculate material quantities and at which project stages?

See [this guide from IStructE](#) for how to calculate embodied carbon.

Elective Documentation

This document is a description of the electives your firm completed or intends to complete in the year of this ECAP submission. It is perfectly acceptable to change electives between ECAP submission and the end of year, but be sure to reflect on this in the *Lesson Learned* section the following year. The four categories of elective are listed below with descriptions of all available electives in the following pages.

- Education (2) required, (4) recommended
- Reporting (1) required, (2) recommended
- Reduction (1) required, (4) recommended
- Advocacy (2) required, (4) recommended

Lessons Learned

A summary of what you have learned as a firm over the previous year of embodied carbon reduction. Use this to inform your strategies for the coming year.

Electives

Bolded electives are required

Education: **(2) required**, (4) recommended

- **Distribute ECAP within your firm upon publishing.**
- **Make (1) webinar focused on embodied carbon available to employees.**
- Have one representative of your firm (any employee) attend quarterly external education programs (e.g. webinar, workshop) provided by SE 2050, [Carbon Leadership Forum](#) (CLF), or other embodied carbon resources.
- Share the SE 2050 [library of resources](#) with technical staff.
- Share embodied carbon reduction strategies with your firm as outlined in [Top 10 Carbon Reducing Actions for Structural Engineers](#) document produced by SE 2050.
- Nominate a minimum of (1) employee per office to participate in a [CLF Community Hub](#) and/or task force.
- Provide narrative outlining plans for minimum (2) firm-wide presentations per year on the topic of embodied carbon.
- Present the document, "[How to calculate embodied carbon](#)" to all technical staff.
- Minimum (1) employee attends a presentation or demo of an LCA-based tool used to calculate embodied carbon, such as Tally, Athena IEB, or One Click LCA.
- Initiate an embodied carbon interest group within your firm and outline their goals.
- Provide a narrative of how the Embodied Carbon Reduction Champion will engage embodied carbon reduction at each office. (intended for multi-office firms).
- Propose other actions promoting embodied carbon education and describe their value.

Reporting: **(1) required**, (2) recommended

- **Submit a minimum of (2) projects per U.S. office with structural engineering services to the SE 2050 Database.¹ You are not required to submit more than (5) total projects across your firm.**
- Submit all of your firm's projects to the SE 2050 database.
- Report a greater percentage of projects than you did the previous year.
- For a project submitted to the database, ask the Architect or Owner if the project has a carbon budget or if there are established project sustainability goals at the project kickoff meeting.
- Propose other actions that promote the reporting of embodied carbon data and describe their value.

¹ Firms are expected to follow with the spirit of the Program. International projects may be included. Projects delivered by international offices are acceptable, but do not count toward the U.S. total required. Additional exclusions include offices established for the primary purpose of construction administration and offices with less than (5) full-time employees.

Reduction: (1) required, (4) recommended

- Communicate the embodied carbon impacts of different design options to clients with creative data visualization. Include these visualizations in your Elective Documentation.
- Project case study sharing embodied carbon reduction successes and lessons learned
- Create a project-specific embodied carbon reduction plan.
- Complete an embodied carbon comparison study during the project concept phase.
- Participate in a LEED, ILFI Zero Carbon, or similar project design charrette and speak to potential design considerations impacting embodied carbon.
- Calculate your firm average benchmark for embodied carbon.
- 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.
- Work with a contractor during material procurement to meet an embodied carbon performance criteria on at least (1) project.
- Have an Environmental Product Declaration (EPD) created for a project.
- Incorporate biogenic materials on at least one project.
- Submit a Circular Economy Narrative describing how the project supports the circular economy. This can be done by incorporating re-use or design for deconstruction into at least one project.
- Report weight and method of transportation of structural material. Track how much is processed for recycling/salvage and sent to landfill, including material generated during demolition and construction activity. Include at least four material streams (e.g. concrete, metal, wood, gypsum wallboard, paper and cardboard, plastic).
- Integrate embodied carbon mitigation strategies in your General Notes.
- Propose other embodied carbon reduction strategies and describe their value.

Advocacy: (2) required, (4) recommended

- **Describe the value of SE 2050 to clients. How can your design teams collaborate to reduce embodied carbon? Please attach any associated marketing materials**
- **Declare your firm as a member of the SE 2050 Commitment with boilerplate proposal language.**
- Share your commitment to SE 2050 on your company website.
- Give an external presentation on embodied carbon that demonstrates a project success or lessons learned (Tip: Get connected at a CLF local hub near you!).
- With the owner or client, discuss a facility- or product-specific EPD requirement for structural materials.
- Share education opportunities with clients.
- Encourage industry and policy change by promoting and using low-carbon and carbon-sequestering materials.
- Start an embodied carbon community of practice or mentorship program in your office.
- Mentor a firm new to the embodied carbon space.
- Propose alternative methods for advocacy and describe their value.