SE 2050 ECAP Submission Form

Email *

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Firm Name *

Gresham Smith

Education

The first step to increased engagement within your firm is through education. We all should strive to understand the impacts of our design decisions and their effects on our environment.

Distribute firm-wide announcement of your firm's pledge to join the SE 2050 Commitment. *

- (●) Completed
- ( ) Not Completed

Provide a brief narrative describing how your firm is promoting a firm-wide education program for embodied carbon reduction and the firm's commitment to SE 2050. *

The structural department at Gresham Smith is working with our firmwide ESG group as well as our Sustainability & Resiliency Center to create a road map for the future when it comes to embodied and operational carbon. During 2022 we primarily focused on education, seeking out as many opportunities as we could to teach our staff about the important role structural engineers can play when reducing embodied carbon in our designs. We had representatives from Nucor and NRMCA present on both structural steel and concrete mix design, and attended NCSEA webinars relating to mass timber design and getting to net zero. We are very excited about where the industry is headed and look forward to continuing to provide educational opportunities to our staff that reflect these changes.

Name of Embodied Carbon Champion (Point Person) *

Allison Hampton

Email of Embodied Carbon Champion *

allison.hampton@greshamsmith.com

Phone number of Embodied Carbon Champion *

615-770-8607

LinkedIn URL

https://www.linkedin.com/in/allison-hampton-pe/

Set a date within the first year to present the “Embodied Carbon 101” Webinar to your firm. Incorporate this information into your orientation/on-boarding programs. *

- (●) Committed / Completed
- ( ) Not Committed / Not Completed

Minimum (1) additional elective to educate your firm about embodied carbon and a narrative of its significance. *

- (●) Committed / Completed
- ( ) Not Committed / Not Completed

ELECTIVES (Min. (1) required, recommended to achieve (4) per year): *

- [x] 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.
- [x] Share the SE 2050 library of resources with technical staff.
- [x] Share embodied carbon reduction strategies with your firm as outlined in Top 10 Carbon Reducing Actions for Structural Engineers document produced by SE 2050.
- [x] Nominate a minimum of (1) employee per office to participate in a CLF Community Hub.
- [ ] Provide narrative outlining plans for minimum (2) firm-wide presentations per year on the topic of embodied carbon
- [x] Present the document, “How to measure and report embodied carbon” to all technical staff.
- [x] Attend a presentation or demo of an LCA-based tool used to calculate embodied carbon.
- [ ] Initiate an embodied carbon interest group within your firm and provide a narrative of 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)
- [ ] Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Reporting

Quality data is essential to making informed decisions and setting important benchmarks and the development of appropriate embodied carbon reduction targets. The SE 2050 database is a central component to building a successful Commitment Program and reaching our collective embodied carbon reduction goals by 2050.

Submit an annual minimum of (2) projects per U.S structural office or (5) total projects for the firm to the SE 2050 Database. *

- ( ) Completed
- (•) Committed and on track
- ( ) Need help reaching this target
- ( ) Not Completed

Number of Projects Reported Last Year (zero in first year)

2

Number of Offices Reporting Last Year (zero in first year)

1

Provide a narrative on how your firm plans to measure, track, and report embodied carbon data. *

We are still working through our baseline for measuring, tracking, and reporting carbon data. During year 1 we utilized both Tally and Excel based measurements that were accompanied by data from EC3. Moving forward we are hoping to come up with a standard that provides guidelines on the best way to measure embodied carbon depending on the project phase and project scale. We will most likely continue to use a combination of Tally and EC3.

Describe the internal training for embodied carbon measurement you provided or will provide. *

Thus far our embodied carbon champion has done one presentation on Tally, with the intent to present more on it in the future when our measurement standard is better established.

ELECTIVES (Not required, recommended to achieve (1) per year):

- [ ] Submit all projects to the SE 2050 Database
- [ ] Meet your target average embodied carbon reduction from the previous year.
- [ ] Report a greater percentage of projects than the preceding 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.
- [ ] Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Embodied Carbon Reduction Strategies

Embodied carbon reduction of structural materials is the ultimate goal of the SE 2050 program. As a starting point, you will have access to the SE 2050 project database and Program resources to identify and set strategies. This section also serves to share lessons learned and incite innovation. Demonstrate leadership by not only applying, but developing best practices and actively collaborating with the design community. This is our profession's opportunity to take action and make an impact.

Set an EC reduction goal for the coming year and an implementation narrative (Qualitative goals focused on education are appropriate for the first year) *

Our current goal is to create our standard for EC measurement and tracking, and teach this methodology to our entire structural team so that any engineer within the group will be able to report on their project's embodied carbon.

For second year’s ECAP and beyond, provide a narrative about what you have learned about embodied carbon reduction in the past year. Describe successes and misses to help the program improve.

The first difficult lesson we learned during Year 1 is that it can be very difficult to find the time to commit to creating these changes if it is not a priority of the full project team or the owner. Many of the long term changes we would like to implement need to be made without any impetus from project relates goals, and in order to do that we will need to take our own time to commit to making these changes. It can be hard to do that when you are a full time project engineer wearing many different hats. We have also learned that even with the best intentions, sometimes EC reductions will fall short when relying on things like concrete mix design. Sourcing supplemental materials can be difficult depending on regional supply.

Minimum (1) additional elective to educate your firm about embodied carbon and a narrative of its significance. *

- (●) Committed / Completed
- ( ) Not Committed / Not Completed

ELECTIVES (Min. (1) required, recommended to achieve (4) per year): *

- [ ] Incorporate data visualization into your ECAP. How are you looking at data to make informed design decisions and communicate design options to your clients?
- [ ] Provide a project case study in your ECAP that captures a reduction of embodied carbon or some lessons learned.
- [ ] Create a project-specific embodied carbon reduction plan.
- [ ] Complete a system embodied carbon design comparison study during the project concept phase.
- [ ] Participate in a project LEED design charrette and speak to potential design considerations impacting embodied carbon.
- [ ] Calculate your firm average benchmark for embodied carbon.
- [ ] Update your specifications and incorporate embodied carbon performance. Include embodied carbon in your submittal review requirements.
- [x] 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 as a result of a project.
- [ ] Incorporate biogenic materials on at least one project annually.
- [ ] Provide a narrative of how circular economy has been used on your projects. Incorporate re-use or design for deconstruction into at least one project.
- [ ] Quantify construction waste reduction on a project and the impact to embodied carbon.
- [ ] Integrate embodied carbon mitigation strategies in your General Notes.
- [ ] Other actions you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Advocacy

True change can only come with industry-wide adoption. This section recognizes that our impact reaches beyond any one firm. Plan opportunities to share your experience and knowledge within your firm, with your design community, and beyond. Host a webinar or lunch ‘n learn, attend a conference, connect with the SEI Sustainability Committee, or reach out to manufacturers and policy-makers.

Provide a narrative about how you plan to share knowledge and data to accelerate adoption of embodied carbon reduction. *

As stated in our first narrative in this ECAP we will be working closely with our ESG group as well as our SRC to create internal educational programs. These programs will cover the bases of why reducing embodied carbon is important but will also take lessons learned from various types of projects. In the very long term we would eventually like to get to a point where we can easily run an LCA on any project and create a database for project comparison, and slowly improve from our baseline.

Describe the value of SE 2050 to clients. How can we collaborate to drive adoption? At your option, attach any associated marketing materials. *

We want to provide our clients with a product they can be proud of, both aesthetically and environmentally. SE 2050 has demonstrated that reducing embodied carbon is feasible and at the same time does not have to break the bank of the client. Many things can be implemented through specifications that will greatly reduce the embodied carbon of a project while still providing an economically designed structure. We hope that by committing to slowly making changes within our firm that we can encourage clients to make changes to their design practices as well.

Optional: Upload any documents you would like to exhibit.

Declare your firm as a member of the SE 2050 commitment on boilerplate proposal language. *

- (●) Committed / Completed
- ( ) Not Committed / Not Completed

ELECTIVES (Not required, recommended to achieve (2) per year):

- [ ] 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!)
- [ ] Discuss with the Owner / Client the option of requiring that some of the structural materials come with facility-specific or product-specific EPDs
- [ ] Share education opportunities with clients
- [ ] Provide a narrative of how you have encouraged industry and policy change incentivizing availability of low-carbon and carbon sequestration materials
- [ ] Start an embodied carbon community of practice or mentorship program in your office
- [ ] Mentor a firm new to the embodied carbon space
- [ ] Other action you feel appropriate and a narrative for why.

Elective Narrative (Optional):

Program Feedback

Please add any comments that you wish to share publicly. The Program Leadership Group is committed to transparently improving SE 2050.

Comments: