

SE 2050 ECAP Submission Form (No PDF)

Email *

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Firm Name *

Buro Happold

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. *

We promote a firm-wide education program within our US region, via the following:

- Global internal trainings / webinars on sustainability in structural engineering, from across the practice
- Onboarding training to new engineers, with access to additional reference documentation
- An internal 'embodied carbon playbook' for guidance to engineers at various stages of a project
- Structural sustainability committee, which includes engagement from across our US offices for dissemination of information.
- Embodied carbon cheat sheet, for company leadership to incorporate into project proposals and educate clients

Name of Embodied Carbon Champion (Point Person) *

Fraser Reid

Email of Embodied Carbon Champion *

fraser.reid@burohappold.com

Phone number of Embodied Carbon Champion *

9174440002

LinkedIn URL

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): *

- ☒ 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.
- ☐ Provide narrative outlining plans for minimum (2) firm-wide presentations per year on the topic of embodied carbon
- ☐ Present the document, "How to measure and report embodied carbon" to all technical staff.
- ☐ 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):

Education is a pivotal step in tackling climate change. Only with a common understanding of the impending climate crisis can we begin to take steps to reduce the environmental impacts of the built environment. Buro Happold's North America Region has taken significant steps to educate our team about the importance of sustainability and how as structural engineers we can influence the impact of our designs.

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)

5

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

5

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

Buro Happold have developed several embodied carbon measurement tools for engineers to utilize and these will continue to be used over the coming year. The internal, structures Web-Based Embodied Carbon Calculator has been developed to give an accessible, easy-to-use option for all engineers. This has a manual data entry function for early-stage assessments as well as a bulk excel import function for handling larger datasets. US EPD values have been uploaded alongside values from around the world and the tool is used globally across all offices.

The data reported from these reviews is collected in the Building Performance Dashboard, alongside other sustainability metrics such as operational carbon, to give a holistic overview of a design's performance.

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

Internal webinars for the web-based embodied carbon calculator and building performance dashboard tools.

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):

Buro Happold have set clear reporting targets to ensure that embodied carbon is measured across our project portfolio. As a minimum, all major projects must have an embodied carbon assessment carried out at each design stage in order to track reduction through the design and to benchmark against similar types of projects.

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) *

Buro Happold has set a public EC reduction target for all new buildings, major retrofits and infrastructure projects by 50% by 2030

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.

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.
- ☐ 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):

Innovation is deeply engrained in the history of Buro Happold, through early pioneering work with tensile membrane structures to delivering world class iconic buildings. Throughout this history our clients have valued our efficient designs and sustainable approach to structural engineering. Reducing the embodied carbon of our designs is an extension of this history and a key aspect of our global firm wide sustainability goals. We aim to reduce the embodied carbon intensity of our designs by 50% by 2030.

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. *

In addition Buro Happold is an active advocate about embodied carbon within the wider industry, through committee participation, presentations, and publications.

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

At Buro Happold, we recognize the role that embodied carbon plays in the broader building decarbonization effort and embrace structural engineers as critical gatekeepers for reducing embodied carbon. Structural engineers hold tremendous credibility within the design team. We exist to ensure that a building is safe to inhabit. By advocating for embodied carbon reduction strategies related to structure, we extend that responsibility to ensuring a safe planet for future generations.

Optional: Upload any documents you would like to exhibit.

 Add file

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:

At Buro Happold, we believe collective action is the best way to address the climate and biodiversity crisis. It is our responsibility to design and create environments that are sustainable and fair. With this in mind, Buro Happold is proud to commit to the SE 2050 program with the explicit goal of achieving net zero carbon by 2050.

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