

SE 2050 ECAP Submission Form (No PDF)

Email *

khung@des-ae.com

Firm Name *

DES

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. *

Share the SE2050 Commitment slide deck with all staff.

Encourage and incentivize employees to become knowledgeable in embodied carbon reduction strategies, code requirements and best practices.

Provide time, training, study stipends and resources to employees to participate and invest in embodied carbon research, tools and education.

Provide periodic update on DES' progress on SE2050 Commitment reporting and exemplary project examples.

Name of Embodied Carbon Champion (Point Person) *

Tom Parrish

Email of Embodied Carbon Champion *

tparrish@des-ae.com

Phone number of Embodied Carbon Champion *

650-980-4820

LinkedIn URL

linkedin.com/in/tom-parrish-520bb58

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):

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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. *

For all new design and construction projects, DES will work with the clients to understand and develop carbon emission reduction goals and assist the design team in evaluating the carbon impacts of different design solutions. (establish the goals)

For all new projects that are targeted for LEED certification, embodied carbon will be measured using Tally's Whole Building Life Cycle Assessment (LCA) plug-in in Revit. Training will be provided to our architectural and structural teams regarding modeling guidance for seamless Tally integration for our projects

DES has implemented an Integrated Sustainable Design and Deliverables checklist, which will mandate SE2050 reporting for applicable projects at the end of each project phase.

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

Our internal training will focus on the following aspects -

CalGreen code and LEED requirement

Carbon analysis - Early design optimization and WBLCA

Cement replacement, SCM and Low-carbon Concrete Specification

Structural systems and alternates

Building enclosure and facade design

Embodied carbon benchmark for projects

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) *

Short-term

Provide periodic update on DES' progress on SE2050 Commitment reporting and complementary project examples.

Long-term

For all new projects that are targeted for LEED certification, embodied carbon will be measured using Tally's Whole Building Life Cycle Assessment (LCA) plug-in in Revit. Training will be provided to our architectural and structural teams regarding modeling guidance for seamless Tally integration for our projects

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 TC Retail project was a great example of adaptive building re-use project that benefited from preserving the existing building structure (garage) and right sizing the new addition to meet the intended functions and program requirement. With this strategy of balancing "new built versus preservation" and utilizing light-weight structural materials with high-recycled content, we're able to reduce significantly the embodied carbon footprint of the project. For the 185 Park project, we continued to collaborate with the GC and concrete supplier to evaluate and refine the cement replacement % for the concrete-structure. While the cement alternate for some structural elements did not meet the specified replacement goal due to performing requirement, their quantities were relatively insignificant. The project was still able to meet CALGreen and LEED threshold.

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):

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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. *

DES has developed a 5-step approach to embodied carbon reduction. Provide details... links to the blog post and graphic.

<https://www.des-ae.com/news/carbon-smart-design>

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

DES is a signatory of AIA 2030 and SE 2050 commitment, of which we're committed to reaching net zero operational carbon emissions for all our projects by 2030 and embodied carbon emissions by 2050. Every new project is pledged to practice and incorporate design strategies and best practices to achieve incremental improvement in energy performance and embodied carbon reduction and ultimately reach AIA 2030 and SE 2050 goal of zero carbon buildings. Since 2019, our projects continued to improve on EUI reduction improvement towards the AIA 2030 goal with all reported building projects.

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):

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Program Feedback

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

Comments:

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