

SE 2050 ECAP Submission Form

Email *

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Firm Name *

Clark Nexsen

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. *

Our SE2050 group meets regularly with a multi-discipline group focused on overall energy and carbon reduction in our designs. At a project level, members of the SE2050 group have advised on specifications and material selections to reduce embodied carbon. Our structural and architectural teams meet to review target projects and discuss improving practices and opportunities for carbon reduction.

Name of Embodied Carbon Champion (Point Person) *

Peter Allen

Email of Embodied Carbon Champion *

pallen@clarknexsen.com

Phone number of Embodied Carbon Champion *

7579617878

LinkedIn URL

<https://www.linkedin.com/company/clark-nexsen/>

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):

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)

2

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

We use primarily Tally and EC3 to measure and track embodied carbon data on our projects, at each major submittal phase.

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

Our SE2050 group meets regularly to discuss available tools and how to better utilize them on projects. We share knowledge and lessons learned with an architecture-based embodied carbon group, and work with them to improve our measurement capabilities.

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)

For our second year, we are working to increase the quantity and quality of our embodied carbon measurement and reporting. We will add to our project database, perform EC analysis, update specifications, and collaborate with design teams to incorporate embodied carbon into our process.

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.

One of the most important steps to reducing embodied carbon is to mindfully choose materials and use them as efficiently as possible. By asking for EPDs and carbon data in product submittals, we can improve awareness and participation with product manufacturers. More product and region-specific information will improve the accuracy of our reporting, allowing us to use more recent, more local, information as a basis for our LCA.

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):

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. *

A member of our in-house SE 2050 team has started the Sustainable Design Committee with the Structural Engineers Association of North Carolina to encourage other structural engineering firms in the state to join the SE 2050 challenge and create a forum for knowledge share regarding embodied carbon reduction in building structures.

The Clark Nexsen SE 2050 team is also collaborating with our architects in a monthly 1-hr. meeting on embodied carbon reduction strategies that we can use on our projects.

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

At Clark Nexsen, we believe that “together we discover, inspire, and shape ideas that transform our world.” We invite our clients to partner with us to understand embodied carbon and evaluate the environmental impacts of each project, with the goal of reducing embodied carbon in our designs while helping our clients achieve their own climate change initiatives. As part of our Integrated Design approach, we ask every team member, including our clients, to provide technical and operational input to fulfill the sustainability goals of the project. To summarize our sustainable designs from the previous year and plans for the coming year, Clark Nexsen annually publicizes an Integrated Design Sustainability Report and Action Plan, available here: https://issuu.com/clarknexsen/docs/clark_nexsen_sustainability_report_2022_issue

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):

Our commitment to SE 2050 is written in our "Integrated Design" and "Embodied Carbon Action Plan" publications found on our website here: <https://www.clarknexsen.com/publications/>

Having completed a basic life cycle assessment on 5 in-house projects, we are now mentoring our other structural engineers on how to perform a life cycle assessment on their projects and how to revise their project specifications to be more sustainable (e.g., performance-based concrete spec). We are also now working with our architects to complete a Whole Building Life Cycle Assessment.

As a leader in reducing embodied carbon in NC, our representation on the SEA of NC Sustainable Design Committee allows us to share our progress with other structural engineering firms on the committee, understand what changes we all can make in designs and specifications to lower embodied carbon, and learn how to perform a building life cycle assessment. In our monthly meetings, we share ideas and answer each other's questions. https://seaofnc.org/Sustainable_Design_Committee

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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