

Embodied Carbon Action Plan 2026



Büro Ehring Engineering P.C.
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Education

BE's architectural engineering practice is committed to the acquisition and transfer of knowledge underpinning sustainable solutions for the built environment. Our education approach will not only serve to train our staff regarding our SE2050 initiatives, but also prompt staff to individually raise our peer's awareness through engagement in open discussions regarding embodied carbon reduction methods early in the project phases. In order to achieve the goals of the SE2050 commitment, we have implemented the following:

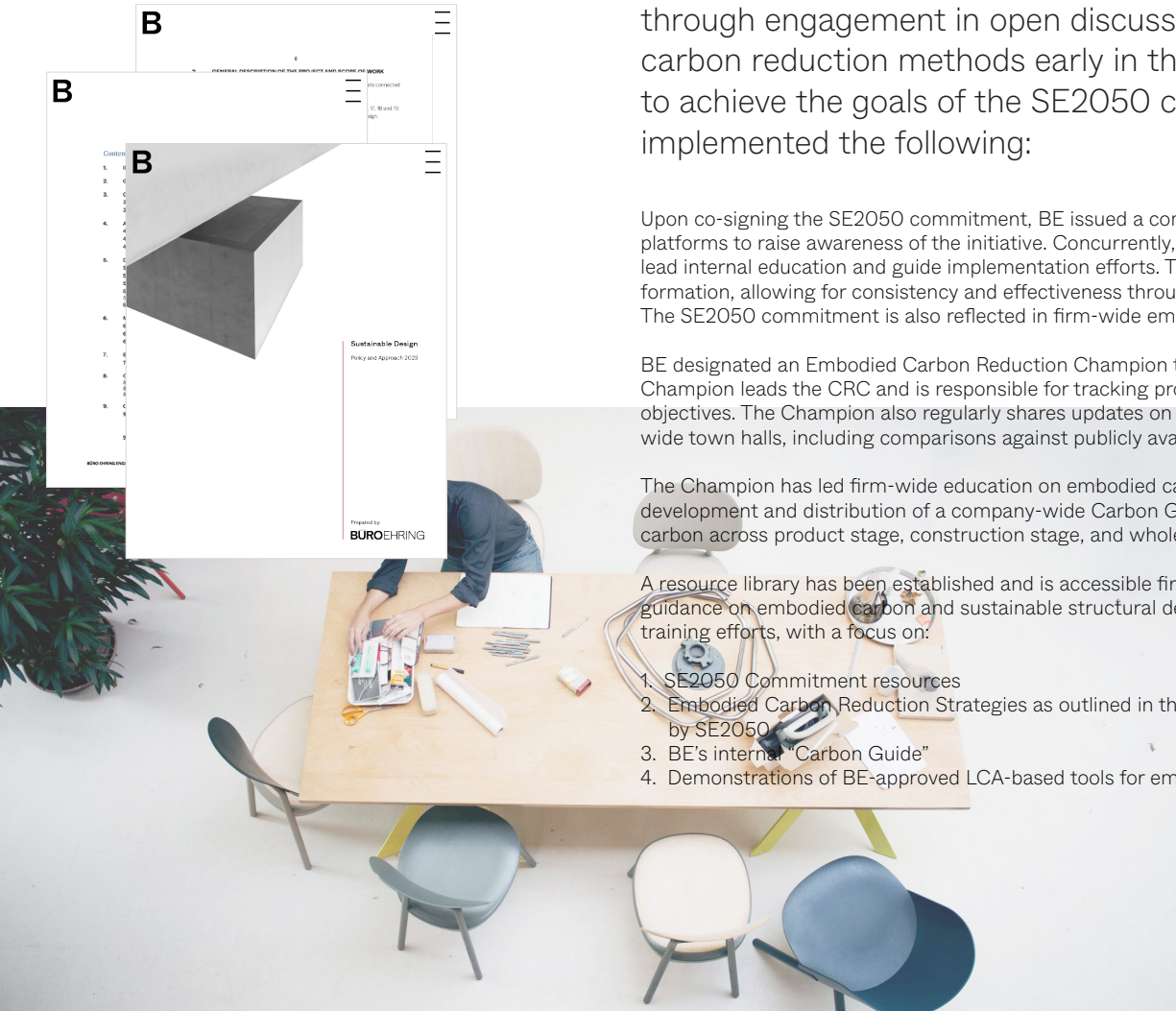
Upon co-signing the SE2050 commitment, BE issued a company-wide announcement via its intranet and social media platforms to raise awareness of the initiative. Concurrently, a Carbon Reduction Committee (CRC) was established to lead internal education and guide implementation efforts. The composition of the CRC has remained unchanged since its formation, allowing for consistency and effectiveness through continued hands-on engagement and direct project experience. The SE2050 commitment is also reflected in firm-wide email signatures to reinforce visibility of the initiative.

BE designated an Embodied Carbon Reduction Champion to advance carbon reduction initiatives across all disciplines. The Champion leads the CRC and is responsible for tracking progress and ensuring alignment with BE's SE2050 ECAP goals and objectives. The Champion also regularly shares updates on BE's ongoing embodied carbon data collection during company-wide town halls, including comparisons against publicly available benchmarks.

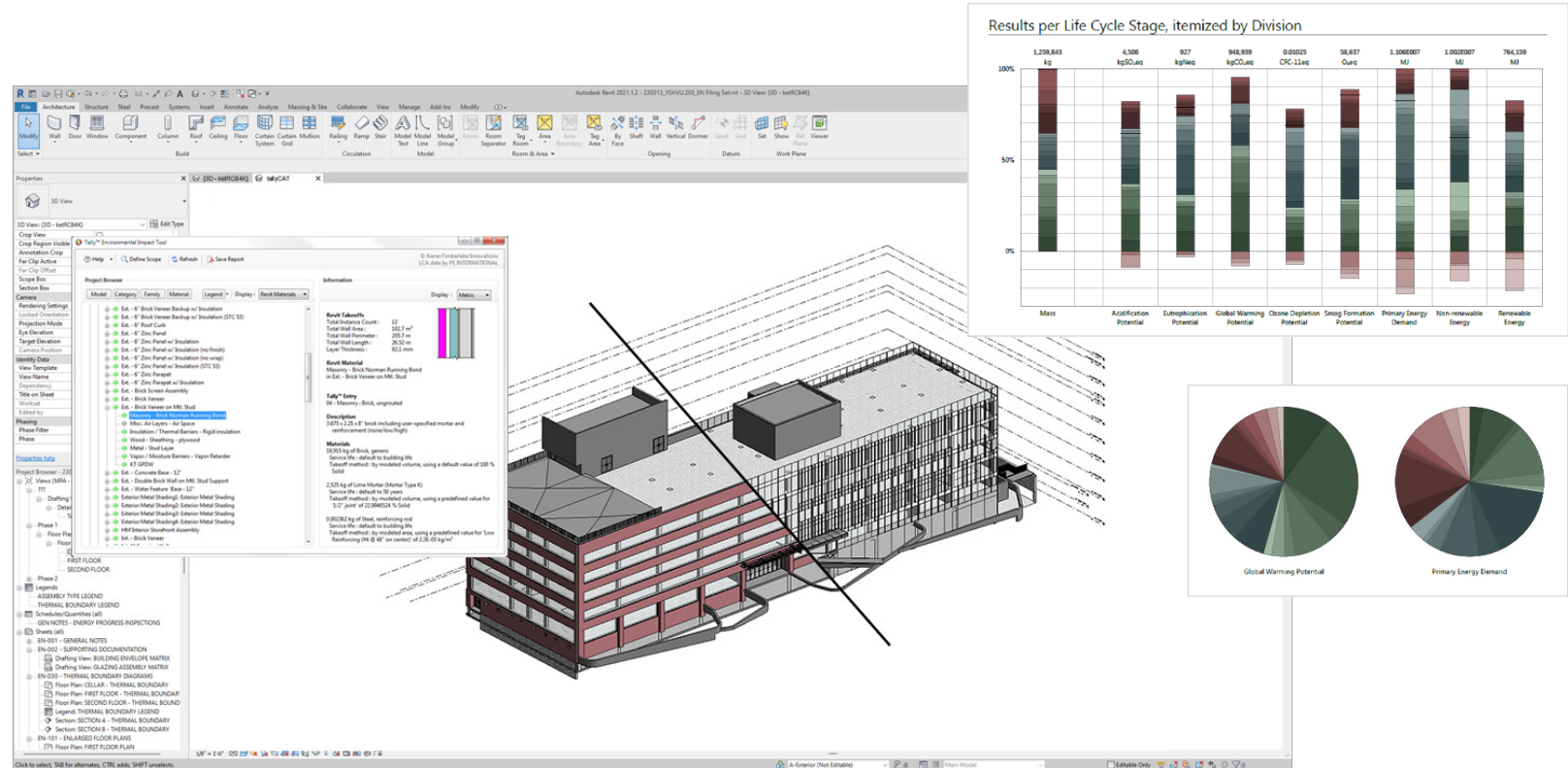
The Champion has led firm-wide education on embodied carbon and BE's approach to addressing it. This includes the development and distribution of a company-wide Carbon Guide, which outlines methodologies for measuring embodied carbon across product stage, construction stage, and whole-building life cycle assessment (WBLCA).

A resource library has been established and is accessible firm-wide, including research papers, seminars, and technical guidance on embodied carbon and sustainable structural design. These materials support ongoing internal forums and training efforts, with a focus on:

1. SE2050 Commitment resources
2. Embodied Carbon Reduction Strategies as outlined in the "Top 10 Carbon Reducing Actions for Structural Engineers" by SE2050
3. BE's internal "Carbon Guide"
4. Demonstrations of BE-approved LCA-based tools for embodied carbon analysis



Reduction Strategy



BE's Carbon Reduction Committee (CRC) has led the firm's carbon reduction strategy in alignment with SE2050 goals and internal benchmarks. To support these efforts, the CRC explored and developed a framework pairing BIM modeling (Revit) with LCA software (TallyCat) to efficiently generate embodied carbon estimates at various stages of design and construction.

Recognizing that meaningful reductions in embodied carbon are driven by efficient material use, BE established workflows to enable rapid and flexible carbon estimation during early design phases, with a focus on life cycle stages A1–A3 (material supply through manufacturing). This approach has informed design strategies at stages where the greatest impact can be achieved.

Due to variability and uncertainty in supply chains and construction logistics since joining the initiative, BE has not yet consistently incorporated LCA stages A4–A5 (transport and construction) into its analyses. This remains an ongoing effort, and the firm is actively working toward improving data reliability and integration in future assessments. In the interim, BE continues to prioritize A1–A3 as the primary focus for embodied carbon reduction.

To advance lower-carbon design and construction, BE has implemented the following strategies:

1. Updated general notes to include performance-oriented EPD requirements for common structural materials, enabling suppliers to meet defined acceptance criteria.
2. Updated Revit modeling standards to facilitate accurate material quantity takeoffs compatible with LCA tools (e.g., Tally).
3. Evaluated multiple design schemes and material options with clients during early project phases to compare embodied carbon intensity.
4. Optimized material usage and tracked embodied carbon during later project phases to support continuous reduction efforts.

Reporting + Measuring

At Büro Ehring, our commitment to sustainability has been reflected in the tracking and reporting of embodied carbon across our projects. During 2025, carbon assessment was integrated into our design workflows, allowing evaluation of environmental impact at multiple stages of project development. Utilizing tools such as TallyCat, the team identified opportunities for reduction and informed design decisions to improve overall project performance.

Operational carbon has not yet been formally tracked within our project workflows; however, it is actively studied and addressed through BE's recently implemented sustainability services, which expand the firm's capabilities in energy analysis and building performance.

As a firm specializing in both structural systems and thermal envelopes, BE approached carbon data collection from multiple perspectives, including material selection, system efficiency, and thermal performance. This integrated approach has enabled the team to provide clients with informed strategies to reduce environmental impact while maintaining performance and constructability.

BE also established a process for documenting BIM-based projects and contributing data to the SE2050 database, successfully submitting two projects in 2025. Building on this effort, the firm aims to submit at least two additional projects in the 2026 calendar year to support continued benchmarking and industry knowledge sharing.

In support of these initiatives, BE developed an internal sustainability dashboard that allows project teams to set goals, compare performance across projects, and track progress against firm-wide metrics. This platform has supported transparency, accountability, and continuous improvement, and will continue to be used to advance carbon reduction efforts.



Advocacy

Büro Ehring believes that education is a cornerstone of advocacy. We champion sustainability through a multifaceted approach encompassing in-house and client education, academic engagement, and industry collaboration, fostering a culture of continuous learning and innovation to build a greener future.

We recognize that our commitment to sustainability goes beyond our project work and extends into the realm of continuous learning and collaboration. Our dedication to in-house education is exemplified through regular Town Halls, where employees from different disciplines and levels of experience come together to share ideas, expertise, and best practices in structural engineering and facade design. These gatherings foster an environment of knowledge transfer, allowing us to innovate and consistently deliver high-quality, sustainable solutions.

Moreover, we understand the value of empowering our clients with up-to-date knowledge of sustainability practices in the industry. By providing them with comprehensive guidance and resources, we enable them to make informed decisions about building greener and more environmentally friendly structures. Our collaborative approach ensures that our clients are not just beneficiaries of our expertise but active participants in the quest for a more sustainable built environment.

Büro Ehring's commitment to fostering a sustainable future also extends to the academic community. Our leaders actively engage with universities, delivering lectures and sharing valuable insights with the next generation of industry professionals. By nurturing their growth and understanding, we contribute to the development of a well-informed and skilled workforce that can carry the mantle of sustainable design forward.

Finally, we recognize the importance of building strong relationships with our partners in the field. By participating in conferences and industry events, we connect with like-minded professionals, exchange ideas, and forge collaborative partnerships. These interactions facilitate the ongoing refinement of our methods and approaches, driving our mission to create better and more sustainable buildings for a greener future.



Sustainability Team

As a team of innovators, problem solvers, and craftsmen, we are committed to building a better future for the world around us. We believe in having a firm with diverse knowledge and expertise allowing us to design in a collaborative atmosphere and enable our creative minds.

Our talented and dedicated nature as individuals, along with our interdisciplinary experience, allow us to find cutting-edge solutions for our clients and collaborators.



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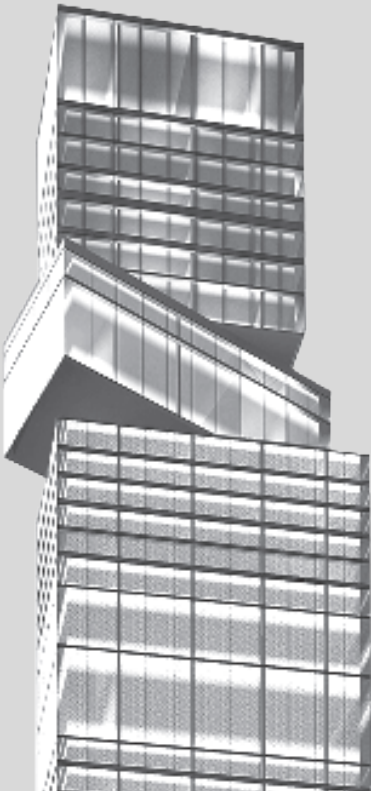
SE2050 Embodied Carbon Champion

Lessons Learned

Through the implementation of BE's embodied carbon reduction strategies as part of the SE2050 commitment, the firm has gained valuable insights into both the opportunities and challenges associated with integrating carbon tracking into design workflows.

The experience of developing internal tools, establishing data collection processes, and applying these methods across active projects has highlighted areas of success as well as aspects requiring further refinement.

1. Integrating embodied carbon considerations into existing optioneering workflows has proven to be an effective approach for introducing this metric early in design, helping to keep it top of mind for both the design team and the client without adding additional process complexity
2. The inclusion of sustainability requirements within general notes and specifications has been a straightforward and effective way to formalize project goals. Careful coordination ensures alignment across the project team and consistent implementation.
3. Life Cycle Assessment stages A1–A3 (material supply through manufacturing) have provided a reliable and accessible foundation for embodied carbon analysis, allowing teams to focus efforts where the greatest impact can be achieved.
4. Selecting appropriate tools at each stage of design has been critical to successful implementation. Tools that are intuitive and aligned with existing workflows have enabled broader adoption across project teams.
5. Incorporating the SE2050 commitment into everyday communication, including email signatures and marketing materials, has helped generate organic and productive discussions with clients and collaborators.
6. Meaningful reductions in embodied carbon have often been achieved through optimization of conventional construction approaches, including material specifications, mix designs, and sourcing strategies.
7. Maintaining consistent internal visibility of embodied carbon initiatives has reinforced their importance as a core design consideration, supporting ongoing engagement across the firm
8. Continued development of standardized approaches to data inputs, including Environmental Product Declarations (EPDs), has supported more consistent and reliable embodied carbon assessments.
9. Tracking and benchmarking project data over time has provided valuable insight into performance trends, supporting informed decision-making and continuous improvement.



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Büro Ehring collaborates with architects, developers, owners, and contractors to find creative solutions for demanding projects. Since our founding, we have held firm to our defining tenets of responsive client service, practical application of engineering principles, innovative and creative problem solving, professional leadership, and commitment to quality. We support novel architectural designs with structural systems that are also constructible and reliable. Büro Ehring has a successful history of creatively collaborating with architects and owners to help them achieve visionary designs for building enclosures while providing the best solutions that are responsive to the client's budget and schedule.



Shape Your Vision

