



SE2050 NET ZERO COMMITMENT

Embodied Carbon

ACTION PLAN 2022

ENTUITIVE

Contents

EMBODIED CARBON ACTION PLAN 2022

- 1 SUSTAINABLE PERFORMANCE
STEWARDSHIP
- 2 SE2050 COMMITMENT
PROGRAM OVERVIEW
- 3 EMBODIED CARBON ACTION PLAN:
ENTUITIVE'S COMMITMENT
 - 3.1 EMBODIED CARBON
EDUCATION GOALS & ACTIONS
 - 3.2 EMBODIED CARBON
REPORTING GOALS & ACTIONS
 - 3.3 EMBODIED CARBON
REDUCTION GOALS & ACTIONS
 - 3.4 EMBODIED CARBON
ADVOCACY GOALS & ACTIONS
- 4 MORE FROM ENTUITIVE:
RECENT INSIGHTS



1

Sustainable Performance Stewardship

FROM COMMITMENT TO ACTION

Entuitive is proud of our commitment to SE 2050, building towards net zero embodied carbon structures. Our commitment to sustainability is the most tangible demonstration of our core purpose to build a better world.



Our leadership in Sustainable Performance will enable our clients to reach their performance aspirations and will attract some of the most passionate talent in our industry – in other words, more people like us.

It is imperative that in every aspect of our work, we are thinking and designing with sustainability in mind.

As of January 2022, Entuitive has proudly signed on to the SE 2050 Commitment, and our Sustainable Performance Stewardship Group will continue to take on the role of driving down carbon emissions across the firm. We will:

INTEGRATE SUSTAINABLE DESIGN THINKING THROUGHOUT ENTUITIVE

The Stewardship Group will continue to collaborate with our internal Knowledge Centres and Technical Groups to incorporate embodied carbon metrics into design aids, develop a guide to delivering deep energy retrofits, develop project sustainability guides for multiple services, and perform targeted research and case study work to identify low embodied carbon solutions. We will also continue to provide relevant learning and development opportunities for all staff at Entuitive.

DEVELOP TOOLS AND RESOURCES TO SUPPORT SUSTAINABLE DESIGN

We will continue to work with our Ennovation team on the development of our CarbEN tool for early-stage design and embodied carbon assessment. We will update our ROCKET tool for early-stage material quantity takeoffs to facilitate LCAs to incorporate US toolsets, and we will develop an Embodied Carbon in Materials cheat sheet to assist project teams. We will continue performing embodied carbon life-cycle assessments and collecting operational carbon data for new build projects to expand our project performance database and help us set additional reduction targets.

This Embodied Carbon Action Plan (ECAP) expands on our ongoing and future global carbon reduction goals, commitments, and plans for implementation according to the SE 2050 themes: education, reporting, embodied carbon reduction strategies, and advocacy. Within this action plan, we have outlined our vision for a net-zero carbon future and we have drafted our implementation strategies for how to move forward.

The Sustainable Performance Stewardship Group encourages questions, feedback, or ideas on this ECAP report.

We look forward to building a more sustainable world with you.

EMILY KING, LEED Green Associate
Associate | Sustainable Performance Lead
emily.king@entuitive.com

ENTUITIVE



SE 2050 Commitment

PROGRAM OVERVIEW

The Structural Engineers 2050 Commitment, created in response to the Carbon Leadership Forum's (CLF) SE 2050 Challenge, is designed to ensure substantive embodied carbon reductions in the design and construction of structural systems by the collective structural engineering profession, with the goal of ultimately eliminating embodied carbon in their projects by 2050.

The following is a summary of our embodied carbon goals based on the SE 2050 four areas of commitment.

EDUCATE

Integrate embodied carbon language throughout Entuitive.

- Educate our project leaders and engineers on speaking confidently about Embodied Carbon and familiarize them with our carbon emissions reduction targets.
- Continue to host embodied carbon learning activities such as monthly Lunch & Learns (L&L) for all staff.
- Develop and post bi-weekly Learning in Action (LIA) newsletters and blog content on relevant embodied carbon content/resources on our intranet.
- Develop structural sustainability guides with low-carbon design strategies for our technical teams, while ensuring everyone has access to the relevant tools and resources for continued professional development.

REPORT

Assess, track, and report embodied carbon impacts and trends of structural systems for various building archetypes, and regions, and share results/data to the SE 2050 Database.

- Develop a standard embodied carbon feasibility study/report at conceptual or schematic design stage to inform the client how they can achieve EC reductions in envelope and structural systems.
- Continue to conduct internal structural LCAs of ongoing projects and analyze trends to inform reduction strategies.
- Assess and report embodied carbon impacts of building design and structural elements at design stage of high profile projects across regions for different building archetypes.

REDUCE

We are working on developing a more concise strategy and tools for our firm to set specific and measurable goals to assess progress and track overall carbon reduction.

- Establish our company baseline and calculate embodied carbon impacts throughout design and integrate reduction strategies for low-carbon design.
- Develop embodied carbon tracking tools within our practice, for example our CarbEN and ROCKET tools, evaluate tools based on internal structural LCA and inform technical teams of potential reduction strategies.
- Benchmark embodied carbon of various building archetypes and measure reduction targets to industry established metrics.

ADVOCATE

Communicate the goals of the SE 2050 commitment with our clients and communities.

- Explicitly declare our SE 2050 commitment on our company website and in our future project proposal packages.
- Organize and facilitate external embodied carbon outreach with the public, and participate in embodied carbon-related education events.
- Offer mentorship opportunities to high school and university students to prime them with knowledge of embodied carbon impacts.
- Participate in industry embodied carbon studies.

Comprising an existing 14-storey concrete frame tower and a five-storey steel framed block connected by a two-storey concrete link building, MacKimmie Block and Tower is the tallest building within the University of Calgary's main campus.

The block and tower originally served as a library but were repurposed for administrative and classroom spaces, including 500 new study spaces for the faculties of Nursing and Social Work. The redevelopment included adding two floors to the existing tower, replacing the existing cladding system with an energy efficient system, and improving the quality of the interior light.

The complex is striving for certification with the Canada Green Building Council's new Zero Carbon Building Standard, aiming to reduce and eliminate carbon emissions by designing passive controls and minimizing energy usage while optimizing interior comfort.

The MacKimmie Block & Tower Redevelopment Project has been awarded multiple times to date, including:

Award of Excellence - Buildings
Canadian Consulting Engineers

Green City Award
Mayor's Urban Design Awards

Award of Excellence
Consulting Engineers of Alberta (CEA)

Tree of Life Award
Canadian Consulting Engineers

MacKimmie Block & Tower Redevelopment
CALGARY, CANADA



Embodied Carbon Action Plan

ENTUITIVE'S COMMITMENT

Our commitment to sustainability is the most tangible demonstration of our core purpose to build a better world. We recognize that leading embodied carbon decision making requires commitment from every member of the Entuitive family.

This, of course, starts with continuing our efforts of educating our engineering team to design with sustainability in mind.

In 2022, the Sustainable Performance Stewardship Group will collaborate with Knowledge Centres and Technical Groups to incorporate embodied carbon metrics into design aids, develop project sustainability guides for multiple services, and perform targeted research and case study work to identify low embodied carbon solutions.

The Group will also develop an in-depth embodied carbon education program for our engineers.

3.1

EMBODIED CARBON EDUCATION GOALS & ACTIONS

REQUIREMENTS

IMPLEMENTATION

STATUS

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

We have announced our commitment to SE 2050 through our weekly company-wide newsletter, which is also posted on our intranet site.

Our Marketing & Communications team will ensure that the announcement is on our social media posts (i.e., LinkedIn, Instagram, etc.) externally for our clients and public.

In addition, we will make our 2022 ECAP available on our Sustainable Performance webpage which will be accessible publicly upon publishing.

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 Stewardship Group prepares two monthly education posts distributed to all staff: one is a shorter post as part of a weekly company-wide email, and the second is a sustainability-specific Learning in Action newsletter, developed to provide staff with information and resources to dive deeper into a sustainability-related topic. The majority of what we post relates to embodied carbon.

The Stewardship Group worked with an outside consultant in 2020 to develop Embodied Carbon 101 and 201 webinars which all staff were encouraged to attend, and which are now mandatory videos for all new hires to watch during onboarding.

We also organize monthly Lunch & Learn sessions focused on sustainability with the majority focused on embodied carbon solutions in design and materials.

In 2022, the Stewardship Group surveyed staff to gauge the general understanding of embodied and operational carbon. Based on the results, the group is developing an in-depth embodied carbon education program which is planned to be mandatory for all engineers. The program is expected to begin later in 2022.

The Stewardship Group has also developed Advisory Documents, Technical Notes, Project Sustainability Guides, and Cheat Sheets relating to strategies that address embodied carbon. These are available to all staff at Entuitive.



ONGOING

REQUIREMENTS

IMPLEMENTATION

STATUS

Nominate an Embodied Carbon Reduction Champion for your firm. Include a brief profile (name, office, title, optional picture and bio) in your ECAP.

Emily King, Associate, in our Toronto office is selected as the company's Embodied Carbon Reduction Champion based on her continued commitment to decarbonizing buildings and infrastructure, and commitment to attaining net-zero carbon emissions of all projects.

Each of our Entuitive offices has identified representatives as Regional Champions to champion our practice-wide effort, support other departments with answering embodied carbon related concerns, complete LCAs and report the results. The Regional Champions will be equipped to promote our ECAP, and present opportunities for continuing education sessions.



2019

Set a date within the first year to present an "Embodied Carbon 101" Webinar to your firm (present your own or use an existing from BSA or equivalent). Include this resource in your orientation/on-boarding programs.

The Stewardship Group organized for Embodied Carbon 101 and 201 webinars to be presented to all staff in 2020, and the two videos have since become part of our onboarding process for all new staff.

The presentation covers embodied carbon applications, case studies, best practices, LCA methodologies and tools, as well as operational carbon.

Key highlights are discussions on strategies to reduce embodied carbon by envelope materials and structural systems, and cheat sheets were distributed to technical teams.

The presentation slides and video recordings are stored on the company drives and intranet webpage, accessible to all staff.



ONGOING

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.

On a regular basis, at least one member of the Stewardship Group attends, and will continue to attend, external education programs provided by either SE2050, the CLF, CaGBC, or other embodied carbon-related sessions. We will work toward having more employees outside of the Stewardship Group attend these sessions as well.

Two of our Stewardship Group members are also on the Steering Committee for the CLF Toronto Hub and help organize monthly webinars focused on reducing embodied carbon. All Entuitive staff are encouraged to attend.



ONGOING

REQUIREMENTS

Share the SE 2050 library of resources with technical staff.

IMPLEMENTATION

We have a folder on our server accessible to all staff containing external education materials, a library of our own resources, and a link to the SE 2050 library of resources.

The link to the SE 2050 library of resources was provided in our firm-wide announcement of our commitment.

STATUS



Q1 2022

Share embodied carbon reduction strategies with your firm as outlined in Top 10 Carbon Reducing Actions for Structural Engineers document produced by SE 2050.

The Stewardship Group has developed Cheat Sheets with embodied carbon reduction strategies, a structural Project Sustainability Guide, LCA tools, and resources. We have shared these with our structural engineering and technical teams. In addition, the ECAP will be shared and discussed with all staff.



2021-2022
ONGOING

Provide narrative outlining plans for minimum (2) firm-wide presentations per year on the topic of embodied carbon.

Our monthly Lunch and Learn (L&L) series will incorporate at least two presentations on the topic of embodied carbon. We will also report project embodied carbon LCA results/findings in the monthly Learning in Action (LIA) newsletters.

Minimum (1) employee attends a presentation or demo of an LCA-based tool used to calculate embodied carbon, such as Tally, Athena IEB, or One Click LCA.

All members of the Stewardship Group have attended presentations/demonstrations and hands-on training to learn our company's LCA programs, either One Click LCA or Athena IEB.



ONGOING

In the future, opportunities to attend learning and development opportunities with LCA-based tools will be shared with the technical staff who have indicated interest to work on structural sustainability. To date, we have around 20+ staff trained on how to use One Click LCA.

Initiate an embodied carbon interest group within your firm and outline their goals.

The Stewardship Group serves the role of embodied carbon interest group, disseminating knowledge and providing education opportunities to staff to reduce embodied carbon in their designs.



2019
ONGOING

The group collaborates with our internal Knowledge Centres and Technical Groups to incorporate embodied carbon metrics into design aids, develop a deep energy retrofit guide, develop project sustainability guides for multiple services, and perform targeted research and case study work to identify low embodied carbon solutions.

Provide a narrative of how the Embodied Carbon Reduction Champion will engage embodied carbon reduction at each office. (Intended for multi-office firms).

The Embodied Carbon Reduction Champion leads the Sustainable Performance Stewardship Group and is regularly in contact with staff from all offices either to contribute directly to projects to reduce embodied carbon, or to work with the rest of the Stewardship Group to provide education sessions and resources to all staff. Our company has a One Company philosophy that allows us to work as one, regardless of region/location.



ONGOING

Showcasing the school's current and emerging programs and technologies, the facility has been designed with flexibility in mind to accommodate future functional space requirements.

The Lethbridge College Trades and Technologies Renewal and Innovation Project (TTRIP) brings all trades programs under the same roof, including the Crooks School of Transportation, Agricultural and Heavy Equipment Technology, Wind Turbine Technology, engineering technology disciplines, and various apprenticeship training programs.

TTRIP was awarded the 2018 Wood WORKS! Alberta Prairie Wood Design Awards for Institutional Wood Design.

Lethbridge College Trades and Technologies
Renewal and Innovation Project (TTRIP)

LETHBRIDGE, CANADA

3.2

EMBODIED CARBON REPORTING GOALS & ACTIONS

REQUIREMENTS

Provide a narrative on how your firm plans to measure, track, and report embodied carbon data. Here are some considerations you may want to include:

How will you calculate embodied carbon for structural materials?

Do you have access to product- or region-specific Environmental Product Declarations (EPDs)?

What commercially available LCA software(s) will you be using to quantify embodied carbon?

What life cycle analysis (LCA) methodology will you use?

Define where you plan to delineate scope (e.g. A1-A5 or whole life cycle), communicate inherent assumptions, etc.

How will you extract material quantities and how often? (currently for internal use and not required in SE 2050 Database)

Submit an annual minimum of (2) projects per U.S structural office but need not exceed (5) total projects for the firm to the SE 2050 Database.

Would you be able to calculate and report on two projects in your first year of committing to SE 2050?

IMPLEMENTATION

Our path to net zero emissions will require consistent and yearly embodied carbon reductions plans and strategies. To track our progress, we will measure the embodied carbon of our projects and report the results to SE 2050. Since 2021, Entuitive has been working towards measuring the embodied carbon on our new build projects at 100%CD and updating our own internal database to analyze trends and inform strategies and decisions to reduce embodied carbon on our projects.

Entuitive uses OneClick LCA to perform our LCAs, and we also have access to Athena Impact Estimator. We have developed our own early parametric tool, CarbEN, to assess the embodied carbon of different structural schemes in concept design.

LCAs are completed with region-specific data, and product or plant-specific data where available and where the information is known. Our LCAs look at the whole life cycle, within the limitations of available data within the software we use (for example OneClickLCA does not have C1 emissions data for North America, therefore they are estimated for similar regions in Europe).

We have developed strategies and processes to better utilize our Revit models to extract material quantities and link building assemblies to OneClick import in order to complete envelope and structural embodied carbon LCAs. We have updated our BIM process to make sure a sufficient level of detail is captured in the Revit model to facilitate the LCA. We have also developed a material quantity takeoff tool to help us extract quantities from PDF drawings before structural Revit models are prepared. Currently we are doing the LCAs at 100% CD to at least measure the embodied carbon impact, however we plan to shift towards doing rapid assessments earlier in design to provide feedback to design teams.

We will report embodied carbon LCA data for at least two projects to the SE 2050 Database in our first year, pending approval to do so from the clients/owners.

STATUS



ONGOING

REQUIREMENTS

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

Would your firm be open to providing embodied carbon training? What materials would you need to accomplish this?

TIP: Check out SE 2050's resources page.

Report a greater percentage of projects than you did the previous 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.

IMPLEMENTATION

We will continue to provide training and development for technical staff on embodied carbon measurements and calculations through internal L&Ls and guided tutorials using OneClickLCA and/or CarbEN. We are also developing an in-depth embodied carbon training series for our staff, rolling out in our next fiscal year.

Currently, all staff have watched our Embodied Carbon 101 and 201 courses. All our embodied carbon-related webinars are available for all staff to access. The Stewardship Group Carbon Reduction team will coordinate the training, answer questions, review the data input parameters and LCA results for accuracy and upload to the SE 2050 site (2023).

We will aim to conduct embodied carbon calculations and measurements for all our structural projects. We acknowledge that this will be a learning curve for us and are committed to continuous improvement.

We have been encouraging our design teams to ask questions about carbon and sustainability targets early in their project planning phase. In our Project Sustainability Guide, we recommend this be established at the first kick-off meeting. The Stewardship Group will set a target to assist in those conversations for at least 5 new projects in our first year and will submit the LCA data on those projects once the required design milestone is met.

STATUS

3.3

EMBODIED CARBON REDUCTION GOALS & ACTIONS

REQUIREMENTS

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 the first year, what do you want to focus on with the SE 2050 program?

IMPLEMENTATION

For the first year in the program, we will be focusing on expanding on our embodied carbon educational goals to include more firm-wide presentations on embodied carbon and reduction strategies, as well as targeted training sessions to grow the LCA skillset across the firm.

We also plan to develop an early-stage and high-level embodied carbon report that can be included in the Structural SD report to be distributed to design and owner teams on projects.

Using the data from the LCAs that have been completed to date, we are developing an interactive dashboard to visualize the results, which will be accessible by all staff. We will use the data from 2021 and 2022 projects to set reduction targets for 2023 for new build projects.

STATUS

Communicate the embodied carbon impacts of different design options to clients with creative data visualization. Include these visualizations in your Elective Documentation.

We are currently conducting early embodied carbon material assessments as part of a low carbon strategy for clients on several projects. These reports are developed during the concept design stage to inform our clients of potential EC reduction opportunities in envelope and structural materials (based on both locally and remotely available materials).

Currently the format is a standard report, however we intend to update our reporting templates to be more visual. We will include an example in our reporting within our first year with SE 2050.

Project case study sharing embodied carbon reduction successes and lessons learned. Create a project-specific embodied carbon reduction plan.

We recently completed a comprehensive study with a multi-disciplinary team on a hypothetical net zero carbon MURB in Toronto. Our team tackled the structural design and embodied carbon LCA work.



JUNE 2022

The results from our study can be found [here](#). The entire Low Carbon Now study can be accessed on BDP Quadrangle's website [here](#).

Complete an embodied carbon comparison study during the project concept phase.

We have completed a concept phase embodied carbon comparison of Good/Better/Best practices to reduce embodied carbon in the structure on a recent project. We have also completed embodied carbon assessment reports for several projects, looking at viable low carbon material options that would be suitable/feasible for the project based on region, cost, and availability.



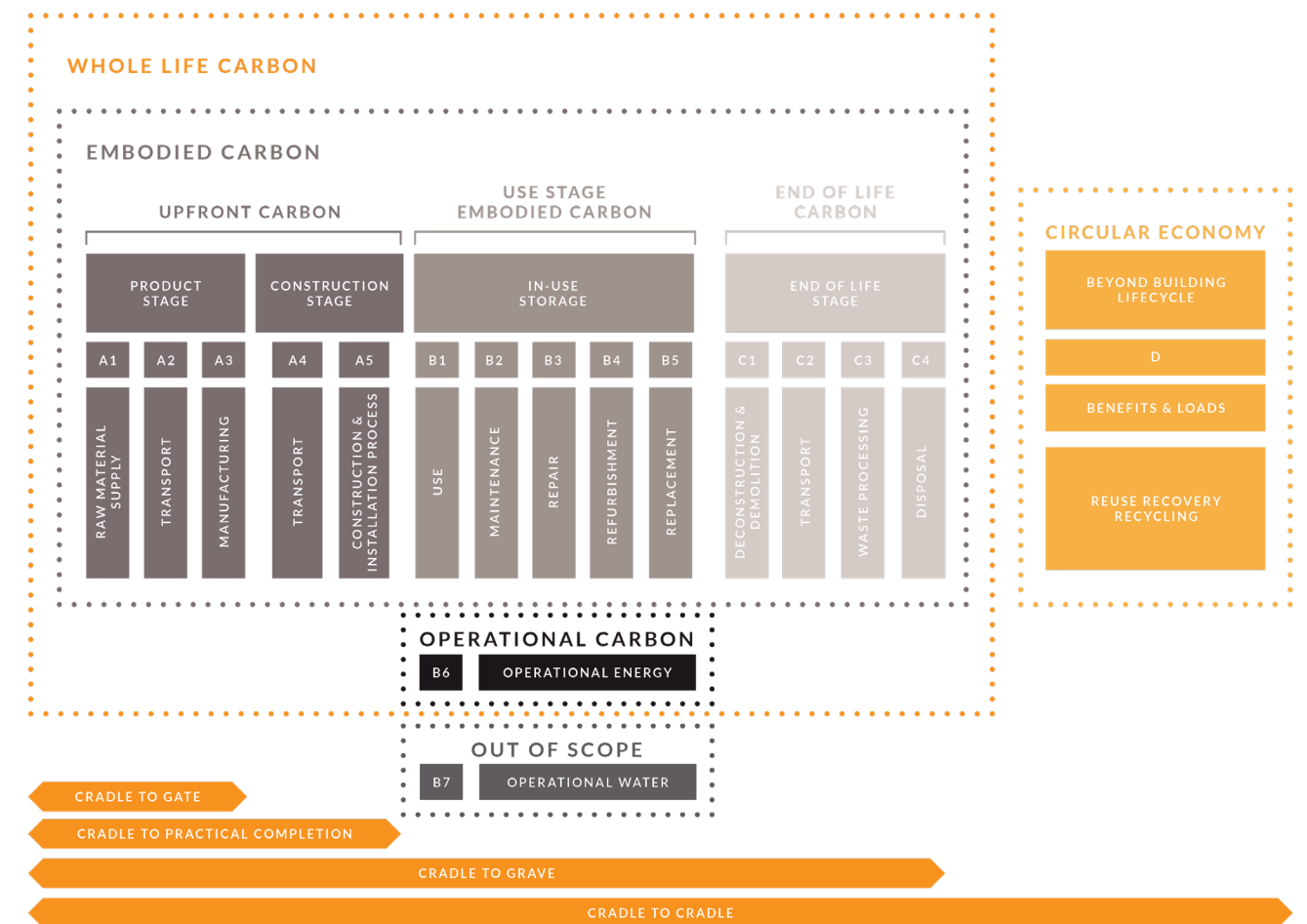
Q1-Q3 2022

LIFE CYCLE ASSESSMENTS (LCAS) AND EMBODIED CARBON

Our team recognizes that as structural and envelope designers, we account for the largest portion of embodied carbon of a building, which prompted us to develop an LCA team that both measures carbon and looks for opportunities for reduction.

We want to be able to deliver on our clients' low-carbon design targets for projects pursuing certifications such as LEED, Canada Green Building Council's (CaGBC) Zero Carbon Building, International Living Future Institute Zero Carbon, Envision, etc.

ENTUITIVE



ADAPTED FROM LETI CLIMATE EMERGENCY DESIGN GUIDE, JANUARY 2020

REQUIREMENTS

IMPLEMENTATION

STATUS

Calculate your firm average benchmark for embodied carbon.

Based on our 2021 and 2022 data, we will establish a carbon benchmark for our projects to serve as a reference point/ baseline that will inform embodied carbon targets of future projects.

Update your specifications to incorporate embodied carbon performance. Include embodied carbon in your submittal review requirements.

Our specifications currently include a section requesting EPDs for concrete, steel, and timber materials, however the section is currently optional, and its inclusion is dependent on the project.



2021

Our cast-in-place concrete specification currently includes an optional section on carbon-capture concrete; however, its inclusion is dependent on the project.

Incorporate biogenic materials on at least one project.

We currently have several projects in various stages of design and construction which incorporate mass timber or stick frame timber in the structural design.



ONGOING

Entuitive studied the feasibility of a Passive House EnerPHit retrofit at this 18-storey residence. Our team reviewed the building envelope and structural components and determined remedial and retrofit work required to meet Passive House criteria and City Housing's new programming requirements.

During the design phase, Entuitive was responsible for designing building envelope details that performed at Passive House levels, while considering tight budget limitations and an aggressive timeline to meet funding requirements. Fibreglass window frames were proposed as a cost-saving measure, and Entuitive obtained a code variance from the City to allow this innovative approach for one of the first times in Ontario.

Entuitive extensively modelled envelope clear field and thermal bridge conditions, working iteratively with the Passive House Consultant to develop details that met rigorous standards, and providing substantial supporting documents for Passive House Certifier reviews.

Our team also created an air leakage testing plan, which included guarded floor blower door tests to verify air tightness as construction progressed, and a final whole building air leakage test to achieve Passive House certification. We reviewed shop drawings and conducted site reviews during the construction phase.

The Ken Soble Tower is one of the largest EnerPHit projects in the world.

Ken Soble Tower - Passive House Retrofit (EnerPHit)

HAMILTON, CANADA

3.4

EMBODIED CARBON ADVOCACY GOALS & ACTIONS

REQUIREMENTS

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

How could you engage others in the AEC industry?

TIP: Think out the CLF community.

IMPLEMENTATION

Entuitive is committed to accelerating sustainability in the built environment and leveraging our relationships with clients, other consultants, contractors, and the community at large to broaden the understanding of embodied carbon in the architecture, engineering, and construction (AEC) industry, including the need to reduce emissions. Our Stewardship Group is involved in numerous studies and ongoing conversations with clients and industry partners, providing education opportunities through L&Ls and conference presentations. Our group is also actively involved in conversations with architects, contractors, and manufacturers to accelerate the adoption of low embodied carbon practices on projects.

Two of the members of the Stewardship Group are also on the CLF Toronto Hub Steering Committee and organize embodied carbon learning events for the Toronto community, to which all Entuitive staff are also invited.

The Stewardship Group also works with teams within Entuitive to conduct structural and envelope embodied carbon studies that we publish on our website and promote on social media to be publicly available for anyone to learn from.

Our Embodied Carbon Champion presented on what Entuitive is doing to reduce the embodied carbon of our work at an SE 2050 focused CLF Toronto Webinar in April, along with two other signatory firms.

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

What is important about the SE 2050 commitment to you? What value do you think it would be to potential clients?

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

Would your firm be committed to sharing it's commitment to the SE 2050 program on proposals (where appropriate)?

In our first year, we will update our marketing collateral to make it clear that we are signatories to the SE 2050 Commitment and will provide a brief description of the importance of making the commitment.

We will include a slide in all our future presentations indicating that we have signed the SE 2050 Commitment and describe what that entails and encourage support from the groups we present to.

We will update our boilerplate proposal documents to include mention of our commitment to SE 2050 and a brief overview of the commitment.

STATUS



ONGOING

REQUIREMENTS

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!).

With the owner or client, discuss a facility- or product-specific EPD requirement for structural materials.

Encourage industry and policy change by promoting and using low-carbon and carbon sequestering materials.

Start an embodied carbon community of practice or mentorship program in your office.

IMPLEMENTATION

We will update the Sustainable Performance page on our website to indicate our commitment to SE 2050.

We have delivered two client-focused embodied carbon L&Ls, and one conference presentation on low carbon concrete. We are signed up to present at a timber-focused conference in the fall speaking on studies looking at timber, fire engineering, building envelope, embodied carbon, and operational carbon.

We plan to deliver at least three external presentations annually, on project successes and lessons learned at conferences and in presentations directly to clients, architects, contractors, etc.

We have provided embodied carbon material assessment reports and/or engaged in project conversations with the client and design team regarding procuring low carbon structural materials for several projects so far in 2022. Part of these discussions have included the EPD section in our specs requesting facility- or product-specific EPDs for the project. From this, we have learned that the availability of EPDs is very region-dependent, and not all markets can support these requests at this time. By asking for these documents, we are demonstrating a need for this information from manufacturers.

We are currently in the process of completing product LCAs and preparing EPDs for 4 concrete-based products.

Through the work of our Stewardship Group, our Whole Life Carbon Consulting team, and our Structural teams, we work on projects that are targeting net zero carbon, and that promote the use of mass timber, low carbon concrete innovations, and low carbon steel.

Our Sustainable Performance Stewardship Group serves this function firm-wide. Part of the group's function is to teach others in the firm how to complete LCAs, how to assess materials from a carbon perspective, and how to design lower carbon structures.

STATUS



Q1-Q3 2022



ONGOING



ONGOING



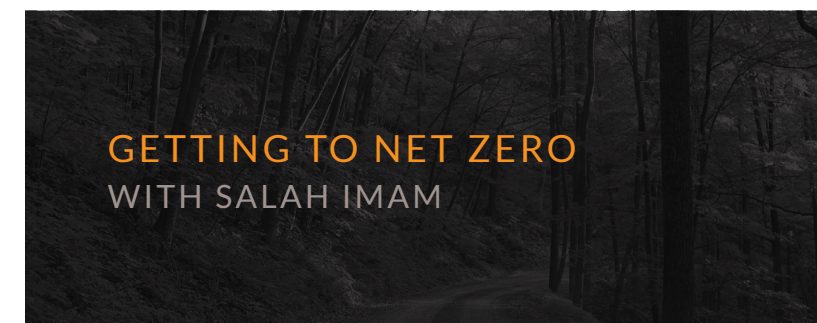
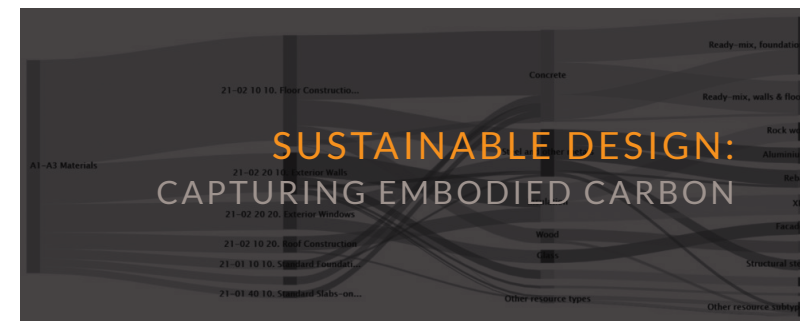
ONGOING



More From Entuitive

RECENT INSIGHTS

Our vision for the future is driven by our purpose, and we believe a better world begins with a sustainable planet. Explore how we're committed to a sustainable future through our recent insights - simply click the links that follow.



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