NORTHEAST EMBODIED CARBON SUMMIT 2024

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BSA | CLF Carbon Leadership Forum Boston / Northeast Hub

PROGRAM

(Tap on session or scroll down to view more information and speaker bios)

DAY 1: THURSDAY, JUNE 20

All programming and remarks will take place in the Morris Auditorium. All food and beverages will be in the Beehive.

Registration & Breakfast	8:00 AM
Welcome Remarks	9:00 AM
Session 1 The State of Embodied Carbon - Market Shifts & Policies	9:15 AM
Coffee Break	10:45 AM
Session 2 Practice & Progress	11:15 PM
Lunch Break	1:00 PM
Session 3 Pushing Forward	1:45 PM
Keynote Remarks	3:30 PM
Networking in the Beehive	4:00 PM
Reception & Cocktails*	5:00 PM

*At BSA Space, 290 Congress Street, second floor

DAY 2: FRIDAY, JUNE 21

All food and beverages will be in the Beehive.

Registration & Breakfast		8:00 AM
Session 1		9:00 AM
1A	Massachusetts Municipal Embodied Carbon Policy	Rosengren Room, 4th FL
1B	Structural Systems: Winning the Embodied Carbon Game	Montgomery Room, 4th FL
1C	Re-Use and Circularity: Existing Buildings, Re-use, Interiors	Connolly Center, 4th FL
Coffee Break		10:00 AM
Session 2		11:00 PM
2A	EC Reduction Challenge: Sessions Learned & Case Studies	Connolly Center, 4th FL
2B	Mass Timber Workshop	Montgomery Room, 4th FL
2C	Biobased Materials	Rosengren Room, 4th FL
Light Lunch & Networking		12:30 PM

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DAY 1 SESSIONS & SPEAKERS

Welcome Remarks

ANDREA LOVE, FAIA, LEED Fellow

Andrea is a Principal and the Director of Building Science at Payette, the 2019 AIA Firm Award recipient for their work fusing design and building performance, and has worked on six recent COTE Top Ten Award winning projects. At Payette, she integrates building performance into all of their work and leads their internal research efforts. She was the Principal Investigator on the 2012 AIA Upjohn Grant research grant focused on thermal bridging and lead the development of Payette's Glazing and Winter Comfort and Kaleidoscope tools. She has served on the AIA COTE Advisory Group, AIA 2030 Working Group, the boards of Built Environment Plus and the Boston Society of Architects where she was the 2023 president. She has been a Lecturer at MIT and Harvard on building performance, and has her BArch from Carnegie Mellon and a Masters in Building Technology from MIT where she was the recipient of the Tucker-Voss Award. She was a 2017 recipient of the AIA Young Architect Award and is a Fellow of the AIA and LEED.

Session 1:
The State of Embodied Carbon - Market Shifts & Policies

The summit will open with an overview discussion of the regulatory landscape, market shifts, and cultural change around embodied carbon. To provide the audience with insight on key actions and strategies for advocacy to move forward, the panelists will cover policies and initiatives at the federal, state, regional, and local level, as well as effective ways to communicate with policy makers, clients, manufacturers, and the public.

JODI SMITS ANDERSON, FAIA, LEEP AP BD+C (Moderator)

Associate Director of Codes and Policy, New Buildings Institute

REBECCA ESAU, AIA

Manager, Carbon-Free Buildings, RMI

MICHELLE LAMBERT, Assoc. AIA, CPHC, LEED BDC, Env SP

Embodied Carbon Policy Researcher, Carbon Leadership Forum

MIRANDA D'OLEO

Program Manager, Policy and Advocacy, Boston Society For Architecture

Session 2:
Practice & Progress

This interdisciplinary panel will focus on how AEC practitioners are achieving meaningful embodied carbon reduction in their work and advancing LCA for the industry as a whole. The panelists from architecture, engineering, construction, and interiors will dive into the metrics that are being measured and the gaps that exist in LCA and practice. The panelists will also discuss best practices, and effective strategies for areas of buildings that often do not get looked at in LCAs that design teams can employ to lower embodied carbon in their projects.

FRANCES YANG (Moderator)

Structures & Sustainability Specialist, Arup

STEPHANIE CARLISLE

Senior Researcher, Carbon Leadership Forum
Lecturer, University of Pennsylvania

AURORA JENSEN

Embodied Carbon Lead, Senior Technical Specialist, Brightworks Sustainability
Adjunct Faculty, Parsons School of Design

JENN CHEN

Principal Interior Designer, LMN Architects

JACOB KNOWLES

Director of Sustainable Design, BR+A Consulting Engineers

JENNIFER TARANTO

Vice President of Sustainability, STO Building Group

Session 3:
Pushing Forward

The final panel explores leadership in market shifts and cultural change around embodied carbon. What does innovation mean to owners, clients, and regulatory stakeholders? The discussion will provide insight on obstacles and opportunities on the path to alignment between industry and institutional embodied carbon reduction goals.

ANDREA LOVE, FAIA, LEED AP (Moderator)

Principal/Director of Building Science Payette
2023 President, Boston Society for Architecture

LORI FERRISS, AIA, PE

Co-Founder and Executive Director of Built Buildings Lab
Principal Consultant, Cameron MacAllister Group

OLIVER SELLERS-GARCIA

Boston Green New Deal Director, City of Boston

PATRICK HAYDON

Owner, Haycon Development

REBECCA HATCHADORIAN

Director, Sustainable Built Environment, Harvard University

Keynote Remarks

BILLIE FAIRCLOTH, FAIA

Billie Faircloth, FAIA, is a design leader and educator who has transformed practice-integrated research and earned a national and international reputation for demonstrating its value, methods, and outcomes. As former partner and research director at KieranTimberlake from 2008 to 2024, Faircloth guided the collaborative development of award-winning projects, including TallyLCA, which provides designers with an actionable understanding of the embodied environmental impacts in buildings.

Faircloth is currently an adjunct professor of architecture at the Weitzman School of Design, University of Pennsylvania. In 2025, Faircloth will join Cornell University as an associate professor in the Department of Architecture and as a senior faculty fellow at the Cornell Atkinson Center for Sustainability. Faircloth served on the AIA Committee on the Environment (AIA COTE) from 2020-24 and was chair of the committee in 2022. She is currently serving on the Board of Directors of the nonprofit Building Transparency.

Reception & Cocktails

Hors d'oeuvres & drinks at BSA Space presented by BE+
and MassCEC including a celebration of the
MassCEC *Embodied Carbon Challenge* winners.

DAY 2 SESSIONS & SPEAKERS

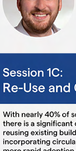
Session 1 Workshops

Three 90-minute workshops to choose from, a combination of presenters, discussions, charrettes, and practice exercises.

Session 1A:
Massachusetts Municipal Embodied Carbon Policy

This workshop is open to all attendees present, including the MA Municipal Cohort on Embodied Carbon Policy, a collective of over 30 municipal officials, spanning from Amherst to Nantucket. Its focus is on fostering collaboration within three priority subgroups: Zoning/Permitting, State Coordination, and Reuse. Attendees will have the invaluable opportunity to convene in person, delving into best practices, vital resources, and the essential steps required for effective implementation. Moreover, municipal officials will be able to forge connections and interact with esteemed partners from the AEC industry. The workshop's facilitators, Rebecca Esau, Miranda D'Oleo, and Michelle Lambert will guide the discussions, ensuring a conducive environment for knowledge exchange and networking. By harnessing the collective expertise and experiences of the municipal officials and industry professionals, this workshop aims to equip the municipal officials and industry experts with the tools and insights necessary to drive impactful policy decisions regarding embodied carbon.

MICHELLE LAMBERT, Assoc. AIA, CPHC, LEED BDC, Env SP
Embodied Carbon Policy Researcher, Carbon Leadership Forum

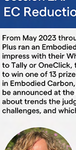


MIRANDA D'OLEO
Program Manager, Policy and Advocacy, Boston Society For Architecture

REBECCA ESAU, AIA
Manager, Carbon-Free Buildings, RMI

Session 1B:
Structural Systems: Winning the Embodied Carbon Game

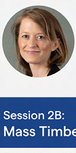
Discover the potential of architects and engineers to mitigate embodied carbon in structural systems through this interactive workshop. Gain insights into the sources of embodied carbon in structural materials and explore effective reduction strategies in procurement and design. Engage in a dynamic game where participants make critical decisions to achieve low-carbon outcomes in a hypothetical building project. Reviewing game results and real-world databases, participants will grasp the impact of their design choices, realizing their significant role in shaping a sustainable built environment.



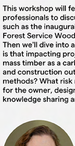
PATRICK KENNY, PE
Vice President, Thornton Tomasetti

Session 1C:
Re-Use and Circularity: Existing Buildings, Re-use, Interiors

With nearly 40% of solid waste by volume being generated by building construction and demolition, there is a significant opportunity to reduce embodied carbon emissions in the built environment by reusing existing buildings and materials. The Boston / New England market is making progress towards incorporating circular practices, but to achieve the level of decarbonization needed to meet our goals, more rapid adoption of these practices at scale will be required. Bringing together a cross-section of built environment stakeholders, this workshop will present the current state of circularity and reuse in the region and help illuminate simple steps that all built environment practitioners can incorporate to promote circularity through facilitated discussions and problem solving. By dispelling perceived barriers, working through common problems, and connecting participants to existing resources, this workshop will advance local and regional circularity efforts and leave all attendees with knowledge and tools to take their own first steps, or accelerate the work they are already doing.



MICHAEL ORBANK
Sustainability Manager, Northeast Region, STO Building Group



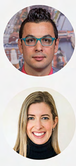
LAUREL CHĄDZYŃSKI, AIA, WELL AP
Sustainable Design Leader, Dyer Brown Associates, Inc

Session 2 Workshops

Three 90-minute workshops to choose from, a combination of presenters, discussions, charrettes, and practice exercises.

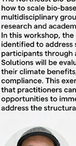
Session 2A:
EC Reduction Challenge: Lessons Learned & Case Studies

From May 2023 through April 2024, the Massachusetts Clean Energy Council and Built Environments Plus ran an Embodied Carbon Reduction Challenge - a competition to see which project could best impress with their Whole Building Lifecycle Assessment. All project teams were offered a free license to Tally or OneClick, three training sessions about embodied carbon and WBLCA, and the opportunity to win one of 13 prizes. Entrants were judged based upon Replicability and Cost Effectiveness, Reduction in Embodied Carbon, and Innovativeness. The entries are currently being judged, and the winners will be announced at the NECS Reception - but what about the lessons learned? Join this workshop to hear about trends the judges saw across all the submissions, including what methods worked, typical challenges, and which innovations were most impressive.



BEVERLY CRAIG
Program Director, Massachusetts Clean Energy Center

MEREDITH ELBAUM
Executive Director, BE+



AURORA JENSEN
Embodied Carbon Lead, Senior Technical Specialist, Brightworks Sustainability
Adjunct Faculty, Parsons School of Design

Session 2B:
Mass Timber Workshop

This workshop will feature a diverse panel of design, forestry, manufacturing and construction professionals to discuss mass timber in the northeast market. We'll highlight some recent successes such as the inaugural Boston Mass Timber Accelerator and research projects funded by the USDA Forest Service Wood Innovations Grant that are contributing to the advancement of mass timber. Then we'll dive into a variety of questions: Where is the project's mass timber coming from and how is that impacting project, economic and sustainability goals? How is the northeast contributing to mass timber as a carbon reducing design solution? What are options for better planning, design, and construction outcomes and how do those options change with different construction procurement methods? What risk mitigation should be considered, particularly if it is the first mass timber project for the owner, designer or contractor? Attendees will gain insight and leave with resources to enhance knowledge sharing and implementation of mass timber in the northeast.

JENN HARDY, AIA, LEED AP
Principal, Goody Clancy

ANDY FAST
Extension Specialist, Forest Industry at
University of New Hampshire Cooperative Extension

MICHAEL SCANCARELLO, PE
Project Director, Odeh Engineers, Inc

SIDNEY FILIPPIS
Director of Design, Sterling Site Access Solutions
Adjunct Professor, Lawrence Technological University

ETHAN BIEDERMAN
Preconstruction/Estimating, South County Post & Beam Inc

Session 2C:
Biobased Materials

The Northeast Bio-Based Materials Collective formed in November 2023 to address the question of how to scale bio-based materials in the built environment in the Northeastern United States. A diverse multidisciplinary group representing the fields of architecture, construction, engineering, manufacturing, research and academia, forestry, agriculture, and policy are now working together to advance this effort. In this workshop, the presenters will introduce the work of the collective, and the five focus areas identified to address system-level barriers to scaling bio-based materials. They will then lead the participants through a design challenge to bring bio-based materials into a building assembly. Solutions will be evaluated using a material greenhouse gas emissions estimating tool to quantify their climate benefits, as well as a rubric of feasibility criteria such as cost, availability, and code compliance. This exercise will also demonstrate a workflow for applied research in the design process that practitioners can easily and quickly incorporate into their own practice. Participants will explore opportunities to immediately incorporate bio-based materials into their work, as well as actions to address the structural barriers to scaling the use of these materials.

JACOB RACUSIN
Director of Building Science & Sustainability, New Frameworks
BioBased Summit Organizer/Facilitator

JAMES KITCHIN
Director of Performance & Provenance, MASS Design Group

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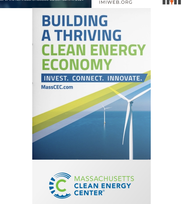

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