

Q1

January – March 2021

be
ex¹⁰

building
energy
exchange

● BE-Ex team



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We continue to connect with an expanded virtual audience through our online programming, including a panel on integrative design, live podcast interviews with a diverse range of industry leaders, and two comprehensive reports focused on multifamily buildings: connecting performance to financing & strategizing passive house design.

March 31, 2021

Climate Mobilization

Act Series:

Reimagining Envelopes

With support from the Natural Resources Defense Council and in partnership with the New York City Mayor's Office of Sustainability, BE-Ex held a CMA Series program focused on opportunities for improving building envelope performance. Panelists from Rockwool North America, ERA Architects, and Rogers Architects discussed the basics, challenges, and benefits of two primary types of envelope recladding.



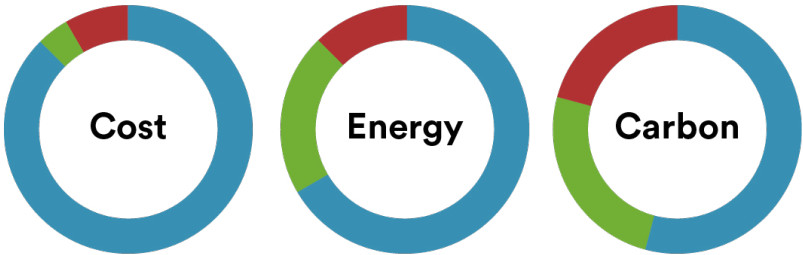
1 Typical Window Head Section
Exterior Windows to Interior

2015-2021 14:11

ROGERSPARTNERS

Alice Bachner

NYC Local Law 97 Carbon Emissions Calculator



March 16, 2021

Integration Series: Teamwork Makes the Dream Work

Panelists discussed how increasingly stringent energy codes and climate policy will prompt engineers, architects and sustainability consultants to work together in a more integrated fashion. Created in partnership with AIA New York COTE and ASHRAE New York, this conversation touched on priorities and strategies for effective integrative processes.



► <https://be-exchange.org/integration-series-teamwork-makes-the-dream-work/>

February 19, 2021

LL97 Carbon Calculator Demo

The LL97 Carbon Emissions Calculator is a unique tool developed by BE-Ex, AKF Group, and the NYC Accelerator aimed at demystifying the Climate Mobilization Act and connecting building owners with planning materials. This tool estimates a building's carbon penalty under Local Law 97. New Calculator features were presented during a demo session, allowing users to automatically populate calculator fields via building address search and presenting available energy usage data.

► <https://be-exchange.org/ll97-calculator/>

column:

What Do You Want, Brick?

by Yetsuh Frank

Managing Director, Strategy & Programs

Building Energy Exchange

The title here is an iconic quote by the legendary Architect, Louis Kahn.* His answer, that the brick wants to be an arch, was an entreaty for the rational use of materials in construction. Bricks set in an arch hold themselves in place without any hidden steel lintels or other structural gymnastics. For a certain set of late-20th century modernists, structural authenticity was close to a religious calling. Hiding, obscuring—or worst of all, faking—the bones of a building was not just a missed aesthetic opportunity but a kind of moral and ethical failure. Although this is probably no longer a view widely shared among Architects, we are seeing a revival of a similar attention to the basic essence of the materials we use to construct things: a desire to fully understand the impact of materials on our ecosystem, our

own health, and most especially their contribution to the climate crisis. It is easy to understand that a structure made of rammed earth—in which one simply digs up soil on the site and packs it down to create walls—uses far less energy in its construction than one made with steel, which requires first mining the raw ore, shipping that to a steel fabrication plant, melting and mixing the materials in a furnace, melting and shaping the castings in another furnace, sometimes shipping the castings to another plant, shaping the castings into wide-flange beams and other components, and finally shipping those to a construction site. But what about the broad spectrum of materials that fall between these extremes? And what about impacts beyond the carbon emissions that result from the manufacturing of various materials—the

*One of the finest and most revered Architects of the 20th century, Kahn also had deep personal flaws. In addition to his wife, Esther Kahn, Kahn maintained relationships with two women that were also at one time his employees, Harriet Pattison and Anne Tyng, and fathered children with all of them. Some of this triple life is described by his son, Nathaniel Kahn, in his 2003 documentary about his father, *My Architect – A Son's Journey*. An even broader perspective is provided by Wendy Lesser in her 2017 biography of Kahn, *You Say to Brick*.

so-called embodied carbon? As we add issues like toxicity, the depletion of finite resources, land consumption, and waste, these questions become increasingly complex.

Perhaps the simplest strategy for reducing the impact of materials is to avoid building new buildings. As our recent guest on Radio BE-Ex, Carl Elefante,¹ has said, “the greenest building is the one that has already been built.” This attitude may have found its ultimate expression in the work of Parisian architects Anne Lacaton and Jean-Phillippe Vassal, who this year have been awarded the highly prestigious Pritzker Prize² largely due to their commitment to “never demolish.” This reverence for existing structures leads them to propose, in the words of the Pritzker announcement, “restrained interventions” that not only reduce the waste of materials but preserve social capital. Rather than desiring a blank slate, Anne Lacaton asserts, “Transformation is the opportunity of doing more and better with what is already existing. The demolishing is a decision of easiness and short term.

It is a waste of many things—a waste of energy, a waste of material, and a waste of history. Moreover, it has a very negative social impact. For us, it is an act of violence.” In a profession whose fees are often set as a percentage of construction cost, it is hard to imagine this unique perspective has not had a negative impact on their finances. But their commitment is clear, especially with regard to social housing, where they have taken public stances against the demolition of projects and worked diligently with the building occupants themselves to understand their needs and design responses that meet them. As the Chair of the Pritzker Architecture Prize Jury Alejandro Aravena put it, “Lacaton and Vassal are radical in their delicacy and bold through their subtleness . . .”

When new structures are needed, we should prioritize materials whose impacts are as limited as possible. Mass timber,³ for instance, offers significant reductions in embodied carbon over concrete and steel superstructures—when sourced from properly managed forests of the correct species. There is renewed urgency around replacing petroleum-based materials like foam

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insulation boards with insulation fabricated from mineral wool and wood fiber. There is even greater urgency around reducing the use of spray-foam materials that are produced using fossil fuels and also deliver an astonishing level of toxicity during both production and application. Embodied carbon has often taken a back seat to operational carbon, but as the deadlines to avoid the worst impacts of climate change bear down on us, the carbon produced trying to build our way out of the problem grows in importance.

Fortunately there is evidence that this thinking is taking root at the Federal level, with the Green Building Advisory Committee recently recommending⁴ that the General Services Administration shift their massively influential procurement principles to prioritize low-embodied carbon materials. A group of sustainable design leaders convened by the folks at Building Green recently submitted

a package of recommendations urging the Biden administration to improve sustainability standards for Federal buildings. The 10-page memo included a significant emphasis on measuring and accounting for the embodied carbon of materials. In an upcoming Radio BE-Ex episode, we will be talking with Architect Stas Zakrzewski⁵ about designing buildings that target two key metrics—low embodied carbon materials and the Passive House standard. But this will be one of many programs on the impacts of materials in the coming months, and of course many others in our community will be following suit. Perhaps we are finally moving into a space where we think as deeply about the nature of materials as Louis Kahn did when he asked brick what it wanted to be. When we consider the critical imperative to reduce the impact of construction, maybe the answer is that the brick wants to remain a brick. ■

1 <https://be-exchange.org/radio-be-ex-carl-elefante/>

2 <https://www.pritzkerprize.com/laureates/anne-lacaton-and-jean-philippe-vassal>

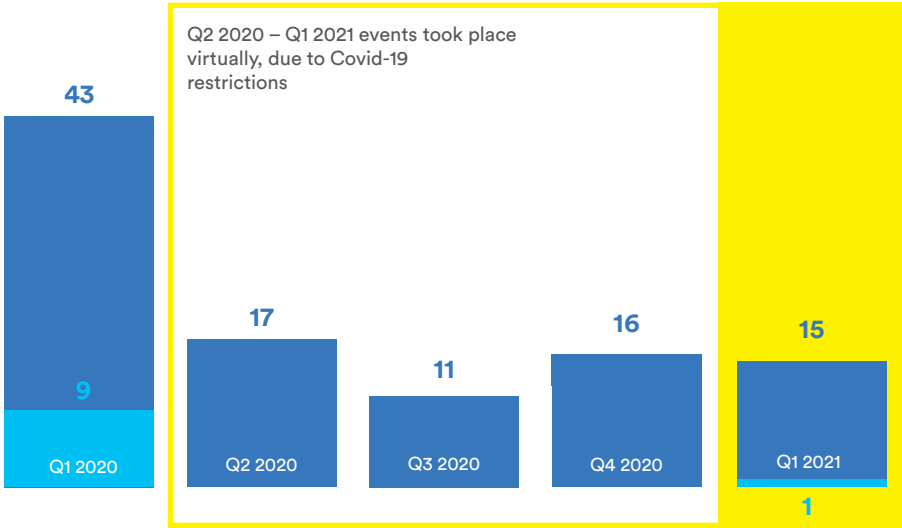
3 <https://www.metropolismag.com/homepage/think-tank-dlr-mass-timber/>

4 <https://rmi.org/press-release/the-us-federal-government-takes-the-lead-on-low-embodied-carbon-buildings/>

5 <https://be-exchange.org/radio-be-ex-passive-house-design-with-stas-zakrzewski/>

We are proud to have offered a successful slate of virtual programs and events in Q1, covering topics in energy efficiency, high-performance design, and technical guidance for climate policy. We look forward to returning to the space for in-person events safely in the future.

BE-Ex hosted events



BE-Ex developed events

diversity goals

- 1. No all male panels
Q1 number: 0
- 2. 50% female speakers across BE-Ex events
Q1: 47%



average number of days on calendar, BE-Ex events

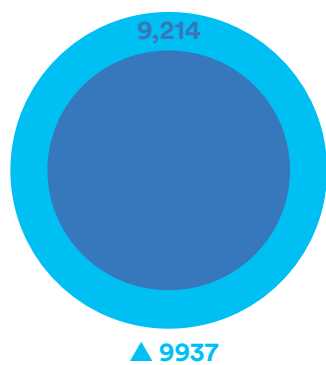


average attendance, BE-Ex events

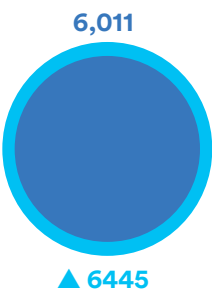
● audience

BE-Ex realized steady audience growth into 2021, adding hundreds of new newsletter subscribers and social media followers. Three major resources—Multifamily Passive House: Connecting Performance to Financing, High Rise | Low Carbon, and the Low Carbon Multifamily Retrofit Playbooks—caused total resource downloads to double relative to Q4 2020.

newsletter subscribers



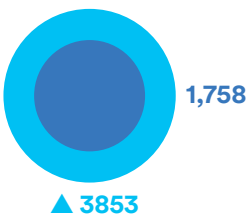
social media followers



■ Q4 2020

■ Q1 2021

resource downloads



program audience geographic distribution



unique website sessions in Q1 2021

Radio BE-Ex

Radio BE-Ex is a live podcast series by Building Energy Exchange that features industry leaders working at the intersection of buildings, energy, and sustainability. The Radio BE-Ex theme for 2021 is **Radical Scale: the people, processes, and technology that will ensure the built environment meets the needs of the future.**

The start of 2021 marks our second year of production and our first year with sponsorship from National Grid. This year, we've also launched Field Notes: a Radio BE-Ex production celebrating Building Energy Exchange's 10-year anniversary by inviting past board directors and industry leaders who played a central role in the development of the Building Energy Exchange to share their professional history and plans for the future.

Q1 2021 | series events

January 28	Financing Deep Retrofits with Sadie McKeown
February 9	Field Notes with Ashok Gupta
February 25	Retrofits for All with BlocPower
March 9	The Future of the Grid with H.G. Chissell
March 23	Field Notes with Daniel Zarrilli

Women in Sustainability and Energy (WISE) Series

The Women in Sustainability and Energy (WISE) series, founded in 2015, is an inclusive platform for all people to learn from experienced leaders, to share knowledge, and to advance equity in the workplace. WISE has been received with overwhelming support from the sustainability & energy community: in 2021, the WISE Series is honored to be supported by series sponsors Sive, Paget, & Riesel (SPR Law), ConEdison, and Gotham360, in addition to program sponsor ChoShields Studio.

Our virtual events this year have included monthly media clubs for facilitated community conversation and "Ask Me Anything" events interviewing industry leaders.

Q1 2021 | series events

February 23	Media Club: Biden's Climate Policy
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Q2 2021 | upcoming series events

April 1	Ask Me Anything with Laurie Schoeman
May 18	Media Club: Inclusive Climate Action

► <https://be-exchange.org/our-series/>



Daylight Hour

Announcing our 2021 Campaign

Building Energy Exchange is thrilled to announce the launch of Daylight Hour 2021: a global social media campaign promoting energy savings in the office environment.

Whether in-office or at-home, participation is easy: on June 18, 2021, we ask participating organizations to turn off electric lighting in day-lit spaces from 12-1pm local time and post about their involvement on social media during and leading up to the event.

By participating in Daylight Hour, you can save energy and money and help demonstrate a strong environmental commitment at your organization. In addition, you can support an equitable post-pandemic future in the lighting industry: while participation in Daylight Hour is free, net proceeds from campaign sponsorship and support will be donated to the Equity in Lighting Scholarship Fund.

Register for Daylight Hour: daylighthour.org/join

April 27, 2021

Reimagining Midcentury Office Buildings to House the Future

New York has tens of millions of square feet of underperforming, midcentury office buildings that don't meet the functional needs of today's office workers. An award-winning design team will discuss their proposal to radically transform this deficient building stock into healthy, energy efficient, live-work structures, offering a pathway to new development that utilizes existing infrastructure, including robust public transportation access.



May 20, 2021

**Radio BE-Ex: Building
Retrofits as Climate Action
with Carl Elefante**

For Radio BE-Ex, a live podcast series featuring industry leaders working at the intersection of buildings, energy, and sustainability, Architect Carl Elefante, FAIA, FAPT, LEED AP, highlights AIA's commitment to climate action and the central importance of retrofitting existing buildings in addressing climate change.

► <https://be-exchange.org/radio-be-ex-carl-elefante/>

May 25, 2021

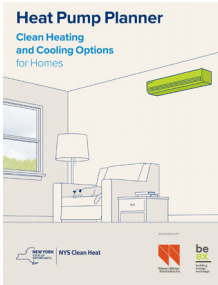
**Climate Mobilization Act
Series: Green Roofs as
Equity Infrastructure**

Green roofs are a recognized tool for improving the environment and health in cities and increasing the resiliency and longevity of our buildings. Speakers will discuss green roof installation benefits, policy requirements, and incentives, including an enhanced tax abatement for priority districts at nearly triple the base rate.



► <https://be-exchange.org/climate-mobilization-act-series-green-roofs-as-equity-infrastructure/>

upcoming



report Heat Pump Planner

This comprehensive report provides guidance for homeowners looking to learn more about heat pumps; from the basic value and purpose to planning strategy and considerations for optimal heat pump installation. This planner covers a number of building types: one-story, two-story, manufactured/mobile, apartment, and townhomes.



education Passive House Modules

Available soon on our on-demand learning platform, BE-Ex Ed, is a three-part series of modules that dive into facets of Passive House design: airtightness, windows & doors, and insulation & thermal bridging. These introductory modules will join a slate of courses already available on the platform.

We are grateful to connect with a vast virtual audience through our online publications and course offerings this quarter, and hope to see new & returning faces in our space in the future.

programs (online)

Passive House Primer

January 13th

CMA Primers

January 26th, February 17th, March 16th, April 22nd

Radio BE-Ex: Financing Deep Retrofits with Sadie McKeown

January 28th

Radio BE-Ex: Field Notes with Ashok Gupta

February 9th

What's My Penalty? LL97 Calculator 2.0 Demo

February 19th

WISE Media Club: Biden's Climate Policy

February 23rd

Radio BE-Ex: Retrofits for All with BlocPower

February 25th

Radio BE-Ex: The Future of the Grid with H.G. Chissell

March 9th

Integration Series: Teamwork Makes the Dream Work

March 16th

Multifamily Passive House: Connecting Performance to Financing

March 18th

Radio BE-Ex: Field Notes with Daniel Zarrilli

March 23rd

Multifamily Retrofits Playbooks Launch

March 24th

Climate Mobilization Act Series: Reimagining Envelopes

March 31st

project status

Q1 2021

- NYSERDA Multifamily Retrofit Playbooks
- Multifamily Passive House: Connecting Performance to Financing
- Carbon Calculator 2.0

Q2 2021

- Brochure: Buildings of Excellence Awards
- Passive House Technical Modules
- Heat Pump Planner
- Passive House Contractor Training
- Architect Advisory Council Report
- Envelope Showcase Online Exhibit
- CTP Decarbonization Resources and Training

Ongoing

- Report: Data Into Action, Commercial
- HPD LL97 Affordable Guidance
- BE-Ex Ed Course Development

■ COMPLETED □ ANTICIPATED