

Fall 2022

BuildingWell

A NOTE FROM THE PRESIDENT

The passage of the Inflation Reduction Act and increasing interest in decarbonizing housing will greatly expand funding to improve building performance, including retrofitting smaller buildings. One concern that NEI is working to address is the shortfall of firms and workers to satisfy growing demand. We are currently:

- Working in partnership with the Emerald Cities Collaborative to work with MBE firms to better position themselves to become contractors through Mass Save and LEAN low-income energy efficiency programs. This includes supporting these firms to grow, meet the requirements of the programs, and polishing technical skills needed for the work;
- Training individuals seeking entry into this field. Examples include NEI's in-house apprenticeship for HERS raters, and providing technical training for enrollees in the Asian American Civic Association's Clean Energy Pathway's Program;
- Working with LISC to train the facilities staff of Tribal communities throughout the country on building operations and maintenance;
- Serving in an advisory role to Roxbury Community College's Center for Smart Building Technology, which seeks to train students for careers as operators of building energy management systems; and
- Exploring a construction management enterprise in the Mid-Atlantic to help guide and train contractors on high performance building projects, especially in row homes.

There is growing awareness that workforce development programs need to combine training with avenues to actually procure this work. NEI is committed to deploying its resources to help expand businesses and workforces that will be needed to advance the clean energy revolution and secure work in the field. We view this as an increasingly important part of our mission.

— Edward F. Connelly
NEI President

The Evolving Landscape of Sustainability: A Career Review with VP Lauren Baumann

BY MICHELLE MORAN, SENIOR ASSOCIATE

Tell me about your history in the industry and at NEI.

I started at NEI as an intern when I was 24 years old. I had studied biology and ecology in college, then I spent a semester in Australia. When I was there, I started to put together the connections between the hard sciences with work I was doing in environmental issues.

I ended up going back to graduate school at Tufts for Urban and Environmental Policy and Planning, and that is where I learned about this idea of sustainable development and what that meant. Julian Agyeman, one of my professors there, was a big fan of NEI, which was a very small organization at that point, and he recommended I do my internship here.

At that point there weren't many organizations doing this type of work. NEI was the first organization where I felt like I could leverage my interests and scientific experience in an arena where it could actually be having a direct, positive impact on sustainability and low-income communities.



Lauren and NEI staff holding up Boston's Steaming Kettle.

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We were new and different in the beginning—we spent the first couple of years just trying to convince people that they needed us, that these were important things to be considering, and that we should be part of their teams! In the very beginning it was hard because not everyone was convinced that this was important enough to merit investing resources and time and energy. So, we spent a lot of time convincing them that that was true, by actually doing work on projects. We leveraged grant resources and partnerships to just get in the door, to provide project teams with our services and show them that they were beneficial and useful.



Above: Lauren touring a building site. Below: Watch out! Water balloon toss.

This has evolved significantly. I think the folks doing sustainability consulting have proven that there's a value proposition to this work. The policy and regulatory environment have shifted too. Whereas there were nearly no requirements back then, we've seen a tremendous amount of progress at the state and local level, where municipalities have identified this as an important priority and are requiring it on projects. Obviously, we saw a very different approach develop as teams were seeing the value of the work we were doing, and being required to do, or rewarded for doing, this work. NEI evolved along with that, and I'd like to think we were one step ahead of it, leading the movement.

Do you think these regulations drive sustainability, or is it the interest in, and the need to provide, sustainably-built housing? Or do they go hand-in-hand?

I was reminiscing on this the other day because I came across some old language that we used to include in our proposals. The last sentence for every introduction was, "The team will focus on measures with a good cost-benefit." For owners that were holding onto their portfolios and properties and managing them over time, that was compelling. If we could figure out how to cost-effectively incorporate measures into their projects on the front-end, it could actually save them money during the operational cycle of the building.

Then, we started to see some requirements and regulations, which brought up the backend. More recently, that focus on cost-benefit has diminished, because for all intents and purposes, we've already done the cost-beneficial things, they're included in the baseline energy code now. I think it's really an achievement that it has gotten to that point, and codes and regulations have been a big part of making sure that it's integrated as a baseline into most projects.



Now, with more and more focus on carbon emissions reduction and carbon neutrality, the focus can't be on traditional financial cost-benefit anymore. When you're working with developers who are primarily focused on the financial side of things, needing to make difficult decisions about how they invest resources, it becomes more challenging to get them there. They don't always see a direct financial benefit to their project over the long-run. In those scenarios, I think regulations and requirements are critical to make sure that we're actually getting projects to where they need to be to collectively achieve our carbon neutrality and emissions reductions goals. Regulations need to be created carefully, because they have a tremendous amount of power.



Right: Lauren presenting at NESEA. Below: 2022 NEI staff outing.

Do you have any advice for people starting out in energy efficiency, sustainability, or looking to get more involved in this type of work?

One of the things that always amazes me is whenever we're recruiting new staff at NEI is we get folks who come interested in this work from a lot of different backgrounds. I think there's a lot of entrance points because the work that we do is so diverse in terms of the skillset it requires. If you have project management skills, or engineering skills, or if you understand affordable housing, it gives you a leg up on doing this type of work.

Almost no one comes into this understanding everything. It's one of the challenges we have as an organization, but also, the value proposition of getting into this work is that there's always something new to learn, there are always people who can teach you something interesting. There are tons of opportunities, no matter what background you've had or what you've studied. I think if you're interested in this work, if you're curious and want to figure things out, there's a ton of opportunity here.

Is this organic process unique to NEI?

The mission is the thing that's unique. Everybody in this organization has done something a little bit different with their professional careers, but everyone comes to the table very motivated by figuring out how to work





Lauren at her goodbye party.

specifically in this arena and have impact on affordable housing. That is one of the things that makes NEI unique and special.

Did you have an overarching goal or vision during your time here? You spoke about how people in this industry are looking to push the envelope to see what's possible. Is that something personal to you, to see what's possible, see what we can do, see how we can help people?

If you look at things from a very big picture perspective, it's a really challenging time to be working on environmental and

sustainability issues. We know that we are so far behind where we need to be in terms of carbon reduction to mitigate impacts of climate change. We know that we're really working now to stem the tide and make sure that we're not creating additional problems. Acknowledging that there's going to be change there, there is a need for adaptation, we want to try and minimize the harmful impacts as much as possible. That's what keeps me interested and engaged in this work on a daily basis—to know that each and every project that we work on, if we can reduce its carbon impact, we are making a measurable difference, and taking solace in that.

Did anything surprise you throughout your career here?

I was amazed at the transition that happened in MA a couple of years ago, as it relates to Passive House integration into our projects. I love the story around that because there was no one specific thing that changed the trajectory of housing development towards that type of high-performance building, it was a lot of things. It was people working at a lot of different levels.

It was folks like us working at the technical level to demystify and show that we could implement this work and do it in a cost-effective way. It was folks working at the program development level, the Mass Clean Energy Center, and the pilot grant that they put out there for the first eight or nine Passive House projects, to help them mitigate any fear around negative capital cost impacts of engaging in a Passive House project. It was the advocacy work at the state-level around starting a utility rebate program that would incentivize folks to do this. It was getting Passive House listed as a way that you could get competitive points on the low-income housing tax credit application with DHCD.

The combination of all of those things was really what moved the needle so rapidly, and that resulted in us going from having one or two Passive House projects that we were working on to 40! It was an extremely rapid transition once it started to happen, but it was many years in the making.

What are some of your proudest moments or achievements at NEI?

One of the things that's been super nice as I've had conversations with people about my transition, is I've had a lot of folks come to me and thank me for some of the work that I've done. And, actually, a lot of it isn't all that recent, a lot of it is from over the years. One of

SUMMER FUN



NEI teams in Boston (above) and the Mid-Atlantic (below) met up for some fun summer outings in the past few weeks, enjoying time together in the last days of the season.





Looking to make a direct impact on your community? New Ecology is looking to expand our team of mission-driven individuals. We are successfully working to on-board and train new hires remotely. We are currently hiring for:

- Vice President
- Senior Project Manager
- Project Manager
- Assistant Project Manager
- HERS Rater/Assistant Project Manager (Wilmington)
- HERS Rater Trainee (Wilmington)

Visit <https://www.newecology.org/category/jobs/> for more information and to apply.

Pass this along to your professional networks!

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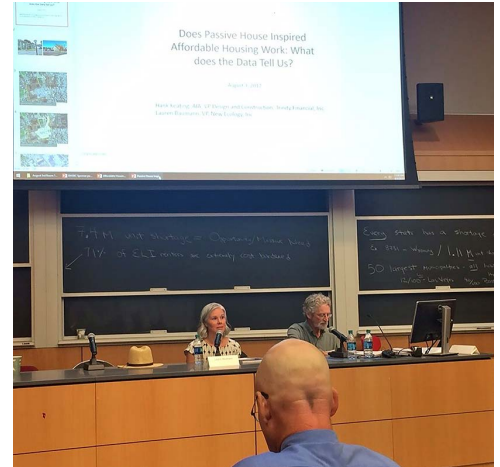
the things that is most meaningful to me is that they say by working with me, I was able to communicate to them, and demystify this work, and facilitate a communication process among the team that led to buy-in and consensus.

It's not a particularly technical related compliment, it's more about my ability to bring people to the table, and have them come along with me as I help them make decisions. I think that's one of the skills that has served me best in my career at NEI. Yes, it's important that I've understood the technical and the policy related stuff, and I understand how development projects happen, but all of that isn't helpful unless you can figure out how to pull it all together and then communicate to project team members so they make the decisions that will get the project to a higher performance level. If anything, I'm proudest of having brought that skill and capacity to the field and, and hopefully, made a difference in projects because of it.

It's true—it's one of the things that I admire most about NEI, that ability to pull everything together and demystify certain things that are daunting to people who don't do this every day, and I know that you are a huge part of that.

I would just like to add that I'm extremely grateful for all of the opportunities that this organization has provided to me, to learn, to provide influence on projects and processes.

It's been an incredible place to work. It's an incredible team of people to work with. There's no way I could have done a small fraction of what we've accomplished without the skills and expertise and motivation and commitment of everybody else on the team. It's a really special, special organization, and I think that is, the people and that process is what I will miss most, when I am no longer a part of the team.



Lauren talks about Passive House at the New Gravity Conference.



Lauren and team recreate the T sign.

DATA DIVE

SOLVING CHRONIC PROBLEMS, DELIVERING SUSTAINED EFFICIENCY



BY CHARLIE SIMEK, ENERGY ENGINEER

Profile: 34-40 Danube St., Boston, MA 02125
Size 26,925 sq. ft. / 3 stories, 18 units, 43 bedrooms
Owner: The Abrams Management Company, Inc.

With new regulations focused on a building's carbon intensity, owners are preparing to make large equipment investments in order to stay in compliance. Boston's Building Emissions Reduction and Disclosure Ordinance (BERDO) requires buildings to gradually reduce their emissions to zero by 2050. While equipment changes can be one path to compliance, NEI has discovered, throughout its years of energy monitoring and analysis, that many buildings could delay and minimize expensive equipment upgrades by repairing and optimizing their current system to run more efficiently.

The Danube affordable housing development is an example of this type of building, where NEI has managed to drastically *reduce gas consumption by 50%*. This puts the building in a position where only minor energy optimization will allow it to meet BERDO's 2030 threshold for compliance. This was all possible without any major boiler or equipment replacement.

Danube enrolled in NEI's Remote Monitoring and Optimization (ReMO) program where data from the heating and domestic hot water (DHW) systems are collected and analyzed. This informs the implementation of Energy Conservation Measures (ECMs) that are recommended by NEI. This analysis led to ECMs that addressed incorrect outdoor air (OA) sensor readings and malfunctioning mechanically controlled valves. By fixing the OA sensor, the boiler is now able to properly control the amount of heat it sends out to the building. The malfunctioning valves at Danube were allowing heat to transfer between the DHW and heating loops, causing inconsistent heating of the building. Replacing these valves isolated the loops and ensured heat was being sent to the correct locations. Solving these issues reduced the building's gas usage by around 50% over 21 months.

Through a combination of equipment repairs and adjustments to the heating and domestic hot water setpoints, Danube was able to achieve and maintain incredible savings on gas usage at the property, putting it one metric ton above the total 2030 BERDO threshold. Only minor optimizations will be necessary over the next 8 years to push the building below this threshold.

JJ Carroll Redevelopment Groundbreaking Ceremony

BY FRANK STONE, PROJECT MANAGER

On June 2, 2022, 2Life Communities held a groundbreaking ceremony at the JJ Carroll Redevelopment project in the Brighton Neighborhood of Boston. Speakers, including Boston Mayor Michelle Wu, addressed the crowd in multiple languages, speaking to the diverse neighborhood and resident population. The ceremony, led by Amy Schectman, highlighted three main themes important to the project team: the importance of partnerships, respect for others, and a desire to expand housing to enable residents to remain and thrive in active communities. The JJ Carroll Redevelopment project will increase the total number of affordable elderly housing units at 132 Chestnut Hill Avenue from 64 to 142 units, and NEI is proud to be part of the Certified Passive House Consultant team for this Phius 2018 project.





L.J.'s furry friends.

LET'S TALK

New Ecology is eager to work with partners who are interested in learning more about our work and how we can help you to achieve your project's goals. We have worked on hundreds of projects for owners in market sectors including housing, office, retail, education, healthcare, government, arts, and nonprofit.

Our passion and commitment is best demonstrated by the fact that we have been at the leading edge of community-based sustainable development since 1999.

At the same time, our reach, approach and successful model have helped us attract and retain a talented staff known for its desire to make advances in a new and growing field.

Interested in learning more? Contact info@newecology.org or call 617-557-1700.

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Community-Based Sustainable Development

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Staff Profile

Name: L.J. Eldredge

Title: Director of Green Building Operations

What does your job entail? My focus is on evaluating, streamlining and improving project management and performance evaluation processes and developing and implementing quality control systems and technical staff training programs. I work closely with the staff to identify issues and areas of concern to help prioritize my focus; ultimately helping the department to operate more smoothly and effectively.

What is the most inspiring/interesting part of your job? I really love helping people. Enabling our team to do the technical work of assisting in creating more energy efficient and environmentally safe building is incredibly satisfying. I feel accomplished when I have helped someone else to feel accomplished, solve a problem, or just listened when they needed to be heard.

What do you like to do outside of work?

I enjoy cooking and baking. Eventually I hope to take some cake decorating classes to improve upon aesthetics of my baked goods!

I also enjoy my family, I am happily married to my husband of 13 years and have two children, ages 6 and 9. It can be a busy house with our two dogs, cat, fish, and hamster but it is also so full of love!

Favorite movie/TV show/band? My all-time favorite TV show is *Friends*; I watch the series on repeat! I also really enjoy rom-coms and Marvel movies.



L.J. with her family.

What have you been doing lately to keep happy and healthy?

Allowing myself some space and quiet time to relax and recharge. I am somewhat of an introvert so the quiet helps me to recharge, refocus, and center myself.

What advice would you give to somebody looking to start in this industry?

You can't teach passion and drive, if you have that and a willingness to continually learn the rest will follow.