

Winter 2023

## BuildingWell

### A NOTE FROM THE PRESIDENT

In my first year at NEI in 2005, I recall looking at Cambridge rooftops from our old office and realizing that improving performances of existing buildings was going to be more challenging and expensive than building new healthy, efficient, resilient buildings. This challenge is now tougher as we seek to decarbonize existing building stock. NEI's efforts to develop practical approaches to this work include:

- Understanding how buildings are using energy, (by co-founding WegoWise, the first attempt at developing a large-scale tool to understand the performance of existing multifamily housing);
- Offering services to property managers to manage energy use of entire portfolios;
- Developing ways to make efficiency upgrades central to recapitalization plans;
- Implementing a radical expansion of utility programs to benefit multifamily affordable housing; and
- Developing ReMO, a low-cost method of gathering and analyzing data on HVAC equipment performance.

Previously, there were few incentives or funding for improving existing building stock. Without mandates and funding, it seemed that other financial and operational issues of building operations took up all the bandwidth.

With the advent of unprecedented incentives from the Federal government, changes in building codes, advancement of municipal energy/carbon disclosure ordinances, and greater willingness to consider climate change in decision making, there is unprecedented alignment that will require and reward building owners to act.

NEI will meet this challenge. The work described gives us a deep understanding of existing building performance and the steps necessary to decarbonize. We are re-aligning our staff to focus on this work; raising funds to support demonstration projects; testing new planning approaches and equipment; and advocating for permanent funding. The work will not be easy, but we can see a path to getting it done at scale.

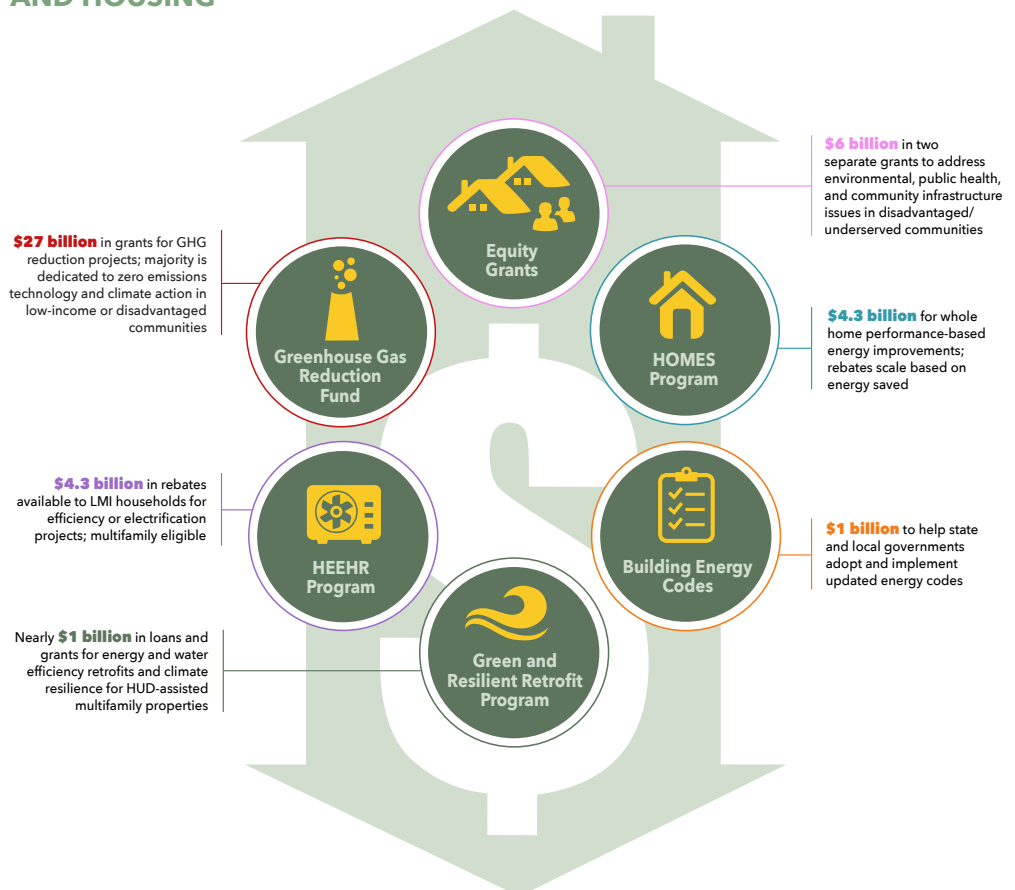
— Edward F. Connelly  
NEI President

### Inflation Reduction Act

BY MICHAEL ABDELMESSIH, ASSISTANT PROJECT MANAGER AND  
SPENCER GORMAN, ASSISTANT PROJECT MANAGER

The Inflation Reduction Act (IRA) was passed in 2022. The IRA establishes a range of new programs for the coming decade and includes changes to numerous tax laws and credits. Many of the new or updated laws, tax credits and programs pertain to energy efficiency improvements in multifamily housing throughout the country. NEI has created the following graphics to present some of the pertinent information. Please note that the information presented in the following graphics is geared towards multifamily housing; different rules, funding and credit levels, and funding sources may be available for other types of affordable housing and LMI households.

#### INFLATION REDUCTION ACT AND HOUSING



continued on next page

These overview graphics are not intended to address the specific financial complexities associated with each opportunity. New Ecology is working to better understand how these will be implemented in the coming months and how we can help our clients access these resources.

## ENERGY EFFICIENCY TAX CREDITS

SUMMARY	TAX CODE SECTION	INCENTIVE
Homebuilder tax credit extended through 2032, expanded to include all multifamily projects.	45L	<ul style="list-style-type: none"> <li>Up to \$2500/unit to achieve ENERGY STAR certification</li> <li>Up to \$5,000 to achieve DOE Zero Energy Ready certification (must meet prevailing wage requirements to receive full incentive)</li> </ul>
Residential Alternative Vehicle Refueling (EV) properties incentive extended through 2032 for eligible homes in targeted rural or low-income census tracts.	30C	<ul style="list-style-type: none"> <li>30% of cost, up to \$1,000</li> </ul>
Home improvement incentives increased and extended to the end of 2032.	25C	<ul style="list-style-type: none"> <li>30% of eligible expenses, up to \$1,200 /year</li> <li>Up to \$2,000 per year for heat pumps, heat pump water heaters and wood stoves (some products have lower caps)</li> </ul>
Clean energy credits extended to on-site residential solar electric, solar waterheating, fuel cell, small wind energy, and geothermal heat pumps through 2035.	25D	<ul style="list-style-type: none"> <li>30% of eligible expenditures, gradually scales down to 22% from 2033-2035</li> </ul>
Increased tax deductions for commercial and mid/high-rise multifamily buildings, depending on percentage energy reduction below ASHRAE 90.1 standard, as well as meeting prevailing wage and apprenticeship requirements.	179D	<ul style="list-style-type: none"> <li>Increased to \$2.50 - \$5.00/ square foot (given prevailing wage and apprenticeship requirements)</li> <li>Expands tax deduction eligibility to existing building retrofits (must demonstrate EUI improvement to qualify)</li> </ul>
Investment Tax Credit (ITC) eligibility for clean energy property investments expanded to include new technologies such as energy storage technology and microgrid controllers. ITC will convert to a tech-neutral structure starting in 2025, with incentives to be based on greenhouse gas emissions reductions.	48	<ul style="list-style-type: none"> <li>Up to 30% of costs (given prevailing wage and apprenticeship requirements), or as low as 6% of costs</li> <li>ITC can also be increased by 10%, given domestic content requirements are met, and another 10% if a project is inside of a designated "energy community"</li> </ul>



## PHIUSCON 2022

BY NICK HERNANDEZ, ENERGY ENGINEER

This past October, several members of NEI staff attended and participated in PhiusCon 2022 in Chicago. Maciej Konieczny, Director of Building Technologies, and Nick Hernandez, Energy Engineer presented at the conference, hosting the session *From Concept to Pre-Certification: Behind the Scenes Look at Project Management and Energy Modeling in Multifamily Housing*, a "behind the scenes" look at pre-certifying a project through PHIUS. They gave an in-depth look at how NEI utilizes both the project manager's and energy modeler's point of view during the project workflow, and explained our best practices and lessons learned.

One of NEI's projects, Old Colony Phase 3C, also won the first-place award in the Low-Rise Multifamily category. NEI acts as the CPHC and PHIUS verifier/rater on this project. Thank you to PhiusCon for hosting us!



**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
- Director of Green Building Services
- Senior Project Manager
- Project Manager
- HERS Rater/Assistant Project Manager (Wilmington)
- Energy Engineer (Wilmington)

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

*Pass this along to your professional networks!*

**NEWSLETTER CONTRIBUTORS:**  
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## Passive House News

BY FRANK STONE, PROJECT MANAGER

### Mildred Hailey

NEI would like to congratulate the Mildred Hailey 1B project team on having the project reach an important sustainability milestone: Phius Passive House Design Certification! Congrats to The Community Builders (TCB), PCA Architecture, and Petersen Engineering for seeing the project through to this step. Building 1B will provide 100 units of housing at the Mildred Hailey housing development in the Jamaica Plain neighborhood of Boston. Building 1B will be built alongside another new construction building, Mildred Hailey 1A, which will include the rebuilt Anna Mae Cole Community Center. In total, the buildings will include 223 units of high-quality housing for area residents. NEI staff are working as the Certified Passive House Consultant (CPHC) and Phius Verifiers on this project.



*Mildred Hailey rendering by PCA. 387 Dudley rendering by Davis Square Architects.*

### 387 Dudley Street

NEI is very excited to announce that the 387 Dudley Street project is now Phius Core+ 2021 Design Certified. This 24-unit building will be 100% affordable housing, and it will have all electric systems. This Nuestra Comunidad Development Corporation project will provide much needed housing in the area, and will have a retail/commercial space at the first-floor level. The project team included Nuestra CDC, Davis Square Architects (DSA), BLW Engineering, and will be built by NEI General Contractors. NEI staff are working as the Certified Passive House Consultant (CPHC) and Phius Verifiers on this project.



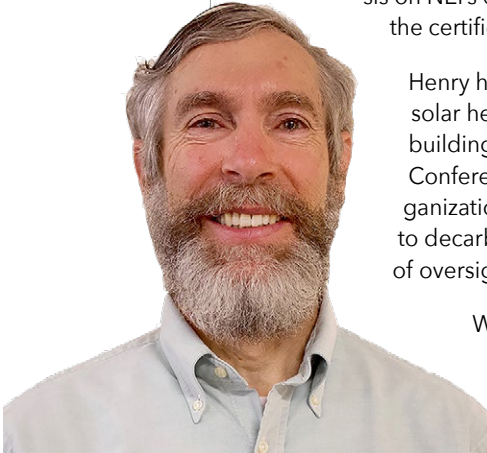
## Bon Voyage, Henry Harvey

BY BARBARA MARTINS, HR ASSISTANT AND JUSTIN IOVENITTI, SENIOR ENERGY ENGINEER

October 31, 2022 marked Henry Harvey's last day at NEI before enjoying a well-earned retirement. Explaining what Henry means to NEI is no easy task. Henry joined NEI as our Director of Engineering in May 2018. In the past 5 years, Henry has helped to completely refine the utility analyses performed on existing buildings, as well as the calculations undertaken for ASHRAE level II audits. This coincided with a dramatic increase in emphasis on NEI's energy modeling services. Members of the engineering team now routinely play key roles in the certification of high-performance buildings via these whole building simulations.

Henry helped to guide research and understanding of several important areas such as air infiltration, solar heat gain, combined heat and power systems, and domestic hot water usage in multifamily buildings, the latter of which culminated in a presentation before the North American Passive House Conference with Neil Donnelly in late 2019. Towards the end of his tenure, NEI embarked on the organization's first Zero Over Time studies. These efforts will become more critical over time as we seek to decarbonize the building industry. Perhaps most importantly, Henry was able to provide a balance of oversight and empowerment for new team members as they rose through the ranks.

We are all grateful to Henry for his contribution of knowledge, expertise, and leadership to the evolutionary processes of Energy Engineering and Modeling at NEI, which has led to growth of interdisciplinary collaborations. We will miss his influence, but we know he leaves things in great order for the next generation of NEI Engineers. Congratulations on all your accomplishments Henry, and all the best for a wonderful next chapter!



## NEW NEI OFFICE IN BALTIMORE

BY JUSTIN IOVENITTI, SENIOR ENERGY ENGINEER

The NEI team in Baltimore has a new home! As of October 2022, we've occupied the first floor of 2526 St. Paul Street in the Greater Charles Village area. Charles Village is home to the Baltimore Museum of Art and Johns Hopkins University. The building is essentially a double wide rowhouse. The original construction dates to the turn of the 20th century. A more recent addition roughly doubled the size of the building (we're guessing around the 1990s).



We've got some new office mates, including a consulting firm focusing on equity and social work counselors. Our office is directly adjacent to a sunken freight rail line to the north (we're reminded it's still active by trains rumbling by several times a day). The block made **national news** when heavy rains caused 26th street to collapse in 2014, swallowing some parked cars in the process. The rebuilt area has resulted in a **new urban park**.



The new space has allowed us room to grow. We recently welcomed the fifth member of our Baltimore team - our third new hire in the last two years! Our project reach continues to grow as well—last year we kicked off projects in North Carolina and Michigan. Here's to our new home!

2022

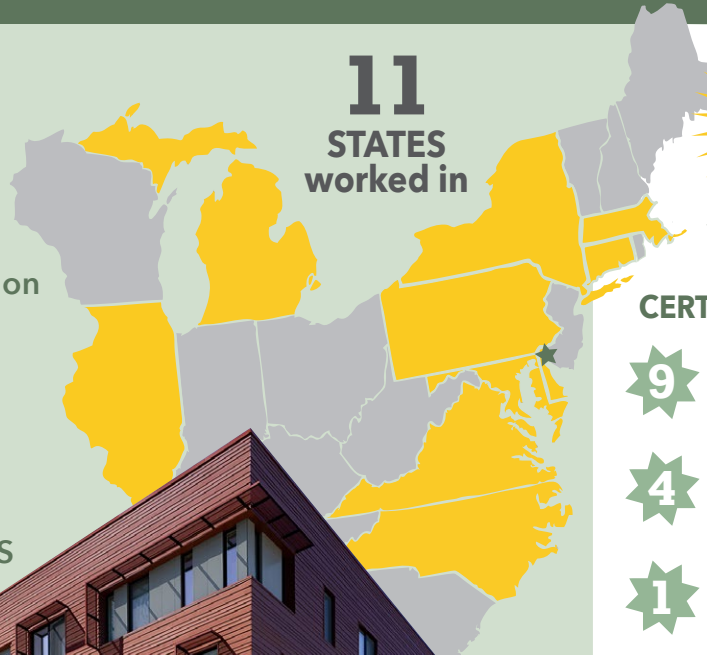
# Year in Review

**1,100+**  
BUILDINGS worked on

**14,500+**  
UNITS worked on

**13,100+**  
AFFORDABLE UNITS  
worked on

**11**  
STATES  
worked in



### CERTIFICATIONS



## LEAN Multifamily Program

### BOILER PROJECTS:

- 45** Audits
- 23** Inspections
- 57** Completed projects

### HEAT PUMP PROJECTS:

- 40** Audits
- 13** Inspections
- 14** Completed projects



**13** NEW HIRES



Stacy Neal

## 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](mailto:info@newecology.org) or call 617-557-1700.

## NEW ECOLOGY

Community-Based Sustainable Development

BOSTON | BALTIMORE  
| WILMINGTON

15 Court Square, Suite 420  
Boston, MA 02108  
[www.newecology.org](http://www.newecology.org)  
617-557-1700

## Staff Profile

**Name:** Stacy Neal

**Title:** Chief Operating Officer

**What does your job entail?** This role is new at New Ecology, so we're defining it in real-time. I am responsible for all of the day-to-day operational and administrative management, overseeing NEI's finance and human resources teams, and building out capacity in IT and communications with support from external partners. I have also begun to manage NEI's internal culture and leadership activities, including facilitating our internal management meetings, planning staff meetings and retreats, and supporting our Board of Directors meetings. It's been an interesting first two months, and I am excited by all of the opportunities ahead!

**What is the most inspiring/interesting part of your job?** While I am a career nonprofit leader and have experience with organizations that achieve mission and social impact, I am entirely new to the sustainable development, climate justice, green building, and affordable housing spaces. The best part of my first weeks at NEI has been the one-on-one meetings I've had with each member of our now-56-person staff, learning what folks do, how they do it, and what they're looking ahead to in 2023 and beyond. I have been excited to better understand how NEI's work achieves impact on multiple levels. We have folks who are installing energy efficient systems into individual buildings, allowing residents and owners to see immediate impact on their living areas and expenses; we have teams stewarding projects for large multifamily units from envelope design to construction and occupancy, with opportunities to influence sustainable outcomes and change practices of architects, developers, and others through a multi-year process; and we're working with large-scale developers, peer organizations, and funders to influence the norms and regulations at the nexus of affordable housing and climate justice, encouraging change at a systemic level over the long-term. These layers of influence are so powerful, and supporting this type of work is really inspiring.

**What do you do outside of work?** My family is my main focus outside of work, and we enjoy traveling and attending sporting events together. I find cooking and baking to be a wonderful source of stress relief and a creative outlet, so I try to find time to peruse new recipes and experiment, as well as to make tried and true favorites from scratch.

**Favorite movie/TV show/band?** I am a big fan of Top Chef and similar programs that combine creativity and competition while inspiring me to attempt new things in the kitchen! I also try to find good prestige TV dramas and watch those in chunks to get deep in the storyline.

**What have you been doing lately to keep happy and healthy?** When the weather is right, I love to run outside. I've also been aiming to incorporate more fresh fruits and veggies into the weekly menu. Finally, turning off notifications on my phone after working hours has been a very healthy practice for me, allowing me to focus on home and personal time and return to work refreshed the next day.

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

For those interested in managing nonprofit organizations, it helps to get a range of experience in both programmatic and administrative roles. Understanding the execution of the work is very helpful in developing perspective on how to support it operationally. Take every opportunity to learn, whether it's by spending time with mentors understanding finer details of things like financial statements or grant applications, or taking on small but meaningful leadership assignments through internal committees.