

Winter 2021

BuildingWell



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FOR OUR
2020 STATS!

A NOTE FROM THE PRESIDENT

The need for a well-trained, innovative workforce to improve buildings has never been greater. The effects of climate change are here and are real, and many of our neighbors live in substandard housing. Efforts to improve our building stock are accelerating. The Biden Administration is prioritizing addressing global warming and housing; many state and local governments intensifying their efforts to electrify buildings, reduce carbon, and build and preserve affordable housing. How will we make sure that emerging opportunities are available to all?

Part of New Ecology's mission has always been to provide opportunities to help expand the number of people working in our field. We are excited to launch a new apprenticeship program to train newcomers to provide services in the growing field of building rating services—whether for Energy Star, code compliance, LEED, or Passive House.

We can, and will, do more, and we encourage all of our colleagues to think about how we can take advantage of the opportunities that are created by crisis to rapidly expand the workforce in this field and further open it up to diverse talent.

— Edward F. Connelly
NEI President

New Moisture Management Educational Initiative for Multifamily Properties

BY JUSTIN IOVENITTI, ENERGY ENGINEER

With the support of the Delaware Sustainable Energy Utility's Energize Delaware (DESEU) initiative, New Ecology has developed an educational program focused on identifying and remedying moisture issues in multifamily properties. The sessions—led by NEI's Mid-Atlantic staff—have taken the form of virtual webinars, which have included video tutorials and audience Q&A, supplemented by inspection checklists. The state's mixed humid climate presents challenges through multiple seasons which must be addressed in concert with energy efficiency pursuits to achieve comfortable, durable, and healthy housing. Since future climate modeling for Delaware projects more storms with heavy, soaking rains and warmer temperatures, we anticipate moisture related problems will increase as well. These can be triggered by a myriad of sources, which include tenant activities, precipitation, flooding, groundwater, and humid outside air.

Thus far, the NEI team has listened to the concerns of multiple developers, multifamily property owners, and property maintenance groups. The stakeholder listening sessions have helped tailor our presentations to unique audiences. We've looked at how moisture issues manifest differently in the following scenarios:

- Townhomes versus low- and mid-rise buildings;
- Buildings utilizing slab-on-grade construction versus those with crawlspaces or basements;
- Properties with low slope roofing versus those with composite shingle roofs;
- Properties which are all-electric versus those with combustion equipment;
- Buildings which are served by central HVAC systems versus those that have individual systems within each apartment.

After the sources of moisture problems have been identified, NEI staff then aim to equip multifamily owners and operators with tools to address them in a comprehensive fashion. These recommendations have been broken down into three levels of intervention: ongoing building operations, light renovations, and gut rehabilitations/new construction. Leasing and property maintenance staff are crucial in identifying

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problems before they become acute. Strategies includes resident education, periodic inspection, enhanced equipment controls, preventative maintenance, and staff training opportunities.

In particular, we've heard of numerous issues with condensation from cooling systems and bathroom exhaust fans.

Properties which are undergoing substantial upgrades have opportunities for more complex solutions, including the installation of vapor retarders, dehumidifiers, variable speed cooling systems, and dedicated ventilation systems. In all cases the sessions are capped with a discussion of real world case studies.

As buildings become more airtight and efficient, energy and moisture issues become even more intertwined. If you are in Delaware and dealing with similar problems please contact us to see how NEI

may assist. The cost of all sessions is subsidized by the Energize Delaware program. DESEU is committing to improving the efficiency and durability of the building stock in the state, and offerings such as this and the broader **Energize Delaware Program** aim to make these goals a reality.



Delaware beach community

Construction Type	Walk-up flats, veneer brick over wood studs – crawlspace foundation
Issues	<ul style="list-style-type: none"> • Bulk moisture/ improper drainage • Lack of dehumidification/sumps • IAQ • Utility burden for dehumidification & ventilation?
Solutions	<ul style="list-style-type: none"> • Address poor grading around building perimeters & discharge drains away from foundations • Provide sump pumps to remove bulk moisture • Add vapor barrier to crawlspace floor • Air seal & insulate at crawlspace ceiling • Heat trace sanitary piping



NEI conducts a virtual Moisture Management session.

WE ARE HIRING!



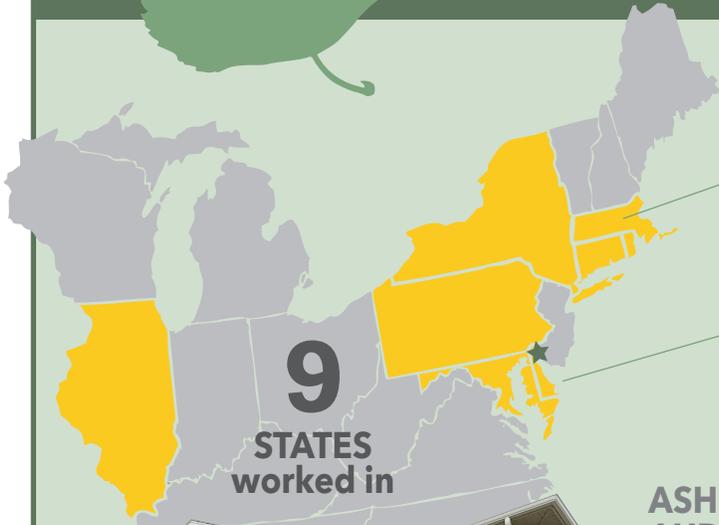
New Ecology is looking to expand our team!

We have several open positions, and we are successfully working to on-board and train new hires remotely. We are currently hiring for:

- Contracts Administrator (Boston)
- Senior Energy Engineer (Boston)
- Project Manager, Green Building and Energy Efficiency (Boston)
- HERS Rater (Boston)

Visit newecology.org/category/jobs for our complete list of job postings and instructions on how to apply. Feel free to pass this along to your professional networks!

2020 Year in Review



RESILIENCE AUDITS ✓

12 developments assessed in Massachusetts

8 in the Mid-Atlantic

ASHRAE AUDITS ✓

6 ASHRAE I

10 ASHRAE II



CERTIFICATIONS



LEAN Multifamily Program:

65 AUDITS
(286 buildings, 4,438 units)

41 INSPECTIONS

50 PROJECTS completed

300+

BUILDINGS worked on

12,500+

UNITS worked on

3,500

AFFORDABLE UNITS worked on



8 NEW HIRES (in a pandemic!)

SAVE MONEY NOW. ASK US HOW!

NEI has secured grant funding to help YOU save money by:

- 24/7 Real-time monitoring of your central heating and hot water systems,
- Identifying and implementing solutions to long-term problems, and
- Learning of water leaks LONG before you get a nasty surprise on your bill.

If you know of eligible properties **AFFORDABLE MULTIFAMILY** or **NON-PROFIT OWNED** please contact us to learn more!

ReMO@newecology.org
or 855-888-6468

Interested in learning more?
[Watch this!](#)



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How it started, how it's going—a recent 11 SEER to 18 SEER AC upgrade on one of our projects.

Building Envelope Retrofits and Expectations

BY FRANK STONE, PROJECT MANAGER

On January 28, the Netherlands Innovation Network, part of the Dutch Ministry of Economic Affairs and Climate Policy, presented on some of the technology solutions and social organization principles that have helped the people of the Netherlands confront climate change challenges. The event, titled Greater Boston's Deep Energy Retrofit Market focused on Dutch solutions that may be applicable locally to Boston's retrofit needs and the accompanying market research report from Cadmus is available [here](#).

A few of the key takeaways included an overview of the homeowner engagement process designed to help guide the community through the energy transition, an introduction to the industrialization of retrofitting packages for buildings, and a discussion of district heating systems (which are currently in [pilot programs in MA](#)). For further follow up, the report from Cadmus, linked above, may be of interest.

The Building Sector Report of the MA 2050 Decarbonization Roadmap Study also identifies a number of action items for the existing housing stock, which is important from an emissions reduction standpoint as 81% of the expected 2050 building stock is already built and in operation. The report, available [here](#), identifies small residential buildings (defined as 4 units or fewer) as contributing to 60% of building emissions. These buildings will likely need to be retrofitted, requiring investment in envelope/insulation and air tightness improvements, ventilation, and heating system electrification. The results of investment in this sector will likely be rewarded both with lower emissions and lower cost to building occupants.



Sunayan Jain

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.

NEW ECOLOGY

Community-Based Sustainable Development

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Staff Profile

Name: Sunayana Jain

Title: Senior Project Manager

What does your job entail? I manage ASHRAE audits, Energy Star certifications, Enterprise Green Communities, and LEED projects. I work closely with affordable housing developers and building owners to help them achieve energy efficiency targets required to obtain Low Income Housing Tax Credits funding.

What is the most inspiring/interesting part of your job? At NEI and in my previous jobs, I have worked on whole-building energy modeling using the Department of Energy's eQUEST tool. Energy modeling is a complex process that analyzes and predicts energy consumption of every aspect of a building. It's rewarding to guide the design team and help them achieve energy performance goals through modeling forecasts.

What is a challenge people in this industry face that you would like to solve?

Existing Buildings are one of the major components of energy usage and greenhouse gas emissions. Many existing buildings are in dire need of energy efficiency upgrades,

however, due to financial limitations, property owners are not able to improve them. I would like to work on existing buildings to find opportunities of energy efficiency measures and work with the state and local authorities to obtain incentives/rebates to make the projects financially viable to implement the measures.

What do you like to do outside of work?

I like to explore various parts of the world with my husband. My most adventurous experiences so far have



been bungee jumping from 440 feet in New Zealand, camping in the Amazon forests in Brazil, and glacier hiking in Patagonia, Argentina.

Favorite movie/TV show/Band? I love watching movies such as Life of Pi, Life is Beautiful, and romantic Hindi movies. I am interested in shoot locations and have visited the shoot locations of Lord of the Rings, Games of Thrones, and Mission Impossible.

What are you doing to keep happy and healthy? Life has been interesting with my 15-month-old son, Kiaan. In these times, I have learned to appreciate small things in life such as a walk outside in a good weather, or trying a new healthy food recipe at home. Recently, I have used a treadmill at home to keep up with the walking/running sessions.

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

With more than a decade of experience in the energy efficiency industry, I have realized that it's an ever-growing industry and there are lot of opportunities to contribute, even in challenging times. It is important to keep yourself updated with changes in codes, certifications, and standards. This is a very broad field and gives you opportunity to work in diverse sectors such as utilities, state regulatory agencies, corporate sustainability, energy consulting, and many more. It is important to be networked to people in the industry and get involved with the local chapters and events.