FULL-DAY WORKSHOPS
9am - 5pm
Creating Successful Energy Models
This workshop will focus on improving the modeling skills of a beginning to intermediate energy modeler. Attendees should have a basic familiarity with green buildings, commercial energy codes, and energy modeling, but will have struggled to create models that make it successfully through a third party review process and/or accurately predict performance. **Chris Schaffner, Neetu Siddharth, & Vipul Singh** *(The Green Engineer)*

Getting to Net Zero: The Nitty Gritty of the Tools & the Steps
Explore tools that effectively utilize metrics, benchmarks, and tracking of actual energy data in order to inform project goal setting and integrated design strategies for NZE and NZE-ready buildings. Through hands-on Excel based exercises on your laptop, you'll learn the importance of comparative modeling (base case vs NZE) in achieving high-performance results. **Andy Shapiro (Energy Balance), Laura Bailey & Bill Maclay (Maclay Architects)**

MORNING WORKSHOPS
10am - 1pm
Energy-, Water-, & Time-Efficient Hot Water Systems
Even in high-performance buildings, most practitioners use outdated, inefficient plumbing methods. Using the United Association (UA)’s Mobile Service Tech Training Lab, we’ll demonstrate practical measures you can take to develop high-performance hot water systems. **Gary Klein (Gary Klein and Associates)**

Materials Transparency: Choosing Better Products for Your High Performing Building
Materials transparency is becoming a primary objective for those creating highly-efficient, healthy buildings. Learn to devise a framework for making choices, to specify ideal materials, and how to approach product research. **Rachelle Ain (Bruner/Cott), Paula Melton (BuildingGreen), Lisa Carey Moore (Integrated Eco Strategy)**

AFTERNOON WORKSHOPS
2 - 5pm
Best Practices for All-Electric Homes & Apartments
All-electric buildings can reduce infrastructure costs, but what are the effects on operating costs, comfort, and reliability? View research from around the Northeast on various solar systems and heat pumps for both water heating and space heating, and learn best practices for determining when and how to forgo fossil fuels. **Robb Aldrich (Steven Winter Associates)**

Embodied Energy & Carbon: Calculating the Life Cycle Impacts of Buildings
Participants will gain the skills and understanding to calculate the life cycle impacts of buildings. The workshop will close with best-practice case studies of buildings that have reduced their embodied and life cycle impacts without adding to the cost of the project. **Craig Jones (Circular Ecology)**

Energy-, Water-, & Time-Efficient Hot Water Systems
(See morning workshop)

How to Prepare for High-Performance Windows
We will look at window installations that are airtight and correctly flashed and that, as a result, will last the lifetime of a building. You’ll learn tools for simple and effective high-performance window installation through presentations and mockups. **Oliver Klein & John Druehinger (475 High Performance Building Supply)**

ZNE High Performance Schools
See how the education sector is leading the market in zero net energy (ZNE) buildings. You’ll view case studies of schools with ZNE design goals; tools and exercises to help plan and advocate for ZNE buildings internally; and resources for creatively financing, planning, and integrating curriculum into new and retrofitted school buildings. **Ralph DiNola (New Buildings Institute), Joseph da Silva, (State of Rhode Island School Building Authority), Stephany Mason (Collaborative for High Performance Schools)**

Pre-conference workshops must be purchased separately from conference passes. View the full descriptions of these workshops at: nesea.org/be17-workshops