



08:00 AM [Welcome, Credits, and Certificates](#)

08:05 AM **What does it mean to be Net Zero? A high-level introduction**

This class will define net zero across time, including the State of California's present definition. We will cover key aspects of planning a net zero project, along with some thoughts about communicating with clients about the effect of the State's policy goals on their building design. We'll also offer some cost case studies and research from various sources, and conclude with resources for deeper exploration.

Ann Edminster

Ann Edminster is a California-based green building consultant with a national practice, laser-focused on decarbonizing homes and communities. Trained as an architect, she facilitates design teams, coaches other building practitioners, works on applied research projects, teaches, develops education programs, writes, and rabble-rouses in the climate space in her spare time. More than a quarter-century ago, she focused her Master's thesis on embodied carbon (a wee bit ahead of the times), and a dozen years ago wrote the first book on zero energy homes -- somewhat more timely, to be sure, but she's still waiting for the times to catch up. <https://annedminster.com/>

ATS Seminar - America Training Solutions Provider #: 406119285

AIA #:NetZeroIntro HSW | GBCI (USGBC/CAGBC) #:920027626

09:05 AM [Review of Session Code Process](#)

09:10 AM **Codes & Standards on the Path to Zero Net Energy**

The changing landscape of codes and standards for "Net Zero Energy" goals have been shifting both at the international scale and down to our own backyards with local government agencies taking the lead on carbon free buildings. This session will give you a primer on the latest developments in building energy efficiency standards and the variations of local "reach" code efforts that are impacting the design space. We'll cover the major changes in Title-24 Part 6 for California, IECC, and touch on ASHRAE 90.1 for commercial buildings.

Ted M. Tiffany

Ted Tiffany has over 20 years experience working in the energy industry. Starting from the commercial construction field, building expertise in energy performance modeling, engineering support, architectural consulting, and policy development he has emerged as one of the leading experts in building decarbonization and grid harmonization in his field. With expertise in complex building design, from houses to hospitals, efficiency engineering, renewable energy systems, microgrid design, he's able to navigate the policy impacts of rate design, grid interaction, and the pathways to ending fossil fuel use in buildings. His prime focus is improving the educational outreach to get electrification and building decarbonization into the mainstream of design, construction, and policy.

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AIA #:NZCodes HSW | GBCI (USGBC/CAGBC) #:920027630

10:10 AM [Break](#)

10:30 AM

### **Making Zero Possible: Efficiency-First Decarbonization**

This session describes a process for designing buildings that couple reductions in greenhouse gas emissions with reductions in energy use. Proceeding along the project roadmap from pre-design through building occupancy, we will take a look at key decision points at each phase. Along with the emphasis on net zero design as a process, this session will take brief detours to explain related issues in building science, project management, and greenhouse gas accounting.

Jack Rusk

Jack Rusk is a Climate Strategist with EHDD, an architecture firm with offices in San Francisco and Seattle. He works across projects at the firm to identify and implement climate positive design strategies. Jack also leads development of the Early Phase Integrated Carbon (EPIC) assessment, a web application for planning carbon reductions. Available for free and covering a range of carbon reduction measures, EPIC illustrates the potential for deep decarbonization in every project. In the past few years, he has published or presented research on ecosystem restoration, life cycle impacts of bio-based materials, urban hazard risk, and decarbonization policy's consequences for health and social equity. Jack is a graduate of the Yale School of the Environment and the Yale School of Architecture and a member of the International Living Future Institute's Energy+Carbon Technical Advisory Group.

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AIA #:NZPossible HSW | GBCI (USGBC/CAGBC) #:920027627

11:30 AM

### **The Positive Impact of Thoughtful Materials Selection**

This class aims to educate architects and engineers on the importance of considering the environmental impact of the products they specify in their building designs. It covers topics such as calculating carbon emissions, understanding the manufacturing processes, and documentation supporting reduced embodied carbon. Additionally, it explores various assessment tools such as life cycle assessment (LCA), environmental product declarations (EPDs), and material transparency declarations. The class also highlights the benefits of reusing existing buildings and materials versus tear-down and new construction.

Vaclav Hasik

Vaclav Hasik is a Program Director at Building Transparency, a non-profit organization behind the EC3 Tool, tallyLCA, and tallyCAT. Vaclav works on methodology, data quality, and LCA research supporting all three tools. Vaclav was previously a sustainability analyst and Life Cycle Assessment (LCA) expert at Urban Fabrick, where he managed projects pursuing LEED certification and helped design teams address embodied carbon through whole-building LCAs. Vaclav also worked as a researcher at the University of Pittsburgh, where he was involved in university-wide carbon accounting, sustainability planning, and research on data and methods for LCA of buildings. He is an active member of the Carbon Leadership Forum and a founder of its San Francisco Bay Area hub.

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AIA #:NZMaterials HSW | GBCI (USGBC/CAGBC) #:920027629

12:30 PM

Break

12:50 PM

### **Grid-Integrated Buildings: Untangling Ourselves From the 'Net' in Net Zero**

This session describes how to design a building that produces the energy it needs to operate. A brief discussion of the electrical grid will set essential context for this discussion. From this basis, we will review how the net zero paradigm has evolved to account for interactions between a building and the electrical grid to which it is connected, how energy storage is important for capturing advantages from renewable energy generation and building efficiency, and how getting to zero is highly dependent on when energy is used.

Jack Rusk

Jack Rusk is a Climate Strategist with EHDD, an architecture firm with offices in San Francisco and Seattle. He works across projects at the firm to identify and implement climate positive design strategies. Jack also leads development of the Early Phase Integrated Carbon (EPIC) assessment, a web application for planning carbon reductions. Available for free and covering a range of carbon reduction measures, EPIC illustrates the potential for deep decarbonization in every project. In the past few years, he has published or presented research on ecosystem restoration, life cycle impacts of bio-based materials, urban hazard risk, and decarbonization policy's consequences for health and social equity. Jack is a graduate of the Yale School of the Environment and the Yale School of Architecture and a member of the International Living Future Institute's Energy+Carbon Technical Advisory Group.

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AIA #:NZGridInt HSW | GBCI (USGBC/CAGBC) #:920027628

01:50 PM

### **The Architect's Roadmap to Net Zero - Q&A Closing Session**

This one-hour live panel will feature the five instructors coming together to answer your net-zero questions.

Jenn Furr

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02:50 PM

End

