Simplifying Energy Efficiency: A Holistic Approach

Nicole Schuster, AIA, CPHC, LEED AP, *Owner/Architect, Positive Trace*

Abstract:

In today's race towards a sustainable and energy-efficient world, our approach to cost-effective solutions in the construction industry is more critical than ever. In this presentation, we will explore practical strategies and lessons derived from recent low-rise multifamily Passive House projects, focusing on simplifying building systems for optimized efficiency.

We will dive into an exploration of key considerations such as Envelope Construction, Mechanical Ventilation with Energy Recovery (ERV), Domestic Hot Water (DHW), system placement and overall energy efficiency. Examine vital questions such as how many ERVs are needed, where they should be located for optimal intake and exhaust duct length, an analysis of distributed or centralized DHW systems, and the impacts these decisions have on building envelopes.

As we compare WUFI model results and Passive House performance metrics, you will gain a deeper understanding of how proper planning early in the design stage can significantly improve cost and energy efficiency outcomes. Join us as we unravel the complexities of energy efficiency and reveal actionable insights that can propel your next project towards sustainability success.

Presenter Biography:

Nicole is an Architect and Sustainability Consultant with over 16 years' experience bringing sustainability to a wide variety of project types and sizes. She recently founded her company, Positive Trace, to focus on bringing sustainability and building science expertise to Architects and project teams.