Affordable Housing Deep Energy Retrofits

Presenter: Christina Aßmann

Additional Presenters:

1. **Julie Klump**, Vice President, Design and Building Performance, Preservation of Affordable Housing (POAH), jklump@poah.org

Presenter Biographies and Experience:

Christina is an architect and building scientist with 20 years of professional experience working on various project types. Her work embraces design, sustainability, regenerative design, carbon reduction, social justice and synergizing of different high- performance building standards. She is passionate about incorporating her sustainability research into her role as an educator. Christina is a licensed architect, LEED AP BD+C, WELL AP, Fitwel Ambassador and Certified Passive House Consultant. Christina holds the German equivalent of a M.S. in Architecture from the Universität Stuttgart, Germany and a MArch from the University of Kansas, where she was part of the renowned Studio 804. She is a licensed architect, LEED AP BD+C, WELL AP, Fitwel Ambassador and Certified Passive House Consultant.Christina has extensive speaking experience including Greenbuild, NAPHC, PhiusCon, NESEA BuildingEnergy, Green Building United Sustainability Symposium and the New York State Green Building Conference. Julie has extensive speaking experience including various presentations and keynote engagements over the years. In 2024 she spoke at the Building Science Symposium, led a NESEA Pro Tour and presented at the Phius Pro Forum and the Winchester City Council.

Abstract:

This presentation will showcase a range of deep energy retrofit solutions for masonry buildings that support affordable housing. Project considerations include both retain age and removal of the existing masonry veneer. Projects will demonstrate a variety of cladding approaches ranging from panelized structural insulated sheathing to integrated exterior insulation and finish solutions.

In addition to several other projects, the presenters will highlight Salem Fairweather, a 1968, 127 unit residential, six story affordable housing apartment building in MA. The scope of work includes a deep energy retrofit based on the Phius CORE REVIVE 2021 standard featuring off-site fabricated enclosure panels, as well as new mechanical systems implemented from the exterior of the building. Upgraded MEP systems include VRF space conditioning, high efficiency ERVs, EV charging stations, a PV canopy, and centralized heat pump water heaters.

PH cost-optimized conservation strategies provide building durability through airtightness, moisture management and thermal improvements based on rigorous but attainable performance targets. The audience will learn different project considerations illustrated by the PH consultant and owner respectively.