A Net Zero Carbon Case Study

Presenter: Jenny Frank

Presenter Biographies and Experience:

Dr. Jenny Frank is an Assistant Professor of Energy Resources Economics at the State University of New York College of Environmental Science and Forestry (SUNY ESF) and she also serves as a Research Associate at the National Oilheat Research Alliance (NORA). She earned her PhD and master's degrees from SUNY ESF, where her research focused on the environmental and financial impacts of renewable energy technologies and feedstocks.

Abstract:

This presentation will examine a net zero carbon case study, which utilizes a solar photovoltaic system for electricity generation and consumption, along with a 100% biomass-based heating fuel. This presentation will discuss the significant energy load that is required by air conditioning in the summer while including the solar photovoltaic system results. The results of the study show that during the summer months, there were higher energy production than consumption values. In the fall months, the season yields higher energy production than consumption values. December and January were the only two months producing higher energy consumption values and lower production values. This case study shows the technical and financial feasibility of creating a net zero home utilizing a 100% biomass-based liquid fuel and a solar PV system within New York State.