

ASPE TechSymposium 2021



Mathias German

Mathias German earned a B.S. in Mechanical Engineering from Gannon University in 2013 and worked as an Applications Engineer with Chromalox Inc. for four years. This work entailed system design, equipment selection, and custom parts design in electric resistance heating applications ranging from small-scale residential to large-scale industrial. Mathias joined Rheem in 2017 as an Applications Engineer, where he is primarily responsible for selecting and designing natural gas, propane, and electric water heaters for use in commercial and industrial applications. Mathias has been a member of ASPE since 2017.

Water Heating Design in the Modern World

This session will explain how to calculate the hot water demands for common commercial applications. Typical assumptions for hot water demands based on fixture type and application use will be covered. The presenter will show step-by-step calculations for real-world applications, discuss the pros and cons of tank vs. tankless water heaters, and explain where these water heaters perform best and their general requirements for operation. Lastly, there will be an overall cost comparison breakdown between tank and tankless water heaters based on purchase price, installation, and operation cost.