

Nic Dunfee, TRC

Poster Title: From Zero Net Energy Buildings to Zero Emission Buildings: The Evolution of Efficiency Metrics in California

Abstract: As California is reaching both its statewide carbon reduction, and 2020 residential new construction zero net energy goal, we are realizing that our work has only begun. Recent updates to the state's carbon emissions goals call for a carbon-free grid and carbon neutrality as a state by 2045. Within the building sector, this has led to more focus on zero-emissions buildings and less on zero net energy (ZNE) buildings. This session will explore why ZNE goals do not necessarily equate to zero emissions buildings, and how this has caused California to start rethinking the way we value building efficiency. The discussion will include what resulted from California's final push towards 2020 goals, and how the state is shifting to the new 2045 carbon emission goals. Attendees will learn why carbon emissions may be displacing energy use as the new metric of choice for efficiency. Drawing from experience designing and implementing a first of its kind residential new construction electrification program for the Sacramento Municipal Utility district, the speaker will address how programs can mitigate specific obstacles and objections facing all-electric new construction. Additional insights include how the sponsor utility is valuing these all-electric homes, and the conversion of avoided therms into kWh savings using a source carbon equivalency.