

Neil Veilleux, Cadmus

**Poster Title:** Strategic Electrification in the New Energy Economy

**Abstract:** Strategic or beneficial electrification can provide a decarbonization pathway to transform the building (heating) and transportation sectors away from direct combustion of fossil fuels (e.g., natural gas, gasoline, diesel, etc.) to high efficiency, electric-powered technologies (e.g., heat pumps, electric vehicles [EVs]). As recently noted by regulators in California, strategic electrification represents "the most viable and predictable path" to achieve a zero-emission future. However, beneficial electrification is rife with controversy as utilities, HVAC companies, transit agencies, and car-makers—in addition to local and state agencies that govern them—wrestle with the challenges of deploying new business models and their associated impacts on public health, the environment, and consumers. This presentation will describe the assumptions, successes, failures, and promise of strategic electrification efforts to date. It will explore the notion that Americans can sufficiently decarbonize the economy—and avert the worst impacts of climate change—by transitioning building and transportation end-uses from fossil fuels to electricity, while simultaneously deploying clean and renewable generation on the grid. The presentation will include a discussion of the challenges associated with disrupting market incumbents, the prevailing market transformation theories, and key policies and programs that drive sustainable market growth. The latter encompasses, for example, recent efforts by states, cities, and utilities to support market development by creating new incentive and financing programs, innovative rate designs, marketing and communication initiatives, supply chain development efforts, and technology and innovation pilots. The presentation will touch on a variety of recent case studies, drawing on examples across the U.S. and Europe. As time permits, this may include, for example, case studies describing how (1) utilities are piloting new business models to adapt to changing customer and regulator expectations (e.g. National Grid, Alliant Energy, Southern California Edison, Con Edison, etc.); (2) state agencies are seeking to drive down soft costs and promote sustainable market growth (e.g. NYSERDA, MassCEC, Mass DOER); and (3) cities are exercising leadership to catalyze regional market transformation (e.g. drawing specifically on the efforts of the Building Electrification Initiative).