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Title: A rising tide lifts all SHIPs: Results and insights from novel behavior-based smart home efficiency programs

Abstract: While we are experiencing a period of rapid technological innovation in home automation and associated residential building technologies, the expected efficiency gains from these technologies are not yet being realized as expected. Could the path forward be one that goes beyond approaches relying solely on technical advances that install widgets? Perhaps we should embrace the human side of the smart home and more deeply integrate social science into these new products and services. This presentation reports out on the latest findings from a sampling of field trials and programs that leverage decision support tools for residential efficiency program implementers, contractors, and participants to drive deeper energy efficiency and savings. In one trial, we discuss pre- and post-intervention results from a smart thermostat pilot designed to increase follow-up on home energy assessments using thermostat analytics. In another program, we use integrated engagement protocols coupled with feedback and services from advanced home energy monitors to drive reductions in always-on loads. Warts and all, the outcomes and results of these mixed methods provide better insights into how to deploy connected devices (and their analytics outputs) in practice that support specific behavior changes. We conclude with lessons learned and suggestions on how to reproduce, evolve, and extend these efforts to help various programs and stakeholders grow outside their relative boxes and chart new pathways for innovation in the smart home space.