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Abstract Title: Getting Smarter? Evidence of Savings from the NEST Thermostat
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Over the last decade, several agencies have reported low utilization of residential programmable thermostats - ranging from 30% to 50% - because of poor usability and complexity. The users either set them to long term hold or incorrectly program the device, which eliminates their energy savings potential. To address this, Nest Labs (among others) has developed an intelligent thermostat that utilizes algorithms, weather data, and occupancy sensors to implement temperature controls independent of user actions. Southern California Gas Company (SoCalGas®) implemented a NEST field study to assess the energy savings of intelligent thermostats in Southern California. Collaboration with electric utility counterparts also allowed the assessment of electric savings. The study was implemented as a Randomized Control Trail (the "gold standard" in evaluation) with Opt-In Enrollment, i.e., customers were recruited to participate, screened for eligibility, and then randomly assigned to the treatment or control group. In total, 501 customers were randomly assigned to participate in the study and received a free NEST thermostats, with an additional 320 customers randomly assigned to the control group. This field study represents the largest NEST study evaluated by a third-party to date using RCT. Ultimately, this evaluation will be used to determine whether the NEST thermostat and other smart thermostats with comparable features are a viable technology that can achieve cost effective gas and electric savings on a large scale and should be included as a program offering. This presentation will report findings on electric and gas savings during the summer and winter of 2014-2015.