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Title: Energize!: A Climate Protection Scale Residential Energy Efficiency Competition.

Abstract: The BECC presentation Energize! provides the program design and behavioral theories for A Climate Protection Scale Residential Energy Efficiency Competition. Municipalities implement a city-wide energy efficiency (EE) competition for parents and residents in city high school districts (or other geographies) to compete against each other to deploy home energy retrofits. Customer participation is scaled-up through "Benchmarking for the Masses" that produces accurate information on a customer's energy use and recommended energy conservation measures, giving customers the information they need to change behavior. Community-based social marketing utilizes existing communication channels; including school and neighborhood newsletters and local business bulletin boards to reach an unprecedented number of participants. Football rivalries spur friendly competitions between school districts and municipalities that engage teachers, students, administrators, boosters, alumni, non-profits, residents, and others to renovate the city's housing stock. Energize! reduces the market barrier of contacting relevant decisionmakers in other Hard-to-Reach segments like apartments. Because the demand for retrofits will be "bottom-up" from tenants with school age kids, or high school alumni, they will use local knowledge on who to contact for common area and tenant retrofits. Energize! also reduces the split incentive market failure through identification of master metered gas and electricity properties and associated efficiency measure recommendations that maximize owner/manager return on investment. The Energize! program is designed to be extremely cost-effective due to 5 elements: 1) It gains energy savings beyond rebated or incentivized measures due to the competition's behavioral element that includes loss aversion, gamification, refer-a-friend, and others, that can increase baseline participation rates from 0.5% to up to 22%. 2) The effects of the low cost benchmarking reports. 3) Energize!'s marketing budget is a fraction of a comparably sized program because it utilizes municipal and school newsletters and local media. 4) We estimate Energize! can increase net energy savings by reducing free riders to near zero because of the highly tailored nature of each competition. 5) Securitization of loans to residents for the retrofits that can reduce interest rates and attract institutional investors. The Energize! program is attractive to local governments' because of ~15 jobs are created per \$1M in EE investment, as well as the increased tax revenue from retail sales. It also provides an actionable program for the 400+ "Climate Mayors" to reduce greenhouse gas emissions in the building sector.