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Abstract Title: Who are the “Low Users” and What Can We Learn from Them?

Abstract Text:

A small percentage of California electricity customers already live at consumption levels consistent with 80% emissions reductions. These “low users”—consumers in the lowest decile—offer concrete examples of the technologies and lifestyles involved in achieving drastic emissions reductions. We investigated a sample of urban California households to determine the extent to which income, house size, fuel substitution, and expert advice were associated with low usage. Surveys, telephone interviews, and a detailed customer dataset revealed aspects of appliance ownership and operation, building characteristics, demographics, attitudes, behaviors, and impacts of incentive programs. Surprisingly, the low-users encompass a diverse cross section of customers who are demographically similar to the general population. Low electricity usage was not a consequence of poverty, living in small apartments, or fuel substitution, although the lowest users are more likely than the general population to live alone. They employed diverse strategies to reach very low consumption but then often exceeded expert recommendations. Six profiles capture the diversity of the low user population, reflecting lowest usage, diverse cooling strategies, energy upgrades, and high quality of life. Relying on existing technologies the low user population reveals a host of low-energy lifestyles which demonstrate that California’s climate policy goals are already achievable in the residential sector. The low user population can also inform decision-makers about successful policies and strategies to reduce residential energy use more widely.