

Abstract #: 219

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Abstract Title: Using Smart Water Meters to Promote Residential Water Conservation

Abstract Text:

This presentation reports the results from a randomized controlled trial using smart water meters to provide high-resolution feedback to residents and to promote water conservation. The City of Sunnyvale updated some of its residential water meters to the ORION AMI Cellular endpoints. These new meters provide refined water consumption information to the utility and the customer. An experiment was conducted to determine which components were most effective at increasing customer engagement, reducing consumption, and increasing customer satisfaction. 409 households were randomly assigned to one of four conditions, (1) Mail – Households received a monthly mailed water report, (2) Mail+Web – Households received a monthly mailed water report, and were provided online access to their consumption, (3) Mail+Web+Doorhanger – Households received the same materials as condition 3 in addition to a doorhanger program announcement, and (4) Control – Households did not receive anything new, but their consumption was monitored using the new meters. The program lasted for three months. Following the pilot, households were sent a survey to assess their satisfaction with the program and the water services provided by the City. The survey contained eight sections on: knowledge of water use, household specific behaviors, opinions of the utility, satisfaction with the reports, and interest in further discussion of the pilot. Results showed that households in each of three feedback conditions used less water than the randomized control in the three-months following the deployment (24%, 17%, and 21% respectively). The presentation provides additional results from the customer survey, which had over a 46% response rate.