

MUNICIPAL REBATE PROGRAMS FOR ENVIRONMENTAL RETROFITS: AN EVALUATION OF ADDITIONALITY AND COST-EFFECTIVENESS

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Abstract:

Rebate programs have become a common conservation policy tool for local municipalities seeking to retrofit residential properties with efficient appliances. This research evaluates whether such rebates can be cost-effective means for water utilities to promote water conservation. A unique database is developed that combines water use data over a three-year period for all households that participated in a utility's high efficiency toilet (HET) rebate program, water use data for a matched sample of neighbors who did not receive a rebate, and a survey of rebate participants. Difference-in-differences models indicate that installation of a HET reduces household water consumption by approximately 7%. While *installation* of a HET appears to be an effective means for achieving household reductions in water consumption, our results also suggest that the *rebate program* is a much less effective means for achieving household reductions in water consumption. Specially, the rebate program is found to provide limited additional water savings beyond what would have occurred naturally and is responsible for only 37% of the total water reduction attributable to the installation of HETs over the study period.

Keywords: rebate programs, water efficiency, difference-in-differences estimator, cost-effectiveness

JEL Codes: Q25, Q28, H76

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