

# Influence and Intention as Determinants of Free Ridership

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## Introduction

Energy Trust of Oregon, working with its evaluation contractor, Research Into Action, sought a method of estimating free ridership for its programs that would not have some of the limitations of previous methods. A key concern with methods established for California (The TecMarket Works Team, 2006) and Massachusetts (Rathburn, et al., 2003) are their length. As an example, a recent California program participant replied to “Do you have any final comments you would like for program sponsors to hear”—the last question in a net-to-gross questionnaire—“This survey is way too long and complicated. I’m busy this time of year.” At that point, the participant had been asked a minimum of 70 questions relating solely to the estimation of net-to-gross. The number of questions possibly asked increased beyond the 70 base questions by 12 for each measure (beyond one) and each behavioral change the respondent identified. The Massachusetts method involves perhaps half as many questions, but includes a complicated skip pattern and many open-ended questions.

Energy Trust of Oregon had additional concerns with common free ridership approaches, including assumptions commonly applied to repeat participants and the algorithms used to assign weights to the questions and constructs to develop a single free ridership estimate for each participant. Some methods assume repeat participation is in itself an indicator of free ridership, following the reasoning that through participating, customers learn efficient options are in their economic interest even in the absence of a rebate. In contrast to this view, the program administrator believes each purchase is driven by the conditions of many factors at the time the purchase is made. The customer always has competing reasons not to invest in energy efficiency. Regarding item weighting, commonly weights are assigned evenly across the factors queried: a three-factor method uses weights of 33%; a five-factor method uses weights of 20%, and so on. No behavioral reasoning is offered as underpinning for the weights.

The authors developed a five-question method that probes the influence of the program on the decision, what likely would have happened had the program not been available to the customer, and whether the customer had sufficient budget available to undertake the efficient purchase in the absence of an incentive. The method generates a free ridership range to reflect the uncertainty from respondents that answered “don’t know” to one or more of the questions.

The authors applied this method to industrial and commercial incentive programs. For the industrial program, the authors estimated that the free rider rate ranged from a low of 16.1% to a high of 19.1%, with a mid-point of 17.6%. For the commercial program, the authors estimated the free-rider rate ranged from a low of 38% to a high of 43%, with a mid-point of 40.4% for sites with electric measures and from 35% to 39% (mid-point, 37.1%) for sites with gas measures. The authors have refined the method and are in the process of testing optimal survey methods with commercial and industrial program participants.