Issues in Evaluating Demand-Side Management Programs
in the Least Cost Planning Process
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In recent years, various methods and tests have appeared in the literature for screening demand-side management (DSM) programs to determine their cost-effectiveness. Two widely used tests are the All-Ratepayers Test and the No-Losers Test. Different state commissions have different regulations and emphases on these program screening tests.

The purpose of this paper is to discuss (a) the long-term, short-term rate and bill impacts and the cost-effectiveness of utilities' energy efficiency programs; and (b) marginal cost and program screening in an integrated least cost planning framework. Specifically, there are six sub-issues this paper discusses: (1) link the bill impact and rate impact with the cost-effectiveness tests; (2) identify the relationship between size of the conservation program and the (i) rate impact and (ii) bill impact; (3) link the rebate level determination with bill impact; (4) provide static and dynamic conditions under which a program will have negative rate impact or bill impact; (5) provide examples from DC utilities to illustrate the differences in results of rate impact test for electric and gas companies; and (6) marginal cost and program screening.

Size of the Conservation Programs and Rate Impacts

In 1986, Ann Bachman and Paul Chernick presented a paper "Assessing Conservation Program Cost-Effectiveness, Participants, Non-participants and the Utility System" at the BRIC conference. They argued the rate impact of a DSM program will be negative if the unit cost of conservation is smaller than the product of (a) the difference between marginal cost and average costs and (b) the ratio of baseload with conservation over baseload without conservation.

One of their conclusions is that a large conservation program is more likely to increase average unit costs than is a small program, even if the costs of conservation and the displaced energy do not vary between the two programs. (See Appendix A for their model and final inequality.)

However, their conclusion can be reversed through a dynamic example. Tables 1 and 2 in Appendix B illustrate why this is the

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