New Carrots for Efficiency Programs

by Steven Nadel

RICK STOVER

Under deregulation, performance incentives to get utilities interested in investing in energy efficiency programs need to change. What works now, and why?

Since the 1970s and '80s, a growing number of utilities have offered programs to help their customers reduce energy use. These demand-side management (DSM) programs were often developed in response to positive incentives extended by state utility commissions for implementation of energy efficiency programs. However, in the mid-1990s, two trends began that have profoundly influenced utility DSM programs: utility restructuring and the emergence of the market transformation paradigm to program design (see "Market Transformation: Expectations vs. Reality," *HE* July/Aug '99, p. 16).

With restructuring, for both the utilities that generate power and those that distribute it, most of the incentives to sell more power remain in place, so providing incentives for good management of efficiency programs has taken on a renewed urgency. In fact, with restructuring, disincentives to energy efficiency are actually increasing in many states. For example, price cap regulation as it is being adopted in many states tends to encourage cutting costs—including energy efficiency budgets—and increasing power sales.

Also, distribution utilities no longer bear the financial risks associated with building new power plants—risks that had provided some incentive to utilities to cut consumer demand for power. Instead, provision of new generation resources is left to the market, and there is less need for regulatory intervention since ratepayers are no longer required to pay for new power plants regardless of whether or not the plant is used. (However, recent power shortages in California and the

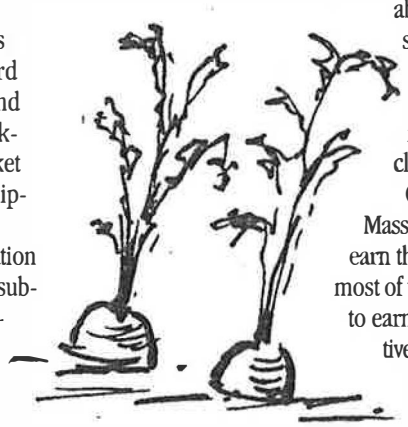
Northeast indicate that regulatory intervention and resource acquisition still have a role to play.) Furthermore, with the competition brought about by restructuring, as well as the availability of new generation technologies, the cost of power from new power plants has declined in many regions, reducing (but far from eliminating) the benefits achieved from energy efficiency programs.

Beyond DSM

The market transformation paradigm offers an alternative approach to saving energy. The aim of a market transformation program is to permanently reduce or overcome market barriers, so that over time efficient goods and services become the norm, with no, or less need for continued market intervention. Successful programs have achieved large energy savings at a cost of $.01/kWh or less, which is below current avoided costs. Given these successes, many state legislatures and utility commissions have embraced the market transformation paradigm.

Market transformation does not occur overnight. For this reason, in the beginning stages of a market transformation program, success is measured not by the number of efficiency measures installed in the short term, but rather by making demonstrable progress in addressing and overcoming specific market barriers. For example, in a program's early years, the emphasis must be on training service providers better, and on increasing the availability and stocking of more efficient equipment.

With this change in emphasis, performance incentives also need to change. Rather than basing incentives on energy savings, market transformation program evaluators focus on *market progress indicators,* such as the number of trained service providers; changes in awareness of and attitudes toward targeted measures; and changes in local stocking, prices, and market share of targeted equipment and services.



Market transformation programs have made substantial inroads in California, Massachusetts, and Vermont, where state regulatory agencies have developed performance incentives designed to work with the market transformation approach. Connecticut and New Jersey are now considering similar initiatives.

Since 1998, in California and Massachusetts, incentives have been set primarily through a negotiation process involving utilities, regulators, and/or non-utility intervenors (the parties vary somewhat from state to state). In the first one to two years of the new programs, most of the market transformation targets were related either to providing a given number of rebates or to accomplishing another specific activity, such as completing a market baseline study or offering a specified number of training sessions. Utilities and other parties were reluctant to set targets based on market share, since in many cases there were insufficient data to determine the overall size of the specific market. Instead, rebate-based incentives were set, with incentives scaled to performance, with the utilities receiving half of the incentive amount for achieving half of the rebate-related annual goals, and the full incentive for achieving most or all of them.

By late 1999, as programs have become better established and solid market data have been collected, utilities and other parties have become more comfortable setting broader market awareness and market participation goals. For example, in 2000, Massachusetts utility incentives for clothes washer programs were based partly on market share and partly on consumer awareness and understanding of the Energy Star label as measured through customer surveys. In 1999, sales of Energy Star clothes washers in Massachusetts climbed to about 16% of all clothes washer sales, compared to national sales of about 8%. Last year, Energy Star clothes washers captured more than 20% of the new clothes washer market.

Overall, utilities in California and Massachusetts have worked hard to earn their incentives and have earned most of the money that they are eligible to earn. The generally modest incentives—the maximum ranges from 6% to 12% of program costs—have clearly motivated program implementers. However, one drawback of the new program incentives has been a tendency for the utilities to focus almost exclusively on meeting incentive goals and to ignore unrelated activities that could contribute to long-term program goals. For example, one utility concentrated on promoting rebates, which were linked to incentives, and spent relatively little time promoting widespread stocking of qualifying products.

Clearly market-based goals are more effective in promoting market transformation than traditional incentives, but regulators need to devote even more emphasis to the use of market effect targets. However, to be sure that market transformation programs are supporting and not derailing the achievement of efficiency goals, incentives must be developed with care. Good data and market/evaluation research are an important foundation for developing effective incentives, which are often best set through negotiation. Still, because markets are dynamic, regulators need to experiment with modifications to current incentive mechanisms, in order to allow performance metrics to be modified if unanticipated changes in the marketplace.

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Steven Nadel is executive director of the American Council for an Energy-Efficient Economy (ACEEE).

For more information:

Copies of the report *Performance Metrics for Market Transformation Programs: Incentivizing Progress without Strangling Creativity* by Steve Nadel, Dave Hewitt, Noah Horowitz, Lauren Casentini, and Ben Bronfman can be ordered from ACEEE:

ACEEE
1001 Connecticut Ave., NW, Suite 801
Washington, D.C. 20036
Tel: (202)429-0063
E-mail: info@aceee.org.
Web site: www.aceee.org