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MEMO

To: NM RCI Technical Working Group
CC: NMED staff
From: Alison Bailie, David Von Hippel , Michael Lazarus, Tellus/CCS
Re: Description of Market Transformation
Date: November 7, 2005

Market Transformation

Market transformation is a relatively new term for energy efficiency programs that focus on voluntary efforts implemented by non-utility organizations to encourage greater uptake by consumers (residential, commercial, and industrial, as well as the professionals that service energy-using equipment) of cost-effective energy conservation practices. The following quotes provide definitions by groups applying market transformation in the United States.

The term "market transformation" encompasses various strategies for the creation of permanent, self-sustaining success of energy-efficient technologies in the marketplace. In contrast with traditional energy efficiency programs, which have focused on piecemeal procurement and installation of efficient technology, market transformation offers a strategic approach to shift entire market sectors toward a more efficient product mix. Market transformation programs may focus on stimulation of consumer demand as well as supplier innovation. (Institute for Market Transformation¹)

Market transformation refers to activities that generate financial return for consumers by encouraging the acceptance of energy efficient products and services in the marketplace. These activities are voluntary, complement the utility energy efficiency efforts (often through a regional, rather than state or local, focus), and works within the existing market. The activities encourage manufacturers, distributors and retailers to offer energy-efficient products and services with a long-term goal of having consumers consider the benefits of energy conservation as a normal part of their buying habits (NEEA Strategic Plan, 2000).

¹ <http://www.imt.org/Organization/about.htm>

In the Western US, one of the leading market transformation organizations is the Northwest Energy Efficiency Alliance (NEEA).² The NEEA summarizes its approach and overall methods of implementing market transformation as follows:³

The Northwest Energy Efficiency Alliance uses a tool called “market transformation” that accelerates the adoption of energy-saving products and services in the existing marketplace. The Alliance and its partners work to create long-term, lasting acceptance of energy efficiency. For example, the Alliance:

- encourages manufacturers and retailers to make energy-saving products and sell them in the stores where consumers typically shop for such items;
- works with home builders and commercial building design teams to adopt high performance building practices;
- promotes new and innovative energy-saving technologies and helps bring them to market; and
- supports energy efficiency training and information programs for Northwest businesses and industry.

By working within the existing marketplace, programs supported by the Northwest Energy Efficiency Alliance are very different than traditional conservation efforts. Alliance partnerships with market actors such as manufacturers, retailers and service providers, the region’s utilities and other like-minded organizations allow for powerful opportunities to leverage resources and enhance our successes.

As a concrete example, the NEEA has an ongoing “Residential Sector Initiative” for market transformation, one component of which has aimed to boost the rate and extent of uptake of ENERGY STAR lighting products by consumers. This effort has had several components including:⁴

- Assembling a special lighting trade show featuring manufacturers of ENERGY STAR products, and building on a national ENERGY STAR lighting program. The trade show was configured to maximize attendance by representatives of Northwest utilities and others.
- Partnering with Wal-Mart and GE to promote sales of compact fluorescent light (CFL) bulbs and other ENERGY STAR lighting products in Northwest Wal-Mart stores. Promotions included a combination of consumer outreach and product pricing elements, resulting in a very large increase in CFL sales at those stores.
- Working with other retail lighting stores to co-market ENERGY STAR lighting products. Here, NEEA provided some funds toward marketing, which were augmented by funds supplied by the retailers themselves.

² Northwest Energy Efficiency Alliance website, www.nwalliance.org.

³ <http://www.nwalliance.org/aboutus/index.asp#MarketTransformation>

⁴ See, for example, page 5 of <http://www.nwalliance.org/resources/documents/AllianceMAR.pdf>.

- Leading a coalition of utilities and others to provide consumer education on proper CFL disposal.

The following description is from *The Potential for More Efficient Electricity Use in the Western United States* (Energy Efficiency Task Force Draft Report to the Clean and Diversified Energy Advisory Committee of the Western Governors' Association, September 15, 2005), and provides a more general description of NEEA's program approach to market transformation, along with some examples of recent budgets and results for the program.⁵

NEEA is a non-profit organization supported by electric utilities, public benefits administrators, state governments, public interest groups and energy efficiency industry representatives. These entities work together to make affordable, energy-efficient products and services available in the marketplace. NEEA was founded to complement – not replace – the strong tradition of state and local utility energy efficiency efforts in the region.

Projects: Many of NEEA's projects are aimed at increasing the supply of and demand for energy efficiency measures in the region, aiming to remove barriers inhibiting the adoption of efficiency measures in the marketplace. Projects target residential, commercial, agricultural, and industrial sectors. A number of the projects also provide information and training.

Energy savings: NEEA estimates its 2004 activities reduced electricity use in the region by 48 average MW (aMW), i.e., 420 GWh/yr. This is equivalent to about 0.25% of annual electricity use in the four-state region. By 2010, the NEEA and related utility efforts are expected to save the region over 500 aMW, enough to offset the need to build two new power plants (NEEA 2005).

Program budgets: From 1996 through 2004, \$165 million was committed to NEEA by its funders. Starting in 2005, an additional \$20 million a year has been pledged for five years through 2009.

Economics: Savings to date (not counting savings that will continue to accrue from the long-term impact of sustained market changes) have cost the Alliance between 0.8 and 1.2 cents per kWh, with a mean of 1.0 cent per kWh. These savings are cost-effective compared to the avoided cost of electricity that would otherwise have been purchased by utilities, which is on the order of 4 cents per kWh over the long-term. Moreover, the savings are at the low-end of costs from other types of conservation programs over the last five to 10 years, which have been about 2.1 cents per kWh according to the Northwest Power Planning and Conservation Council.

If an effort were implemented in New Mexico that led to 0.25% savings in electricity consumption per year with a total resource cost of 1.2 cents/kWh,⁶ starting in 2007, the state could save about 870 TWh annually by 2020 (about 3% of projected total consumption in 2020).

⁵ <http://www.westgov.org/wga/initiatives/cdeac/Energyefficiencydraft9-15.pdf>

⁶ Total resource cost estimate from *Retrospective Assessment of the Northwest Energy Efficiency Alliance* (Violette, Ozog and Cooney 2003)

This would lead to GHG emission reductions of about 0.5 million metric tons CO₂e, while providing net economic benefits.

NEEA References

NEEA 2005. 2004 Annual Report. www.nwalliance.org/resources/documents/A_2004AR.pdf.

_____. 2005. *2004 Market Activities Report*. Portland, OR: NEEA.

Violette, Daniel, Michael Ozog and Kevin Cooney 2003. *Retrospective Assessment of the Northwest Energy Efficiency Alliance*. Summit Blue Consulting & Stratus Consulting. Prepared for NEEA. <http://www.nwalliance.org/resources/documents/120.pdf>