Can You Spare a Paradigm for Today’s Lighting Programs?

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Lighting Partners Meeting  
Atlanta, Georgia  
March 11, 2007
1. Background
2. Current Paradigm
3. Panel discussion: Lighting programs today and tomorrow
Panel

- **Marci Sanders, Senior Manager for Northwest Energy Efficiency Alliance since 1998**
  - Oversees a portfolio of residential projects. Professional background includes public relations, renewable energy development, and telecommunications.

- **Richard Greenburg, Manager of Residential Lighting Incentive Program, Southern California Edison**
  - Over 20 years in energy efficiency and utility work on numerous programs

- **Sean Keeney, Marketing Program Administrator, United Illuminating Company since 2002**
  - Implements ENERGY STAR Lighting and Appliance program. Background in business, management, and manufacturing.
Background

- 1980’s and Early 1990’s: Regulated electric utilities analyzed planned how to meet their service territory’s forecasted energy consumption requirements, sector by sector, over long-term planning horizons

- Peak and Baseload Generation and “Demand-Side Management Programs” were included in comprehensive Integrated Resource Plans

- Utilities balanced their interests in building load with need and/or requirements to manage load
  - A range of scenarios was analyzed and presented to regulators
  - Rate impacts were considered

- Integrated Resource Plans were updated periodically
Cost-effectiveness is paramount

Utility DSM Programs offered with goal of equity across sectors

Load management, demand response, and energy efficiency addressed comprehensively

M&V required to document results

Customer service and “branding” of the utility were among the significant but intangible benefits to the utility

Many regulatory-utility relationships evolved from litigation to collaboratives over time
Lighting Program Features

- Direct Install of CFL Fixtures
- Home audits filling sockets with CFLs
- Solving the retail distribution challenge through mail-order and targeted marketing
- Mail-in rebates
- Free-ridership, participant and non-participant spillover
By the mid-1990’s, some states deregulated electric utilities, divorcing power generation from local distribution. This trend was an outgrowth of technological and legislative changes, including the combined cycle gas powered generation, and PURPA, that enabled more independent power generation, in a period of privatization and adequate to excess capacity.

Impacts on Demand-Side Management
- IRP no longer relevant
- BUT elimination of DSM would have societal costs
- State Legislation mandated System Benefit Funding for Energy Efficiency and Renewable Energy
DSM as Market Transformation

- Cost-effectiveness remains essential
- Target audience of customers includes multiple service territories
- Broadening of
  - Strategies to achieve savings within programs
  - Stakeholders involved
  - Approaches to customer outreach
  - Program milestones and indicators of program success (including multiyear perspective)
- Need for more in-depth need for understanding of market structure and trends than in resource acquisition
- Technology floors (codes, standards) and ceilings (specifications) influence program goals, create moving program targets
- Measurement and Tracking needs change/increase
- Attribution of savings to program results remain a key regulatory issue
Lighting Program Features

- The ENERGY STAR specification for CFL bulbs
- Penetrating grocery stores and supermarkets
- Instant rebates, upstream markdowns, challenges
- Net-to-gross ratios and market penetration forecasts
Energy Efficiency Industry Today

- **Growth in Energy Efficiency Programs**
  - More geographic areas involved
  - Organizations dedicated to Energy Efficiency
  - National and local branding: ENERGY STAR
  - From collaboration to statewide cooperation and in some cases, implementation and regional collaboration
Current Paradigm:
Energy Efficiency in The Hybrid World

- The Market Transformation Ball Keeps Rolling Along
- Energy Efficiency Programs Valued As A Demand Resource
- Energy Efficiency Programs and Climate Change Policy
The Role of Residential Lighting

Weighted Average Residential Lighting Profiles

Un-Weighted Residential Lighting Summer Profiles
The Forward Capacity Market

- FCM will be used to meet New England’s forecasted demand and reserve requirements three years into the future.
- Generation AND Demand Resources may participate.
  - Pre-qualifying participants participate in a price-based auction. All resources that clear the auction are paid the market-clearing price for delivering either kW or KW-savings. Resource performance is measured and verified during the delivery period.
  - New resources can receive a long-term commitment (up to 5 years).
  - Bids must deliver summer AND winter capacity.
Involvement of Energy Efficiency Programs in the Forward Capacity Market

• For less than 60 hours per year, New England needs an additional 2,500 MW of capacity to serve load.

• Combined, residential and commercial lighting projects are the single largest source of winter AND summer KW savings in New England.
Benefits

- Possible significant additional $ for efficiency
  - $2.50 for one CFL (over a 6 year life)
  - $7.50/kW-month starting in 2010
- Partnerships with new entities
- Greater confidence in some savings due to increased evaluation
Issues

- Who owns the capacity credits
- Need to adjust for ISO’s definition of peak savings
- M&V is extensive and different from state regulation
  - Increase evaluation costs
  - Focused on “gross” savings
Current Lighting Programs

- Are some measures better suited than others for market transformation? Resource acquisition?
- What types of marketing strategies do your programs use? What is the role of customer education?
- How is Quality Assurance addressed?
- What do you track, count, measure, use to define goals?
Where Next?

- Should programs be more comprehensive and/or should there be more orientation to capacity savings?
- What works best to transform markets?
- How important is consistency among programs across organizations, states, regions, the country?