

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

Elizabeth Titus

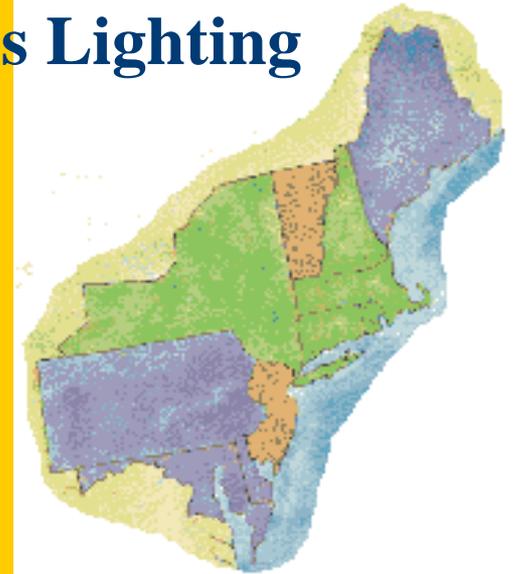
Research and Evaluation Manager

etitus@neep.org; 781-860-9177 x11

Lighting Partners Meeting

Atlanta, Georgia

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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.

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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

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DSM As Resource Acquisition

- 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

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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

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Deregulation of Electric Utilities

- 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

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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

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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

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Current Paradigm: Energy Efficiency in The Hybrid World

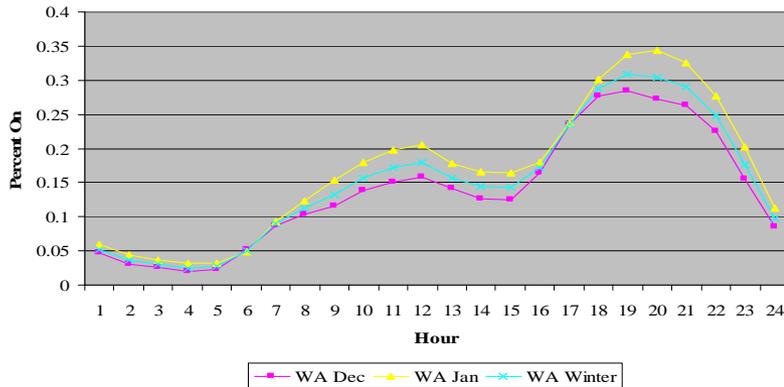
- The Market Transformation Ball Keeps Rolling Along
- Energy Efficiency Programs Valued As A Demand Resource
- Energy Efficiency Programs and Climate Change Policy

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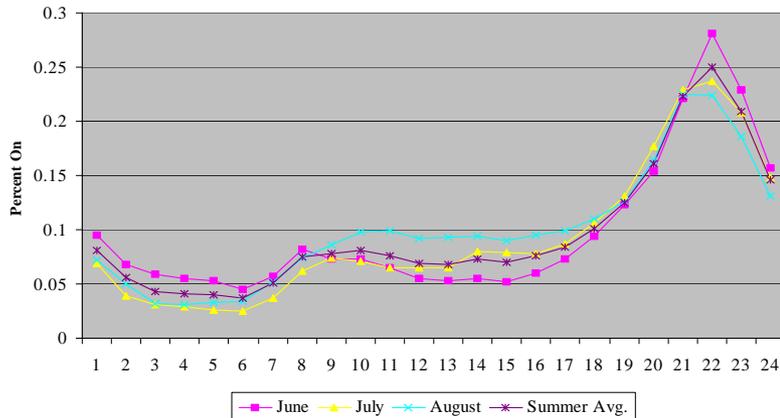


The Role of Residential Lighting

Weighted Average Residential Lighting Profiles



Un-Weighted Residential Lighting Summer Profiles



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CHANGE A BULB. CHANGE EVERYTHING.

WHAT ARE CFL BULBS & WHY SWITCH?

HOW ENLIGHTENED IS YOUR AREA?

United States

CFL LIGHTBULBS PURCHASED SINCE 1/1/07:
11,763,792

NEW STATE BANNING

EQUIVALENCY:
DOLLARS SAVED: **\$34,733,066,432**
CARS OFF THE ROAD: **2,502,244**
POUNDS OF COAL SAVED: **1,224,643,730**
POUNDS OF CO2 PREVENTED: **5,241,475,164**

CHANGE A BULB, CHANGE EVERYTHING
It only takes 18 seconds to change a light. Have energy and cash now by switching to Energy Star CFL bulbs, available nearly everywhere light bulbs are sold.

Lighting accounts for 20 percent of the average homes electric bill.

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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.

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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.

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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?

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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?

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