2014-2015 IMPLEMENTATION UPDATE

Lighting Deeper Dive

EEAC Consultants
10 June 2014
Overview and Summary

- **Lighting**: ~60% of ALL Residential and LI savings
- **Larger role in Implementation Update (IU) than in Plan**
- **Still reviewing IU goals:**
  - Ensure they reflect “best practices”
  - Differences in proposed PA lighting efforts
  - Awaiting 2013 AR data
- **Moving forward: More LEDs**
  - Nearly half of Lighting Initiative YTD Lifetime savings
  - LEDs are near parity on Incentive $/Lifetime kWh
- **When to exit CFLs in next 3-Year Plan?**
Lighting Represents Nearly 60% of All Residential and LI Savings

- Lighting Initiative is 47% of all 2013 Residential savings (Plan)

- Lighting is 59% of ALL 2013 Residential savings, 63% of Low Income (Plan)
Lighting’s Importance Continues in 2014 and 2015

Greater role for Residential Lighting Initiative in Implementation Update (IU) than in 2014 & 2015 Plan

Residential Lighting Initiative Savings (MWh)

- 250,000
- 200,000
- 150,000
- 100,000
- 50,000

2013 2014 2015

Implementation Update
Plan
2014 - 2015 IU Savings & Budgets developed using a high level extrapolation of 2013 data w/adjustments for:
- Evaluation (e.g., EISA adjustments)
- Implementation, i.e., changes in program activity

Are proposed IU changes
- Best practices?
- Supported by PAs’ “on the ground” efforts?

To be completed by 8/7
Examine PA differences in Residential Lighting Initiative IU savings

- NGrid Lighting increases 51% vs. Plan
- NU Lighting increases 7% vs. Plan
- But NU Lighting is 53% of sector savings, NGrid’s is 42%
Review Federal lamp standards (EISA) impacts
- 2012-2014 tier got us to halogens
  • CFLs are NOT the baseline
- 2020 tier gets us to CFL level of efficiency
- For covered lamps, greater impact on CFL lifetime savings than on LED savings

Review other Key assumptions
- Incentive levels
- Program product mix
- Assumed product mix in baseline
LED Product Mix Has Increased Markedly Since 2012

In Plan LEDs were 5% of Residential Lighting Initiative unit goals for ALL three years.

But 2013 results informed higher 2014 goals and performance:

<table>
<thead>
<tr>
<th>LED Contributions to Residential Savings</th>
<th>2013 Q4</th>
<th>2014 YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units</td>
<td>15%</td>
<td>16%</td>
</tr>
<tr>
<td>Annual Savings</td>
<td>23%</td>
<td>26%</td>
</tr>
<tr>
<td>Lifetime Savings</td>
<td>39%</td>
<td>47%</td>
</tr>
<tr>
<td>Incentives</td>
<td>46%</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Other States are Accelerating Their Shift to LEDs

► Connecticut
- 2014: 22% LED Unit goal (32% YTD)
- 2015: 32% LED Unit goal
- Shareholder incentive tied to the above
- No more dimmable CFL support

► Rhode Island
- 14% of unit goals (15% YTD)
- 27% of Annual Savings YTD
- 45% of Lifetime Savings YTD
LED Program Cost Efficiency at Near Parity With CFLs on a Lifetime Basis

► 2014 PA LED incentives will continue to drop to reflect continued declines in retail pricing

► PA Bulk procurement solicitation will help drive down DI costs for all lighting products

<table>
<thead>
<tr>
<th>Residential Lighting Initiative Incentive Cost in 2013 (cents/kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>per Annual kWh</td>
</tr>
<tr>
<td>CFL</td>
</tr>
<tr>
<td>LED</td>
</tr>
</tbody>
</table>
Near-Term Program Strategies and Implications

► LED Prices and Incentives will continue to decline while efficacy (and savings) increase
  − LEDs may very soon be cheaper on an lifetime savings basis

► Begin to exit CFL market starting with certain specialty lamps
  − Better LED performance in most enclosed and dimming applications
  − Complete exit likely in next Three-year Plan

► Increased LED DI, particularly for specialty applications
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