Home Renovation

Energy Star Qualified Lighting
Capturing Lost Opportunities

Joseph G. Howley
Manager - Industry Relations and Environmental Marketing
GE Lighting
Chairman - NEMA Lamp Section

April 27
2004 National Energy Star Lighting Partner Meeting
Home Renovation Lighting Sales

Two Primary Channels of Distribution

Lighting Products
- DIY/Hardware Retailers
  - Energy Star® Options
  - Compact Fluorescents
  - Residential Fixtures
    - Torchières
    - Under Cabinet
    - Ceiling

Consumer must
Self-Educate, Self Select

Lighting Showrooms
  (Residential Contractors)
  - Decorative Incandescent
    - Ceiling, Chandelier, Bath, Etc.
  - Function Fluorescent
    - Kitchen, Utility, Garage, Etc.

High Touch but
Limited, if any, Energy Star

2004 National Energy Star Lighting Partner Meeting
# Home Renovation Lighting Selection

<table>
<thead>
<tr>
<th>Primary Drivers</th>
<th>Home Owner Selects at Show Room</th>
<th>Home Owner Selects at DIY/Hardware</th>
<th>Contractor Selects at Distributor/Show Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aesthetics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Installation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Function</td>
<td>Function</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost</td>
<td>Cost</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aesthetics</td>
<td>Aesthetics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delivery</td>
<td>Delivery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lamp Types</td>
<td>Lamp Types</td>
</tr>
</tbody>
</table>

Energy and Environment are not big decision drivers.

2004 National Energy Star Lighting Partner Meeting
Promoting Energy Efficient Residential Lighting

*Meeting Critical Drivers*....

- **Function**
  - Many Fixture Energy Star Fixture Types Now Available
    - Over 9000 on Energy Star Web-Site
  -Fixture Introductions and Innovations Ongoing
  -Most fixtures available with Fluorescent Technology

- **Initial Cost**
  - Most Fixtures Types more expensive.
    - Lamps, Ballasts, Sockets, Optics, Low Volume

- **Aesthetics**
  - Improving
  - Acceptable in many applications
Promoting Energy Efficient Residential Lighting

Meeting Critical Drivers (2)....

❖ Availability
  ➢ Most Show Rooms do not promote Energy Star Fixtures
  ➢ Some Energy Star Options at DIY/Hardware Stores
    • Inconsistent Availability

❖ Delivery
  ➢ Show Rooms can order Energy Star but not in Stock

❖ Familiarity
  ➢ Contractors not Familiar with all lamp types, sockets

❖ Maintenance & Energy
  ➢ Much lower Energy Cost and Much Longer Life
Energy Star Fixture Issues

Why Energy Star Fixture Market won’t Transform on its own….

- DIY/Hardware Buyers Looking for Low Cost
  - Requires Rebates/Incentives to Lower Initial Cost, or
  - Requires Education on Energy and Maintenance to explain lower overall ownership costs, but
  - Limited Education Potential In Store

2004 National Energy Star Lighting Partner Meeting
Energy Star Fixture Issues

Why Energy Star Fixture Market won’t Transform on its own….

Show Room Buyers Looking for Aesthetics, Options and Selection Help
- Requires Show Room to Display Energy Star Fixtures, or
- Educate Customers on Maintenance and Energy Advantages, but
- Most Stores do not carry or Promote Energy Star Fixtures

2004 National Energy Star Lighting Partner Meeting
Energy Star Fixture Issues

Why Energy Star Fixture Market won’t Transform on its own…

- **Contactor Buyers Looking for Maximum Profit with Minimum Installation and Operation Risk**
  - Requires Rebates or Incentives to allow higher profit and take risk on use of new technology
  - Requires available products and installation knowledge,
  - Typically Special Order, with Delivery Delays, at a Higher Price, containing unfamiliar and risky lamp types.

2004 National Energy Star Lighting Partner Meeting
Downlights

A closer look at one Fixture Type….

Features – Reflector Lamp
Commonly Available
Inexpensive Can
Medium Screw Based Socket
R30 Lamp w/ Broad Distribution
Fully Dimmable
Lamp Commonly Available
65 Watts per Downlight
2000 Hours Life – 2 years Typical

2004 National Energy Star Lighting Partner Meeting
Downlights

Replace with Halogen Par 30....

Features- Halogen PAR 30 Lamp
Medium Screw Based Socket
Tighter Distribution with PAR Lamps
Fully Dimmable
Lamps Available – More Expensive
50 Watts - 23% Saving over R30
3000 Hrs Life – 3 years +50%

Significant energy savings and more dramatic lighting.

2004 National Energy Star Lighting Partner Meeting
Downlights

Replace with Halogen-IR (Infrared Reflecting) Par 30....

Features- Halogen-IR PAR 30
IR – Most Efficient PAR Lamp
Medium Screw Based Socket
Tighter Distribution on PAR 30
Fully Dimmable
Lamp not common in Stores
Much more expensive
45 Watts - 31% Saving over R30
6000 Hrs Life – 6 years + 200%

Could ENERGY STAR Category approach be used with IR?

2004 National Energy Star Lighting Partner Meeting
Downlights

Replace with new R30 Dimming CFL Lamps….

Features
Medium Screw Based Socket
R30 Glass Lamp Shape
Very Broad Distribution
Acceptable Dimming
Lamp now being introduced
15 Watts per Downlight
Equivalent to 50W R30
10,000 Hours Life – 10 Years

2004 National Energy Star Lighting Partner Meeting
Downlights

Dedicated Plug-in CFL Energy Star Fixtures….

Features
More Expensive Fixture w/Ballast
Must Match Socket/Lamp/Ballast
Consumer replacement lamps
    not very common
Very Broad Distribution
Dimmable only on Dimming Ballast
26 Watts per Lamp – 60% Savings
10,000 Hours Life – 10 years
May need to be IC Rated
Hot Fixture may reduce lumens
Consumer Acceptance?

Most Difficult Approach to Consumer Market.

2004 National Energy Star Lighting Partner Meeting
Home Renovation Solutions

*Options to Promote Energy Star Fixtures…*

1) **In store Rebates/Promotions at DIY or Hardware Stores to Lower Initial Price**
   - **Energy Star** Fixtures need More Consistent Placement
   - Easiest to Implement

2) **Educate Consumer on Lower Overall Operating Costs and Environmental Benefits**
   - Provide Consumer Financial Incentive
   - Utility Bill Stuffers or Direct Mail
   - Web Site Education and Information
   - Public Service Announcements or Paid Advertising
3) Energy Star Fixture Displays at Lighting Showrooms
   - Convince Showrooms to Stock Fixtures
   - Educate Sales Staff to Educate Consumers
   - Provide Rebate Incentives to Lower Initial Price.

4) Provide Contractor Incentive to Increase Profit Margin
   - Plus educate contractor on Energy Star fixture types, lamp types and provide installation training to remove risk.
Home Renovation

Energy Star Qualified Lighting
Capturing Lost Opportunities

Questions?

Discussion?

2004 National Energy Star Lighting Partner Meeting