ENERGY STAR® 101
Solid-State Lighting Luminaire Program

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1. What is ENERGY STAR?
2. Maximize Your Partnership
3. Working with EEPS
4. Leveraging ENERGY STAR
5. Questions
What is ENERGY STAR?

- The national symbol for energy efficiency
- Awarded to products that meet strict energy-efficiency guidelines set by U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (EPA)

- Serves as a marketing platform for retailers, manufacturers, and utilities to promote energy efficient products
- Participation in the program is voluntary
The Value of ENERGY STAR

- Helps consumers identify energy efficient products through:
  - Common language
  - Single set of performance criteria

- Eases sales process
  - Offers partners cost-effective ways of promoting energy efficient products to consumers
  - Credible, objective information about energy efficient options

- Elevates your brand awareness in U.S.
  - Signal corporate commitment to social good
  - Attracts consumers
Consumers Recognize the ENERGY STAR Logo

Aided Recognition of ENERGY STAR Label

Source: Consortium for Energy Efficiency Household Surveys (2001-2007). Standard errors vary between 1.5% and 2.2%.
Over 60 ENERGY STAR Product Categories

### Labeled Products
- Appliances
- Commercial Food Service
- Heating & Cooling
- Home Electronics
- Lighting
- Office Equipment
- Windows, Doors & Skylights
- Other Products

### Labeled Buildings
- New Homes
- Commercial & Institutional

### Services
- Home Improvement
- Business Improvement
Over One Billion Products Sold
Encourages Collaboration

Opportunities for partners to collaborate include:

- Annual ENERGY STAR Partner Meetings
  - Appliance Partner Meeting
  - Lighting Partner Meeting
- ENERGY STAR Criteria Setting Meetings
- ENERGY STAR National Campaigns
  - Change a Light, Change the World
  - Cool Your World
  - Refrigerator Retirement Campaign
Who’s Involved with ENERGY STAR?

ENERGY STAR is a network of allied organizations:

- Federal Government (DOE and EPA)
- Manufacturers
- Retailers
- Energy Efficiency Program Sponsors (EEPS)
  - Utilities, States, and Energy Offices
  - Over 500 Utilities serve more than 62 million households
Who’s Involved with ENERGY STAR?

Manufacturers

Retailers

Program Sponsors

- GE
- Lowe’s
- TCP
- Walmart
- Philips
- The Home Depot
- ACE
- Sylvania
- Pacific Gas and Electric Company
- Alliant Energy
- NYSERDA
Energy Efficiency Program Sponsors (EEPS)

- **Utilities**
  - CA IOUs, Georgia Power, Duke, NGRID, LADWP etc

- **State and Local Government Agencies**
  - NYSERDA, GEFA, WI FOE

- **Regional Organizations**
  - Northeast Energy Efficiency Partnerships (NEEP), Northwest Energy Efficiency Alliance (NEEA),

- **Other stakeholders** – Non-profit organizations, and other partner types as determined on a case-by-case basis
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Product Qualification Steps

1. SSL Program Partnership Agreement
2. Manufacturer Guidelines
3. Product Groupings
4. Online Process for Qualification Submission
Step 1: SSL Partnership Agreement

- Review Program Requirements
- Complete and Sign a Partnership Agreement
  - Voluntary, non-binding document
- Send to partnerships@drintl.com
Step 2: Manufacturers Guide

- Outline the Process for Submitting Products
- Application Forms
- Checklist of Data Needs
- Sample Size
- Approved Margins of Error
  - Guide Posted at www.energystar.gov/sslpartners
- Living Document
Step 3: Product Group Qualification Process

- Partner defines the group of similar products
- D&R will verify that all members of the group are identical except for minor variations
- Partners will provide a single luminaire to represent group
- If it passes, all the members of group will be qualified
## Product Variations

<table>
<thead>
<tr>
<th>Variations Within Product Groupings</th>
<th></th>
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<tbody>
<tr>
<td>Housing/Chassis</td>
<td>Not Allowed</td>
</tr>
<tr>
<td>Heat Sink/Heat Management</td>
<td>Not Allowed</td>
</tr>
<tr>
<td>Finish</td>
<td>Allowed</td>
</tr>
<tr>
<td>Reflector/Trim</td>
<td>Allowed</td>
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<tr>
<td>Shade/Diffuser</td>
<td>Allowed</td>
</tr>
<tr>
<td>Mounting</td>
<td>Allowed</td>
</tr>
<tr>
<td>Light Source</td>
<td>Allowed with Conditions</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Allowed with Conditions</td>
</tr>
</tbody>
</table>
Step 4: Online Process for Application Submission

- Submit applications online through My ENERGY STAR Account
  - SSL Online Product Submittal Tool (SSL-OPS)
- Upload test reports and packaging to Web site
- Receive feedback within a week
- Packaging approved by D&R Account Manager
Welcome to the ENERGY STAR SSL Product Submission Tool

The ENERGY STAR Program Requirements for Solid-State Lighting (SSL) Luminaries are intended for general illumination. SSL general illumination devices were not previously covered by any ENERGY STAR product category, although there are other product categories using light emitting diodes (LEDs) for non-illumination purposes, including indication and decoration.

The following applications are presently covered by the ENERGY STAR SSL Program:

**Residential Applications**
- Under-cabinet kitchen lighting
- Portable desk task lights
- Recessed, surface and pendant-mounted downlights
- Ceiling-mounted luminaires with diffusers
- Cove lighting
- Surface-mounted luminaires with directional head(s)
- Outdoor wall-mounted porch lights
- Outdoor step lights
- Outdoor pathway lights
- Outdoor pole/arm-mounted decorative luminaires

**Commercial Applications**
- Recessed, surface and pendant-mounted downlights
- Under-cabinet shelf-mounted task lighting
- Portable desk task lights
- Wall wash luminaires
- Bollards

To begin entering new products, click 'Begin' below. You may also review products that you have submitted, that have been returned, and that have been previously qualified by choosing from the tabs at the top of the screen.

Begin  Enter new Solid State Lighting Products

Go  Return to MESA
Product Information

Brand Name: [Enter the brand name under which this model is sold.]
Model Name: [Enter an optional name that describes this model.]
Model Number:
Fixture Application: [Select]
Fixture Type: [Select an Application Type first]
Nominal Wattage:
Lumen Output: You may choose the lumen output from either the Goniophotometer Test or the Integrating Sphere Output Report.
Is this a private-labeled product? [Yes] Check the box only if you are not the original equipment manufacturer (OEM) of this product.
Quality Assurance Program

- Third-Party, Independent Labs
- Manufacturer-funded
- Off-the-Shelf Testing
- Carry Stiff Penalties

A Quality Assurance Testing Program Manual is in development and will be available on the ENERGY STAR Web site.
Results of Non-compliance

- One product failure in a grouping will disqualify the entire group.

- Two product failures in a grouping will place the partner on a probationary list.

- Probation suspends partner’s ability to use groupings and have to qualify each unique product separately.

- Partner is removed from probation after one year.
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Why Offer Efficiency Programs

- Energy Prices Continue to Soar
- Climate Change is Mainstream
- 2007 Energy Bill
- Energy Security
- RGGI – CO2 Cap & Trade regimes
- Energy Efficiency as the Fifth Fuel

Bruce Johnson, Director of Energy Efficiency Implementation, National Grid

“Right now this resurgence seems to be sustainable, primarily because it’s not entirely related to the regulatory environment. Climate change is going to be on our conscience for the foreseeable future.”

Jeff Lyash, President and CEO, Progress Energy Florida

“For the first time in decades, people are thinking about the cost and environmental impact of energy usage. It is now regularly covered in the mainstream media, a key subject of presidential debates, and a topic of discussion in places from classrooms to coffee shops.”

Ted Schultz, Vice President of Energy Efficiency, Duke Energy

“Clearly, energy efficiency has staying power with the current issues around climate change. We’ve never been in a position like this before...we have a great opportunity to make energy efficiency a norm for all our customers.”
Customer Attitudes

- 82% of Americans believe in global warming, and there is widespread belief that human behavior is contributing to the problem. 
  Fox News/Opinion Dynamics Poll, Spring 2007
- Majority believe immediate action needed 
  NY Times/CBS Poll, April 2007
- 86% would choose one home over another based on its energy efficiency. 
  Shelton Group/Energy Pulse, 2006
- 63% say change their consumption habits based on increase in energy prices. 
  Shelton Group/Energy Pulse, 2006
Lighting and Appliance Program
Budgets 2006 - 2008

Source: D&R Appliance and Lighting Program Guides
Energy Efficiency Budgets
($3.1 Billion in US)

Source: CEE U.S. ENERGY-EFFICIENCY PROGRAMS
A $3.7 Billion US and Canadian Industry
2007 REPORT
Annual Electric Utility Spending on Energy Efficiency

Will eclipse $5B within several years!

Many states could increase EE spending exponentially in the near term: IL, MO, MD, NC, SC, NM, OH, MI, VA, others?
Program Growth in 2009

- **Expanded Efficiency Budgets in 2009**
- **Possible Expansions in 2009**
“BOSTON— National Grid, which supplies about half the state’s electricity, plans to dramatically boost spending on energy conservation programs in the state, with a 30 percent increase next year and a doubling of the current spending to more than $125 million annually over the next three years, according to company officials.”

Worcester Telegram & Gazette 9/14/08
Regional Variability of Programs

Programs

- Rebates
- Appliances
- Lighting

- Education + Rebates
- Appliances
- Lighting
- Consumer education

- Education + Rebates + Home improvement
- Advanced Tech
- Appliances
- Lighting

Technologies

Emerging Markets
- Mid-Atlantic, SE, SW

Mature Markets
- NE, MW, PNW
So, How Do You Fit In?

- Increased EE Program Funding = Increased Demand for EE Products & Services (+Education)

- Get Involved! …

- Need much more effective integration of emerging technology into portfolios

- Need to consider the process technology as well as widget technology
Portfolio of Strategic Investments

- Define, educate, and promote cost-effective energy/environmental savings through single designation: ENERGY STAR

- Residential initiatives
  - Efficient products
  - Efficient new homes
  - Existing home efficiency improvements
  - Affordable housing

- Commercial initiatives
  - Efficient products
  - Existing building efficiency improvement
  - Efficient new construction

- Industrial initiatives
Working with your Utility Partner

- **Sales Data!**
  - Be generous to your partner and provide information
  - Utilities need market share lift data to justify $ spent

- **Recognition**
  - Utilities understand that in-store messaging needs to conform to the retailers guidelines
  - Retailers need to understand that utilities need recognition for their efforts

- **Communication**
  - Utilities plan months in advance for bill inserts, retailers and manufacturers should communicate in advance any problems with agreed upon promotions
Working with your Utility Partner

- **Rebate Options**
  - Mail in applications
  - Online Applications
  - Retailer Point of Sale
    - Store Register
    - Store Website
    - Utilities prefer these as they are the most cost effective and easiest to administer
Utility Requirements

- Customer Data Collection
  - Retailer reports
  - Gift cards
  - Tear pads with customer info

- Utility POS contracts

- Qualified product availability
Utilities report influences by those purchases and the savings claimed by products

- Energy - kWh
- Gas – Therms

Savings are claimed to the PUC

Need to prove that they affected customer purchase

Prove that they are customers of that utility area

Prove that product was installed

Prove the savings claim of each product
Agenda

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Consumer Outreach Activities

- Simple and Clear Messaging
- Web Content – www.energystar.gov/led
- Tools and Resources
ENERGY STAR messaging:

- **Initial Targets:**
  - Residential: Early adopters attracted by new technology
  - Commercial: Lighting designers

- **Primary Message:**
  - Residential Indoor: Superior light quality
  - Residential Outdoor: Durability
  - Commercial: Design elements

- **Secondary Messages:** Long life; energy savings

- CFLs are not the enemy – there is room for both
Simple and Clear Messaging

- Reduce energy costs
- Lasts a long time
- Lowers maintenance costs
- Reduces cooling costs
- Comes with three-year warranty
Simple and Clear Messaging

Application-specific messaging:

- ENERGY STAR LED undercabinet shelf-mounted lighting:
  - “Accent and task lighting with clarity and sparkle. Great for illuminating work spaces and showcases.”

- ENERGY STAR LED outdoor step lights:
  - “Provide lasting, sturdy, reliable, and safe outdoor lighting.”

- Commercial ENERGY STAR LED Recessed Downlights:
  - “Commercial ENERGY STAR LED Downlights provide high quality, low energy light while reducing cooling and maintenance costs.”
Tools and Resources

- Partner Resource Guide
- Info Graphics
- SSL Facts and Figures
- Frequently Asked Questions (FAQs)
- Program Design Guide
- Product Profile, Market Profile, Product Snapshot
- Media Outreach and Support
- Sales Data
Did you know?
You need 40 incandescents or 6 CFLs to match the lifespan of 1 LED

Save BIG with LEDs...
LEDs use 10-12 times less energy than incandescent bulbs!

Substituting 1 LED for 40 incandescent bulbs can save you $738
Partner Outreach Activities

- Announce progress and share information via e-newsletter
  - Subscribe by sending an e-mail to ssl@drintl.com

- Web pages are ready
  - www.energystar.gov/led
  - Buyer’s Guide
  - Qualified products list

- Solicit Feedback:
  - Proposed Category A Expansion
  - Efficacy Ratcheting
  - Future criteria for replacement lamps
Upcoming Events

- 2nd Draft of Integral LED Lamp Criteria
- Category A expansion
- Launch Quality Assurance Program
Questions?

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