ENERGY STAR Qualified
Decorative Light Strings
Pierrette LeBlanc
Senior Standards Eng.
Isabelle Guimont
Account Mgr, Retail Sector

March 13, 2007
Agenda

- Specification for Decorative Light Strings (DLS)
- Impact for Canada
- Current Market in Canada
- Consumer Outreach

Incandescent vs. LED

One 7-watt incandescent bulb consumes the same amount of electricity as 140 LED bulbs (or two 24 foot strings)
Definition

Decorative Light String (DLS):

- A string of lamps that operate on AC power in North America (120 V RMS AC, 60 Hz) or via a power adapter or controller that connects directly to AC power
- Residential lighting purposes
- Replaceable or sealed
- Net or icicle configuration
Inspection

- Number of lamps per strings
- Replaceable lamps
- Safety requirements
- Rated for indoor or indoor/outdoor applications
- Warranty – minimum 3 years
Electrical requirements

- Input Power: 0.20 watts per lamp
- Over-Voltage: Failed lamps < 3%
  (over-voltage test at 132 V for one hour)
Lifetime requirements

Lifetime test consists of operating the lamps for 1000 hours continuously

- Maintained light output:
  - No less than 70% for color lamps
  - No less than 50% for white phosphor based lamps

- Failed lamps: < 3%
Weathering Requirements

Weathering test consists of 20 cycles of 8 hours of uv light at 60 degrees Celcius, 0.25 hours of water spray, 3.75 hours of condensation at 50 d.C.. Total of 240 hours.

• Maintained light output:
  ➢ No less than 70% for color lamps
  ➢ No less than 50% for white phosphor based lamps
• Failed lamps: < 3%
Packaging

- Indicate product suitability
- Product description: # lamps, length, rated wattage
- French and English (Canadian requirement)
- Correlated Color temperature for white light strings
  - Soft white: <3500 CCT
  - Pure-white: 3500-5000 CCT
  - Blue-white: >5000 CCT
Impact for Canada

- National retail sales of holiday lights in Canada have been estimated to be between $300 million and $400 million dollars annually\(^1\).
- Converting only 40% of the 10 million strings sold in Canada from incandescent to LED would result in annual energy savings of approximately 220 GWh.
- This new comer into the ENERGY STAR line-up is an important strategic move for ENERGY STAR, particularly in regard to the emergence of white-light LEDs in general illumination applications around the world.

\(^1\) Source: 1993 BC Hydro Holiday Lighting Market Assessment Report
The success of the past three years’ promotional campaigns have boosted the sales for LED strings, especially in British Columbia.

- Mail-in rebates.
- In-store instant rebates
- Trade-ins

The addition of an ENERGY STAR® symbol will increase the awareness that these products are an energy-efficient alternative to traditional incandescent strings.
Current Market State

- Market is about to be transformed in Canada regarding DLS.
- 9 major chains, representing a 90% share of the market, have converted their stock:
  - Some exclusively carry the LED products as decorative light strings.
  - Others stock at least 50% LED DLS.
Consumer Outreach

- We are carrying out two surveys on DLS: Retailers and End-Users.
  - Better address barriers
  - Test common messages to be used across the country
- Notification to all ENERGY STAR Participants on DSL specifications.
- General POP material, training material for retailers, ...
Contact Information

Pierrette LeBlanc:
Telephone: (613) 947-1503
Email: pileblan@nrcan.gc.ca

Isabelle Guimont:
Telephone: (613) 996-5281
Email: iguimont@nrcan.gc.ca

Canadian ENERGY STAR website: energystar.gc.ca
NRCan/OEE website: oee.nrcan.gc.ca
Process to Qualify DLS

1. Developing qualification process with ICF Consulting Canada
   - Specifications
   - QPI / Reporting
   - Manufacturer Commitment
   - Process outline
   - ENERGY STAR logo use guidelines

2. Web listing