

*Energy Smart Awareness Brown Bag*

# Commercial Lighting Program Update

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# Overview

- How changing federal standards will impact the T12 retrofit opportunity
- New lighting measures, including LEDs
- The new C&I Lighting calculator: overview and launch plans



# Federal Standard Changes and the T12 Retrofit Opportunity

- With the passage of the Energy Policy Act in 1992, the least efficient T12 lamps and magnetic ballasts will no longer meet minimum federal efficacy requirements beginning in 2013.
- Retrofits from a T12 baseline will no longer qualify for reimbursements under the C&I Lighting program after the law goes into effect.
- This could impact as much as 50% of aggregate program savings.
- [Lighting EPACK Final Rule](#), page 11



## Example: Replace T12 with HP T8

2009

- Existing 2 Lamp T12  
baseline of 96 Watts
- Proposed 2 Lamp HP T8  
efficiency of 48 Watts
- Change in Watts = 48
- Change in LPD = 50%
- Energy savings 50% without  
controls

2013

- Existing 2 Lamp T12  
baseline of 96 Watts does  
not qualify
- Federal standard baseline of  
standard 2 lamp T8 - 59 W
- Proposed 2 Lamp HP T8  
48 Watts
- Change in Watts = 11
- Change in LPD = 19%
- Energy savings 19% without  
controls



# Adaptation Strategies

- Aggressively pursue the T12 retrofit opportunity through 2012.
- Retrofit to higher efficiency options:
  - Low wattage HP T8
  - Emerging LED options
  - Integrate controls
- BPA is weighing other options.
  - Input is welcome



# New Lighting Measures

- Lighting technology is evolving rapidly
- Utilities have installed many emerging technologies through the program as non-standard measures
- BPA gained experience with efficiency, cost and performance of new measures
- To streamline approval, BPA wants to standardize specifications and reimbursement levels for these measures where appropriate
- BPA is working to include these measures as soon as possible



# New Measures

- LED refrigerated case lighting
  - Already approved through BPA EnergySmart Grocer program
  - Great application in a cool environment
- LED outdoor signage
  - Replaces linear T12 HO
  - Significantly more efficient
- LED downlights
  - High bay style
- LED canopy lights
  - Gas station typical application



## New Measures (cont.)

- 25, 28 watt reduced wattage T8
  - Key role post-2012?
- LED screw-in reflector lamps
- Evluma 40 watt area (barn) light
- 400-500 watt induction
  - Replacing 1000 watt HID
- 55 watt screw-in induction
- Bi-level stairwell and garage fixtures



# LED Demos

BPA would like to demonstrate the following in the offices of customer utilities:

- recessed can LED downlights
- track lighting demonstration areas
- other technology demonstrations will be considered
- ideal demonstration area is a lobby or conference room that is open to the public

Contact [Craig Ciranny](#) if you would like to participate



# The New C&I Lighting Calculator: Overview and Launch Plan

- Overview
- Launch plan



# Overview

- Current calculator 1.7e lacks full functionality
  - Measure list is long and not user friendly
  - Controls require manual work-around
  - Complexity hinders program success
- BPA began new calculator development in Fall 2009
  - Utility program manager interviews
  - Review of calculators
  - User surveys
- New Calculator 2.0 will have increased functionality
  - Simpler interface
  - More understandable drop-downs, controls capacity
  - Utility modifications capability

The new calculator is designed to position the program for the future, empowering utilities to offer more measures and controls.



# Launch Plans

- BPA will continue to accept the current calculator (version 1.7e) until at least Oct. 1, 2010.
- Version 2.0 calculator demo is a bonus session after the EE Summit March 18, 3:00 pm.
- Goal of April 1, 2010 availability.
- Training plans in development
  - Online meetings
  - Regional trainings for
    - Program Managers
    - Contractors
- We have incorporated flexibility into the transition process to make it as smooth as possible.



# Questions?



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# About BPA

BPA is a not-for-profit federal electric utility that operates a high-voltage transmission grid comprising more than 15,000 miles of lines and associated substations in Washington, Oregon, Idaho and Montana. It also markets more than a third of the electricity consumed in the Pacific Northwest. The power is produced at 31 federal dams operated by the U.S. Corps of Engineers and Bureau of Reclamation and one nuclear plant in the Northwest and is sold to more than 140 Northwest utilities. BPA purchases power from seven wind projects and has more than 2,500 megawatts of wind interconnected to its transmission system. To learn more, visit [www.bpa.gov](http://www.bpa.gov).

## **BPA Energy Efficiency:**

The Northwest has been a leader in treating energy efficiency and conservation as a power resource. The region learned fast that a megawatt saved is the equivalent of a megawatt produced. As of 2007, energy efficiency accounted for only one percent of all electricity production in the United States. But in the Northwest, it accounted for 10 percent thanks to collaboration among the Bonneville Power Administration, Northwest Power and Conservation Council, regional utilities, state agencies and environmental interests.

In fact, energy efficiency has been BPA's biggest resource addition for more than 25 years. Through its utility customers and partners, the agency has acquired more than 1,100 average megawatts (aMW) of savings - more energy than either The Dalles Dam or Bonneville Dam could produce in an entire year. In fiscal year 2008 alone, public power secured 76 aMW of energy efficiency for the Northwest - the equivalent energy to power 65,000 homes for an entire year.

