

# What's Ready for Prime Time?

## *Commercial and Industrial Lighting*

## *Securing Our Energy Future*

Utility Energy Efficiency Summit

Tuesday, March 17, 2009

2:30 pm Session III B

Ray Hartwell

BPA C & I Lighting Program Manager



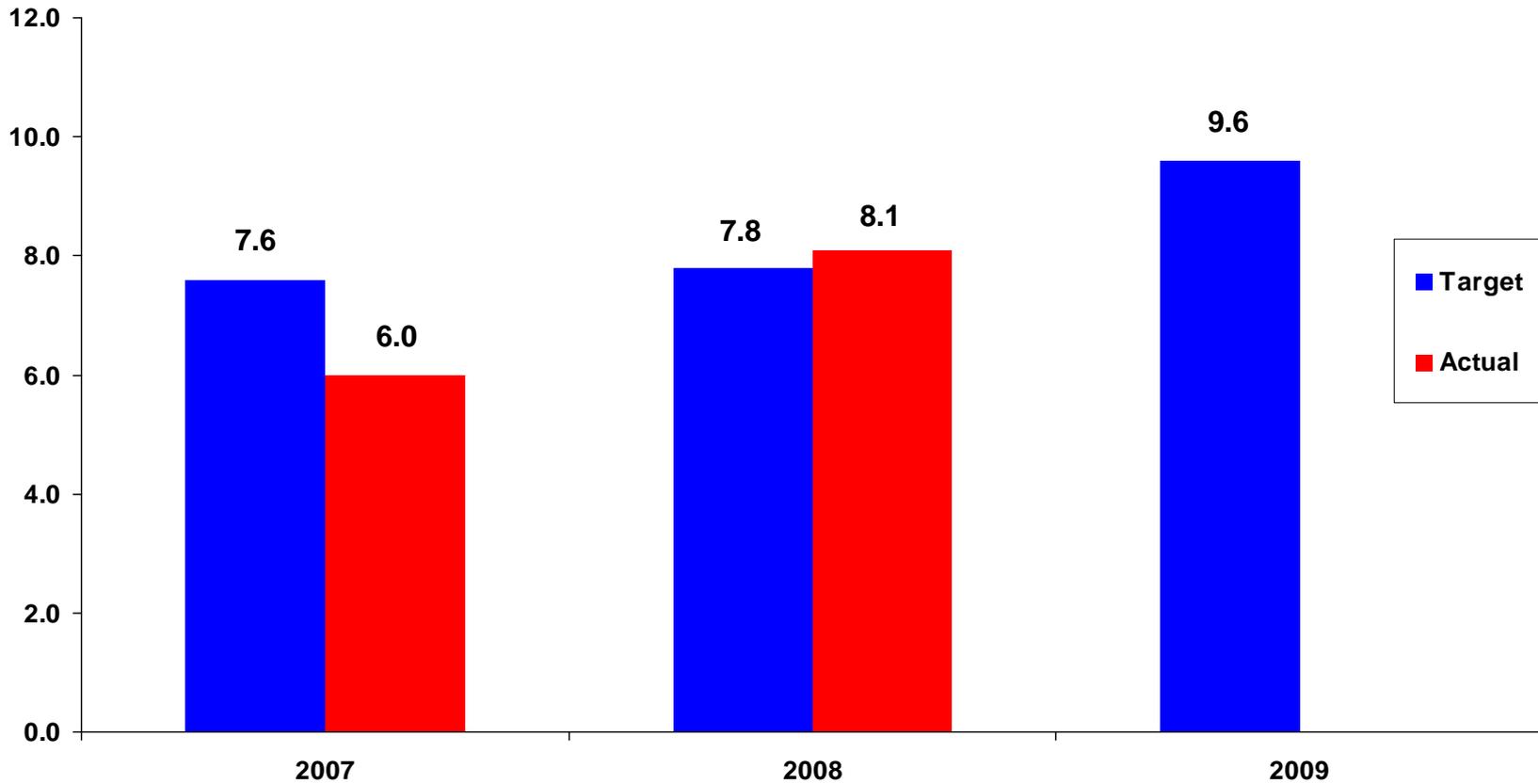
# A Large Opportunity

- 5<sup>th</sup> Power Plan includes 245 aMW in Commercial New and Replacement Lighting by 2025
- Reduce Wattage
  - Retrofit to T8 Fluorescent
  - New T5 High Bay Fixtures
- Reduce Hours
  - Controls
- Emerging Technologies



# Achievements and Targets

Average  
Megawatts



# Program Strategy

- Strong Program Economics and Reimbursement Levels
- Improved Program Tools
- Trade Ally Network
- Utility Support



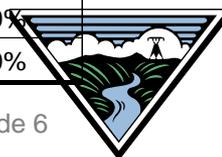
# Strong Program Economics and Reimbursement Levels

- Large Energy Savings
  - Reduced Wattage 50% or more
  - Controls reduce hours of operation
- Quick Paybacks
- Typical Incentive 60% of Cost
  - Up to 70% of cost
  - Tax Credits provide additional boost
- Recent reimbursement increases of 48% on average



# Reimbursement Increases

Measure Description		Old Incentive Per Unit	→ 2009 Incentive Per Unit	Increase (48% on Average!)
<b>A High Performance T8 Fluorescent Lamps and Electronic Ballast</b>				
1	1 lamp and electronic ballast (15 to 44 input watts)	\$15	\$20	33%
2	2 to 4 lamps and electronic ballast (45 to 114 input watts)	\$30	\$40	33%
<b>C Hardwired Compact Fluorescent</b>				
1	7 to 49 Watts (Nominal Lamp Watts)	\$30	\$40	33%
2	50 to 99 Watts	\$50	\$80	60%
<b>F LED or Cold Cathode Signs</b>				
1	Retrofit kit or Replace existing incandescent sign	\$30	\$50	67%
<b>H High Output Fluorescent Luminaire (New Fixture)</b>				
1	85 to 129 Watts (Ballast Input Watts)	\$80	\$120	50%
2	130 to 189 Watts	\$100	\$140	40%
3	190 to 249 Watts	\$120	\$160	33%
4	250 to 600 Watts	\$140	\$180	29%
<b>I Pulse Start Metal Halide Luminaire (New Fixture)</b>				
1	300 to 399 Watts (Nominal Lamp Watts)	\$100	\$150	50%
2	400 to 750 Watts	\$150	\$200	33%
<b>J Occupancy Sensors, Timers, Photocells, and Control Panels</b>				
1	100 to 200 Watts controlled	\$35	\$35	flat
2	over 200 Watts controlled	\$45	\$60	33%
<b>L Retrofit Very High Output Fixtures with T5 Lamps &amp; Ballasts</b>				
1	2 T5 lamps and high output ballast	\$25	\$50	100%
2	3 to 4 T5 lamps and high output ballast	\$50	\$100	100%



# Improved Lighting Spreadsheet Calculator

As requested by customers...

- Lamp and Ballast descriptions simplified:
  - Before: 93 choices, such as:  
“T8HP 4', 2-F32T8, 3100+lumen, 1-NLO Advance Optanium IOP/ROP/VOP-2P32-SC”
  - Now: 18 choices, such as:  
“High Performance T8, 2-4' lamps with Normal Light Output ballast”
- Auto-completion of sheets
- Separate example sheet





# Northwest Trade Ally Network

## Commercial & Industrial Lighting

- Training Trade Allies and Connecting them with Utility Programs
  - Sessions around the region
  - Newsletter
  - Website ([www.northwest-lighting.org](http://www.northwest-lighting.org))
- Lots of Enthusiasm and Turnout
  - 360 allies to date
  - Controls training, supported by program changes
- Use the Network to Promote your Programs!





## Northwest Trade Ally Network

Commercial & Industrial Lighting

*Illuminating opportunities*

Home

About

News & Events

Forms & Resources

Utility Locator

Trade Ally Locator

Join the Network

Contact Us

### Utility Lighting Rebate Program Information

Seattle City Light  
700 5th Avenue, Suite 3200  
Seattle, WA 98104-5031  
(206) 684-3000  
<http://www.seattle.gov/light/>

#### Lighting Program

Northwest Trade Ally Network Promoted Lighting Program  
<http://www.seattle.gov/light/conserves/business/>

#### Commercial Accounts: >10000

Jerry Wright  
(206) 684-3360  
[jerry.wright@seattle.gov](mailto:jerry.wright@seattle.gov)

#### Industrial Accounts

Surinder Rekhi  
(206) 684-3729  
[surinder.rekhi@seattle.gov](mailto:surinder.rekhi@seattle.gov)

### Contact the TAN to:

- Update information
- Add forms and materials
- Add logos



# Utility Support Resources

We want to help you succeed in running this program.

- BPA Engineering Support
  - Craig Ciranny, Lighting Technical Lead, and Other BPA Engineers
- Lighting Design Lab Technical Support
  - [www.lightingdesignlab.com/](http://www.lightingdesignlab.com/)
- BPA Training for Utilities
  - Calculator and Program Training
  - Session tomorrow, March 18, at 3pm



# A Promising Future

- Planned Simplifications to the New Construction Calculator
- New Measures in Development, including LEDs and Induction Metal Halide
- Turnkey Lighting Pilot



# Give us your Feedback

We're always looking for program suggestions.

- Reception this evening
- Tomorrow
  - Breakfast table
  - Calculator spreadsheet training
- Anytime
  - (503) 230-7319
  - [rvhartwell@bpa.gov](mailto:rvhartwell@bpa.gov)



# What's Ready for Prime Time?

## *Updates from the Residential Sector*

### *Securing Our Energy Future*

Utility Energy Efficiency Summit

Tuesday, March 17, 2009

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Sarah Fielding Moore

BPA Residential Sector Lead



# April 1, 2009 Updates

To assist BPA utilities . . .

- ESTAR appliances – easier documentation
- ESTAR light fixtures – upstream options
- Heat pump conversions – available
- HP upgrades in Manufactured Homes – HZ1
- Window retrofit reimbursement - \$6/sq ft!
- Low Income windows – all in!
- R-49 attic insulation - available
- Montana House – available



## What we're working on. . .

- Change-a-Light
- ENERGY STAR Light Fixtures
- ENERGY STAR Appliances
- PTCS program – improvements
- Insulation – impact of 6<sup>th</sup> Power Plan
- Energy Star Homes NW
- Consumer Electronics Initiative



# CFLs and Lighting – what's next?



- Specialty CFLs
- ESTAR Lighting Fixtures
  - Made documentation a bit easier to facilitate markdown promotions
  - Should BPA consider a regional markdown approach on fixtures?



# Energy Star Appliances

- Tracking changes to standards

*For example:*

- Clothes Washers (current MEF 1.72+ WF 8.0)
  - Effective July 1, 2009: MEF 1.8+ WF 7.5
  - Effective July 1, 2011: MEF 2.0+, WF 6.0



# PTCS program improvements

- Reconcile site registry to PTR
- Streamline paperwork process
- Develop PTCS marketing materials
- Target support to contractors
- Improve site registry Web Site
- Update training curriculum
- Create Master Tech certification



# Shell measures



- Reminder about LI Windows
  - Reimbursement = up to \$20/sq. ft.
- Insulation – R-49 attic insulation

# Technology opportunities

- Ductless Heat Pumps- early data review
- Heat Pump Water Heater - field test
- Prescriptive Duct Sealing – evaluate
- LED down-lights – price points/standards
- NEEA's Consumer Electronic Initiative



# Ideas for new approaches

- Supporting small/medium-sized utilities
  - Centralized utility rebate processing
  - Marketing assistance
- NEEM Homes – increasing market share



# Feedback? Concerns? Ideas?

Let's talk. . . . .

- Vendor reception this evening
- Breakfast table tomorrow (Wednesday)

