



Industry Partners Lighting Session

Envisioning the Next Generation of Lighting Programs: Working Together on a Comprehensive Approach

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Commercial Program Manager
Sept 30, 2009
New Orleans, LA

Agenda

▼ Session 1

(11:00am-2:00pm)

- Background
- Member Presentations
 - *Margaret Song, CLC*
 - *Liesel Schulte, FOE*
- Lunch
- Industry Presentations
 - *Joe Howley/Lisa McLeer, GE*
 - *Pekka Haakarainen, Lutron*
 - *Jeff Dross, Kichler Lighting*

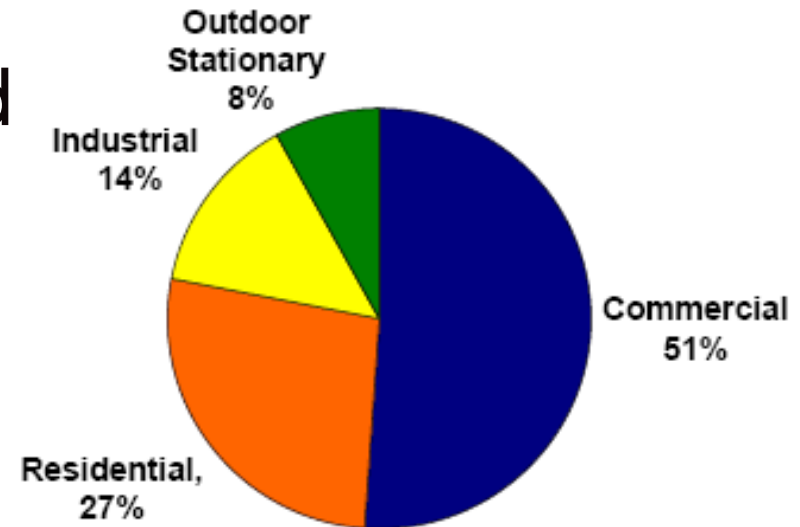
▼ Session 2

(2:30pm-5:00pm)

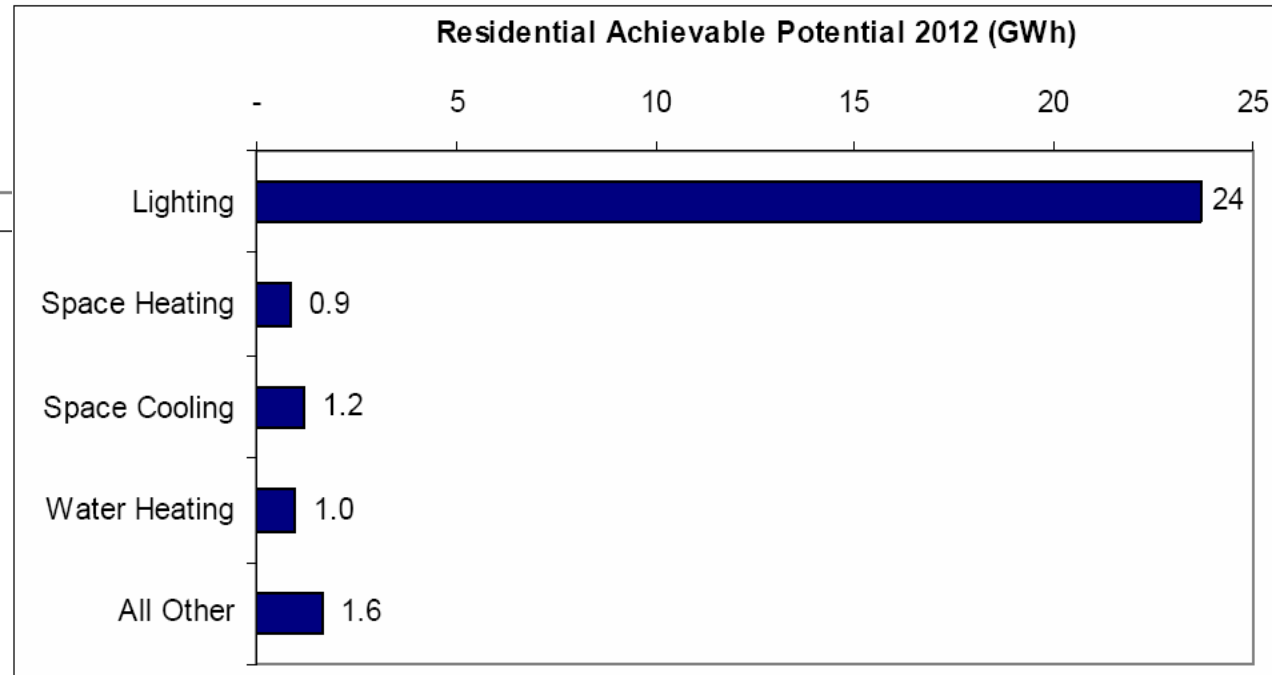
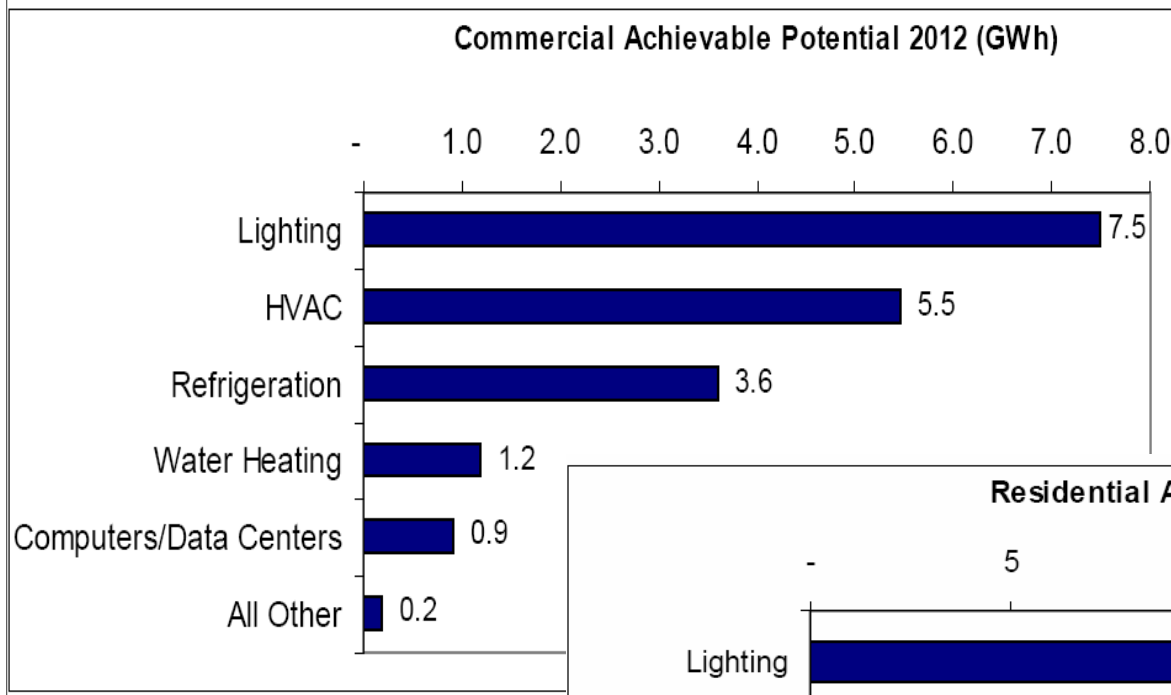
- Defining a Comprehensive Approach
- Group Work
 - *Targeting 4 different customer types with a comprehensive approach*
- Discussion

Ample Opportunity Exists

- ▶ Lighting represents 30.3% of commercial and residential total building electricity use.
- ▶ Lighting Programs are already successful
 - Accounts for 60-75% total savings in 5 states –CA, RI, VT, NJ, WI



Iowa Achievable Potential



Tried and True Program Approaches

Common Residential Program Types		Common Commercial Program Types	
Manufacturer/ Retailer/ Distributor	Prescriptive (most)	Manufacturer/ Retailer/ Distributor	Performance or prescriptive
	Market Share (some)		
	Cooperative Advertising (some)		
	SPIFFS (some)		
In-house programs (such as audits or new construction)	Performance or prescriptive	On-site programs (such as audits or new construction)	Performance or prescriptive

A Changing Landscape

- ▶ Federal Standards
- ▶ State and Provincial Activity
 - Building Codes
 - Increasing Savings Goals
 - Claims of Market Saturation
- ▶ Emerging Opportunities
 - SSL
 - Controls
 - Daylighting
 - Design



US Federal Standards

- ▶ Energy Independence and Security Act of 2007
 - General Service and Modified-Spectrum Incandescents
 - Metal Halide Lamp Fixtures
- ▶ Energy Conservation Standards and Test Procedures 2009 – Final Rule
 - General Service Fluorescent Lamps
 - Incandescent Reflector Lamps
- ▶ Potential for Others
 - BR
 - Outdoor lighting



General Service Incandescent Lamps

Rated Lumen Ranges	Maximum Rate Wattage	Minimum Rate Lifetime	Effective Date
1490-2600	72	1,000 hours	1/1/2012
1050-1489	53	1,000 hours	1/1/2013
750-1049	43	1,000 hours	1/1/2014
310-749	29	1,000 hours	1/1/2014

Fluorescent Lamp Standards

Lamp Type	Correlated Color Temperature	Energy Conservation Standard lm/W
4-Foot (T8-T12) Medium Bi-pin ≥25W	≤ 4,500K	89
	> 4,500K and ≤ 7,000K	88
2-Foot (T8-T12) U-Shaped ≥25W	≤ 4,500K	84
	> 4,500K and ≤ 7,000K	81
8-Foot (T8-T12) Slimline ≥52W	≤ 4,500K	97
	> 4,500K and ≤ 7,000K	93
8-Foot (T8-T12) High Output	≤ 4,500K	92
	> 4,500K and ≤ 7,000K	88
4-Foot (T5) Miniature Bi-pin Standard Output ≥26W	≤ 4,500K	86
	> 4,500K and ≤ 7,000K	81
4-Foot (T5) Miniature Bi-pin High Output ≥49W	≤ 4,500K	76
	> 4,500K and ≤ 7,000K	72

Effective Date of new DOE standards: July 14 , 2012

Current exemptions continue [For example, lamps with CRI ≥87, cold temp. (CT), UV, etc.]

Canadian Federal Standards

- ▶ Minimum Energy Performance Standards
 - General Service Incandescent Reflectors (2009)
 - Ceiling Fans/ Light Kits (2010)
 - Torchieres (2010)
 - General Service Lamps (2012)



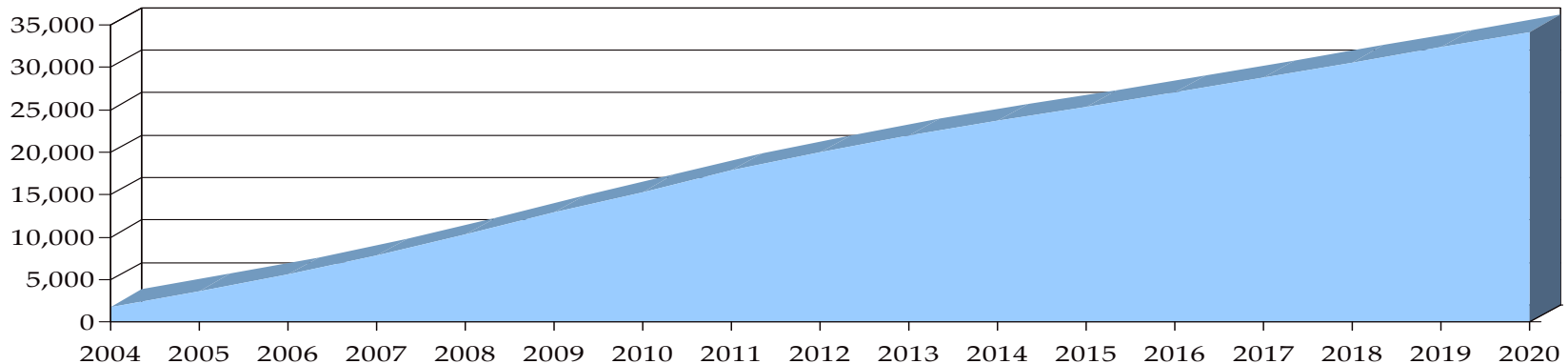
State & Provincial: Stringent Codes

- ▶ **Stringent Building Codes (Title 24, ASHRAE 90.1 2004, IECC)**
- ▶ **American Clean Energy and Security Act: 50% Reduction**
 - **Residential 2014**
 - **Commercial 2015**



State & Provincial: Increased Goals

▶ California EE Goals through 2020



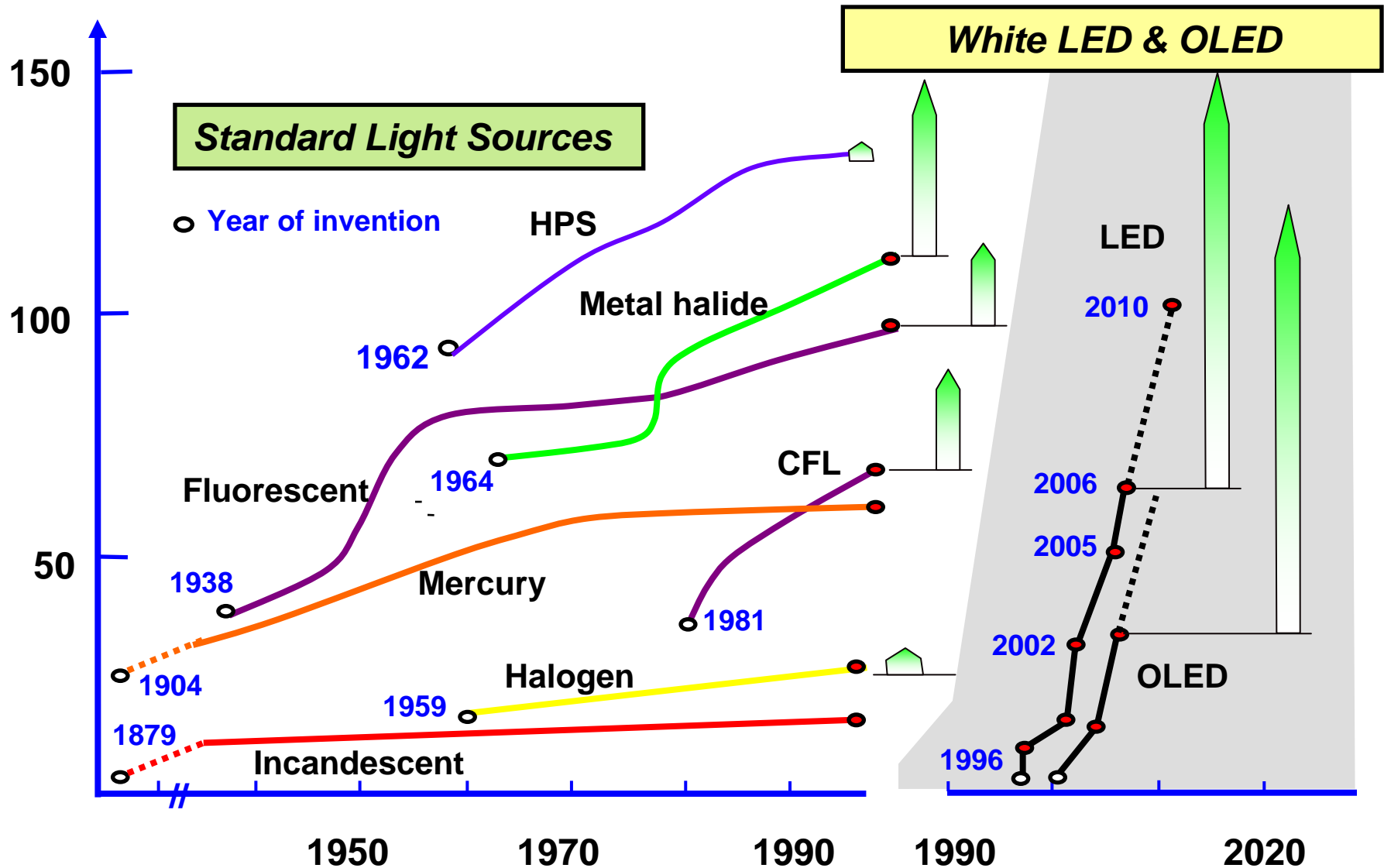
▶ **BC Hydro** – Reduce electricity consumption 20% by 2020

▶ **Progress Energy** – Increase EE by 50% through 2020

State & Provincial: Market Saturation?

- ▶ States considering moving away from “plain vanilla” CFL programs
 - Arkansas
 - Attorney General’s office testified to PUC that CFL market is transformed
 - California
 - CPUC draft plan recommends 10% reduction and no support after 2012
 - Connecticut
 - CPUC decided that CFL programs will be suspended in 2010
 - Massachusetts
 - Net-to-gross values are declining
 - Northwest
 - Northwest Power and Planning Council have reduced claimable savings
 - Texas
 - CPS Energy in San Antonio is discussing whether to continue CFL incentives

Emerging Opportunities: SSL



Emerging Opportunities: Controls

- ▶ Occupant Recognition
- ▶ Dimming
- ▶ Dimming with Load Shedding
- ▶ Daylighting

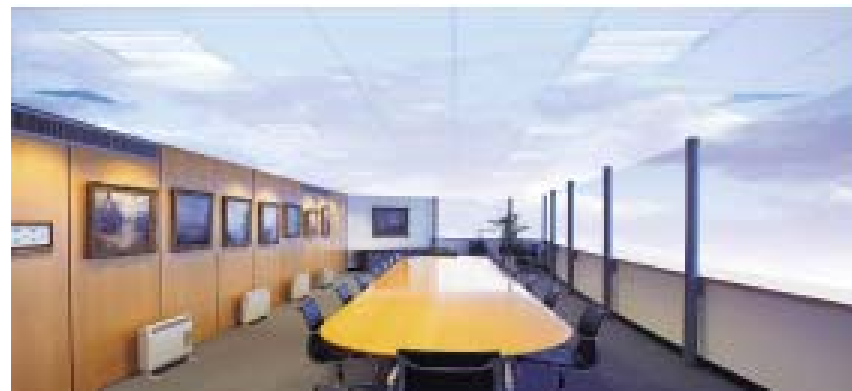
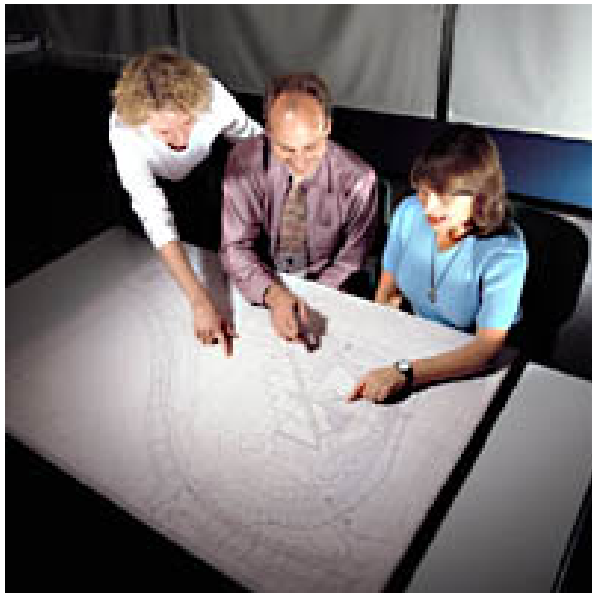


Emerging Opportunities: Daylighting

- ▶ LBNL estimates 35% energy savings from daylighting



Emerging Opportunities: Design



Our Task

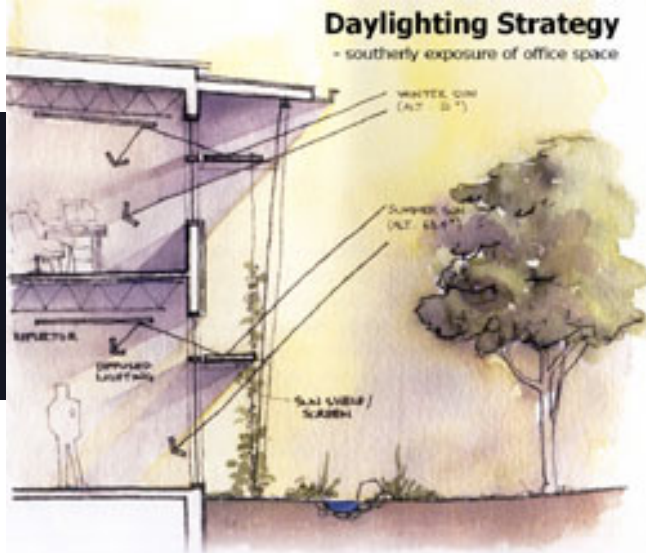
▶ Can we design comprehensive program models that combine these elements to deliver energy savings?

- Traditional technologies
- Emerging technologies (SSL)
- Controls
- Daylighting
- Design



Models to Consider

- ▶ Residential and Commercial Efficiency Program Models
- ▶ Manufacturer Plans for Comprehensive Approach



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