



Advanced Lighting Baseline Study Phase 1 and 2 Results

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Presentation Overview

- Definition of “Advanced Lamp”
- Study Overview
- Key Findings
- Conclusions

Definition of “Advanced Lamp”

What are Advanced Lamps?

- Bare spiral CFLs greater than 30 watts
- A-shaped CFLs
- Globe CFLs
- Candelabra CFLs
- Reflector CFLs
- 3-way CFLs
- Bare & covered dimmable CFLs
- GU-24 products
- EISA-compliant halogens
- Advanced incandescents
- LEDs

Study Overview

Objectives

- Key Objective
 - Provide baseline data for key advanced lighting market indicators
- Two Study Phases
 - Phase 1
 - Mine existing data on California retail store shelf availability and diversity, California household installation and storage rates
 - Draft report presented in March
 - Phase 2
 - Mine existing data on California and non-California sales, California non-residential installations and non-California retail store shelf availability and diversity
 - Conduct literature review of advanced lamp market research outside of California
 - Draft report presented in June

Study Overview

Baseline Indicators

Residential Advanced Lighting Baseline Indicator	Data Source
Phase 1	
Availability, stocking of advanced lamps	2008-2009 California shelf survey data
% of household sockets filled w/advanced lamps	2008-2009 California residential socket inventory data
% of bulbs in storage that are advanced lamps	2008-2009 California residential socket inventory data
Phase 2	
Availability, stocking of advanced lamps outside of California	2008-2009 non-California shelf survey data
% of CFLs installed in small commercial applications that are advanced lamps	2006-2008 upstream nonresidential CFL data
% of 2008-2009 lamp sales for which advanced lamps account *	2008-2009 ACNielsen, Activant data
Prices for advanced lamps	2008-2009 ACNielsen, Activant data

* Drug, grocery, hardware, and some mass merchandise channels only.

Datasets

- Retail store shelf survey data
 - California
 - Collected in 2008-2009 as part of 2006-2008 Upstream Lighting Program Impact Evaluation
 - Includes 326 stores throughout California***
 - Non-California
 - Collected in 2009 as part of 2010 CFL Market Effects Study
 - Includes 115 stores in Georgia, Pennsylvania, and Kansas

Datasets

- California socket inventory data
 - Residential
 - Collected in 2008-2009 as part of 2010 Residential Lighting Metering Study
 - Includes data on installation and storage for all lamp types from 1,200+ homes
 - Nonresidential
 - Collected in 2009 as part of 2006-2008 Small Commercial Contract Group Direct Impact Evaluation
 - Includes data on CFL installation in 677 nonresidential sites

Datasets

- California and Non-California Point-of-Sales Data
 - Retail store scanner data for 2008, 2009, and 2010
 - Data sources include AC Nielsen and Activant
 - Channels include grocery, hardware, and drug

Presentation Overview

- CA and Non-CA retail stocking
 - Percentage of stores carrying advanced lamps
 - Percentage of total lamps by lamp type
 - Percentage of total lamp packages by lamp type
- CA lamp diversity in retail stores
 - Number of unique model numbers per store
- CA lamp installation and storage rates
 - Residential (all lamp types)
 - Nonresidential (CFLs)
- CA and Non-CA retail lamp sales
- CA and Non-CA retail lamp pricing

Advanced Lighting Baseline Study Phases 1 and 2 Key Findings

Key Findings: California and Non-California Retail Store Inventory

Availability

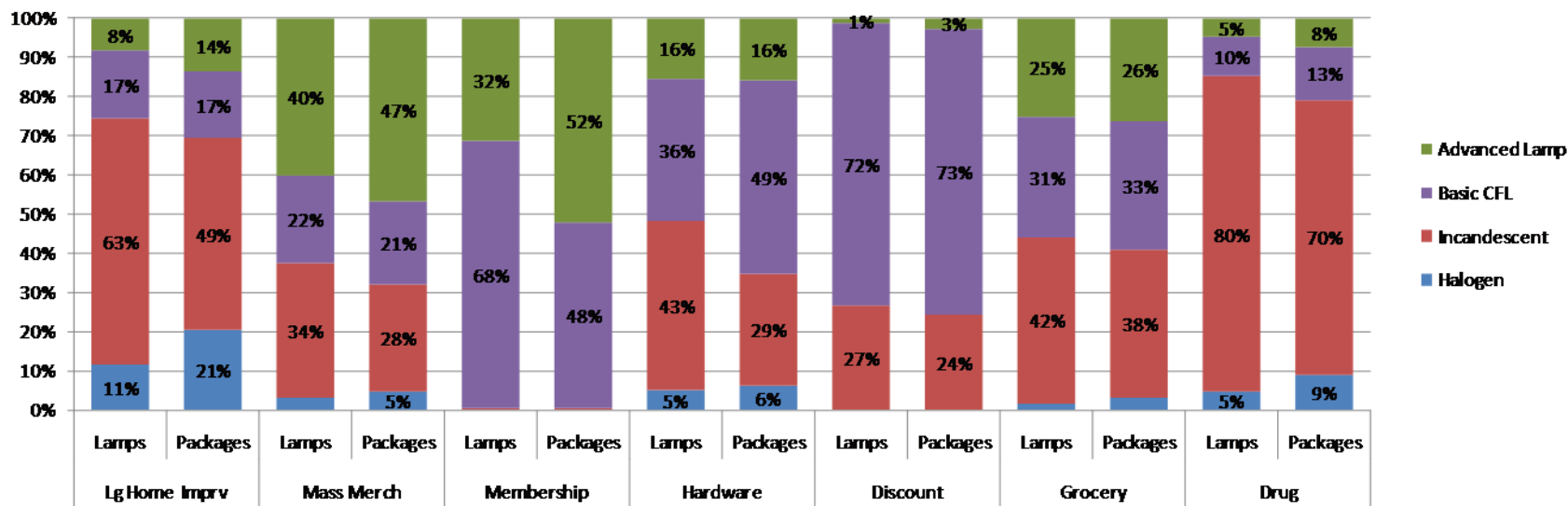
- Across all store types, the percentage of CA and non-CA stores carrying specific MSB lamp types are fairly similar
 - A few exceptions
 - Incandescents available in fewer non-CA stores than in CA stores (81% and 87% respectively)
 - Dimmable reflector/flood CFLs were found in nearly 2/3 of non-CA stores but <1/3 of CA stores
 - Tube CFLs were found in 8% of non-CA stores and 15% of CA stores

Availability

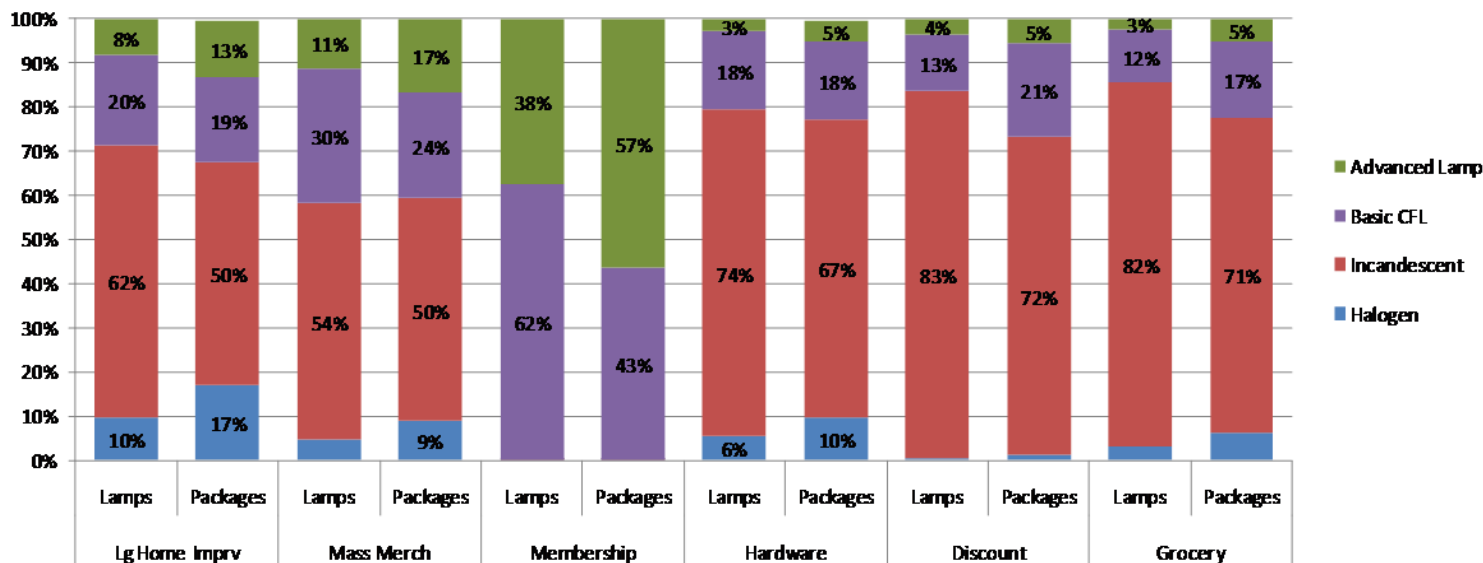
- Within specific store types, there are notable differences between CA and non-CA stores for certain lamp types
 - High-wattage tube CFLs were found in 14% of CA mass merchandise and hardware stores (and 4% of California membership stores), but were not available in any non-CA mass merchandise, hardware, or membership stores
 - Three-way spiral CFLs were found in 2/3 of CA membership stores but only 14% of non-CA
 - Three-way spiral CFLs were found in 63% of non-CA grocery stores, but only 21% of CA grocery stores
 - Globes were found in 79% of non-CA grocery stores, but less than 1/3 of CA grocery stores

Advanced Lamp Inventory

CA



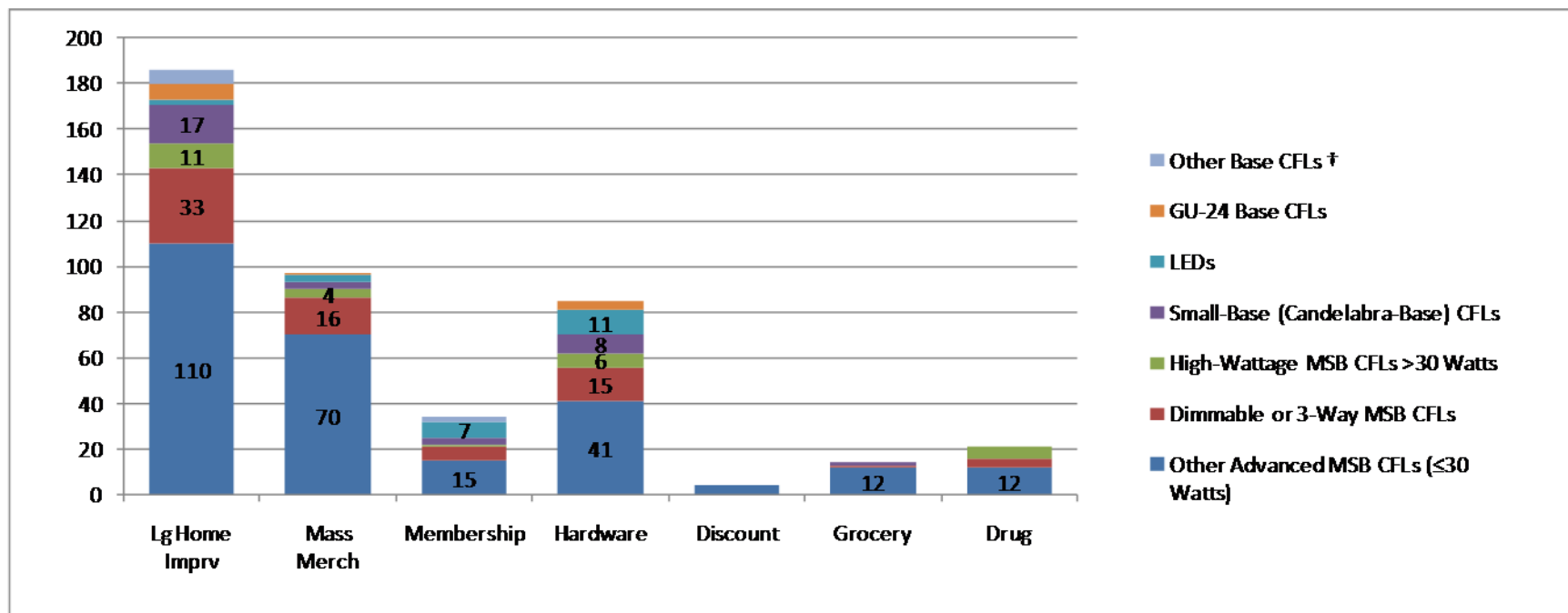
Non-CA



See report tables 4-3 through 4-6 for # lamps/packages by channel.

Advanced Lamp Diversity

California Stores:
Number of Advanced Lamp Models by Lamp Type and Store Type, 2009*



* See report Table 4-7 for number of advanced lamp models by store type.

† Excludes standard pin-based CFLs (non-GU based) as these are not considered Advanced Lamps.

Key Findings: California Res and Non-Res Installation and Storage Rates

Advanced Lamp Installation and Storage Rates

Proportion of Installed and Stored Lamps by Technology and IOU Service Territory, California Residential, 2008-2009

Lamp Type	IOU Service Territory						Overall	
	PG&E		SCE		SDG&E			
	Installed	Stored	Installed	Stored	Installed	Stored	Installed	Stored
ADVANCED								
High-wattage MSB CFLs (>30 Watts)								
High-wattage spiral	0.10%	0.10%	0.10%	-	0.10%	0.10%	0.10%	0.10%
High-wattage tube	-	-	-	0.10%	-	0.10%	-	0.10%
High-wattage reflector/flood	-	-	-	-	-	-	-	-
Specialty MSB CFLs: dimmable								
Dimmable spiral	0.10%	0.20%	-	-	0.20%	0.70%	0.10%	0.20%
Dimmable reflector/flood	-	-	0.10%	-	-	-	-	-
Specialty MSB CFLs: 3-way								
3-way spiral	-	0.10%	0.10%	-	-	0.10%	0.10%	0.10%
Other Advanced MSB CFLs (≤30 Watts)								
Reflector/flood	1.40%	1.50%	1.80%	0.90%	1.60%	1.70%	1.60%	1.30%
A-lamp	0.50%	0.80%	0.60%	0.70%	0.30%	1.40%	0.50%	0.80%
Globe	1.00%	1.40%	0.70%	0.60%	0.60%	0.50%	0.80%	1.00%
Candelabra (MSB)	0.50%	0.70%	0.30%	0.10%	0.20%	-	0.40%	0.40%
Tube	0.60%	0.90%	0.60%	0.60%	0.70%	0.70%	0.60%	0.80%
Bug Light	-	0.10%	-	-	-	-	-	-
LEDs	0.10%	0.20%	-	-	0.10%	0.10%	0.10%	0.10%
Small-Base (Candelabra-Base) CFLs	0.30%	0.50%	0.40%	0.50%	0.30%	-	0.30%	0.50%
GU-24 Base CFLs	-	-	0.10%	-	0.10%	-	0.10%	-
Other Base CFLs*	-	-	-	-	-	-	-	-
ALL ADVANCED	6.1%	6.6%	6.1%	3.5%	5.6%	5.5%	5.9%	5.3%
NON-ADVANCED								
Halogens	8.80%	5.10%	6.70%	5.40%	8.90%	4.60%	8.00%	5.20%
Basic CFLs (≤30 Watts)	17.00%	28.70%	16.80%	25.50%	13.40%	24.30%	16.40%	26.90%
Incandescents	53.40%	55.80%	57.20%	63.40%	57.60%	63.10%	55.50%	59.60%
Standard Pin-Based CFLs	1.80%	0.90%	1.60%	0.30%	1.80%	0.30%	1.70%	0.60%
Fluorescent	12.90%	2.90%	11.40%	1.90%	12.60%	2.20%	12.30%	2.40%
Unknown	-	-	0.20%	-	0.10%	-	0.20%	-
Overall	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Total Lamps	26,072	6,187	22,647	4,596	12,785	2,614	61,504	13,397



Advanced Lamp Installation and Storage Rates

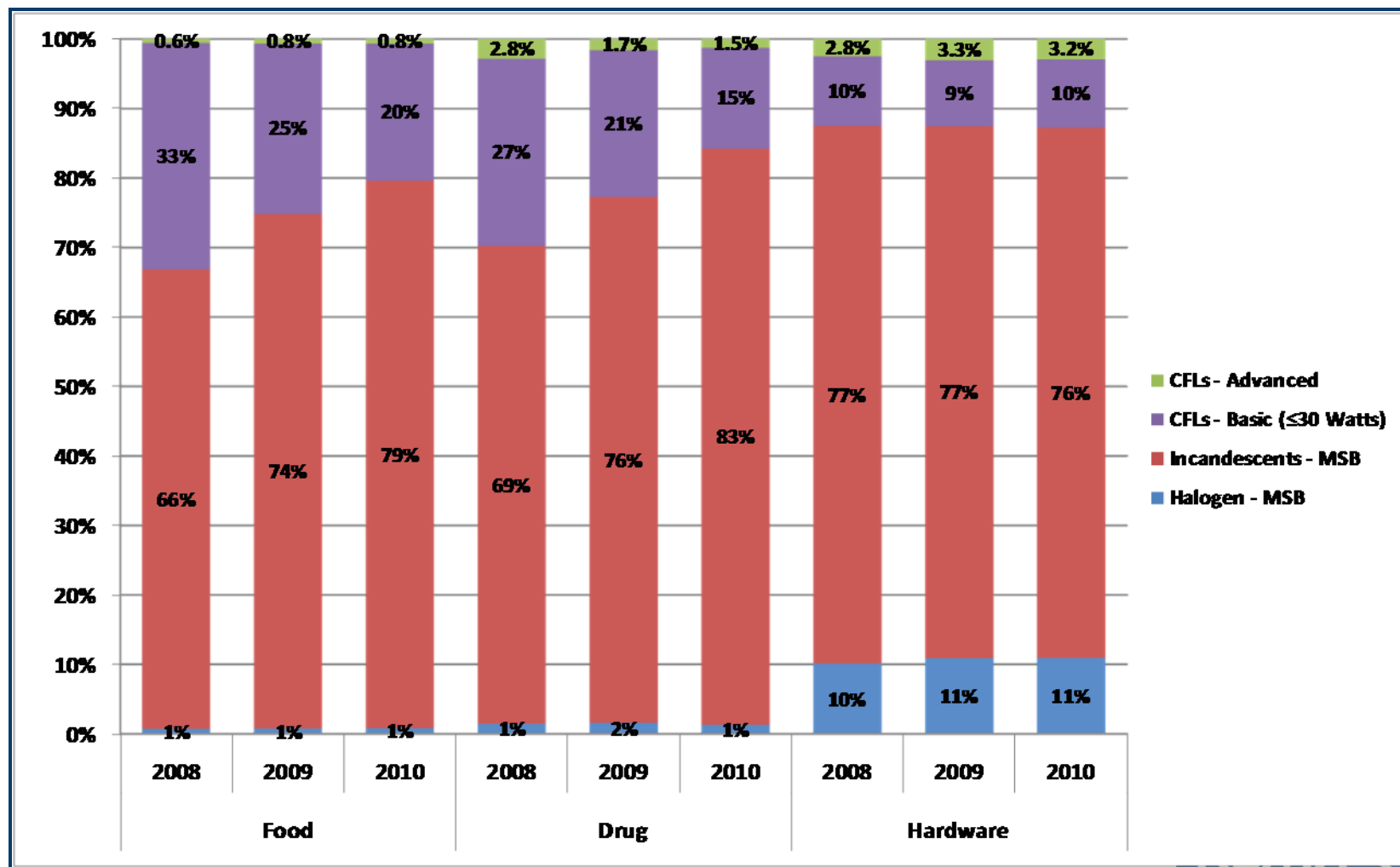
Proportion of Installed and Stored Lamps by Technology and IOU Service Territory, California Non-Residential, 2009

Lamp Type	PG&E		SCE		SDG&E		Overall	
	Installed	Stored	Installed	Stored	Installed	Stored	Installed	Stored
ADVANCED								
High-wattage MSB CFLs (≥30 Watts)								
High-wattage spiral	0.9%	0.4%	2.1%	9.5%	0.2%	0.0%	1.2%	3.0%
High-wattage tube	0.0%	0.0%	0.2%	0.3%	0.1%	0.2%	0.1%	0.1%
High-wattage reflector/flood	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Specialty MSB CFLs: dimmable								
Dimmable spiral	10.2%	0.0%	0.3%	0.0%	0.3%	0.0%	4.9%	0.0%
Dimmable reflector/flood	1.1%	1.8%	0.0%	0.0%	0.0%	0.0%	0.5%	1.1%
Specialty MSB CFLs: 3-way								
3-way spiral	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%
Other Advanced MSB CFLs (<30 Watts)								
Reflector/flood	10.4%	5.5%	19.6%	17.4%	12.7%	14.5%	14.3%	9.9%
A-lamp	1.4%	4.1%	1.0%	1.2%	0.8%	4.1%	1.2%	3.2%
Globe	1.9%	2.4%	1.1%	0.7%	0.7%	0.3%	1.4%	1.7%
Candelabra (MSB)	0.0%	0.0%	0.1%	0.0%	0.2%	0.0%	0.1%	0.0%
Tube	0.7%	0.0%	0.2%	0.3%	2.4%	1.9%	0.7%	0.3%
Bug Light	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEDs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Small-Base (Candelabra-Base) CFLs	6.1%	0.6%	25.3%	0.0%	1.1%	0.0%	13.0%	0.4%
GU-24 Base CFLs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Other Base CFLs*	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%
NON-ADVANCED								
Basic CFLs (<30 Watts)	63.4%	78.4%	45.8%	69.9%	72.7%	77.4%	57.7%	75.8%
Unknown CFLs	3.4%	6.6%	4.2%	.7%	8.9%	1.6%	4.5%	4.4%
Overall	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total CFLs	2,842,311	586,473	2,410,630	282,451	834,865	85,881	6,087,806	954,805

Key Findings: California and United States Lamp Sales and Average Prices

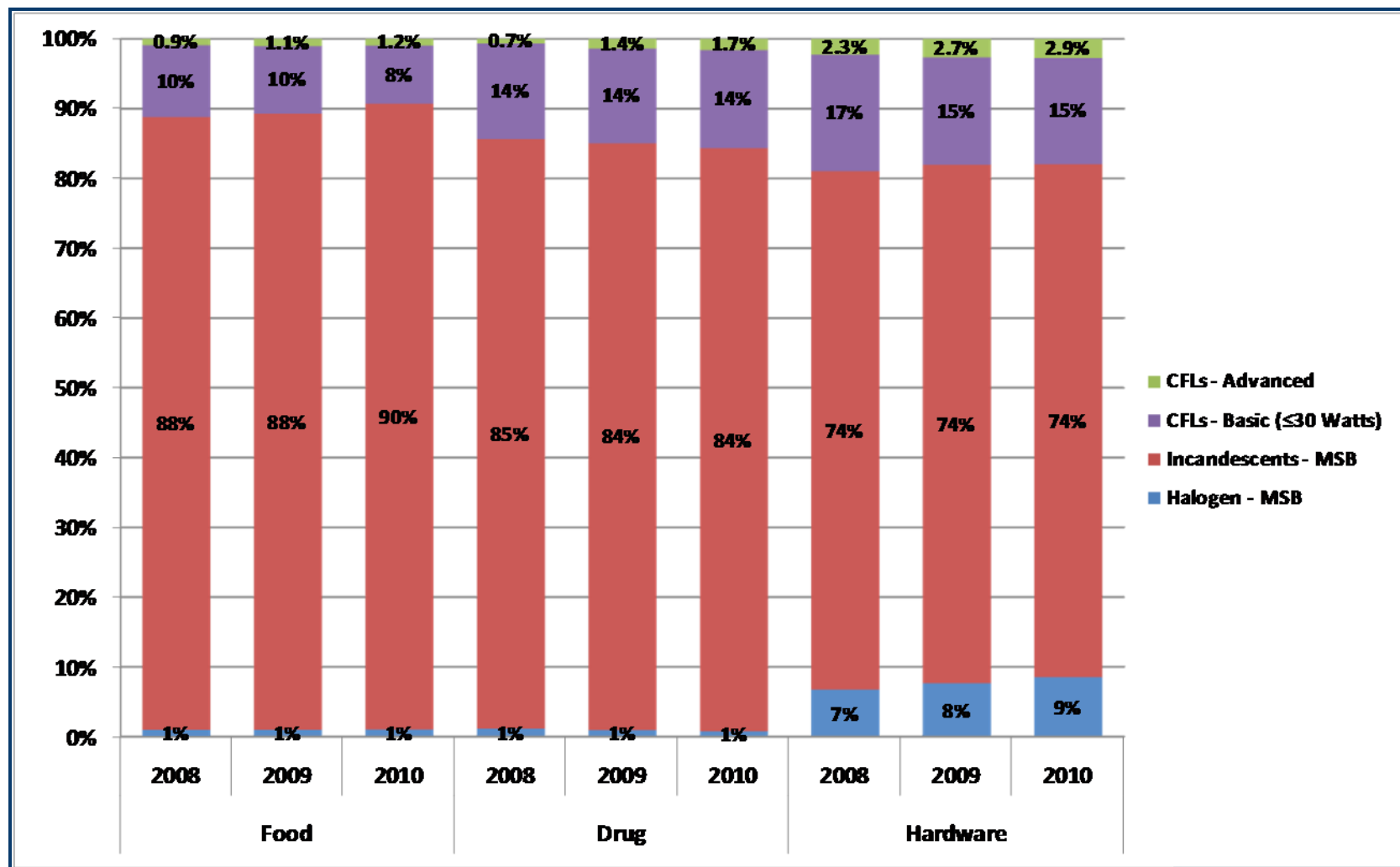
Lamp Sales

Percent of MSB Lamps Sold by Store Type and Year, 2008-2010 – California



Lamp Sales

Percent of MSB Lamps Sold by Store Type and Year, 2008-2010 – United States



Lamp Sales

Percent of MSB Lamps Sold by Lamp Type, Store Type and Year, 2008-2010 – California

% of Medium Screw-Base (MSB) Lamps	Large Grocery			Drug			Hardware		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
ADVANCED									
High-wattage CFLs (>30 Watts)									
High-wattage spiral	0.00%	0.00%	0.00%	0.01%	0.03%	0.02%	0.05%	0.08%	0.08%
High-wattage A-lamp	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
High-wattage tube	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%	0.03%
High-wattage reflector/flood	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Specialty CFLs: dimmable									
Dimmable spiral	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.23%	0.12%	0.09%
Dimmable reflector/flood	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.19%	0.21%	0.20%
Specialty CFLs: 3-way									
3-way spiral	0.09%	0.08%	0.06%	0.10%	0.19%	0.19%	0.08%	0.04%	0.03%
Other advanced MSB CFLs (≤30 Watts)									
Reflector/flood	0.30%	0.32%	0.31%	0.21%	0.41%	0.55%	1.04%	1.23%	1.10%
A-lamp	0.07%	0.10%	0.13%	0.03%	0.07%	0.08%	0.25%	0.40%	0.40%
Globe	0.08%	0.04%	0.04%	2.06%	0.65%	0.13%	0.15%	0.19%	0.21%
Candelabra (MSB)	0.08%	0.09%	0.06%	0.01%	0.04%	0.10%	0.02%	0.02%	0.02%
LEDs									
LEDs	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.04%	0.23%	0.24%
Small-Base (Candelabra-Base) CFLs									
Small-Base (Candelabra-Base) CFLs	0.01%	0.02%	0.05%	0.01%	0.02%	0.05%	0.20%	0.13%	0.10%
GU-24 Base CFLs									
GU-24 Base CFLs	0.00%	0.05%	0.11%	0.00%	0.05%	0.17%	0.02%	0.07%	0.12%
Other Base CFLs									
Other Base CFLs	0.06%	0.04%	0.02%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%
Advanced	0.6%	0.8%	0.8%	2.8%	1.7%	1.5%	2.8%	3.3%	3.2%
NON-ADVANCED									
Halogen	0.7%	0.8%	0.8%	1.4%	1.6%	1.3%	10.1%	10.9%	11.0%
Basic CFLs (≤30 Watts)	32.6%	24.5%	19.7%	26.9%	21.1%	14.5%	10.0%	9.5%	9.8%
Incandescents (All MSB)	66.1%	73.9%	78.6%	68.8%	75.6%	82.7%	77.1%	76.5%	76.0%

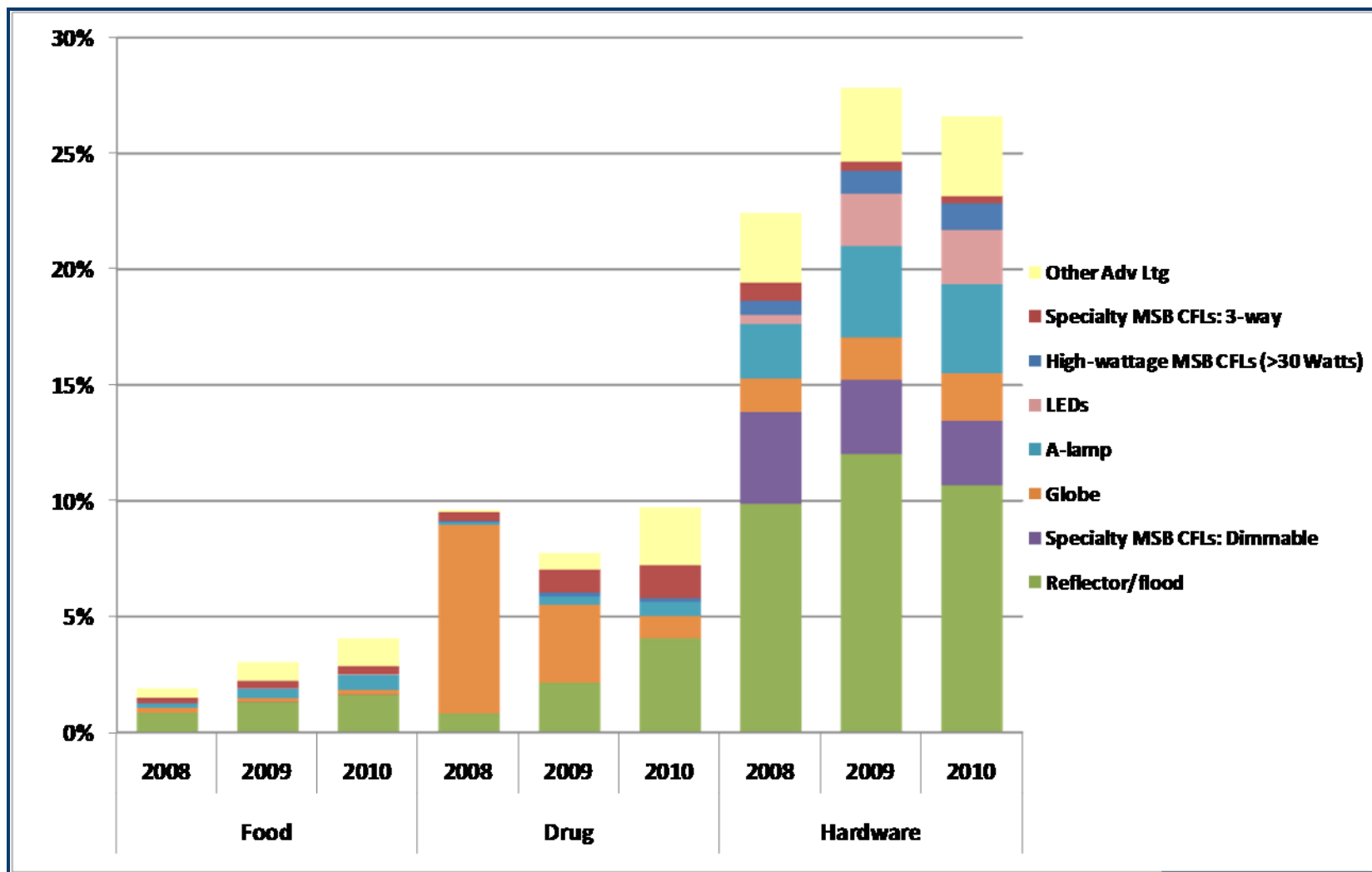
Lamp Sales

Percent of MSB Lamps Sold by Lamp Type, Store Type and Year – United States

% of Medium Screw-Base (MSB) Lamps	Large Grocery			Drug			Hardware		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
ADVANCED									
High-wattage CFLs (>30 Watts)									
High-wattage spiral	0.02%	0.02%	0.02%	0.00%	0.01%	0.01%	0.08%	0.08%	0.09%
High-wattage A-lamp	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%
High-wattage tube	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.03%
High-wattage reflector/flood	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Specialty CFLs: dimmable									
Dimmable spiral	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.03%	0.03%
Dimmable reflector/flood	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.18%	0.18%	0.18%
Specialty CFLs: 3-way									
3-way spiral	0.12%	0.10%	0.09%	0.08%	0.20%	0.22%	0.10%	0.08%	0.07%
Other advanced MSB CFLs (≤30 Watts)									
Reflector/flood	0.27%	0.40%	0.42%	0.23%	0.63%	0.60%	1.14%	1.30%	1.24%
A-lamp	0.07%	0.10%	0.08%	0.04%	0.18%	0.25%	0.21%	0.28%	0.33%
Globe	0.04%	0.06%	0.06%	0.24%	0.20%	0.21%	0.21%	0.24%	0.28%
Candelabra (MSB)	0.26%	0.21%	0.19%	0.01%	0.04%	0.15%	0.02%	0.02%	0.02%
LEDs	0.00%	0.01%	0.02%	0.00%	0.00%	0.00%	0.02%	0.12%	0.12%
Small-Base (Candelabra-Base) CFLs	0.01%	0.03%	0.07%	0.00%	0.01%	0.04%	0.03%	0.03%	0.06%
GU-24 Base CFLs	0.00%	0.02%	0.05%	0.00%	0.00%	0.00%	0.00%	0.01%	0.03%
Other Base CFLs	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.02%	0.01%	0.01%
Advanced	0.9%	1.1%	1.2%	0.7%	1.4%	1.7%	2.3%	2.7%	2.9%
NON-ADVANCED									
Halogen	1.0%	1.0%	1.0%	1.1%	0.9%	0.7%	6.7%	7.7%	8.5%
Basic CFLs (≤30 Watts)	10.3%	9.7%	8.3%	13.7%	13.6%	14.1%	16.7%	15.4%	15.2%
Incandescents (All MSB)	87.8%	88.2%	89.5%	84.5%	84.1%	83.5%	74.3%	74.2%	73.5%

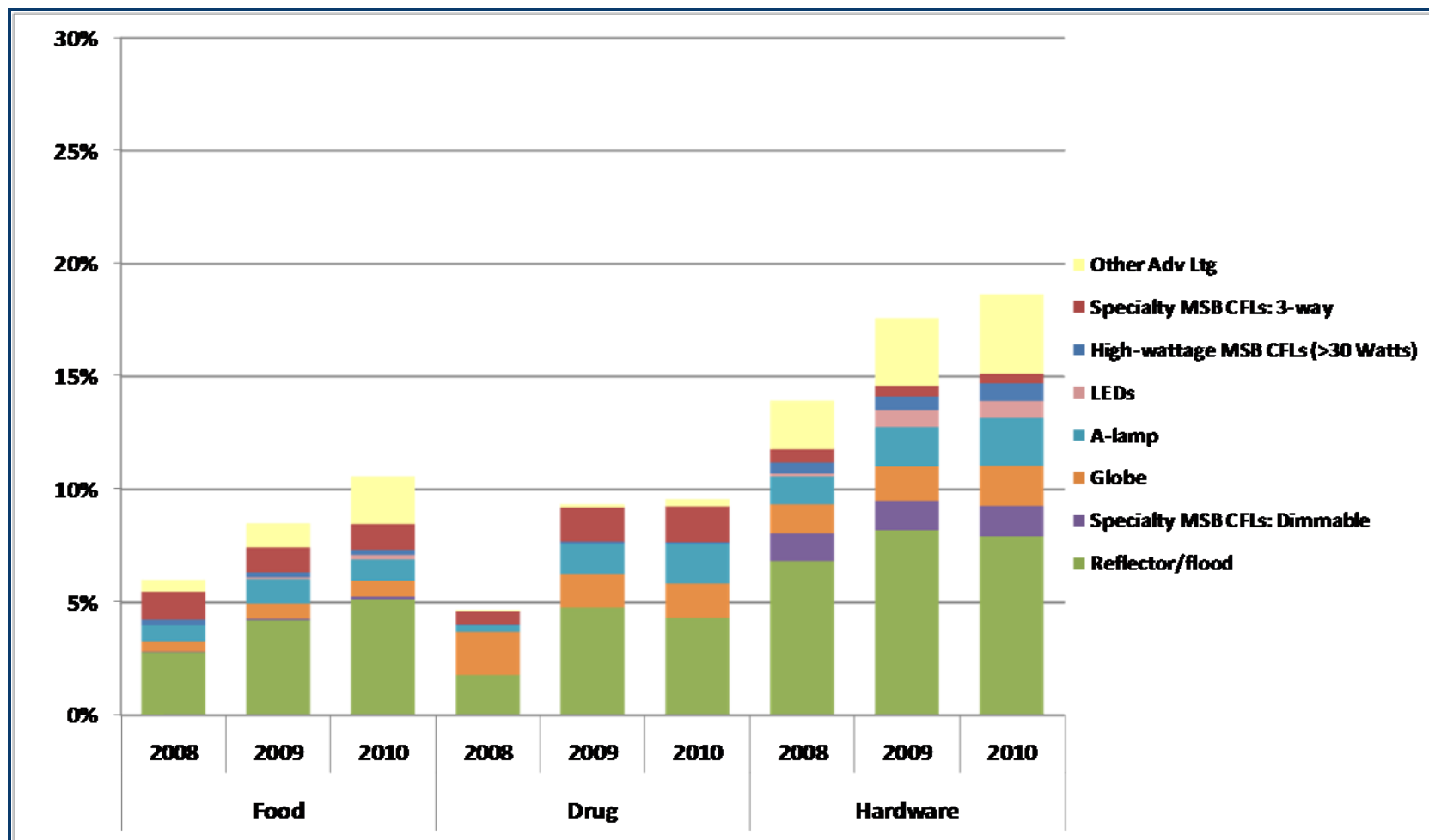
Lamp Sales

Percent of CFLs Sold by Lamp Type, Store Type, and Year – California



Lamp Sales

Percent of CFLs Sold by Lamp Type, Store Type, and Year – United States



Lamp Sales

Percent of CFLs Sold by Lamp Type, Store Type, and Year – California

% of All CFLs Sold	Large Grocery			Drug			Hardware		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
ADVANCED									
High-wattage CFLs (>30 Watts)	0.01%	0.02%	0.01%	0.05%	0.18%	0.16%	0.62%	0.98%	1.16%
High-wattage spiral	0.01%	0.01%	0.01%	0.05%	0.18%	0.16%	0.51%	0.76%	0.80%
High-wattage A-lamp	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.08%
High-wattage tube	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	0.20%	0.28%
High-wattage reflector/flood	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Specialty CFLs: dimmable	0.00%	0.01%	0.02%	0.00%	0.00%	0.00%	3.97%	3.20%	2.79%
Dimmable spiral	0.00%	0.01%	0.02%	0.00%	0.00%	0.00%	2.18%	1.14%	0.90%
Dimmable reflector/flood	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.79%	2.06%	1.89%
Specialty CFLs: 3-way	0.24%	0.31%	0.33%	0.40%	0.98%	1.42%	0.78%	0.39%	0.31%
3-way spiral	0.24%	0.31%	0.33%	0.40%	0.98%	1.42%	0.78%	0.39%	0.31%
Other advanced MSB CFLs (≤30 Watts)	1.46%	2.21%	2.79%	9.10%	6.06%	6.41%	13.83%	18.02%	16.71%
Reflector/flood	0.84%	1.31%	1.61%	0.82%	2.14%	4.07%	9.87%	12.03%	10.67%
A-lamp	0.19%	0.39%	0.64%	0.11%	0.35%	0.61%	2.35%	3.96%	3.85%
Globe	0.21%	0.17%	0.21%	8.14%	3.37%	0.96%	1.44%	1.82%	2.05%
Candelabra (MSB)	0.22%	0.35%	0.33%	0.03%	0.19%	0.77%	0.16%	0.22%	0.15%
LEDs	0.00%	0.03%	0.04%	0.00%	0.00%	0.00%	0.39%	2.26%	2.33%
Small-Base (Candelabra-Base) CFLs	0.02%	0.09%	0.23%	0.03%	0.08%	0.33%	1.88%	1.31%	0.96%
GU-24 Base CFLs	0.00%	0.21%	0.54%	0.00%	0.26%	1.23%	0.23%	0.66%	1.16%
Other Base CFLs	0.16%	0.15%	0.10%	0.00%	0.00%	0.00%	0.13%	0.03%	0.03%
Total Advanced	1.89%	3.02%	4.06%	9.57%	7.56%	9.55%	21.83%	26.86%	25.45%

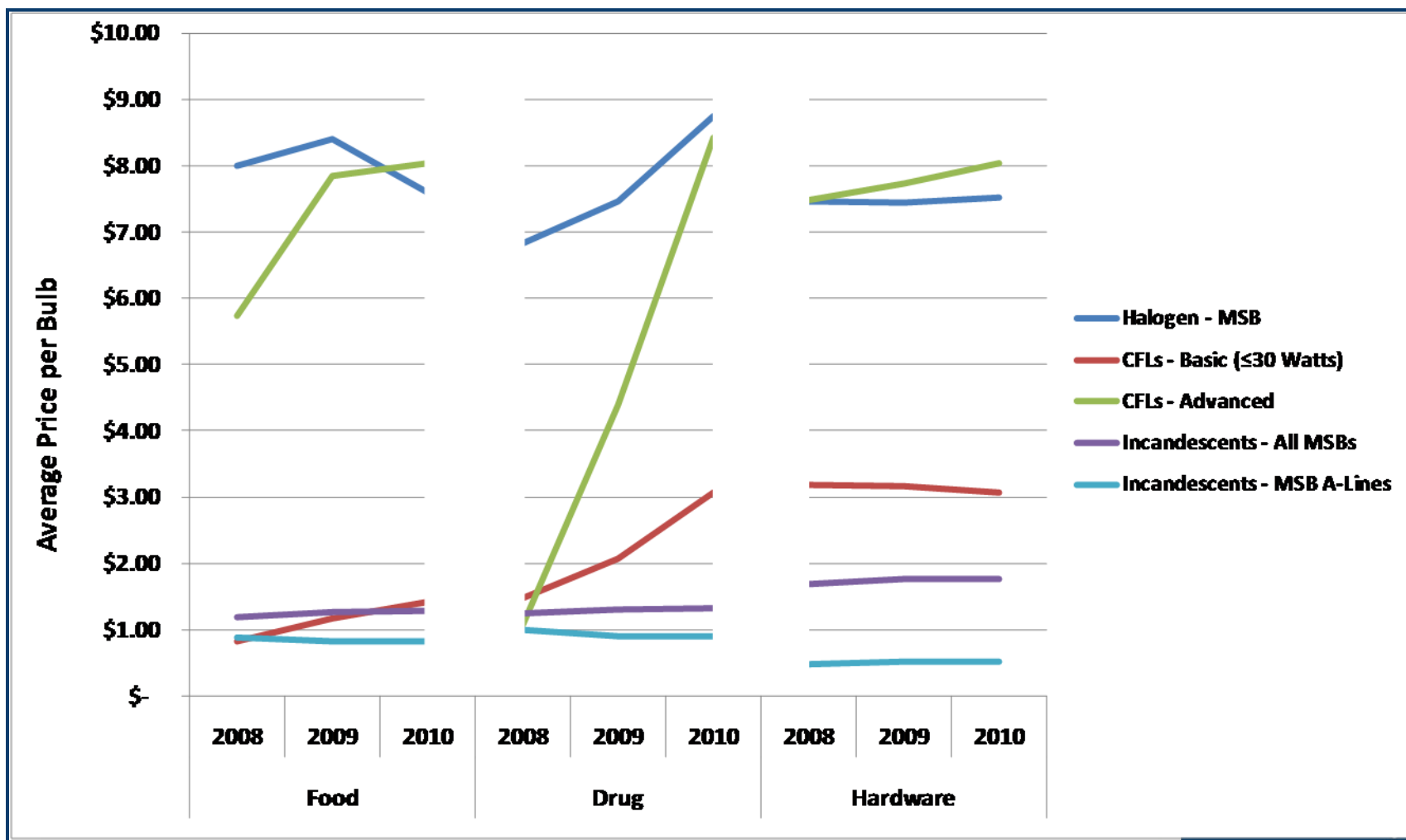
Lamp Sales

Percent of CFLs Sold by Lamp Type, Store Type, and Year – United States

% of All CFLs Sold	Large Grocery			Drug			Hardware		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
ADVANCED									
High-wattage CFLs (>30 Watts)	0.25%	0.23%	0.23%	0.02%	0.09%	0.06%	0.49%	0.59%	0.79%
High-wattage spiral	0.25%	0.22%	0.22%	0.02%	0.09%	0.06%	0.46%	0.49%	0.59%
High-wattage A-lamp	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.03%
High-wattage tube	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.08%	0.16%
High-wattage reflector/flood	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Specialty CFLs: dimmable	0.03%	0.07%	0.11%	0.00%	0.00%	0.00%	1.23%	1.31%	1.35%
Dimmable spiral	0.03%	0.03%	0.04%	0.00%	0.00%	0.00%	0.17%	0.17%	0.19%
Dimmable reflector/flood	0.00%	0.04%	0.08%	0.00%	0.00%	0.00%	1.06%	1.14%	1.16%
Specialty CFLs: 3-way	1.24%	1.11%	1.16%	0.62%	1.51%	1.58%	0.59%	0.49%	0.43%
3-way spiral	1.24%	1.11%	1.16%	0.62%	1.51%	1.58%	0.59%	0.49%	0.43%
Other advanced MSB CFLs (≤30 Watts)	6.60%	8.23%	9.11%	4.04%	7.92%	8.66%	9.47%	11.61%	11.97%
Reflector/flood	2.79%	4.21%	5.15%	1.77%	4.77%	4.31%	6.83%	8.19%	7.93%
A-lamp	0.70%	1.08%	0.94%	0.29%	1.34%	1.76%	1.23%	1.75%	2.13%
Globe	0.45%	0.68%	0.70%	1.91%	1.49%	1.53%	1.28%	1.52%	1.77%
Candelabra (MSB)	2.65%	2.27%	2.33%	0.06%	0.32%	1.05%	0.12%	0.15%	0.15%
LEDs	0.00%	0.07%	0.20%	0.00%	0.00%	0.00%	0.13%	0.76%	0.74%
Small-Base (Candelabra-Base) CFLs	0.08%	0.33%	0.83%	0.01%	0.04%	0.25%	0.17%	0.19%	0.37%
GU-24 Base CFLs	0.00%	0.24%	0.58%	0.00%	0.00%	0.00%	0.03%	0.08%	0.21%
Other Base CFLs	0.17%	0.14%	0.16%	0.00%	0.01%	0.00%	0.11%	0.07%	0.06%
Total Advanced	8.37%	10.41%	12.38%	4.70%	9.57%	10.55%	12.21%	15.09%	15.92%

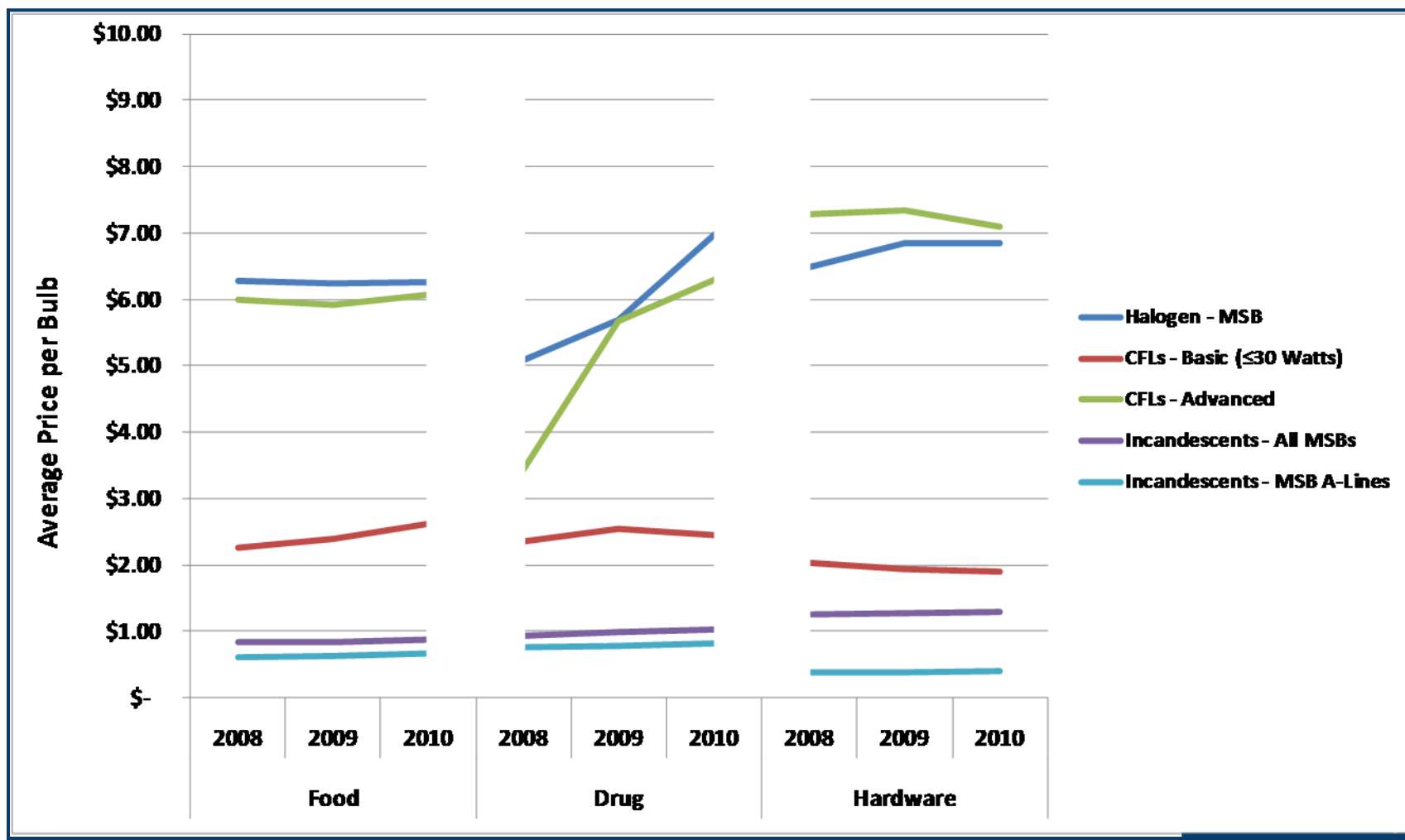
Average Lamp Prices

Average Sale Prices per Lamp Sold by Store Type and Year, 2008-2010 – California



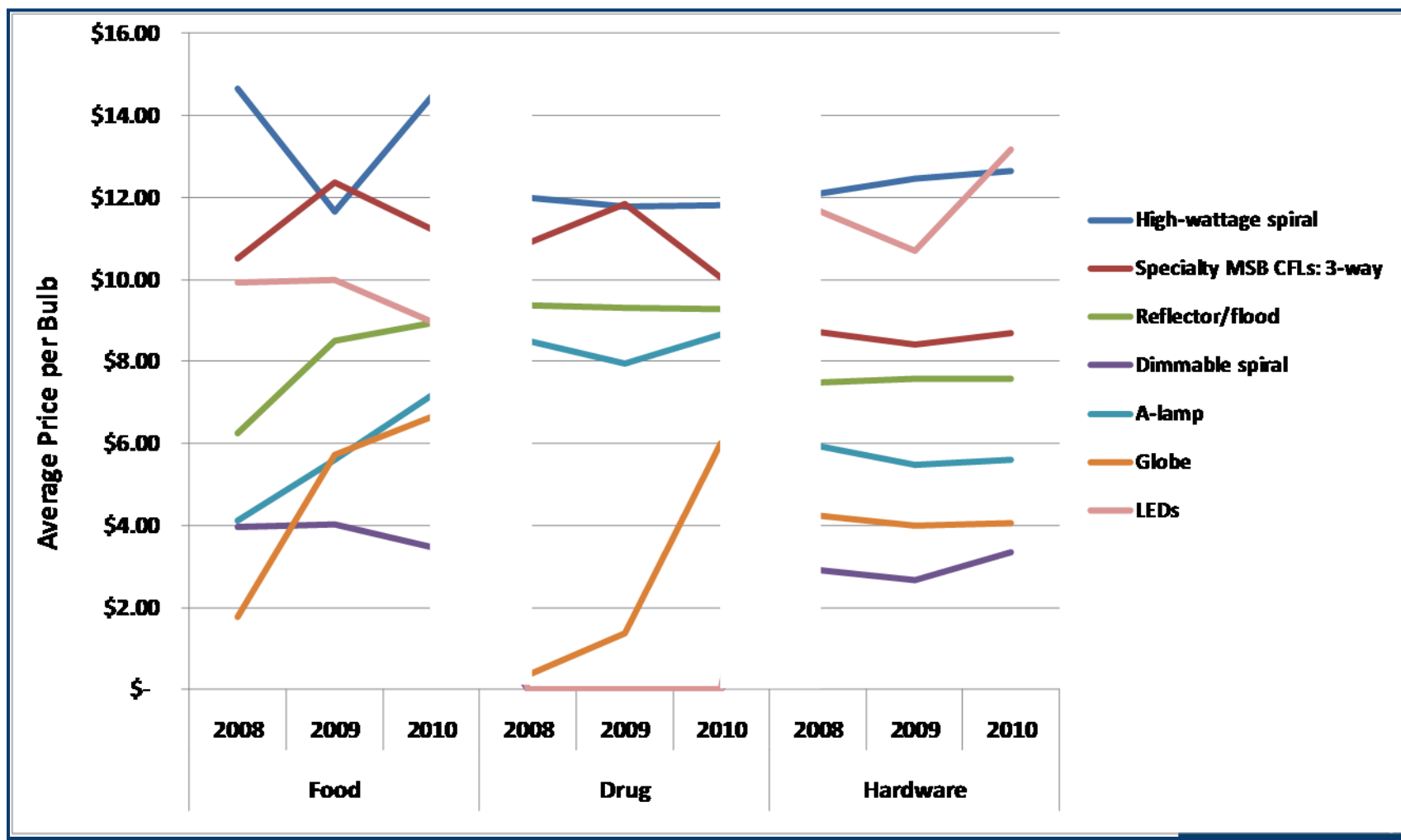
Average Lamp Prices

Average Sale Prices per Lamps Sold by Store Type and Year, 2008-2010 – United States



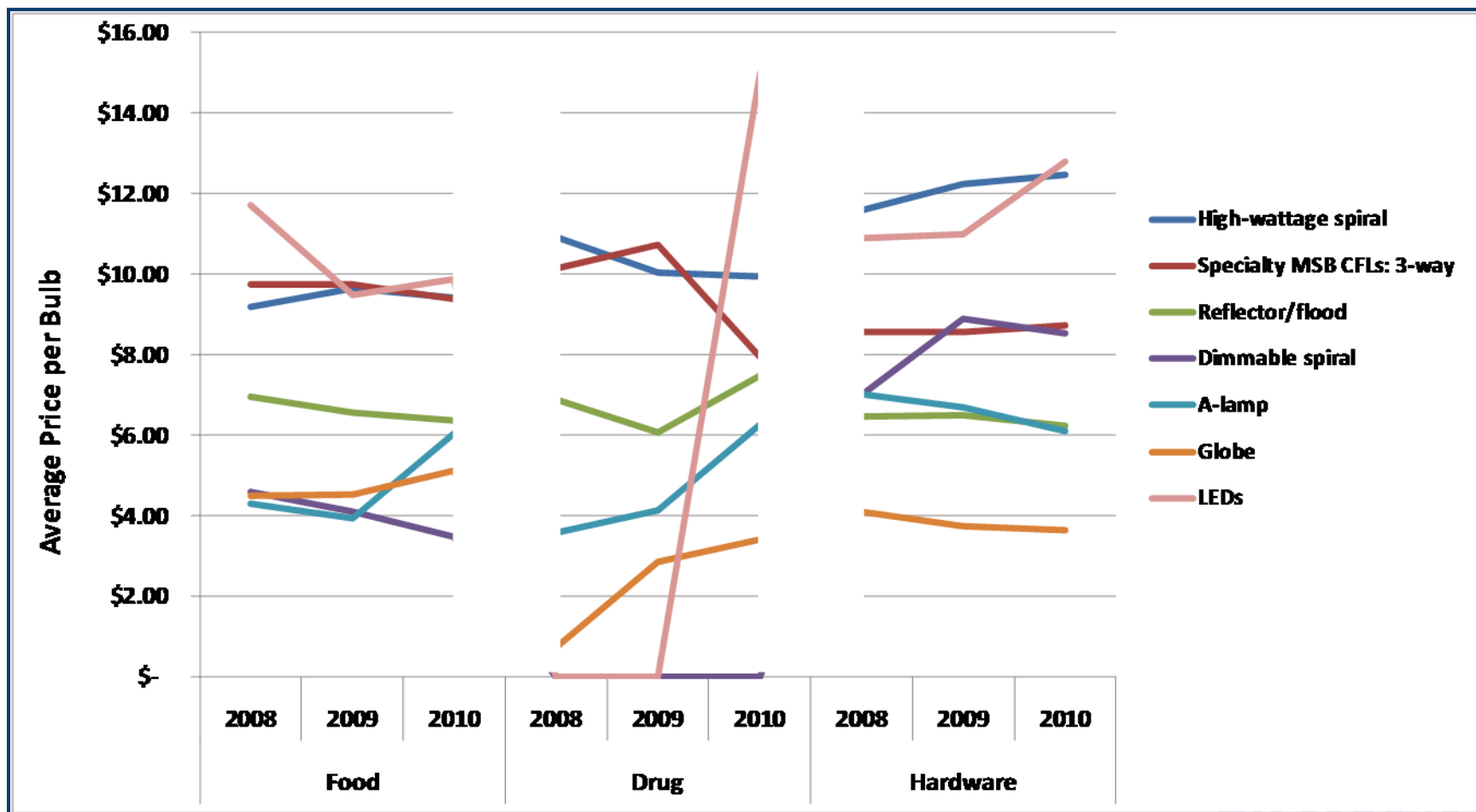
Average Lamp Prices

Average Sale Prices per Lamps Sold by Store Type and Year, 2008-2010 – California



Average Lamp Prices

Average Sale Prices per Lamps Sold by Store Type and Year, 2008-2010 – United States



Average Lamp Prices

Average Sale Prices per Lamps Sold by Store Type and Year, 2008-2010 – California

Average Price per Lamp	Large Grocery			Drug			Hardware		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
ADVANCED									
High-wattage CFLs (>30 Watts)									
High-wattage spiral	\$14.66	\$11.65	\$14.48	\$11.99	\$11.78	\$11.81	\$12.10	\$12.46	\$12.64
High-wattage A-lamp								\$9.96	\$9.91
High-wattage tube	\$19.81	\$19.72	\$14.13				\$17.83	\$17.00	\$16.82
High-wattage reflector/flood									
Specialty CFLs: dimmable									
Dimmable spiral	\$3.98	\$4.01	\$3.46				\$2.91	\$2.68	\$3.36
Dimmable reflector/flood							\$15.34	\$14.34	\$13.86
Specialty CFLs: 3-way									
3-way spiral	\$10.50	\$12.37	\$11.21	\$10.89	\$11.85	\$10.06	\$8.72	\$8.41	\$8.71
Other advanced MSB CFLs (≤30 Watts)									
Reflector/flood	\$6.25	\$8.51	\$8.95	\$9.38	\$9.32	\$9.28	\$7.48	\$7.58	\$7.56
A-lamp	\$4.11	\$5.61	\$7.18	\$8.49	\$7.93	\$8.66	\$5.93	\$5.47	\$5.61
Globe	\$1.77	\$5.73	\$6.66	\$0.36	\$1.36	\$5.99	\$4.24	\$3.98	\$4.04
Candelabra (MSB)	\$6.32	\$6.68	\$7.11	\$6.09	\$7.34	\$5.40	\$5.35	\$5.20	\$5.21
LEDs	\$9.94	\$9.98	\$8.97				\$11.68	\$10.69	\$13.17
Small-Base (Candelabra-Base) CFLs	\$9.78	\$6.32	\$5.85	\$7.00	\$7.14	\$6.85	\$3.46	\$3.03	\$3.27
GU-24 Base CFLs		\$6.66	\$6.94		\$6.33	\$8.07	\$7.30	\$7.40	\$6.93
Other Base CFLs	\$5.19	\$5.45	\$5.02				\$2.74	\$5.75	\$4.37
Advanced	\$5.73	\$7.84	\$8.03	\$1.08	\$4.40	\$8.42	\$7.49	\$7.72	\$8.04
NON-ADVANCED									
Halogen	\$7.99	\$8.41	\$7.60	\$6.82	\$7.46	\$8.75	\$7.45	\$7.43	\$7.51
Basic CFLs (≤30 Watts)	\$0.83	\$1.16	\$1.42	\$1.48	\$2.06	\$3.07	\$3.19	\$3.16	\$3.06
Incandescents (All MSB)	\$1.18	\$1.27	\$1.29	\$1.25	\$1.31	\$1.33	\$1.69	\$1.77	\$1.77
Incandescents (MSB A-Line)	\$0.88	\$0.83	\$0.83	\$0.99	\$0.91	\$0.90	\$0.47	\$0.53	\$0.52

Average Lamp Prices

Average Sale Prices per Lamps Sold by Store Type and Year, 2008-2010 – United States

Average Price per Lamp	Large Grocery			Drug			Hardware		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
ADVANCED									
High-wattage CFLs (>30 Watts)									
High-wattage spiral	\$9.19	\$9.65	\$9.40	\$10.94	\$10.03	\$9.94	\$11.57	\$12.25	\$12.46
High-wattage A-lamp		\$8.94	\$8.81				\$13.04	\$9.95	\$10.72
High-wattage tube	\$17.93	\$17.71	\$14.41				\$15.92	\$14.30	\$13.79
High-wattage reflector/flood	\$18.07	\$17.12	\$16.48						
Specialty CFLs: dimmable									
Dimmable spiral	\$4.61	\$4.11	\$3.47				\$6.98	\$8.91	\$8.54
Dimmable reflector/flood	\$15.07	\$14.38	\$13.58			\$19.14	\$14.17	\$13.92	\$13.00
Specialty CFLs: 3-way									
3-way spiral	\$9.75	\$9.75	\$9.38	\$10.13	\$10.75	\$7.93	\$8.56	\$8.57	\$8.72
Other advanced MSB CFLs (≤30 Watts)									
Reflector/flood	\$6.95	\$6.56	\$6.36	\$6.88	\$6.08	\$7.48	\$6.46	\$6.50	\$6.25
A-lamp	\$4.29	\$3.93	\$6.04	\$3.56	\$4.13	\$6.27	\$7.03	\$6.71	\$6.11
Globe	\$4.49	\$4.52	\$5.12	\$0.73	\$2.86	\$3.42	\$4.10	\$3.74	\$3.63
Candelabra (MSB)	\$3.73	\$3.77	\$3.62	\$5.43	\$5.69	\$3.89	\$5.36	\$5.24	\$5.28
LEDs	\$11.73	\$9.49	\$9.88			\$15.00	\$10.88	\$10.98	\$12.79
Small-Base (Candelabra-Base) CFLs	\$5.57	\$4.62	\$4.67	\$6.85	\$6.77	\$6.39	\$5.22	\$4.49	\$3.72
GU-24 Base CFLs		\$6.21	\$6.41				\$7.48	\$7.59	\$6.97
Other Base CFLs	\$5.63	\$6.09	\$5.60	\$6.00	\$5.76	\$6.48	\$6.97	\$7.62	\$6.94
Advanced	\$6.00	\$5.92	\$6.06	\$3.43	\$5.67	\$6.30	\$7.29	\$7.33	\$7.09
NON-ADVANCED									
Halogen	\$6.28	\$6.25	\$6.25	\$5.09	\$5.69	\$6.98	\$6.49	\$6.85	\$6.84
Basic CFLs (≤30 Watts)	\$2.26	\$2.39	\$2.62	\$2.35	\$2.55	\$2.44	\$2.04	\$1.93	\$1.90
Incandescents (All MSB)	\$0.84	\$0.83	\$0.87	\$0.92	\$0.99	\$1.03	\$1.26	\$1.27	\$1.29
Incandescents (MSB A-Line)	\$0.62	\$0.63	\$0.66	\$0.76	\$0.78	\$0.82	\$0.39	\$0.38	\$0.39

Conclusions

CA/Non-CA Availability

- With few exceptions, percentage of CA and non-CA stores carrying various MSB lamp types were similar in 2008/2009
 - Incandescents and tube CFLs in more CA stores than non-CA stores
 - Dimmable reflector/flood CFLs in more non-CA stores than CA stores
- More noteworthy differences in CA/non-CA advanced lamp availability within specific store types
 - High-wattage tube CFLs were found in CA mass merchandise, hardware, membership stores but none in non-CA
 - Three-way spiral CFLs were found in more CA membership stores than non-CA
 - Globes and three-way spiral CFLs were found in more non-CA grocery stores than CA grocery stores

CA/Non-CA Inventory

- Advanced lamps and basic CFLs accounted for either a greater or similar proportion of total lamps in CA stores versus non-CA stores in 2009
 - Incandescents accounted for less than half the MSB lamp inventory in CA mass merch stores than in non-CA
 - Basic CFLs accounted for a much larger proportion of total lamps found in CA hardware and discount than in non-CA
 - CA grocery stores stocked less than half the proportion of incandescents as non-CA stores; fairly high proportion of advanced lamps in CA grocery
 - Advanced lamps comprised 4x the proportion of total lamps CA mass merch versus non-CA mass merch
 - CA/non-CA Large home improvement stores and mass merch stores had similar inventory proportions

Diversity (CA)

- Across all store types in CA, MSB reflectors had the greatest diversity in 2009 (85 models)
 - Followed by a-lamps (57 models) and globes (37 models)
- Across all advanced lamp types, large home improvement stores had the greatest overall diversity (186 models)
- Discount stores had the lowest diversity of advanced lamps (4 models)
- There were 17 unique LED models found across all store types
 - Hardware stores had the greatest diversity across all store types (11 models)

CA Residential Installation/Storage

- California households were dominated by incandescents in 2009
 - 56% of installed and 60% of stored lamps
- Basic CFLs accounted for larger fraction of stored than installed lamps
 - 16% of installed and 27% of stored lamps
- Advanced lamps comprised a small proportion of lamps installed/stored in CA households in 2009
 - Only 6% of installed, 5% of stored
 - Mostly reflector, globe, and tube CFLs $\leq 30W$

CA Non-Residential Installation/Storage

- In 2009, advanced lamps represented approximately 42% of all installed CFL lamps and about 25% of all CFL lamps in storage.
- Basic CFLs were in storage at a higher rate than advanced CFLs.
- Reflectors and candelabra-base CFLs were the most commonly installed advanced lamps.
- Advanced lighting was installed more frequently than basic CFLs in fixtures controlled by dimmers, motion sensors, timeclocks, and twist timers.
 - However, 40.8% of the bulbs installed in fixtures controlled by dimmers were found to be basic CFLs (which should not be used in dimmable sockets).
- Offices in small retail buildings had the highest percentage of advanced CFLs (81.3% of CFLs found).
- Restrooms in health/medical centers had the lowest percentage of advanced CFLs (3.7% of CFLs found).

CA/U.S. Sales

- CFL Shares Decreasing in CA 2008 – 2010
 - Sales of CFLs as a percentage of MSB sales in CA's large food and drug stores have decreased since 2008.
 - CFL shares in CA hardware stores and in each of the three channels in the US have remained fairly steady over the same time period.
- Shares of ALP lamps increased slightly in large food stores and hardware stores in CA.
 - Increasing from 0.6% to 0.8% in large grocery stores and from 2.8% to 3.2% in hardware stores.
 - Shares in drug stores decreased from 2.8% to 1.5%.
- CFL reflectors accounted for the largest share of ALP lamps sold in both CA and the US.
 - Ranging from approximately 30% to 50% for most regions, retail channels and years.

CA/U.S. Prices

- The average price of an incandescent sold through large food, drug and hardware stores in California was higher than in the United States in every year and in each of the three retail channels.
- The average price of a basic CFL sold in large food stores was lower in CA than in the US, however, the opposite is true of basic CFLs sold through hardware stores.
- The average prices of a ALP lamps sold between 2008 and 2010 in hardware stores were lower in the US than in CA.
 - A couple exceptions to this were for dimmable CFLs and CFLs with base types other than MSB.



Thank you for your attention.

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