The Residential Lighting Market: Past, Present, and Future

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Director of Market Research, D&R International

Presented at 2012 ENERGY STAR Partner Meeting,
October 23, 2012
Is this slide needed? - JH
Product Snapshot: LED Replacement Lamps

D&R and Lighting
Lighting Market Profiles

Residential Lighting Market Profile 2012

Commercial Lighting Market Profile 2013
New Suite of Market Profiles

Residential Water Heater Market Profile 2013

Residential Refrigerator and Freezer Market Profile 2013

Residential HVAC Market Profile 2013

Clothes Washer and Dryer Market Profile 2013
All Data is Screened

- Point of sale and shipment data
- Sensor and metering data
- Professional audit data
- Controlled peer review studies
- Large, unbiased samples

- No unvalidated self-report data
- No willingness-to-pay data
- No anecdotal data
Why We Screen Data

What People Say vs What is Actually True

# of Standard CFLs Observed in On-site Audit

# of Standard CFLs Reported in Phone Survey

Note: Excludes outliers and respondents not familiar with CFLs.
Why We Screen Data

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Superior Results

- Expert Insights
- Careful Analysis
- Good Data

- Accurate Calculation of Energy Savings
- Superior Program Designs
RESIDENTIAL LIGHTING MARKET PROFILE 2012
Residential Lighting Socket Saturation.

![Bar chart showing lighting socket saturation from 2001 to 2010. In 2001, 86% were inefficient and 15% efficient. In 2010, 67% were efficient and 33% efficient.]

**Note:** Totals may not sum to 100% due to rounding.

**Source:** Adapted from data in D&R International’s *Residential Lighting Market Profile-2012.*

**Savings:** 200 billion kWh and $20 billion by the end of 2012.
Big savings remain

Regional CFL Saturation

- Individual States or Regions: 13%, 17%, 20%, 23%, 28%
- Nationwide (DOE): 23%
- Regional Average: 20%

Source: D&R’s Residential Lighting Market Profile-2012, Figure 5
Big savings remain

Regional CFL Saturation

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Remaining Potential

Sockets filled with tubes and other specialized lighting

Source: D&R's Residential Lighting Market Profile-2012, Figure 5
The bad news
The bad news

Efficient Socket Saturation

CFL Saturation (%)

Flat Shipments
Historic Saturation
The bad news
U.S. Shipments of CFLs for Installation in Homes

Note: Totals may not sum to 100% due to rounding.

Source: Adapted from data in D&R International's Residential Lighting Market Profile-2012, Figure 3.
Why is this a problem?

2007

Screw-base lamps

INFLOW

2

13

EFFICIENT
INEFFICIENT

OUTFLOW

0

15

EFFICIENT
INEFFICIENT

8%
Why is this a problem?
Why is this a problem?

Screw-base lamps

INFLOW

EFFICIENT

INEFFICIENT

OUTFLOW

EFFICIENT

INEFFICIENT

30%
Why is this a problem?
So How Many Lamps Do We Need to Sustain Growth?

### Annual Efficient Lamp Sales per Home Needed to Increase Saturation

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<th>Desired 2020 Socket Saturation</th>
<th>2011 Socket Saturation</th>
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<tr>
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<td>0%</td>
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<td>30%</td>
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<tr>
<td>35%</td>
<td></td>
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<td>40%</td>
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<tr>
<td>45%</td>
<td></td>
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<tr>
<td>50%</td>
<td></td>
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<td>55%</td>
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*Source: D&R International’s Residential Lighting Market Profile-2012, Table 10.*
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**Source:** D&R International’s *Residential Lighting Market Profile-2012*, Table 10.
We need BIG increases in unit sales

Annual Shipments of CFLs and LED Lamps for Final Sale in the United States

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* Assumes the volume of efficient lamps sold for installation outside the residential sector remains constant from 2011 to 2020.

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**Source:** D&R International

130% INCREASE
U.S. Shipments of CFLs

Types of strategies
Types of strategies

The Power of Suggestion over Quality Purchased

Discount Level

- Full Price
- 20% Discount
- 40% Discount

Purchase Quantity (units)

- No Anchor ("Buy some for your freezer")
- Anchor ("Buy 18 for your freezer")

Note: Signage featuring the indicated message was placed at point of purchase.
Source: D&R International’s Residential Lighting Market Profile-2012, Figure 37
The Power of Suggestion over Quality Purchased

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**Source:** D&R International’s *Residential Lighting Market Profile-2012, Figure 37*
What role will LEDs play?

### Table 8. Projected LED Replacement Lamp Prices, by Light Output ($)

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<td>11.50</td>
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<td>450</td>
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**Notes:** $/kilolumen values were estimated based on projections from DOE’s Multi-Year Program Plan. Prices for each year are considered to be the prices in January of that year. Prices for each light output category were calculated based on the estimated $/kilolumen values.

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- We need to more than double efficient lamp sales
- Maintain or surpass those volumes through 2020
- It is possible to do so
- Regulators and program administrators should not restrict or disincetivize utility promotion of CFLs
If you want to know:

- How low hours of use could go
- What role LEDs will play in the market in the next few years
- How well efficient lighting products are performing
- Where the remaining savings potential is concentrated
- Why dimming is probably not as big a problem as people think
- Why you don’t need to target your lighting programs to specific segments
Length
80 Pages

Tables and Charts
60

Sources
70
To learn more:

www.betterdatabetterdesign.com

or contact:

Andre Javier-Barry
(301) 588-9387x1077
ajavierbarry@drintl.com