Residential Lighting: Towards a Portfolio Approach
Pacific Gas and Electric Company

Energy services to 15 MM people:

• 5.1 MM Electric customer accounts
• 4.3 MM Natural Gas accounts

70,000 square miles with diverse topography and climate zones

20,000 employees

A regulated investor-owned utility

Ranked the greenest utility in the United States in 2009 and 2010
2010 Savings Drivers: Electric

- Lighting: 45%
- Codes & Standards: 18%
- Process: 10%
- Refrigeration: 9%
- HVAC: 8%
- Consumer Electronics: 4%
- Low Income: 2%
- Other: 2%

Gigawatt Hour Savings: Largest End Use Drivers
California Investor Owned Utility Residential Lighting Program Overview

Upstream Lighting Program

Basic Lighting
- <30 Watt Bare spiral

Advanced Lighting
- Dimmable or >30 Watts
- LED
- Covered
- Reflector

<table>
<thead>
<tr>
<th></th>
<th>PG&amp;E</th>
<th>SCE</th>
<th>SDG&amp;E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Lighting</td>
<td>$30MM</td>
<td>$32MM</td>
<td>$16MM</td>
</tr>
<tr>
<td>Advanced Lighting</td>
<td>$33MM</td>
<td>$45MM</td>
<td>$11MM</td>
</tr>
</tbody>
</table>
Current Program Snapshot

- Upstream Lighting Program is primarily a CFL program
  - Basic CFLs directed to hard-to-reach customers
  - Advanced products in most significant lighting retail channels
Lighting Portfolio Mix: 2010 to Present

Incentives

Energy Savings (kW)

Basic CFL

76%

Reflector Dimmable Other

Covered

24%

11%

1%

Dimmable Fixture Other

Covered

13%

8%

1%

1%

Basic CFL

61%
Transition Challenges

- Advanced lighting more expensive; not necessarily more efficacious
- EISA understanding
- Education and outreach
- Product quality
PG&E is completing a **pricing test** for LED PAR and MR lights in two mass market retailers.

- **Purpose**: To test different incentive levels to determine optimal price
- **Duration**: Three phases, each lasting four weeks
- **Incentive Levels**:

<table>
<thead>
<tr>
<th>Product</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR-16</td>
<td>$10</td>
<td>$5</td>
<td>$2</td>
</tr>
<tr>
<td>PAR30/PAR38</td>
<td>$15</td>
<td>$10</td>
<td>$5</td>
</tr>
</tbody>
</table>
For PAR 38 lamps (retail $40), the highest rebate amount ($15) generated the highest sales increase, but the middle incentive level ($10) produced similar results.

- **Sales Increases:**
  - $15: 422%
  - $10: 383%
  - $5: 177%

- **Baseline:** Month of previous sales data

- **Limitations:**
  - Insufficient Inventory
  - Missing Signage
  - Knowledgeable Sales Staff
Pricing Test-Lessons Learned

• **Signage**: Rebates are important, but signage also played a key role.
  - Impact on Sales
  - Proximity to Product
  - Clear on Rebate Process
  - Regular Maintenance

• **Optimal Pricing Level**: On a $40 retail price, the $10 rebate provided similar results as a $15 rebate, but much more than a $5 rebate

• **Engage Stakeholders**: Engage Stakeholders (i.e. Marketing, Legal, Sales) Early
Upcoming Pricing Tests

- Recessed Downlight Retrofit Kits
- LED A-Line, Globe, Candelabra
Marketing Efforts and Education

With so many different technologies in the market, there is **consumer confusion**. We feel that this is an **opportunity for utilities** to help lead the way and **educate** consumers. We are designing collateral for two main purposes: **Driving Sales** and **Consumer Education**.

- **Sales**:
  - Understand Retailer Needs
  - Help Increase Sales

- **Education**:
  - Available Lighting Options
  - Lumens vs. Watts

- **Strategy**:
  - Website
  - POP Signage
  - Sales Staff
2012 Planned LED Products

- Recessed Downlight Retrofit Kit
- PAR38, PAR30, PAR20
- MR-16
- A-Line, Globe, Candelabra (Late 2012)
Thank You!

Dave Bend
Senior Product Manager, Lighting
Pacific Gas and Electric Company
(415) 973-7150
ddbw@pge.com