Specialty CFL Shelf Survey Analysis

Prepared by Matthew Taylor for Energy Trust of Oregon
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Executive Summary

Key Findings

This report, conducted for Energy Trust of Oregon, uses data from the NEEA retail lighting shelf surveys to analyze the availability, diversity, prices, and market share of specialty CFL bulbs in Oregon. The key findings of the analysis are:

- Approximately 49% of lighting shelving in Oregon is dedicated to specialty bulbs. An estimated one quarter of this 49% is dedicated to CFL technology, indicating that CFL technology for specialty lighting is less available and less readily shelved by Oregon retailers than for non-specialty lighting applications.

- On average, Oregon Big Box stores allocate a larger percentage of specialty lighting shelf space to CFL bulbs than do Oregon Grocery/Drug/Hardware stores. Stores within metropolitan areas similarly allocate a larger share of specialty lighting to CFL technology than do stores outside of metropolitan areas.

- Both the stores outside of metropolitan areas and the Grocery/Drug/Hardware stores exhibit different CFL shelving practices between specialty and non-specialty CFLs, allocating statistically larger shares of non-specialty shelving to CFLs than for specialty shelving.

- CFL technology has an estimated 32-36% market share of specialty lighting in Oregon, slightly lower than CFL market share of non-specialty lighting. There are a number of specialty lighting applications for which there are currently no CFL alternatives, some of which will never conceivably develop CFL alternatives due to the nature of the application. While the available data does not differentiate between the applications of non-CFL specialty lighting, taking a more narrowed view of the market in which specialty CFLs are competing would increase estimated CFL market share.

- Approximately 89% of Oregon lighting retailers that carry specialty bulbs also carry at least one model of specialty CFLs.

- Since 2008, Oregon lighting retailers have increased the availability and diversity of screw-based specialty CFLs and reduced the availability of Pin-based and Circline bulbs

as well as the diversity of those offerings. Similarly, retailers have moved towards increasing the availability of the more traditional incandescent looking specialty lighting and away from tubular specialty lighting, screw-based or otherwise.

- Prices for CFL bulbs vary significantly with several differentiating characteristics. Analysis of the determinants of the price of CFL bulbs revealed a significantly positive correlation between bulb wattage and price per bulb. Significantly negative correlations between price per bulb and being sold in a Big Box store, having dimming capabilities, and the quantity of bulbs per package were identified. Preliminary regression results indicate that overall, after controlling for the above mentioned characteristics, prices of CFL bulbs in Oregon have seen a statistically significant decrease over the last two years. However, when individual bulb styles are analyzed separately the decline in bulb price over time is no longer significant, indicating that the overall decline in price is due to the changing mix of bulbs sold and not due to reductions in the cost of technology or any increasing economies of scale. While not statistically significant, the negative coefficients are still indicative of a downward trend in most specialty CFL bulb types.

Recommendations to Energy Trust and Future Shelving Studies

1. That 45-49% of lighting shelving is dedicated to specialty bulbs indicates that this is a large segment of the lighting market and a segment worth pursuing. NEEA, Energy Trust, and similar organizations in the Pacific Northwest should continue to be active in this market, promoting CFL alternatives where they exist and supporting further development of CFL and LED alternatives for applications in which they are currently none.

2. The practice of shelving specialty CFLs has been adopted least by rural Grocery/Drug/Hardware stores. Any thoughts towards expanding existing programs to increase CFL market penetration in these areas should take into consideration (1) their limited role as a channel for residential CFL sales and (2) the relatively small impact that such efforts would have on CFL share of the specialty bulb market in Oregon.

3. Energy Trust should continue to pursue coordination with their home products program management contractor on any future shelving surveys, specifically on survey

methodology, consistency in data collection, and a compatible survey sample. Such coordination will help reduce redundancy of survey efforts and ensure that the data collected expands and enriches the understanding of the residential lighting market in Oregon.

4. Energy Trust should pursue building upon their existing partnerships with participating lighting retailers in an effort to move towards more comprehensive data collection. Ideally, data on CFL sales outside of the Energy Trust program as well as incandescent bulb sales could be available to Energy Trust. Such information would enhance understanding of the CFL market in Oregon and allow for a more accurate determination of CFL market share in Energy Trust service territory. Potential benefits for partnering retailers might include store level analysis and feedback on lighting sales and analysis of the state of the residential lighting market.

5. Future NEEA surveys should include an expanded sample that includes stratification such that each state's sample is representative, allowing for comparisons between states. Such comparisons would allow for analysis of the effects that the various regional energy efficiency programs and initiatives are having on the residential lighting market, providing useful feedback to program staff and policy makers.

6. Future NEEA surveys should continue to record lumens per bulb. As residential energy efficiency lighting moves towards incorporating more LED technology this will become an increasingly important element of any future analysis of the residential lighting market.

7. In light of the observed shift from alternative based bulbs towards screw-based lamps and the coinciding shift away from tubular CFLs, NEEA should expand the other components of their research in the residential lighting market - the market actor interviews and residential consumer surveys - to include questions concerning the main drivers of these trends. This additional questioning would help clarify the source of this shift - changing consumer demand or changes in production and supply - as well as identify the root causes. These insights will prove valuable to both bulb manufacturers and energy efficiency programs as they move forward in developing new energy efficient lighting products and expand the market.