ANNUAL LIGHTING SURVEY OF NORTHWEST ELECTRICAL DISTRIBUTORS 2015

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Bonneville Power Administration
Northwest Energy Efficiency Alliance

PREPARED BY:

Navigant and Cadeo Group

REPORT HIGHLIGHTS

- LED unit sales grew by 52% from 2014 to 2015
- Linear fluorescent lamps remain the most common lamp technology, but show steady decline in unit sales
- LED growth was strongest in TLED, downlights, and fixtures
- 2015 TLED unit sales more than doubled 2014 sales
- HID unit sales continue to decline rapidly

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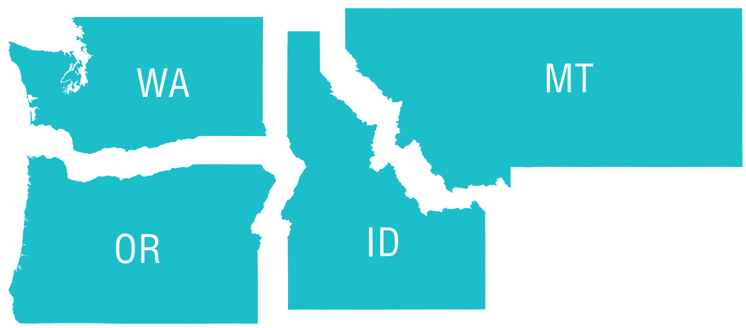
REPORT OVERVIEW

This report presents the results of the third annual BPA and NEEA Northwest Electrical Distributor Lighting Survey. The first two surveys, conducted in 2013 and 2014, analyzed lighting sales data from 2010-2014. This year's survey presents sales data for 2015, representing 29 Northwest distributors, including 14 new participants, as well as more detailed sales categories for controls and LEDs.[1] The research team estimates the total sales of these distributors represented 35 percent to 70 percent of the total Northwest non-residential distributor market, depending on the product.[2]

COMPOSITION OF PARTICIPANTS

DATA COLLECTED FROM
29 DISTRIBUTORS THIS ROUND

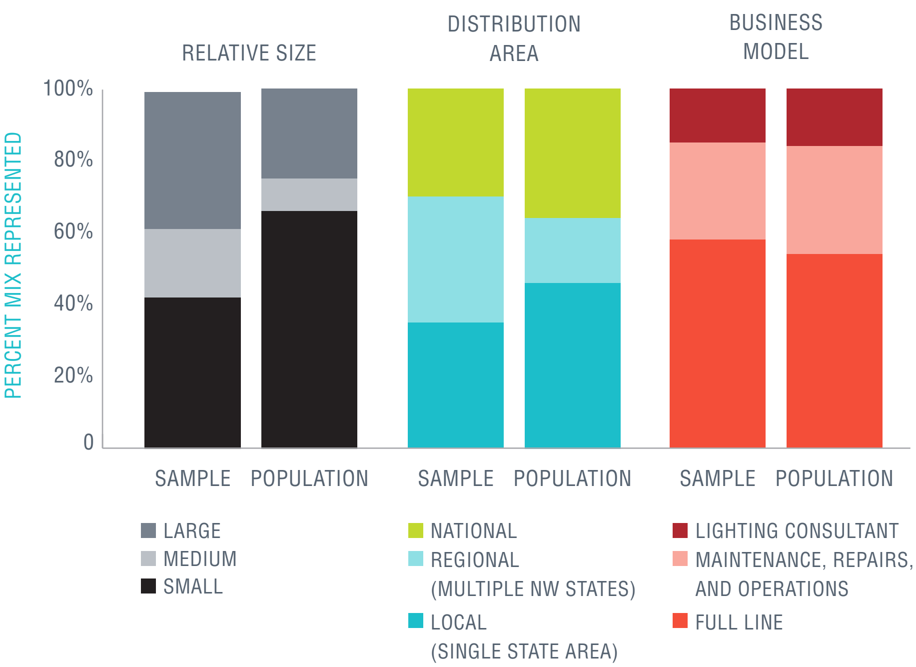
15 WEB QUESTIONNAIRE RESPONSES FROM
DISTRIBUTORS NOT PARTICIPATING IN NEEA'S
REDUCED WATTAGE PROGRAM



35-70%

ESTIMATED PERCENT OF THE TOTAL MARKET REPRESENTED BY
COLLECTED SALES DATA (VARIES BY PRODUCT)

MIX OF DISTRIBUTORS IN THE SAMPLE COMPARED TO THE POPULATION



Source: Analysis of distributor sales data

Applying lessons learned from the first two rounds of research, the team again worked with NEEA program staff, as well as BPA's Energy Efficiency Market Liaison, Evergreen Consulting Group, and lighting program managers from regional utilities. Through this coordinated effort, the team reached 29 distributors for the 2015 sales data collection, an increase from the 18 distributors included in last year's effort. The chart to the left shows the mix of participating distributors by relative size, distribution area, and business model, compared to the mix of the population of distributors in the Northwest.

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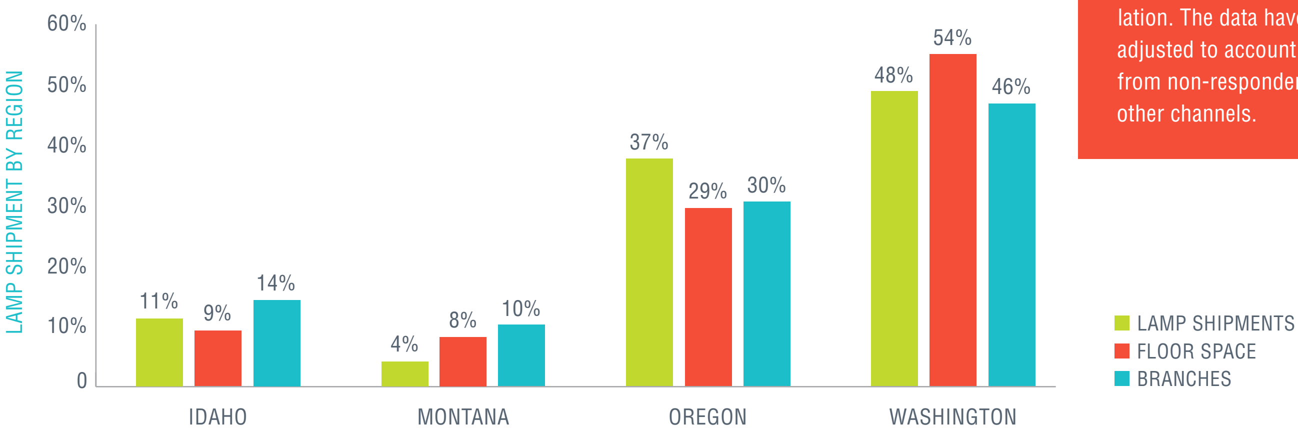
[1] A combined 18 unique distributors provided data in the previous two surveys, representing sales from 2010 through 2014. In this year's study 14 new distributors provided data, in most cases submitting sales data dating back to 2013, and 12 of last year's participants provided updated sales data through 2015. This report reflects data from a combined 34 unique distributors that have provided data in the three surveys.

[2] Total non-residential lighting sales in the Northwest were calculated by scaling national sales data estimates to the Northwest region based on commercial floor space.

This report characterizes the sales data as estimated totals and market averages. These "estimated" values are based on actual sales data from distributors, and include a limited amount of extrapolation adjustments to account for missing data. The 2015 data is the most complete, while past years required more extrapolation. The data have not been adjusted to account for sales from non-responders and other channels.

The chart below shows lamp shipments by state, along with shares of total commercial floor space and known distributor branch locations by state for context. Relative to commercial floor space, sales quantity appears to be largely representative of the region with the majority of sales going to Washington (48%) and Oregon (37%).

DISTRIBUTOR LAMP SHIPMENTS, FLOOR SPACE, AND BRANCHES BY STATE, 2015

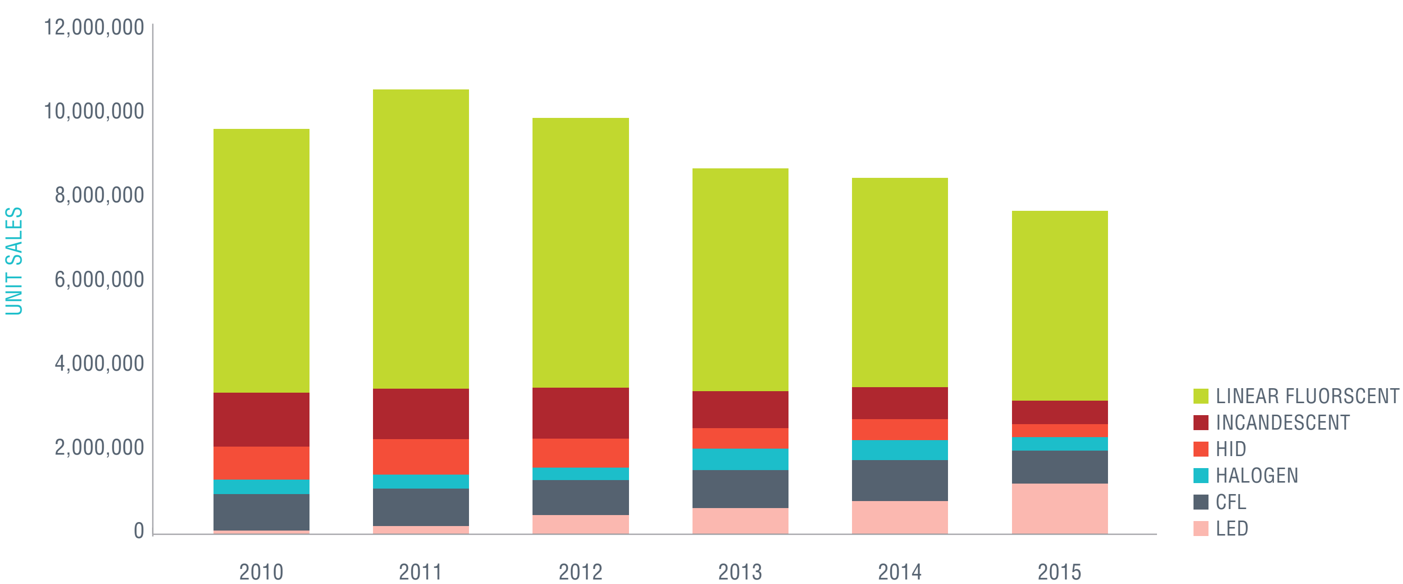


Source: Analysis of distributor sales data, total Northwest branches and square footage for all distributors

SURVEY RESULTS

Linear fluorescent lamps (LFLs), again, accounted for the majority of the sales across the Northwest non-residential lighting market in 2015. Compared to other lamp types on a per unit basis, LFLs made up 59 percent of the 2015 sales. LED sales increased rapidly from 2014 to 2015, with LEDs accounting for 15 percent of sales in 2015, up from nine percent in 2014. The chart below shows estimated total sales for reporting distributors, reflecting reported sales only, not the entire Northwest market.

ESTIMATED UNIT SALES FOR REPORTING DISTRIBUTORS BY TECHNOLOGY TYPE, 2010-2015

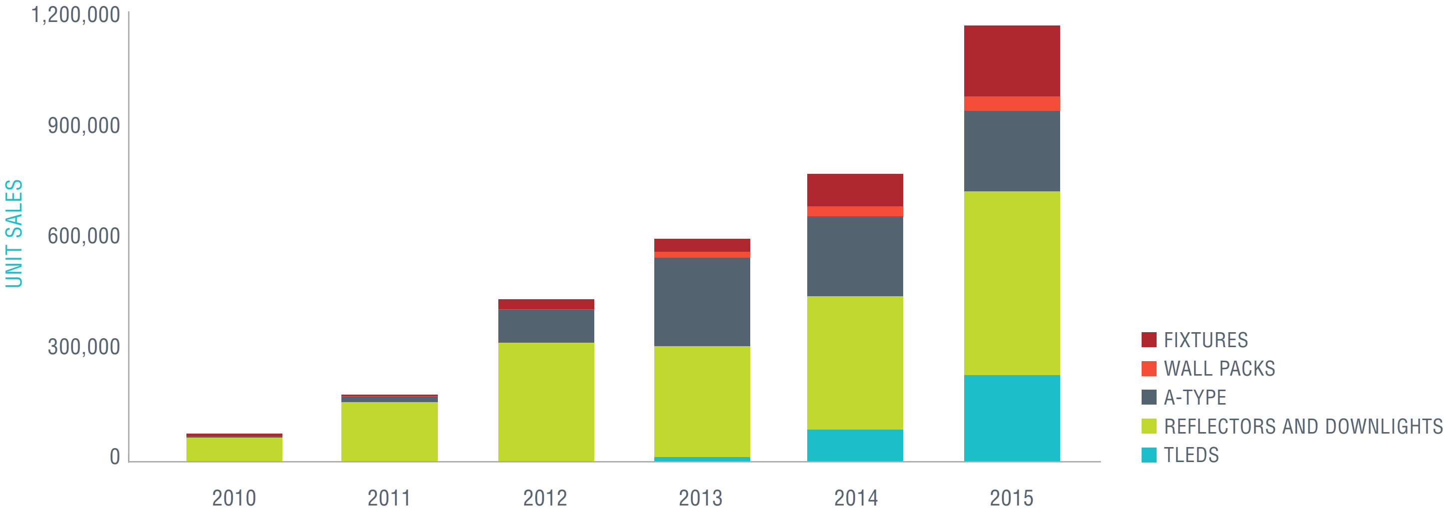


Source: Analysis of distributor sales data

LED LAMPS AND FIXTURES

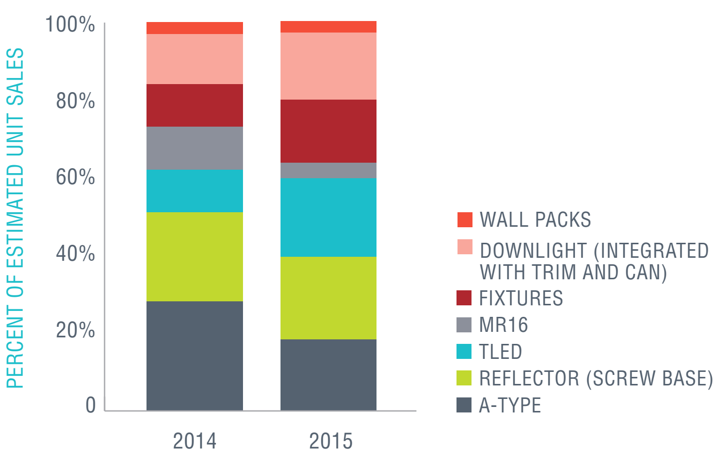
Sales of LED lamps and fixtures in the Northwest continued to boom in 2015. Estimated unit sales grew from approximately 767,000 in 2014 to 1.2 million in 2015, surpassing all other technologies except linear fluorescent. In terms of year-over-year growth in LED sales, 2015 showed the biggest gain yet. The unit sales shown below and throughout the report are estimated values based on actual sales data from distributors, including a limited amount of extrapolation adjustments to account for missing data. These values have not been adjusted for nonrespondents or other sales channels.

ESTIMATED LED UNIT SALES, 2010-2015



Source: Analysis of distributor sales data

PERCENT OF LED UNIT SALES BY PRODUCT TYPE, 2014 AND 2015



Source: Analysis of distributor sales data

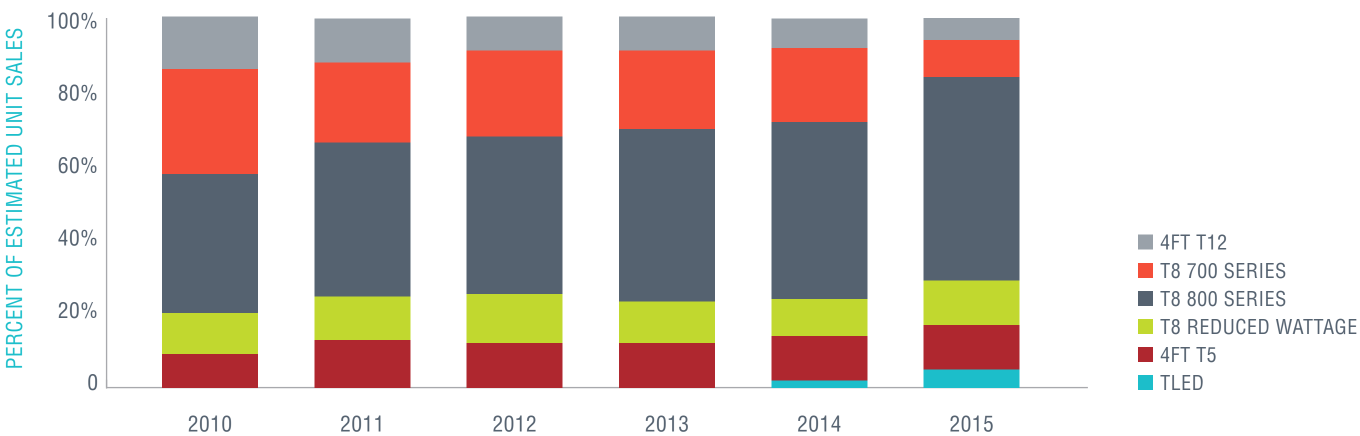
The LED market is changing quickly, and so are the LED products that comprise its sales. From 2010-2014, reflectors, downlights, and A-type lamps constituted the majority of LED sales, and these categories still accounted for 61 percent of sales in 2015. Downlights showed major growth last year, with unit sales doubling from 98,000 in 2014 to 199,000 in 2015. Another notable change was the boom in TLEDs. Distributors' 2015 sales included more TLEDs than any other single LED product category, more than doubling 2014 sales. While accounting for only a small percentage of LED sales, LED fixtures also saw continued growth with sales doubling from 2014 to 2015.

LINEAR FLUORESCENT LAMPS AND TLEDS

LFLs remain the dominant commercial lighting technology, but 2015 continued a steady decline in LFL sales. LFL categories with low efficacies, such as 700 series T8s and four-foot T12s, showed the sharpest decline, reflecting changes in the federal standards for General Service Fluorescent Lamps. A combination of 800 series 32 watt T8s and reduced wattage T8 lamps, and a smaller but growing number of TLEDs absorbed this changing market share. These changes continue a trend toward higher-efficiency lighting across the Northwest. However, the dominance of the 32-Watt T8 remains a significant opportunity to shift toward energy-saving options such as reduced wattage lamps, TLEDs, and LED fixtures.

While TLED sales boomed in 2015, TLEDs still account for only a small portion of linear lamp sales, making up 5 percent of total linear lamp sales (including LFL and TLED). Simultaneously, reduced wattage (25W and 28W) T8 lamps showed a sales boost in 2015, with a 12 percent increase in unit sales over 2014.

ESTIMATED LINEAR LAMP UNIT SALES BY TYPE, 2010-2015

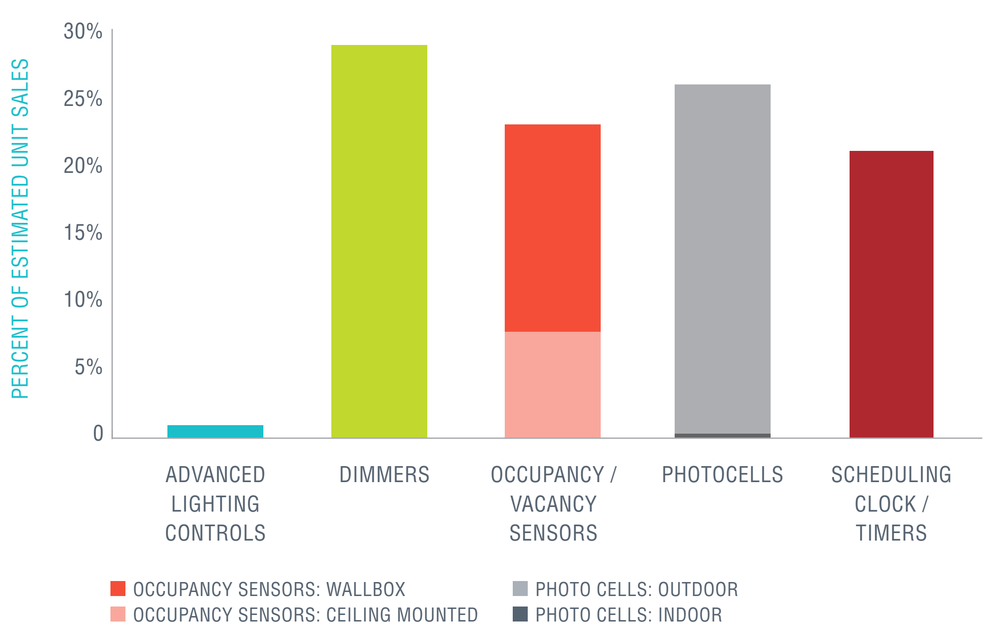


Source: Analysis of distributor sales data

LIGHTING CONTROLS

The survey data on lighting controls showed that dimmers and outdoor photocells were the most common types of control product sold. The adjacent graph combines sales from 2013-2015, because only some distributors reported controls sales. During this time period, dimmers, photocells, occupancy sensors, and timers made up the vast majority of lighting controls sales. A smaller number of advanced controls products were sold, and market actors expect these products to see increased sales in coming years.

LIGHTING CONTROLS UNIT SALES, 2013-2015



Source: Analysis of distributor sales data

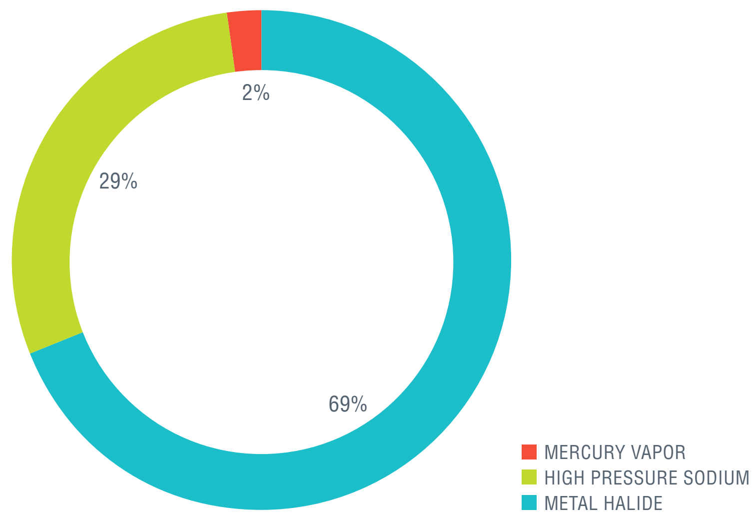
HIGH INTENSITY DISCHARGE LAMPS

The decline in HID lamp sales continued in 2015. Distributors reported HID lamp sales in the Northwest region dropped from over 800,000 unit sales in 2011 to 300,000 units in 2015. This also represents a decline in HID share relative to other technologies. Some of the decrease likely reflects the strong adoption of LED lamps in outdoor lighting in recent years.

Metal halide sales remain the top choice in the HID market with an estimated average market share of 69 percent of all HID sales in 2015.

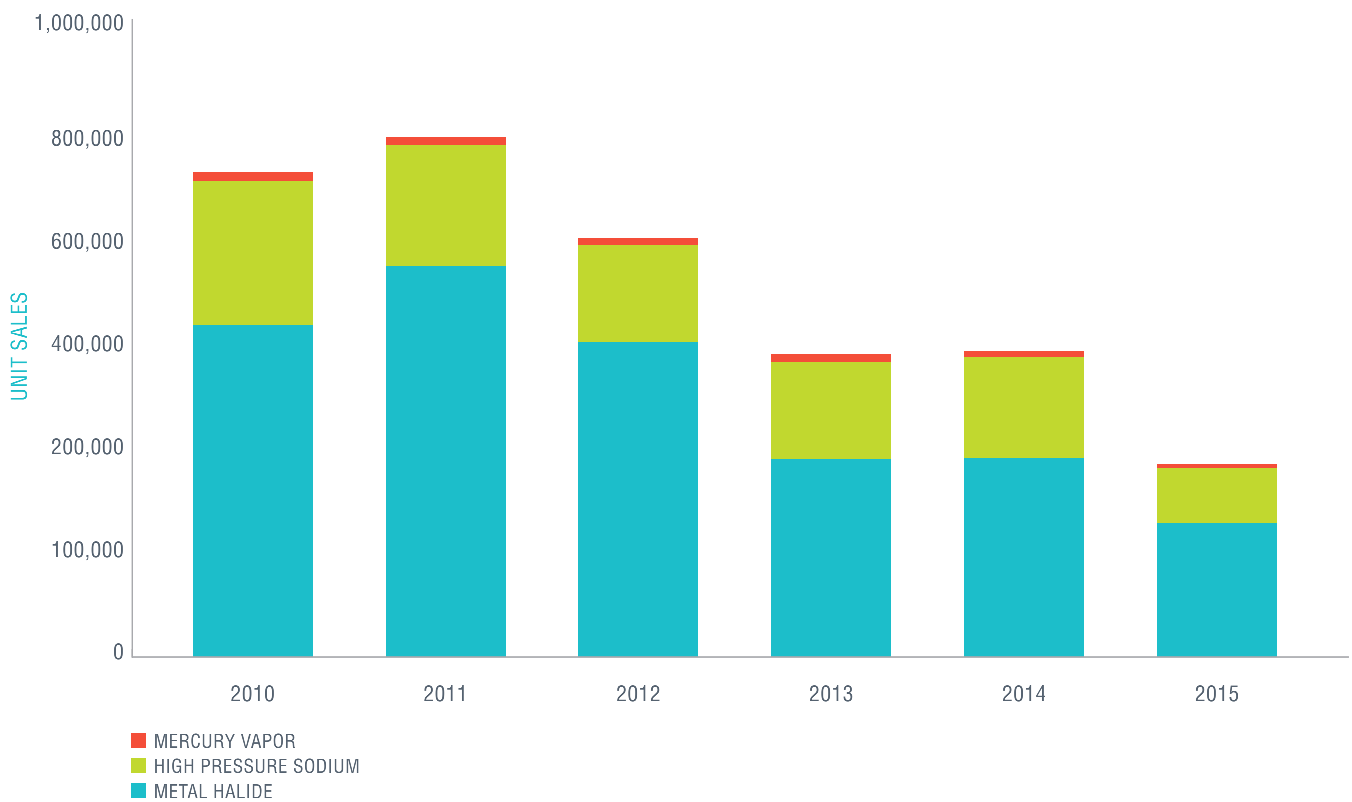
Mercury vapor lamps, banned by the federal government in 2009, continue to have an estimated average market share of less than two percent of HID sales.

ESTIMATED HID UNIT SALES BY TYPE, 2015



Source: Analysis of distributor sales data

ESTIMATED HID UNIT SALES BY TYPE, 2010-2015



Source: Analysis of distributor sales data

CONTACT

This survey is intended to help utilities with their understanding of the non-residential lighting marketplace and to provide electrical distributors with data useful for business planning. The team welcomes feedback on the data presented in this report. Please direct questions and comments to:

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