

# HOW THE OTHER HALF LIGHTS: AN ANALYSIS OF PURCHASE AND INSTALLATION DEMOGRAPHIC PATTERNS

*Melissa Meek, NMR Group, Inc.*  
*Kiersten von Trapp, NMR Group, Inc.*  
*David Barclay, NMR Group, Inc.*  
*Lisa Wilson-Wright, NMR Group, Inc.*  
*Scott Walker, NMR Group, Inc.*  
*Greg Englehart, NMR Group, Inc.*

This poster presents findings from the 2016-17 Massachusetts Lighting Market Consumer Survey and On-site Saturation Study. The data is from periodic on-site lighting inventories conducted with households in Massachusetts and portions of New York that are part of a panel. Data for the most recent study were collected October 2016 through January 2017. We chose New York as a comparison area primarily because the state discontinued residential upstream lighting programs in 2014. NMR conducted consumer surveys in each state and visited 465 homes in Massachusetts (315 panel households) and 150 homes in New York (105 panel households).<sup>1</sup> NMR has conducted on-site visits in Massachusetts since 2009 and in New York since 2013. In recent years, growth in panel size in both states has enabled a deeper analysis of bulb replacement and purchase behavior.

A replacement bulb is defined as the bulb installed in a socket in 2017 to replace a bulb observed in a socket during the 2016 site visits. In 2017, nearly half of the replacement bulbs installed in Massachusetts were LEDs (47%). This is close to double the proportion of LEDs installed in New York in 2017 (28%). Despite rapid LED adoption, some demographic groups are leading others in efficient bulb replacement.

In both states, non-low-income households, single family households, and homeowners were more likely than low-income households, multi-family households, and renters to install replacement LEDs. While likelihood of installing LEDs is lower for some demographic groups, they are not being left behind in Massachusetts. The state's rate of LED replacement by low-income households more than doubled from 2016 (16%) to 2017 (40%). In fact, low-income households in Massachusetts are installing replacement LEDs at the same rate as non-low-income households in New York (40%).

In previous years, we observed that some demographic groups, including low-income households and renters, were more likely to install CFLs, and we speculated that CFLs were a more cost-conscious energy-efficient option for these households. This year, we observed no difference in the replacement rates of CFLs among demographic groups. CFL replacement and saturation have been decreasing overall. This is a trend that began before the Massachusetts PAs discontinued incentives for CFLs in January 2017.

LEDs appear to be eclipsing CFLs as the preferred efficient bulb across all demographic groups in Massachusetts. Understanding consumer behaviors and concerns specific to each group will further bolster the success of residential lighting programs. For example, low-income householders were more likely to report that they were concerned about the cost of efficient bulbs or that they did not have any LED or CFL bulbs in storage. We recommend that program bulbs continue to be supported in places where low-income households are more likely to purchase LEDs, such as mass merchandise retailers (e.g., Target, Walmart) and lighting and electronic retailers (e.g., Batteries + Bulbs, Best Buy). The program should also continue to provide rebates at home improvement stores, which are the most popular sources of new bulbs across all groups. Targeting landlords and property managers is another opportunity for savings, as renters bear the financial burden of inefficient bulbs, but are often unable or unwilling to install more costly LEDs that might outlast their tenure in the household.

---

<sup>1</sup> For more information on methodology, please see full report at: <http://ma-eeac.org/wordpress/wp-content/uploads/Lighting-Market-Assessment-Consumer-Survey-and-On-Site-Saturation-Study.pdf>