

Memorandum

To: Scott Dimetrosky and Lisa Skumatz, Connecticut Energy Efficiency Board Evaluation Consultants

CC: Craig Diamond, CT EEB Executive Secretary

From: Glenn Reed, CT EEB Residential Technical Consultant

Date: December 2, 2015

Re: Residential Technical Consultant comments on the 11/16/15 LED Lighting Study Draft Report (R154)

Provided below are summary and highlight comments on the November 16 review draft of the LED Lighting Study Report. These comments supplement those contained in the marked-up draft report that was also submitted. The comments below are included in the marked-up draft, but are provided here as a high level summary and for emphasis.

1. Please note explicitly on the first page of the Executive Summary that CT has attained an overall 56% efficient socket saturation. Has any other state even exceeded 50%?
2. The data and Recommendation on first year in-service rates (ISRs) is interesting and useful. However, there is no discussion as to how to address the continued installation of efficient bulbs after year 1 to accurately capture lifetime savings.
3. The Consideration on future primary research should be more specific. What types of CT-specific research would be most useful? Panel studies to better understand lamp replacement practices as CT's self-reported data differed from those observed in MA panels?
4. Can the estimates of lighting savings potential, and by extension lighting usage, be put in context relative to average CT household electricity usage? Given low electric heat and hot water penetrations and low cooling hours of use, lighting usage and savings potential probably represents a significant proportion of residential energy use in CT.
5. The caveat in Consideration 3 on the use of delta watts derived, in part, from self-reports is appropriate. However, the recommendation to use a market adoption model needs further description of what such a model is and the benefits from its use.

6. This are a number of additional analyses and tables/figures that should be presented on socket saturation. There is nothing presented as to technology saturation by lamp type, average bulb wattage and wattage equivalence (or lumens) by technology and lamp type, the percentage of efficient and inefficient lamps and/or wattage on dimming circuits, etc.
7. Should covered A-lamp CFLs be considered a specialty lamp?
8. 8% of LED purchases were reported as being from online. Can anything further be said about this market channel?
9. There are a number of comments/concerns regarding the discussion of the Companies' direct install efforts, including a significant overestimate of overall HES participation and the likely exclusion of HES-IE participants in estimating the number of direct install bulbs. Further, the number of HES participants in the onsite survey sample raises possible questions as to the representativeness of the sample.
10. The savings potential estimates should also be calculated off of an EISA-land baseline that includes both incandescents and halogens. Also, please provide a copy of the workbook used to generate these savings potential estimates.