Northeast Residential Lighting Hours-of-Use Study, Recommendations

Hours-of-Use Recommendation: Based on the Study results, the evaluation team recommends that the program administrators in Connecticut adopt the combined hours-of-use room-by-room estimates for Connecticut, Massachusetts, Rhode Island and upstate New York with no differentiation between customer classes (limited income versus non-limited income).   In addition, the evaluation team recommended that the hours of use be adjusted to account for the following theories:

- Households may select higher-use locations for their high-efficiency bulbs (slight upward adjustment).
- Households may begin to use sockets with efficient bulbs in lieu of sockets containing inefficient bulbs (slight upward adjustment in savings).
- Households may choose to use efficient bulbs more than the inefficient bulbs that they replaced (slight downward adjustment in savings)

CL&P Response: CL&P agrees with this recommendation and will incorporate Table ES-5 from the study (reproduced below) into the 2015 Program Savings Documentation (PSD) for residential direct install and retail lighting.   Note that the room types presented below do not align completely with those currently in the PSD (which include additional room types).   CL&P will maintain the current 2014 PSD room types and map the results from Table ES-5 to the most appropriate room type in the PSD.

Table ES-5: HOU by Area Adjusted for Snapback

Room	CT	MA	RI	UNY	Overall
Bedroom	2.8 (2.4, 3.1) bdefg	2.2 (2.0, 2.4) acfgh	2.9 (2.4, 3.4) bdefg	2.0 (1.7, 2.3) acfgh	2.3 (2.1, 2.5) acfgh
Bathroom	1.7 (1.3, 2.0) fgh	2.0 (1.8, 2.3) fgh	1.6 (1.1, 2.1) fgh	2.1 (1.7, 2.4) fgh	2.0 (1.8, 2.1) fgh
Kitchen	4.7 (4.3, 5.1) bfgh	4.2 (3.9, 4.4) afgh	4.1 (3.5, 4.6) fgh	4.3 (3.9, 4.6) fgh	4.2 (4.1, 4.4) fgh
Living Space	3.9 (3.5, 4.3) dg	3.5 (3.3, 3.7) fgh	3.6 (3.0, 4.2) fg	3.2 (2.9, 3.6) afgh	3.5 (3.4, 3.7) fgh
Dining Room	3.4 (2.9, 3.9) fg	3.0 (2.6, 3.3) fgh	3.8 (3.0, 4.6) df	2.8 (2.3, 3.2) cfgh	3.0 (2.8, 3.3) fgh
Exterior	6.5 (6.0, 6.9) bdegh	5.7 (5.5, 6.0) acg	6.7 (6.2, 7.2) bdegh	5.7 (5.3, 6.0) ac	5.8 (5.6, 6.1) acg
Other	1.9 (1.7, 2.1) fgh	1.9 (1.7, 2.0) fgh	1.7 (1.4, 2.0) fgh	1.9 (1.7, 2.1) fgh	1.9 (1.8, 2.0) fgh
Household	3.0 (2.8, 3.2) fgh	2.9 (2.8, 3.0) fgh	2.9 (2.7, 3.1) fgh	2.8 (2.7, 3.0) fgh	2.9 (2.8, 3.0) fgh

Coincidence Factor Recommendation: Based on the Study results, the evaluation team recommends that the program administrators in Connecticut use coincidence factor estimates for Connecticut, Massachusetts, Rhode Island and upstate New York.

CL&P Response: CL&P agrees with this recommendation and will incorporate Table ES-7 from the study (reproduced below) into the 2015 Program Savings Documentation (PSD) for direct install and retail lighting.

Table ES-7: Peak Period Coincidence Factors and Confidence Intervals – All Bulbs

Region	Winter Peak Period Dec. & Jan. (5 PM – 7PM)	Summer Peak Period June, July and August (1 PM – 5PM)	ISO-NE Seasonal Peak Hour (Winter) January 24, 2013 Hour Ending 19	ISO-NE Seasonal Peak Hour (Summer) July 19, 2013 Hour Ending 17	NYSO Peak Hour July 7, 2013 Hour Ending 19
CT	17% (15%, 19%) d	16% (13%, 18%) bd	22% (19%, 24%)	16% (13%, 18%)	n/a
MA	16% (15%, 17%)	12% (11%, 14%) ac	19% (18%, 20%)	12% (10%, 13%)	n/a
RI	16% (13%, 19%)	19% (15%, 24%) bde	19% (16%, 22%)	17% (13%, 21%)	n/a
UNY	14% (11%, 16%) ae	11% (9%, 13%) acf	n/a	n/a	9% (8%, 11%)
Overall[1]	16% (15%, 17%) d	13% (12%, 14%) c	20% (19%, 21%)	13% (12%, 15%)	n/a
MHT	27% (24%, 30%) h	17% (15%, 19%) h	n/a	n/a	19% (17%, 21%)
DNY	28% (25%, 31%) h	17% (15%, 19%) h	n/a	n/a	19% (17%, 21%)
NYSERDA	22% (19%, 24%) fg	14% (12%, 15%) fg	n/a	n/a	15% (13%, 16%)