IMPACT EVALUATION
NYSERDA CFL Expansion Fast Track Program: Random Digit Dial and Onsite Survey Results
Interim Report

Prepared for
The New York State
Energy Research and Development Authority

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Project Number 9875

NYSERDA
March 2010
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ABSTRACT

This report summarizes the results of random digit dial surveys and on-site saturation studies conducted in New York State, New York City, and three comparison areas as part of an impact evaluation of the Compact Fluorescent Lamp (CFL) Expansion Fast Track Program, which is a part of the New York Energy SmartSM Products Program. The surveys were conducted under the direction of NMR Group (NMR), part of the market characterization and assessment team led by Summit Blue Consulting. APPRISE Incorporated managed the data collection efforts. The purpose of the surveys was to gather information on CFL awareness, use and purchase behavior, estimate the number of incandescent bulbs purchased by respondents, and determine awareness and experience using light emitting diodes, among a few other purposes. The report discusses the results of these surveys, focusing on similarities and differences between New York State, New York City, and three comparison areas.
ACKNOWLEDGEMENTS

The team wishes to acknowledge the survey preparation, survey implementation, and data cleaning work performed by APPRISE. Furthermore, APPRISE staff contributed to the methodological discussion in Section 2. The team also wishes to acknowledge the contributions of Victoria Engel-Fowles of NYSERDA, Rick Ridge, and Ralph Prahl of the New York State Department Public Service Evaluation Consultant Team, and the Energy Efficiency Portfolio Standard Evaluation Advisory Group.
Table 20: Use of CFLs by Comparison Area......................................................... 5-4
Table 21: Ever Purchased or Been Given a CFL Bulb by Utility Service Territory................................................. 5-4
Table 22: History of CFL Use by Utility Service Territory ................................................................. 5-5
Table 23: History of CFL Use by Utility Service Territory ................................................................. 5-5
Table 24: Overall Light Bulb Purchase Strategy by Comparison Area ................................................. 6-7
Table 25: Overall Light Bulb Purchase Strategy by Utility Service Territory ................................................. 6-8
Table 26: CFLs Purchased in the Last Three Months by Comparison Area ................................................. 6-9
Table 27: CFLs Purchased in the Last Year by Comparison Area ......................................................... 6-10
Table 28: Consistency in Reporting of Three Month and Yearly Purchases by Comparison Area ................. 6-10
Table 29: CFLs Purchased in the Last Three Months by Utility Service Territory ................................................. 6-11
Table 30: CFLs Purchased in the Last Year by Utility Service Territory ......................................................... 6-11
Table 31: Consistency in Reporting of Three Month and Yearly Purchases by Utility Service Territory ......................................................... 6-11
Table 32: Number of CFLs Received for Free in the Last Three Months by Comparison Area ................. 6-12
Table 33: Number of CFLs Received for Free in the Last Year by Comparison Area ................................................. 6-12
Table 34: CFLs Purchased in the Last Three Months of 2008 by Comparison Area ................................................. 6-13
Table 35: CFLs Purchased in the Last Year by Comparison Area ......................................................... 6-14
Table 36: Incandescent Bulbs Purchased in the Last Three Months by Comparison Area ......................... 6-15
Table 37: Incandescent Bulbs Purchased in the Last Year by Comparison Area ................................................. 6-15
Table 38: Type of Store where CFL Bulbs were Purchased by Comparison Area ................................................. 6-16
Table 39: Type of Store where Incandescent Bulbs were Purchased by Comparison Area ......................... 6-19
Table 40: Probable Program Participants ................................................................................................. 6-20
Table 41: Non-Participating Stores by Percent of CFLs Purchased ......................................................... 6-21
Table 42: Use of CFL in Home over Past Year ................................................................................................. 7-2
Table 43: Number of CFLs in Use at Respondents Home Three Months Ago by Comparison Area ......................... 7-3
Table 44: Current CFL Use by Households and Percentage of All CFLs Installed ................................................. 7-6
Table 45: Current CFL Use by Size of Home ................................................................................................. 7-8
Table 46: CFL Use by Owner or Renter Status ................................................................................................. 7-9
Table 47: CFL Use by Who Pays the Electricity Bill Status ......................................................................................... 7-9
Table 48: Current CFL Use by Primary Language Spoken at Home ................................................................. 7-9
Table 49: CFL Use by Household Income ................................................................................................. 7-10
Table 50: CFL Use by Education ................................................................................................................. 7-11
Table 51: Current Number of CFLs in Use at Respondents Home by Comparison Area ......................... 7-12
Table 52: Comparison of Incandescent and CFL Wattage by Percent of Sum within Wattage Category ................................................................................................. 7-14
Table 53: Comparison of Incandescent and CFL Wattage by Percent of Sum within Wattage Category ................................................................................................. 7-14
Table 54: Socket Saturation – Socket Type by Percent of all Sockets ............................................................. 7-15
Table 55: Socket Saturation – CFLs Installed by Socket Type by Comparison Area ................................................. 7-16
Table 56: Socket Saturation – Bulb Features by Percent of all Sockets ......................................................... 7-17
Table 57: Socket Saturation – CFLs Installed by Bulb Shape by Comparison Area ................................................. 7-18
Table 58: Percentage of CFLs in Storage by Comparison Area ......................................................................................... 7-19
Table 59: Percentage of CFLs in Storage by Utility Service Territory ................................................................. 7-19
Table 60: Current Number of CFLs in Storage at Respondents Home ................................................................. 7-22
Table 61: Reason for Storing CFLs by Comparison Area ......................................................................................... 7-22
Table 62: Storing CFLs as Replacements for Bulbs Already in Use by Comparison Area ......................... 7-23
Table 63: Storing CFLs as Replacements for Bulbs Already in Use by Utility Service Territory ......................... 7-23
Table 64: Satisfaction with Currently Installed by Comparison Area ......................................................................................... 7-24
Table 65: Satisfaction with Currently Installed CFLs by Utility Service Territory ................................................. 7-24
Table 66: Respondent Ever Removed CFL after Installation by Comparison Area based on CFL Users ................................................................................................. 7-24
Table 67: Reason for Dissatisfaction with CFLs by Comparison Area ................................................................. 7-25
Table 68: Why Respondent Removed CFLs ................................................................................................. 7-26
Table 69: Familiarity and Use of LEDs by Comparison Area ............................................................ 8-1
Table 70: Familiar with LEDs by Utility Service Territory .............................................................. 8-2
Table 71: Familiarity and Use of LED Holiday Lights by Comparison Area .................................... 8-3
Table 72: Use of Various LED Applications by Comparison Area ................................................. 8-5
Table 73: Use of Various LED Applications by Utility Service Territory ....................................... 8-6
Table 74: Homeownership Status and Type of Home by Comparison Area .................................. A-1
Table 75: Homeownership Status and Type of Home by Utility Service Territory ....................... A-2
Table 76: Decade Home was Built by Comparison Area ............................................................... A-3
Table 77: Decade Home was Built by Utility Service Territory .................................................... A-4
Table 78: Size of Home by Comparison Area ............................................................................... A-5
Table 79: Size of Home by Utility Service Territory ..................................................................... A-5
Table 80: Highest Level of Education by Comparison Area .......................................................... A-6
Table 81: Highest Level of Education by Utility Service Territory ................................................. A-7
Table 82: Head of Household Employment Status and Household Income by Comparison Area .... A-9
Table 83: Head of Household Employment Status and Household Income by Utility Service Territory ................................................................................................................................. A-10
Table 84: Race and Ethnicity by Comparison Area ........................................................................ A-11
Table 85: Race and Ethnicity by Utility Service Territory .............................................................. A-12
Table 86: Primary Language Spoken in the Home by Comparison Area ........................................ A-13
Table 87: Primary Language Spoken in the Home by Utility Service Territory ............................. A-13
Table 88: Gender by Comparison Area ......................................................................................... A-14
Table 89: Gender by Utility Service Territory ................................................................................ A-14
Table 90: Number and Age Group of Persons Living in the Home by Comparison Area ............... A-14
Table 91: Number and Age Group of Persons Living in the Home by Utility Service Territory ....... A-15
Table 92: Home Occupied During the Week Daytime Hours by Comparison Area ....................... A-15
Table 93: Home Occupied During the Week Daytime Hours by Utility Service Territory .......... A-15
Table 94: Household Car Ownership by Comparison Area ............................................................ A-16
Table 95: Household Car Ownership by Utility Service Territory ............................................... A-16

LIST OF FIGURES

Figure 1: Mean CFL Usage ............................................................................................................. 3-2
Figure 2: NYS - RDD Reported CFLs Installed by Onsite Observed CFLs Installed ....................... 3-3
Figure 3: Ohio - RDD Reported CFLs Installed by Onsite Observed CFLs Installed ........................ 3-4
Figure 4: NYC - RDD Reported CFLs Installed by Onsite Observed CFLs Installed ..................... 3-5
Figure 5: DC - RDD Reported CFLs Installed by Onsite Observed CFLs Installed ........................ 3-6
Figure 6: Houston - RDD Reported CFLs Installed by Onsite Observed CFLs Installed ................ 3-7
Figure 7: Mean CFL Purchases ..................................................................................................... 3-8
Figure 8: New York State - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases ......................................................................................................................... 3-9
Figure 9: Ohio - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases ...... 3-10
Figure 10: New York City - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases ......................................................................................................................... 3-11
Figure 11: DC - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases ........ 3-12
Figure 12: Houston - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases ......................................................................................................................... 3-13
Figure 13: Awareness and Familiarity with CFLs by Comparison Area ......................................... 4-2
Figure 14: Awareness and Familiarity with CFLs by Utility Service Territory .............................. 4-5
Figure 15: Number of CFL and Incandescent Bulbs Purchased in Past Three Months by
Comparison Area................................................................................................................. 6-16
Figure 16: Number of CFL and Incandescent Bulbs Purchased in Past Year by Comparison Area ...... 6-17
Figure 17: Mean number of CFLs Installed over Time by Comparison Area................................. 7-4
Figure 18: Mean number of CFLs Installed over Time by Utility Service Territory........................ 7-5
Figure 19: Mean number of CFLs in Storage over Time by Comparison Area................................ 7-20
Figure 20: Mean Number of CFLs in Storage over Time by Utility Service Territory ...................... 7-21
Figure 21: Satisfaction with Currently Installed CFLs and Select Characteristics of CFLs by
Comparison Area1.................................................................................................................. 7-27
Figure 22: Familiarity and Use of LEDs by Comparison Area ...................................................... 8-2
Figure 23: Familiarity and Use of Holiday LEDs by Comparison Area ........................................ 8-4
Figure 24: Mean CFL Storage .................................................................................................. C-1
Figure 25: New York State - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage ............................................................. C-2
Figure 26: Ohio - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage............. C-3
Figure 27: New York City - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage ...... C-4
Figure 28: DC - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage............... C-5
Figure 29: Houston - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage......... C-6
EXECUTIVE SUMMARY

This report summarizes the results of random digit dial (RDD) surveys and onsite saturation studies conducted in New York State excluding New York City and Nassau and Suffolk Counties (hereafter NYS), New York City (NYC), and three comparison areas that lack CFL programs as part of an impact evaluation of the Compact Fluorescent Lamp (CFL) Expansion Fast Track Program, which is a part of the Energy Efficiency Portfolio Standard (EEPS) Program offering. The surveys were conducted under the direction of NMR Group (NMR), part of the Market Characterization and Assessment team led by Summit Blue Consulting. APPRISE Incorporated managed the data collection efforts.

STUDY OBJECTIVES AND METHODS

The goals of the CFL Expansion Program evaluation are to assess 1) the extent to which program support engenders more sales than are directly supported by the program; 2) how much remaining potential there is for replacing incandescent bulbs with CFLs; 3) how much net savings are being achieved by the program; 4) the sustainability of program savings; and 5) how to modify the current and future program to maximize cost-effective net savings from efficient residential lighting. The current report provides information that informs each of these goals. In addition, future evaluation activities including a process evaluation and statistical modeling drawing on data from multiple states and cities will provide additional insights and explore program impacts on sales and electricity and demand savings, remaining potential, sustainability, and possible program modifications.

SYNOPSIS OF FINDINGS

Table 1 summarizes the key results related to CFL awareness, use, and familiarity for NYS, NYC, and the three comparison areas. The evaluators derived estimates of on awareness, familiarity, and self-reported history of use from the RDD survey only, but estimates of the number of products in use, storage, and recently purchased come from both the RDD survey and the onsite saturation studies. As can be seen in Table 1, the evaluators observed notable differences in self-reported CFL usage, storage, and purchases between the RDD and the onsite saturation studies. As a result of these differences, the evaluators determined that, because they were collected by trained technicians in the respondents’ homes, the weighted onsite observed data provide more credible and reliable estimates of CFL counts, and the team prioritizes onsite over RDD data in the reporting that follows.

Overall, the results in Table 1 indicate that the CFL market—including awareness and familiarity—was more developed in NYS compared to Ohio and NYC, and more developed in NYC compared to the District of Columbia (DC), and, to a lesser extent, Houston, Texas. The analyses conducted in this interim report do not provide adequate information to explain the differences and similarities between the five comparison areas. The multistate modeling effort (another of the CFL Expansion Program evaluation tasks) further examines what drives the CFL market—including sales and use—drawing information from areas across the nation including data from onsite CFL saturation studies.

Looking more specifically, the data reported in Table 1 indicate a more developed CFL market in NYS compared to Ohio, including significantly greater awareness of CFLs (91% in NYS and 86% in Ohio) and higher levels of familiarity with (31% in NYS and 25% in Ohio), a higher proportion of households that have ever used CFLs (66% in NYS vs. 54% in Ohio), and more CFLs currently installed (11.3 in NYS vs. 8.9 in Ohio as counted onsite). The CFL market in NYC appears to be more developed than in DC and somewhat more developed than in Houston. Comparisons of NYC with DC and Houston show that awareness and familiarity were higher in NYC (79% aware and 28% very familiar) than in DC (72% aware and 21% very familiar); awareness in NYC and Houston was statistically similar (79% vs. 76%), while familiarity was significantly higher in NYC (28% very familiar) than in Houston (21% very
familiar). A higher proportion of households in NYC (54%) compared to DC (47%), but about the same as Houston (52%), had used CFLs. Based on the observed onsite data, NYC households had purchased more CFLs than DC and Houston households (3.0 in NYC, 1.8 in DC, and 1.4 in Houston) during 2008. Note that the factors driving CFL use, purchases, and saturation in NYS, NYC, and across the nation are explored in detail in the multistate modeling report.

Table 1: Key Indicators by Comparison Areas
(Based on all respondents in each survey type; see footnotes for distinctions)

<table>
<thead>
<tr>
<th></th>
<th>NYS</th>
<th>OH</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of CFLs</td>
<td>91%</td>
<td>86%ab</td>
<td>79%ab</td>
<td>72%ab</td>
<td>76%</td>
</tr>
<tr>
<td>Very Familiar with CFLs</td>
<td>31%</td>
<td>25%a</td>
<td>28%</td>
<td>21%ab</td>
<td>21%ab</td>
</tr>
<tr>
<td>Not at all Familiar with CFLs</td>
<td>14%</td>
<td>23%ab</td>
<td>27%ab</td>
<td>33%ab</td>
<td>32%ab</td>
</tr>
<tr>
<td>Ever purchased CFLs</td>
<td>66%</td>
<td>54%ab</td>
<td>50%ab</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td>Ever used CFLs</td>
<td>69%</td>
<td>58%ab</td>
<td>54%ab</td>
<td>47%a</td>
<td>52%</td>
</tr>
<tr>
<td>Never used CFLs</td>
<td>31%</td>
<td>42%ab</td>
<td>46%ab</td>
<td>53%a</td>
<td>48%</td>
</tr>
<tr>
<td>Mean CFLs currently installed</td>
<td>6.2</td>
<td>4.8ab</td>
<td>3.7ab</td>
<td>3.2</td>
<td>5.6ab</td>
</tr>
<tr>
<td>Mean CFLs currently installed – onsite</td>
<td>11.3</td>
<td>8.9a</td>
<td>7.4</td>
<td>4.9a</td>
<td>6.4</td>
</tr>
<tr>
<td>Mean CFLs installed in last three months 2008</td>
<td>5.1</td>
<td>3.7ab</td>
<td>2.7ab</td>
<td>2.5</td>
<td>5.0ab</td>
</tr>
<tr>
<td>Mean CFLs installed during 2008</td>
<td>3.9</td>
<td>3.0b</td>
<td>2.4ab</td>
<td>2.2</td>
<td>3.4ab</td>
</tr>
<tr>
<td>Mean CFLs in storage</td>
<td>1.9</td>
<td>1.6a</td>
<td>1.5a</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Mean CFLs in storage – onsite</td>
<td>1.1</td>
<td>2.2a</td>
<td>1.0</td>
<td>0.7</td>
<td>0.04a</td>
</tr>
<tr>
<td>Mean CFLs purchased in during 2008</td>
<td>4.7</td>
<td>3.8ab</td>
<td>3.3ab</td>
<td>3.1</td>
<td>4.5ab</td>
</tr>
<tr>
<td>Mean CFLs purchased in 2008 – onsite</td>
<td>3.9</td>
<td>3.3</td>
<td>3.0</td>
<td>1.8</td>
<td>1.4a</td>
</tr>
<tr>
<td>Mean CFLs purchased in last three months 2008</td>
<td>1.3</td>
<td>1.1</td>
<td>1.1</td>
<td>0.7a</td>
<td>0.9</td>
</tr>
<tr>
<td>Mean CFLs purchased in last three months – onsite</td>
<td>0.6</td>
<td>0.8</td>
<td>0.9</td>
<td>0.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

1 Results subject to rounding error.
2 Includes “Don’t know/Refused”
3 Based on onsite saturation surveys – sample sizes: NYS = 203, OH = 98, NYC = 100, DC = 97, and Houston = 99
4 The RDD survey asked some questions relative to the time of the survey. All references to “three months ago” refer to a period between September and December 2008, depending on whether the respondent answered the survey in December 2008 or January 2009; similarly references to the “past year” are to 2008. The on-site surveys were conducted after the RDD survey, during August and September of 2009, but the three month period in question remained September to December 2008 and the past year remained 2008 because the team asked specifically about those time periods during the onsite surveys.
a Statistically significant at $\alpha = 0.05$, which is the one-tailed test for the 90% confidence level.
b Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC, and Houston are compared to NYC.

Table 2 examines similar variables for utility service territories within NYS. The “All Others” category includes electric cooperatives and municipal utilities, and the Con Edison territory excludes NYC, which is presented separately in Table 1. Notably, only a few of the findings differ statistically or garner ample statistical power to distinguish them from NYS as a whole. Across all service territories, 83% or more of respondents reported being aware of CFLs. Between 24% (for the combined all others utility group), and

1 Due to small sample sizes, we have not broken the onsite data down by utility service territory.
35% (in the NYSEG service territory) of respondents were very familiar with CFLs, while only 11% (in the Central Hudson service territory) or fewer respondents reported that they were not at all familiar with CFLs. The majority of the respondents (58% or more) reported buying CFLs at some point; and the majority (58% or more) have used CFLs in the past. Self-reported CFL use increased in all utility territories from a year ago (when respondents had an average of three or more CFLs installed in their homes) to three months ago (four or more CFLs) and again to the date of the survey (5.4 or more). At the time of the survey, respondents were currently storing from an average of 1.1 CFLs in the Orange and Rockland service territory to 2.8 CFLs in the Con Edison service territory. Across all utility territories respondents bought, on average, between 3.2 (in the Con Edison utility territory) and 7.6 CFLs (in the Central Hudson service territory) in the past year and 0.8 (in the Con Edison service territory) to 2.6 CFLs (in the Central Hudson service territory) in the past three months.

Table 2: Key Indicators by Utility Service Territory\(^1\)
(Based on all RDD respondents by utility)

<table>
<thead>
<tr>
<th></th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of CFLs</td>
<td>98%(^{ab})</td>
<td>83%(^{a})</td>
<td>89%</td>
<td>93%</td>
<td>94%</td>
<td>90%</td>
<td>97%(^{a})</td>
</tr>
<tr>
<td>Very Familiar with CFLs</td>
<td>25%</td>
<td>33%</td>
<td>30%</td>
<td>35%</td>
<td>25%</td>
<td>35%</td>
<td>24%</td>
</tr>
<tr>
<td>Not at all Familiar with CFLs(^2)</td>
<td>11%</td>
<td>7%</td>
<td>6%</td>
<td>6%</td>
<td>9%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Ever purchased CFLs</td>
<td>72%</td>
<td>58%</td>
<td>63%(^{a})</td>
<td>71%(^{a})</td>
<td>68%</td>
<td>62%</td>
<td>77%</td>
</tr>
<tr>
<td>Ever used CFLs</td>
<td>76%</td>
<td>58%(^{a})</td>
<td>66%(^{a})</td>
<td>75%(^{ab})</td>
<td>75%</td>
<td>65%</td>
<td>79%</td>
</tr>
<tr>
<td>Never used CFLs(^2)</td>
<td>24</td>
<td>42(^{a})</td>
<td>34(^{a})</td>
<td>25(^{a})</td>
<td>25</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>Mean CFLs currently installed</td>
<td>7.5</td>
<td>5.4</td>
<td>5.8</td>
<td>6.6</td>
<td>5.4</td>
<td>6.6</td>
<td>7.0</td>
</tr>
<tr>
<td>Mean CFLs installed three months ago</td>
<td>6.6(^{a})</td>
<td>5.2</td>
<td>4.6</td>
<td>5.3</td>
<td>4.0</td>
<td>5.2</td>
<td>6.7</td>
</tr>
<tr>
<td>Mean CFLs installed a year ago</td>
<td>4.7</td>
<td>3.6</td>
<td>4.0</td>
<td>3.8</td>
<td>3.0</td>
<td>3.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Mean CFLs in storage</td>
<td>2.4</td>
<td>2.8</td>
<td>1.8</td>
<td>1.7</td>
<td>1.1(^{a})</td>
<td>1.7</td>
<td>2</td>
</tr>
<tr>
<td>Mean CFLs purchased in past year</td>
<td>7.6(^{ab})</td>
<td>3.2(^{a})</td>
<td>4.7</td>
<td>4.5</td>
<td>4.4</td>
<td>4.2</td>
<td>5.3</td>
</tr>
<tr>
<td>Mean CFLs purchased in past three months</td>
<td>2.6(^{a})</td>
<td>.8</td>
<td>1.1</td>
<td>1.3</td>
<td>1.6</td>
<td>1.0(^{a})</td>
<td>.5(^{a})</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

\(^1\) Results subject to rounding error.
\(^2\) Includes “Don’t know/Refused”

Other key findings from these efforts include the following:

- Respondents did not generally recall seeing the ENERGY STAR\(^{\circ}\) label on CFLs and were, therefore, not very aware of differences between labeled and non-labeled CFLs.
• Respondents aware of CFLs first heard about them through mass media advertisements, a finding consistent across areas. The advertisements in NYS and NYC could have been supported by NYSERDA programs, but only a handful of respondents were aware of NYSERDA support of the campaigns.

• Most respondents across all areas examined started using CFLs within the past three years.

• Respondents still purchased a greater number of incandescent bulbs than CFLs. While they tended to buy both types of bulbs at home improvement, mass merchandise, and grocery stores, respondents were more likely also to purchase incandescent bulbs at hardware, bargain, and drug stores.

• The number of CFLs in use in households varied by housing (e.g., ownership status, house size), demographic (e.g., language), and socioeconomic characteristics (e.g., education and income). The multistate modeling effort found that many, although not all, of these factors had unique net positive effects on CFL use, sales, and saturation.

• Overall, the evaluation team estimates that about one in five sockets in NYS (19%) and NYC (21%) contain a CFL, based on the results of the onsite saturation studies. Of the remaining CFLs, most (70% of all sockets in the home) could also be filled with CFLs or LEDs that adhere to the standard A-shaped profile.

• Renters and those who do not pay their own electric bills in NYC were more likely to be CFL users than their counterparts in DC or Houston. The modeling effort suggests that saturation was higher in households that paid their own electricity bill than in households that did not.

• Most respondents stored at least some CFLs, but the reported number stored per household remained constant over the past year.

• Respondents were generally satisfied with CFLs, with 51% or more in each comparison area saying they were “very satisfied” with the CFLs currently installed in their homes. “Very satisfied” ratings were statistically higher in DC (72%) compared to NYC (59%). Respondents who reported having removed CFLs from service or being dissatisfied with CFLs generally cited the product

• In NYS, CFLs have made the greatest inroads replacing incandescent bulbs with wattages ranging from 40 to 49 watts and 65 to 75 watts. In these categories, CFLs represent over one-third of all bulbs (35% and 39%, respectively). In NYC, CFLs represent greater than two-fifths of all bulbs in wattages ranging from 65 to 75 watts (45%) and 120 to 150 watts (41%).

• About one-half of NYS (52%), Ohio (48%), and Houston (48%) respondents were aware of light emitting diodes (LEDs). LED awareness in NYC stood at 34%, significantly lower than in NYS and Houston, but not significantly different than DC (39%). Fewer than 10% of respondents in any area use LEDs (users include 10% of those familiar with LEDs and 5% overall).

• During the onsite visits, technicians observed LEDs installed in one-percent or less of sockets in each comparison area, including NYS and NYC.

• Although respondents were generally less aware of LED holiday lights than LEDs overall, they were also more likely to report using them. However, the evaluators note that the survey asked specifically about LED holiday lights but did not include specific questions about other household LED applications (e.g., nightlights, flashlights, etc.). Furthermore, the survey was taken just after the Christmas holiday and may also have contributed to recent memories of using LED holiday lights.
CONCLUSIONS AND RECOMMENDATIONS

The results presented in the RDD and onsite survey report suggest that NYSERDA’s New York Energy SmartSM Products Program has succeeded in moving the market for CFLs towards transformation in both NYS and NYC, but there is still untapped potential for energy savings with CFLs in NYSERDA territory. Even though CFL shipments to the United States have dropped from peak levels since 2007 and a national economic downturn has created sluggish sales of all retail products, including CFLs, the results indicate that the percentage of respondents in NYS and NYC using CFLs—and the number of CFLs they have installed in their homes—increased over the course of the year. The onsite results indicate that more NYC households purchased CFLs in the last three months of 2008 than NYS households, but the number of CFLs purchased in the two areas was statistically similar. This may be due to differences in the purchase rates and housing unit size—more NYC households buy CFLs, but in fewer numbers because the housing units are smaller. A greater percentage of households in NYS and in NYC used CFLs than in their respective comparison areas. The percent of current CFL users is similar between NYS (84%) and both NYC (79%) and Ohio (82%), but the average number of CFLs installed in NYS (11.3) is significantly higher than that in NYC (7.4) and Ohio (8.9). Still, the majority of respondents bought more incandescent bulbs, on average, than CFLs, indicating that CFLs are not yet the standard lighting choice. The vast majority of CFLs purchased in 2008 by onsite participants in NYS (79%) and NYC (82%) were purchased from a non-participating retailer. In NYS, one-half of all CFLs purchased in the past year were purchased from non-participating home improvement stores—30% from Home Depot and 20% from Lowes. In NYC, over one-half of CFLs purchased in the past year were purchased from Home Depot (33%) or Costco (18%). The majority of RDD survey respondents also report purchasing CFLs from home improvement and mass merchandise retailers.

Based on the findings from the RDD and onsite surveys summarized above and others discussed in the full body of this report, the following conclusions and recommendations emerge. Additional conclusions and recommendations have been developed from the multi-state modeling effort and the process evaluation which have been presented under separate cover.

Conclusion: Until the CFL Expansion Fast Track program was started, most of NYSERDA’s resources for CFLs have gone toward retailer support and consumer education rather than incentives. In the NYSERDA territory, the vast majority of consumers know that CFLs exist; consumer awareness was 91% in NYS and 79% in NYC. However, a smaller number of consumers are very familiar with CFLs (31% NYS and 28% NYC).

Recommendation: Consider outreach messaging to CFL users that encourages additional purchases of CFLs, rather than improving consumer awareness. Future marketing campaigns may want to educate committed current CFL users on the benefits of further increasing the number of sockets in which they have installed CFLs.

Conclusion: Many NYSERDA territory households use CFLs, but not nearly as many as could. The onsite survey found that 84% of NYS households and 79% of NYC households used CFLs. One in five sockets in NYS (19%) and NYC (21%) contains a CFL, based on the results of the onsite saturation studies. The remaining available potential opportunity for CFLs or LEDs in NYS is 70% of all sockets, of which the majority are small- or medium-base screw-in sockets and adhere to the standard A-shape profile, into which an A-shaped or many spiral shaped CFLs could be installed.

Recommendation: Continue to incentivize products to encourage consumers to purchase CFLs. The multi-state modeling effort suggests that once households start using CFLs, they largely will continue to do so.
**Conclusion:** Most households in NYC preferred to keep light bulbs (of any type) on hand, rather than buy them as they burn out—the bulbs on hand are the ones that will be used when one burns out. Most households in NYS and NYC (72% each) did not have any CFLs in storage; across all NYSERDA territory, households had an average of about one CFL in storage and 91% of respondents said they would keep the stored CFLs on hand for future use.

**Recommendation:** Continue incentives for multipacks of CFLs in the selection of program offerings at retailers, so that households can easily have extra CFLs available. Because most consumers prefer to keep bulbs on hand, if they can reach for a CFL without making a special trip to a retailer, they will be more likely to use one the next time a bulb burns out.

**Recommendation:** To capture program savings from CFLs in multipacks immediately, consumer outreach can also educate consumers about the value of replacing incandescents right away, rather than waiting for them to burn out.

**Conclusion:** Specialty bulbs comprise a small but important portion of the remaining CFL potential in households in NYS and NYC. In NYS, the greatest potential for CFLs is in replacing standard A-shaped incandescent bulbs (38%), but the potential to replace bullet-shaped incandescent bulbs is also notable (17%). In NYC, the greatest potential for CFLs is also in replacing standard A-shaped incandescent bulbs (34%) and the potential to replace globe (10%) and bullet-shaped (13%) CFLs is also notable. Spiral shaped CFLs often fit in sockets that contain A-shaped bulbs, so an A-shaped CFL is not always required to replace an A-shaped incandescent.

**Recommendation:** Consider increasing support of more specialty bulbs, while still including standard CFLs in the mix of products incentivized by the CFL Expansion Program.
Section 1

INTRODUCTION

The New York Energy SmartSM Products Program partners with retailers and manufacturers to increase the supply of and demand for energy efficient ENERGY STAR® products within NYSERDA’s service territory. The Program currently partners with more than 930 retailers and 34 manufacturers of various energy efficient ENERGY STAR products, including compact fluorescent lamps (CFLs). Current program efforts include working with retailers by providing staff training, point-of-purchase materials for stores, financial assistance with marketing and promotional efforts, and market share incentives. The CFL Expansion Fast Track Energy Efficiency Portfolio Standard Program (hereafter CFL Expansion Program or simply the Program) will: increase marketing and co-op advertising promotions with retail stores and lighting manufacturers; continue to increase the network of retail partners and manufacturers; increase consumer accessibility to a wider variety of CFLs by providing incentives to retailers to increase the number of CFLs sold and increase permanent shelf space for these products; increase in-store promotions and point-of-purchase information to educate consumers; increase participation in the CFL Collection Center Program; and promote the manufacture, sale, and usage of high power factor CFLs.

Through the CFL Expansion Program, it is estimated that 16.9 million CFLs will be installed within SBC territory between 2009 and 2011, saving approximately 1,083,861 MWh. Of the estimated 16.9 million CFLs sales the program will impact, 37% (approximately 6,775,701 CFLs) will be purchased as a result of direct program incentives and 63% (approximately 10,151,815 CFLs) of the bulbs will be purchased as spillover from program marketing, outreach, and education efforts.

NMR Group (NMR) is conducting an impact evaluation of the CFL Expansion Program; NMR is part of the Market Characterization and Assessment team led by Summit Blue Consulting. APPRISE Incorporated managed the data collection efforts. The goals of the CFL Expansion Program evaluation are to assess 1) the extent to which program support engenders more sales than are directly supported by the program; 2) how much remaining potential there is for replacing incandescent bulbs with CFLs; 3) how much net savings are being achieved by the program; 4) the sustainability of program savings; and 5) how to modify the current and future program to maximize cost-effective net savings from efficient residential lighting.

Changes in the national CFL market present one challenge of assessing the impact of the CFL Expansion Program on sales. As shown in Table 3, national CFL shipments increased dramatically in 2006, and even more dramatically in 2007, before falling off in 2008; the implication is that households in the US bought—and likely used—three to four times more CFLs in 2007 and 2008 than they did in 2004.

Table 3: CFL Shipments to U.S.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Units</th>
<th>Adjusted for Non-Residential Applications1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>93,475,116</td>
<td>82,258,102</td>
</tr>
<tr>
<td>2005</td>
<td>101,772,949</td>
<td>89,560,195</td>
</tr>
<tr>
<td>2006</td>
<td>184,686,594</td>
<td>162,524,203</td>
</tr>
<tr>
<td>2007</td>
<td>397,128,692</td>
<td>349,473,250</td>
</tr>
<tr>
<td>2008</td>
<td>337,485,972</td>
<td>296,987,655</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Commerce

1 Shipment data in the second column include CFLs installed in commercial applications; the estimates in this third column include only those estimated shipments that will be installed in residential applications.
During the same time period, there was a shift in the areas of the country where CFLs were being sold. While CFL sales were historically higher in states or areas with CFL incentive programs, research conducted in California suggests that recent CFL sales in non-program comparison areas have been as great as or greater than those in California. The California researchers have developed a number of hypotheses to explain these findings (see Cadmus et al 2009 for details), but preliminary analyses point toward the following explanation (quoted verbatim)

Erosion of Incremental Market Effects over Time (Spillover Hypothesis). California's programs may have caused market effects in both California and nationally in the past but, at this point, sales and awareness in the national market are very similar to conditions observed in California. Therefore, the California programs are likely no longer generating incremental market effects beyond any positive net impacts they may be generating, and any differences between California and other states have largely eroded.

In short, non-program states may be in the process of “catching up” to the level of sales and CFL use in program states. CFL sales in places with historic incentive programs may have leveled off as the market in those areas was transformed, while CFL sales have increased in those states without programs or with recently implemented programs as more people become aware of and adopt the technology. However, more rigorous testing involving a diversity of states is needed to confirm this hypothesis.

New York, however, is rather different from other program states, in that, until now, most of its resources for CFLs have gone toward retailer support and consumer education rather than incentives. Hence, for some purposes, it is useful to consider this current study as a baseline for the Program before the CFL Expansion Program took effect in the Spring of 2009. The evaluation may also be used to assess the effects of the 2008 Program prior to the implementation of the CFL Expansion Program through the multistate effort to model CFL sales and use. It is also possible that NYSERDA’s prior emphasis on retailer support and consumer education rather than incentives may make New York an “in-between state” in terms of program effects.

Given the likely changes in the national CFL market, the evaluators determined that in order to understand the impact of the CFL expansion program on CFL sales and usage, an understanding of how New York compares to non-program areas in terms of CFL awareness, use, and sales, among other related factors was first needed. Furthermore, New York City (NYC) differs from New York State, less Nassau and Suffolk Counties and New York City (hereafter NYS) in key ways that suggest it should be considered separately from the remainder of the state. The evaluation, therefore, includes a number of tasks in which NYS and NYC are compared to each other and to additional geographic regions in the United States.

This report summarizes the results of two related evaluation tasks in the CFL Expansion Program Evaluation—random digit dial (RDD) telephone surveys and onsite saturation studies of NYS and NYC households as well as those in the three comparison areas of Ohio, Houston, TX, and the District of

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5 In addition to this random digit dial (RDD) survey, other tasks include the conducting of on-site saturation studies at a subset of homes identified through the RDD survey and performing higher level statistical modeling on CFL usage and sales from multiple states and areas both with and without programs.
Columbia (DC). The evaluators chose the comparison areas based on their similarities to NYS (Ohio) and NYC (Houston and DC) on a number of key socioeconomic and demographic factors, recognizing that important differences nevertheless exist between New York and the selected comparison areas. The draft results of a complementary task—the multistate modeling effort—were delivered on November 24, 2009, to NYSERDA. The task included analyses that statistically controlled for these differences among areas through the use of regression analysis in an attempt to explain what drives CFL sales in New York and beyond. After NYSERDA has reviewed the multistate modeling report, the evaluation team will provide a joint summary report that highlights the key findings of the RDD survey, the onsite saturation study, and the multistate modeling effort.

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Section 2

METHODOLOGY

This section of the reports summarizes survey design and implementation, sample frames, sampling error, and the analysis approaches used, including tests for statistical significance and power for a random digit dial (RDD) telephone survey conducted in New York State, less Nassau and Suffolk Counties and New York City (hereafter NYS), New York City (NYC), Ohio, Houston, TX, and the District of Columbia (DC).

2.1 RANDOM DIGIT DIAL SURVEYS

The evaluators fielded a random digit dial (RDD) survey in each of the five areas in an effort to ascertain their level of awareness and familiarity with CFLs and LEDs as well as historical and recent experiences using and purchasing CFL and LEDs. The RDD survey also allowed the evaluation team to recruit participants for the onsite saturation studies.

2.1.1 Survey design and implementation

Braun Research conducted the RDD telephone survey under the direction of APPRISE, The New York State Energy Research and Development Authority’s (NYSERDA’s) data collection contractor. The evaluation team designed the survey instrument to be comparable with the survey instruments from California for purposes of future comparative analysis in addition to that presented in this report (the Appendix includes the survey questionnaires). To ensure comparability among the five areas being examined in this study, the survey questions and responses were nearly identical across geographic areas, although individual questions and responses were tweaked to suit the particular state or city. The evaluation team pre-tested the survey prior to fielding to ensure that all questions were understandable and that all survey skip patterns were properly programmed. The telephone interviewers received training on the survey questions and procedures. During the training, interviewers conducted mock interviews so that they became completely familiar with the survey instrument prior to fielding with actual respondents. APPRISE and NMR Group, Inc. (NMR) research staff monitored interviews throughout the field period to ensure that interviewers were effective in collecting the data and coding the survey responses. In addition, Braun Research conducted on-going monitoring to assess the quality of work by all interviewers. The survey was translated into Spanish for use in the NYC and Houston samples. The evaluation team implemented the NYS and NYC surveys from December 12, 2008 through January 20, 2009, and the Ohio, Houston, and DC surveys from January 9 through February 1, 2009.

2.1.2 Sample Frames, design and sampling error

The RDD survey sample frames for each of the five locations were provided by Survey Sampling International (SSI). The NYS frame included all counties of New York excepting those on Long Island (i.e., Nassau and Suffolk Counties) and in NYC. The NYC frame included the five boroughs of the City. The DC frame included only the District of Columbia. The Houston frame included all of Harris County. The Ohio frame included the entire state excluding area codes 513 and 283. These area codes cover the Duke Power service territory where a separate CFL program is being implemented.

The random digit sampling procedure provides representation of both listed and unlisted (including not-yet-listed) numbers by random generation of the last two digits of telephone numbers selected on the basis

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7 Please note that lighting program sponsors in Connecticut, Massachusetts, Michigan, and Wisconsin are also fielding comparable surveys in the summer of 2009 collectively covering the states of Connecticut, Indiana, Maryland, Massachusetts, Michigan, and Wisconsin.
of their area code, telephone exchange (the first three digits of a seven digit number), and bank number (the four and fifth digits). Telephone exchanges are selected with probabilities proportionate to their size by county and by exchange within county. Only working banks of telephone numbers were selected. A working bank is a group of 100 contiguous telephone numbers that contain at least one working residential listing. Using working banks improves the efficiency of the sample in locating households and it provides the opportunity for households with numbers in a new exchange to be included in the sample.

The sample was released for interviewing in replicates, which are random subsamples of the larger sample. Using replicates controls the release of sample to ensure that all released sample numbers receive the full call procedures and to maintain appropriate regional distribution of called numbers. Interviewers had a minimum effort requirement of at least two daytime, evening, and weekend phone calls per sample telephone number. If the interviewer reached an answering machine at the number dialed, he/she left a message on the first contact and on every third contact thereafter.

The evaluation team relied on simple random sampling at the state or city level when conducting the survey. They set no quotas for utility service territories within New York or any other states or cities. The sampling precision at the 90% confidence level, assuming a proportion of 50%, for NYS was 2.8%, while the sampling precision for Ohio, NYC, DC, and Houston was 3.7% (Table 4). The sampling precision for comparisons between NYS and Ohio was 4.6% and between NYC and either DC or Houston was 5.2%. Although the team did not set quotas for individual utility service territories, Table 4 presents the sampling precision for each, and they range from about 5% for the National Grid service territory to 16% for the Orange and Rockland service territory.

Table 4: CFL Expansion Program Random-Digit Dial (RDD) Survey Specifics

<table>
<thead>
<tr>
<th>Target Group</th>
<th>Estimated Population Size</th>
<th>Sample Size</th>
<th>Sampling Precision (90% confidence)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households in National Grid service territory</td>
<td>1,371,754</td>
<td>440</td>
<td>3.9%</td>
</tr>
<tr>
<td>Households in NYSEG service territory</td>
<td>620,660</td>
<td>284</td>
<td>4.9%</td>
</tr>
<tr>
<td>Households in O&amp;R service territory</td>
<td>168,720</td>
<td>29</td>
<td>15.5%</td>
</tr>
<tr>
<td>Households in CHG&amp;E service territory</td>
<td>102,758</td>
<td>68</td>
<td>10.0%</td>
</tr>
<tr>
<td>Households in RG&amp;E service territory</td>
<td>325,734</td>
<td>91</td>
<td>8.7%</td>
</tr>
<tr>
<td>Households in Con Edison (not NYC)</td>
<td>337,142</td>
<td>55</td>
<td>11.2%</td>
</tr>
<tr>
<td>Total NY less NYC &amp; Long Island (NYS)</td>
<td>2,926,768</td>
<td>967a</td>
<td>2.8%</td>
</tr>
<tr>
<td>Households in Ohio</td>
<td>4,445,773</td>
<td>501</td>
<td>3.7%</td>
</tr>
<tr>
<td>NYS compared to Ohio or NYC</td>
<td></td>
<td></td>
<td>4.6%</td>
</tr>
<tr>
<td>Households in New York City</td>
<td>3,021,588</td>
<td>502</td>
<td>3.7%</td>
</tr>
<tr>
<td>Households in Washington, DC</td>
<td>248,338</td>
<td>500</td>
<td>3.7%</td>
</tr>
<tr>
<td>Households in Houston</td>
<td>717,945</td>
<td>503</td>
<td>3.7%</td>
</tr>
<tr>
<td>NYC compared to DC or Houston</td>
<td></td>
<td></td>
<td>5.2%</td>
</tr>
</tbody>
</table>

1 Proportion of 50%

a An additional 34 households were surveyed in areas served by municipal utilities and electric coops, but the team lacked a population estimate for those areas.

Table 5 through Table 9 list the disposition of all telephone numbers contacted by state or city as part of this study. Table 10 reports the final response rates for NYS, NYC, and each of the comparison areas. The response rates ranged from a low of 26% in NYC to a high of 35% in Houston. The lower response rate in NYC compared to other areas appears to be due to a larger than usual number of non-completed surveys (i.e., surveys that were started but the respondent refused to complete).
### Table 5: RDD Survey Sample Disposition: NYS

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>1001</td>
<td>25%</td>
</tr>
<tr>
<td>Partial</td>
<td>56</td>
<td>1%</td>
</tr>
<tr>
<td>Contacted</td>
<td>1,418</td>
<td>36%</td>
</tr>
<tr>
<td>Refused</td>
<td>578</td>
<td>15%</td>
</tr>
<tr>
<td>Not Completed</td>
<td>915</td>
<td>23%</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>2</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Total</td>
<td>3,970</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Table 6: RDD Survey Sample Disposition: Ohio

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>501</td>
<td>21%</td>
</tr>
<tr>
<td>Partial</td>
<td>31</td>
<td>1%</td>
</tr>
<tr>
<td>Contacted</td>
<td>733</td>
<td>31%</td>
</tr>
<tr>
<td>Refused</td>
<td>306</td>
<td>13%</td>
</tr>
<tr>
<td>Not Completed</td>
<td>829</td>
<td>34%</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>2,400</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Table 7: RDD Survey Sample Disposition: NYC

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>502</td>
<td>21%</td>
</tr>
<tr>
<td>Partial</td>
<td>33</td>
<td>2%</td>
</tr>
<tr>
<td>Contacted</td>
<td>867</td>
<td>36%</td>
</tr>
<tr>
<td>Refused</td>
<td>509</td>
<td>21%</td>
</tr>
<tr>
<td>Not Completed</td>
<td>489</td>
<td>20%</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>2,400</td>
<td>100%</td>
</tr>
</tbody>
</table>

### Table 8: RDD Survey Sample Disposition: DC

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>500</td>
<td>21%</td>
</tr>
<tr>
<td>Partial</td>
<td>41</td>
<td>2%</td>
</tr>
<tr>
<td>Contacted</td>
<td>706</td>
<td>29%</td>
</tr>
<tr>
<td>Refused</td>
<td>174</td>
<td>7%</td>
</tr>
<tr>
<td>Not Completed</td>
<td>979</td>
<td>41%</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>2,400</td>
<td>100%</td>
</tr>
</tbody>
</table>
Table 9: RDD Survey Sample Disposition: Houston

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Complete</td>
<td>503</td>
<td>21%</td>
</tr>
<tr>
<td>Partial</td>
<td>43</td>
<td>2%</td>
</tr>
<tr>
<td>Contacted Refused</td>
<td>700</td>
<td>29%</td>
</tr>
<tr>
<td>Not Completed</td>
<td>212</td>
<td>9%</td>
</tr>
<tr>
<td>Excluded Unusable Number</td>
<td>939</td>
<td>39%</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>3</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Total</td>
<td>2,400</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 10: Response Rates for the RDD Telephone Survey by Comparison Area

<table>
<thead>
<tr>
<th></th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Interview</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
<tr>
<td>Eligible Sample Size</td>
<td>3,053</td>
<td>1,571</td>
<td>1,911</td>
<td>1,421</td>
<td>1,458</td>
</tr>
<tr>
<td>Response Rate</td>
<td>32.8%</td>
<td>31.9%</td>
<td>26.3%</td>
<td>35.2%</td>
<td>34.5%</td>
</tr>
</tbody>
</table>

2.2  **ONSITE SATURATION STUDIES**

Although the RDD survey method provides vital information to the impact evaluation, the approach is prone to respondent self-report error. Respondents often have a difficult time providing accurate on-the-spot estimates of their CFL use, storage, and purchases. For this reason, the team paired the RDD survey method with an onsite saturation study in which a trained technician visited respondents’ homes and recorded the total number of lighting sockets in the home, the number of CFLs in use, and the number of CFLs in storage. The technician also asked when the respondent purchased each individual CFL found in the home. While the method still relied on customer self-report for purchase behavior, it was generally a more accurate approach as the respondent had more time to think about their answer and the visual cue of looking at a specific CFL increased their ability to provide a reliable date of purchase.

2.2.1  **Recruitment**

After completing the telephone survey, the RDD survey respondents were offered an incentive to participate in an onsite visit to their homes. Table 11 provides a summary of the number of onsite visits completed in each area and the incentive offered to participants. The evaluation team has found that survey cooperation rates in large metropolitan areas are lower than in other regions, to encourage greater willingness to participate in the onsite survey, larger incentives were offered in NYC and DC.

Table 11: Response Rates for the Onsite Saturation Study

<table>
<thead>
<tr>
<th></th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentive</td>
<td>$100</td>
<td>$100</td>
<td>$150</td>
<td>$150</td>
<td>$100</td>
</tr>
<tr>
<td>Number of Onsites</td>
<td>203</td>
<td>98</td>
<td>100</td>
<td>97</td>
<td>99</td>
</tr>
<tr>
<td>Eligible Sample Size</td>
<td>1,001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
<tr>
<td>Response Rate</td>
<td>20.3%</td>
<td>19.6%</td>
<td>19.9%</td>
<td>19.4%</td>
<td>19.7%</td>
</tr>
</tbody>
</table>
2.2.2 Onsite Visit Data Collection

Evidence from previous studies has shown that RDD survey respondents’ self-reported information on the number of CFLs purchased or installed in their homes is often inaccurate and can benefit from calibration based on on-site home surveys conducted by trained professionals.\(^8\) In self-reporting recent CFL purchases, RDD survey respondents can have a tendency to overestimate, perhaps reflecting a social desirability bias.\(^9\) Therefore, in addition to the telephone survey, the onsite saturation survey was used to validate the reliability of self-reported data from the telephone survey.

The on-site data collection instrument was designed to collect detailed information on each socket in the home. Information collected included:

- Bulb type
- Wattage
- Application
- Socket type
- Room location
- Specialty features
- Hours and frequency of use\(^{10}\)

For CFLs, the model numbers of installed CFLs were also collected and respondents were asked the time of year and store where they purchased each CFL.

Table 12 shows the final sample sizes and the associated error margin at the 90% confidence level for each of the onsite saturation samples and for comparisons between areas (e.g. when NYS is compared to Ohio or NYC).

<table>
<thead>
<tr>
<th>Target Group</th>
<th>Estimated Population Size</th>
<th>Sample Size</th>
<th>Sampling Precision (90% confidence)(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total NY less NYC &amp; Long Island (NYS)</td>
<td>2,926,768</td>
<td>203</td>
<td>5.8%</td>
</tr>
<tr>
<td>Households in Ohio</td>
<td>4,445,773</td>
<td>98</td>
<td>8.3%</td>
</tr>
<tr>
<td>NYS compared to Ohio or NYC</td>
<td></td>
<td></td>
<td>10.1%</td>
</tr>
<tr>
<td>Households in New York City</td>
<td>3,021,588</td>
<td>100</td>
<td>8.2%</td>
</tr>
<tr>
<td>Households in Washington, DC</td>
<td>248,338</td>
<td>97</td>
<td>8.4%</td>
</tr>
<tr>
<td>Households in Houston</td>
<td>717,945</td>
<td>99</td>
<td>8.3%</td>
</tr>
<tr>
<td>NYC Compared to DC or Houston</td>
<td></td>
<td></td>
<td>11.7%</td>
</tr>
</tbody>
</table>

\(^1\)Proportion of 50%

2.3 DATA ANALYSIS PROCEDURES

Since RDD surveys tend to under-represent certain parts of this target population (e.g., households containing only young adults, households with household heads with high school education or less, and single person households), relative weights were developed to furnish results that are consistent with the

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\(^10\) These data were collected in case NYSERDA had future use of them, but, because they also suffer from substantial self-report error, we have not summarized hours of use data in this report.
geographic and demographic distribution of households in these areas. The population parameters used to calculate the weights were derived from the American Community Survey (ACS).\textsuperscript{11}

Weighting the data is an important means of mitigating the effects of differential non-response by geographic or demographic group and the inability of RDD samples to include households that have no other telephone besides cell phones. Current data indicates that 14.8\% of American households are cell-phone only households.\textsuperscript{12} These cell phone only households are more likely to contain younger adults and to be single adult households. The weighting is intended to represent these types of households more appropriately, balance the sample, and bring it into alignment with population parameters on geographic location, household member age, highest level of education by head of household, and household size.

The weighting for the NYS and NYC studies was calculated in two stages: a geographic weight and a demographic weight. These two weights were calculated separately but then combined into one final weight. The Ohio, DC, and Houston studies included only a demographic weight. As cities, there was no way to subgroup the DC and Houston studies to create geographic weights. For Ohio, an exploratory analysis of the rural versus urban areas of the state showed no significant differences in sample distribution from the actual population distribution and negated the need to create a geographic weight. The following procedures were employed:

- **Geographic Weight: NYS and NYC Studies Only**
  - Counties were combined into regions based on NYSERDA New York Energy Smart\textsuperscript{SM} Community Regions.
  - The population parameter for the geographic weighting was developed using household counts by county from ACS 2005-2007 three year average data. Schuyler and Hamilton counties were accepted from this process. Data for these counties is from 2000 Census.
  - Geographic weights were created to bring the sample distribution across regions into alignment with distribution of households across regions.

- **Demographic Weight: All Studies**
  - Demographic data on the ages of adult household members, highest level of education of the household head, and household size were obtained from ACS 2007 data.

- **Complete Weight**
  - The sample data were weighted with a geographic weight described above for only the New York State and New York City studies. The weighted sample distribution was compared on demographics (i.e., age, education, household size) to population parameters. A demographic weight was calculated to bring sample distributions into alignment with population parameters. The weight at this stage is the geographic weight multiplied by the demographic weight.
  - The weights were trimmed so no individual case had too much impact on weighted data.\textsuperscript{13}

\textsuperscript{11} Bureau of the Census. *American Community Survey.* <http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ACS&_submenuId=datasets_2&_lang=en>


\textsuperscript{13} When weights are calculated iteratively based on several characteristics, sometimes a few respondents (because their unique configuration of characteristics may be unusual) will end up requiring larger weights than the other respondents. For example, the vast majority of cases will have weights that run between one and three, but a few respondents require weights of eight or more. The responses of these few cases would have a very large influence on than resulting weighted data. Therefore, we trim their weight back to three or four, bringing them in line with
The evaluators also applied a similar weighting scheme to the onsite data, correcting for demographics and geography to make them more comparable with those of the state or city.

The survey data were analyzed using the Statistical Package for Social Sciences (SPSS)\textsuperscript{14} and Excel. The team conducted exploratory data analysis on all variables, producing descriptive statistics such as means and proportions based on the type of question being summarized. RDD survey results are reported for all five comparison areas as well as individual utility service territories within NYS, while onsite saturation study results are reported for only the five comparison areas. The evaluators also tested for both Type I (statistical significance at the 90\% confidence level) and Type II (statistical power of 80\%) and denoted in tables those comparisons that achieved significance of 90\% and/or power of 80\%. More specifically, the team tested for the so-called “Type I Error” in which one concludes a difference exists between two groups when it really does not (\textit{i.e.}, in statistical language, rejects the null hypothesis when it should be accepted) by using the following formulas:

\[
(Abs \ p_1 - p_2) > 1.645 \sqrt{\frac{(p_1(1-p_1))/n_1) + (p_2 (1-p_2))/n_2)} (\text{for differences between proportions})
\]

The formula for determining whether the difference between two means is significant at the 90\% confidence level is as follows:

\[
\frac{Abs(mean_1-mean_2)}{\sqrt{\frac{(sd_1^2 /n_1) + (sd_2^2 /n_2)}}} > 1.645 (\text{for differences between means})
\]

The team also tested the probability of the so-called “Type II Error” in which one concludes no difference exists, when, in reality, there is a difference (\textit{i.e.}, accepts the null, when it should be rejected).\textsuperscript{15} This probability is determined by the statistical power of the data, such that the probability of a Type II error is denoted as \(\beta\) and the statistical power is 1- \(\beta\) (note that the probability associated with the Type I error is denoted as \(\alpha\) and 1- \(\alpha\) is the confidence level). One way of improving statistical power and thus reducing the chances of a Type II error is to increase sample size, but this step can actually increase the chance of a Type I error because small differences achieve statistical significance when sample sizes are large. From a practical standpoint, larger sample sizes also increase the costs of conducting a study. Therefore, applied social and behavioral researchers commonly accept 80\% as a desirable level of statistical power (or 20\% probability of Type II error), which generally allows for reasonable sample sizes that do not lead to overly sensitive tests of statistical significance for Type I errors at the 90\% confidence level.\textsuperscript{16}

Note that tests for statistical significance and power were performed for all comparisons between NYS with Ohio and NYC, and NYC with DC and Houston, but the team only tested significance and power for the key results for utility service territories and within NYS. Statistical power was determined using the G Power Program (Version 3).\textsuperscript{17} In text, the team states whether comparisons achieved statistical significance, but results for tests of statistical power are noted only in tables.

\[\text{References}\]

\textsuperscript{14} SPSS Inc. (2008) \textit{Statistical Package for Social Sciences 16.0}. SPSS, Inc: Chicago, IL.

\textsuperscript{15} The evaluation team wishes to acknowledge the thoughtful and careful attention that Richard Ridge paid to the issue of statistical power. His efforts have greatly informed the discussion on this subject.


Section 3

DIFFERENCES BETWEEN THE RDD AND ONSITE SURVEYS

NMR observed notable differences between the random digit dial (RDD) and on-site surveys in reported compact fluorescent lamp (CFL) usage, storage, and purchases. As a result of these differences, NMR determined that the on-site observed data would provide more credible and reliable estimates of CFL counts. Below is a detailed discussion of these differences between the two samples that led to this determination. The data are shown unweighted to provide a more straightforward, “apples to apples” comparison. The evaluation team focuses mainly on the differences observed in New York State (less New York City and Nassau and Suffolk Counties, hereafter NYS) and New York City (NYC), but addresses differences in the three other comparison areas as well.18

3.1 CURRENT USAGE OF CFLS

The evaluators compared the onsite and RDD survey data by examining the average reported usage and developing graphs that plot respondents’ RDD survey response and the number of CFLs found onsite. As Figure 1 shows, the average onsite participant in NYS, Ohio, NYC, and DC underreported the number of CFLs currently installed in their homes and onsite participants in Houston overreported the number of CFLs installed in their homes. The gaps in reporting were large—in both NYS (onsite was 11.3 CFLs and RDD was 6.8 CFLs) and in NYC (onsite was 7.4 CFLs and RDD was 4.4 CFLs).

Turning to household level results reveals more nuanced patterns. The scatter plots shown in Figure 2 through Figure 6 suggest that NYS and NYC respondents provided more reliable estimates of current use during the RDD survey than did those in the three comparison areas. This conclusion is based on the fact that the fitted lines are relatively steeper for NYC and, especially, NYS and the individual data points for the two states exhibit less deviation from the fitted line than in the other areas.19

---

18 Due to the relatively low incidence of CFLs found in storage during the onsite saturation study the discussion of the differences between the two samples is included in Appendix C.

19 The team forced these fitted line in the scatter plots in this section to have an intercept of zero (i.e., to cross the x and y axes at zero) because use and purchases cannot go below zero. However, this action means that the slope of the line (equivalent to the explained variance or R² of a regression model) is no longer a valid measure, so it is not presented here.
Figure 1: Mean CFL Usage
(Based on all onsite participants)

<table>
<thead>
<tr>
<th></th>
<th>RDD</th>
<th>RDD</th>
<th>RDD</th>
<th>RDD</th>
<th>RDD</th>
<th>RDD</th>
<th>RDD</th>
<th>RDD</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>6.8</td>
<td>11.3</td>
<td>5.9</td>
<td>8.9</td>
<td>4.4</td>
<td>7.4</td>
<td>3.5</td>
<td>4.9</td>
</tr>
<tr>
<td>Ohio</td>
<td>8.8</td>
<td>5.9</td>
<td>8.0</td>
<td>8.9</td>
<td>4.4</td>
<td>7.4</td>
<td>3.5</td>
<td>4.9</td>
</tr>
<tr>
<td>NYC</td>
<td>7.7</td>
<td>6.4</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>6.4</td>
</tr>
<tr>
<td>Current Usage</td>
<td>6.8</td>
<td>11.3</td>
<td>5.9</td>
<td>8.9</td>
<td>4.4</td>
<td>7.4</td>
<td>3.5</td>
<td>4.9</td>
</tr>
</tbody>
</table>
Figure 2: NYS - RDD Reported CFLs Installed by Onsite Observed CFLs Installed (Based on all onsite participants)
Figure 3: Ohio - RDD Reported CFLs Installed by Onsite Observed CFLs Installed
(Based on all onsite participants)
Figure 4: NYC - RDD Reported CFLs Installed by Onsite Observed CFLsInstalled
(Based on all onsite participants)
Figure 5: DC - RDD Reported CFLs Installed by Onsite Observed CFLs Installed
(Based on all onsite participants)
3.2 PURCHASES OF CFLs

To determine estimates of CFL purchases, the RDD survey asked respondents a series of questions about how many CFLs they had bought in the past year (i.e., 2008) and in the past three months (i.e., approximately September through December 2008). In contrast, during the onsite visits, the technician asked respondents when they purchased each CFL found either in storage or in use in the home. The technician then coded the purchase into one of the following time periods:

- During 2009 through August of September, depending on when onsite was completed
- During the last three months of 2008
- During the first nine months of 2008
- Earlier than 2008

Purchases reported in the first nine months of 2008 were combined with purchases in the last three months of 2008 to develop an estimate of total 2008 (past year) CFL purchases.

---

20 The RDD survey asked some questions relative to the time of the survey. All references to “three months ago” refer to a period between September and December 2008, depending on whether the respondent answered the survey in December 2008 or January 2009; similarly references to the “past year” are to 2008. The on-site surveys were conducted after the RDD survey, during August and September of 2009, but the three month period in question remained September to December 2008 and the past year remained 2008 because we asked specifically about those time periods during the onsite surveys.
As Figure 7 demonstrates, onsite participants were unable to accurately report the number of CFLs purchased in the past three months or in the past year. In almost all cases, the number of CFLs reported purchased in 2008 through the RDD survey was higher than the number verified onsite; Houston serves as the one exception, where one-year purchases were verified to be higher onsite than reported in the telephone survey.21 Purchases in the past three months display a divergent pattern, with onsite verified purchases exceeding those reported onsite in all areas except NYS.

Figure 7: Mean CFL Purchases
((Based on all onsite participants)

![Figure 7: Mean CFL Purchases](image)

Table: Mean CFL Purchases

<table>
<thead>
<tr>
<th></th>
<th>Past 3 Month Purchases</th>
<th>Past Year Purchases</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>1.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Ohio</td>
<td>0.6</td>
<td>4.5</td>
</tr>
<tr>
<td>NYC</td>
<td>0.8</td>
<td>3.3</td>
</tr>
<tr>
<td>DC</td>
<td>0.9</td>
<td>3.0</td>
</tr>
<tr>
<td>RDD</td>
<td>0.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Onsites</td>
<td>1.8</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Figure 8 to Figure 12 display scatter plots of RDD survey self-reported and onsite verified CFL purchases in the past year.22 The correspondence between purchase estimates obtained from the RDD and onsite surveys is fairly low in all areas, with NYS, NYC, and DC showing higher levels of agreement between their RDD and onsite survey estimates of purchases in the past year than Houston or Ohio.

---

21 To verify the number of purchases onsite, respondents walked through their homes with the technicians and reported the time period in which they believed the CFLs were purchased. As in the RDD survey, the onsite recall of purchase date is still “self-report” but with a higher level of salience, as the respondent was looking at the CFL when providing the date.

22 The small number of reported purchases in the past three months (i.e., the end of 2008) among onsite participants limited the usefulness of scatter plots of these data, so we have not presented the graphs here.
Figure 8: New York State - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases (Based on all onsite participants)
Figure 9: Ohio - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases
(Based on all onsite participants)
Figure 10: New York City - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases (Based on all onsite participants)
Figure 11: DC - RDD Reported Past Year Purchases by Onsite Reported Past Year Purchases
(Based on all onsite participants)
3.3 RDD VS. ONSITE SURVEY COMPARISON IN OTHER AREAS

The findings presented here for NYS, NYC, and the three comparison areas are not unique, according to preliminary analyses conducted in support of the multistate modeling effort. Analyses from all 16 areas included in that study also find that respondents have a difficult time correctly estimating their CFL use and purchases during telephone surveys. Similar to the findings here, the error in self-reporting tends to be greater for CFL purchases than for CFL use. The evaluators conducting the multistate modeling effort have been attempting to identify patterns that explain the error in self-reported usage and purchases. While the examination is on-going, preliminary results suggest that respondents who self-report higher numbers of purchases exhibit greater error in their estimates (i.e., they usually have purchased fewer CFLs than reported), but the analyses have not yet revealed patterns for error in self-reported use.

Revisions to the multistate modeling report and the summary report of both efforts to be delivered to NYSERDA in late December 2009 or January 2010 will discuss the results of this examination in detail.
Section 4

AWARENESS AND PERCEIVED QUALITY OF CFLS

The evaluation team asked random digit dial (RDD) survey respondents about their awareness and familiarity with compact fluorescent lamps (CFLs), the ENERGY STAR® label, and the presence of the ENERGY STAR label on CFL packages. Respondents aware of the ENERGY STAR label on CFLs also described any differences of which they were aware between labeled and non-labeled CFLs. These questions served two purposes. First, they served as “screeners” for later questions so that those not aware of or at all familiar with CFLs were not asked questions about CFL use or purchases. Second, the questions allowed the researchers to identify differences in awareness of and familiarity with CFLs between the comparison areas that could help to explain findings on usage, storage, purchase behavior, and other issues explored in the study.

The findings indicate that respondents from New York State, less Nassau and Suffolk Counties and New York City (hereafter NYS) were more likely to be aware of CFLs compared to Ohio and New York City (NYC) respondents. Likewise, NYS respondents were also more likely than Ohio respondents to rate themselves as “very familiar” with CFLs. NYC respondents were more likely to be aware of CFLs than were District of Columbia (DC) respondents. NYC respondents are also more likely to rate themselves as “very familiar” with CFLs when compared to both DC and Houston, Texas respondents.

As with CFLs, NYS respondents were more likely to be aware of the ENERGY STAR label than were respondents in Ohio and NYC. In contrast, familiarity with the label was similar between NYC, DC, and Houston. Fewer than 40% of respondents in any of the comparison areas recalled seeing the ENERGY STAR label on CFLs. Significant differences existed only between NYS (39%) and NYC (31%). In general respondents were not aware of differences between ENERGY STAR labeled CFLs and CFLs not having the ENERGY STAR. The few who were aware of differences typically said the ENERGY STAR labeled CFLs were more efficient and had a longer life.

4.1 AWARENESS AND FAMILIARITY WITH CFLS

Table 13 and Figure 13 on the next page summarize RDD survey respondents’ self-reported awareness of and familiarity with CFLs for NYS, NYC, and the three comparison areas of Ohio, DC, and Houston. Turning first to the results from areas served by the New York State Energy Research and Development Authority (NYSERDA), NYS respondents voiced significantly greater awareness of CFLs than NYC respondents. Ninety-one percent of NYS respondents were aware of CFLs while only 79% of NYC respondents were aware of them. Most NYS (70%) and NYC (59%) respondents rated themselves as either “somewhat” or “very familiar” with CFLs. Eighty-six percent of respondents in Ohio were aware of CFLs—a sizable but significantly smaller percentage than in NYS; likewise, significantly fewer Ohio respondents (25%) rated themselves as “very familiar” with CFLs when compared to NYS residents (31%). Compared to NYC, significantly fewer District DC (72%) respondents were aware of CFLs, and significantly fewer respondents from DC (21%) and Houston (21%) were “very familiar” with CFLs (28% in NYC).
Table 13: Awareness and Familiarity with CFLs for NYS, NYC, and Comparison Areas
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Awareness / Familiarity with CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AWARENESS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aware of CFLs</td>
<td>91%</td>
<td>86%ab</td>
<td>79%ab</td>
<td>72%ab</td>
<td>76%</td>
</tr>
<tr>
<td>Not aware of CFLs</td>
<td>9</td>
<td>14</td>
<td>21</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td><strong>FAMILIARITY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very familiar</td>
<td>31%</td>
<td>25%a</td>
<td>28%</td>
<td>21%ab</td>
<td>21%ab</td>
</tr>
<tr>
<td>Somewhat familiar</td>
<td>39</td>
<td>36</td>
<td>31a</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>Not too familiar</td>
<td>14</td>
<td>15</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Not at all familiar</td>
<td>14</td>
<td>23ab</td>
<td>27ab</td>
<td>33a</td>
<td>32a</td>
</tr>
<tr>
<td>Don’t know / refused</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

a Statistically significant at $\alpha = 0.05$, which is the one-tailed test for the 90% confidence level.
b Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

Figure 13: Awareness and Familiarity with CFLs by Comparison Area\(^1\)
(Based on all RDD participants)

Familiar includes those rating themselves as “somewhat” or “very familiar” with CFLs.
In addition to determining awareness and familiarity with CFLs, the survey also asked respondents about their familiarity with the ENERGY STAR label in general and its usage on CFL packaging in particular. In all areas, the percentage of respondents who rated themselves as “very familiar” with the ENERGY STAR label (i.e., rating themselves as an eight or higher on a zero-to-ten scale, where zero is “not at all familiar” and ten is “very familiar”) was higher than the percentage who recalled seeing the label on CFLs (Table 14). The discrepancy was statistically different in NYS, where 51% of respondents rated themselves as “very familiar” with the ENERGY STAR but only 39% recalled seeing the ENERGY STAR label on CFL products. In NYC, where 39% of respondents rated themselves as “very familiar” with the label, only 31% recalled seeing it on CFLs; likewise in DC 39% of respondents rated themselves as “very familiar” with the label but only 27% recalled seeing it on CFLs.

The percentage of NYS respondents who rated themselves as very familiar with CFLs (51%) was statistically higher than those from Ohio and NYC (39% for each). Respondents in DC and Houston reported similar levels of familiarity with the ENERGY STAR label as respondents in NYC. NYC respondents (31%) were less likely than respondents from the rest of NYS (39%) to recall seeing the ENERGY STAR label on CFLs. In Ohio, 38% of respondents had seen the ENERGY STAR label on CFLs, a finding similar to that in NYS. In DC and Houston, 27% and 31% respectively, had seen the ENERGY STAR label on CFLs, similar to the percentage found in NYC.

<table>
<thead>
<tr>
<th>Familiarity with ENERGY STAR Label</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENERGY STAR Label</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very familiar (8 to 10)</td>
<td>51%</td>
<td>39%&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>39%&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>39%</td>
<td>35%</td>
</tr>
<tr>
<td>Somewhat familiar (4 to 7)</td>
<td>27</td>
<td>23</td>
<td>25</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>Not too familiar (1 to 3)</td>
<td>7</td>
<td>12</td>
<td>10</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Not at all familiar (0)</td>
<td>15</td>
<td>26</td>
<td>26</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Don’t know / refused</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>ENERGY STAR on CFLs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has seen label on CFLs</td>
<td>39%&lt;sup&gt;cd&lt;/sup&gt;</td>
<td>38%</td>
<td>31%&lt;sup&gt;abcd&lt;/sup&gt;</td>
<td>27%&lt;sup&gt;cd&lt;/sup&gt;</td>
<td>31%</td>
</tr>
<tr>
<td>Has not seen label on CFLs</td>
<td>25</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Not aware or familiar with CFLs</td>
<td>23</td>
<td>36%</td>
<td>41</td>
<td>43</td>
<td>44</td>
</tr>
<tr>
<td>Don’t know / refused</td>
<td>13</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td><strong>Sample Size</strong></td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

<sup>a</sup> Statistically significant at α = 0.05, which is the one-tailed test for the 90% confidence level. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

<sup>b</sup> Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

<sup>c</sup> Statistically significant at α = 0.05, which is the one-tailed test for the 90% confidence level. Each area compared to itself on being very familiar with the ENERGY STAR label and having seen the label on CFLs.

<sup>d</sup> Statistical power exceeds 80% for one-tailed hypothesis testing. Each area compared to itself on being very familiar with the ENERGY STAR label and having seen the label on CFLs.
Table 15 and Figure 14 summarize the key results related to awareness and familiarity with CFLs, the ENERGY STAR label, and ENERGY STAR labeled CFLs for individual utilities within NYS. Note that the “all others” category includes electric cooperatives and municipal utilities, and the Con Edison Territory excludes NYC, which is presented separately in tables with NYS, Ohio, DC, and Houston. The results indicate that awareness of CFLs exceeded 80% in all parts of the state, while at least 58% or more respondents reported that they were familiar with CFLs. Respondents served by Con Edison (58%) or National Grid (68%) were significantly less likely to be familiar with CFLs than were NYS respondents overall (78%). In most utility service territories, familiarity with the ENERGY STAR label (as indicated by a rating of eight or higher on the same zero-to-ten scale discussed above) exceeded 75%, although it was just 62% in the Orange and Rockland service territory. Fewer than one-half of the respondents in any utility service territory were aware of ENERGY STAR Labeled CFLs.

Table 15: Awareness and Familiarity with CFLs and ENERGY STAR Label by Utility Service Territory
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Awareness / Familiarity with CFLs</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of CFLs</td>
<td>98%ab</td>
<td>83%a</td>
<td>89%</td>
<td>93%</td>
<td>94%</td>
<td>90%</td>
<td>97%a</td>
</tr>
<tr>
<td>Familiar with CFLs¹</td>
<td>79%</td>
<td>58%ab</td>
<td>68%ab</td>
<td>74%</td>
<td>73%</td>
<td>70%</td>
<td>73%</td>
</tr>
<tr>
<td>Familiar with ENERGY STAR label²</td>
<td>85%</td>
<td>78%</td>
<td>80%</td>
<td>80%</td>
<td>62%</td>
<td>77%</td>
<td>88%</td>
</tr>
<tr>
<td>Aware of ENERGY STAR label on CFLs</td>
<td>45%</td>
<td>36%</td>
<td>37%</td>
<td>39%</td>
<td>27%</td>
<td>45%</td>
<td>43%</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

¹ Includes "somewhat" and "very" familiar.
² Includes ratings of four or higher on a zero-to-ten scale, where zero is not at all familiar and ten is very familiar.
a Statistically significant at \( \alpha = 0.05 \), which is the one-tailed test for the 90% confidence level. Compared to NYS.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Compared to NYS.
Figure 14: Awareness and Familiarity with CFLs by Utility Service Territory
(Based on all RDD participants)

<table>
<thead>
<tr>
<th></th>
<th>Aware of CFLs</th>
<th>Familiar with CFLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Hudson G&amp;E</td>
<td>98%</td>
<td>79%</td>
</tr>
<tr>
<td>Con Edison</td>
<td>83%</td>
<td>58%</td>
</tr>
<tr>
<td>National Grid</td>
<td>89%</td>
<td>68%</td>
</tr>
<tr>
<td>NYSEG</td>
<td>93%</td>
<td>74%</td>
</tr>
<tr>
<td>Orange and Rockland</td>
<td>94%</td>
<td>73%</td>
</tr>
<tr>
<td>Rochester G&amp;E</td>
<td>90%</td>
<td>70%</td>
</tr>
<tr>
<td>All Others</td>
<td>97%</td>
<td>73%</td>
</tr>
</tbody>
</table>

Familiar includes those rating themselves as “somewhat” or “very familiar” with CFLs.
4.2 PERCEIVED QUALITY DIFFERENCES IN CFLS

The vast majority of both NYS (90%) and NYC (86%) respondents were not aware of any differences in the quality of CFLs that were or were not labeled with the ENERGY STAR (Table 16). NYC respondents (14%) were more likely to report being aware of differences when compared to NYS (10%), DC (10%), or Houston (8%). The few respondents voicing awareness of differences stated that ENERGY STAR products were more efficient, had longer life, or differed in terms of brightness, quality, savings, and other factors. These differences were reported consistently across the comparison areas. Likewise, at least 84% of respondents in each utility service territory within NYS were not aware of differences between ENERGY STAR labeled and other CFLs (Table 17).

Table 16: Perceived Quality Differences between ENERGY STAR and Other CFLs
(Based on all RDD respondents, multiple response)

<table>
<thead>
<tr>
<th>Perceived Difference</th>
<th>NYS</th>
<th>Ohio</th>
<th>New York City</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of differences</td>
<td>10%</td>
<td>11%</td>
<td>14%</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Not aware of differences</td>
<td>90</td>
<td>89</td>
<td>86ab</td>
<td>91a</td>
<td>93ab</td>
</tr>
<tr>
<td>AWARE OF DIFFERENCES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More efficient</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Longer life</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Brighter light</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Better quality</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Save money</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Misc. quality issues(^2)</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

\(^1\) Includes those who responded “don’t know” or refused to answer the question.
\(^2\) Includes such responses as the delay in starting up and light color.
a Statistically significant at \(\alpha = 0.05\), which is the one-tailed test for the 90% confidence level. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
b Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

Table 17: Perceived Quality Differences between ENERGY STAR and Other CFLs by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Perceived Difference</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of differences</td>
<td>11%</td>
<td>7%</td>
<td>9%</td>
<td>12%</td>
<td>13%</td>
<td>7%</td>
<td>16%</td>
</tr>
<tr>
<td>Not aware of differences</td>
<td>89</td>
<td>93</td>
<td>91</td>
<td>88</td>
<td>87</td>
<td>93</td>
<td>84</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>
Section 5

PRIOR EXPERIENCE WITH AND USE OF CFLS

Prior experience with compact fluorescent lamps (CFLs) likely affects current use and purchase of the products. In order to explore prior experience with CFLs, the team asked the random digit dial (RDD) survey respondents when they first heard about CFLs, if they have ever used CFLs, and, if so, when they first used CFLs.

Most respondents who were aware of CFLs first heard about them through mass media advertisements, a finding that was consistent across all areas included in the study. While these advertisements in New York State, less Nassau and Suffolk Counties and New York City (hereafter NYS), and New York City (NYC) could have been supported by New York State Energy Research and Development Authority (NYSERDA) programs, only a handful of respondents specifically tied the advertising to NYSERDA. Most respondents from NYS and from NYC had used, purchased, and/or received CFLs for free at some point prior to the implementation of this RDD survey. Prior usage of CFLs in NYS was higher than in Ohio or NYC, while NYC prior usage of CFLs was higher than that of the District of Columbia (DC) but not Houston, Texas. Respondents who have used CFLs typically first did so within the past three years; this pattern is the same for all areas examined in this study.

5.1 WHERE FIRST HEARD OF CFLS

Respondents throughout the interstate comparison areas as well as utility service territories within NYS (Table 18 and Table 19) most often first heard about CFLs through an advertisement or in-store display. Within NYS and NYC, these respondents did not directly attribute the advertising to the NYSERDA programs, but NYSERDA may still have sponsored the advertisements and displays through the advertising component of another New York Energy SmartSM program. Two percent of respondents in both NYS and NYC attributed their knowledge of CFLs directly to NYSERDA advertisements. Word of mouth and the utility or electric company were also common sources for respondents’ introductions to CFLs.
Table 18: Where First Heard of CFLs by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisement&lt;sup&gt;1&lt;/sup&gt;</td>
<td>38%</td>
<td>34%</td>
<td>31%ab</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Store Display/Ad&lt;sup&gt;1&lt;/sup&gt;</td>
<td>17</td>
<td>19</td>
<td>13a</td>
<td>11</td>
<td>17a</td>
</tr>
<tr>
<td>Word of Mouth</td>
<td>16</td>
<td>17</td>
<td>15</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>At Work</td>
<td>6</td>
<td>4a</td>
<td>4a</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Utility/Electric Company</td>
<td>5</td>
<td>3a</td>
<td>4</td>
<td>3</td>
<td>2a</td>
</tr>
<tr>
<td>NYSERDA Ad (specific mention)&lt;sup&gt;2&lt;/sup&gt;</td>
<td>2</td>
<td>N/A</td>
<td>2</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Energy Audit</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Internet</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Class, community group, church, fair</td>
<td>1</td>
<td>&lt;1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>All other sources</td>
<td>1</td>
<td>2</td>
<td>5ab</td>
<td>2ab</td>
<td>1ab</td>
</tr>
<tr>
<td>Not aware / not at all familiar with CFLs</td>
<td>16</td>
<td>24ab</td>
<td>28ab</td>
<td>34a</td>
<td>33a</td>
</tr>
<tr>
<td>Don't know/refused</td>
<td>8</td>
<td>5a</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>502</td>
</tr>
</tbody>
</table>

<sup>1</sup> Includes advertising and in-store displays that the respondent did not directly attribute to NYSERDA. However, NYSERDA may have sponsored the ad through its programs.

<sup>2</sup> Respondent directly attributed the advertisement to NYSERDA.

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.

b Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
## Table 19: Where First Heard of CFLs by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Where First Heard</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisement (not store or NYSERDA)¹</td>
<td>42%</td>
<td>33%</td>
<td>38%</td>
<td>38%</td>
<td>42%</td>
<td>38%</td>
<td>37%</td>
</tr>
<tr>
<td>Store Display/Ad¹</td>
<td>8</td>
<td>19</td>
<td>16</td>
<td>20</td>
<td>13</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Word of Mouth</td>
<td>17</td>
<td>10</td>
<td>19</td>
<td>13</td>
<td>10</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>At Work</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Utility/Electric Company</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>9</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>NYSERDA Ad (specific mention)²</td>
<td>0</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Energy Audit</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Internet</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Class, community group, church, fair</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>All other sources</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Not aware / not at all familiar with CFLs</td>
<td>0</td>
<td>14</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Don't know/refused</td>
<td>13</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>22</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

¹ Includes advertising and in-store displays that the respondent did not directly attribute to NYSERDA. However, NYSERDA may have sponsored the ad through its programs.

² Respondent directly attributed the advertisement to NYSERDA.
5.2 PRIOR USE OF CFLS

The evaluation team asked respondents a few different questions about their prior use of CFLs. The team determined not only if respondents had ever purchased a CFL or received one for free, but also if the respondents knowingly had used CFLs inside or outside of the home. In most cases, the percentage responding that they have ever used a CFL on the inside or outside of their home is slightly larger than the percentage who ever bought CFLs or received one for free (Table 20). The source of the differences could be CFLs that were installed at the time the respondent moved into their home.

Comparing across areas, the results indicate that NYS respondents (66%) are significantly more likely than Ohio (54%) and NYC (50%) respondents to report that they have purchased or received CFLs. Likewise, NYS respondents (69%) are also significantly more likely to report having used CFLs at some point when compared to Ohio (58%) and NYC (54%) respondents. The percentage of respondents in DC and Houston (47% each) who have purchased or received CFLs is similar to that in NYC (50%), but NYC respondents (54%) were statistically more likely than DC respondents (47%) to have ever used a CFL. The majority of respondents across utility service areas within NYS have either purchased or been given a CFL bulb (Table 21).

Table 20: Use of CFLs by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th></th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAVE EVER PURCHASED OR RECEIVED CFL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>66%</td>
<td>54%ab</td>
<td>50%ab</td>
<td>47%</td>
<td>47%</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>22</td>
<td>21</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Not aware of CFLs</td>
<td>16</td>
<td>24ab</td>
<td>28ab</td>
<td>34a</td>
<td>33a</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>0</td>
<td>&lt;1</td>
<td>1a</td>
<td>&lt;1a</td>
<td>1</td>
</tr>
<tr>
<td>HAVE EVER USED CFL</td>
<td>69%</td>
<td>58%ab</td>
<td>54%ab</td>
<td>47%a</td>
<td>52%</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

Table 21: Ever Purchased or Been Given a CFL Bulb by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Purchased/Received CFL</th>
<th>Central Hudson G&amp;E</th>
<th>Con-Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>72%</td>
<td>58%</td>
<td>63%a</td>
<td>71%a</td>
<td>68%</td>
<td>62%</td>
<td>77%</td>
</tr>
<tr>
<td>No/Don’t know/ Not Aware of CFLs</td>
<td>28</td>
<td>42%</td>
<td>37</td>
<td>29</td>
<td>32</td>
<td>38</td>
<td>23</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

a Statistically significant at $\alpha = 0.05$, which is the one-tailed test for the 90% confidence level. Compared to NYS.
Half of households in NYS (51%) and 45% in Ohio first started using CFLs within the past three years, with 14% in each state first using CFLs in the past year (Table 22). Significantly more households in Ohio (44%) than NYS (34%) have not yet used a CFL. Likewise, 38% of households in NYC first used CFLs in the past three years, including 13% in the past year. Significantly more NYC households (48%) compared to NYS (34%) have never used CFLs. In contrast, significantly more households in DC (54%) than in NYC (48%) have not yet used a CFL. Forty-three percent of Houston households and 34% of DC households first started using CFLs in the past three years, compared to 38% in NYC.

At least 58% of respondents in all utility service territories used CFLs (Table 23). Respondents in the NYSEG service territory (75%) were significantly more likely than all NYS respondents (66%) to report having used CFLs. Most respondents within NYS service territories started using CFLs within the past three years.

Table 22: History of CFL Use by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Years</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>D.C.</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used CFLs</td>
<td>69%</td>
<td>58%ab</td>
<td>54%ab</td>
<td>47%a</td>
<td>52%</td>
</tr>
<tr>
<td>FIRST USED CFLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never/Don’t know¹</td>
<td>34</td>
<td>44ab</td>
<td>48ab</td>
<td>54a</td>
<td>49</td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>14%</td>
<td>14%</td>
<td>13%</td>
<td>9%a</td>
<td>14%</td>
</tr>
<tr>
<td>1-3</td>
<td>37</td>
<td>31a</td>
<td>25ab</td>
<td>25</td>
<td>29</td>
</tr>
<tr>
<td>More than 3 years</td>
<td>15</td>
<td>12</td>
<td>13</td>
<td>13</td>
<td>9a</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

¹ Includes those who do not know if they have used CFLs and who do not know when first used CFLs.

Table 23: History of CFL Use by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Response</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used CFLs</td>
<td>76%</td>
<td>58%a</td>
<td>66%a</td>
<td>75%ab</td>
<td>75%</td>
<td>65%</td>
<td>79%</td>
</tr>
<tr>
<td>FIRST USED CFLs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never/Don’t know¹</td>
<td>26%</td>
<td>44%</td>
<td>36%</td>
<td>25%</td>
<td>29%</td>
<td>36%</td>
<td>30%</td>
</tr>
<tr>
<td>Less than 1 year</td>
<td>17</td>
<td>10</td>
<td>13</td>
<td>17</td>
<td>21</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>1-3</td>
<td>46</td>
<td>28</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>34</td>
<td>45</td>
</tr>
<tr>
<td>More than 3 years</td>
<td>11</td>
<td>18</td>
<td>15</td>
<td>17</td>
<td>12</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

¹ Includes those who do not know if they have used CFLs and who do not know when first used CFLs.

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
Section 6

LIGHT BULB PURCHASING BEHAVIOR

Section 6 addresses respondents’ light bulb purchasing behavior for both random digit dial (RDD) survey and onsite saturation study respondents. Both are based on a respondents’ self-reported recollection of when they purchased lighting products, but the evaluators believe that the onsite estimates are more accurate, given that the respondent is typically looking at the bulb in the socket (or place of storage) when making the judgment of purchase date, rather than sitting in one location on the phone trying to recall how many lighting products they purchased overall at each time period. The RDD survey results compare incandescent purchases with compact fluorescent lamp (CFL) purchases. The evaluators included questions on incandescent purchasing behavior to see how it compared to that for CFLs, exploring specifically if purchase numbers and the stores at which respondents bought the two types of products differed. The onsite saturation study results focus only on CFL purchases, and the analysis compares RDD self-reported purchases to onsite verified purchases.

In order to establish how RDD respondents handle their lighting purchases, the team first asked if respondents kept a supply of light bulbs on hand (i.e., stored them) or if they bought bulbs only when another burns out. This question applied to all light bulb purchase, not just CFL or incandescent purchases. The respondents indicated that they tend to keep a supply of bulbs on hand rather than purchasing as needed.

Respondents in all regions still stated that they bought more incandescent bulbs, on average, than CFLs, although the rates of CFL purchases in NYS were closer to those of incandescent than in all the other regions.

Most households bought CFLs and incandescent bulbs from home improvement, mass merchandise, and grocery stores. Incandescent bulbs, however, also tended to be purchased from hardware, bargain, and drugstores more frequently than CFLs were.

As discussed in Section 3, the analysis comparing estimates of purchases from the RDD survey and onsite saturation study reveal that respondents typically overestimate their CFL purchases in the RDD survey, sometimes substantially. Because they are generally more reliable, the evaluators prioritized onsite verified estimates of CFL purchases at different time periods. The onsite results presented in Section 6.3 indicate that more NYC households purchased CFLs in the past three months than NYS households, but the number of CFLs purchased in the two areas was statistically similar. This may be due to differences in the purchase rates and housing unit size—more NYC households buy CFLs, but in fewer numbers because the housing units are smaller. NYC households were also more likely than those in Houston and DC to buy CFLs in the past three months and the past year. NYC and NYS respondents were more likely than their counterparts in the other areas to report purchasing large numbers of CFLs (16 to 25 CFLs) in the past three months and the past year. Note that many of these results differ from those self-reported in the RDD survey, in which NYS and Houston respondents generally reported purchasing more CFLs than NYC respondents.
6.1 **LIGHT BULB PURCHASE STRATEGY**

In order to understand RDD survey respondents’ general strategy for purchasing *all* light bulbs—CFLs, incandescent bulbs, and other bulb types—the team asked if they purchased light bulbs as needed or tended to keep some on hand to use as other bulbs burned out. Three-fourths of respondents in NYS and Ohio reported keeping a supply of bulbs on hand (*i.e.*, in storage; see discussion in Section 7.5 on CFL storage in particular). NYC (70%) respondents are less likely to keep a supply of bulbs on hand than NYS respondents (Table 24). Likewise, NYC respondents (70%) were more likely to keep bulbs on hand than were DC respondents (64%). NYC respondents (26%) were statistically more likely than NYS respondents (20%), however, to buy replacements as they burn out. A handful of respondents in all areas (three or four percent) kept some light bulbs on hand but bought others as they burn out.

The majority of respondents, 60% or more, in all utility service territories of NYS kept a supply of light bulbs on hand (Table 25).

**Table 24: Overall Light Bulb Purchase Strategy by Comparison Area**

(Asked about light bulbs in general and is not limited to CFL, incandescent, or any other particular bulb type.

- Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
- Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep a supply on hand</td>
<td>76%</td>
<td>75%</td>
<td>70%a</td>
<td>64%a</td>
<td>70%</td>
</tr>
<tr>
<td>Buy replacements as bulbs burn out</td>
<td>20</td>
<td>21</td>
<td>26ab</td>
<td>30</td>
<td>23</td>
</tr>
<tr>
<td>Both</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Don't Know/Refused</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4ab</td>
</tr>
</tbody>
</table>

Sample Size: 1001 501 502 500 503
Table 25: Overall Light Bulb Purchase Strategy by Utility Service Territory¹
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Habit</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keep a supply on hand</td>
<td>64%</td>
<td>86%</td>
<td>75%</td>
<td>79%</td>
<td>78%</td>
<td>69%</td>
<td>77%</td>
</tr>
<tr>
<td>Buy replacements as bulbs burn out</td>
<td>28</td>
<td>9</td>
<td>22</td>
<td>18</td>
<td>16</td>
<td>24</td>
<td>23</td>
</tr>
<tr>
<td>Both</td>
<td>7</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Don't know/refused</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>&lt;1</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

¹ Asked about light bulbs in general and is not limited to CFL, incandescent, or any other particular bulb type.
6.2 CFLS PURCHASED OVER THE PAST YEAR – RDD SURVEY

RDD survey respondents described the number of CFLs that they purchased in the past three months and over the past year. It is important to note that the number of CFL purchases in the past three months was included in the counts of CFLs purchased in the past year and that these telephone based self-reported estimates are less reliable than the onsite estimates presented below.

The three-month results indicate that significantly more households in NYS (22%) compared to NYC (17%) purchased CFLs within the last three months, but the average number of CFLs purchased in NYS (1.3) is similar to that in NYC (1.1) (Table 26). CFL purchase behavior in the past three months is similar between NYS and Ohio. The three-month CFL purchase rates in NYC (17%) are not significantly higher than those in DC (14%) or Houston (15%), and the average number of CFLs purchased in NYC (1.1) was similar to Houston (0.9) but significantly more than in DC (0.7). The one-year CFL purchase rate (58%) in NYS is significantly higher than in Ohio (47%) and NYC (45%), and the average number of CFLs purchased is also significantly more in NYS (4.7) than in Ohio (3.8) and NYC (3.3). Forty-five percent of NYC households purchased CFLs within the past year, about the same rate as in Houston (44%); however, the average number of CFLs purchased by NYC households (3.3) was significantly fewer than in Houston (4.5).

Table 28 suggests that respondents demonstrated logical consistency in their reporting; extrapolating three month purchases to one year (by multiplying the three month estimate by four) yields yearly estimates that are similar to those that customers directly self-reported purchasing in the year. While similar, the results show that multiplying the three-month estimate out to the year exceeds the self-reported yearly purchases for NYS, Ohio, and especially NYC but falls below the self reports for DC and Houston. In other words, reported purchase rates picked up in NYS, Ohio, and NYC in the quarter prior to the survey when compared to the year as a whole. This quarter was associated with the last three months of the year, frequently a time of greater lighting purchases.\(^23\)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>78%</td>
<td>81%</td>
<td>83%a</td>
<td>86%</td>
<td>85%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>14</td>
<td>12</td>
<td>11a</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>6 to 15</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>2ab</td>
<td>5</td>
</tr>
<tr>
<td>16 to 25</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0a</td>
<td>0a</td>
</tr>
<tr>
<td>More than 25</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>0a</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>1.3</td>
<td>1.1</td>
<td>1.1</td>
<td>0.7a</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Sample Size 1001 501 502 500 503

\(^{23}\) Note that the lack of statistical independence—that is that the respondents were specifically told to factor their three months purchases into the yearly purchase estimates—precludes the team from conducting statistical analyses of the differences in Table 26.
Table 27: CFLs Purchased in the Last Year by Comparison Area¹
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>42%</td>
<td>53%ab</td>
<td>55%ab</td>
<td>63%ab</td>
<td>56%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>21</td>
<td>19</td>
<td>22</td>
<td>18</td>
<td>15ab</td>
</tr>
<tr>
<td>6 to 15</td>
<td>29</td>
<td>22ab</td>
<td>18ab</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>16 to 25</td>
<td>4</td>
<td>5</td>
<td>2a</td>
<td>3</td>
<td>4a</td>
</tr>
<tr>
<td>More than 25</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4a</td>
</tr>
<tr>
<td>Mean</td>
<td>4.7</td>
<td>3.8ab</td>
<td>3.3ab</td>
<td>3.1</td>
<td>4.5ab</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

¹ Includes purchases from the past three months, as well as the remainder of the year
a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

Table 28: Consistency in Reporting of Three Month and Yearly Purchases by Comparison Area
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Mean Number of CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean – three months, self reported</td>
<td>1.3</td>
<td>1.1</td>
<td>1.1</td>
<td>0.7</td>
<td>0.9</td>
</tr>
<tr>
<td>Mean – year extrapolated from three months</td>
<td>5.2</td>
<td>4.4</td>
<td>4.4</td>
<td>2.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Mean – year, self reported</td>
<td>4.7</td>
<td>3.8</td>
<td>3.3</td>
<td>3.1</td>
<td>4.5</td>
</tr>
<tr>
<td>Difference in yearly estimates</td>
<td>0.5</td>
<td>0.6</td>
<td>1.1</td>
<td>-0.3</td>
<td>-0.9</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

Table 29 and Table 30 show the number of CFLs respondents purchased in the past by utility service territories. The average number of bulbs purchased in the past 3 months ranged widely, from a low of 0.5 in the combined “All Other” utility service territories to a high of 2.6 in the Central Hudson utility service territory. The average number of purchases in the past three months is somewhat surprising considering 66% or more of respondents (depending on the area) did not purchase a single CFL in the past 3 months; this implies that a few people purchased numerous bulbs in the past three months, but many purchased none. The average number of bulbs purchased in the past year ranged across regions from an average of 3.2 bulbs in the Con Edison utility service territory to 7.6 bulbs in the Central Hudson utility service territory. Respondents in the Central Hudson service territory purchased statistically more CFLs in the past year than NYS respondents overall (7.6 vs. 4.7 respectively). Respondents within NYS also show logical consistency in how many CFLs they report buying in the past three months and the past year. However, respondents served by Central Hudson G&E and Orange and Rockland appear to have increased their purchase rate in the past three months, while the “all others” served by municipal utilities and cooperatives appear to have bought in smaller numbers in recent months.
Table 29: CFLs Purchased in the Last Three Months by Utility Service Territory  
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>66%</td>
<td>82%</td>
<td>78%</td>
<td>77%</td>
<td>75%</td>
<td>83%</td>
<td>83%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>11</td>
<td>13</td>
<td>14</td>
<td>19</td>
<td>11</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>6 to 15</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>16 or more</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>2.6a</td>
<td>.8</td>
<td>1.1</td>
<td>1.3</td>
<td>1.6</td>
<td>1.0a</td>
<td>.5a</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

a Statistically significant at $\alpha = 0.05$, which is the one-tailed test for the 90% confidence level. Compared to NYS.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Compared to NYS.

Table 30: CFLs Purchased in the Last Year by Utility Service Territory  
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>35%</td>
<td>46%</td>
<td>45%</td>
<td>39%</td>
<td>38%</td>
<td>42%</td>
<td>33%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>21</td>
<td>29</td>
<td>21</td>
<td>26</td>
<td>28</td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td>6 to 15</td>
<td>27</td>
<td>26</td>
<td>29</td>
<td>29</td>
<td>31</td>
<td>27</td>
<td>40</td>
</tr>
<tr>
<td>16 or more</td>
<td>17</td>
<td>0</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Mean</td>
<td>7.6ab</td>
<td>3.2a</td>
<td>4.7</td>
<td>4.5</td>
<td>4.4</td>
<td>4.2</td>
<td>5.3</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

a Statistically significant at $\alpha = 0.05$, which is the one-tailed test for the 90% confidence level. Compared to NYS.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Compared to NYS.

Table 31: Consistency in Reporting of Three Month and Yearly Purchases by Utility Service Territory  
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean – three months, self reported</td>
<td>2.6</td>
<td>.8</td>
<td>1.1</td>
<td>1.3</td>
<td>1.6</td>
<td>1.0</td>
<td>.5</td>
</tr>
<tr>
<td>Mean – year extrapolated from three months</td>
<td>10.4</td>
<td>3.2</td>
<td>4.4</td>
<td>5.2</td>
<td>6.4</td>
<td>4.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Mean – year, self reported</td>
<td>7.6</td>
<td>3.2</td>
<td>4.7</td>
<td>4.5</td>
<td>4.4</td>
<td>4.2</td>
<td>5.3</td>
</tr>
<tr>
<td>Difference in yearly estimates</td>
<td>2.8</td>
<td>0</td>
<td>-0.3</td>
<td>0.7</td>
<td>2.0</td>
<td>-0.2</td>
<td>-3.3</td>
</tr>
<tr>
<td>Sample Size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>
Very few households in NYS (2%) and NYC (2%) or the comparison areas (2% to 4%) reported receiving CFLs for free in the last three months (Table 32) or the past year (Table 33).

Table 32: Number of CFLs Received for Free in the Last Three Months by Comparison Area (Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>98%</td>
<td>96%a</td>
<td>98%</td>
<td>98%</td>
<td>97%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6 to 15</td>
<td>1</td>
<td>1</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.4ab</td>
<td>0.1</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston. b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

Table 33: Number of CFLs Received for Free in the Last Year by Comparison Area (Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>91%</td>
<td>91%</td>
<td>90%</td>
<td>92%</td>
<td>90%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>6 to 15</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3a</td>
</tr>
<tr>
<td>16 to 25</td>
<td>0</td>
<td>1a</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More than 25</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td>0.3</td>
<td>0.4</td>
<td>0.5</td>
<td>0.2a</td>
<td>0.5</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.

6.3 CFLS PURCHASED OVER THE PAST YEAR – ONSITE SATURATION STUDIES

In the RDD survey, respondents were asked a series of questions about CFLs purchased in the past three months and in 2008. In the onsite visits, CFLs in storage and in use were identified and then participants were asked when they obtained each CFL. The respondent had to account for an estimated purchase date for each CFL found installed or in storage in the home and was looking at the product when providing this reported date of purchase, thus reducing, but not eliminating, self-report error. Although this section provides some comparison of RDD and onsite survey estimates of purchases, please refer to Section 3 for additional analyses of RDD vs. onsite estimates of purchases. It is important also to note that the results presented in Section 3 were not weighted, but the team has weighted the results presented in this section in order to generalize them to all households in the respective area.

24 The evaluators reason that onsite respondents provide more accurate estimates because they are actually looking at individual products when recalling the date of purchase, while RDD survey respondents generally do not consider each individual bulb and provide their best guess estimate while remaining in one place while on the phone.
As Table 34 shows, in the last three months of 2008, significantly fewer households in NYS (10%) compared to NYC (21%) purchased CFLs, but the average number of CFLs purchased in NYS (0.6) is similar to that in NYC (0.9). It is worth noting that the RDD survey self-reports instead showed the NYS respondents purchased more CFLs than NYC respondents, and highlights the difficulty that respondents have providing accurate estimates of purchases in telephone surveys. CFL purchase behavior in the past three months is similar between NYS and Ohio. The three-month CFL purchase rates in NYC (21%) are statistically similar to DC (13%) and significantly higher than those in Houston (4%), but the average number of CFLs purchased in NYC (0.9) is similar to that in DC (0.7) and Houston (0.4).

Table 34: CFLs Purchased in the Last Three Months of 2008 by Comparison Area
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>Category</th>
<th>NYS Onsites</th>
<th>Ohio Onsites</th>
<th>NYC Onsites</th>
<th>DC Onsites</th>
<th>Houston Onsites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of households</td>
<td>90%</td>
<td>83%</td>
<td>79%a</td>
<td>87%</td>
<td>96%ab</td>
</tr>
<tr>
<td>Zero</td>
<td>% of CFLs</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>% of households</td>
<td>6%</td>
<td>13%a</td>
<td>15%a</td>
<td>7%a</td>
<td>2%ab</td>
</tr>
<tr>
<td>1 to 5</td>
<td>% of CFLs</td>
<td>31%</td>
<td>40%</td>
<td>25%</td>
<td>21%</td>
<td>11%a</td>
</tr>
<tr>
<td>6 to 15</td>
<td>% of households</td>
<td>3%</td>
<td>5%</td>
<td>4%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>55%</td>
<td>60%</td>
<td>35%ab</td>
<td>66%ab</td>
<td>89%ab</td>
</tr>
<tr>
<td>16 to 25</td>
<td>% of households</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>14%</td>
<td>0%ab</td>
<td>40%ab</td>
<td>12%ab</td>
<td>0%</td>
</tr>
<tr>
<td>More than 25</td>
<td>% of households</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total Number of Households</td>
<td>202</td>
<td>96</td>
<td>100</td>
<td>91</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Total CFLs Purchased</td>
<td>124</td>
<td>79</td>
<td>93</td>
<td>64</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.6</td>
<td>0.8</td>
<td>0.9</td>
<td>0.7</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Sample Size</td>
<td>203</td>
<td>98</td>
<td>100</td>
<td>97</td>
<td>99</td>
<td></td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
The one-year CFL purchase rate in NYS (43%) was similar to NYC (44%) and Ohio (46%), and the average number of CFLs purchased was also similar (3.9 vs. 3.0 vs. 3.3, respectively). The one-year CFL purchase rate in NYC (44%) was significantly higher than DC (23%) and Houston (15%), and the average number of CFLs purchased was also significantly higher in NYC (3.0) than in Houston (1.4) but not DC (Table 35). This last result differs from the RDD survey self-reports, where Houston respondents were found to have purchased significantly more CFLs in the past year than NYC respondents.

Table 35: CFLs Purchased in the Last Year by Comparison Area
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>Category</th>
<th>NYS Onsites</th>
<th>Ohio Onsites</th>
<th>NYC Onsites</th>
<th>DC Onsites</th>
<th>Houston Onsites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero</td>
<td>% of households</td>
<td>58%</td>
<td>54%</td>
<td>56%</td>
<td>77%ab</td>
<td>85%ab</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>% of households</td>
<td>18%</td>
<td>23%</td>
<td>22%</td>
<td>12%a</td>
<td>6%ab</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>14%</td>
<td>17%</td>
<td>17%</td>
<td>48%a</td>
<td>14%</td>
</tr>
<tr>
<td>6 to 15</td>
<td>% of households</td>
<td>17%</td>
<td>20%</td>
<td>18%</td>
<td>9%a</td>
<td>7%a</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>46%</td>
<td>54%</td>
<td>52%</td>
<td>15%a</td>
<td>56%</td>
</tr>
<tr>
<td>16 to 25</td>
<td>% of households</td>
<td>5%</td>
<td>2%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>24%</td>
<td>13%a</td>
<td>23%</td>
<td>37%a</td>
<td>12%a</td>
</tr>
<tr>
<td>More than 25</td>
<td>% of households</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>16%</td>
<td>17%</td>
<td>8%a</td>
<td>0%ab</td>
<td>18%a</td>
</tr>
<tr>
<td>Total Number of Households</td>
<td>202</td>
<td>96</td>
<td>100</td>
<td>91</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Total CFLs Purchased</td>
<td>781</td>
<td>316</td>
<td>299</td>
<td>169</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>3.9</td>
<td>3.3</td>
<td>3.0</td>
<td>1.8</td>
<td>1.4a</td>
<td></td>
</tr>
<tr>
<td>Sample Size</td>
<td>203</td>
<td>98</td>
<td>100</td>
<td>97</td>
<td>99</td>
<td></td>
</tr>
</tbody>
</table>

1 Includes purchases from the past three months, as well as the remainder of the year
a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
6.4 INCANDESCENT BULB PURCHASES OVER THE PAST YEAR

Over the past three months, about one-third of respondents in NYS, NYC, and the comparison areas had purchased incandescent bulbs, while a majority of respondents had done so over the course of the year (Table 36 and Table 37). Over the past year, on average, households in NYS purchased 7.2 incandescent bulbs, significantly fewer than in Ohio (9.4). In NYC over the past year, households purchased an average of 7.0 incandescent bulbs, significantly fewer than in Houston (8.6) yet similar to NYS. Purchases in the past three months were similar across the five areas.

Table 36: Incandescent Bulbs Purchased in the Last Three Months by Comparison Area
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Number of Incandescents</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>69%</td>
<td>66%</td>
<td>66%</td>
<td>64%</td>
<td>66%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>21</td>
<td>21a</td>
<td>22</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>6 to 15</td>
<td>8</td>
<td>11a</td>
<td>10</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>16 to 25</td>
<td>1</td>
<td>1</td>
<td>&lt;1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>More than 25</td>
<td>1</td>
<td>1</td>
<td>&lt;1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Mean</td>
<td>1.8</td>
<td>2.1</td>
<td>1.9</td>
<td>1.9</td>
<td>1.9</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.

Table 37: Incandescent Bulbs Purchased in the Last Year by Comparison Area
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Number of Incandescents</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>34%</td>
<td>31%</td>
<td>30%</td>
<td>28%</td>
<td>28%</td>
</tr>
<tr>
<td>1 to 5</td>
<td>22</td>
<td>18a</td>
<td>25</td>
<td>21</td>
<td>24</td>
</tr>
<tr>
<td>6 to 15</td>
<td>22</td>
<td>32ab</td>
<td>35ab</td>
<td>39</td>
<td>30a</td>
</tr>
<tr>
<td>16 to 25</td>
<td>7</td>
<td>11ab</td>
<td>7</td>
<td>8</td>
<td>12ab</td>
</tr>
<tr>
<td>More than 25</td>
<td>2</td>
<td>8ab</td>
<td>3</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Mean</td>
<td>7.2</td>
<td>9.4ab</td>
<td>7.0</td>
<td>7.7</td>
<td>8.6a</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
Figure 15 shows the average number of CFL bulbs and incandescent bulbs purchased by households in the five comparison areas in the past three months, and Figure 16 does the same for the past year. The tables show that households continued to purchase more incandescent bulbs than CFLs in the months immediately preceding the survey. However, with the past three months, incandescent purchases exceeded CFL purchases by just 0.5 bulbs in NYS compared to 0.8 bulbs in NYC, 1.0 bulbs in Ohio and Houston, and 1.2 bulbs in DC. The gaps between incandescent and CFL purchases were greater for the entire year. Note that the purchase of CFLs and incandescent bulbs were not statistically independent of each other; not only do consumers often choose between the two products but other factors such as house size and who pays the electricity bills may also factor into the purchase behavior of both types of bulbs. For this reason, the team is not testing the statistical significance of these comparisons.

Figure 15: Number of CFL and Incandescent Bulbs Purchased in Past Three Months by Comparison Area
Figure 16: Number of CFL and Incandescent Bulbs Purchased in Past Year by Comparison Area
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Comparison Area</th>
<th>Incandescents</th>
<th>CFLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>7.2</td>
<td>4.7</td>
</tr>
<tr>
<td>Ohio</td>
<td>9.4</td>
<td>3.8</td>
</tr>
<tr>
<td>NYC</td>
<td>7.0</td>
<td>3.3</td>
</tr>
<tr>
<td>DC</td>
<td>7.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Houston</td>
<td>8.6</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Mean Bulbs Purchased
6.5 RETAILERS WHERE LIGHT BULBS WERE PURCHASED

Respondents to the RDD survey suggest that the greatest percentage of CFL purchasing households bought the products from home improvement stores. Over one-half (54%) of purchasing households in NYS and similar percentages in Ohio (52%) and NYC (55%) purchased CFLs from home improvement stores (Table 38). Households in NYS also bought CFLs at mass merchandise (36%), grocery (16%), hardware (14%), and warehouse (12%) stores. In Ohio, significantly more households purchased CFLs at mass merchandise stores (45%) and significantly fewer purchased at hardware stores (10%) compared to NYS. In NYC the proportion of households that bought CFLs from each type of retailer was generally similar to NYS, with the exception of statistically different purchases from mass merchandise stores (NYS 36% vs. NYC 19%), drug stores (NYS 4% vs. NYC 15%), bargain stores (NYS 5% vs. NYC 9%), and home furnishing stores (NYS 1% vs. NYC 6%). The mix of retailers in NYC was different than in DC, with significantly more NYC purchases from home improvement stores, warehouse stores, and bargain stores and significantly fewer NYC purchases in grocery stores and hardware stores compared to DC. Compared to Houston, NYC respondents purchased significantly fewer CFLs from mass merchandise stores and significantly more from hardware stores, drug stores, and home furnishing stores.

Table 38: Type of Store where CFL Bulbs were Purchased by Comparison Area
(Based on RDD survey CFL purchasers, multiple response)

<table>
<thead>
<tr>
<th>Store Type</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home improvement</td>
<td>54%</td>
<td>52%</td>
<td>55%</td>
<td>47%a</td>
<td>60%</td>
</tr>
<tr>
<td>Mass merchandise</td>
<td>36</td>
<td>45a</td>
<td>19ab</td>
<td>21</td>
<td>39ab</td>
</tr>
<tr>
<td>Grocery</td>
<td>16</td>
<td>17</td>
<td>12</td>
<td>24ab</td>
<td>14</td>
</tr>
<tr>
<td>Warehouse</td>
<td>12</td>
<td>11</td>
<td>14</td>
<td>9a</td>
<td>12</td>
</tr>
<tr>
<td>Hardware</td>
<td>14</td>
<td>10a</td>
<td>12</td>
<td>23ab</td>
<td>7a</td>
</tr>
<tr>
<td>Bargain</td>
<td>5</td>
<td>6</td>
<td>9a</td>
<td>3ab</td>
<td>7</td>
</tr>
<tr>
<td>Drugstore</td>
<td>4</td>
<td>4</td>
<td>15ab</td>
<td>19</td>
<td>7ab</td>
</tr>
<tr>
<td>Convenience</td>
<td>1</td>
<td>0a</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Electrical/ Specialty lighting</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>&lt;1</td>
<td>2</td>
</tr>
<tr>
<td>Home furnishing</td>
<td>1</td>
<td>&lt;1</td>
<td>6ab</td>
<td>5</td>
<td>1ab</td>
</tr>
<tr>
<td>Office supply</td>
<td>&lt;1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sample size</td>
<td>603</td>
<td>260</td>
<td>250</td>
<td>221</td>
<td>265</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
The stores at which respondents purchased incandescent bulb were more varied than for CFLs, and the purchase locations often differed statistically between the two types of bulbs (Table 39). These patterns likely reflect the fact that incandescent bulbs are still the dominant residential lighting technology and available in a greater variety of retail stores than are CFLs. Looking more closely the data indicate that, similar to CFLs, respondents most frequently reported purchasing incandescents at home improvement, mass merchandise, and grocery stores in all areas. However, mass merchandise and grocery stores were more popular places to buy incandescent rather than CFL bulbs. Likewise, a greater percentage of respondents bought incandescent bulbs at hardware, bargain, and drugstores compared to CFLs. These patterns hold for each of the five comparison areas.

Table 39: Type of Store where Incandescent Bulbs were Purchased by Comparison Area
(Based on all RDD survey CFL purchasers, multiple response)

<table>
<thead>
<tr>
<th>Store Type</th>
<th>NYS CFL</th>
<th>NYS Inc.</th>
<th>Ohio CFL</th>
<th>Ohio Inc.</th>
<th>NYC CFL</th>
<th>NYC Inc.</th>
<th>DC CFL</th>
<th>DC Inc.</th>
<th>Houston CFL</th>
<th>Houston Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home improvement</td>
<td>54%</td>
<td>50%</td>
<td>52%</td>
<td>52%</td>
<td>55%</td>
<td>46%</td>
<td>47%</td>
<td>46%</td>
<td>60%</td>
<td>58%</td>
</tr>
<tr>
<td>Mass merchandise</td>
<td>36</td>
<td>56cd</td>
<td>45</td>
<td>66cd</td>
<td>19</td>
<td>30cd</td>
<td>21</td>
<td>40cd</td>
<td>39</td>
<td>67cd</td>
</tr>
<tr>
<td>Grocery</td>
<td>16</td>
<td>40cd</td>
<td>17</td>
<td>45cd</td>
<td>12</td>
<td>34cd</td>
<td>24</td>
<td>58cd</td>
<td>14</td>
<td>45cd</td>
</tr>
<tr>
<td>Warehouse</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>11</td>
<td>14</td>
<td>21c</td>
<td>9</td>
<td>15c</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Hardware</td>
<td>14</td>
<td>25cd</td>
<td>10</td>
<td>20cd</td>
<td>12</td>
<td>28cd</td>
<td>23</td>
<td>28</td>
<td>7</td>
<td>15cd</td>
</tr>
<tr>
<td>Bargain</td>
<td>5</td>
<td>21cd</td>
<td>6</td>
<td>34cd</td>
<td>9</td>
<td>27cd</td>
<td>3</td>
<td>26cd</td>
<td>7</td>
<td>32cd</td>
</tr>
<tr>
<td>Drugstore</td>
<td>4</td>
<td>13cd</td>
<td>4</td>
<td>17cd</td>
<td>15</td>
<td>33cd</td>
<td>19</td>
<td>49cd</td>
<td>7</td>
<td>23cd</td>
</tr>
<tr>
<td>Convenience</td>
<td>1</td>
<td>3cd</td>
<td>0</td>
<td>3cd</td>
<td>1</td>
<td>5cd</td>
<td>0</td>
<td>8cd</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Electrical/Specialty lighting</td>
<td>2</td>
<td>6cd</td>
<td>2</td>
<td>5c</td>
<td>3</td>
<td>14cd</td>
<td>&lt;1</td>
<td>8cd</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Home furnishing</td>
<td>1</td>
<td>3cd</td>
<td>&lt;1</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>3c</td>
</tr>
<tr>
<td>Office supply</td>
<td>&lt;1</td>
<td>2cd</td>
<td>0</td>
<td>3cd</td>
<td>1</td>
<td>8cd</td>
<td>2</td>
<td>6c</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Internet</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2cd</td>
<td>0</td>
<td>2cd</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3c</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Sample size</td>
<td>603</td>
<td>700</td>
<td>260</td>
<td>346</td>
<td>250</td>
<td>357</td>
<td>221</td>
<td>357</td>
<td>265</td>
<td>360</td>
</tr>
</tbody>
</table>

\(c\) Significantly different at 90% confidence level from same store type where CFLs purchased.

Onsite participants were asked to identify where they obtained the CFLs that were observed in their homes, both installed and in storage. Table 40 summarizes the percent of CFLs purchased by participants in NYS and NYC by source. Purchases were classified as bought from a participating retailer if the retailer names matched one of a list provided by NYSERDA staff. The vast majority of CFLs purchased in 2008 by onsite participants in NYS (79%) and NYC (82%) were purchased from a non-participating retailer. In NYS, one-half all of CFLs purchased in the past year were purchased from non-participating home improvement stores—30% from Home Depot and 20% from Lowes. In NYC, over one-half of CFLs purchased in the past year were purchased from Home Depot (33%) or Costco (18%) (Table 41). The majority of RDD survey respondents also report purchasing CFLs from home improvement and mass merchandise retailers.

25 RDD survey respondents were asked a similar question, but given the overall greater level of reliability of the onsite method, we have only reported the specific retailer results for onsite respondents.
### Table 40: Probable Program Participants
(Based on all CFLs found onsite)

<table>
<thead>
<tr>
<th>Source</th>
<th>NYS</th>
<th>NYC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CFLs Purchased</td>
<td>781</td>
<td>299</td>
</tr>
<tr>
<td>Purchased from participating retailer</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>BJ’s †</td>
<td>1</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>True Value</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Costco †</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Wegman’s</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Thruway Market</td>
<td>&lt;1</td>
<td>-</td>
</tr>
<tr>
<td>Price Chopper</td>
<td>&lt;1</td>
<td>-</td>
</tr>
<tr>
<td>Pathmark</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Purchased from non-participating retailer</td>
<td>79%</td>
<td>82%</td>
</tr>
<tr>
<td>Received for free</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>From unspecified energy efficiency program</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>From friend/family</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Purchased from unspecified retailer</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Received from NYSEC</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>Provided by housing</td>
<td>-</td>
<td>4%</td>
</tr>
<tr>
<td>Electrician</td>
<td>-</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>10%</td>
<td>1%</td>
</tr>
</tbody>
</table>

† No participating locations in NYC
Table 41: Non-Participating Stores by Percent of CFLs Purchased
(Based on all CFLs found onsite)

<table>
<thead>
<tr>
<th>Store Name</th>
<th>NYS</th>
<th>NYC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CFLs Purchased</td>
<td>617</td>
<td>245</td>
</tr>
<tr>
<td>Home Depot</td>
<td>39%</td>
<td>40%</td>
</tr>
<tr>
<td>Lowe’s</td>
<td>25%</td>
<td>6%</td>
</tr>
<tr>
<td>Wal-Mart</td>
<td>18%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Dollar Store</td>
<td>9%</td>
<td>-</td>
</tr>
<tr>
<td>Target</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>SAM’s Club</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Aldi</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>Ikea</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Topp’s</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>ShopRite</td>
<td>1%</td>
<td>3%</td>
</tr>
<tr>
<td>Costco¹</td>
<td>-</td>
<td>22%</td>
</tr>
<tr>
<td>1,000 bulbs.com</td>
<td>-</td>
<td>6%</td>
</tr>
<tr>
<td>Bed, Bath, and Beyond</td>
<td>-</td>
<td>3%</td>
</tr>
<tr>
<td>99 Cents Store</td>
<td>-</td>
<td>3%</td>
</tr>
<tr>
<td>Mendelowitz Lighting</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>Rainbow Lighting</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>Swanson</td>
<td>-</td>
<td>2%</td>
</tr>
<tr>
<td>IKEA</td>
<td>-</td>
<td>1%</td>
</tr>
<tr>
<td>Park Slope Food Coop</td>
<td>-</td>
<td>1%</td>
</tr>
<tr>
<td>Jack’s Store</td>
<td>-</td>
<td>1%</td>
</tr>
<tr>
<td>National Wholesale Liquidators</td>
<td>-</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

¹ Although there are three Costco’s located in NYC, none participated in the program. It is possible that the respondents purchased the CFLs from a Costco outside of NYC.
Section 7

CFL USE OVER THE PAST YEAR

The random digit dial (RDD) survey and the onsite saturation study also explored how respondents used CFLs over the past year. The team further examined self-reported current usage by various demographic factors. During the onsite visits, trained technicians visited participants’ homes and methodically cataloged the lighting present. The onsite saturation study, therefore, offers the most reliable and valid numbers for current CFL usage. As with the purchase data, the evaluation team prioritized the results from the onsite survey over those from the RDD survey because former is believed to be more reliable.

The results indicate that the percentage of RDD respondents self-reporting that they were using CFLs—and the number of CFLs they have installed in their homes—increased over the course of the year. This finding held true across the five comparison areas as well as the utility service territories within New York State, less Nassau and Suffolk County and New York City (hereafter NYS). Based on data collected during the onsite saturation visits, the percentage of current CFL users is similar between NYS and Ohio, but the average number of CFLs installed in NYS is significantly higher than that in Ohio. For New York City (NYC) the percent of CFL users is significantly higher compared to the District of Columbia (DC) and Houston, but the average number of CFLs installed in NYC is similar to that in DC and Houston, a finding that is largely driven by the small size of most homes—and hence the fewer sockets—in NYC.

The number of CFLs self-reported in the RDD survey to be in use in households varied by such characteristics as size of home, home ownership status, who pays the electricity bill and various socioeconomic characteristics including income and education, among others. NYC households who rent, do not pay their own electricity bill, have lower incomes, or have less education are more likely than their counterparts in DC and, to a lesser extent, Houston, Texas to have reported using CFLs. The team will use more advanced statistical techniques in the multistate comparison portion of this study and control for these and other characteristics in an effort to isolate the impact of each factor as well as CFL program activity on CFL use and sales.

The onsite saturation study revealed that the percentage of sockets filled with CFLs was numerically higher in NYS and NYC than in Ohio, DC, or Houston, but the differences failed to achieve statistical significance. The differences also lacked sufficient power, however, suggesting that saturation in NYS and NYC is no different than in the comparison areas. The study finds that about 70% of all sockets in NYS and NYC could still be filled with CFLs, most of which have medium screw bases and adhere to the standard A-shape profile, into which an A-shaped or many spiral shaped CFLs could be installed.

Turning to CFL storage, a majority of RDD respondents in each comparison area self-reported storing CFLs at the time of the survey, mainly for future use to replace either another CFL or an incandescent bulb. The data from the onsite visits leads to another conclusion—the majority of onsite respondents in each comparison area were not storing any CFLs at the time of the onsite visits.

Overall, RDD respondents were satisfied with the CFLs currently in use and with various characteristics of CFLs. The few respondents who voiced dissatisfaction or who removed CFLs from service cited burn out, brightness, fit, appearance, light color, and other factors among the reasons.

26 The onsite sample included too few households in some of the key demographic groups to conduct this analysis on the data collected in respondents’ homes.
27 Similar data are not available for the onsites.
28 The onsite survey did not ask respondents about the intended future of stored CFLs.
7.1 CFL USE OVER THE PAST YEAR – RDD SURVEY

Table 42 and Table 43 together with Figure 17 and Figure 18 on the following pages summarize respondents’ self-reported CFL usage over the past year. To summarize, the percentage of respondents using CFLs—and the number of CFLs they have installed in their homes—has increased over the course of the year, and this finding holds true across the five comparison areas as well as the utility service territories within NYS. It is important to note that the results should be viewed as additive—most CFLs in place one year ago were likely still in place at the time of the survey, but over the year the respondent filled more sockets with CFLs leading to an increase in CFLs installed.

In addition to this overall finding, the data also point to statistically more households using CFLs in NYS (ranging from 47% a year ago to 65% currently) compared to Ohio (42% a year ago to 55% currently) and NYC (40% a year ago and 51% currently) (Table 42). Likewise, statistical tests suggest that more NYC respondents used CFLs than District of Columbia (DC) respondents (32% a year ago to 42% currently). The comparison of NYC and Houston, however, indicates that NYC respondents used CFLs more frequently than Houston respondents one year ago (40% for NYC vs. 33% for Houston) but after that time use was similar in the two areas. The table also indicates that CFL usage over the year grew 10% in DC and 18% in NYS, with NYS showing significantly higher increases in usage compared to Ohio (13%) and NYC (11%) and Houston (15%) increasing at a higher rate than NYC. These findings provide confirmation of the argument that CFL sales are rising throughout the nation, but mixed evidence that non-program areas are playing “catch up”. While the statistically greater sales increase in Houston supports the “catch up” hypothesis, the lack of catch-up in Ohio (compared to NYS) and DC (compared to NYC) challenge the hypothesis. Even more challenging is the fact that NYS—the area with arguably the strongest program activity—saw its sales increase more than any other area, potentially pointing to a program effect. A more stringent statistical approach that controls for intervening factors and program activity would isolate the possible program and catch up effects that may be influencing the results.

Table 42: Use of CFL in Home over Past Year
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Number of CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently</td>
<td>65%</td>
<td>55%ab</td>
<td>51%ab</td>
<td>42%ab</td>
<td>48%</td>
</tr>
<tr>
<td>3 months ago</td>
<td>57</td>
<td>48ab</td>
<td>44ab</td>
<td>34ab</td>
<td>42</td>
</tr>
<tr>
<td>1 year ago</td>
<td>47</td>
<td>42a</td>
<td>40ab</td>
<td>32ab</td>
<td>33a</td>
</tr>
<tr>
<td>% Increase over year</td>
<td>18</td>
<td>13ab</td>
<td>11ab</td>
<td>10</td>
<td>15a</td>
</tr>
<tr>
<td>Sample Size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

Table 43 breaks the results down by the number of CFLs in use in households over the past year. The findings demonstrate that NYS households are more likely than Ohio and NYC households to use six to fifteen CFLs in their homes, a finding that largely remained consistent over the past year. Moreover, while there is no statistically significant difference in the percentage of NYC and Houston households using CFLs (Table 42), Table 43 shows that NYC households are statistically more likely to use one to five CFLs while Houston households are statistically more likely to use sixteen or more CFLs; the

29 The team considered conducting statistical tests on results in Table 42 and Table 43 within each comparison area but decided against this approach as the results are not statistically independent of each other due to the additive nature of the question (i.e., CFLs installed one year ago may still have been installed at the time of the survey).
difference may be influenced by the differences in housing unit size between the areas. Later in this section, the team explores the relationship of usage to home size, home ownership status, and other housing and demographic characteristics of respondents and their households.

Finally, Figure 17 and Figure 18 present the mean number of CFLs installed in homes across comparison areas and within NYS utility service territories.

### Table 43: Number of CFLs in Use at Respondents Home Three Months Ago by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of CFLs</th>
<th>Currently</th>
<th>3 Months Ago</th>
<th>1 Year Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NYS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 1001</td>
<td>Zero</td>
<td>35%</td>
<td>43%</td>
<td>53%</td>
</tr>
<tr>
<td></td>
<td>One to Five</td>
<td>23</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Six to Fifteen</td>
<td>32</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Sixteen+</td>
<td>10</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td><strong>Ohio</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 501</td>
<td>Zero</td>
<td>45%ab</td>
<td>52%ab</td>
<td>58%a</td>
</tr>
<tr>
<td></td>
<td>One to Five</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Six to Fifteen</td>
<td>24ab</td>
<td>19ab</td>
<td>15a</td>
</tr>
<tr>
<td></td>
<td>Sixteen+</td>
<td>8</td>
<td>7</td>
<td>4a</td>
</tr>
<tr>
<td><strong>NYC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 502</td>
<td>Zero</td>
<td>49%ab</td>
<td>56%ab</td>
<td>60%ab</td>
</tr>
<tr>
<td></td>
<td>One to Five</td>
<td>25</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Six to Fifteen</td>
<td>22ab</td>
<td>17ab</td>
<td>16a</td>
</tr>
<tr>
<td></td>
<td>Sixteen+</td>
<td>3ab</td>
<td>2ab</td>
<td>1ab</td>
</tr>
<tr>
<td><strong>DC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 500</td>
<td>Zero</td>
<td>58%ab</td>
<td>66%ab</td>
<td>68%ab</td>
</tr>
<tr>
<td></td>
<td>One to Five</td>
<td>20a</td>
<td>16ab</td>
<td>18a</td>
</tr>
<tr>
<td></td>
<td>Six to Fifteen</td>
<td>18</td>
<td>14</td>
<td>11a</td>
</tr>
<tr>
<td></td>
<td>Sixteen+</td>
<td>4</td>
<td>3</td>
<td>3a</td>
</tr>
<tr>
<td><strong>Houston</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 503</td>
<td>Zero</td>
<td>52%</td>
<td>58%</td>
<td>67%a</td>
</tr>
<tr>
<td></td>
<td>One to Five</td>
<td>18</td>
<td>16ab</td>
<td>14ab</td>
</tr>
<tr>
<td></td>
<td>Six to Fifteen</td>
<td>19</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Sixteen+</td>
<td>11ab</td>
<td>10ab</td>
<td>6ab</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing; Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
Figure 17: Mean number of CFLs Installed over Time by Comparison Area (Based on all RDD participants)

<table>
<thead>
<tr>
<th>Comparison Areas</th>
<th>Installed 1 year ago</th>
<th>Installed 3 months ago</th>
<th>Currently installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>3.4</td>
<td>5.0</td>
<td>5.6</td>
</tr>
<tr>
<td>Ohio</td>
<td>2.2</td>
<td>2.5</td>
<td>3.2</td>
</tr>
<tr>
<td>NYC</td>
<td>2.4</td>
<td>2.7</td>
<td>3.7</td>
</tr>
<tr>
<td>DC</td>
<td>3.0</td>
<td>3.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Houston</td>
<td>3.9</td>
<td>5.1</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Mean Number of CFLs Installed
Figure 18: Mean number of CFLs Installed over Time by Utility Service Territory (Based on all RDD participants)

<table>
<thead>
<tr>
<th>Utility Service Territory</th>
<th>Mean Number of CFLs Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Hudson G&amp;E</td>
<td>Installed 1 year ago: 4.7</td>
</tr>
<tr>
<td></td>
<td>Installed 3 months ago: 6.6</td>
</tr>
<tr>
<td></td>
<td>Currently installed: 7.6</td>
</tr>
<tr>
<td>Con Edison</td>
<td>Installed 1 year ago: 3.6</td>
</tr>
<tr>
<td></td>
<td>Installed 3 months ago: 5.2</td>
</tr>
<tr>
<td></td>
<td>Currently installed: 5.4</td>
</tr>
<tr>
<td>National Grid</td>
<td>Installed 1 year ago: 4.0</td>
</tr>
<tr>
<td></td>
<td>Installed 3 months ago: 4.6</td>
</tr>
<tr>
<td></td>
<td>Currently installed: 5.8</td>
</tr>
<tr>
<td>NYSEG</td>
<td>Installed 1 year ago: 3.8</td>
</tr>
<tr>
<td></td>
<td>Installed 3 months ago: 5.3</td>
</tr>
<tr>
<td></td>
<td>Currently installed: 6.6</td>
</tr>
<tr>
<td>Orange &amp; Rockland</td>
<td>Installed 1 year ago: 3.0</td>
</tr>
<tr>
<td></td>
<td>Installed 3 months ago: 4.0</td>
</tr>
<tr>
<td></td>
<td>Currently installed: 5.4</td>
</tr>
<tr>
<td>Rochester G&amp;E</td>
<td>Installed 1 year ago: 3.9</td>
</tr>
<tr>
<td></td>
<td>Installed 3 months ago: 5.2</td>
</tr>
<tr>
<td></td>
<td>Currently installed: 6.6</td>
</tr>
<tr>
<td>All Other</td>
<td>Installed 1 year ago: 4.2</td>
</tr>
<tr>
<td></td>
<td>Installed 3 months ago: 6.7</td>
</tr>
<tr>
<td></td>
<td>Currently installed: 7.0</td>
</tr>
</tbody>
</table>

Mean Number of CFLs Installed
Table 44 breaks down the information on per-household CFL installations by both the percentage of households currently using the specified range of CFLs and also the percentage of CFLs that fall into those ranges. The results show that a minority of households in all the comparison areas accounted for the majority of CFLs installed. For example, in NYS, the 42% of households with six or more CFLs installed accounted for 89% of all installed CFLs; in NYC, 25% of households accounted for 81% of installed CFLs. See Table 43 above for statistical comparisons of current CFL usage.30

<table>
<thead>
<tr>
<th># of CFLs in Use</th>
<th>Category</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>D.C.</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero</td>
<td>% of households</td>
<td>35%</td>
<td>45%ab</td>
<td>49%ab</td>
<td>58%ab</td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>One to Five</td>
<td>% of households</td>
<td>23%</td>
<td>23%</td>
<td>25%</td>
<td>20%a</td>
<td>18%ab</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>11%</td>
<td>14%</td>
<td>20%</td>
<td>17%</td>
<td>10%</td>
</tr>
<tr>
<td>Six to Fifteen</td>
<td>% of households</td>
<td>32%</td>
<td>24%ab</td>
<td>22%ab</td>
<td>18%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>50%</td>
<td>47%</td>
<td>56%</td>
<td>53%</td>
<td>33%</td>
</tr>
<tr>
<td>16 or more</td>
<td>% of households</td>
<td>10%</td>
<td>8%</td>
<td>3%ab</td>
<td>4%</td>
<td>11%ab</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>39%</td>
<td>38%</td>
<td>25%</td>
<td>30%</td>
<td>57%</td>
</tr>
<tr>
<td>Total Number of Households</td>
<td>1,001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
<td></td>
</tr>
<tr>
<td>All CFLs in Use</td>
<td>5,973</td>
<td>2,408</td>
<td>1,923</td>
<td>1,640</td>
<td>2,899</td>
<td></td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

30 The team also conducted tests of statistical significance and power on comparisons for the percentage of CFLs in each category, but larger sample sizes made nearly all the results achieve significance at the 90% confidence level and 80% power level.
7.2 CFL USE BY KEY DEMOGRAPHIC CHARACTERISTICS

The tables in Section 7.2 introduce results broken down by selected housing, social, economic, and demographic characteristics (collectively referred to as demographic characteristics for ease of discussion) in order to examine potential differences in CFL usage by these factors. While the other chapters and analyses in this report focus on differences between comparison areas, the analyses in this chapter focus on differences within areas. Please note that the results are preliminary because they do not take collinearity and intervening factors into account. For this reason, the team has not conducted tests of statistical significance or power. The regression approach that will be used in the multistate analysis will control statistically for these factors and in an attempt to identify the “net effect” of each one on CFL usage and sales.

Table 45 lists the percentage of households with various quantities of CFLs installed by the size of the home. The key finding from the table is that respondents living in smaller homes were less likely to have any CFLs installed, and if they did, to have fewer CFLs installed than those living in larger homes. Specifically, in the three cities examined, more than one-half of the respondents living in homes smaller than 2,000 square feet did not use CFLs; in NYS 40% of those in smaller homes were non-users, and in Ohio 46% of those in smaller homes were non-users. It is important to note that NYS, Ohio, and NYC respondents living in smaller homes were more likely to use CFLs than those in the same size homes in DC and Houston. In contrast, the majority of households in all comparison areas living in homes 2,000 square feet or larger had at least one CFL, and many had six to fifteen CFLs installed.

31 Appendix A includes more detail on the individual demographic characteristics.
32 Collinearity occurs when two factors have a relationship between them. For example, income and education are collinear; those with college degrees are typically more likely to have moderate to higher incomes than those with less than a college degree. Intervening factors would include such things as CFL program activity, concentration of large box stores, climate, economic climate, and electricity prices, among many potential others.
33 The saturation studies will allow the evaluators to determine the number of sockets in the home, which varies by home size, and the percentage of sockets holding CFLs.
Table 45: Current CFL Use by Size of Home  
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Area</th>
<th>House Size</th>
<th>Sample Size</th>
<th>Zero</th>
<th>One to Five</th>
<th>Six to Fifteen</th>
<th>Sixteen+</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>&lt; 2,000</td>
<td>571</td>
<td>40%</td>
<td>25</td>
<td>28</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>2,000-3,499</td>
<td>366</td>
<td>28%</td>
<td>19</td>
<td>41</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>3,500+</td>
<td>45</td>
<td>20%</td>
<td>34</td>
<td>29</td>
<td>17</td>
</tr>
<tr>
<td>Ohio</td>
<td>&lt; 2,000</td>
<td>373</td>
<td>46%</td>
<td>24</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>2,000-3,499</td>
<td>95</td>
<td>40%</td>
<td>23</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>3,500+</td>
<td>20</td>
<td>51%</td>
<td>20</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td>NYC</td>
<td>&lt; 2,000</td>
<td>293</td>
<td>53%</td>
<td>26</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2,000-3,499</td>
<td>166</td>
<td>34%</td>
<td>22</td>
<td>34</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>3,500+</td>
<td>35</td>
<td>33%</td>
<td>28</td>
<td>33</td>
<td>6</td>
</tr>
<tr>
<td>DC</td>
<td>&lt; 2,000</td>
<td>334</td>
<td>63%</td>
<td>20</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>2,000-3,499</td>
<td>122</td>
<td>39%</td>
<td>19</td>
<td>33</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>3,500+</td>
<td>29</td>
<td>29%</td>
<td>29</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>Houston</td>
<td>&lt; 2,000</td>
<td>256</td>
<td>59%</td>
<td>17</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>2,000-3,499</td>
<td>189</td>
<td>36%</td>
<td>23</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>3,500+</td>
<td>48</td>
<td>42%</td>
<td>12e</td>
<td>27</td>
<td>18</td>
</tr>
</tbody>
</table>

The team also explored CFL installations by home ownership status and whether or not households directly paid their own electricity bill (Table 46 and Table 47 on the following pages).34 The key findings show that homeowners were more likely than renters to have installed CFLs and those who directly paid their electricity bill were more likely to have installed CFLs than those who were not directly responsible for their electricity bill. NYS and NYC respondents who rented or did not directly pay their bill were more likely to use CFLs than were similar respondents in the relevant comparison areas.

Table 48 (on the following page) shows that non-English speakers consistently used fewer CFLs than did English speakers.

---

34 It should be noted that small homes are more likely to be rented than are moderate to large size homes. Furthermore, while renters are the least likely to pay their own electricity bills, a handful of owners have electricity included in their condo or management fees. Therefore, most of the households who have their electricity paid for by another party are renters, but a few are condo owners or own in developments with management fees.
### Table 46: CFL Use by Owner or Renter Status
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Area</th>
<th>Status</th>
<th>Sample Size</th>
<th>Zero</th>
<th>One to Five</th>
<th>Six to Fifteen</th>
<th>Sixteen+</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>Own</td>
<td>830</td>
<td>29%</td>
<td>24</td>
<td>34</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Rent</td>
<td>155</td>
<td>55%</td>
<td>20</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>Ohio</td>
<td>Own</td>
<td>408</td>
<td>41%</td>
<td>24</td>
<td>26</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Rent</td>
<td>87</td>
<td>56%</td>
<td>22</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>NYC</td>
<td>Own</td>
<td>250</td>
<td>40%</td>
<td>25</td>
<td>29</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Rent</td>
<td>241</td>
<td>57%</td>
<td>25</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>DC</td>
<td>Own</td>
<td>291</td>
<td>43%</td>
<td>23</td>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Rent</td>
<td>197</td>
<td>72%</td>
<td>18</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Houston</td>
<td></td>
<td>380</td>
<td>45%</td>
<td>19</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Rent</td>
<td>115</td>
<td>66%</td>
<td>17</td>
<td>16</td>
<td>1</td>
</tr>
</tbody>
</table>

### Table 47: CFL Use by Who Pays the Electricity Bill Status
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Area</th>
<th>Tenure</th>
<th>Sample Size</th>
<th>Zero</th>
<th>One to Five</th>
<th>Six to Fifteen</th>
<th>Sixteen+</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>Pay bill</td>
<td>916</td>
<td>33%</td>
<td>23</td>
<td>31</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Included in rent</td>
<td>47</td>
<td>55%</td>
<td>14</td>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td>Ohio</td>
<td>Pay bill</td>
<td>459</td>
<td>43%</td>
<td>24</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Included in rent</td>
<td>24</td>
<td>54%</td>
<td>25</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>NYC</td>
<td>Pay bill</td>
<td>398</td>
<td>46%</td>
<td>25</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Included in rent</td>
<td>86</td>
<td>58%</td>
<td>29</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>DC</td>
<td>Pay bill</td>
<td>405</td>
<td>51%</td>
<td>22</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Included in rent</td>
<td>82</td>
<td>78%</td>
<td>16</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Houston</td>
<td></td>
<td>469</td>
<td>50%</td>
<td>19</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Included in rent</td>
<td>24</td>
<td>77%</td>
<td>10</td>
<td>13</td>
<td>0</td>
</tr>
</tbody>
</table>

1 Includes those with any other payment arrangement.

### Table 48: Current CFL Use by Primary Language Spoken at Home
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Area</th>
<th>Primary Language</th>
<th>Sample Size</th>
<th>Zero</th>
<th>One to Five</th>
<th>Six to Fifteen</th>
<th>Sixteen+</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>English</td>
<td>971</td>
<td>35%</td>
<td>23</td>
<td>33</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Other (mainly non-Spanish)</td>
<td>14</td>
<td>63%</td>
<td>13</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>NYC</td>
<td>English</td>
<td>436</td>
<td>48%</td>
<td>25</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Other (mainly Spanish)</td>
<td>57</td>
<td>58%</td>
<td>26</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>Houston</td>
<td>English</td>
<td>465</td>
<td>50%</td>
<td>18</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Other (mainly Spanish)</td>
<td>35</td>
<td>67%</td>
<td>17</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 49 displays the relationship between household income and CFL use in the home. The key finding demonstrates that higher-earning households are more likely to be CFL users and to use them in greater quantities. More specifically, the majority of households in each area that earned less than $20,000 (low-earning households) did not use any CFLs. In contrast, the majority of households earning $20,000 or more were likely to use at least one CFL. Likewise, middle-earning households ($20,000 to $74,999) were more likely to be non-CFL users than were the highest earning households. Furthermore, high earning households were also more likely to use sixteen or more CFLs in their homes than lower or middle-earning households. Finally, it is important to note that the lowest earning households in NYC are more likely to use CFLs than are their counterparts in DC and Houston. Please note that these income categories, based on those by the United State Census Bureau, have not been adjusted for the cost of living, which are lower in Ohio and Houston than in the other three areas. The more detailed multistate ANCOVA and regression analyses will control for the cost of living.

**Table 49: CFL Use by Household Income**  
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Area</th>
<th>Income</th>
<th>Sample Size</th>
<th>Zero</th>
<th>One to Five</th>
<th>Six to Fifteen</th>
<th>Sixteen+</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NYS</td>
<td>&lt; $20,000</td>
<td>127</td>
<td>59%</td>
<td>15</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>$20,000 to $74,999</td>
<td>367</td>
<td>30%</td>
<td>29</td>
<td>32</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>$75,000 or more</td>
<td>224</td>
<td>22%</td>
<td>16</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>Ohio</td>
<td>Less than $20,000</td>
<td>87</td>
<td>55%</td>
<td>21</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>$20,000 to $74,999</td>
<td>202</td>
<td>42%</td>
<td>28</td>
<td>21</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>$75,000 or more</td>
<td>89</td>
<td>23%</td>
<td>22</td>
<td>41</td>
<td>14</td>
</tr>
<tr>
<td>NYC</td>
<td>Less than $19,999</td>
<td>64</td>
<td>61%</td>
<td>25</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>$20,000 to $74,999</td>
<td>150</td>
<td>49%</td>
<td>26</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>$75,000 or more</td>
<td>106</td>
<td>30%</td>
<td>26</td>
<td>35</td>
<td>9</td>
</tr>
<tr>
<td>DC</td>
<td>Less than $20,000</td>
<td>74</td>
<td>80%</td>
<td>14</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>$20,000 to $74,999</td>
<td>142</td>
<td>54%</td>
<td>25</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>$75,000 or more</td>
<td>141</td>
<td>32%</td>
<td>25</td>
<td>35</td>
<td>8</td>
</tr>
<tr>
<td>Houston</td>
<td>Less than $20,000</td>
<td>71</td>
<td>68%</td>
<td>19</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>$20,000 to $74,999</td>
<td>138</td>
<td>55%</td>
<td>13</td>
<td>27</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>$75,000 or more</td>
<td>156</td>
<td>38%</td>
<td>22</td>
<td>22</td>
<td>19</td>
</tr>
</tbody>
</table>
Table 50 suggests that the highly educated are more likely to use CFLs, but this does not always mean that they use greater numbers of CFLs. Specifically, in each of the comparison areas, respondents with no more than a high school diploma were less likely to use CFLs than are those with some college; in contrast, those with at least a college degree were more likely to have at least one CFL in their home (i.e., less likely to have zero) than those who had not exceeded high school.

Table 50: CFL Use by Education
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Area</th>
<th>Education</th>
<th>Sample Size</th>
<th>Zero</th>
<th>One to Five</th>
<th>Six to Fifteen</th>
<th>Sixteen+</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYS</td>
<td>HS Grad or Less</td>
<td>281</td>
<td>45%</td>
<td>21</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Some College</td>
<td>258</td>
<td>33%</td>
<td>24</td>
<td>33</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>College +</td>
<td>426</td>
<td>24%</td>
<td>24</td>
<td>37</td>
<td>14</td>
</tr>
<tr>
<td>Ohio</td>
<td>HS Grad or Less</td>
<td>192</td>
<td>56%</td>
<td>19</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Some College</td>
<td>133</td>
<td>39%</td>
<td>29</td>
<td>25</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>College +</td>
<td>163</td>
<td>27%</td>
<td>27</td>
<td>33</td>
<td>13</td>
</tr>
<tr>
<td>NYC</td>
<td>HS Grad or Less</td>
<td>154</td>
<td>59%</td>
<td>23</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Some College</td>
<td>115</td>
<td>46%</td>
<td>20</td>
<td>29</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>College +</td>
<td>213</td>
<td>39%</td>
<td>31</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>DC</td>
<td>HS Grad or Less</td>
<td>119</td>
<td>80%</td>
<td>10</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Some College</td>
<td>107</td>
<td>58%</td>
<td>18</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>College +</td>
<td>258</td>
<td>42%</td>
<td>28</td>
<td>23</td>
<td>6</td>
</tr>
<tr>
<td>Houston</td>
<td>HS Grad or Less</td>
<td>115</td>
<td>66%</td>
<td>16</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Some College</td>
<td>131</td>
<td>53%</td>
<td>13</td>
<td>21</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>College +</td>
<td>244</td>
<td>30%</td>
<td>24</td>
<td>30</td>
<td>16</td>
</tr>
</tbody>
</table>

7.3 CURRENT CFL USAGE – ONSITE SATURATION STUDIES

In the RDD survey, respondents were asked to estimate the number of CFLs currently installed in their homes. In the onsite visits, a trained technician visited each participant’s home and identified the type of bulb installed in each socket in the home. By this method, the onsite studies provide a more accurate count of the number of CFLs installed in homes. Please refer to Section 3 for more on RDD vs. onsite estimates of use.

The percent of current CFL users is similar between NYS (84%) and both NYC (79%) and Ohio (82%), but the average number of CFLs installed in NYS (11.3) is significantly higher than that in NYC (7.4) and Ohio (8.9). The percent of CFL users is significantly higher in NYC (79%) compared to DC (56%) and Houston (55%), but the average number of CFLs installed in NYC (7.4) is similar to that in DC (8.9) and Houston (6.4) (Table 51).
Table 51: Current Number of CFLs in Use at Respondents Home by Comparison Area  
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th># of All CFLs in Use</th>
<th>Category</th>
<th>NYS Onsites</th>
<th>Ohio Onsites</th>
<th>NYC Onsites</th>
<th>DC Onsites</th>
<th>Houston Onsites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero</td>
<td>% of households</td>
<td>16%</td>
<td>18%</td>
<td>21%</td>
<td>44%ab</td>
<td>45%ab</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>One to Five</td>
<td>% of households</td>
<td>23%</td>
<td>28%</td>
<td>31%</td>
<td>25%</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>6%</td>
<td>8%</td>
<td>10%</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>Six to Fifteen</td>
<td>% of households</td>
<td>33%</td>
<td>33%</td>
<td>30%</td>
<td>21%</td>
<td>17%a</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>30%</td>
<td>33%</td>
<td>37%</td>
<td>42%</td>
<td>28%</td>
</tr>
<tr>
<td>16 or more</td>
<td>% of households</td>
<td>28%</td>
<td>22%</td>
<td>17%</td>
<td>9%a</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>64%</td>
<td>59%</td>
<td>52%</td>
<td>43%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Total Number of Households
All CFLs in Use
Mean CFLs in Use
Sample Size

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
7.4  SOCKET SATURATIONS

As Table 52 shows, the socket saturations in NYS are statistically similar across the five areas. Overall, NMR estimates that about one in five sockets in NYS (19%) and NYC (21%) contain a CFL and seven out of ten sockets in NYS (70%) and NYC (70%) contain an incandescent or halogen bulb. Of all sockets, about one out of three in NYS (33%) and NYC (34%) contain a specialty bulb of any type, however significantly more sockets in NYS (8%) contain specialty CFLs compared to NYC (1%).

Table 52: Socket Saturation
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th>Sockets Containing</th>
<th>NYS Onsites</th>
<th>Ohio Onsites</th>
<th>NYC Onsites</th>
<th>DC Onsites</th>
<th>Houston Onsites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sockets</td>
<td>12,177</td>
<td>5,963</td>
<td>3,503</td>
<td>3,084</td>
<td>4,295</td>
</tr>
<tr>
<td>Incandescent bulbs</td>
<td>65%</td>
<td>71%</td>
<td>62%</td>
<td>67%</td>
<td>68%</td>
</tr>
<tr>
<td>CFLs</td>
<td>19</td>
<td>15</td>
<td>21</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Fluorescent</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Halogen</td>
<td>5</td>
<td>2</td>
<td>8</td>
<td>9</td>
<td>2a</td>
</tr>
<tr>
<td>LED</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Other bulb types</td>
<td>0.1%</td>
<td>1</td>
<td>0.1%</td>
<td>1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Any specialty bulb</td>
<td>33%</td>
<td>30%</td>
<td>34%</td>
<td>38%</td>
<td>29%</td>
</tr>
<tr>
<td>Any specialty CFL</td>
<td>8%a</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Any dimmable bulb</td>
<td>7%</td>
<td>4%</td>
<td>14%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>Any dimmable CFL</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Any three-way bulb</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Any three-way CFL</td>
<td>1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Sample Size</td>
<td>203</td>
<td>98</td>
<td>100</td>
<td>97</td>
<td>99</td>
</tr>
</tbody>
</table>

* a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
  b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
Table 53 shows the distribution of CFLs and incandescent bulbs in their equivalent wattage categories. In NYS, CFLs have made the greatest inroads replacing incandescent bulbs in wattages ranging from 40 to 49 watts and 65 to 75 watts. In these wattage categories, CFLs represent over one-third of all bulbs (35% and 39%, respectively). In NYC, CFLs represent greater than two-fifths of all bulbs in the wattage equivalents ranging from 65 to 75 watts (45%) and 120 to 150 watts (41%).

The penetration of CFLs in NYS is significantly greater than Ohio for the following categories: 25 to 35 watts, 50 to 60 watts, 65 to 75 watts, and 150 or more watts. The penetration of CFLs in NYS is significantly less than Ohio in wattages ranging from 120 to 150 watts. Compared with DC and Houston, NYC has made significantly greater inroads in replacing incandescent bulbs with CFLs in wattages ranging from 25 to 35 and 50 to 60 watts.

Table 53: Comparison of Incandescent and CFL Wattage by Percent of Sum within Wattage Category
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th>Watts Incandescent</th>
<th>Watts CFLs</th>
<th>Minimum Light Output (Lumens)</th>
<th>NYS Onsites</th>
<th>Ohio Onsites</th>
<th>NYC Onsites</th>
<th>DC Onsites</th>
<th>Houston Onsites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Incan CFL</td>
<td>Incan CFL</td>
<td>Incan CFL</td>
<td>Incan CFL</td>
<td>Incan CFL</td>
</tr>
<tr>
<td>&lt;25</td>
<td>&lt;4</td>
<td>&lt;250</td>
<td>100% &lt;1</td>
<td>100% 0</td>
<td>100% 0</td>
<td>100% 0</td>
<td>100% 0</td>
</tr>
<tr>
<td>25 – 35</td>
<td>4 – 9</td>
<td>250</td>
<td>84% 16</td>
<td>91%a 9</td>
<td>80% 20</td>
<td>91%a 9</td>
<td>60%a 40</td>
</tr>
<tr>
<td>40 – 49</td>
<td>10 – 13</td>
<td>450</td>
<td>65% 35</td>
<td>70% 30</td>
<td>77% 23</td>
<td>73% 27</td>
<td>71% 29</td>
</tr>
<tr>
<td>50 – 60</td>
<td>14 – 17</td>
<td>800</td>
<td>83% 17</td>
<td>91%a 9</td>
<td>72% 28</td>
<td>91%ab 9</td>
<td>92%ab 8</td>
</tr>
<tr>
<td>65 – 75</td>
<td>18 – 25</td>
<td>1100</td>
<td>61%a 39</td>
<td>73%a 27</td>
<td>55% 45</td>
<td>61% 39</td>
<td>84%ab 16</td>
</tr>
<tr>
<td>80 – 100</td>
<td>26 – 30</td>
<td>1,600</td>
<td>86% 14</td>
<td>84% 16</td>
<td>90% 10</td>
<td>92% 8</td>
<td>87% 13</td>
</tr>
<tr>
<td>120 – 150</td>
<td>31 – 52</td>
<td>2,000 – 2,600</td>
<td>93%a 7</td>
<td>59%a 41</td>
<td>59% 41</td>
<td>6%ab 94</td>
<td>91%ab 9</td>
</tr>
<tr>
<td>150+</td>
<td>53+</td>
<td>2,600+</td>
<td>94%a 6</td>
<td>100%a 0</td>
<td>91% 9</td>
<td>88% 12</td>
<td>0ab 0</td>
</tr>
<tr>
<td>Three way</td>
<td>Varies</td>
<td></td>
<td>90% 10</td>
<td>89% 11</td>
<td>84% 16</td>
<td>100%a 0</td>
<td>100%a b</td>
</tr>
<tr>
<td>Don’t know</td>
<td></td>
<td></td>
<td>93% 7</td>
<td>93% 7</td>
<td>90% 10</td>
<td>100%ab 0</td>
<td>0a 100%</td>
</tr>
<tr>
<td>Sample Size</td>
<td></td>
<td></td>
<td>203 203</td>
<td>98 98</td>
<td>100 100</td>
<td>97 97</td>
<td>99 99</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.

b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
Table 54 summarizes the distributions of socket types by the bulb currently installed in it. The majority of sockets in homes in NYS (84%) and NYC (89%) have small or medium screw-in bases, and nearly all CFLs are installed in screw-in sockets. Based on the number of sockets containing either incandescent or halogen bulbs, the remaining available potential opportunity for CFLs or light emitting diodes (LEDs) in NYS is 70% of all sockets, of which 66% are small- or medium-base screw-in sockets. The remaining available potential for CFLs or LEDs in NYC is also 70% of all sockets, of which 68% are small- or medium-base screw-in sockets.

Table 54: Socket Saturation – Socket Type by Percent of all Sockets
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th>Sockets Type</th>
<th>All Bulb Types</th>
<th>Incandescent</th>
<th>CFLs</th>
<th>Fluorescent</th>
<th>Halogen</th>
<th>LED</th>
<th>Other Bulb Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sockets</td>
<td>12,177</td>
<td>7,928</td>
<td>2,285</td>
<td>1,235</td>
<td>611</td>
<td>80</td>
<td>38</td>
</tr>
<tr>
<td>All Socket Types</td>
<td>100%</td>
<td>65</td>
<td>18</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Screw (small/medium)</td>
<td>84%</td>
<td>61</td>
<td>18</td>
<td>&lt;1</td>
<td>4</td>
<td>4</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Medium screw</td>
<td>73%</td>
<td>51</td>
<td>18</td>
<td>&lt;1</td>
<td>3</td>
<td>3</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Candelabra (small screw)</td>
<td>11%</td>
<td>10</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Pin base</td>
<td>15%</td>
<td>4</td>
<td>&lt;1</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>GU Base</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other socket types</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Other</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

New York City

<table>
<thead>
<tr>
<th>Sockets Type</th>
<th>All Bulb Types</th>
<th>Incandescent</th>
<th>CFLs</th>
<th>Fluorescent</th>
<th>Halogen</th>
<th>LED</th>
<th>Other Bulb Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sockets</td>
<td>3,503</td>
<td>2,169</td>
<td>728</td>
<td>305</td>
<td>271</td>
<td>27</td>
<td>4</td>
</tr>
<tr>
<td>All Socket Types</td>
<td>100%</td>
<td>62</td>
<td>21</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>Screw (small/medium)</td>
<td>87%</td>
<td>62</td>
<td>20</td>
<td>&lt;1</td>
<td>5</td>
<td>5</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Medium screw</td>
<td>75%</td>
<td>50</td>
<td>20</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Candelabra (small screw)</td>
<td>12%</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pin base</td>
<td>12%</td>
<td>&lt;1</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>GU Base</td>
<td>1%</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other socket types</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
As Table 55 shows, the distribution of CFLs by socket type in NYS is similar to that in Ohio and NYC. The percentage of CFLs installed in medium screw-base sockets is significantly higher in NYC compared with DC.

Table 55: Socket Saturation – CFLs Installed by Socket Type by Comparison Area
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th>Socket Type</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sockets</td>
<td>2,285</td>
<td>908</td>
<td>728</td>
<td>452</td>
<td>638</td>
</tr>
<tr>
<td>Screw (small/medium)</td>
<td>99%</td>
<td>97%</td>
<td>96%</td>
<td>86%a</td>
<td>100%</td>
</tr>
<tr>
<td>Medium screw</td>
<td>97%</td>
<td>97%</td>
<td>96%</td>
<td>86%a</td>
<td>100%</td>
</tr>
<tr>
<td>GU Base</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>6%</td>
<td>0</td>
</tr>
<tr>
<td>Pin base</td>
<td>1%</td>
<td>2%</td>
<td>4%</td>
<td>8%</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Other socket types</td>
<td>0</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

Table 56 summarizes the distribution of sockets by bulb and bulb feature. Over half of all sockets in NYS (54%) and NYC (52%) contain either a standard A-shaped incandescent bulb or a standard spiral CFL. CFLs are installed in about one out of five sockets in both NYS and NYC (19% vs. 21%). In NYS, the greatest potential for CFLs is in replacing standard A-shaped incandescent bulbs (38%), but the potential to replace bullet-shaped incandescent bulbs is also notable (17%). In NYC, the greatest potential for CFLs is also in replacing standard A-shaped incandescent bulbs (34%) and the potential to replace globe (10%) and bullet-shaped (13%) CFLs is also notable. It should be noted that spiral shaped CFLs often fit in sockets that contain A-shaped bulbs, so an A-shaped CFL is not always required to replace an A-shaped incandescent.
# Table 56: Socket Saturation – Bulb Features by Percent of all Sockets
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th>Bulb Shapes</th>
<th>Sockets Containing</th>
<th>All Bulb Types</th>
<th>Incandescent</th>
<th>CFLs</th>
<th>Fluorescent</th>
<th>Halogen</th>
<th>LED</th>
<th>Other Bulb Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York State</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Sockets</td>
<td>12,177</td>
<td>7,928</td>
<td>2,285</td>
<td>1,235</td>
<td>611</td>
<td>80</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>All Bulb Shapes</td>
<td>100%</td>
<td>65</td>
<td>19</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>A-shaped</td>
<td>38%</td>
<td>38</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Spiral</td>
<td>16%</td>
<td>0</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Flood</td>
<td>9%</td>
<td>5</td>
<td>&lt;1</td>
<td>0</td>
<td>4</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Tube</td>
<td>11%</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>&lt;1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Globe</td>
<td>6%</td>
<td>5</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Circline</td>
<td>1%</td>
<td>0</td>
<td>&lt;1</td>
<td>1</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Bullet</td>
<td>18%</td>
<td>17</td>
<td>&lt;1</td>
<td>0</td>
<td>1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Bug</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>New York City</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Sockets</td>
<td>3,503</td>
<td>2,169</td>
<td>728</td>
<td>305</td>
<td>271</td>
<td>27</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>All Bulb Shapes</td>
<td>100%</td>
<td>62</td>
<td>21</td>
<td>9</td>
<td>8</td>
<td>1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>A-shaped</td>
<td>35%</td>
<td>34</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Spiral</td>
<td>18%</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Flood</td>
<td>9%</td>
<td>4</td>
<td>&lt;1</td>
<td>0</td>
<td>5</td>
<td>&lt;1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Tube</td>
<td>10%</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Globe</td>
<td>10%</td>
<td>10</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Circline</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Bullet</td>
<td>15%</td>
<td>13</td>
<td>&lt;1</td>
<td>0</td>
<td>1</td>
<td>&lt;1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Bug</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>&lt;1%</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
As Table 57 shows, the distribution of CFLs by shape is similar between NYS and both NYC and Ohio. The percentage of spiral shaped CFLs is significantly higher in NYC compared with DC and the percentage of globe shaped CFLs is significantly lower in NYC compared with Houston.

Table 57: Socket Saturation – CFLs Installed by Bulb Shape by Comparison Area
(Based on all onsite respondents)

<table>
<thead>
<tr>
<th></th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total CFLs</td>
<td>2,285</td>
<td>908</td>
<td>728</td>
<td>452</td>
<td>638</td>
</tr>
<tr>
<td>A-shaped</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
<td>4%</td>
<td>1%</td>
</tr>
<tr>
<td>Spiral</td>
<td>87%</td>
<td>88%</td>
<td>85%</td>
<td>74% (\text{a})</td>
<td>83%</td>
</tr>
<tr>
<td>Flood</td>
<td>2%</td>
<td>5%</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Tube</td>
<td>5%</td>
<td>3%</td>
<td>10%</td>
<td>17%</td>
<td>2% (\text{a})</td>
</tr>
<tr>
<td>Globe</td>
<td>2%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>1%</td>
<td>9% (\text{ab})</td>
</tr>
<tr>
<td>Bullet</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>0</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Bug</td>
<td>&lt;1%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>&lt;1%</td>
<td>0</td>
<td>&lt;1%</td>
<td>0</td>
</tr>
<tr>
<td>Don’t know</td>
<td>0</td>
<td>&lt;1%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

\(\text{a}\) Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.  
\(\text{b}\) Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
### 7.5 CFL STORAGE

Prior CFL users were asked about their CFL storage practices during the RDD survey. At the time of the survey, 66% of CFL users in NYS reported storing CFLs, slightly more than in Ohio (63%), and significantly more than in NYC (59%) (Table 58). As shown in Figure 19, across all households (including non-users), the average number of CFLs in storage was slightly more in NYS (1.9) than in Ohio (1.6) and significantly more than in NYC (1.5). Three months prior to the survey, fewer CFL users in each state had CFLs in storage (Table 58), and the number of CFLs being stored in households in each area was slightly fewer than the number of CFLs currently being stored (Figure 19). NYS (13%) experienced a significantly greater increase in the number of households storing CFLs over the three months prior to the survey when compared to Ohio (9%) and NYC (3%).

Across all regions within the state, more respondents reported storing CFLs at the time of the survey than they did three months ago (Table 59 and Figure 20). The results indicate that at least one-half of CFL users across all regions reported currently storing CFLs and, on average, they stored between 1.1 (in the Orange and Rockland utility territory), to 2.8 CFLs (in the Con Edison service territory). Three months prior to the survey the percentage of those who stored was as low as 39% (in the Southern Tier), although the numbers of CFLs stored was similar (0.8, in the Orange and Rockland area to 2.8 CFLs in the Con Edison service territory).

#### Table 58: Percentage of CFLs in Storage by Comparison Area
(Based on RDD respondents who have used CFLs)

<table>
<thead>
<tr>
<th>Storing CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>D.C.</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently</td>
<td>66%</td>
<td>63%</td>
<td>59%a</td>
<td>60%</td>
<td>61%</td>
</tr>
<tr>
<td>Three Months Ago</td>
<td>53%</td>
<td>54%</td>
<td>56%</td>
<td>55%</td>
<td>59%</td>
</tr>
<tr>
<td>% Increase</td>
<td>13%</td>
<td>9%a</td>
<td>3%ab</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>Mean Number Currently Stored</td>
<td>2.7</td>
<td>2.7</td>
<td>2.7</td>
<td>2.4</td>
<td>2.7</td>
</tr>
<tr>
<td>Sample Size</td>
<td>731</td>
<td>306</td>
<td>288</td>
<td>255</td>
<td>299</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

#### Table 59: Percentage of CFLs in Storage by Utility Service Territory
(Based on RDD respondents who have used CFLs)

<table>
<thead>
<tr>
<th>Storing CFLs</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently</td>
<td>74%</td>
<td>81%</td>
<td>61%</td>
<td>63%</td>
<td>63%</td>
<td>72%</td>
<td>65%</td>
</tr>
<tr>
<td>Three months ago</td>
<td>46%</td>
<td>71%</td>
<td>52%</td>
<td>54%</td>
<td>42%</td>
<td>55%</td>
<td>50%</td>
</tr>
<tr>
<td>% Increase</td>
<td>28%</td>
<td>10%</td>
<td>9%</td>
<td>9%</td>
<td>21%</td>
<td>17%</td>
<td>15%</td>
</tr>
<tr>
<td>Sample Size</td>
<td>55</td>
<td>34</td>
<td>311</td>
<td>219</td>
<td>23</td>
<td>61</td>
<td>28</td>
</tr>
</tbody>
</table>
Figure 19: Mean number of CFLs in Storage over Time by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Comparison Areas</th>
<th>Houston</th>
<th>DC</th>
<th>NYC</th>
<th>Ohio</th>
<th>NYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>In storage 3 months ago</td>
<td>1.4</td>
<td>1.1</td>
<td>1.4</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>In storage now</td>
<td>1.4</td>
<td>1.3</td>
<td>1.5</td>
<td>1.6</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Mean Number of CFLs in Storage
Figure 20: Mean Number of CFLs in Storage over Time by Utility Service Territory (Based on all RDD participants)

<table>
<thead>
<tr>
<th>Utility Service Territory</th>
<th>In storage 3 months ago</th>
<th>In storage now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Hudson G&amp;E</td>
<td>1.3</td>
<td>2.4</td>
</tr>
<tr>
<td>Con Edison</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>National Grid</td>
<td>1.5</td>
<td>1.8</td>
</tr>
<tr>
<td>NYSEG</td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Orange &amp; Rockland</td>
<td>0.8</td>
<td>1.1</td>
</tr>
<tr>
<td>Rochester G&amp;E</td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td>All Other</td>
<td>1.6</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Mean Number of CFLs in Storage
Turning to storage data collected through the onsite saturation study, as Table 60 shows, a similar number of households in NYS (28%) and NYC (28%) have at least one CFL in storage. In addition, a similar number of households in NYS (28%) and Ohio (34%) have at least one CFL in storage, and households in NYS and Ohio have a similar average number of CFLs in storage (1.1 vs. 2.2). The number of households with one CFL in storage in NYC (28%) is similar to DC (20%) and significantly higher than those in Houston (3%). In addition, the average number of CFLs in storage in NYC (1.0) is similar to that in DC (0.7) and significantly higher than that in Houston (0.04).

<table>
<thead>
<tr>
<th># of All CFLs in Storage</th>
<th>Category</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero</td>
<td>% of households</td>
<td>72%</td>
<td>66%</td>
<td>72%</td>
<td>80%</td>
<td>97%&lt;sup&gt;ab&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>One to Five</td>
<td>% of households</td>
<td>22%</td>
<td>21%</td>
<td>24%</td>
<td>15%</td>
<td>3%&lt;sup&gt;ab&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>46%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22%</td>
<td>55%</td>
<td>37%&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>100%&lt;sup&gt;ab&lt;/sup&gt;</td>
</tr>
<tr>
<td>Six to Fifteen</td>
<td>% of households</td>
<td>6%</td>
<td>10%</td>
<td>3%</td>
<td>5%</td>
<td>0%&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>44%</td>
<td>39%</td>
<td>23%</td>
<td>63%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0%&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>16 or more</td>
<td>% of households</td>
<td>&lt;1%</td>
<td>4%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>% of CFLs</td>
<td>10%&lt;sup&gt;a&lt;/sup&gt;</td>
<td>39%&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>22%</td>
<td>0%&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>0%&lt;sup&gt;ab&lt;/sup&gt;</td>
</tr>
<tr>
<td>Total Number of Households</td>
<td></td>
<td>202</td>
<td>96</td>
<td>100</td>
<td>91</td>
<td>100</td>
</tr>
<tr>
<td>Mean CFLs in Storage</td>
<td></td>
<td>1.1</td>
<td>2.2</td>
<td>1.0</td>
<td>0.7</td>
<td>0.04</td>
</tr>
<tr>
<td>Sample Size</td>
<td></td>
<td>203</td>
<td>98</td>
<td>100</td>
<td>97</td>
<td>99</td>
</tr>
</tbody>
</table>

<sup>a</sup> Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.

The vast majority of those RDD survey respondents in NYS, NYC, and the corresponding comparison areas who reported storing CFLs said that the bulbs are being kept for future use (Table 61). Seven percent of those in NYS and 9% of those in NYC said that the bulbs in storage were there because the CFLs did not fit or work in fixtures; it is unlikely that these CFLs will be used in the future.

<table>
<thead>
<tr>
<th>Reason</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>D.C.</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>For future use</td>
<td>91%</td>
<td>94%</td>
<td>91%</td>
<td>92%</td>
<td>94%</td>
</tr>
<tr>
<td>Did not fit/work in fixture</td>
<td>7</td>
<td>5</td>
<td>9</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Over purchased bulbs</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Concern about mercury/disposal</td>
<td>1</td>
<td>2</td>
<td>0a</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sample size</td>
<td>498</td>
<td>203</td>
<td>189</td>
<td>172</td>
<td>194</td>
</tr>
</tbody>
</table>

<sup>a</sup> Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
About one-third of the CFLs reported as being stored via the RDD survey in NYS will be used to replace existing CFLs, which is about the same rate as in Ohio (Table 62). In NYC, 48% of the CFLs in storage will be used to replace existing CFLs, a rate significantly higher than that reported in NYS and DC (34%). Respondents within NYS varied in what types of bulb the stored CFLs would replace (Table 63). Between 11% (in the Orange and Rockland service territory) and 36% (in the National Grid service territory) of respondents storing CFLs intended to use them to replace incandescent bulbs, while 11% (in the Orange and Rockland territory) to 50% (in the areas served by “all other” utilities) intended to replace other CFLs.

Table 62: Storing CFLs as Replacements for Bulbs Already in Use by Comparison Area
(Based on RDD respondents storing CFLs)

<table>
<thead>
<tr>
<th>Reason</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>D.C.</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace compact fluorescent</td>
<td>32%</td>
<td>35%</td>
<td>48%ab</td>
<td>34%ab</td>
<td>42%</td>
</tr>
<tr>
<td>Replace incandescent</td>
<td>37</td>
<td>39</td>
<td>26ab</td>
<td>38a</td>
<td>30</td>
</tr>
<tr>
<td>Both/Whichever needed replacing first</td>
<td>28</td>
<td>22</td>
<td>23</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Will go in new fixtures</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Don’t know/ refused</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Sample Size</td>
<td>379</td>
<td>203</td>
<td>189</td>
<td>172</td>
<td>194</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

Table 63: Storing CFLs as Replacements for Bulbs Already in Use by Utility Service Territory
(Based on RDD respondents storing CFLs)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFL</td>
<td>24%</td>
<td>16%</td>
<td>37%</td>
<td>34%</td>
<td>11%</td>
<td>32%</td>
<td>50%</td>
</tr>
<tr>
<td>Incandescent</td>
<td>32</td>
<td>27</td>
<td>36</td>
<td>30</td>
<td>11</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Whichever needs replacing first</td>
<td>36</td>
<td>57</td>
<td>22</td>
<td>33</td>
<td>78</td>
<td>32</td>
<td>30</td>
</tr>
<tr>
<td>Don’t know/ refused</td>
<td>8</td>
<td>0</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Sample Size</td>
<td>22</td>
<td>24</td>
<td>160</td>
<td>115</td>
<td>9</td>
<td>35</td>
<td>14</td>
</tr>
</tbody>
</table>

7.6 SATISFACTION WITH CFLS

The RDD Survey asked respondents a series of questions about their satisfaction with CFLs. The vast majority of CFL users in NYS and NYC and their corresponding comparison areas were “satisfied” or “very satisfied” with the CFLs that were currently installed in their homes (Table 64). In NYS, 90% said they were “satisfied” or “very satisfied” with their CFLs, significantly more than the 86% who gave a similar rating in Ohio. Ninety-three percent of CFL users in NYC gave high satisfaction ratings, the same proportion who gave those ratings in DC, and significantly higher than the 88% in Houston. Breaking satisfaction apart, the results indicate that a greater percentage of DC respondents (72%) said they were “very satisfied” with CFLs compared to NYC respondents (59%), while the latter were more likely to indicate being “somewhat satisfied” (34% in NYC vs. 21% in DC).
Table 65 shows the level of satisfaction NYS CFL users have with their currently installed CFLs. The overwhelming majority (81% or more) across all regions were satisfied with their currently installed CFLs.

**Table 64: Satisfaction with Currently Installed by Comparison Area**  
(Based on RDD reported current CFL Users)

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>D.C.</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>60%</td>
<td>54%a</td>
<td>59%</td>
<td>72%ab</td>
<td>51%a</td>
</tr>
<tr>
<td>Somewhat satisfied</td>
<td>30</td>
<td>32</td>
<td>34</td>
<td>21ab</td>
<td>37</td>
</tr>
<tr>
<td>Neither satisfied nor dissatisfied</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Somewhat dissatisfied</td>
<td>3</td>
<td>7a</td>
<td>3</td>
<td>2</td>
<td>6a</td>
</tr>
<tr>
<td>Very dissatisfied</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3a</td>
</tr>
<tr>
<td>Don't know/ refused</td>
<td>1</td>
<td>1</td>
<td>0a</td>
<td>2a</td>
<td>0</td>
</tr>
<tr>
<td>Sample Size</td>
<td>721</td>
<td>301</td>
<td>281</td>
<td>250</td>
<td>295</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

**Table 65: Satisfaction with Currently Installed CFLs by Utility Service Territory**  
(Based on RDD reported current CFL users)

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of respondents¹</td>
<td>90%</td>
<td>92%</td>
<td>90%</td>
<td>86%</td>
<td>88%</td>
<td>92%</td>
<td>91%</td>
</tr>
<tr>
<td>Sample Size</td>
<td>55</td>
<td>34</td>
<td>311</td>
<td>219</td>
<td>23</td>
<td>61</td>
<td>28</td>
</tr>
</tbody>
</table>

¹ Includes “somewhat satisfied” and “very satisfied” response categories.

Table 66 presents information on the percentage of CFL users who had removed a CFL from service. In all of the comparison areas, fewer than one-half of the CFL users had ever removed a CFL from use. However, there were significantly fewer households in DC compared to the other cities that had ever removed a CFL.

**Table 66: Respondent Ever Removed CFL after Installation by Comparison Area based on CFL Users**  
(Based on RDD respondents who have ever used CFLs)

<table>
<thead>
<tr>
<th>Removed CFL</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>D.C.</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>39%</td>
<td>36%</td>
<td>41%</td>
<td>26%ab</td>
<td>42%</td>
</tr>
<tr>
<td>No</td>
<td>61</td>
<td>62</td>
<td>59</td>
<td>74ab</td>
<td>57</td>
</tr>
<tr>
<td>Don’t know/ refused</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sample Size</td>
<td>731</td>
<td>306</td>
<td>116</td>
<td>255</td>
<td>299</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

The small numbers of respondents who rated themselves as dissatisfied (as indicated by a satisfaction rating of “very dissatisfied,” “somewhat dissatisfied,” or “neither satisfied nor dissatisfied”) with CFLs or removed bulbs from service generally cited similar reasons underlying their responses and actions (Table 67 and Table 68). For example, to explain their dissatisfaction with CFLs, respondents in NYS, NYC,
and the corresponding comparison areas named many of the same concerns, including that the CFLs are not bright enough, light color, and that the bulbs burned out, broke, or stopped working (Table 67). A delay in the light coming on was mentioned significantly more often in NYS (20%) than in NYC (7%). Respondents in Ohio (27%) and Houston (49%) also were significantly more concerned about CFL flickering than those in NYS or NYC (respectively). Concern about mercury in CFLs or special disposal needs were identified by 11% in NYS, about the same as in Ohio (10%) and by 5% in NYC, 11% in Houston, but by no respondents in DC. Note that the high level of dissatisfaction in NYC with CFL brightness may reflect high usage of bulbs with smaller wattages or lumens, but it could also be related to the fact that many NYC residences have fewer windows and are built in close proximity to others, limiting the ambient light that enters the home. The saturation study may provide additional information to explain this finding.

Table 67: Reason for Dissatisfaction with CFLs by Comparison Area
(Based on RDD respondents with CFL satisfaction ratings of “very dissatisfied,” “somewhat dissatisfied,” or “neither satisfied nor dissatisfied”; Multiple response)

<table>
<thead>
<tr>
<th>Reason for Dissatisfaction</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulb not bright enough</td>
<td>25%</td>
<td>27%</td>
<td>41%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Delay in light coming in</td>
<td>20</td>
<td>16</td>
<td>7a</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Burned out</td>
<td>18</td>
<td>15</td>
<td>13</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Light color</td>
<td>15</td>
<td>9</td>
<td>19</td>
<td>32</td>
<td>17</td>
</tr>
<tr>
<td>Fit in the fixture</td>
<td>11</td>
<td>1a</td>
<td>0a</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Disposal/mercury hazard</td>
<td>11</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>No savings/savings not obvious</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Broke/Stopped working</td>
<td>3</td>
<td>11</td>
<td>4</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Do not like</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>16a</td>
<td>7a</td>
</tr>
<tr>
<td>Appearance</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Need special bulb outdoors</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Too bright</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Did not work with dimmer/3-way switch</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Flickering</td>
<td>0</td>
<td>27ab</td>
<td>0</td>
<td>5</td>
<td>49ab</td>
</tr>
<tr>
<td>Expensive</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>15a</td>
</tr>
<tr>
<td>Noisy/hum/harine</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brightness (unspecified if too bright, or not enough)</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Don't know/Refused</td>
<td>5</td>
<td>2</td>
<td>0a</td>
<td>19a</td>
<td>2</td>
</tr>
<tr>
<td>Sample size</td>
<td>73</td>
<td>41</td>
<td>21</td>
<td>18</td>
<td>37</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
Similarly, when asked why they removed CFLs, respondents most commonly noted that the CFLs had burned out, broken, or otherwise stopped working. Significantly more respondents in NYC (65%) compared to NYS (58%) and DC (53%) said they removed CFLs because they burned out. The team did not ask the types of questions necessary—for example the manufacturer or model number of CFLs or the type of fixtures in which the products were used—to assess why NYC (and Houston) respondents experienced more CFL failure than respondents elsewhere. Dissatisfaction with the light output (not bright enough, with smaller numbers who said they were too bright) and color are among the other common reasons cited for removal, suggesting that consumers may need more information about wattage equivalencies or color choice when buying CFLs (Table 68). Other reasons cited for removal include improper fit and that the CFLs did not work with three-way or dimmer switches.

### Table 68: Why Respondent Removed CFLs
(Based on RDD respondents who removed CFLs)

<table>
<thead>
<tr>
<th>Why Removed CFLs</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>D.C.</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burned out/broken/stopped working</td>
<td>58%</td>
<td>53%</td>
<td>65%a</td>
<td>53%a</td>
<td>67%</td>
</tr>
<tr>
<td>Not bright enough</td>
<td>15</td>
<td>24a</td>
<td>12</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Didn't fit properly</td>
<td>8</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>2ab</td>
</tr>
<tr>
<td>Light color</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>4a</td>
</tr>
<tr>
<td>Did not work with dimmer or 3-way</td>
<td>5</td>
<td>5</td>
<td>9a</td>
<td>1ab</td>
<td>5</td>
</tr>
<tr>
<td>Too bright</td>
<td>3</td>
<td>5</td>
<td>1a</td>
<td>6a</td>
<td>2</td>
</tr>
<tr>
<td>Did not work well in cold weather</td>
<td>3</td>
<td>0a</td>
<td>0a</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Delay in coming on</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Removed or changed fixture</td>
<td>2</td>
<td>3</td>
<td>0a</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Mercury/disposal hazard</td>
<td>1</td>
<td>1</td>
<td>0a</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Flickered</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0a</td>
<td>1</td>
</tr>
<tr>
<td>Interference with electronic devices</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Exploded</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Other reasons</td>
<td>3</td>
<td>2</td>
<td>12ab</td>
<td>9</td>
<td>7a</td>
</tr>
<tr>
<td>Don't know/Refused</td>
<td>1</td>
<td>1</td>
<td>0a</td>
<td>4a</td>
<td>0</td>
</tr>
<tr>
<td>Sample Size</td>
<td>277</td>
<td>108</td>
<td>288</td>
<td>69</td>
<td>130</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston. b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

The survey asked respondents to rate their satisfaction with specific characteristics associated with CFLs. Respondents used a scale of one to five to rate their satisfaction where one was “very dissatisfied” and five was “very satisfied.” The findings indicate that respondents in NYS, NYC, and all comparison areas were largely satisfied with CFLs (Figure 21, which also includes results for overall satisfaction with installed CFLs). At first glance, respondents in all areas gave lower satisfaction ratings for the dimming and three-way capabilities of CFLs, but closer examination reveals that many voiced neutrality or said that they “did not know” their rating for dimming and three-way capabilities, possibly indicating that they had little experience with these features in CFLs or that they do not have much of an opinion about them. While the team could tease out statistical differences within each category, the fact remains that the five areas show virtually the same patterns of satisfaction with each of the characteristics of CFLs.
Figure 21: Satisfaction with Currently Installed CFLs and Select Characteristics of CFLs by Comparison Area\(^1\)
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>CFL Characteristic</th>
<th>Houston</th>
<th>DC</th>
<th>NYC</th>
<th>Ohio</th>
<th>NYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>88%</td>
<td>93%</td>
<td>93%</td>
<td>86%</td>
<td>90%</td>
</tr>
<tr>
<td>Fit in Fixtures</td>
<td>78%</td>
<td>83%</td>
<td>77%</td>
<td>84%</td>
<td>80%</td>
</tr>
<tr>
<td>Dimming Capability</td>
<td>38%</td>
<td>31%</td>
<td>38%</td>
<td>34%</td>
<td>33%</td>
</tr>
<tr>
<td>3-Way Capability</td>
<td>37%</td>
<td>33%</td>
<td>36%</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>Light Color</td>
<td>78%</td>
<td>86%</td>
<td>77%</td>
<td>77%</td>
<td>77%</td>
</tr>
<tr>
<td>Light Quality</td>
<td>82%</td>
<td>89%</td>
<td>80%</td>
<td>81%</td>
<td>81%</td>
</tr>
<tr>
<td>No Flickering</td>
<td>73%</td>
<td>77%</td>
<td>81%</td>
<td>75%</td>
<td>79%</td>
</tr>
<tr>
<td>Immediate Start-up</td>
<td>83%</td>
<td>77%</td>
<td>77%</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td>Heat Output</td>
<td>84%</td>
<td>90%</td>
<td>86%</td>
<td>84%</td>
<td>86%</td>
</tr>
<tr>
<td>Long Life</td>
<td>63%</td>
<td>73%</td>
<td>90%</td>
<td>65%</td>
<td>68%</td>
</tr>
<tr>
<td>Price</td>
<td>81%</td>
<td>81%</td>
<td>81%</td>
<td>72%</td>
<td>78%</td>
</tr>
<tr>
<td>Cost to Operate</td>
<td>77%</td>
<td>88%</td>
<td>88%</td>
<td>78%</td>
<td>80%</td>
</tr>
<tr>
<td>Environmental Benefits</td>
<td>64%</td>
<td>71%</td>
<td>71%</td>
<td>70%</td>
<td>71%</td>
</tr>
<tr>
<td>Suitability in hard to reach areas</td>
<td>86%</td>
<td>93%</td>
<td>83%</td>
<td>84%</td>
<td>88%</td>
</tr>
</tbody>
</table>

\(^1\) Satisfaction determined by a rating of “four” or “five” on a one-to-five scale where one is “very dissatisfied” and five is “very satisfied.”
Section 8

LIGHT EMITTING DIODES

Light emitting diodes (LEDs) are an emerging technology with the potential to save even more electricity than what is now achieved by CFLs. LEDs have high lumen output at very low wattages and have many advantages compared to CFLs (e.g., LEDs do not contain mercury, can be cycled on and off without degradation, turn on to full brightness quickly, and are not as fragile as CFLs and incandescents). LEDs also have the potential for much longer lifetimes compared to CFLs (i.e., LED failure is rarely sudden; rather than burning out, the light output fades over time). However, LED products are not always directly comparable to traditional forms of lighting, and while a few LED products are currently available for general lighting applications, the technology is still in development and high cost continues to be a barrier. The national ENERGY STAR program, under the guidance of the Department of Energy has developed specifications for several LED product categories and continues to facilitate the development of LED quality testing procedures to assess product reliability. As the market for CFLs becomes increasingly transformed and as the federal Energy Independence and Security Act of 2007 (EISA 2007) increases standards for lighting technology, many energy efficiency program sponsors are looking to LEDs as a potential new source of electricity and demand savings. The evaluation team included a handful of questions about familiarity with and use of LEDs in the consumer survey.

Just over half of respondents in New York State (hereafter NYS), less Nassau and Suffolk Counties and New York City (NYC) (52%) were familiar with LEDs, slightly more than in Ohio (Table 69 and Figure 22). Awareness of LEDs in New York City (NYC) was similar to the District of Columbia (DC) (39%) but significantly lower than Houston (48%). Rates of LED usage among all respondents were similar in NYS (5%), Ohio (5%), and NYC (4%), but significantly higher in DC (7%) and Houston (8%) when compared to NYC. Only 10% (in NYS) to 17% (in DC) of respondents aware of LEDs reported using them; the differences between areas were not statistically significant. Within NYS, familiarity with LEDs ranged from 40% in the Con Edison service territory to 57% in the Central Hudson service territory (Table 70). During the onsite visits, technicians observed LEDs installed in less than one-percent of total sockets in each of the comparison areas. This further indicates the relatively low penetration of LED technology in residential homes (Section 7.4).

Table 69: Familiarity and Use of LEDs by Comparison Area
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Level of Familiarity</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FAMILIARITY AND USE (ALL RDD RESPONDENTS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiar with LEDs</td>
<td>52%</td>
<td>48%</td>
<td>34%ab</td>
<td>39%</td>
<td>48%ab</td>
</tr>
<tr>
<td>Currently use LEDs</td>
<td>5%</td>
<td>5%</td>
<td>4%</td>
<td>7%a</td>
<td>8%ab</td>
</tr>
<tr>
<td>Sample size (all RDD respondents)</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
<tr>
<td><strong>FAMILIARITY AND USE (FAMILIAR RESPONDENTS ONLY)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiar with LEDs and use them</td>
<td>10%</td>
<td>11%</td>
<td>12%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Sample size (familiar with LEDs)</td>
<td>494</td>
<td>251</td>
<td>186</td>
<td>204</td>
<td>270</td>
</tr>
</tbody>
</table>

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
Figure 22: Familiarity and Use of LEDs by Comparison Area  
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Percentage of Respondents</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar with LEDs</td>
<td>52%</td>
<td>48%</td>
<td>31%</td>
<td>39%</td>
<td>48%</td>
</tr>
<tr>
<td>Use LEDs</td>
<td>5%</td>
<td>5%</td>
<td>4%</td>
<td>7%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Table 70: Familiar with LEDs by Utility Service Territory  
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Familiar</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>57%</td>
<td>40%</td>
<td>52%</td>
<td>55%</td>
<td>49%</td>
<td>56%</td>
<td>53%</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>
Holiday string lights are an LED application that received early support from the ENERGY STAR program with a labeling specification\(^{35}\) and have been marketed by efficiency programs and others as a more energy efficient, longer lasting, safer alternative to traditional incandescent string lights. The survey explicitly asked those familiar with LEDs if they used LED holiday lights.

Familiarity with LED holiday lights specifically ranged from 20% in NYC to 42% in NYS, while use of LED holiday lights among all respondents ranged from 6% in NYC to 12% in NYS (Table 71 and Figure 23). Familiarity with holiday lights in NYS (42%) was significantly higher than that in NYC (20%). Awareness of LED holiday lights in Houston (33%) was significantly higher than NYC, and a significantly higher 10% of households there used LED holiday lights compared to only 6% in NYC. Limiting the analysis to only those households familiar with LED holiday lights, the results show that between 23% (in DC) to 31% (in Houston)—29% in both NYS and NYC—actually used LED holiday lights. Although more respondents are aware of LEDs in general than LED holiday lights specifically, a greater proportion of those respondents aware of holiday lights actually use them. This finding holds true across comparison areas.

### Table 71: Familiarity and Use of LED Holiday Lights by Comparison Area
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Level of Familiarity</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FAMILIARITY AND USE (ALL RDD RESPONDENTS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiar with LED holiday lights</td>
<td>42%</td>
<td>38%</td>
<td>20%ab</td>
<td>24%</td>
<td>33%ab</td>
</tr>
<tr>
<td>Currently use LED holiday lights</td>
<td>12%</td>
<td>9%</td>
<td>6%ab</td>
<td>7%</td>
<td>10%ab</td>
</tr>
<tr>
<td>Sample Size (all RDD respondents)</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
<tr>
<td><strong>FAMILIARITY AND USE (FAMILIAR RESPONDENTS ONLY)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Familiar with LED holiday lights and use them</td>
<td>29%</td>
<td>24%</td>
<td>29%</td>
<td>23%</td>
<td>31%</td>
</tr>
<tr>
<td>Sample size (familiar with LED holiday lights)</td>
<td>436</td>
<td>196</td>
<td>109</td>
<td>128</td>
<td>177</td>
</tr>
</tbody>
</table>

\(^{a}\) Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.

\(^{b}\) Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.

\(^{35}\) ENERGY STAR Program Requirements for Decorative Light Strings have been in development for several years and Version 1.4 became effective March 1, 2008.
Figure 23: Familiarity and Use of Holiday LEDs by Comparison Area
(Based on all RDD participants)

<table>
<thead>
<tr>
<th>Percentage of Respondents</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar with LEDs</td>
<td>42%</td>
<td>38%</td>
<td>20%</td>
<td>24%</td>
<td>33%</td>
</tr>
<tr>
<td>Use LEDs</td>
<td>12%</td>
<td>9%</td>
<td>6%</td>
<td>7%</td>
<td>10%</td>
</tr>
</tbody>
</table>
Respondents familiar with LEDs were also asked to name other LED applications that they were currently using (Table 72). These other responses (all unprompted and volunteered by the respondent) varied among the geographic areas. LED light bulbs and task/desk lamps were the most frequently identified applications used among those familiar with LEDs. Some applications identified, such as automotive lighting and flashlights may rely on batteries or non-electrical-grid related power.

Turning to results within NYS, of the respondents who are familiar with LEDs between 7%, in the Orange and Rockland utility service territory, to 18%, in Central Hudson territory, are using LEDs for household lighting (Table 73). Although respondents voiced awareness of numerous uses for LEDs, they are most familiar with holiday lights, a finding that confirms results from the larger geographic comparison areas, although this result could be influenced by the fact that the survey explicitly asked about LED holiday lights and not all other LED technologies.

Table 72: Use of Various LED Applications by Comparison Area
(Based on RDD respondents familiar with LEDs)

<table>
<thead>
<tr>
<th>Application</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use LEDs</td>
<td>10%</td>
<td>11%</td>
<td>12%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>LED APPLICATIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holiday lights¹</td>
<td>23%</td>
<td>24%</td>
<td>29%</td>
<td>23%</td>
<td>31%</td>
</tr>
<tr>
<td>Light bulbs/screw in bulbs</td>
<td>23</td>
<td>36ab</td>
<td>27</td>
<td>23</td>
<td>20a</td>
</tr>
<tr>
<td>Task/Desk lamps</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>41ab</td>
<td>17a</td>
</tr>
<tr>
<td>Night lights</td>
<td>16</td>
<td>20</td>
<td>7ab</td>
<td>13a</td>
<td>23ab</td>
</tr>
<tr>
<td>Novelty fixtures</td>
<td>16</td>
<td>12</td>
<td>7ab</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Under cabinet lighting</td>
<td>13</td>
<td>16</td>
<td>4ab</td>
<td>13ab</td>
<td>17ab</td>
</tr>
<tr>
<td>Flashlights</td>
<td>12</td>
<td>9</td>
<td>11</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Recessed can lighting</td>
<td>2</td>
<td>6ab</td>
<td>8ab</td>
<td>5</td>
<td>2ab</td>
</tr>
<tr>
<td>Electronic devices</td>
<td>2</td>
<td>0ab</td>
<td>0ab</td>
<td>0</td>
<td>1a</td>
</tr>
<tr>
<td>Automotive lighting</td>
<td>0</td>
<td>8ab</td>
<td>0</td>
<td>2a</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>0ab</td>
<td>0ab</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Sample size</td>
<td>543</td>
<td>251</td>
<td>186</td>
<td>204</td>
<td>270</td>
</tr>
</tbody>
</table>

¹ The survey explicitly asked respondents familiar LEDs if they were aware of LED holiday lights. The other responses were all volunteered by the respondent with no prompting, likely explaining the lower levels of awareness of many of them.

a Significantly different at 90% confidence level. NYS compared to Ohio and NYC. NYC compared to DC and Houston.
b Statistical power exceeds 80% for one-tailed hypothesis testing. Ohio and NYC are compared to NYS, and DC and Houston are compared to NYC.
Table 73: Use of Various LED Applications by Utility Service Territory
(Based on RDD respondents familiar with LEDs)

<table>
<thead>
<tr>
<th>Response</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange and Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use LEDs</td>
<td>18%</td>
<td>9%</td>
<td>7%</td>
<td>12%</td>
<td>7%</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Holiday lights</td>
<td>16%</td>
<td>20%</td>
<td>25%</td>
<td>31%</td>
<td>0</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Flashlights</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Novelty fixtures</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Night lights</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>Light bulbs/screw in bulbs</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Task/Desk lamps</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Under cabinet lighting</td>
<td>0</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>All other</td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sample size</td>
<td>40</td>
<td>24</td>
<td>231</td>
<td>161</td>
<td>14</td>
<td>53</td>
<td>20</td>
</tr>
</tbody>
</table>

1 Includes traffic lights, outdoor residential lights, miscellaneous commercial uses, and miscellaneous gadgets, among a few other uses.
Section 9

CONCLUSIONS

This report summarizes the results of random digit dial (RDD) and onsite surveys conducted in New York State (hereafter NYS), excluding New York City (NYC) and Nassau and Suffolk Counties and three comparison areas—Ohio (minus the portion served by Duke Energy), the District of Columbia (DC), and Houston, Texas—that lack CFL programs. This task was completed as part of an impact evaluation of the Compact Fluorescent Lamp (CFL) Expansion Fast Track Program, which is a part of the Energy Efficiency Portfolio Standard Program offering. The surveys were conducted under the direction of NMR Group, Inc. (NMR), part of the Market Characterization and Assessment team led by Summit Blue Consulting. APPRISE Incorporated managed the data collection efforts. The survey addressed the following issues:

- Awareness and perceived quality of CFLs
- Prior experience with and use of CFLs
- Light bulb purchasing behavior
- CFL use over the past year
- Light emitting diodes

The RDD and onsite survey results suggest that the market for CFLs—including CFL awareness, familiarity, use, and purchase—was more developed in 2008 and at the time of the saturation surveys in the summer of 2009 in NYS than in either Ohio or NYC. Similarly, both the RDD and onsite surveys find that the CFL market in NYC was generally more developed than that in DC. However, while the RDD survey indicates that the CFL market in Houston rivaled that of the market in NYC, the onsite survey instead suggests that the NYC market was more developed than that in Houston. Given the greater level of reliability from the onsite surveys, the evaluators are inclined to conclude that the NYC market was also more developed than the Houston market.

9.1 DIFFERENCES BETWEEN THE RDD AND ONSITE SURVEYS

Data collected during the onsite visits reveals that RDD survey respondents typically have a difficult time providing point estimates of the number of CFLs they have purchased or currently use. On average, respondents tend to overestimate their purchases and underestimate their usage during RDD surveys. When responding to RDD surveys, respondents are likely thinking in a very general way about how many CFLs they may have purchased during the specified time period, but during the onsite visits they are looking at the CFL when reporting when it was purchased. This action increases the salience of purchase date in their minds, leading the respondent to think more deeply about when that actual CFL was purchased. Furthermore, onsite purchase numbers are bounded by the number of CFLs actually found in the home. Together the salience and the bounded number likely explain the fact that onsite estimates of purchase numbers are lower than RDD survey estimates of the same. In contrast, while rarely exactly on target, RDD survey self reports of usage are generally more similar to actual usage than are estimates of purchases. Respondents, therefore, appear to know that they have zero, a couple, a few, or a lot of CFLs in use, even if they cannot give an exact estimate of the number.

9.2 AWARENESS AND PERCEIVED QUALITY OF CFLS

The evaluation team asked survey respondents about their awareness and familiarity with CFLs, the ENERGY STAR® label, and the presence of the ENERGY STAR label on CFL packages. Respondents
aware of the ENERGY STAR label on CFLs also described any differences of which they were aware between labeled and non-labeled CFLs. The findings indicate that respondents from NYS were more likely to be aware of CFLs compared to Ohio and NYC respondents. Likewise, NYS respondents were also more likely than Ohio respondents to rate themselves as “very familiar” with CFLs. NYC respondents were more likely to be aware of CFLs than were DC respondents. NYC respondents are also more likely to rate themselves as “very familiar” with CFLs when compared to both DC and Houston respondents.

As with CFLs, NYS respondents were more likely to be aware of the ENERGY STAR label than were respondents in Ohio and NYC. In contrast, familiarity with the label was similar between NYC, DC, and Houston. Fewer than 40% of respondents in any of the comparison areas recalled seeing the ENERGY STAR label on CFLs. The few who were aware of differences typically said the ENERGY STAR labeled CFLs were more efficient and had a longer life.

9.3 PRIOR EXPERIENCE WITH AND USE OF CFLS

Prior experience with CFLs likely affects current use and purchase of the products. Therefore, the team asked the survey respondents when they first heard about CFLs, if they have ever used CFLs, and, if so, when they first used CFLs. Most respondents who were aware of CFLs first heard about them through mass media advertising. Most respondents from NYS and from NYC had used, purchased, and/or received CFLs for free at some point prior to the implementation of the RDD and onsite surveys. Prior usage of CFLs in NYS was higher than in Ohio or NYC, while NYC prior usage of CFLs was higher than that of the DC but not Houston. Respondents first used CFLs within the past three years.

9.4 LIGHT BULB PURCHASING BEHAVIOR

The onsite results indicated that more NYC households purchased CFLs in the past three months than NYS households, but the number of CFLs purchased in the two areas was statistically similar. NYC households were also more likely than those in Houston and DC to buy CFLs in the past three months and the past year. NYC and NYS respondents were more likely than their counterparts in the other areas to report purchasing 16 to 25 CFLs in the past three months and the past year. Note that many of these results differ from those self-reported in the RDD survey, in which NYS and Houston respondents generally reported purchasing more CFLs than NYC respondents.

Respondents in all regions still bought more incandescent bulbs, on average, than CFLs. Most households bought CFLs and incandescent bulbs from home improvement, mass merchandise, and grocery stores. Incandescent bulbs, however, also tended to be purchased from hardware, bargain, and drugstores more frequently than CFLs were. The majority of CFLs installed or stored in onsite respondents’ homes were purchased at retailers that partnered with the New York Energy SmartSM Products Program.

9.5 CFL USE OVER THE PAST YEAR

The team also explored how respondents used CFLs over the past year, including usage by key demographic factors. The results indicate that the percentage of respondents using CFLs—and the number of CFLs they have installed in their homes—increased over the course of the year. A greater percentage of households in NYS and in NYC used CFLs than in their respective comparison areas.

Based on data collected during the onsite saturation visits, the percentage of current CFL users is similar between NYS and Ohio, but the average number of CFLs installed in NYS is significantly higher than that in Ohio. For NYC, the percent of CFL users is significantly higher compared to DC and Houston,
but the average number of CFLs installed in NYC is similar to that in DC and Houston, a finding that is largely driven by the small size of most homes—and hence the fewer sockets—in NYC.

The onsite saturation study revealed that the percentage of sockets filled with CFLs was numerically higher in NYS and NYC than in Ohio, DC, or Houston, but the differences failed to achieve statistical significance. They also lacked sufficient power, however, suggesting that saturation in NYS and NYC may not different than in the comparison areas. The study finds that about 70% of all sockets in NYS and NYC could still be filled with CFLs, most of which have medium screw bases and adhere to the standard A-shape profile, into which an A-shaped or many spiral shaped CFLs could be installed.

A majority of respondents in each comparison area self-reported storing CFLs at the time of the survey. The onsite visits found the opposite—the majority of onsite respondents in each comparison area were not storing any CFLs at the time of the onsite visits. The respondents were storing the CFLs for future use, although they were split on whether the stored CFL would replace another CFL or an incandescent bulb. NYC respondents were significantly more likely than NYS and DC respondents to report that they would use the CFL to replace another CFL.

Respondents were, by and large, satisfied with the CFLs currently in use and with various characteristics of CFLs. The few respondents who voiced dissatisfaction or who have removed CFLs from service cited burn out, brightness, fit, appearance, light color, and other factors among the reasons.

9.6 LIGHT Emitting Diodes

About one-half of NYS (52%), Ohio (48%), and Houston (48%) respondents were aware of light emitting diodes (LEDs). LED awareness in NYC stood at 34%, significantly lower than in NYS and Houston, but not significantly different than DC (39%). Fewer than 10% of RDD respondents in any area self-reported using LEDs, with the the onsite saturation study showing fewer than one percent of sockets in any of the five areas was installed with an LED.

Although RDD respondents were generally less aware of LED holiday lights, they were more likely to report using them. However, the evaluators note that the survey asked specifically about LED holiday lights but did not include questions about other household LED applications (e.g., nightlights, flashlights, etc.). Furthermore, the survey was taken just after the Christmas holiday and may also have contributed to recent memories of using LED holiday lights.

9.7 RECOMMENDATIONS

Based on the findings from the RDD and onsite surveys summarized above, the following conclusions and recommendations emerge. Additional conclusions and recommendations have been developed from the multi-state modeling effort and the process evaluation which have been presented under separate cover.

**Conclusion:** Until the CFL Expansion Fast Track program was started, most of NYSERDA’s resources for CFLs have gone toward retailer support and consumer education rather than incentives. In the NYSERDA territory, the vast majority of consumers know that CFLs exist; consumer awareness was 91% in NYS and 79% in NYC. However, a smaller number of consumers are very familiar with CFLs (31% NYS and 28% NYC).

**Recommendation:** Consider outreach messaging to CFL users that encourages additional purchases of CFLs, rather than improving consumer awareness. Future marketing campaigns may want to educate committed current CFL users on the benefits of further increasing the number of sockets in which they have installed CFLs.
Conclusion: Many NYSERDA territory households use CFLs, but not nearly as many as could. The onsite survey found that 84% of NYS households and 79% of NYC households used CFLs. One in five sockets in NYS (19%) and NYC (21%) contains a CFL, based on the results of the onsite saturation studies. The remaining available potential opportunity for CFLs or LEDs in NYS is 70% of all sockets, of which the majority are small- or medium-base screw-in sockets and adhere to the standard A-shape profile, into which an A-shaped or many spiral shaped CFLs could be installed.

Recommendation: Continue to incentivize products to encourage consumers to purchase CFLs. The multi-state modeling effort suggests that once households start using CFLs, they largely will continue to do so.

Conclusion: Most households in NYC preferred to keep light bulbs (of any type) on hand, rather than buy them as they burn out—the bulbs on hand are the ones that will be used when one burns out. Most households in NYS and NYC (72% each) did not have any CFLs in storage; across all NYSERDA territory, households had an average of about one CFL in storage and 91% of respondents said they would keep the stored CFLs on hand for future use.

Recommendation: Continue incentives for multipacks of CFLs in the selection of program offerings at retailers, so that households can easily have extra CFLs available. Because most consumers prefer to keep bulbs on hand, if they can reach for a CFL without making a special trip to a retailer, they will be more likely to use one the next time a bulb burns out.

Recommendation: To capture program savings from CFLs in multipacks immediately, consumer outreach can also educate consumers about the value of replacing incandescents right away, rather than waiting for them to burn out.

Conclusion: Specialty bulbs comprise a small but important portion of the remaining CFL potential in households in NYS and NYC. In NYS, the greatest potential for CFLs is in replacing standard A-shaped incandescent bulbs (38%), but the potential to replace bullet-shaped incandescent bulbs is also notable (17%). In NYC, the greatest potential for CFLs is also in replacing standard A-shaped incandescent bulbs (34%) and the potential to replace globe (10%) and bullet-shaped (13%) CFLs is also notable. Spiral shaped CFLs often fit in sockets that contain A-shaped bulbs, so an A-shaped CFL is not always required to replace an A-shaped incandescent.

Recommendation: Consider increasing support of more specialty bulbs, while still including standard CFLs in the mix of products incentivized by the CFL Expansion Program.
APPENDIX A

DEMOGRAPHICS

This appendix summarizes the housing, demographic, and socioeconomic characteristics of respondents. While the information is largely presented for review, the analyses discussed in the main document have at times referenced the results presented below, as they may help to explain compact fluorescent lamp (CFL) use and purchasing habits. In future analyses, the team will use more complex statistical techniques to tease out the demographic, programmatic, and other factors related to CFL use.

9.8 HOUSING CHARACTERISTICS

Most survey respondents in New York State (NYS) (75%), Ohio (75%), and Houston (67%) owned their homes and lived in single-family attached homes (Table 74). In contrast, fewer than one-half of New York City (NYC) (43%) and District of Columbia (DC) (49%) respondents owned their homes and only about one-fourth of respondents in those two areas (22% in NYC and 25% in DC) lived in single-family detached homes. Respondents in these two cities were more likely to dwell in single-family attached homes and apartment buildings of all sizes—but especially those with five or more units—when compared to respondents from the other three areas.

Within NYS, Table 75 shows that 66% or more of respondents in all utility service territories owned or were buying their homes. Single family detached homes ranged from 49% (in the Con Edison service territory) to 78% (in the Orange and Rockland service territory). Apartments accounted for 9% to 30% of respondent dwellings across service territories, with 6% (in various service territories) to 16% (in Con Edison service territory) of residences being located in two to four unit apartment buildings.

Table 74: Homeownership Status and Type of Home by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Home Type</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own/buying home</td>
<td>75%</td>
<td>75%</td>
<td>43%</td>
<td>49%</td>
<td>67%</td>
</tr>
<tr>
<td><strong>TYPE OF HOME</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single-family detached home</td>
<td>69%</td>
<td>74%</td>
<td>22%</td>
<td>25%</td>
<td>67%</td>
</tr>
<tr>
<td>Single-family attached home</td>
<td>10</td>
<td>9</td>
<td>17</td>
<td>27</td>
<td>10</td>
</tr>
<tr>
<td>(duplex, row home)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apartment building with 2-4 units</td>
<td>8</td>
<td>3</td>
<td>16</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Apartment building with 5+ units</td>
<td>7</td>
<td>7</td>
<td>39</td>
<td>34</td>
<td>14</td>
</tr>
<tr>
<td>Mobile home</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>&lt;0</td>
<td>&lt;1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>&lt;1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Sample size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

1 Buying refers to respondents who were in the process of buying a home at the time of the survey.
### Table 75: Homeownership Status and Type of Home by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Response</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own/buying home&lt;sup&gt;1&lt;/sup&gt;</td>
<td>68%</td>
<td>69%</td>
<td>76%</td>
<td>83%</td>
<td>69%</td>
<td>66%</td>
<td>87%</td>
</tr>
<tr>
<td>Single-family detached home</td>
<td>60%</td>
<td>49%</td>
<td>73%</td>
<td>72%</td>
<td>78%</td>
<td>74%</td>
<td>70%</td>
</tr>
<tr>
<td>Single-family attached home (duplex, row home)</td>
<td>14</td>
<td>16</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Apartment building with 2-4 units</td>
<td>12</td>
<td>16</td>
<td>6</td>
<td>6</td>
<td>13</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Apartment building with 5 or more units</td>
<td>10</td>
<td>17</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Mobile home/Other</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

<sup>1</sup> Buying refers to respondents who were in the process of buying a home at the time of the survey.
Table 76 summarizes the year in which respondents’ homes were built, but the analysis is limited to only single-family detached or attached homes because these respondents would be the most likely to have accurate information on the age of their homes. In most areas the largest percentage of homes was built in the 1930s or earlier. In, Houston homes were newer, with the largest percentage of homes built in 2000 or later (21%).

Within NYS, patterns across utility service territories generally mirrored those for the state, with the largest percentage of homes being built in the 1930s or earlier and followed by another burst of development in the 1950s to 1970s (Table 77). Exceptions included the Central Hudson Gas and Electric service territory in which 23% of homes were built in the 1970s and the Orange and Rockland service territory with a burst of development in the 1990s (18%).

Table 76: Decade Home was Built by Comparison Area
(Based on respondents living in single family homes)

<table>
<thead>
<tr>
<th>Decade</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930s or earlier</td>
<td>25%</td>
<td>21%</td>
<td>25%</td>
<td>41%</td>
<td>4%</td>
</tr>
<tr>
<td>1940s</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>1950s</td>
<td>14</td>
<td>12</td>
<td>16</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>1960s</td>
<td>11</td>
<td>10</td>
<td>9</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>1970s</td>
<td>11</td>
<td>10</td>
<td>4</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>1980s</td>
<td>9</td>
<td>9</td>
<td>4</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>1990s</td>
<td>7</td>
<td>8</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2000 or later</td>
<td>6</td>
<td>12</td>
<td>2</td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>13</td>
<td>12</td>
<td>31</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>Sample size</td>
<td>851</td>
<td>439</td>
<td>223</td>
<td>303</td>
<td>413</td>
</tr>
</tbody>
</table>
### Table 77: Decade Home was Built by Utility Service Territory
(Based on respondents living in single family homes)

<table>
<thead>
<tr>
<th>Decade</th>
<th>Central Hudson G&amp;E</th>
<th>Con-Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930s or earlier</td>
<td>10%</td>
<td>31%</td>
<td>28%</td>
<td>29%</td>
<td>11%</td>
<td>13%</td>
<td>36%</td>
</tr>
<tr>
<td>1940s</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>1950s</td>
<td>10</td>
<td>18</td>
<td>15</td>
<td>14</td>
<td>4</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>1960s</td>
<td>12</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>22</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>1970s</td>
<td>23</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>19</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>1980s</td>
<td>3</td>
<td>7</td>
<td>7</td>
<td>10</td>
<td>7</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>1990s</td>
<td>9</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>18</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>2000 or later</td>
<td>7</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td>0</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>12</td>
<td>11</td>
<td>10</td>
<td>8</td>
<td>19</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Sample size</td>
<td>55</td>
<td>39</td>
<td>378</td>
<td>247</td>
<td>26</td>
<td>79</td>
<td>27</td>
</tr>
</tbody>
</table>

Appendix A-4
Respondents from NYC (53%) and DC (50%) were more likely to live in small homes (less than 1,400 square feet) relative to the other comparison areas (32% in Houston to 26% in Ohio) (Table 78). Few respondents from any of the areas lived in homes larger than 2,499 square feet. In keeping with home size, respondents in NYC (26%) and DC (27%) area were more likely to live in one-bedroom homes than were respondents from the other areas (6% in Ohio and 11% in NYS and Houston). Three-bedroom homes were the most common type in NYS (41%), Ohio (46%), and Houston (40%).

Similar to the entire state, between 56% and 74% of these residences throughout NYS utility service territories were less than 2,000 sq. ft., and a three-bedroom residence was most common across all utility service territories (Table 79).

### Table 78: Size of Home by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Square Feet</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SQUARE FEET</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1,400</td>
<td>31%</td>
<td>26%</td>
<td>53%</td>
<td>50%</td>
<td>32%</td>
</tr>
<tr>
<td>1,400-1,999</td>
<td>31</td>
<td>36</td>
<td>25</td>
<td>25</td>
<td>31</td>
</tr>
<tr>
<td>2,000-2,499</td>
<td>18</td>
<td>20</td>
<td>10</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>2,500-3,499</td>
<td>14</td>
<td>10</td>
<td>6</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>3,500-3,999</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4,000-4,999</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5,000 or more</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Don’t know/Refused</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>BEDROOMS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>1</td>
<td>11</td>
<td>6</td>
<td>26</td>
<td>27</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>23</td>
<td>29</td>
<td>28</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>41</td>
<td>46</td>
<td>27</td>
<td>26</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>19</td>
<td>6</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6 or more</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Don’t know/ refused</td>
<td>2</td>
<td>1</td>
<td>5%</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Sample size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>
## Table 79: Size of Home by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Size of Home</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SQUARE FEET</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1,400</td>
<td>44%</td>
<td>43%</td>
<td>26%</td>
<td>27%</td>
<td>28%</td>
<td>32%</td>
<td>37%</td>
</tr>
<tr>
<td>1,400-1,999</td>
<td>17</td>
<td>13</td>
<td>38</td>
<td>32</td>
<td>29</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>2,000-2,499</td>
<td>10</td>
<td>13</td>
<td>20</td>
<td>23</td>
<td>19</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>2,500-3,499</td>
<td>22</td>
<td>22</td>
<td>12</td>
<td>13</td>
<td>13</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>3,500 or more</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>BEDROOMS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zero or 1</td>
<td>24%</td>
<td>25%</td>
<td>9%</td>
<td>8%</td>
<td>0%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
<td>17</td>
<td>18</td>
<td>24</td>
<td>28</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>27</td>
<td>26</td>
<td>48</td>
<td>39</td>
<td>38</td>
<td>46</td>
<td>57</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>18</td>
<td>20</td>
<td>22</td>
<td>31</td>
<td>21</td>
<td>14</td>
</tr>
<tr>
<td>5 or more</td>
<td>11</td>
<td>13</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>
9.9 DEMOGRAPHIC AND SOCIOECONOMIC CHARACTERISTICS

Table 80 shows that there were only slight differences in the educational background of respondents in NYS compared with Ohio or NYC. The majority of respondents had at least some college in NYS (56%), Ohio (52%), and NYC (53%); 35% of respondents in NYS, 39% in Ohio, and 33% in NYC reported that they were high school graduates. DC respondents (66%) were the most likely to have at least some college compared to all other areas examined; 30% had a graduate or professional degree.

Within NYS, respondents in the Con Edison (67%) and Orange and Rockland (72%) service territories were more likely than those in other parts of the state to report having at least some college (Table 81).

Table 80: Highest Level of Education by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Education</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than ninth grade</td>
<td>1%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Ninth to twelfth grade no diploma</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>High school graduate (includes GED)</td>
<td>35</td>
<td>39</td>
<td>33</td>
<td>21</td>
<td>31</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>17</td>
<td>17</td>
<td>11</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Associates degree</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Bachelors degree</td>
<td>15</td>
<td>14</td>
<td>16</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
<td>14</td>
<td>11</td>
<td>18</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Sample size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

Appendix A-7
### Table 81: Highest Level of Education by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Education</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than ninth grade</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Ninth to twelfth grade no diploma</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>High school graduate (includes GED)</td>
<td>37</td>
<td>17</td>
<td>38</td>
<td>37</td>
<td>19</td>
<td>33</td>
<td>37</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>11</td>
<td>27</td>
<td>18</td>
<td>16</td>
<td>9</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Associates degree</td>
<td>13</td>
<td>2</td>
<td>10</td>
<td>13</td>
<td>22</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Bachelors degree</td>
<td>16</td>
<td>18</td>
<td>14</td>
<td>14</td>
<td>16</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Graduate or professional degree</td>
<td>13</td>
<td>20</td>
<td>12</td>
<td>14</td>
<td>25</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>3</td>
<td>12</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>
The majority of respondents in NYS classified themselves as either employed full-time (54%) or retired (32%), similar to the status of respondents in Ohio (51% an 28%, respectively) (Table 82). Fifty-three percent of respondents in NYC said they were employed full-time, similar to DC (54%) but less than Houston (64%). Twenty-three percent of respondents in NYC and 24% in DC stated that they were retired, slightly more than reported in Houston (18%). Table 82 also shows slight differences in household income in the comparison areas among those who were willing to disclose that information in the survey. Interestingly, respondents in all areas were fairly evenly spread throughout the various income categories, although the demographic and socioeconomic weighting scheme may be equalizing the distribution somewhat.

Within NYS, most respondents reported being employed full-time, with the exception of the Con Edison service territory, where more respondents were retired (47% respectively) (Table 83). There was somewhat more variability in household income between utility service territories, largely reflecting the cost of living, the proximity to NYC, and varying rates of refusal to answer the question.

Table 82: Head of Household Employment Status and Household Income by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Response</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EMPLOYMENT STATUS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed full-time (includes self</td>
<td>54%</td>
<td>51%</td>
<td>53%</td>
<td>54%</td>
<td>64%</td>
</tr>
<tr>
<td>employed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed part time (includes self</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>employed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>32</td>
<td>28</td>
<td>23</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>Not currently employed</td>
<td>7</td>
<td>13</td>
<td>12</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>HOUSEHOLD INCOME</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$9,999 or less</td>
<td>6%</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>$10,000 to $14,999</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>$15,000 to $19,999</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>$20,000 to $29,999</td>
<td>9</td>
<td>9</td>
<td>6</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>$30,000 to $39,999</td>
<td>7</td>
<td>12</td>
<td>7</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>$40,000 to $49,999</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td>12</td>
<td>14</td>
<td>9</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>$75,000 to $99,999</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>$100,000 to $149,999</td>
<td>7</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>$150,000 or more</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Refused</td>
<td>22</td>
<td>18</td>
<td>27</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>Don’t know</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Sample size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

The categories are based on those used and reported by the US Census Bureau.

Appendix A-9
Table 83: Head of Household Employment Status and Household Income by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Response</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EMPLOYMENT STATUS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed full-time (includes self employed)</td>
<td>63%</td>
<td>33%</td>
<td>50%</td>
<td>56%</td>
<td>50%</td>
<td>69%</td>
<td>63%</td>
</tr>
<tr>
<td>Employed part-time (includes self-employed)</td>
<td>2</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Retired</td>
<td>20</td>
<td>47</td>
<td>34</td>
<td>30</td>
<td>16</td>
<td>24</td>
<td>23</td>
</tr>
<tr>
<td>Not currently employed</td>
<td>10</td>
<td>7</td>
<td>8</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>5</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>25</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>HOUSEHOLD INCOME</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $30,000</td>
<td>16%</td>
<td>12%</td>
<td>31%</td>
<td>25%</td>
<td>9%</td>
<td>31%</td>
<td>36%</td>
</tr>
<tr>
<td>$30,000 to $49,999</td>
<td>10</td>
<td>8</td>
<td>17</td>
<td>18</td>
<td>9</td>
<td>14</td>
<td>23</td>
</tr>
<tr>
<td>$50,000 to $99,999</td>
<td>30</td>
<td>20</td>
<td>19</td>
<td>20</td>
<td>9</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>$100,000 or more</td>
<td>7</td>
<td>24</td>
<td>10</td>
<td>7</td>
<td>22</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Refused</td>
<td>28</td>
<td>34</td>
<td>18</td>
<td>24</td>
<td>34</td>
<td>20</td>
<td>7</td>
</tr>
<tr>
<td>Don’t know</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>16</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

Appendix A-10
The race and ethnic mix of respondents in NYS and Ohio was similar, with a large majority of respondents identifying themselves as white in NYS (85%) and Ohio (83%) (Table 84). In contrast, fifty-nine percent of respondents in NYC and 56% in Houston identified themselves as white, while only 33% did so in DC. A majority of DC respondents (56%) identified as black or African American. Houston and NYC respondents were most likely to identify themselves as Hispanic, reflecting both the demographics of the area as well as the fact that the team fielded the survey in Spanish in those two cities but nowhere else.

The majority of NYS respondents by service territory claimed their race as white with no more than eight percent of respondents reporting the presence of a Hispanic in the household (Table 85).

### Table 84: Race and Ethnicity by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Race and Ethnicity</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RACE OF RESPONDENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>85%</td>
<td>83%</td>
<td>59%</td>
<td>33%</td>
<td>56%</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>7</td>
<td>11</td>
<td>19</td>
<td>56</td>
<td>24</td>
</tr>
<tr>
<td>American Indian, Native Hawaiian, or Alaska Native</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>5</td>
<td>4</td>
<td>14</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td><strong>HISPANIC IN HOUSEHOLD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>4%</td>
<td>3%</td>
<td>10%</td>
<td>5%</td>
<td>12%</td>
</tr>
<tr>
<td>Sample size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

Appendix A-11
Table 85: Race and Ethnicity by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Race or Ethnicity</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>RACE OF RESPONDENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>77%</td>
<td>68%</td>
<td>87%</td>
<td>93%</td>
<td>81%</td>
<td>76%</td>
<td>97%</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>7</td>
<td>18</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>American Indian, Native Hawaiian, or Alaska Native</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>8</td>
<td>13</td>
<td>5</td>
<td>3</td>
<td>13</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>HISPANIC IN HOUSEHOLD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>7%</td>
<td>5%</td>
<td>4%</td>
<td>2%</td>
<td>3%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>
Table 86 and Table 87 summarize the primary language respondents claimed to speak at home. Prior to discussing the results, it is important to recall that the survey was conducted only in English in NYS, Ohio, and DC and in English and Spanish in NYC and Houston. Those with limited English or Spanish skills may not have been able to answer the survey if they could not communicate effectively with the interviewer.

With this caveat in mind, Table 86 shows that English was the primary language spoken at home across all comparison areas, ranging from 85% in NYC to 98% in Ohio. About one in ten people in NYC (9%) and Houston (10%) identified Spanish as their primary language. Within NYS, English was the primary language spoken in 92% or more of the respondents’ households across service territories (Table 87).

Table 86: Primary Language Spoken in the Home by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Language</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>97%</td>
<td>98%</td>
<td>85%</td>
<td>97%</td>
<td>89%</td>
</tr>
<tr>
<td>Other (Specify)</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Spanish</td>
<td>&lt;1</td>
<td>0</td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Mandarin</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
<td>0</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Russian</td>
<td>&lt;1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Don’t know/refused</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sample size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

Table 87: Primary Language Spoken in the Home by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Language</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>93%</td>
<td>95%</td>
<td>98%</td>
<td>97%</td>
<td>97%</td>
<td>92%</td>
<td>100%</td>
</tr>
<tr>
<td>Spanish</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Russian</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mandarin</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Refused</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>
Table 88 shows that across comparison areas, more respondents were females than males (55% or more). This is also true within NYS utility service territories (53% or more were female) with one exception—more males (55%) responded in the Central Hudson Gas and Electric service territory (Table 89).

**Table 88: Gender by Comparison Area**  
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Gender</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>57%</td>
<td>55%</td>
<td>55%</td>
<td>58%</td>
<td>58%</td>
</tr>
<tr>
<td>Male</td>
<td>43</td>
<td>45</td>
<td>45</td>
<td>42</td>
<td>42</td>
</tr>
<tr>
<td>Sample size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

**Table 89: Gender by Utility Service Territory**  
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>45%</td>
<td>54%</td>
<td>57%</td>
<td>59%</td>
<td>53%</td>
<td>59%</td>
<td>72%</td>
</tr>
<tr>
<td>Male</td>
<td>55</td>
<td>46</td>
<td>43</td>
<td>41</td>
<td>47</td>
<td>41</td>
<td>28</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

On average, households in all five areas had less than one child; DC households had the smallest number of children (0.4), on average, and Houston had the highest (0.9) (Table 90). NYS and NYC had 0.6 children on average, while Ohio had 0.7. The average number of household residents age 65 or older was also less than one, varying from 0.2 in Houston to 0.4 in NYS. Overall average household size varied from 2.1 in DC to 3.0 in Houston, with NYS, Ohio, and NYC at 2.6 household members, on average.

Within the state, the average number of children per household ranged from 0.5 in multiple areas to 1.2 in the Orange and Rockland service territory, but as with NYS, the average household had less than one child (Table 91). The average number of household residents 65 or older ranged between 0.2 in multiple areas to 0.6 in the Con Edison service territory. Overall household size varied from 2.3 in the Con Edison service territory to 3.3 in the Orange and Rockland service territory.

**Table 90: Number and Age Group of Persons Living in the Home by Comparison Area**  
(Based on respondents providing usable answers on household composition)

<table>
<thead>
<tr>
<th>Number of People by Age Group</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean number of under 17 in home</td>
<td>0.6</td>
<td>0.7</td>
<td>0.6</td>
<td>0.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Mean number of over 65 in home</td>
<td>0.4</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Mean household size</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.1</td>
<td>3.0</td>
</tr>
<tr>
<td>Sample size</td>
<td>963</td>
<td>493</td>
<td>478</td>
<td>480</td>
<td>491</td>
</tr>
</tbody>
</table>
Table 91: Number and Age Group of Persons Living in the Home by Utility Service Territory
(Based on respondents providing usable answers on household composition)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Central Hudson G&amp;E</th>
<th>Con-Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean number of under 17 in home</td>
<td>0.7</td>
<td>0.5</td>
<td>0.6</td>
<td>0.6</td>
<td>1.2</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Mean number of over 65 in home</td>
<td>0.2</td>
<td>0.6</td>
<td>0.4</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Mean household size</td>
<td>2.7</td>
<td>2.3</td>
<td>2.6</td>
<td>2.5</td>
<td>3.3</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>

In NYS, NYC, and the comparison areas, the majority of respondents said their homes were occupied during the daytime hours during the week. As Table 92 shows, 73% of homes in NYS and 77% of homes in Ohio were usually occupied during daytime hours. In NYC, more homes were occupied during week daytime hours (68%) compared to DC (62%), but fewer when compared to Houston (71%). Likewise, the majority of homes in all the areas had home internet access, but still about one-fourth of the respondents in each areas reported not using the internet at all.

Within NYS, most respondents said that their homes were occupied during weekday, daytime hours, ranging from 57% in Central Hudson service territory to 80% in Rochester G&E service territory (Table 93). Between 54% (in the Con Edison service territory) and 84% (in Orange and Rockland service territory) of households had access to the internet on their home computers, but between 10% (in the Orange and Rockland service territory) and 26% (in the Con Edison service territory) of respondents said that they did not use the internet.

Table 92: Home Occupied During the Week Daytime Hours by Comparison Area
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Response</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home during week, daytime</td>
<td>73%</td>
<td>77%</td>
<td>68%</td>
<td>62%</td>
<td>71%</td>
</tr>
<tr>
<td>Home internet access</td>
<td>66%</td>
<td>61%</td>
<td>62%</td>
<td>61%</td>
<td>69%</td>
</tr>
<tr>
<td>Does not use internet</td>
<td>23%</td>
<td>26%</td>
<td>26%</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>Sample size</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
</tbody>
</table>

Table 93: Home Occupied During the Week Daytime Hours by Utility Service Territory
(Based on all RDD respondents)

<table>
<thead>
<tr>
<th>Response</th>
<th>Central Hudson G&amp;E</th>
<th>Con-Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home during week, daytime</td>
<td>57%</td>
<td>75%</td>
<td>74%</td>
<td>72%</td>
<td>69%</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>Home internet access</td>
<td>77%</td>
<td>54%</td>
<td>64%</td>
<td>65%</td>
<td>84%</td>
<td>67%</td>
<td>63%</td>
</tr>
<tr>
<td>Does not use internet</td>
<td>14%</td>
<td>26%</td>
<td>25%</td>
<td>23%</td>
<td>10%</td>
<td>17%</td>
<td>24%</td>
</tr>
<tr>
<td>Sample size</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
</tbody>
</table>
Table 94 shows that 85% of respondents in NYS said that they own or lease cars, compared to 86% in Ohio. The average number of cars per household in NYS and Ohio having at least one vehicle was 2.0. In NYC 49% of respondents owned or leased cars; this is a lower percentage than both DC, where 62% of households owned or leased cars, and Houston, where 86% of households had at least one car. The average number of cars owned is 1.5 in NYC, 1.6 in DC, and 2.1 in Houston.

Table 95 show the percentage of respondents owning or leasing cars varied a great deal throughout NYS, with 90% of households in the Orange and Rockland service territory having cars to 70% having at least one car in the Con Edison service territory. The average number of cars per household ranged from 1.6 in the service territory of all other utilities to 2.3 in the Central Hudson Gas and Electric service territory.

### Table 94: Household Car Ownership by Comparison Area
(Base see table)

<table>
<thead>
<tr>
<th>Method</th>
<th>NYS</th>
<th>Ohio</th>
<th>NYC</th>
<th>DC</th>
<th>Houston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own/lease car</td>
<td>85%</td>
<td>86%</td>
<td>49%</td>
<td>62%</td>
<td>86%</td>
</tr>
<tr>
<td>Sample size (all households)</td>
<td>1001</td>
<td>501</td>
<td>502</td>
<td>500</td>
<td>503</td>
</tr>
<tr>
<td>Mean</td>
<td>2.0</td>
<td>2.0</td>
<td>1.5</td>
<td>1.6</td>
<td>2.1</td>
</tr>
<tr>
<td>Sample size (households with cars)</td>
<td>877</td>
<td>450</td>
<td>277</td>
<td>344</td>
<td>453</td>
</tr>
</tbody>
</table>

### Table 95: Household Car Ownership by Utility Service Territory
(Base see table)

<table>
<thead>
<tr>
<th>Number of Cars</th>
<th>Central Hudson G&amp;E</th>
<th>Con Edison</th>
<th>National Grid</th>
<th>NYSEG</th>
<th>Orange &amp; Rockland</th>
<th>Rochester G&amp;E</th>
<th>All Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not own/lease car</td>
<td>77%</td>
<td>70%</td>
<td>87%</td>
<td>88%</td>
<td>87%</td>
<td>89%</td>
<td>90%</td>
</tr>
<tr>
<td>Sample size (all households)</td>
<td>68</td>
<td>55</td>
<td>440</td>
<td>284</td>
<td>29</td>
<td>91</td>
<td>34</td>
</tr>
<tr>
<td>Mean</td>
<td>2.3</td>
<td>1.9</td>
<td>2.0</td>
<td>2.0</td>
<td>1.9</td>
<td>1.9</td>
<td>1.6</td>
</tr>
<tr>
<td>Sample size (households with cars)</td>
<td>53</td>
<td>41</td>
<td>388</td>
<td>255</td>
<td>27</td>
<td>82</td>
<td>31</td>
</tr>
</tbody>
</table>
Hello, my name is <INTERVIEWER>, and I’m calling from Braun Research on behalf of the New York State Energy Research and Development Authority, or NYSERDA.

We are contacting households to discuss how people use different types of lighting in their homes. May I speak with the person in the household who is the most knowledgeable about household purchases such as light bulbs and other household supplies?

[WHEN CORRECT RESPONDENT COMES TO THE PHONE, RE-INTRODUCE AND CONTINUE.]

We’re conducting a brief survey about how you use different types of lighting in your home. The information you provide will help NYSERDA improve its energy efficiency programs and services, which will help keep energy bills as low as possible by reducing consumption.

As an independent research firm, Braun Research does not intend to report your responses in any way that would reveal your identity.

**KNOWLEDGE/AWARENESS**

S1. I’d like to ask you a few questions about your awareness of different types of light bulbs. Before this call today, had you ever heard of compact fluorescent bulbs, or CFLs?

1  YES
2  NO
96  REFUSED
97  DON’T KNOW

[ASK S2 IF S1 = 2, 96, 97 OTHERWISE, SKIP TO S3.]
S2. Compact fluorescent light bulbs – also known as CFLs – usually do not look like regular incandescent bulbs. The most common type of compact fluorescent bulb is made with a glass tube bent into a spiral, resembling soft-serve ice cream, and it fits in a regular light bulb socket. Before today, were you familiar with CFLs?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK S3 IF S1 =1 OR S2=1, OTHERWISE SKIP TO ES1].

S3. How familiar are you with CFLs? Would you say that you are…?

1 Very familiar
2 Somewhat familiar
3 Not too familiar
4 Not at all familiar
96 REFUSED
97 DON’T KNOW

[IF S2 = 2, 96, 97 OR S3 = 4, 96, 97, GO TO ES1 OTHERWISE, CONTINUE.]

Q1. Have you or anyone else in your household ever purchased or been given any compact fluorescent light bulbs or CFLs to use in a home?

1 YES, R HAS
2 YES, SOMEONE ELSE HAS (ASK TO SPEAK TO THAT PERSON AND REPEAT INTRO)
3 NO
96 REFUSED
97 DON’T KNOW

[IF Q1 = 2, RESTART INTERVIEW WITH CORRECT RESPONDENT. OTHERWISE, CONTINUE.]
ES1. Are you familiar with the ENERGY STAR label on household products?

The label is a blue-and-white label with the word "energy" followed by a five-pointed star. Energy Star labels are used by the Environmental Protection Agency – the EPA – and the Department of Energy to identify and label highly energy-saving products for consumers. On a scale of 0 to 10 with 0 being not at all familiar and 10 being very familiar, how familiar were you with the Energy Star label before today?

___ Enter 0 to 10 rating

96 REFUSED

97 DON’T KNOW

[ASK ES2 IF ES1 = 1 TO 10 AND S3=3, 2, 1, OTHERWISE SKIP TO INSTRUCTION AFTER ES4]

ES2. Have you ever seen an Energy Star label on CFL packaging or on the display materials where CFLs are sold?

1 YES

2 NO

96 REFUSED

97 DON’T KNOW

[ASK ES3 IF ES2 = 1, OTHERWISE SKIP TO INSTRUCTION AFTER ES4]

ES3. Are you aware of any difference in the quality of CFLs that have the Energy Star label and the CFLs that do not have this label?

1 YES

2 NO

96 REFUSED

97 DON’T KNOW

[ASK ES4 IF ES3 = 1, OTHERWISE, SKIP TO INSTRUCTION AFTER ES4]

ES4. In what way is the quality of CFLs with the Energy Star label different than the quality of other CFLs? Anything else?

1 OTHER (SPECIFY): ___________

96 REFUSED

97 DON’T KNOW
[IF S2=2, 96, 97 OR S3=4, 96, 97 GO TO LED1, OTHERWISE CONTINUE]

**USE OF CFLs**

USE1. How did you first learn about CFLs?

[DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]

1. THROUGH THE LOCAL UTILITY OR LOCAL ELECTRIC COMPANY
2. THROUGH AN ENERGY AUDIT IN MY HOME
3. THROUGH AN AD BY/INFORMATION FROM THE NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY (NYSERDA)
4. AD OR STORY IN TV, RADIO, NEWSPAPER, MAGAZINE; SPONSOR OTHER THAN LOCAL ELECTRIC COMPANY OR NYSERDA
5. RETAIL STORE DISPLAY OR AD
6. FRIEND OR FAMILY MEMBER
7. WORK; CO-WORKER; PROMOTION IN THE WORKPLACE
8. OTHER (SPECIFY) ___________
96. REFUSED
97. DON’T KNOW

USE2. Have you EVER used a compact fluorescent light bulb, or CFL, on the inside or outside of your home?

1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[IF Q1 = 3, 96, 97 AND Q USE2 = 2, 96, 97, GO TO INTRO PRECEDING Q LED1. ASK Q USE3 IF Q USE2 = 1. OTHERWISE, SKIP TO Q USE9.]
USE3. Approximately how long ago did you FIRST use a compact fluorescent light bulb?

[RECORD NUMBER OF YEARS OR MONTHS, NOT A RANGE. IF LESS THAN ONE YEAR, RECORD MONTHS.
IF “DON’T KNOW,” PROBE: Is it less than or more than five years ago? WORK FROM THERE TO GET AN ESTIMATE.
ENTER 97 FOR MONTHS AND YEARS IF STILL “DON’T KNOW.”
ENTER 96 FOR MONTHS AND YEARS IF REFUSED.]

1 MONTHS ________
2 YEARS ________
96 REFUSED
97 DON’T KNOW

USE4. How many CFLs do you currently have installed on the inside or outside of your home?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE5. About how many CFLs were installed on the inside or outside of your home three months ago, that is, around the beginning of September?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE6. About how many CFLs were installed on the inside or outside of your home a year ago?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW
USE7. Have you ever installed and then later removed a CFL from the inside or outside of your home?
   1   YES
   2   NO
   96  REFUSED
   97  DON’T KNOW

[ASK Q USE8 IF Q USE7 = 1. OTHERWISE, SKIP TO Q USE9.]

USE8. Why did you remove the bulb(s)?
   [DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]
   1   BURNED OUT
   2   BROKE/STOPPED WORKING
   3   BULB IS TOO BRIGHT
   4   BULB IS NOT BRIGHT ENOUGH
   5   DELAY IN LIGHT COMING ON
   6   DID NOT WORK WITH DIMMER SWITCH
   7   DOESN’T FIT PROPERLY
   8   STUCK OUT OF FIXTURE
   9   LIGHT COLOR
   10  INTERFERENCE WITH RADIO, TV, OTHER ELECTRONIC DEVICES
   11  OTHER (SPECIFY): ___________
   96  REFUSED
   97  DON’T KNOW

USE9. Do you currently have any CFLs in storage in your home? This could be in your closet, your pantry, your garage, or anywhere in your home.
   1   YES
   2   NO
   96  REFUSED
   97  DON’T KNOW

[ASK Q USE10 IF Q USE9 = 1. OTHERWISE, SKIP TO Q USE11.]
USE10. How many CFLs are you storing right now?

[RECORD A NUMBER, NOT A RANGE.]

NUMBER OF CFLs: ________  
96 REFUSED  
97 DON’T KNOW

USE11. Were you storing any CFLs in your home three months ago, back in September?

1 YES  
2 NO  
96 REFUSED  
97 DON’T KNOW

[ASK Q USE12 IF Q USE11 = 1. OTHERWISE, SKIP TO Q USE13.]

USE12. Approximately how many CFLs were you storing three months ago?

[RECORD A NUMBER, NOT A RANGE.]

NUMBER OF CFLs: ________  
96 REFUSED  
97 DON’T KNOW

[ASK Q USE13 IF Q USE9 = 1 OR Q USE11 = 1. OTHERWISE, SKIP TO THE INSTRUCTION PRECEDING Q USE15.]

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 13 SHOULD READ AS FOLLOWS:]  

USE13. Why are you storing the CFLs? Is it because . . .?

[SELECT ALL THAT APPLY.]  
1 You are storing them for future use  
2 They do not fit or work with the fixture for which you had intended to use them  
3 Some other reason (Specify): ________  
96 REFUSED  
97 DON’T KNOW
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLs

[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 13 SHOULD READ AS FOLLOWS:]

USE13. Why were you storing the CFLs? Is it because . . .?

[SELECT ALL THAT APPLY.]
1. You were storing them for future use
2. They did not fit or work with the fixture for which you had intended to use them
3. Some other reason (Specify): _________
96. REFUSED
97. DON’T KNOW

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 13 SHOULD READ AS FOLLOWS:]

USE14. Do you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1. REPLACE COMPACT FLUORESCENT
2. REPLACE INCANDESCENT
3. BOTH/WHICHEVER NEEDED REPLACING FIRST
4. OTHER (SPECIFY): _________
96. REFUSED
97. DON’T KNOW

[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 13 SHOULD READ AS FOLLOWS:]

USE14. Did you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1. REPLACE COMPACT FLUORESCENT
2. REPLACE INCANDESCENT
3. BOTH/WHICHEVER NEEDED REPLACING FIRST
4. OTHER (SPECIFY): _________
96. REFUSED
97. DON’T KNOW

[IF (Qs USE4, USE5, USE6 ALL = 0, 96, 97) AND (Q USE7 = 2, 96, 97), SKIP TO Q LED1. OTHERWISE, CONTINUE.]
USE15. How satisfied are you with the compact fluorescent light bulbs currently in your home or, if you have no CFLs installed right now, the ones you have used in the past? Would you say . . .?

5  Very satisfied
4  Somewhat satisfied
3  Neither satisfied nor dissatisfied
2  Somewhat dissatisfied
1  Very dissatisfied
96  REFUSED
97  DON’T KNOW

[ASK Q USE16 IF Q USE15 = 1, 2, 3. OTHERWISE SKIP TO Q USE17.]

USE16. Why are you not satisfied?

1  RECORD RESPONSE
96  REFUSED
97  DON’T KNOW
I am going to read you a list of characteristics that may be associated with CFLs. Please tell me how satisfied you are with each by responding with: very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

How satisfied are you with the CFL’s . . .?

[CATI: RANDOMIZE]

a. Ability to fit in most fixtures without sticking out
b. Dimming capability
c. 3-way switching capability  
   READ IF NECESSARY: This capability refers to the ability to have CFL shine at different levels of brightness in a 3-way lamp
d. Light color
e. Light quality
f. Having a constant light output / no flickering
g. Immediate start-up / no delays
h. Long bulb life
i. Purchase price
j. Cost to operate
k. Amount of heat output
l. Environmental benefits
m. Suitability to use in hard-to-reach areas
n. Energy efficiency

5  VERY SATISFIED
4  SOMewhat SATISFIED
3  NEITHER SATISFIED NOR DISSATISFIED
2  SOMEWHAT DISSATISFIED
1  VERY DISSATISFIED
96  REFUSED
97  DON’T KNOW
**LEDs**

LED1. Are you familiar with light emitting diodes, or LED lights?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q LED2 IF Q LED1 = 1. OTHERWISE, SKIP TO Q BUY1.]

LED2. Have you ever heard of LED holiday lights?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q LED3 IF Q LED2 = 1. OTHERWISE, SKIP TO Q LED4.]

LED3. Do you own any LED holiday lights that you are currently using or planning to use this holiday season?
   1 YES
   2 NO
   3 OWN BUT NOT USING THIS SEASON
   96 REFUSED
   97 DON’T KNOW
LED4. What other types of LED lamps, fixtures, or bulbs have you heard of?

[DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]

1 TASK/DESK LAMPS
2 UNDERCABINET LIGHTING
3 LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS
4 RECESSED/CAN LIGHTING
5 NIGHT LIGHTS
6 FLASHLIGHTS
7 NOVELTY FIXTURES
8 OTHER (SPECIFY): __________
9 NONE
96 REFUSED
97 DON’T KNOW

LED5. Are you currently using any LED lamps, fixtures, or bulbs for regular household lighting?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK Q LED6 IF Q LED5 = 1. OTHERWISE, SKIP TO Q BUY1.]
LED6. What types of LED lamps, fixtures, or bulbs are you currently using?

[DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]

1. Task/Desk Lamps
2. Undercabinet Lighting
3. Light Bulbs/Screw in Bulbs/Gu-Type Bulbs
4. Recessed/Can Lighting
5. Night Lights
6. Flashlights
7. Novelty Fixtures
8. Other [Specify] ________________
96. Refused
97. Don’t Know

Purchasing

Now I have a few questions about your light bulb-buying habits.

BUY1. Do you usually keep a supply of light bulbs on hand, or do you tend to buy replacements as bulbs burn out?

1. Keep a Supply on Hand
2. Buy Replacements as Bulbs Burn Out
3. Both
96. Refused
97. Don’t Know

BUY2. During the past year, how many incandescent, or regular light bulbs, did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.

[Record a number, not a range.
If “Don’t Know,” probe: Is it less than or more than five bulbs? Work from there to get an estimate.]

Number of Bulbs: _________
96. Refused
97. Don’t Know
[IF (Q BUY2 = 0, 96, 97) AND (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO INTRO PRECEDING Q DEM1.
IF (Q BUY2 = 0, 96, 97) AND ((S1 = 1) OR (S2 = 1)), SKIP TO Q BUY5.
OTHERWISE, CONTINUE.]

BUY3. And during the past three months, how many *incandescent, or regular, light bulbs* did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________
96 REFUSED
97 DON’T KNOW

[CATI: Q BUY3 SHOULD BE LOWER THAN OR EQUAL TO Q BUY2.]

[IF BUY3 IS GREATER THAN BUY2, SAY: Your responses indicate that the number of incandescent, or regular, light bulbs you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.
RESTART THE QUESTIONING AT BUY2.]
BUY4. I’m going to read you a list of types of stores. For each one, please tell me if you have purchased **incandescent, or regular, light bulbs** from this type of store in the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

a. Grocery store or supermarket, such as Stop & Shop or Whole Foods
b. Warehouse store, such as BJ’s, Costco, or Sam’s Club
c. Home improvement store, such as Home Depot or Lowe’s
d. Hardware store, such as TruValue, ACE Hardware, or Aubuchon
e. Mass merchandise or discount department store, such as a Wal-Mart, K-Mart, or Target
f. Drugstore, such as Walgreen’s, Rite-Aid, or CVS
g. Convenience store, such as 7-Eleven
h. Specialty lighting or electrical store
i. Home furnishing store, such as a Bed, Bath, and Beyond, Linens and Things, or Pottery Barn
j. Mail order catalogs
k. Through the Internet
l. Bargain store, such as the Dollar Store or Family Dollar
m. Office supply store, such as Office Depot or Staples
n. Any other types of stores I did not mention? (Specify): _______

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO THE INTRO BEFORE Q DEM1.]

BUY5. During the past year, how many energy saving, **compact fluorescent light bulbs, or CFLs**, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________
96 REFUSED
97 DON’T KNOW
BUY6. During the past year, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.

IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: 

96 REFUSED

97 DON’T KNOW

[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY8.

IF (Q BUY5 = 0 AND Q BUY6 = 0), SKIP TO Q DEM1.

OTHERWISE, CONTINUE.]

BUY7. And during the past three months, how many energy saving, compact fluorescent light bulbs, or CFLs, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.

IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: 

96 REFUSED

97 DON’T KNOW

[CATI: BUY7 SHOULD BE LOWER THAN OR EQUAL TO Q BUY5.]

[ASK Q BUY8 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q BUY9.]

[IF BUY7 IS GREATER THAN BUY5, SAY: Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY5.]
BUY8. During the past three months, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: _________

96 REFUSED

97 DON’T KNOW

[CATI: BUY8 SHOULD BE LOWER THAN OR EQUAL TO Q BUY6.]

[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY12.]

[IF BUY8 IS GREATER THAN BUY6, SAY: Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you received for free in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY6.]

You told me earlier that you purchased [FILL REPSONSE FROM BUY5] CLFs in the past year. Now I would like to ask about the types of stores where you purchased the CFLs from over the past year, including the last three months.
BUY9. I’m going to read you a list of different types of stores. For each one, please tell me if you purchased any CFL light bulbs from this type of store over the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

a. Grocery store or supermarket, such as Stop & Shop or Whole Foods
b. Warehouse store, such as BJ’s, Costco, or Sam’s Club
c. Home improvement store, such as Home Depot or Lowe’s
d. Hardware store, such as TruValue, ACE Hardware, or Aubuchon
e. Mass merchandise or discount department store, such as a Wal-Mart, K-Mart, or Target
f. Drugstore, such as Walgreen’s, Rite-Aid, or CVS
g. Convenience store, such as 7-Eleven
h. Specialty lighting or electrical store
i. Home furnishing store, such as a Bed, Bath, and Beyond, Linens ‘N Things, or Pottery Barn
j. Mail order catalogs
k. Through the Internet
l. Bargain store, such as the Dollar Store or Family Dollar
m. Office supply store, such as Office Depot or Staples
n. Any other types of stores I did not mention? (Specify): _______

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[CATI: ASK Qs BUY10 FOR EACH “YES” IN BUY9 (ITEMS a – n).]

BUY10 (a – n). What is the name of the [FILL STORE TYPE FROM BUY9] where you purchased CFLs in the last year? [ALLOW MULTIPLE RESPONSES.]

1 STORE NAME
96 REFUSED
97 DON’T KNOW

[IF Q BUY9J = 1, SKIP Q BUY 11.
IF Q BUY9K = 1, SKIP Q BUY 11.]
[CATI: ASK Qs BUY11 FOR EACH STORE NAME MENTIONED IN BUY10 (ITEMS a – n). ALLOW THE FOLLOWING TO BE CODED IN CITY/TOWN FOR THE FOLLOWING LOCALES: NEW YORK CITY = 77, MANHATTAN = 78, BROOKLYN = 79, BRONX = 80, QUEENS = 81, STATEN ISLAND = 82]

BUY11 (a – n). And what street, city or town, and state is [INSERT BUY10 STORE NAME] in? [ALLOW MULTIPLE RESPONSES.]

1 STREET
2 CITY/TOWN
3 STATE
96 REFUSED
97 DON’T KNOW

[ASK Q BUY11-1 IF “NEW YORK CITY” FOR ANY BUY11a – n.]

BUY11-1 (a-n). Is that in Manhattan, Brooklyn, the Bronx, Staten Island, or Queens?

1 MANHATTAN
2 BROOKLYN
3 BRONX
4 QUEENS
5 STATEN ISLAND
96 REFUSED
97 DON’T KNOW

[ASK Q BUY11-2 IF STREET IN Q BUY11 = 96, 97 AND (BUY11-1 =1, 2, 3, 4, 5 OR CITY/TOWN IN Q BUY11 = 78, 79, 80, 81, 82]

BUY11-2 (a-n). Can you tell me what part of [RESPONSE TO Q BUY11-1 OR BOROUGH CODE IN Q BUY11]?

1 PART OF NYC BOROUGH: ________
96 REFUSED
97 DON’T KNOW

[CATI: FOR EACH OPTION LIST BELOW, ADD 96 = REFUSED, 97 = DON’T KNOW. INCLUDE INSTRUCTION “DO NOT READ. SELECT ALL THAT APPLY.”]
RESPONSE OPTIONS FOR Q BUY10a, Grocery store or supermarket.

1. HANNAFORD’S
2. PRICE CHOPPER
3. SHOP RITE
4. STOP & SHOP
5. TOPS
6. WEGMANS
7. WHOLE FOODS
8. OTHER (SPECIFY): _______

RESPONSE OPTIONS FOR Q BUY10b, Warehouse store.

1. BJ’S
2. COSTCO
3. SAM’S CLUB
4. OTHER (SPECIFY): _______

RESPONSE OPTIONS FOR Q BUY10c, Home improvement store.

1. HOME DEPOT
2. LOWE’S
3. OTHER (SPECIFY): _______

RESPONSE OPTIONS FOR Q BUY10d, Hardware store.

1. ACE HARDWARE
2. AUBUCHON
3. TRUVALUE
4. OTHER (SPECIFY): _______

[ASK Q BUY10d1 FOR EACH “OTHER” RESPONSE IN Q BUY10d.]
BUY10d1. Is this an ACE Hardware, Aubuchon or TruValue store?
   [IF “YES,” ASK: Which store is it?
   IF “NO,” SELECT “NONE OF THESE.”]
   1 ACE HARDWARE
   2 AUBUCHON
   3 TRUVALUE
   4 NONE OF THESE
   96 REFUSED
   97 DON’T KNOW

RESPONSE OPTIONS FOR Q BUY10e, Mass merchandise or discount department store.
   1 K-MART
   2 TARGET
   3 WAL-MART
   4 OTHER (SPECIFY): __________

RESPONSE OPTIONS FOR Q BUY10f, Drugstore.
   1 CVS
   2 RITE-AID
   3 WALGREEN’S
   4 OTHER (SPECIFY): __________

RESPONSE OPTIONS FOR Q BUY10g, Convenience store.
   1 7-Eleven
   2 OTHER (SPECIFY): __________

RESPONSE OPTIONS FOR Q BUY10h - Specialty lighting or electrical store.
   1 SPECIFY: __________

RESPONSE OPTIONS FOR Q BUY10i, Home furnishing store.
   1 BED, BATH, AND BEYOND
   2 LINENS ‘N THINGS
   3 POTTERY BARN
   4 OTHER (SPECIFY): __________

RESPONSE OPTIONS FOR Q BUY10j, Mail order catalogs.
   1 SPECIFY: __________
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLS

RESPONSE OPTIONS FOR Q BUY10k, Internet.
1 SPECIFY: _________

RESPONSE OPTIONS FOR Q BUY10l, Bargain store.
1 CHRISTMAS TREE SHOP
2 DOLLAR STORE
3 FAMILY DOLLAR
4 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10m, Office supply store.
1 OFFICE DEPOT
2 STAPLES
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10n, Other.
1 SPECIFY: _________

[ASK Q BUY12 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q DEM1.]
BUY12. You mentioned that you have been given CFLs in the past year. Where or from whom did you receive these free CFLs?

[DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]

1  CON EDISON
2  NATIONAL GRID
3  NYSEG/NEW YORK STATE ELECTRIC & GAS
4  ORANGE & ROCKLAND UTILITIES
5  CENTRAL HUDSON GAS & ELECTRIC
6  ROCHESTER GAS & ELECTRIC
7  OTHER UTILITY (SPECIFY): __________
8  SIERRA CLUB
9  GIRL/BOY SCOUTS
10 SPORTING EVENT (SPECIFY): __________
11 EMPLOYER/BUSINESS MEETING (SPECIFY): __________
12 RETAIL STORE (SPECIFY): __________
13 SCHOOL (SPECIFY): __________
14 FRIEND, NEIGHBOR, OR FAMILY MEMBER
15 NYSERDA
16 OTHER GOVERNMENT AGENCY (SPECIFY): __________
17 OTHER (SPECIFY): __________
96 REFUSED
97 DON’T KNOW

DEMOGRAPHICS

Now I have a few last questions for statistical purposes only.
DEM1. What type of home do you live in? Is it a . . .?
   1 Single-family detached house
   2 Single-family attached house (townhouse, row house, or duplex)
   3 Apartment building with 2-4 units
   4 Apartment building with 5 or more units
   5 Mobile home or house trailer
   6 Other (Specify): _______
   96 REFUSED
   97 DON’T KNOW

[ASK Q DEM2 IF Q DEM1 = 1, 2. OTHERWISE, SKIP TO DEM3.]

DEM2. When was your home built? Please stop me when I get to the appropriate category.
   1 1930s or earlier
   2 1940s
   3 1950s
   4 1960s
   5 1970s
   6 1980s
   7 1990s
   8 2000 or later
   96 REFUSED
   97 DON’T KNOW

DEM3. Do you or members of your household own this home or do you rent?
   1 OWN/BUYING
   2 RENT/LEASE
   3 OCCUPIED WITHOUT PAYMENT OF RENT
   4 OTHER (SPECIFY): _________
   96 REFUSED
   97 DON’T KNOW
DEM4. Approximately how many square feet is your home?

1  Less than 1,400
2  1,400 – 1,999
3  2,000 – 2,499
4  2,500 – 3,499
5  3,500 – 3,999
6  4,000 – 4,999
7  5,000 or more
96  REFUSED
97  DON’T KNOW

[ASK Q DEM5 IF Q DEM4 = 96, 97. OTHERWISE, SKIP TO Q DEM6.]

DEM5. How many rooms are in your home, not counting bathrooms?

1  1
2  2
3  3
4  4
5  5
6  6
7  7
8  8
9  9
10  10 or more
96  REFUSED
97  DON’T KNOW

DEM6. How many bedrooms do you have in your home?

[INTERVIEWER: IF A ONE-ROOM EFFICIENCY OR STUDIO, BEDROOMS = 0.]

1  NUMBER OF BEDROOMS _______
96  REFUSED
97  DON’T KNOW
DEM7. What is the highest level of education that the head of household has completed so far?

[READ CATEGORIES, IF NECESSARY.]

1. LESS THAN NINTH GRADE
2. NINTH TO TWELFTH GRADE; NO DIPLOMA
3. HIGH SCHOOL GRADUATE (INCLUDES GED)
4. SOME COLLEGE, NO DEGREE
5. ASSOCIATES DEGREE
6. BACHELORS DEGREE
7. GRADUATE OR PROFESSIONAL DEGREE
96. REFUSED
97. DON’T KNOW

DEM8. Counting yourself, how many people who normally live in this household on a full time basis fit into the following age groups? Please include everyone who lives in your home whether or not they are related to you and exclude anyone who is just visiting or children who may be away at college or in the military.

[CATI: ALLOW ENTRY OF NUMBER FOR EACH OF a – g. INCLUDE RESPONSE OPTION FOR 96 = REFUSED AND 97 = DON’T KNOW FOR EACH AGE GROUP.]

a. 0 to 17 years old
b. 18 to 24 years old
c. 25 to 34 years old
d. 35 to 44 years old
e. 45 to 54 years old
f. 55 to 64 years old
g. 65 or older

1. NUMBER PEOPLE
96. REFUSED
97. DON’T KNOW

DEM9. In general, is the home usually occupied during the daytime hours on weekdays?

1. YES, USUALLY
2. NO, NOT USUALLY
96. REFUSED
97. DON’T KNOW
DEM10. Do you have a computer in your home?
1  YES
2  NO
96  REFUSED
97  DON’T KNOW

DEM11. Do you have Internet access . . .?
[SELECT ALL THAT APPLY.]
1  Through a home computer
2  Through work
3  Through public computers, such as in the library
4  DO NOT USE THE INTERNET
96  REFUSED
97  DON’T KNOW

DEM12. How would you describe the head of the household’s employment status? Would you say the head of household is . . .?
1  Employed full-time
2  Self-employed full-time
3  Employed part-time
4  Self-employed part-time
5  Temporarily unemployed
6  Not employed
7  Retired
96  REFUSED
97  DON’T KNOW
DEM13. Please tell me the name of your electric utility or electric company.

[IF NECESSARY: What company delivers electricity to your home?] 
[DO NOT READ. SELECT ONE RESPONSE ONLY.]

1 CON EDISON
2 NATIONAL GRID
3 NYSEG/NEW YORK STATE ELECTRIC & GAS
4 ORANGE & ROCKLAND UTILITIES
5 CENTRAL HUDSON GAS & ELECTRIC
6 ROCHESTER GAS & ELECTRIC
7 OTHER UTILITY (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

[ASK Q DEM13a IF Q DEM13 = 96, 97. OTHERWISE, SKIP TO Q DEM13b.]

DEM13a. Could you tell me the town or city you live in?

1 CITY OR TOWN (SPECIFY): __________
96 REFUSED
97 DON’T KNOW

DEM13b. Do you pay your electric bill directly to your electric company, or is your electricity included in your rent or condo fee?

1 PAY DIRECTLY TO ELECTRIC COMPANY
2 ELECTRICITY INCLUDED IN RENT OR CONDO FEE
3 PAID FOR IN SOME OTHER WAY
96 REFUSED
97 DON’T KNOW
DEM14. Please tell me the primary language spoken in your home.

1. ENGLISH
2. SPANISH
3. MANDARIN
4. CANTONESE
5. TAGALOG
6. KOREAN
7. VIETNAMESE
8. RUSSIAN
9. JAPANESE
10. OTHER (SPECIFY): __________
96. REFUSED
97. DON’T KNOW

[ASK Q DEM15 IF Q DEM14 = 1, 96, 97. OTHERWISE, SKIP TO Q DEM16.]

DEM15. Are any members of your household Spanish, Hispanic, or Latino?

1. YES
2. NO
96. REFUSED
97. DON’T KNOW
DEM16. Is the head of the household . . .?

[SELECT ONE RESPONSE ONLY. IF MIXED RACE OR MULTIPLE RACES, RECORD IN ‘OTHER’ ]

1 White
2 Black or African-American
3 American Indian, Native Hawaiian, or Alaska Native
4 Chinese
5 Japanese
6 Korean
7 Vietnamese
8 Filipino
9 Other (Specify): ________
96 REFUSED
97 DON’T KNOW

DEM16a. How many cars do you and other members of your household currently own or lease?

[READ IF NECESSARY: Please include vans and trucks that are for personal use but exclude any vehicles used for business purposes only]

___ Enter number of cars currently owned/leased by members of the household
96 REFUSED
97 DON’T KNOW
DEM17. Which category best describes your total household income in 2007 before taxes? Please stop me when I get to the appropriate category.

1  $9,999 or less  
2  $10,000 to $14,999  
3  $15,000 to $19,999  
4  $20,000 to $29,999  
5  $30,000 to $39,999  
6  $40,000 to $49,999  
7  $50,000 to $74,999  
8  $75,000 to $99,999  
9  $100,000 to $149,999  
10 $150,000 or more  
96 REFUSED  
97 DON’T KNOW

DEM18. [INTERVIEWER: DO NOT READ.]

Sex:

1  FEMALE  
2  MALE

REC1. Thank you, that completes the survey we’re doing today but I have one other thing I would like to talk to you about before we finish.

Later this winter, we will be offering people $100 to participate in another research activity. We are planning to visit people’s homes to gather information on the lighting installed in their home. This would be a one-time visit, and we would schedule a time to come that would be convenient for you.

Would you be interested in participating in this?

1  YES  
2  NO  
96 REFUSED  
97 DON’T KNOW

[IF Q REC1 = 1, SKIP TO Q REC3.  
IF Q REC1 = 2, 96, SKIP TO THANK AND TERMINATE. OTHERWISE, CONTINUE.]
REC2. That is okay; you do not have to decide now. Would it be okay if I take your name and have someone call you later this winter when we are scheduling these visits to see if you would like to participate?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF Q REC2 = 1, CONTINUE. OTHERWISE, SKIP TO THANK AND TERMINATE.]

REC3. What city or town do you live in?

1 CITY/TOWN
96 REFUSED
97 DON’T KNOW

REC4. And your name?

1 NAME
96 REFUSED
97 DON’T KNOW

REC5. And what is the best number to call you at about a visit?

1 TELEPHONE NUMBER (WITH AREA CODE)
96 REFUSED
97 DON’T KNOW

THANK AND TERMINATE

Thank you very much for taking the time to participate in our survey today.

[IF REC1 = 1 OR REC2 = 1, READ.]

As I said, we will be scheduling these visits later in the winter and will call you then.
Hello, my name is <INTERVIEWER>, and I’m calling from Braun Research as part of a national study to
discuss how you use different types of lighting in your home. I'm not selling anything. May I speak with
the person in the household who is the most knowledgeable about household purchases such as light
bulbs and other household supplies?

[WHEN CORRECT RESPONDENT COMES TO THE PHONE, RE-INTRODUCE AND
CONTINUE.]

As an independent research firm, Braun Research does not intend to report your responses in any way that
would reveal your identity.

KNOWLEDGE/AWARENESS

S1. I’d like to ask you a few questions about your awareness of different types of light bulbs. Before
this call today, had you ever heard of compact fluorescent bulbs, or CFLs?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK S2 IF S1 = 2, 96, 97 OTHERWISE, SKIP TO S3.]

S2. Compact fluorescent light bulbs – also known as CFLs – usually do not look like regular
incandescent bulbs. The most common type of compact fluorescent bulb is made with a glass
tube bent into a spiral, resembling soft-serve ice cream, and it fits in a regular light bulb socket.
Before today, were you familiar with CFLs?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLS

[ASK S3 IF S1 =1 OR S2=1, OTHERWISE SKIP TO ES1].

S3. How familiar are you with CFLs? Would you say that you are…?

1 Very familiar
2 Somewhat familiar
3 Not too familiar
4 Not at all familiar
96 REFUSED
97 DON’T KNOW

[IF S2 = 2, 96, 97 OR S3 = 4, 96, 97, GO TO ES1 OTHERWISE, CONTINUE.]

Q1. Have you or anyone else in your household ever purchased or been given any compact fluorescent light bulbs or CFLs to use in a home?

1 YES, R HAS
2 YES, SOMEONE ELSE HAS (ASK TO SPEAK TO THAT PERSON AND REPEAT INTRO)
3 NO
96 REFUSED
97 DON’T KNOW

[IF Q1 = 2, RESTART INTERVIEW WITH CORRECT RESPONDENT. OTHERWISE, CONTINUE.]

ES1. Are you familiar with the ENERGY STAR label on household products?

The label is a blue-and-white label with the word "energy" followed by a five-pointed star. Energy Star labels are used by the Environmental Protection Agency – the EPA – and the Department of Energy to identify and label highly energy-saving products for consumers. On a scale of 0 to 10 with 0 being not at all familiar and 10 being very familiar, how familiar were you with the Energy Star label before today?

___ Enter 0 to 10 rating
96 REFUSED
97 DON’T KNOW

[ASK ES2 IF ES1 = 1 TO 10 AND S3=3, 2, 1, OTHERWISE SKIP TO INSTRUCTION AFTER ES4]
ES2. Have you ever seen an Energy Star label on CFL packaging or on the display materials where CFLs are sold?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK ES3 IF ES2 = 1, OTHERWISE SKIP TO INSTRUCTION AFTER ES4]

ES3. Are you aware of any difference in the quality of CFLs that have the Energy Star label and the CFLs that do not have this label?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK ES4 IF ES3 = 1, OTHERWISE, SKIP TO INSTRUCTION AFTER ES4]

ES4. In what way is the quality of CFLs with the Energy Star label different than the quality of other CFLs? Anything else?

1 OTHER (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

[IF S2=2, 96, 97 OR S3=4, 96, 97 GO TO LED1, OTHERWISE CONTINUE]
USE OF CFLs

USE1. How did you first learn about CFLs?
[DO NOT READ. SELECT ALL THAT APPLY.]

1. THROUGH THE LOCAL UTILITY OR LOCAL ELECTRIC COMPANY
2. THROUGH AN ENERGY AUDIT IN MY HOME
3. AD OR STORY IN TV, RADIO, NEWSPAPER, MAGAZINE; SPONSOR OTHER THAN LOCAL ELECTRIC COMPANY
4. RETAIL STORE DISPLAY OR AD
5. FRIEND OR FAMILY MEMBER
6. WORK; CO-WORKER; PROMOTION IN THE WORKPLACE
7. OTHER (SPECIFY) _____________
96. REFUSED
97. DON’T KNOW

USE2. Have you EVER used a compact fluorescent light bulb, or CFL, on the inside or outside of your home?

1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[IF Q1 = 3, 96, 97 AND Q USE2 = 2, 96, 97, GO TO INTRO PRECEDING Q LED1.
ASK Q USE3 IF Q USE2 = 1. OTHERWISE, SKIP TO Q USE9.]
USE3. Approximately how long ago did you FIRST use a compact fluorescent light bulb?

[RECORD NUMBER OF YEARS OR MONTHS, NOT A RANGE. IF LESS THAN ONE YEAR, RECORD MONTHS.
IF “DON’T KNOW,” PROBE: Is it less than or more than five years ago? WORK FROM THERE TO GET AN ESTIMATE.
ENTER 97 FOR MONTHS AND YEARS IF STILL “DON’T KNOW.”
ENTER 96 FOR MONTHS AND YEARS IF REFUSED.]

1 MONTHS ________
2 YEARS ________
96 REFUSED
97 DON’T KNOW

USE4. How many CFLs do you currently have installed on the inside or outside of your home?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE5. About how many CFLs were installed on the inside or outside of your home three months ago, that is, around the beginning of October?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE6. About how many CFLs were installed on the inside or outside of your home a year ago?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

Appendix C-37
USE7. Have you ever installed and then later removed a CFL from the inside or outside of your home?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK Q USE8 IF Q USE7 = 1. OTHERWISE, SKIP TO Q USE9.]

USE8. Why did you remove the bulb(s)?

[DO NOT READ. SELECT ALL THAT APPLY.]

1 BURNED OUT
2 BROKE/STOPPED WORKING
3 BULB IS TOO BRIGHT
4 BULB IS NOT BRIGHT ENOUGH
5 DELAY IN LIGHT COMING ON
6 DID NOT WORK WITH DIMMER SWITCH
7 DOESN’T FIT PROPERLY
8 STUCK OUT OF FIXTURE
9 LIGHT COLOR
10 INTERFERENCE WITH RADIO, TV, OTHER ELECTRONIC DEVICES
11 OTHER (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

USE9. Do you currently have any CFLs in storage in your home? This could be in your closet, your pantry, your garage, or anywhere in your home.

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK Q USE10 IF Q USE9 = 1. OTHERWISE, SKIP TO Q USE11.]
USE10. How many CFLs are you storing right now?  
[RECORD A NUMBER, NOT A RANGE.]

NUMBER OF CFLs: ________

96 REFUSED  
97 DON’T KNOW

USE11. Were you storing any CFLs in your home three months ago, back in October?

1 YES  
2 NO  

96 REFUSED  
97 DON’T KNOW

[ASK Q USE12 IF Q USE11 = 1. OTHERWISE, SKIP TO Q USE13.]

USE12. Approximately how many CFLs were you storing three months ago?  
[RECORD A NUMBER, NOT A RANGE.]

NUMBER OF CFLs: ________

96 REFUSED  
97 DON’T KNOW

[ASK Q USE13 IF Q USE9 = 1 OR Q USE11 =1. OTHERWISE, SKIP TO THE INSTRUCTION PRECEDING Q USE15.]

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 13 SHOULD READ AS FOLLOWS:]  

USE13. Why are you storing the CFLs? Is it because . . .?

[SELECT ALL THAT APPLY.]

1 You are storing them for future use  
2 They do not fit or work with the fixture for which you had intended to use them  
3 Some other reason (Specify): ________

96 REFUSED  
97 DON’T KNOW
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLS

[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 13 SHOULD READ AS FOLLOWS:]

USE13. Why were you storing the CFLs? Is it because . . .?

[SELECT ALL THAT APPLY.]

1 You were storing them for future use
2 They did not fit or work with the fixture for which you had intended to use them
3 Some other reason (Specify): __________
96 REFUSED
97 DON'T KNOW

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 14 SHOULD READ AS FOLLOWS:]

USE14. Do you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1 REPLACE COMPACT FLUORESCENT
2 REPLACE INCANDESCENT
3 BOTH/WHICHEVER NEEDED REPLACING FIRST
4 OTHER (SPECIFY): __________
96 REFUSED
97 DON'T KNOW

[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 14 SHOULD READ AS FOLLOWS:]

USE14. Did you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1 REPLACE COMPACT FLUORESCENT
2 REPLACE INCANDESCENT
3 BOTH/WHICHEVER NEEDED REPLACING FIRST
4 OTHER (SPECIFY): __________
96 REFUSED
97 DON'T KNOW

[IF (Qs USE4, USE5, USE6 ALL = 0, 96, 97) AND (Q USE7 = 2, 96, 97), SKIP TO Q LED1. OTHERWISE, CONTINUE.]
USE15. How satisfied are you with the compact fluorescent light bulbs currently in your home or, if you have no CFLs installed right now, the ones you have used in the past? Would you say . . .?

5 Very satisfied
4 Somewhat satisfied
3 Neither satisfied nor dissatisfied
2 Somewhat dissatisfied
1 Very dissatisfied
96 REFUSED
97 DON’T KNOW

[ASK Q USE16 IF Q USE15 = 1, 2, 3. OTHERWISE SKIP TO Q USE17.]

USE16. Why are you not satisfied?

1 RECORD RESPONSE
96 REFUSED
97 DON’T KNOW
USE17. I am going to read you a list of characteristics that may be associated with CFLs. Please tell me how satisfied you are with each by responding with: very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

How satisfied are you with the CFL’s . . .?

[CATI: RANDOMIZE]

- o. Ability to fit in most fixtures without sticking out
- p. Dimming capability
- q. 3-way switching capability \[\text{READ IF NECESSARY: This capability refers to the ability to have a CFL shine at different levels of brightness in a 3-way lamp.}\]
- r. Light color
- s. Light quality
- t. Having a constant light output / no flickering
- u. Immediate start-up / no delays
- v. Long bulb life
- w. Purchase price
- x. Cost to operate
- y. Amount of heat output
- z. Environmental benefits
- aa. Suitability to use in hard-to-reach areas
- bb. Energy efficiency

5 VERY SATISFIED
4 SOMEWHAT SATISFIED
3 NEITHER SATISFIED NOR DISSATISFIED
2 SOMEWHAT DISSATISFIED
1 VERY DISSATISFIED
96 REFUSED
97 DON’T KNOW
**LEDs**

LED1. Are you familiar with light emitting diodes, or LED lights?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q LED2 IF Q LED1 = 1. OTHERWISE, SKIP TO Q BUY1.]

LED2. Have you ever heard of LED holiday lights?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q LED3 IF Q LED2 = 1. OTHERWISE, SKIP TO Q LED4.]

LED3. Do you own any LED holiday lights that you used this past holiday season?
   1 YES
   2 NO
   3 OWN BUT DID NOT USE THIS PAST SEASON
   96 REFUSED
   97 DON’T KNOW
LED4. What other types of LED lamps, fixtures, or bulbs have you heard of?

[DO NOT READ. SELECT ALL THAT APPLY.]

1 TASK/DESK LAMPS
2 UNDERCABINET LIGHTING
3 LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS
4 RECESSED/CAN LIGHTING
5 NIGHT LIGHTS
6 FLASHLIGHTS
7 NOVELTY FIXTURES
8 OTHER (SPECIFY): __________
9 NONE
96 REFUSED
97 DON’T KNOW

LED5. Are you currently using any LED lamps, fixtures, or bulbs for regular household lighting?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK Q LED6 IF Q LED5 = 1. OTHERWISE, SKIP TO Q BUY1.]

LED6. What types of LED lamps, fixtures, or bulbs are you currently using?

[DO NOT READ. SELECT ALL THAT APPLY.]

1 TASK/DESK LAMPS
2 UNDERCABINET LIGHTING
3 LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS
4 RECESSED/CAN LIGHTING
5 NIGHT LIGHTS
6 FLASHLIGHTS
7 NOVELTY FIXTURES
8 OTHER [SPECIFY] __________
96 REFUSED
97 DON’T KNOW
PURCHASING

Now I have a few questions about your light bulb-buying habits.

BUY1. Do you usually keep a supply of light bulbs on hand, or do you tend to buy replacements as bulbs burn out?
   1 KEEP A SUPPLY ON HAND
   2 BUY REPLACEMENTS AS BULBS BURN OUT
   3 BOTH
   96 REFUSED
   97 DON’T KNOW

BUY2. During the past year, how many *incandescent, or regular light bulbs*, did you purchase?
   Please try to estimate the total number of bulbs, as opposed to packages.
   [RECORD A NUMBER, NOT A RANGE.
   IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]
   NUMBER OF BULBS: ________
   96 REFUSED
   97 DON’T KNOW

[IF (Q BUY2 = 0, 96, 97) AND (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO INTRO PRECEDING Q DEM1.
IF (Q BUY2 = 0, 96, 97) AND ((S1 = 1) OR (S2 = 1)), SKIP TO Q BUY5.
OTHERWISE, CONTINUE.]

BUY3. And during the past three months, how many *incandescent, or regular, light bulbs* did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.
   [RECORD A NUMBER, NOT A RANGE.
   IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]
   NUMBER OF BULBS: ________
   96 REFUSED
   97 DON’T KNOW

[CATI: Q BUY3 SHOULD BE LOWER THAN OR EQUAL TO Q BUY2.]
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLS

[IF BUY3 IS GREATER THAN BUY2, SAY: Your responses indicate that the number of incandescent, or regular, light bulbs you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY2.]

BUY4. I’m going to read you a list of types of stores. For each one, please tell me if you have purchased incandescent, or regular, light bulbs from this type of store in the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

  o. Grocery store or supermarket, such as Kroger or Whole Foods
  p. Warehouse store, such as BJ’s, Costco, or Sam’s Club
  q. Home improvement store, such as Home Depot or Lowe’s
  r. Hardware store, such as TruValue or ACE Hardware
  s. Mass merchandise or discount department store, such as a Wal-Mart, K-Mart, or Target
  t. Drugstore, such as Walgreen’s, Rite-Aid, or CVS
  u. Convenience store, such as 7-Eleven
  v. Specialty lighting or electrical store
  w. Home furnishing store, such as a Bed, Bath, and Beyond, Linens and Things, or Pottery Barn
  x. Mail order catalogs
  y. Through the Internet
  z. Bargain store, such as the Dollar Store or Family Dollar
  aa. Office supply store, such as Office Depot or Staples
  bb. Any other types of stores I did not mention? (Specify): ______

  1 YES
  2 NO
  96 REFUSED
  97 DON’T KNOW

[IF (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO THE INTRO BEFORE Q DEM1.]
BUY5. During the past year, how many energy saving, compact fluorescent light bulbs, or CFLs, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: 
96 REFUSED
97 DON’T KNOW

BUY6. During the past year, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: 
96 REFUSED
97 DON’T KNOW

[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY8.
IF (Q BUY5 = 0 AND Q BUY6 = 0), SKIP TO Q DEM1.
OTHERWISE, CONTINUE.]

BUY7. And during the past three months, how many energy saving, compact fluorescent light bulbs, or CFLs, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: 
96 REFUSED
97 DON’T KNOW

[CATI: BUY7 SHOULD BE LOWER THAN OR EQUAL TO Q BUY5.]
[ASK Q BUY8 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q BUY9.]
[IF BUY7 IS GREATER THAN BUY5, SAY:] Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY5.]

BUY8. During the past three months, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________
96 REFUSED
97 DON’T KNOW

[CATI: BUY8 SHOULD BE LOWER THAN OR EQUAL TO Q BUY6.]

[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY12.]

[IF BUY8 IS GREATER THAN BUY6, SAY:] Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you received for free in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY6.]

You told me earlier that you purchased [FILL RESPONSE FROM BUY5] CLFs in the past year. Now I would like to ask about the types of stores where you purchased the CFLs from over the past year, including the last three months.
BUY9. I’m going to read you a list of different types of stores. For each one, please tell me if you purchased any CFL light bulbs from this type of store over the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

- o. Grocery store or supermarket, such as Kroger or Whole Foods
- p. Warehouse store, such as BJ’s, Costco, or Sam’s Club
- q. Home improvement store, such as Home Depot or Lowe’s
- r. Hardware store, such as TruValue or ACE Hardware
- s. Mass merchandise or discount department store, such as a Wal-Mart, K-Mart, or Target
- t. Drugstore, such as Walgreen’s, Rite-Aid, or CVS
- u. Convenience store, such as 7-Eleven
- v. Specialty lighting or electrical store
- w. Home furnishing store, such as a Bed, Bath, and Beyond, Linens ‘N Things, or Pottery Barn
- x. Mail order catalogs
- y. Through the Internet
- z. Bargain store, such as the Dollar Store or Family Dollar
- aa. Office supply store, such as Office Depot or Staples
- bb. Any other types of stores I did not mention? (Specify): ______

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[CATI: ASK Qs BUY10 AND BUY11 FOR EACH “YES” IN BUY9 (ITEMS a – n).]

BUY10 (a – n). What is the name of the [FILL STORE TYPE FROM BUY9] where you purchased CFLs in the last year? [ALLOW MULTIPLE RESPONSES.]

1 STORE NAME
96 REFUSED
97 DON’T KNOW

[IF Q BUY9J = 1, SKIP Q BUY 11.
IF Q BUY9K = 1, SKIP Q BUY 11.]

[CATI: ASK Qs BUY11 FOR EACH STORE NAME MENTIONED IN BUY10 (ITEMS a – n).]
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLs

BUY11 (a – n). And what street, city or town, and state is [INSERT BUY10 STORE NAME] in?
[ALLOW MULTIPLE RESPONSES.]

1 STREET
2 CITY/TOWN
3 STATE
96 REFUSED
97 DON’T KNOW

[CATI: FOR EACH OPTION LIST BELOW, ADD 96 = REFUSED, 97 = DON’T KNOW. INCLUDE INSTRUCTION “DO NOT READ. SELECT ALL THAT APPLY.”]

RESPONSE OPTIONS FOR Q BUY10a, Grocery store or supermarket.
1 DAVE’S
2 GIANT EAGLE
3 IGA
4 KROGER
5 SHOP RITE
6 WHOLE FOODS
7 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10b, Warehouse store
1 BJ’S
2 COSTCO
3 SAM’S CLUB
4 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10c, Home improvement store
1 HOME DEPOT
2 LOWE’S
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10d, Hardware store
1 ACE HARDWARE
2 TRUVALUE
3 OTHER (SPECIFY): _________

[ASK Q BUY10d1 FOR EACH “OTHER” RESPONSE IN Q BUY10d.]
BUY10d1. Is this an ACE Hardware or TruValue store?
    [IF “YES,” ASK: Which store is it?
    IF “NO,” SELECT “NONE OF THESE.”]
1 ACE HARDWARE
2 TRUVALUE
3 NONE OF THESE
96 REFUSED
97 DON’T KNOW

RESPONSE OPTIONS FOR Q BUY10e, Mass merchandise or discount department store
1 K-MART
2 TARGET
3 WAL-MART
4 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10f, Drugstore
1 CVS
2 RITE-AID
3 WALGREEN’S
4 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10g, Convenience store
1 7-Eleven
2 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10h - Specialty lighting or electrical store
1 SPECIFY: _________

RESPONSE OPTIONS FOR Q BUY10i, Home furnishing store
1 BED, BATH, AND BEYOND
2 LINENS ‘N THINGS
3 POTTERY BARN
4 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10j, Mail order catalogs
1 SPECIFY: _________
RESPONSE OPTIONS FOR Q BUY10k, Internet
1 SPECIFY: _________

RESPONSE OPTIONS FOR Q BUY10l, Bargain store
1 CHRISTMAS TREE SHOP
2 DOLLAR STORE
3 FAMILY DOLLAR
4 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10m, Supply store
1 OFFICE DEPOT
2 STAPLES
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10n, Other
1 SPECIFY: _________

[ASK Q BUY12 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q DEM1.]

BUY12. You mentioned that you have been given CFLs in the past year. Where or from whom did you receive these free CFLs?

[DO NOT READ. SELECT ALL THAT APPLY.]
1 LOCAL UTILITY OR ELECTRIC COMPANY
2 SIERRA CLUB
3 GIRL/BOY SCOUTS
4 SPORTING EVENT (SPECIFY): _________
5 EMPLOYER/BUSINESS MEETING (SPECIFY): _________
6 RETAIL STORE (SPECIFY): _________
7 SCHOOL (SPECIFY): _________
8 FRIEND, NEIGHBOR, OR FAMILY MEMBER
9 LOCAL OR OTHER GOVERNMENT AGENCY (SPECIFY): _________
10 OTHER (SPECIFY): _________
96 REFUSED
97 DON’T KNOW
DEMOGRAPHICS

Now I have a few last questions for statistical purposes only.

DEM1. What type of home do you live in? Is it a . . .?
   1  Single-family detached house
   2  Single-family attached house (townhouse, row house, or duplex)
   3  Apartment building with 2-4 units
   4  Apartment building with 5 or more units
   5  Mobile home or house trailer
   6  Other (Specify): _______
   96  REFUSED
   97  DON’T KNOW

[ASK Q DEM2 IF Q DEM1 = 1, 2. OTHERWISE, SKIP TO DEM3.]

DEM2. When was your home built? Please stop me when I get to the appropriate category.
   1  1930s or earlier
   2  1940s
   3  1950s
   4  1960s
   5  1970s
   6  1980s
   7  1990s
   8  2000 or later
   96  REFUSED
   97  DON’T KNOW
DEM3. Do you or members of your household own this home or do you rent?
1 OWN/Buying
2 RENT/LEASE
3 OCCUPIED WITHOUT PAYMENT OF RENT
4 OTHER (SPECIFY): __________
96 REFUSED
97 DON’T KNOW

DEM4. Approximately how many square feet is your home?
1 Less than 1,400
2 1,400 – 1,999
3 2,000 – 2,499
4 2,500 – 3,499
5 3,500 – 3,999
6 4,000 – 4,999
7 5,000 or more
96 REFUSED
97 DON’T KNOW

[ASK Q DEM5 IF Q DEM4 = 96, 97. OTHERWISE, SKIP TO Q DEM6.]

DEM5. How many rooms are in your home, not counting bathrooms?
1 1
2 2
3 3
4 4
5 5
6 6
7 7
8 8
9 9
10 10 or more
96 REFUSED
97 DON’T KNOW
DEM6. How many bedrooms do you have in your home?

[INTERVIEWER: IF A ONE-ROOM EFFICIENCY OR STUDIO, BEDROOMS = 0.]

1 NUMBER OF BEDROOMS _______
96 REFUSED
97 DON’T KNOW

DEM7. What is the highest level of education that the head of household has completed so far?

[READ CATEGORIES, IF NECESSARY.]

1 LESS THAN NINTH GRADE
2 NINTH TO TWELFTH GRADE; NO DIPLOMA
3 HIGH SCHOOL GRADUATE (INCLUDES GED)
4 SOME COLLEGE, NO DEGREE
5 ASSOCIATES DEGREE
6 BACHELORS DEGREE
7 GRADUATE OR PROFESSIONAL DEGREE
96 REFUSED
97 DON’T KNOW

DEM8. Counting yourself, how many people who normally live in this household on a full time basis fit into the following age groups? Please include everyone who lives in your home whether or not they are related to you and exclude anyone who is just visiting or children who may be away at college or in the military.

[CATI: ALLOW ENTRY OF NUMBER FOR EACH OF a – g. INCLUDE RESPONSE OPTION FOR 96 = REFUSED AND 97 = DON’T KNOW FOR EACH AGE GROUP.]

h. 0 to 17 years old
i. 18 to 24 years old
j. 25 to 34 years old
k. 35 to 44 years old
l. 45 to 54 years old
m. 55 to 64 years old
n. 65 or older
1 NUMBER PEOPLE
96 REFUSED
97 DON’T KNOW

Appendix C-55
DEM9. In general, is the home usually occupied during the daytime hours on weekdays?
   1  YES, USUALLY
   2  NO, NOT USUALLY
   96 REFUSED
   97 DON’T KNOW

DEM10. Do you have a computer in your home?
   1  YES
   2  NO
   96 REFUSED
   97 DON’T KNOW

DEM11. Do you have Internet access . . .?
       [SELECT ALL THAT APPLY.]
       1  Through a home computer
       2  Through work
       3  Through public computers, such as in the library
       4  DO NOT USE THE INTERNET
       96 REFUSED
       97 DON’T KNOW

DEM12. How would you describe the head of the household’s employment status? Would you say the head of household is . . .?
   1  Employed full-time
   2  Self-employed full-time
   3  Employed part-time
   4  Self-employed part-time
   5  Temporarily unemployed
   6  Not employed
   7  Retired
   96 REFUSED
   97 DON’T KNOW
DEM13. Please tell me the name of your electric utility or electric company.

[IF NECESSARY: What company delivers electricity to your home?]  
[DO NOT READ. SELECT ONE RESPONSE ONLY.]

1  CINCINNATI GAS & ELECTRIC
2  CLEVELAND ELECTRIC ILLUMINATING
3  COLUMBUS SOUTHERN POWER
4  DAYTON POWER & LIGHT
5  OHIO EDISON
6  OHIO POWER
7  SOUTHERN CENTRAL POWER
8  TOLEDO EDISON
9  OTHER UTILITY OR RURAL ELECTRIC COMPANY (SPECIFY _______)
96  REFUSED
97  DON’T KNOW

[ASK Q DEM13a IF Q DEM13 = 96, 97. OTHERWISE, SKIP TO Q DEM13b.]

DEM13a. Could you tell me the town or city you live in?

1  CITY OR TOWN (SPECIFY __________________)
96  REFUSED
97  DON’T KNOW

DEM13b. Do you pay your electric bill directly to your electric company, or is your electricity included in your rent or condo fee?

1  PAY DIRECTLY TO ELECTRIC COMPANY
2  ELECTRICITY INCLUDED IN RENT OR CONDO FEE
3  PAID FOR IN SOME OTHER WAY
96  REFUSED
97  DON’T KNOW
DEM14. Please tell me the primary language spoken in your home.

1. ENGLISH
2. SPANISH
3. MANDARIN
4. CANTONESE
5. TAGALOG
6. KOREAN
7. VIETNAMESE
8. RUSSIAN
9. JAPANESE
10. OTHER (SPECIFY): _________

96. REFUSED
97. DON’T KNOW

[ASK Q DEM15 IF Q DEM14 = 1, 96, 97. OTHERWISE, SKIP TO Q DEM16.]

DEM15. Are any members of your household Spanish, Hispanic, or Latino?

1. YES
2. NO

96. REFUSED
97. DON’T KNOW
DEM16. Is the head of the household . . .?

[SELECT ONE RESPONSE ONLY. IF MIXED RACE OR MULTIPLE RACES, RECORD IN ‘OTHER’.]

1. White
2. Black or African-American
3. American Indian, Native Hawaiian, or Alaska Native
4. Chinese
5. Japanese
6. Korean
7. Vietnamese
8. Filipino
9. Other (Specify): ________
96. REFUSED
97. DON’T KNOW

DEM16a. How many cars do you and other members of your household currently own or lease?

[READ IF NECESSARY: Please include vans and trucks that are for personal use but exclude any vehicles used for business purposes only]

___ Enter number of cars currently owned/leased by members of the household
96. REFUSED
97. DON’T KNOW
DEM17. Which category best describes your total household income in 2007 before taxes? Please stop me when I get to the appropriate category.

1. $9,999 or less
2. $10,000 to $14,999
3. $15,000 to $19,999
4. $20,000 to $29,999
5. $30,000 to $39,999
6. $40,000 to $49,999
7. $50,000 to $74,999
8. $75,000 to $99,999
9. $100,000 to $149,999
10. $150,000 or more
96. REFUSED
97. DON’T KNOW

DEM18. [INTERVIEWER: DO NOT READ]

Sex:
1. FEMALE
2. MALE

REC1. Thank you, that completes the survey we’re doing today but I have one other thing I would like to talk to you about before we finish.
Later this winter, we will be offering people $100 to participate in another research activity. We are planning to visit people’s homes to gather information on the lighting installed in their home. This would be a one-time visit, and we would schedule a time to come that would be convenient for you.
Would you be interested in participating in this?
1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[IF Q REC1 = 1, SKIP TO Q REC3.
IF Q REC1 = 2, 96, SKIP TO THANK AND TERMINATE.
OTHERWISE, CONTINUE.]
REC2. That is okay; you do not have to decide now. Would it be okay if I take your name and have someone call you later this winter when we are scheduling these visits to see if you would like to participate?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF Q REC2 = 1, CONTINUE. OTHERWISE, SKIP TO THANK AND TERMINATE.]

REC3. What city or town do you live in?

1 CITY/TOWN
96 REFUSED
97 DON’T KNOW

REC4. And your name?

1 NAME
96 REFUSED
97 DON’T KNOW

REC5. And what is the best number to call you at about a visit?

1 TELEPHONE NUMBER (WITH AREA CODE)
96 REFUSED
97 DON’T KNOW

THANK AND TERMINATE

Thank you very much for taking the time to participate in our survey today.

[IF REC1 = 1 OR REC2 = 1, READ.]

As I said, we will be scheduling these visits later in the winter and will call you then.
Hello, my name is <INTERVIEWER>, and I’m calling from Braun Research on behalf of the New York State Energy Research and Development Authority, or NYSERDA.

We are contacting households to discuss how people use different types of lighting in their homes. May I speak with the person in the household who is the most knowledgeable about household purchases such as light bulbs and other household supplies?

[WHEN CORRECT RESPONDENT COMES TO THE PHONE, RE-INTRODUCE AND CONTINUE.]

We’re conducting a brief survey about how you use different types of lighting in your home. The information you provide will help NYSERDA improve its energy efficiency programs and services, which will help keep energy bills as low as possible by reducing consumption.

As an independent research firm, Braun Research does not intend to report your responses in any way that would reveal your identity.

KNOWLEDGE/AWARENESS

S1. I’d like to ask you a few questions about your awareness of different types of light bulbs. Before this call today, had you ever heard of compact fluorescent bulbs, or CFLs?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK S2 IF S1 = 2, 96, 97 OTHERWISE, SKIP TO S3.]
S2. Compact fluorescent light bulbs – also known as CFLs – usually do not look like regular incandescent bulbs. The most common type of compact fluorescent bulb is made with a glass tube bent into a spiral, resembling soft-serve ice cream, and it fits in a regular light bulb socket. Before today, were you familiar with CFLs?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK S3 IF S1 =1 OR S2=1, OTHERWISE SKIP TO ES1].

S3. How familiar are you with CFLs? Would you say that you are…?

1 Very familiar
2 Somewhat familiar
3 Not too familiar
4 Not at all familiar
96 REFUSED
97 DON’T KNOW

[IF S2 = 2, 96, 97 OR S3 = 4, 96, 97, GO TO ES1 OTHERWISE, CONTINUE.]

Q1. Have you or anyone else in your household ever purchased or been given any compact fluorescent light bulbs or CFLs to use in a home?

1 YES, R HAS
2 YES, SOMEONE ELSE HAS (ASK TO SPEAK TO THAT PERSON AND REPEAT INTRO)
3 NO
96 REFUSED
97 DON’T KNOW

[IF Q1 = 2, RESTART INTERVIEW WITH CORRECT RESPONDENT. OTHERWISE, CONTINUE.]
ES1. Are you familiar with the ENERGY STAR label on household products?
   The label is a blue-and-white label with the word "energy" followed by a five-pointed star.
   Energy Star labels are used by the Environmental Protection Agency – the EPA – and the
   Department of Energy to identify and label highly energy-saving products for consumers. On a
   scale of 0 to 10 with 0 being not at all familiar and 10 being very familiar, how familiar were you
   with the Energy Star label before today?

   ___ Enter 0 to 10 rating
   96 REFUSED
   97 DON’T KNOW

[ASK ES2 IF ES1 = 1 TO 10 AND S3=3, 2, 1, OTHERWISE SKIP TO INSTRUCTIONS AFTER
ES4]

ES2. Have you ever seen an Energy Star label on CFL packaging or on the display materials where
CFLs are sold?

   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK ES3 IF ES2 = 1, OTHERWISE SKIP TO INSTRUCTIONS AFTER ES4]

ES3. Are you aware of any difference in the quality of CFLs that have the Energy Star label and the
CFLs that do not have this label?

   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK ES4 IF ES3 = 1, OTHERWISE, SKIP TO INSTRUCTIONS AFTER ES4]

ES4. In what way is the quality of CFLs with the Energy Star label different than the quality of other
CFLs? Anything else?

   1 OTHER (SPECIFY): ___________
   96 REFUSED
   97 DON’T KNOW

Appendix C-64
USE OF CFLs

USE1. How did you first learn about CFLs?

[DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]

1. THROUGH THE LOCAL UTILITY OR LOCAL ELECTRIC COMPANY
2. THROUGH AN ENERGY AUDIT IN MY HOME
3. THROUGH AN AD BY/INFORMATION FROM THE NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY (NYSERDA)
4. AD OR STORY IN TV, RADIO, NEWSPAPER, MAGAZINE; SPONSOR OTHER THAN LOCAL ELECTRIC COMPANY OR NYSERDA
5. RETAIL STORE DISPLAY OR AD
6. FRIEND OR FAMILY MEMBER
7. WORK; CO-WORKER; PROMOTION IN THE WORKPLACE
8. OTHER (SPECIFY) ___________
96. REFUSED
97. DON’T KNOW

USE2. Have you EVER used a compact fluorescent light bulb, or CFL, on the inside or outside of your home?

1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[IF Q1 = 3, 96, 97 AND Q USE2 = 2, 96, 97, GO TO INTRO PRECEDING Q LED1. ASK Q USE3 IF Q USE2 = 1. OTHERWISE, SKIP TO Q USE9.]
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLS

USE3. Approximately how long ago did you FIRST use a compact fluorescent light bulb?

[RECORD NUMBER OF YEARS OR MONTHS, NOT A RANGE. IF LESS THAN ONE YEAR, RECORD MONTHS.
IF “DON’T KNOW,” PROBE: Is it less than or more than five years ago? WORK FROM THERE TO GET AN ESTIMATE.
ENTER 97 FOR MONTHS AND YEARS IF STILL “DON’T KNOW.”
ENTER 96 FOR MONTHS AND YEARS IF REFUSED.]

1 MONTHS ________
2 YEARS ________
96 REFUSED
97 DON’T KNOW

USE4. How many CFLs do you currently have installed on the inside or outside of your home?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE5. About how many CFLs were installed on the inside or outside of your home three months ago, that is, around the beginning of September?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE6. About how many CFLs were installed on the inside or outside of your home a year ago?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

Appendix C-66
USE7. Have you ever installed and then later removed a CFL from the inside or outside of your home?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q USE8 IF Q USE7 = 1. OTHERWISE, SKIP TO Q USE9.]

USE8. Why did you remove the bulb(s)?
[DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]
   1 BURNED OUT
   2 BROKE/STOPPED WORKING
   3 BULB IS TOO BRIGHT
   4 BULB IS NOT BRIGHT ENOUGH
   5 DELAY IN LIGHT COMING ON
   6 DID NOT WORK WITH DIMMER SWITCH
   7 DOESN’T FIT PROPERLY
   8 STUCK OUT OF FIXTURE
   9 LIGHT COLOR
   10 INTERFERENCE WITH RADIO, TV, OTHER ELECTRONIC DEVICES
   11 OTHER (SPECIFY): ___________
   96 REFUSED
   97 DON’T KNOW

USE9. Do you currently have any CFLs in storage in your home? This could be in your closet, your pantry, your garage, or anywhere in your home.
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q USE10 IF Q USE9 = 1. OTHERWISE, SKIP TO Q USE11.]
USE10. How many CFLs are you storing right now?

[RECORD A NUMBER, NOT A RANGE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE11. Were you storing any CFLs in your home three months ago, back in September?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK Q USE12 IF Q USE11 = 1. OTHERWISE, SKIP TO Q USE13.]

USE12. Approximately how many CFLs were you storing three months ago?

[RECORD A NUMBER, NOT A RANGE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

[ASK Q USE13 IF Q USE9 = 1 OR Q USE11 = 1. OTHERWISE, SKIP TO THE INSTRUCTION PRECEDING Q USE15.]

USE13. Why are you storing the CFLs? Is it because . . .?

[SELECT ALL THAT APPLY.]

1 You are storing them for future use
2 They do not fit or work with the fixture for which you had intended to use them
3 Some other reason (Specify): ________
96 REFUSED
97 DON’T KNOW
[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 13 SHOULD READ AS FOLLOWS:]

USE13. Why were you storing the CFLs? Is it because . . .?

[SELECT ALL THAT APPLY.]

1  You were storing them for future use
2  They did not fit or work with the fixture for which you had intended to use them
3  Some other reason (Specify): __________
96  REFUSED
97  DON’T KNOW

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 13 SHOULD READ AS FOLLOWS:]

USE14. Do you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1  REPLACE COMPACT FLUORESCENT
2  REPLACE INCANDESCENT
3  BOTH/WHICHEVER NEEDED REPLACING FIRST
4  OTHER (SPECIFY): __________
96  REFUSED
97  DON’T KNOW

[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 13 SHOULD READ AS FOLLOWS:]

USE14. Did you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1  REPLACE COMPACT FLUORESCENT
2  REPLACE INCANDESCENT
3  BOTH/WHICHEVER NEEDED REPLACING FIRST
4  OTHER (SPECIFY): __________
96  REFUSED
97  DON’T KNOW

[IF (Qs USE4, USE5, USE6 ALL = 0, 96, 97) AND (Q USE7 = 2, 96, 97), SKIP TO Q LED1. OTHERWISE, CONTINUE.]
USE15.  How satisfied are you with the compact fluorescent light bulbs currently in your home or, if you have no CFLs installed right now, the ones you have used in the past? Would you say . . .?

5  Very satisfied
4  Somewhat satisfied
3  Neither satisfied nor dissatisfied
2  Somewhat dissatisfied
1  Very dissatisfied
96  REFUSED
97  DON’T KNOW

[ASK Q USE16 IF Q USE15 = 1, 2, 3. OTHERWISE SKIP TO Q USE17.]

USE16.  Why are you not satisfied?

1  RECORD RESPONSE
96  REFUSED
97  DON’T KNOW
USE17. I am going to read you a list of characteristics that may be associated with CFLs. Please tell me how satisfied you are with each by responding with: very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

How satisfied are you with the CFL’s . . .?

[CATI: RANDOMIZE]

cc. Ability to fit in most fixtures without sticking out

dd. Dimming capability

ee. 3-way switching capability

READ IF NECESSARY: This capability refers to the ability to have CFLs shine at different levels of brightness in a 3-way lamp.

ff. Light color

gg. Light quality

hh. Having a constant light output / no flickering

ii. Immediate start-up / no delays

jj. Long bulb life

kk. Purchase price

ll. Cost to operate

mm. Amount of heat output

nn. Environmental benefits

oo. Suitability to use in hard-to-reach areas

pp. Energy efficiency

5 VERY SATISFIED

4 SOMEWHAT SATISFIED

3 NEITHER SATISFIED NOR DISSATISFIED

2 SOMEWHAT DISSATISFIED

1 VERY DISSATISFIED

96 REFUSED

97 DON’T KNOW
LEDs

LED1. Are you familiar with light emitting diodes, or LED lights?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q LED2 IF Q LED1 = 1. OTHERWISE, SKIP TO Q BUY1.]

LED2. Have you ever heard of LED holiday lights?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q LED3 IF Q LED2 = 1. OTHERWISE, SKIP TO Q LED4.]

LED3. Do you own any LED holiday lights that you are currently using or planning to use this holiday season?
   1 YES
   2 NO
   3 OWN BUT NOT USING THIS SEASON
   96 REFUSED
   97 DON’T KNOW
LED4. What other types of LED lamps, fixtures, or bulbs have you heard of?

[DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]

1. TASK/DESK LAMPS
2. UNDERCABINET LIGHTING
3. LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS
4. RECESSED/CAN LIGHTING
5. NIGHT LIGHTS
6. FLASHLIGHTS
7. NOVELTY FIXTURES
8. OTHER (SPECIFY): __________
9. NONE
96. REFUSED
97. DON’T KNOW

LED5. Are you currently using any LED lamps, fixtures, or bulbs for regular household lighting?

1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[ASK Q LED6 IF Q LED5 = 1. OTHERWISE, SKIP TO Q BUY1.]
LED6. What types of LED lamps, fixtures, or bulbs are you currently using?

[DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]

1. TASK/DESK LAMPS
2. UNDERCABINET LIGHTING
3. LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS
4. RECESSED/CAN LIGHTING
5. NIGHT LIGHTS
6. FLASHLIGHTS
7. NOVELTY FIXTURES
8. OTHER [SPECIFY]__________
9. REFUSED
97. DON’T KNOW

PURCHASING

Now I have a few questions about your light bulb-buying habits.

BUY1. Do you usually keep a supply of light bulbs on hand, or do you tend to buy replacements as bulbs burn out?

1. KEEP A SUPPLY ON HAND
2. BUY REPLACEMENTS AS BULBS BURN OUT
3. BOTH
96. REFUSED
97. DON’T KNOW

BUY2. During the past year, how many *incandescent, or regular light bulbs*, did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________
96. REFUSED
97. DON’T KNOW
[IF (Q BUY2 = 0, 96, 97) AND (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO INTRO PRECEDING Q DEM1.]

[IF (Q BUY2 = 0, 96, 97) AND ((S1 = 1) OR (S2 = 1)), SKIP TO Q BUY5.]

OTHERWISE, CONTINUE.]

BUY3. And during the past three months, how many incandescent, or regular, light bulbs did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.]

IF "DON’T KNOW," PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________

96 REFUSED

97 DON’T KNOW

[CATI: Q BUY3 SHOULD BE LOWER THAN OR EQUAL TO Q BUY2.]}

[IF BUY3 IS GREATER THAN BUY2, SAY: Your responses indicate that the number of incandescent, or regular, light bulbs you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY2.]
BUY4. I’m going to read you a list of types of stores. For each one, please tell me if you have purchased *incandescent, or regular, light bulbs* from this type of store in the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

cc. Grocery store or supermarket, such as Stop & Shop or Whole Foods
dd. Warehouse store, such as BJ’s, Costco, or Sam’s Club
ee. Home improvement store, such as Home Depot or Lowe’s
ff. Hardware store, such as TruValue or ACE Hardware
gg. Mass merchandise or discount department store, such as a Wal-Mart, K-Mart, or Target
hh. Drugstore, such as Walgreen’s, Rite-Aid, or CVS
ii. Convenience store, such as 7-Eleven
jj. Specialty lighting or electrical store
kk. Home furnishing store, such as a Bed, Bath, and Beyond, Linens and Things, or Pottery Barn
ll. Mail order catalogs
mm. Through the Internet
nn. Bargain store, such as the Dollar Store or Family Dollar
oo. Office supply store, such as Office Depot or Staples
pp. Any other types of stores I did not mention? (Specify): ________

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO THE INTRO BEFORE Q DEM1.]

BUY5. During the past year, how many energy saving, *compact fluorescent light bulbs, or CFLs*, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.

IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________

96 REFUSED
97 DON’T KNOW
BUY6. During the past year, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: _____
96 REFUSED
97 DON’T KNOW

[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY8.
IF (Q BUY5 = 0 AND Q BUY6 = 0), SKIP TO Q DEM1.
OTHERWISE, CONTINUE.]

BUY7. And during the past three months, how many energy saving, compact fluorescent light bulbs, or CFLs, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: _____
96 REFUSED
97 DON’T KNOW

[CATI: BUY7 SHOULD BE LOWER THAN OR EQUAL TO Q BUY5.]

[ASK Q BUY8 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q BUY9.]

[IF BUY7 IS GREATER THAN BUY5, SAY: Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.
RESTART THE QUESTIONING AT BUY5.]
BUY8. During the past three months, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: _____
96 REFUSED
97 DON’T KNOW

[CATI: BUY8 SHOULD BE LOWER THAN OR EQUAL TO Q BUY6.]

[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY12.]

[IF BUY8 IS GREATER THAN BUY6, SAY: Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you received for free in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY6.]

You told me earlier that you purchased [FILL RESPONSE FROM BUY5] CFLs in the past year. Now I would like to ask about the types of stores where you purchased the CFLs from over the past year, including the last three months.
BUY9. I’m going to read you a list of different types of stores. For each one, please tell me if you purchased any CFL light bulbs from this type of store over the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

c. Grocery store or supermarket, such as Stop & Shop or Whole Foods
d. Warehouse store, such as BJ’s, Costco, or Sam’s Club
e. Home improvement store, such as Home Depot or Lowe’s
f. Hardware store, such as TruValue or ACE Hardware
g. Mass merchandise or discount department store, such as a Wal-Mart, K-Mart, or Target
h. Drugstore, such as Walgreen’s, Rite-Aid, or CVS
i. Convenience store, such as 7-Eleven
j. Specialty lighting or electrical store
k. Home furnishing store, such as a Bed, Bath, and Beyond, Linens ‘N Things, or Pottery Barn
l. Mail order catalogs
m. Through the Internet
n. Bargain store, such as the Dollar Store or Family Dollar
o. Office supply store, such as Office Depot or Staples
p. Any other types of stores I did not mention? (Specify): ______

1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[CATI: ASK Qs BUY10 FOR EACH “YES” IN BUY9 (ITEMS a – n).]

BUY10 (a – n). What is the name of the [FILL STORE TYPE FROM BUY9] where you purchased CFLs in the last year? [ALLOW MULTIPLE RESPONSES.]

1. STORE NAME
96. REFUSED
97. DON’T KNOW

[IF Q BUY9J = 1, SKIP Q BUY 11.
IF Q BUY9K = 1, SKIP Q BUY 11.]
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLS

[CATI: ASK Qs BUY11 FOR EACH STORE NAME MENTIONED IN BUY10 (ITEMS a – n). ALLOW THE FOLLOWING TO BE CODED IN CITY/TOWN FOR THE FOLLOWING LOCALES: NEW YORK CITY = 77, MANHATTAN = 78, BROOKLYN = 79, BRONX = 80, QUEENS = 81, STATEN ISLAND = 82]

BUY11 (a – n). And what street, city or town, and state is that in? [ALLOW MULTIPLE RESPONSES.]

[PROBE FOR CROSS STREET. IF “DON’T KNOW,” PROBE: Do you have an idea where it was? WORK FROM THERE TO GET BEST ESTIMATE]

1 STREET
2 CITY/TOWN
3 STATE
96 REFUSED
97 DON’T KNOW

[ASK Q BUY11-1 IF “NEW YORK CITY” FOR ANY BUY11a – n.]

BUY11-1 (a-n). Is that in Manhattan, Brooklyn, the Bronx, Staten Island, or Queens?

1 MANHATTAN
2 BROOKLYN
3 BRONX
4 QUEENS
5 STATEN ISLAND
96 REFUSED
97 DON’T KNOW

[ASK Q BUY11-2 IF STREET IN Q BUY11 = 96, 97 AND (BUY11-1 =1, 2, 3, 4, 5 OR CITY/TOWN IN Q BUY11 = 78, 79, 80, 81, 82]

BUY11-2 (a-n). Can you tell me what part of [RESPONSE TO Q BUY11-1 OR BOROUGH CODE IN Q BUY11]?

1 PART OF NYC BOROUGH: _________
96 REFUSED
97 DON’T KNOW

[CATI: FOR EACH OPTION LIST BELOW, ADD 96 = REFUSED, 97 = DON’T KNOW. INCLUDE INSTRUCTION “DO NOT READ. SELECT ALL THAT APPLY.”]

Appendix C-80
RESPONSE OPTIONS FOR Q BUY10a, Grocery store or supermarket.
1  D’AGOSTINO’S
2  GRISTIDE’S
3  SHOP RITE
4  STOP & SHOP
5  WHOLE FOODS
6  OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10b, Warehouse store
1  BJ’S
2  COSTCO
3  SAM’S CLUB
4  OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10c, Home improvement store
1  HOME DEPOT
2  LOWE’S
3  OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10d, Hardware store
1  ACE HARDWARE
2  TRUVALUE
3  OTHER (SPECIFY): _________

[ASK Q BUY10d1 FOR EACH “OTHER” RESPONSE IN Q BUY10d.]

BUY10d1.  Is this an ACE Hardware or TruValue store?
[IF “YES,” ASK: Which store is it?
IF “NO,” SELECT “NONE OF THESE.”]
1  ACE HARDWARE
2  TRUVALUE
3  NEITHER OF THESE
96  REFUSED
97  DON’T KNOW
RESPONSE OPTIONS FOR Q BUY10e, Mass merchandise or discount department store
1  K-MART
2  TARGET
3  WAL-MART
4  OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10f, Drugstore
1  CVS
2  RITE-AID
3  WALGREEN’S
4  OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10g, Convenience store
1  7-Eleven
2  OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10h - Specialty lighting or electrical store
1  SPECIFY: _________

RESPONSE OPTIONS FOR Q BUY10i, Home furnishing store
1  BED, BATH, AND BEYOND
2  LINENS ‘N THINGS
3  POTTERY BARN
4  OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10j, Mail order catalogs
1  SPECIFY: _________

RESPONSE OPTIONS FOR Q BUY10k, Internet
1  SPECIFY: _________

RESPONSE OPTIONS FOR Q BUY10l, Bargain store
1  DOLLAR STORE
2  FAMILY DOLLAR
3  OTHER (SPECIFY): _________
RESPONSE OPTIONS FOR Q BUY10m, Office Supply store
   1 OFFICE DEPOT
   2 STAPLES
   3 OTHER (SPECIFY): __________

RESPONSE OPTIONS FOR Q BUY10n, Other
   1 SPECIFY: __________

[ASK Q BUY12 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q DEM1.]

BUY12. You mentioned that you have been given CFLs in the past year. Where or from whom did you receive these free CFLs?

   [DO NOT READ. SELECT ALL THAT APPLY. PROBE ONCE FOR ADDITIONAL RESPONSES]
   1 CON EDISON
   2 NATIONAL GRID
   3 OTHER UTILITY (SPECIFY): __________
   4 SIERRA CLUB
   5 GIRL/BOY SCOUTS
   6 SPORTING EVENT (SPECIFY): __________
   7 EMPLOYER/BUSINESS MEETING (SPECIFY): __________
   8 RETAIL STORE (SPECIFY): __________
   9 SCHOOL (SPECIFY): __________
   10 FRIEND, NEIGHBOR, OR FAMILY MEMBER
   11 NYSERDA
   12 OTHER GOVERNMENT AGENCY (SPECIFY): ____________
   13 OTHER (SPECIFY): __________
   96 REFUSED
   97 DON’T KNOW
DEMOGRAPHICS

Now I have a few last questions for statistical purposes only.

DEM1. What type of home do you live in? Is it a . . .?
   1 Single-family detached house
   2 Single-family attached house (townhouse, row house, or duplex)
   3 Apartment building with 2-4 units
   4 Apartment building with 5 or more units
   5 Mobile home or house trailer
   6 Other (Specify): _______
   96 REFUSED
   97 DON’T KNOW

[ASK Q DEM2 IF Q DEM1 = 1, 2. OTHERWISE, SKIP TO DEM3.]

DEM2. When was your home built? Please stop me when I get to the appropriate category.
   1 1930s or earlier
   2 1940s
   3 1950s
   4 1960s
   5 1970s
   6 1980s
   7 1990s
   8 2000 or later
   96 REFUSED
   97 DON’T KNOW
DEM3. Do you or members of your household own this home or do you rent?
   1 OWN/BUYING
   2 RENT/LEASE
   3 OCCUPIED WITHOUT PAYMENT OF RENT
   4 OTHER (SPECIFY): __________
   96 REFUSED
   97 DON’T KNOW

DEM4. Approximately how many square feet is your home?
   1 Less than 1,400
   2 1,400 – 1,999
   3 2,000 – 2,499
   4 2,500 – 3,499
   5 3,500 – 3,999
   6 4,000 – 4,999
   7 5,000 or more
   96 REFUSED
   97 DON’T KNOW

[ASK Q DEM5 IF Q DEM4 = 96, 97. OTHERWISE, SKIP TO Q DEM6.]

DEM5. How many rooms are in your home, not counting bathrooms?
   1 1
   2 2
   3 3
   4 4
   5 5
   6 6
   7 7
   8 8
   9 9
   10 10 or more
   96 REFUSED
   97 DON’T KNOW
DEM6. How many bedrooms do you have in your home?

[INTERVIEWER: IF A ONE-ROOM EFFICIENCY OR STUDIO, BEDROOMS = 0.]
1. NUMBER OF BEDROOMS _______
96. REFUSED
97. DON’T KNOW

DEM7. What is the highest level of education that the head of household has completed so far?

[READ CATEGORIES, IF NECESSARY.]
1. LESS THAN NINTH GRADE
2. NINTH TO TWELFTH GRADE; NO DIPLOMA
3. HIGH SCHOOL GRADUATE (INCLUDES GED)
4. SOME COLLEGE, NO DEGREE
5. ASSOCIATES DEGREE
6. BACHELORS DEGREE
7. GRADUATE OR PROFESSIONAL DEGREE
96. REFUSED
97. DON’T KNOW

DEM8. Counting yourself, how many people who normally live in this household on a full time basis fit into the following age groups? Please include everyone who lives in your home whether or not they are related to you and exclude anyone who is just visiting or children who may be away at college or in the military.

[CATI: ALLOW ENTRY OF NUMBER FOR EACH OF a – g. INCLUDE RESPONSE OPTION FOR 96 = REFUSED AND 97 = DON’T KNOW FOR EACH AGE GROUP.]

a. 0 to 17 years old
b. 18 to 24 years old
c. 25 to 34 years old
d. 35 to 44 years old
e. 45 to 54 years old
f. 55 to 64 years old
g. 65 or older

1. NUMBER PEOPLE
96. REFUSED
97. DON’T KNOW
DEM9. In general, is the home usually occupied during the daytime hours on weekdays?
   1 YES, USUALLY
   2 NO, NOT USUALLY
   96 REFUSED
   97 DON’T KNOW

DEM10. Do you have a computer in your home?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

DEM11. Do you have Internet access . . .?
   [SELECT ALL THAT APPLY.]
   1 Through a home computer
   2 Through work
   3 Through public computers, such as in the library
   4 DO NOT USE THE INTERNET
   96 REFUSED
   97 DON’T KNOW

DEM12. How would you describe the head of the household’s employment status? Would you say the
   head of household is . . .?
   1 Employed full-time
   2 Self-employed full-time
   3 Employed part-time
   4 Self-employed part-time
   5 Temporarily unemployed
   6 Not employed
   7 Retired
   96 REFUSED
   97 DON’T KNOW

NOTE: THERE IS NO QUESTION 13 OR 13A IN NY CITY SITE
DEM13b. Do you pay your electric bill directly to your electric company, or is your electricity included in your rent or condo fee?

1 PAY DIRECTLY TO ELECTRIC COMPANY
2 ELECTRICITY INCLUDED IN RENT OR CONDO FEE
3 PAID FOR IN SOME OTHER WAY
96 REFUSED
97 DON’T KNOW

DEM14. Please tell me the primary language spoken in your home.

1 ENGLISH
2 SPANISH
3 MANDARIN
4 CANTONESE
5 TAGALOG
6 KOREAN
7 VIETNAMESE
8 RUSSIAN
9 JAPANESE
10 OTHER (SPECIFY): _________
96 REFUSED
97 DON’T KNOW

[ASK Q DEM15 IF Q DEM14 = 1, 96, 97. OTHERWISE, SKIP TO Q DEM16.]

DEM15. Are any members of your household Spanish, Hispanic, or Latino?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW
DEM16. Is the head of the household . . .?

[SELECT ONE RESPONSE ONLY. IF MIXED RACE OR MULTIPLE RACES RECORD IN ‘OTHER’]

1 White
2 Black or African-American
3 American Indian, Native Hawaiian, or Alaska Native
4 Chinese
5 Japanese
6 Korean
7 Vietnamese
8 Filipino
9 Other (Specify): ________
96 REFUSED
97 DON’T KNOW

DEM16a. How many cars do you and other members of your household currently own or lease?

[READ IF NECESSARY: Please include vans and trucks that are for personal use but exclude any vehicles used for business purposes only]

___ Enter number of cars currently owned/leased by members of the household
96 REFUSED
97 DON’T KNOW
DEM17. Which category best describes your total household income in 2007 before taxes? Please stop me when I get to the appropriate category.

1 $9,999 or less
2 $10,000 to $14,999
3 $15,000 to $19,999
4 $20,000 to $29,999
5 $30,000 to $39,999
6 $40,000 to $49,999
7 $50,000 to $74,999
8 $75,000 to $99,999
9 $100,000 to $149,999
10 $150,000 or more
96 REFUSED
97 DON’T KNOW

DEM18. [INTERVIEWER: DO NOT READ]

Sex:
1 FEMALE
2 MALE

REC1. Thank you, that completes the survey we’re doing today but I have one other thing I would like to talk to you about before we finish.

Later this winter, we will be offering people $150 to participate in another research activity. We are planning to visit people’s homes to gather information on the lighting installed in their home. This would be a one-time visit, and we would schedule a time to come that would be convenient for you.

Would you be interested in participating in this?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF Q REC1 = 1, SKIP TO Q REC3.
IF Q REC1 = 2, 96, SKIP TO THANK AND TERMINATE.
OTHERWISE, CONTINUE.]
RECV. That is okay; you do not have to decide now. Would it be okay if I take your name and have someone call you later this winter when we are scheduling these visits to see if you would like to participate?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF Q REC2 = 1, CONTINUE. OTHERWISE, SKIP TO THANK AND TERMINATE.]

REC3. What city or town do you live in?

1 CITY/TOWN
96 REFUSED
97 DON’T KNOW

REC4. And your name?

1 NAME
96 REFUSED
97 DON’T KNOW

REC5. And what is the best number to call you at about a visit?

1 TELEPHONE NUMBER (WITH AREA CODE)
96 REFUSED
97 DON’T KNOW

THANK AND TERMINATE

Thank you very much for taking the time to participate in our survey today.

[IF REC1 = 1 OR REC2 = 1, READ.]

As I said, we will be scheduling these visits later in the winter and will call you then.
Hello, my name is <INTERVIEWER>, and I’m calling from Braun Research as part of a national study to discuss how you use different types of lighting in your home. I’m not selling anything. May I speak with the person in the household who is the most knowledgeable about household purchases such as light bulbs and other household supplies?

[WHEN CORRECT RESPONDENT COMES TO THE PHONE, RE-INTRODUCE AND CONTINUE.]

As an independent research firm, Braun Research does not intend to report your responses in any way that would reveal your identity.

KNOLEDGE/ AWARENESS

S1. I’d like to ask you a few questions about your awareness of different types of light bulbs. Before this call today, had you ever heard of compact fluorescent bulbs, or CFLs?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK S2 IF S1 = 2, 96, 97 OTHERWISE, SKIP TO S3.]

S2. Compact fluorescent light bulbs – also known as CFLs – usually do not look like regular incandescent bulbs. The most common type of compact fluorescent bulb is made with a glass tube bent into a spiral, resembling soft-serve ice cream, and it fits in a regular light bulb socket. Before today, were you familiar with CFLs?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW
[ASK S3 IF S1 =1 OR S2=1, OTHERWISE SKIP TO ES1].

S3. How familiar are you with CFLs? Would you say that you are…?
   1 Very familiar
   2 Somewhat familiar
   3 Not too familiar
   4 Not at all familiar
   96 REFUSED
   97 DON’T KNOW

[IF S2 = 2, 96, 97 OR S3 = 4, 96, 97, GO TO ES1 OTHERWISE, CONTINUE.]

Q1. Have you or anyone else in your household ever purchased or been given any compact fluorescent light bulbs or CFLs to use in a home?
   1 YES, R HAS
   2 YES, SOMEONE ELSE HAS (ASK TO SPEAK TO THAT PERSON AND REPEAT INTRO)
   3 NO
   96 REFUSED
   97 DON’T KNOW

[IF Q1 = 2, RESTART INTERVIEW WITH CORRECT RESPONDENT. OTHERWISE, CONTINUE.]

ES1. Are you familiar with the ENERGY STAR label on household products?

   The label is a blue-and-white label with the word "energy" followed by a five-pointed star. Energy Star labels are used by the Environmental Protection Agency – the EPA – and the Department of Energy to identify and label highly energy-saving products for consumers. On a scale of 0 to 10 with 0 being not at all familiar and 10 being very familiar, how familiar were you with the Energy Star label before today?

   ___ Enter 0 to 10 rating
   96 REFUSED
   97 DON’T KNOW

[ASK ES2 IF ES1 = 1 TO 10 AND S3=3, 2, 1, OTHERWISE SKIP TO INSTRUCTION AFTER ES4]
ES2. Have you ever seen an Energy Star label on CFL packaging or on the display materials where CFLs are sold?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK ES3 IF ES2 = 1, OTHERWISE SKIP TO INSTRUCTION AFTER ES4]

ES3. Are you aware of any difference in the quality of CFLs that have the Energy Star label and the CFLs that do not have this label?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK ES4 IF ES3 = 1, OTHERWISE, SKIP TO INSTRUCTION AFTER ES4]

ES4. In what way is the quality of CFLs with the Energy Star label different than the quality of other CFLs? Anything else?

1 OTHER (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

[IF S2=2, 96, 97 OR S3=4, 96, 97 GO TO LED1, OTHERWISE CONTINUE]
USE OF CFLs

USE1. How did you first learn about CFLs?

[DO NOT READ. SELECT ALL THAT APPLY.]

1  THROUGH THE LOCAL UTILITY OR LOCAL ELECTRIC COMPANY
2  THROUGH AN ENERGY AUDIT IN MY HOME
3  AD OR STORY IN TV, RADIO, NEWSPAPER, MAGAZINE; SPONSOR OTHER THAN LOCAL ELECTRIC COMPANY
4  RETAIL STORE DISPLAY OR AD
5  FRIEND OR FAMILY MEMBER
6  WORK; CO-WORKER; PROMOTION IN THE WORKPLACE
7  OTHER (SPECIFY) ___________
96  REFUSED
97  DON’T KNOW

USE2. Have you EVER used a compact fluorescent light bulb, or CFL, on the inside or outside of your home?

1  YES
2  NO
96  REFUSED
97  DON’T KNOW

[IF Q1 = 3, 96, 97 AND Q USE2 = 2, 96, 97, GO TO INTRO PRECEDING Q LED1.
ASK Q USE3 IF Q USE2 = 1. OTHERWISE, SKIP TO Q USE9.]
USE3. Approximately how long ago did you FIRST use a compact fluorescent light bulb?

[RECORD NUMBER OF YEARS OR MONTHS, NOT A RANGE. IF LESS THAN ONE YEAR, RECORD MONTHS.
IF “DON’T KNOW,” PROBE: Is it less than or more than five years ago? WORK FROM THERE TO GET AN ESTIMATE.
ENTER 97 FOR MONTHS AND YEARS IF STILL “DON’T KNOW.”
ENTER 96 FOR MONTHS AND YEARS IF REFUSED.]

1 MONTHS ________
2 YEARS ________
96 REFUSED
97 DON’T KNOW

USE4. How many CFLs do you currently have installed on the inside or outside of your home?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE5. About how many CFLs were installed on the inside or outside of your home three months ago, that is, around the beginning of October?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW

USE6. About how many CFLs were installed on the inside or outside of your home a year ago?

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF CFLs: ________
96 REFUSED
97 DON’T KNOW
USE7. Have you ever installed and then later removed a CFL from the inside or outside of your home?
    1 YES
    2 NO
    96 REFUSED
    97 DON’T KNOW

[ASK Q USE8 IF Q USE7 = 1. OTHERWISE, SKIP TO Q USE9.]

USE8. Why did you remove the bulb(s)?
   [DO NOT READ. SELECT ALL THAT APPLY.]
   1 BURNED OUT
   2 BROKE/STOPPED WORKING
   3 BULB IS TOO BRIGHT
   4 BULB IS NOT BRIGHT ENOUGH
   5 DELAY IN LIGHT COMING ON
   6 DID NOT WORK WITH DIMMER SWITCH
   7 DOESN’T FIT PROPERLY
   8 STUCK OUT OF FIXTURE
   9 LIGHT COLOR
   10 INTERFERENCE WITH RADIO, TV, OTHER ELECTRONIC DEVICES
   11 OTHER (SPECIFY): ___________
    96 REFUSED
    97 DON’T KNOW

USE9. Do you currently have any CFLs in storage in your home? This could be in your closet, your pantry, your garage or anywhere in your home.
    1 YES
    2 NO
    96 REFUSED
    97 DON’T KNOW

[ASK Q USE10 IF Q USE9 = 1. OTHERWISE, SKIP TO Q USE11.]
USE10. How many CFLs are you storing right now?  

[RECORD A NUMBER, NOT A RANGE.]

NUMBER OF CFLs:  
96 REFUSED
97 DON’T KNOW

USE11. Were you storing any CFLs in your home three months ago, back in October?  

1 YES  
2 NO  
96 REFUSED
97 DON’T KNOW

[ASK Q USE12 IF Q USE11 = 1. OTHERWISE, SKIP TO Q USE13.]  

USE12. Approximately how many CFLs were you storing three months ago?  

[RECORD A NUMBER, NOT A RANGE.]

NUMBER OF CFLs:  
96 REFUSED
97 DON’T KNOW

[ASK Q USE13 IF Q USE9 = 1 OR Q USE11 = 1. OTHERWISE, SKIP TO THE INSTRUCTION PRECEDING Q USE15.]  

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 13 SHOULD READ AS FOLLOWS:]  

USE13. Why are you storing the CFLs? Is it because . . .?  

[SELECT ALL THAT APPLY.]  
1 You are storing them for future use  
2 They do not fit or work with the fixture for which you had intended to use them  
3 Some other reason (Specify):  
96 REFUSED
97 DON’T KNOW
[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 13 SHOULD READ AS FOLLOWS:]

USE13. Why were you storing the CFLs? Is it because . . .?

[SELECT ALL THAT APPLY.]

1 You were storing them for future use
2 They did not fit or work with the fixture for which you had intended to use them
3 Some other reason (Specify): __________

96 REFUSED
97 DON’T KNOW

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 14 SHOULD READ AS FOLLOWS:]

USE14. Do you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1 REPLACE COMPACT FLUORESCENT
2 REPLACE INCANDESCENT
3 BOTH/WHICHEVER NEEDED REPLACING FIRST
4 OTHER (SPECIFY): __________

96 REFUSED
97 DON’T KNOW

[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 14 SHOULD READ AS FOLLOWS:]

USE14. Did you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1 REPLACE COMPACT FLUORESCENT
2 REPLACE INCANDESCENT
3 BOTH/WHICHEVER NEEDED REPLACING FIRST
4 OTHER (SPECIFY): __________

96 REFUSED
97 DON’T KNOW

[IF (Qs USE4, USE5, USE6 ALL = 0, 96, 97) AND (Q USE7 = 2, 96, 97), SKIP TO Q LED1. OTHERWISE, CONTINUE.]
USE15. How satisfied are you with the compact fluorescent light bulbs currently in your home or, if you have no CFLs installed right now, the ones you have used in the past? Would you say . . .?

5 Very satisfied
4 Somewhat satisfied
3 Neither satisfied nor dissatisfied
2 Somewhat dissatisfied
1 Very dissatisfied
96 REFUSED
97 DON'T KNOW

[ASK Q USE16 IF Q USE15 = 1, 2, 3. OTHERWISE SKIP TO Q USE17.]

USE16. Why are you not satisfied?

1 RECORD RESPONSE
96 REFUSED
97 DON'T KNOW
USE17. I am going to read you a list of characteristics that may be associated with CFLs. Please tell me how satisfied you are with each by responding with: very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

How satisfied are you with the CFL’s . . .?

[CATI: RANDOMIZE]

qq. Ability to fit in most fixtures without sticking out
rr. Dimming capability
ss. 3-way switching capability    READ IF NECESSARY: This capability refers to the ability to have CFL shine at different levels of brightness in a 3-way lamp.
tt. Light color
uu. Light quality
vv. Having a constant light output / no flickering
ww. Immediate start-up / no delays
xx. Long bulb life
yy. Purchase price
zz. Cost to operate
aaa. Amount of heat output
bbb. Environmental benefits
ccc. Suitability to use in hard-to-reach areas
ddd. Energy efficiency

5    VERY SATISFIED
4    SOMewhat SATISFIED
3    NEITHER SATISFIED NOR DIssatisfied
2    SOMewhat DISSatisfied
1    VERY DIssatisfied
96    REFUSED
97    DON’T KNOW
**LEDs**

LED1. Are you familiar with light emitting diodes, or LED lights?

1. YES  
2. NO  
96. REFUSED  
97. DON’T KNOW

[ASK Q LED2 IF Q LED1 = 1. OTHERWISE, SKIP TO Q BUY1.]

LED2. Have you ever heard of LED holiday lights?

1. YES  
2. NO  
96. REFUSED  
97. DON’T KNOW

[ASK Q LED3 IF Q LED2 = 1. OTHERWISE, SKIP TO Q LED4.]

LED3. Do you own any LED holiday lights that you used this past holiday season?

1. YES  
2. NO  
3. OWN BUT DID NOT USE THIS PAST SEASON  
96. REFUSED  
97. DON’T KNOW
LED4. What other types of LED lamps, fixtures, or bulbs have you heard of?  
[DO NOT READ. SELECT ALL THAT APPLY.]
1. TASK/DESK LAMPS  
2. UNDERCABINET LIGHTING  
3. LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS  
4. RECESSED/CAN LIGHTING  
5. NIGHT LIGHTS  
6. FLASHLIGHTS  
7. NOVELTY FIXTURES  
8. OTHER (SPECIFY): __________  
9. NONE  
96. REFUSED  
97. DON‘T KNOW

LED5. Are you currently using any LED lamps, fixtures, or bulbs for regular household lighting?  
1. YES  
2. NO  
96. REFUSED  
97. DON‘T KNOW

[ASK Q LED6 IF Q LED5 = 1. OTHERWISE, SKIP TO Q BUY1.]  

LED6. What types of LED lamps, fixtures, or bulbs are you currently using?  
[DO NOT READ. SELECT ALL THAT APPLY.]
1. TASK/DESK LAMPS  
2. UNDERCABINET LIGHTING  
3. LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS  
4. RECESSED/CAN LIGHTING  
5. NIGHT LIGHTS  
6. FLASHLIGHTS  
7. NOVELTY FIXTURES  
8. OTHER [SPECIFY]___________  
96. REFUSED  
97. DON‘T KNOW
PURCHASING

Now I have a few questions about your light bulb-buying habits.

BUY1. Do you usually keep a supply of light bulbs on hand, or do you tend to buy replacements as bulbs burn out?
   1  KEEP A SUPPLY ON HAND
   2  BUY REPLACEMENTS AS BULBS BURN OUT
   3  BOTH
   96  REFUSED
   97  DON’T KNOW

BUY2. During the past year, how many *incandescent, or regular light bulbs*, did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.
[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]
   NUMBER OF BULBS: _____
   96  REFUSED
   97  DON’T KNOW

[IF (Q BUY2 = 0, 96, 97) AND (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO INTRO PRECEDING Q DEM1.
IF (Q BUY2 = 0, 96, 97) AND ((S1 = 1) OR (S2 = 1)), SKIP TO Q BUY5.
OTHERWISE, CONTINUE.]

BUY3. And during the past three months, how many *incandescent, or regular, light bulbs* did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.
[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]
   NUMBER OF BULBS: _____
   96  REFUSED
   97  DON’T KNOW

[CATI: Q BUY3 SHOULD BE LOWER THAN OR EQUAL TO Q BUY2.]
NYSERDA CFL Expansion RDD Survey Results

Differences Between the RDD and Onsite Surveys –
Current Storage of CFLs

[IF BUY3 IS GREATER THAN BUY2, SAY: Your responses indicate that the number of incandescent, or regular, light bulbs you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY2.]

BUY4. I’m going to read you a list of types of stores. For each one, please tell me if you have purchased incandescent, or regular, light bulbs from this type of store in the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

qq. Grocery store or supermarket, such as Safeway or Whole Foods
rr. Warehouse store, such as BJ’s, Costco, or Sam’s Club
ss. Home improvement store, such as Home Depot or Lowe’s
tt. Hardware store, such as TruValue or ACE Hardware
uu. Mass merchandise or discount department store, such as a Wal-Mart, K-Mart, or Target
vv. Drugstore, such as Walgreen’s, Rite-Aid, or CVS
ww. Convenience store, such as 7-Eleven
xx. Specialty lighting or electrical store
yy. Home furnishing store, such as a Bed, Bath, and Beyond, Linens and Things, or Pottery Barn
zz. Mail order catalogs
aaa. Through the Internet
bbb. Bargain store, such as the Dollar Store or Family Dollar
ccc. Office supply store, such as Office Depot or Staples
ddd. Any other types of stores I did not mention? (Specify): _______
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[IF (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO THE INTRO BEFORE Q DEM1.]
BUY5. During the past year, how many energy saving, *compact fluorescent light bulbs, or CFLs*, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.

IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________

96 REFUSED

97 DON’T KNOW

BUY6. During the past year, how many, if any, energy saving, *compact fluorescent light bulbs, or CFLs*, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.

IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________

96 REFUSED

97 DON’T KNOW

[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY8.

IF (Q BUY5 = 0 AND Q BUY6 = 0), SKIP TO Q DEM1.

OTHERWISE, CONTINUE.]

BUY7. And during the past three months, how many energy saving, *compact fluorescent light bulbs, or CFLs*, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.

IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________

96 REFUSED

97 DON’T KNOW

[CATI: BUY7 SHOULD BE LOWER THAN OR EQUAL TO Q BUY5.]

[ASK Q BUY8 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q BUY9.]
[IF BUY7 IS GREATER THAN BUY5, SAY: Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY5.]

BUY8. During the past three months, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: _______

96 REFUSED
97 DON’T KNOW

[CATI: BUY8 SHOULD BE LOWER THAN OR EQUAL TO Q BUY6.]

[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY12.]

[IF BUY8 IS GREATER THAN BUY6, SAY: Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you received for free in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.

RESTART THE QUESTIONING AT BUY6.]

You told me earlier that you purchased [FILL RESPONSE FROM BUY5] CLFs in the past year. Now I would like to ask about the types of stores where you purchased the CFLs from over the past year, including the last three months.
BUY9. I’m going to read you a list of different types of stores. For each one, please tell me if you purchased any CFL light bulbs from this type of store over the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

qq. Grocery store or supermarket, such as Safeway or Whole Foods
rr. Warehouse store, such as BJ’s, Costco, or Sam’s Club
ss. Home improvement store, such as Home Depot or Lowe’s
tt. Hardware store, such as TruValue or ACE Hardware
uu. Mass merchandise or discount department store, such as a Wal-Mart, K-Mart, or Target
vv. Drugstore, such as Walgreen’s, Rite-Aid, or CVS
ww. Convenience store, such as 7-Eleven
xx. Specialty lighting or electrical store
yy. Home furnishing store, such as a Bed, Bath, and Beyond, Linens ‘N Things, or Pottery Barn
zz. Mail order catalogs
aaa. Through the Internet
bbb. Bargain store, such as the Dollar Store or Family Dollar
ccc. Office supply store, such as Office Depot or Staples
ddd. Any other types of stores I did not mention? (Specify): _______

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[CATI: ASK Qs BUY10 AND BUY11 FOR EACH “YES” IN BUY9 (ITEMS a – n).]

BUY10 (a – n). What is the name of the [FILL STORE TYPE FROM BUY9] where you purchased CFLs in the last year? [ALLOW MULTIPLE RESPONSES.]

1 STORE NAME
96 REFUSED
97 DON’T KNOW

[IF Q BUY9J = 1, SKIP Q BUY 11.
IF Q BUY9K = 1, SKIP Q BUY 11.]

[CATI: ASK Qs BUY11 FOR EACH STORE NAME MENTIONED IN BUY10 (ITEMS a – n).]
BUY11 (a – n). And what street, city or town, and state is [INSERT BUY10 STORE NAME] in? [ALLOW MULTIPLE RESPONSES.]

1 STREET
2 CITY/TOWN
3 STATE
96 REFUSED
97 DON’T KNOW

[CATI: FOR EACH OPTION LIST BELOW, ADD 96 = REFUSED, 97 = DON’T KNOW. INCLUDE INSTRUCTION “DO NOT READ. SELECT ALL THAT APPLY.”]

RESPONSE OPTIONS FOR Q BUY10a, Grocery store or supermarket.
1 BEST WAY
2 GIANT
3 SAFEWAY
4 WEGMANS
5 WHOLE FOODS
6 OTHER (SPECIFY): __________

RESPONSE OPTIONS FOR Q BUY10b, Warehouse store
1 BJ’S
2 COSTCO
3 SAM’S CLUB
4 OTHER (SPECIFY): __________

RESPONSE OPTIONS FOR Q BUY10c, Home improvement store
1 HOME DEPOT
2 LOWE’S
3 OTHER (SPECIFY): __________

RESPONSE OPTIONS FOR Q BUY10d, Hardware store
1 ACE HARDWARE
2 TRUVALUE
3 OTHER (SPECIFY): __________

[ASK Q BUY10d1 FOR EACH “OTHER” RESPONSE IN Q BUY10d.]
BUY10d1. Is this an ACE Hardware or TruValue store?

[IF “YES,” ASK: Which store is it?
IF “NO,” SELECT “NONE OF THESE.”]

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<tbody>
<tr>
<td>1</td>
<td>ACE HARDWARE</td>
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<td>2</td>
<td>TRUVALUE</td>
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<td>3</td>
<td>NONE OF THESE</td>
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<tr>
<td>96</td>
<td>REFUSED</td>
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<td>97</td>
<td>DON’T KNOW</td>
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RESPONSE OPTIONS FOR Q BUY10e, Mass merchandise or discount department store

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<td>1</td>
<td>K-MART</td>
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<td>2</td>
<td>TARGET</td>
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<tr>
<td>3</td>
<td>WAL-MART</td>
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<td>4</td>
<td>OTHER (SPECIFY): ________</td>
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RESPONSE OPTIONS FOR Q BUY10f, Drugstore

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<td>1</td>
<td>CVS</td>
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<td>2</td>
<td>RITE-AID</td>
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<td>3</td>
<td>WALGREEN’S</td>
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<td>4</td>
<td>OTHER (SPECIFY): ________</td>
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RESPONSE OPTIONS FOR Q BUY10g, Convenience store

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<tr>
<td>1</td>
<td>7-Eleven</td>
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<tr>
<td>2</td>
<td>OTHER (SPECIFY): ________</td>
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RESPONSE OPTIONS FOR Q BUY10h - Specialty lighting or electrical store

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<tr>
<td>1</td>
<td>SPECIFY: ________</td>
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RESPONSE OPTIONS FOR Q BUY10i, Home furnishing store

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<tr>
<td>1</td>
<td>BED, BATH, AND BEYOND</td>
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<tr>
<td>2</td>
<td>LINENS ‘N THINGS</td>
</tr>
<tr>
<td>3</td>
<td>POTTERY BARN</td>
</tr>
<tr>
<td>4</td>
<td>OTHER (SPECIFY): ________</td>
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RESPONSE OPTIONS FOR Q BUY10j, Mail order catalogs

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<tr>
<td>1</td>
<td>SPECIFY: ________</td>
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</table>
RESPONSE OPTIONS FOR Q BUY10k, Internet
1 SPECIFY: ________

RESPONSE OPTIONS FOR Q BUY10l, Bargain store
1 DOLLAR STORE
2 FAMILY DOLLAR
3 OTHER (SPECIFY): ________

RESPONSE OPTIONS FOR Q BUY10m, Supply store
1 OFFICE DEPOT
2 STAPLES
3 OTHER (SPECIFY): ________

RESPONSE OPTIONS FOR Q BUY10n, Other
1 SPECIFY: ________

[ASK Q BUY12 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q DEM1.]

BUY12. You mentioned that you have been given CFLs in the past year. Where or from whom did you receive these free CFLs?

[DO NOT READ. SELECT ALL THAT APPLY.]
1 LOCAL UTILITY OR ELECTRIC COMPANY
2 SIERRA CLUB
3 GIRL/BOY SCOUTS
4 SPORTING EVENT (SPECIFY): ________
5 EMPLOYER/BUSINESS MEETING (SPECIFY): ________
6 RETAIL STORE (SPECIFY): ________
7 SCHOOL (SPECIFY): ________
8 FRIEND, NEIGHBOR, OR FAMILY MEMBER
9 LOCAL OR OTHER GOVERNMENT AGENCY (SPECIFY): __________
10 OTHER (SPECIFY): ________
96 REFUSED
97 DON’T KNOW
DEMographics

Now I have a few last questions for statistical purposes only.

DEM1. What type of home do you live in? Is it a . . .?
   1 Single-family detached house
   2 Single-family attached house (townhouse, row house, or duplex)
   3 Apartment building with 2-4 units
   4 Apartment building with 5 or more units
   5 Mobile home or house trailer
   6 Other (Specify): ______
   96 REFUSED
   97 DON’T KNOW

[ASK Q DEM2 IF Q DEM1 = 1, 2. OTHERWISE, SKIP TO DEM3.]

DEM2. When was your home built? Please stop me when I get to the appropriate category.
   1 1930s or earlier
   2 1940s
   3 1950s
   4 1960s
   5 1970s
   6 1980s
   7 1990s
   8 2000 or later
   96 REFUSED
   97 DON’T KNOW
DEM3. Do you or members of your household own this home or do you rent?
   1 OWN/BUYING
   2 RENT/LEASE
   3 OCCUPIED WITHOUT PAYMENT OF RENT
   4 OTHER (SPECIFY): __________
   96 REFUSED
   97 DON’T KNOW

DEM4. Approximately how many square feet is your home?
   1 Less than 1,400
   2 1,400 – 1,999
   3 2,000 – 2,499
   4 2,500 – 3,499
   5 3,500 – 3,999
   6 4,000 – 4,999
   7 5,000 or more
   96 REFUSED
   97 DON’T KNOW

[ASK Q DEM5 IF Q DEM4 = 96, 97. OTHERWISE, SKIP TO Q DEM6.]

DEM5. How many rooms are in your home, not counting bathrooms?
   1 1
   2 2
   3 3
   4 4
   5 5
   6 6
   7 7
   8 8
   9 9
   10 10 or more
   96 REFUSED
   97 DON’T KNOW
DEM6. How many bedrooms do you have in your home?

[INTERVIEWER: IF A ONE-ROOM EFFICIENCY OR STUDIO, BEDROOMS = 0.]

1. NUMBER OF BEDROOMS ______
2. REFUSED
3. DON’T KNOW

DEM7. What is the highest level of education that the head of household has completed so far?

[READ CATEGORIES, IF NECESSARY.]

1. LESS THAN NINTH GRADE
2. NINTH TO TWELFTH GRADE; NO DIPLOMA
3. HIGH SCHOOL GRADUATE (INCLUDES GED)
4. SOME COLLEGE, NO DEGREE
5. ASSOCIATES DEGREE
6. BACHELORS DEGREE
7. GRADUATE OR PROFESSIONAL DEGREE
8. REFUSED
9. DON’T KNOW

DEM8. Counting yourself, how many people who normally live in this household on a full time basis fit into the following age groups? Please include everyone who lives in your home whether or not they are related to you and exclude anyone who is just visiting or children who may be away at college or in the military.

[CATI: ALLOW ENTRY OF NUMBER FOR EACH OF a – g. INCLUDE RESPONSE OPTION FOR 96 = REFUSED AND 97 = DON’T KNOW FOR EACH AGE GROUP.]

v. 0 to 17 years old
w. 18 to 24 years old
x. 25 to 34 years old
y. 35 to 44 years old
z. 45 to 54 years old
aa. 55 to 64 years old
bb. 65 or older
1. NUMBER PEOPLE
2. REFUSED
3. DON’T KNOW
DEM9. In general, is the home usually occupied during the daytime hours on weekdays?

1 YES, USUALLY
2 NO, NOT USUALLY
96 REFUSED
97 DON’T KNOW

DEM10. Do you have a computer in your home?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

DEM11. Do you have Internet access . . .?

[SELECT ALL THAT APPLY.]

1 Through a home computer
2 Through work
3 Through public computers, such as in the library
4 DO NOT USE THE INTERNET
96 REFUSED
97 DON’T KNOW

DEM12. How would you describe the head of the household’s employment status? Would you say the head of household is . . .?

1 Employed full-time
2 Self-employed full-time
3 Employed part-time
4 Self-employed part-time
5 Temporarily unemployed
6 Not employed
7 Retired
96 REFUSED
97 DON’T KNOW

CHECK IF WE NEED TO ASK DEM13 AND DEM13A IN DC. IF SO, WHAT RESPONSE OPTIONS SHOULD WE USE?
DEM13. Please tell me the name of your electric utility or electric company.

[IF NECESSARY: What company delivers electricity to your home?]

[DO NOT READ. SELECT ONE RESPONSE ONLY.]

1 CON EDISON
2 NATIONAL GRID
3 NYSEG/NEW YORK STATE ELECTRIC & GAS
4 ORANGE & ROCKLAND UTILITIES
5 CENTRAL HUDSON GAS & ELECTRIC
6 ROCHESTER GAS & ELECTRIC
7 OTHER UTILITY (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

[ASK Q DEM13a IF Q DEM13 = 96, 97. OTHERWISE, SKIP TO Q DEM13b.]

DEM13a. Could you tell me the town or city you live in?

1 CITY OR TOWN (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

DEM13b. Do you pay your electric bill directly to your electric company, or is your electricity included in your rent or condo fee?

1 PAY DIRECTLY TO ELECTRIC COMPANY
2 ELECTRICITY INCLUDED IN RENT OR CONDO FEE
3 PAID FOR IN SOME OTHER WAY
96 REFUSED
97 DON’T KNOW
DEM14. Please tell me the primary language spoken in your home.

1 ENGLISH
2 SPANISH
3 MANDARIN
4 CANTONESE
5 TAGALOG
6 KOREAN
7 VIETNAMESE
8 RUSSIAN
9 JAPANESE
10 OTHER (SPECIFY): __________
96 REFUSED
97 DON’T KNOW

[ASK Q DEM15 IF Q DEM14 = 1, 96, 97. OTHERWISE, SKIP TO Q DEM16.]

DEM15. Are any members of your household Spanish, Hispanic, or Latino?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW
DEM16. Is the head of the household . . .?

[SELECT ONE RESPONSE ONLY. IF MIXED RACE OR MULTIPLE RACES, RECORD IN ‘OTHER’.]

1  White
2  Black or African-American
3  American Indian, Native Hawaiian, or Alaska Native
4  Chinese
5  Japanese
6  Korean
7  Vietnamese
8  Filipino
9  Other (Specify): ________
96  REFUSED
97  DON’T KNOW

DEM16a. How many cars do you and other members of your household currently own or lease?

[READ IF NECESSARY: Please include vans and trucks that are for personal use but exclude any vehicles used for business purposes only]

___  Enter number of cars currently owned/leased by members of the household
96  REFUSED
97  DON’T KNOW
DEM17. Which category best describes your total household income in 2007 before taxes? Please stop me when I get to the appropriate category.

1. $9,999 or less
2. $10,000 to $14,999
3. $15,000 to $19,999
4. $20,000 to $29,999
5. $30,000 to $39,999
6. $40,000 to $49,999
7. $50,000 to $74,999
8. $75,000 to $99,999
9. $100,000 to $149,999
10. $150,000 or more
96. REFUSED
97. DON’T KNOW

DEM18. [INTERVIEWER: DO NOT READ]

Sex:

1. FEMALE
2. MALE

REC1. Thank you, that completes the survey we’re doing today but I have one other thing I would like to talk to you about before we finish.

Later this winter, we will be offering people $150 to participate in another research activity. We are planning to visit people’s homes to gather information on the lighting installed in their home. This would be a one-time visit, and we would schedule a time to come that would be convenient for you.

Would you be interested in participating in this?

1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[IF Q REC1 = 1, SKIP TO Q REC3.
IF Q REC1 = 2, 96, SKIP TO THANK AND TERMINATE.
OTHERWISE, CONTINUE.]
REC2. That is okay; you do not have to decide now. Would it be okay if I take your name and have someone call you later this winter when we are scheduling these visits to see if you would like to participate?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF Q REC2 = 1, CONTINUE. OTHERWISE, SKIP TO THANK AND TERMINATE.]

REC3. What city or town do you live in?

1 CITY/TOWN
96 REFUSED
97 DON’T KNOW

REC4. And your name?

1 NAME
96 REFUSED
97 DON’T KNOW

REC5. And what is the best number to call you at about a visit?

1 TELEPHONE NUMBER (WITH AREA CODE)
96 REFUSED
97 DON’T KNOW

THANK AND TERMINATE

Thank you very much for taking the time to participate in our survey today.

[IF REC1 = 1 OR REC2 = 1, READ.]

As I said, we will be scheduling these visits later in the winter and will call you then.
Hello, my name is <INTERVIEWER>, and I’m calling from Braun Research as part of a national study to discuss how you use different types of lighting in your home. I'm not selling anything. May I speak with the person in the household who is the most knowledgeable about household purchases such as light bulbs and other household supplies?

As an independent research firm, Braun Research does not intend to report your responses in any way that would reveal your identity.

**KNOWLEDGE/AWARENESS**

S1. I’d like to ask you a few questions about your awareness of different types of light bulbs. Before this call today, had you ever heard of compact fluorescent bulbs, or CFLs?

1    YES  
2    NO  
96   REFUSED  
97   DON’T KNOW

[ASK S2 IF S1 = 2, 96, 97 OTHERWISE, SKIP TO S3.]

S2. Compact fluorescent light bulbs – also known as CFLs – usually do not look like regular incandescent bulbs. The most common type of compact fluorescent bulb is made with a glass tube bent into a spiral, resembling soft-serve ice cream, and it fits in a regular light bulb socket. Before today, were you familiar with CFLs?

1    YES  
2    NO  
96   REFUSED  
97   DON’T KNOW
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLS

[ASK S3 IF S1 =1 OR S2=1, OTHERWISE SKIP TO ES1].

S3. How familiar are you with CFLs? Would you say that you are…?

1 Very familiar
2 Somewhat familiar
3 Not too familiar
4 Not at all familiar
96 REFUSED
97 DON’T KNOW

[IF S2 = 2, 96, 97 OR S3 = 4, 96, 97, GO TO ES1 OTHERWISE, CONTINUE.]

Q1. Have you or anyone else in your household ever purchased or been given any compact fluorescent light bulbs or CFLs to use in a home?

1 YES, R HAS
2 YES, SOMEONE ELSE HAS (ASK TO SPEAK TO THAT PERSON AND REPEAT INTRO)
3 NO
96 REFUSED
97 DON’T KNOW

[IF Q1 = 2, RESTART INTERVIEW WITH CORRECT RESPONDENT. OTHERWISE, CONTINUE.]

ES1. Are you familiar with the ENERGY STAR label on household products?

The label is a blue-and-white label with the word "energy" followed by a five-pointed star. Energy Star labels are used by the Environmental Protection Agency – the EPA – and the Department of Energy to identify and label highly energy-saving products for consumers. On a scale of 0 to 10 with 0 being not at all familiar and 10 being very familiar, how familiar were you with the Energy Star label before today?

___ Enter 0 to 10 rating
96 REFUSED
97 DON’T KNOW

[ASK ES2 IF ES1 = 1 TO 10 AND S3=3, 2, 1, OTHERWISE SKIP TO INSTRUCTION AFTER ES4]
ES2. Have you ever seen an Energy Star label on CFL packaging or on the display materials where CFLs are sold?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK ES3 IF ES2 = 1, OTHERWISE SKIP TO INSTRUCTION AFTER ES4]

ES3. Are you aware of any difference in the quality of CFLs that have the Energy Star label and the CFLs that do not have this label?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK ES4 IF ES3 = 1, OTHERWISE, SKIP TO INSTRUCTION AFTER ES4]

ES4. In what way is the quality of CFLs with the Energy Star label different than the quality of other CFLs? Anything else?

1 OTHER (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

[IF S2=2, 96, 97 OR S3=4, 96, 97 GO TO LED1, OTHERWISE CONTINUE]
USE OF CFLs

USE1. How did you first learn about CFLs?
[DO NOT READ. SELECT ALL THAT APPLY.]

1. THROUGH THE LOCAL UTILITY OR LOCAL ELECTRIC COMPANY
2. THROUGH AN ENERGY AUDIT IN MY HOME
3. AD OR STORY IN TV, RADIO, NEWSPAPER, MAGAZINE; SPONSOR OTHER THAN LOCAL ELECTRIC COMPANY
4. RETAIL STORE DISPLAY OR AD
5. FRIEND OR FAMILY MEMBER
6. WORK; CO-WORKER; PROMOTION IN THE WORKPLACE
7. OTHER (SPECIFY) ___________
96. REFUSED
97. DON’T KNOW

USE2. Have you EVER used a compact fluorescent light bulb, or CFL, on the inside or outside of your home?

1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[IF Q1 = 3, 96, 97 AND Q USE2 = 2, 96, 97, GO TO INTRO PRECEDING Q LED1. ASK Q USE3 IF Q USE2 = 1. OTHERWISE, SKIP TO Q USE9.]
USE3. Approximately how long ago did you FIRST use a compact fluorescent light bulb?

   [RECORD NUMBER OF YEARS OR MONTHS, NOT A RANGE. IF LESS THAN ONE YEAR, RECORD MONTHS.
   IF “DON’T KNOW,” PROBE: Is it less than or more than five years ago? WORK FROM THERE TO GET AN ESTIMATE.
   ENTER 97 FOR MONTHS AND YEARS IF STILL “DON’T KNOW.”
   ENTER 96 FOR MONTHS AND YEARS IF REFUSED.]

   1 MONTHS ________
   2 YEARS ________
   96 REFUSED
   97 DON’T KNOW

USE4. How many CFLs do you currently have installed on the inside or outside of your home?

   [RECORD A NUMBER, NOT A RANGE.
   IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

   NUMBER OF CFLs: ________
   96 REFUSED
   97 DON’T KNOW

USE5. About how many CFLs were installed on the inside or outside of your home three months ago, that is, around the beginning of October?

   [RECORD A NUMBER, NOT A RANGE.
   IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

   NUMBER OF CFLs: ________
   96 REFUSED
   97 DON’T KNOW

USE6. About how many CFLs were installed on the inside or outside of your home a year ago?

   [RECORD A NUMBER, NOT A RANGE.
   IF “DON’T KNOW,” PROBE: Is it fewer or greater than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

   NUMBER OF CFLs: ________
   96 REFUSED
   97 DON’T KNOW
USE7. Have you ever installed and then later removed a CFL from the inside or outside of your home?

1  YES
2  NO
96  REFUSED
97  DON’T KNOW

[ASK Q USE8 IF Q USE7 = 1. OTHERWISE, SKIP TO Q USE9.]

USE8. Why did you remove the bulb(s)?

[DO NOT READ. SELECT ALL THAT APPLY.]

1  BURNED OUT
2  BROKE/STOPPED WORKING
3  BULB IS TOO BRIGHT
4  BULB IS NOT BRIGHT ENOUGH
5  DELAY IN LIGHT COMING ON
6  DID NOT WORK WITH DIMMER SWITCH
7  DOESN’T FIT PROPERLY
8  STUCK OUT OF FIXTURE
9  LIGHT COLOR
10  INTERFERENCE WITH RADIO, TV, OTHER ELECTRONIC DEVICES
11  OTHER (SPECIFY): ___________

96  REFUSED
97  DON’T KNOW

USE9. Do you currently have any CFLs in storage in your home? This could be in your closet, your pantry, your garage, or anywhere in your home.

1  YES
2  NO
96  REFUSED
97  DON’T KNOW

[ASK Q USE10 IF Q USE9 = 1. OTHERWISE, SKIP TO Q USE11.]
USE10. How many CFLs are you storing right now?
[RECORD A NUMBER, NOT A RANGE.]
NUMBER OF CFLs: _____
96 REFUSED
97 DON’T KNOW

USE11. Were you storing any CFLs in your home three months ago, back in October?
1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK Q USE12 IF Q USE11 = 1. OTHERWISE, SKIP TO Q USE13.]
USE12. Approximately how many CFLs were you storing three months ago?
[RECORD A NUMBER, NOT A RANGE.]
NUMBER OF CFLs: _____
96 REFUSED
97 DON’T KNOW

[ASK Q USE13 IF Q USE9 = 1 OR Q USE11 =1. OTHERWISE, SKIP TO THE INSTRUCTION PRECEDING Q USE15.]

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 13 SHOULD READ AS FOLLOWS:]
USE13. Why are you storing the CFLs? Is it because . . .?
[SELECT ALL THAT APPLY.]
1 You are storing them for future use
2 They do not fit or work with the fixture for which you had intended to use them
3 Some other reason (Specify): _________
96 REFUSED
97 DON’T KNOW

Appendix C-127
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLs

[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 13 SHOULD READ AS FOLLOWS:]

USE13. Why were you storing the CFLs? Is it because . . .?

[SELECT ALL THAT APPLY.]

1. You were storing them for future use
2. They did not fit or work with the fixture for which you had intended to use them
3. Some other reason (Specify): __________
96. REFUSED
97. DON’T KNOW

[IF (USE9 = 1 AND USE11 = 1) OR (USE9 = 1 AND USE11 = 2, 96, 97), USE 14 SHOULD READ AS FOLLOWS:]

USE14. Do you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1. REPLACE COMPACT FLUORESCENT
2. REPLACE INCANDESCENT
3. BOTH/WHICHEVER NEEDED REPLACING FIRST
4. OTHER (SPECIFY): __________
96. REFUSED
97. DON’T KNOW

[IF USE9 = 2, 96, 97 AND USE11 = 1, USE 14 SHOULD READ AS FOLLOWS:]

USE14. Did you anticipate using them to replace other compact fluorescent light bulbs or to replace standard incandescent light bulbs?

1. REPLACE COMPACT FLUORESCENT
2. REPLACE INCANDESCENT
3. BOTH/WHICHEVER NEEDED REPLACING FIRST
4. OTHER (SPECIFY): __________
96. REFUSED
97. DON’T KNOW

[IF (Qs USE4, USE5, USE6 ALL = 0, 96, 97) AND (Q USE7 = 2, 96, 97), SKIP TO Q LED1. OTHERWISE, CONTINUE.]
USE15. How satisfied are you with the compact fluorescent light bulbs currently in your home or, if you have no CFLs installed right now, the ones you have used in the past? Would you say . . .?

5 Very satisfied
4 Somewhat satisfied
3 Neither satisfied nor dissatisfied
2 Somewhat dissatisfied
1 Very dissatisfied
96 REFUSED
97 DON’T KNOW

[ASK Q USE16 IF Q USE15 = 1, 2, 3. OTHERWISE SKIP TO Q USE17.]

USE16. Why are you not satisfied?

1 RECORD RESPONSE
96 REFUSED
97 DON’T KNOW
USE17. I am going to read you a list of characteristics that may be associated with CFLs. Please tell me how satisfied you are with each by responding with: very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, or very dissatisfied.

How satisfied are you with the CFL’s . . . ?

[CATI: RANDOMIZE]

- eee. Ability to fit in most fixtures without sticking out
- fff. Dimming capability
- ggg. 3-way switching capability
  
  READ IF NECESSARY: This capability refers to the ability to have a CFL shine at different levels of brightness in a 3-way lamp
- hhh. Light color
- iii. Light quality
- jjj. Having a constant light output / no flickering
- kkk. Immediate start-up / no delays
- lll. Long bulb life
- mmm. Purchase price
- nnn. Cost to operate
- ooo. Amount of heat output
- ppp. Environmental benefits
- qqq. Suitability to use in hard-to-reach areas
- rrr. Energy efficiency

5 VERY SATISFIED
4 SOMEWHAT SATISFIED
3 NEITHER SATISFIED NOR DISSATISFIED
2 SOMEWHAT DISSATISFIED
1 VERY DISSATISFIED
96 REFUSED
97 DON’T KNOW
**LEDs**

LED1. Are you familiar with light emitting diodes, or LED lights?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q LED2 IF Q LED1 = 1. OTHERWISE, SKIP TO Q BUY1.]

LED2. Have you ever heard of LED holiday lights?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

[ASK Q LED3 IF Q LED2 = 1. OTHERWISE, SKIP TO Q LED4.]

LED3. Do you own any LED holiday lights that you used this past holiday season?
   1 YES
   2 NO
   3 OWN BUT DID NOT USE THIS PAST SEASON
   96 REFUSED
   97 DON’T KNOW
LED4. What other types of LED lamps, fixtures, or bulbs have you heard of?

[DO NOT READ. SELECT ALL THAT APPLY.]

1 TASK/DESK LAMPS
2 UNDERCABINET LIGHTING
3 LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS
4 RECESSED/CAN LIGHTING
5 NIGHT LIGHTS
6 FLASHLIGHTS
7 NOVELTY FIXTURES
8 OTHER (SPECIFY): __________
9 NONE
96 REFUSED
97 DON’T KNOW

LED5. Are you currently using any LED lamps, fixtures, or bulbs for regular household lighting?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[ASK Q LED6 IF Q LED5 = 1. OTHERWISE, SKIP TO Q BUY1.]

LED6. What types of LED lamps, fixtures, or bulbs are you currently using?

[DO NOT READ. SELECT ALL THAT APPLY.]

1 TASK/DESK LAMPS
2 UNDERCABINET LIGHTING
3 LIGHT BULBS/SCREW IN BULBS/GU-TYPE BULBS
4 RECESSED/CAN LIGHTING
5 NIGHT LIGHTS
6 FLASHLIGHTS
7 NOVELTY FIXTURES
8 OTHER [SPECIFY]___________
96 REFUSED
97 DON’T KNOW
PURCHASING

Now I have a few questions about your light bulb-buying habits.

BUY1. Do you usually keep a supply of light bulbs on hand, or do you tend to buy replacements as bulbs burn out?
   1 KEEP A SUPPLY ON HAND
   2 BUY REPLACEMENTS AS BULBS BURN OUT
   3 BOTH
   96 REFUSED
   97 DON’T KNOW

BUY2. During the past year, how many *incandescent, or regular light bulbs*, did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.
   [RECORD A NUMBER, NOT A RANGE.
   IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]
   NUMBER OF BULBS: ________
   96 REFUSED
   97 DON’T KNOW

[IF (Q BUY2 = 0, 96, 97) AND (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO INTRO PRECEDING Q DEM1.
IF (Q BUY2 = 0, 96, 97) AND ((S1 = 1) OR (S2 = 1)), SKIP TO Q BUY5.
OTHERWISE, CONTINUE.]

BUY3. And during the past three months, how many *incandescent, or regular, light bulbs* did you purchase? Please try to estimate the total number of bulbs, as opposed to packages.
   [RECORD A NUMBER, NOT A RANGE.
   IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]
   NUMBER OF BULBS: ________
   96 REFUSED
   97 DON’T KNOW

[CATI: Q BUY3 SHOULD BE LOWER THAN OR EQUAL TO Q BUY2.]
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results
Current Storage of CFLs

[IF BUY3 IS GREATER THAN BUY2, SAY: Your responses indicate that the number of incandescent, or regular, light bulbs you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.]

RESTART THE QUESTIONING AT BUY2.]

BUY4. I’m going to read you a list of types of stores. For each one, please tell me if you have purchased **incandescent, or regular, light bulbs** from this type of store in the last year.

**[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]**

eee. Grocery store or supermarket, such as Kroger or Whole Foods
fff. Warehouse store, such as Costeo or Sam’s Club
ggg. Home improvement store, such as Home Depot or Lowe’s
hhh. Hardware store, such as TruValue or ACE Hardware
iii. Mass merchandise or discount department store, such as a Wal-Mart or Target
jjj. Drugstore, such as Walgreen’s or CVS
kkk. Convenience store, such as 7-Eleven
lll. Specialty lighting or electrical store
mmm. Home furnishing store, such as a Bed, Bath, and Beyond, Linens and Things, or Pottery Barn
nnn. Mail order catalogs
ooo. Through the Internet
ppp. Bargain store, such as the Dollar Store or Family Dollar
qqq. Office supply store, such as Office Depot or Staples
rrr. Any other types of stores I did not mention? (Specify): _______

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF (S1 = 2, 96, 97) AND (S2 = 2, 96, 97), SKIP TO THE INTRO BEFORE Q DEM1.]

BUY5. During the past year, how many energy saving, **compact fluorescent light bulbs, or CFLs**, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]
BUY6. During the past year, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________
96 REFUSED
97 DON’T KNOW

(IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY8.
IF (Q BUY5 = 0 AND Q BUY6 = 0), SKIP TO Q DEM1.
OTHERWISE, CONTINUE.)

BUY7. And during the past three months, how many energy saving, compact fluorescent light bulbs, or CFLs, did you purchase? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: ________
96 REFUSED
97 DON’T KNOW

[CATI: BUY7 SHOULD BE LOWER THAN OR EQUAL TO Q BUY5.]
[ASK Q BUY8 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q BUY9.]

[IF BUY7 IS GREATER THAN BUY5, SAY: Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you purchased in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.
RESTART THE QUESTIONING AT BUY5.]
BUY8. During the past three months, how many, if any, energy saving, compact fluorescent light bulbs, or CFLs, did you receive for free – without purchasing them – from an individual or organization? Please try to estimate the total number of CFL bulbs, as opposed to packages.

[RECORD A NUMBER, NOT A RANGE.
IF “DON’T KNOW,” PROBE: Is it less than or more than five bulbs? WORK FROM THERE TO GET AN ESTIMATE.]

NUMBER OF BULBS: __________
96 REFUSED
97 DON’T KNOW

[CATI: BUY8 SHOULD BE LOWER THAN OR EQUAL TO Q BUY6.]
[IF (Q BUY5 = 0 AND Q BUY6 > 0 AND < 96), SKIP TO Q BUY12.]
[IF BUY8 IS GREATER THAN BUY6, SAY: Your responses indicate that the number of compact fluorescent light bulbs, OR CFLs, you received for free in the past three months is greater than the number you purchased in the past year. I’m going to read through these questions again. Please try to adjust your answers so that the number of bulbs purchased in the past year is greater than or equal to the number purchased in the past three months.]

RESTART THE QUESTIONING AT BUY6.]

You told me earlier that you purchased [FILL RESPONSE FROM BUY5] CLFs in the past year. Now I would like to ask about the types of stores where you purchased the CFLs from over the past year, including the last three months.
BUY9. I’m going to read you a list of different types of stores. For each one, please tell me if you purchased any CFL light bulbs from this type of store over the last year.

[CATI: RANDOMIZE, BUT ALWAYS ASK ITEM n LAST.]

eee. Grocery store or supermarket, such as Kroger or Whole Foods
fff. Warehouse store, such as Costo or Sam’s Club
ggg. Home improvement store, such as Home Depot or Lowe’s
hhh. Hardware store, such as TruValue or ACE Hardware
iii. Mass merchandise or discount department store, such as a Wal-Mart or Target
jjj. Drugstore, such as Walgreen’s or CVS
kkk. Convenience store, such as 7-Eleven
lll. Specialty lighting or electrical store
mmm. Home furnishing store, such as a Bed, Bath, and Beyond, Linens ‘N Things, or Pottery Barn
nnn. Mail order catalogs
ooo. Through the Internet
ppp. Bargain store, such as the Dollar Store or Family Dollar
qqq. Office supply store, such as Office Depot or Staples
rrr. Any other types of stores I did not mention? (Specify): _______

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[CATI: ASK Qs BUY10 AND BUY11 FOR EACH “YES” IN BUY9 (ITEMS a – n).]

BUY10 (a – n). What is the name of the [FILL STORE TYPE FROM BUY9] where you purchased CFLs in the last year? [ALLOW MULTIPLE RESPONSES.]

1 STORE NAME
96 REFUSED
97 DON’T KNOW

[IF Q BUY9J = 1, SKIP Q BUY 11.
IF Q BUY9K = 1, SKIP Q BUY 11.]

[CATI: ASK Q BUY11 FOR EACH STORE NAME MENTIONED IN BUY10 (ITEMS a – n).]
Differences Between the RDD and Onsite Surveys – NYSERDA CFL Expansion RDD Survey Results

Current Storage of CFLS

BUY11 (a – n). And what street, city or town, and state is [INSERT BUY10 STORE NAME] in?
[ALLOW MULTIPLE RESPONSES.]

1 STREET
2 CITY/TOWN
3 STATE
96 REFUSED
97 DON’T KNOW

[CATI: FOR EACH OPTION LIST BELOW, ADD 96 = REFUSED, 97 = DON’T KNOW.
INCLUDE INSTRUCTION “DO NOT READ. SELECT ALL THAT APPLY.”]

RESPONSE OPTIONS FOR Q BUY10a, Grocery store or supermarket.
1 CENTRAL
2 FIESTA
3 KROGER
4 RANDALL’S
5 WHOLE FOODS
6 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10b, Warehouse store
1 COSTCO
2 SAM’S CLUB
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10c, Home improvement store
1 HOME DEPOT
2 LOWE’S
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10d, Hardware store
1 ACE HARDWARE
2 TRUVALUE
3 OTHER (SPECIFY): _________

[ASK Q BUY10d1 FOR EACH “OTHER” RESPONSE IN Q BUY10d.]
BUY10d1. Is this an ACE Hardware or TruValue store?

[IF “YES,” ASK: Which store is it?
IF “NO,” SELECT “NONE OF THESE.”]

1 ACE HARDWARE
2 TRUVALUE
3 NONE OF THESE
96 REFUSED
97 DON’T KNOW

RESPONSE OPTIONS FOR Q BUY10e, Mass merchandise or discount department store

1 TARGET
2 WAL-MART
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10f, Drugstore

1 CVS
2 WALGREEN’S
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10g, Convenience store

1 7-Eleven
2 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10h - Specialty lighting or electrical store

1 SPECIFY: _________

RESPONSE OPTIONS FOR Q BUY10i, Home furnishing store

1 BED, BATH, AND BEYOND
2 LINENS ‘N THINGS
3 POTTERY BARN
4 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10j, Mail order catalogs

1 SPECIFY: _________
RESPONSE OPTIONS FOR Q BUY10k, Internet
1 SPECIFY: _________

RESPONSE OPTIONS FOR Q BUY10l, Bargain store
1 DOLLAR STORE
2 FAMILY DOLLAR
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10m, Supply store
1 OFFICE DEPOT
2 STAPLES
3 OTHER (SPECIFY): _________

RESPONSE OPTIONS FOR Q BUY10n, Other
1 SPECIFY: _________

[ASK Q BUY12 IF Q BUY6 > 0. OTHERWISE, SKIP TO Q DEM1.]

BUY12. You mentioned that you have been given CFLs in the past year. Where or from whom did you receive these free CFLs?

[DO NOT READ. SELECT ALL THAT APPLY.]
1 LOCAL UTILITY OR ELECTRIC COMPANY
2 SIERRA CLUB
3 GIRL/BOY SCOUTS
4 SPORTING EVENT (SPECIFY): _________
5 EMPLOYER/BUSINESS MEETING (SPECIFY): _________
6 RETAIL STORE (SPECIFY): _________
7 SCHOOL (SPECIFY): _________
8 FRIEND, NEIGHBOR, OR FAMILY MEMBER
9 LOCAL OR OTHER GOVERNMENT AGENCY (SPECIFY): _____________
10 OTHER (SPECIFY): _________
96 REFUSED
97 DON’T KNOW
DEM1. What type of home do you live in? Is it a . . .?
   1 Single-family detached house
   2 Single-family attached house (townhouse, row house, or duplex)
   3 Apartment building with 2-4 units
   4 Apartment building with 5 or more units
   5 Mobile home or house trailer
   6 Other (Specify): ______
   96 REFUSED
   97 DON’T KNOW

[ASK Q DEM2 IF Q DEM1 = 1, 2. OTHERWISE, SKIP TO DEM3.]

DEM2. When was your home built? Please stop me when I get to the appropriate category.
   1 1930s or earlier
   2 1940s
   3 1950s
   4 1960s
   5 1970s
   6 1980s
   7 1990s
   8 2000 or later
   96 REFUSED
   97 DON’T KNOW
DEM3. Do you or members of your household own this home or do you rent?

1 OWN/BUYING
2 RENT/LEASE
3 OCCUPIED WITHOUT PAYMENT OF RENT
4 OTHER (SPECIFY): __________
96 REFUSED
97 DON’T KNOW

DEM4. Approximately how many square feet is your home?

1 Less than 1,400
2 1,400 – 1,999
3 2,000 – 2,499
4 2,500 – 3,499
5 3,500 – 3,999
6 4,000 – 4,999
7 5,000 or more
96 REFUSED
97 DON’T KNOW

[ASK Q DEM5 IF Q DEM4 = 96, 97. OTHERWISE, SKIP TO Q DEM6.]

DEM5. How many rooms are in your home, not counting bathrooms?

1 1
2 2
3 3
4 4
5 5
6 6
7 7
8 8
9 9
10 10 or more
96 REFUSED
97 DON’T KNOW
DEM6. How many bedrooms do you have in your home?

[INTERVIEWER: IF A ONE-ROOM EFFICIENCY OR STUDIO, BEDROOMS = 0.]

1 NUMBER OF BEDROOMS _______
96 REFUSED
97 DON’T KNOW

DEM7. What is the highest level of education that the head of household has completed so far?

[READ CATEGORIES, IF NECESSARY.]

1 LESS THAN NINTH GRADE
2 NINTH TO TWELFTH GRADE; NO DIPLOMA
3 HIGH SCHOOL GRADUATE (INCLUDES GED)
4 SOME COLLEGE, NO DEGREE
5 ASSOCIATES DEGREE
6 BACHELORS DEGREE
7 GRADUATE OR PROFESSIONAL DEGREE
96 REFUSED
97 DON’T KNOW

DEM8. Counting yourself, how many people who normally live in this household on a full time basis fit into the following age groups? Please include everyone who lives in your home whether or not they are related to you and exclude anyone who is just visiting or children who may be away at college or in the military.

[CATI: ALLOW ENTRY OF NUMBER FOR EACH OF a – g. INCLUDE RESPONSE OPTION FOR 96 = REFUSED AND 97 = DON’T KNOW FOR EACH AGE GROUP.]

cc. 0 to 17 years old
dd. 18 to 24 years old
ee. 25 to 34 years old
ff. 35 to 44 years old
gg. 45 to 54 years old
hh. 55 to 64 years old
ii. 65 or older
1 NUMBER PEOPLE
96 REFUSED
97 DON’T KNOW
DEM9. In general, is the home usually occupied during the daytime hours on weekdays?
   1 YES, USUALLY
   2 NO, NOT USUALLY
   96 REFUSED
   97 DON’T KNOW

DEM10. Do you have a computer in your home?
   1 YES
   2 NO
   96 REFUSED
   97 DON’T KNOW

DEM11. Do you have Internet access . . .?
   [SELECT ALL THAT APPLY.]
   1 Through a home computer
   2 Through work
   3 Through public computers, such as in the library
   4 DO NOT USE THE INTERNET
   96 REFUSED
   97 DON’T KNOW

DEM12. How would you describe the head of the household’s employment status? Would you say the head of household is . . .?
   1 Employed full-time
   2 Self-employed full-time
   3 Employed part-time
   4 Self-employed part-time
   5 Temporarily unemployed
   6 Not employed
   7 Retired
   96 REFUSED
   97 DON’T KNOW

CHECK IF WE NEED TO ASK Q13 AND Q13A IN HOUSTON – IF SO, WHAT RESPONSE OPTIONS SHOULD WE USE

Appendix C-144
DEM13. Please tell me the name of your electric utility or electric company.

[IF NECESSARY: What company delivers electricity to your home?]

[DO NOT READ. SELECT ONE RESPONSE ONLY.]
1 CON EDISON
2 NATIONAL GRID
3 NYSEG/NEW YORK STATE ELECTRIC & GAS
4 ORANGE & ROCKLAND UTILITIES
5 CENTRAL HUDSON GAS & ELECTRIC
6 ROCHESTER GAS & ELECTRIC
7 OTHER UTILITY (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

[ASK Q DEM13a IF Q DEM13 = 96, 97. OTHERWISE, SKIP TO Q DEM13b.]

DEM13a. Could you tell me the town or city you live in?

1 CITY OR TOWN (SPECIFY): ___________
96 REFUSED
97 DON’T KNOW

DEM13b. Do you pay your electric bill directly to your electric company, or is your electricity included in your rent or condo fee?

1 PAY DIRECTLY TO ELECTRIC COMPANY
2 ELECTRICITY INCLUDED IN RENT OR CONDO Fee
3 PAID FOR IN SOME OTHER WAY
96 REFUSED
97 DON’T KNOW
DEM14. Please tell me the primary language spoken in your home.

1  ENGLISH
2  SPANISH
3  MANDARIN
4  CANTONESE
5  TAGALOG
6  KOREAN
7  VIETNAMESE
8  RUSSIAN
9  JAPANESE
10  OTHER (SPECIFY): _________
96  REFUSED
97  DON’T KNOW

[ASK Q DEM15 IF Q DEM14 = 1, 96, 97. OTHERWISE, SKIP TO Q DEM16.]

DEM15. Are any members of your household Spanish, Hispanic, or Latino?

1  YES
2  NO
96  REFUSED
97  DON’T KNOW
DEM16. Is the head of the household . . .?

[SELECT ONE RESPONSE ONLY. IF MIXED RACE OR MULTIPLE RACES, RECORD IN ‘OTHER’.]

1 White
2 Black or African-American
3 American Indian, Native Hawaiian, or Alaska Native
4 Chinese
5 Japanese
6 Korean
7 Vietnamese
8 Filipino
9 Other (Specify): ________
96 REFUSED
97 DON’T KNOW

DEM16a. How many cars do you and other members of your household currently own or lease?

[READ IF NECESSARY: Please include vans and trucks that are for personal use but exclude any vehicles used for business purposes only]

___ Enter number of cars currently owned/leased by members of the household
96 REFUSED
97 DON’T KNOW
DEM17. Which category best describes your total household income in 2007 before taxes? Please stop me when I get to the appropriate category.

1. $9,999 or less
2. $10,000 to $14,999
3. $15,000 to $19,999
4. $20,000 to $29,999
5. $30,000 to $39,999
6. $40,000 to $49,999
7. $50,000 to $74,999
8. $75,000 to $99,999
9. $100,000 to $149,999
10. $150,000 or more
96. REFUSED
97. DON’T KNOW

DEM18. [INTERVIEWER: DO NOT READ]

Sex:
1. FEMALE
2. MALE

REC1. Thank you, that completes the survey we’re doing today but I have one other thing I would like to talk to you about before we finish.

Later this winter, we will be offering people $100 to participate in another research activity. We are planning to visit people’s homes to gather information on the lighting installed in their home. This would be a one-time visit, and we would schedule a time to come that would be convenient for you.

Would you be interested in participating in this?

1. YES
2. NO
96. REFUSED
97. DON’T KNOW

[IF Q REC1 = 1, SKIP TO Q REC3.
IF Q REC1 = 2, 96, SKIP TO THANK AND TERMINATE. OTHERWISE, CONTINUE.]
REC2. That is okay; you do not have to decide now. Would it be okay if I take your name and have someone call you later this winter when we are scheduling these visits to see if you would like to participate?

1 YES
2 NO
96 REFUSED
97 DON’T KNOW

[IF Q REC2 = 1, CONTINUE. OTHERWISE, SKIP TO THANK AND TERMINATE.]

REC3. What city or town do you live in?

1 CITY/TOWN
96 REFUSED
97 DON’T KNOW

REC4. And your name?

1 NAME
96 REFUSED
97 DON’T KNOW

REC5. And what is the best number to call you at about a visit?

1 TELEPHONE NUMBER (WITH AREA CODE)
96 REFUSED
97 DON’T KNOW

THANK AND TERMINATE

Thank you very much for taking the time to participate in our survey today.

[IF REC1 = 1 OR REC2 = 1, READ.]

As I said, we will be scheduling these visits later in the winter and will call you then.
APPENDIX C

DIFFERENCES BETWEEN THE RDD AND ONSITE SURVEYS – CURRENT STORAGE OF CFLS

The scatter plots shown in Figure 25 through Figure 29 compare the unweighted RDD survey self-reported counts for current CFL storage and the unweighted observed onsite counts for current CFL storage. The scatter plots reveal that the onsite participants tended to overreport the number of CFLs they currently have in storage. It is important to note that while, on average, the differences between the RDD and onsite counts for NYS, Ohio and DC participants are small; the scatter plots clearly demonstrate that the majority of onsite participants were unable to accurately report the number of CFLs currently in storage.

Figure 24: Mean CFL Storage
(Base: All on-site participants)
Figure 25: New York State - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage

R² = -0.053
Figure 26: Ohio - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage
Figure 27: New York City - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage

\[ R^2 = 0.2701 \]
Figure 28: DC - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage

R² = 0.0566
Figure 29: Houston - RDD Reported CFLs in Storage by Onsite Observed CFLs in Storage