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Energy Efficiency / Demand Response Plan: Plan Year 3 (6/1/2010-5/31/2011)

Evaluation Report: Lights for Learning™ Program

Presented to

Illinois Department of Commerce and Economic Opportunity

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Presented by

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Executive Summary

E.1. Evaluation Objectives

The primary objectives of this evaluation are to quantify energy impacts from the Program Year Three (PY3) Lights for Learning™ (L4L) program, to determine key process-related program strengths and weaknesses, and to identify ways in which the program can be implemented more effectively. PY3 L4L program activity occurred between July 1, 2010 and May 31, 2011.

The main goals of the L4L program are to provide schools and other organizations with ways to educate students on the benefits of energy efficiency while conducting fundraising activities for their school or other organization. Products featured included CFLs (from nine product options), LED nightlights, and LED holiday strands (from two product options), and energy efficiency products (including BITs Smart Strip 7-outlet power strips and Kill-A-Watt electricity usage monitors).[1]

The program has been offered statewide since 2005 and is sponsored by the Illinois Department of Commerce and Economic Opportunity (DCEO). The L4L program is administered by Midwest Energy Efficiency Alliance (MEEA) and implemented in Illinois by Applied Proactive Technologies (APT) with order fulfillment through the Energy Federation, Inc. (EFI).

E.2. Evaluation Methods

The methods used for the L4L program's impact evaluation included reviewing the program's default energy savings assumptions and quantifying gross savings impacts from the program reporting data. Where possible, Navigant recommended adjustments to program default savings values, to be consistent with the PY3 ComEd Residential ENERGY STAR® Lighting Program Evaluation.[2] These recommended adjustments included revisions to installation rates, hours of use and product wattage differences for some measures. Net impacts were derived using a planning assumption for the NTG ratio from ComEd.[3]

The PY3 process evaluation included in-depth interviews with MEEA program staff and APT contract implementers. The evaluation team conducted a review of the PY3 program materials and tracking databases. The evaluation team contacted fundraiser coordinators and end-use purchasers to gauge end-user satisfaction with the fundraiser and the lighting products.

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[1] Applied Proactive Technologies, Inc., *ENERGY STAR® Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011.*

[2] Navigant, ComEd PY3 Residential ENERGY STAR® Lighting Program Evaluation Report (DRAFT, September 16, 2011).

[3] Please see Net to Gross discussion for rationale of using the planning assumption for NTG ratio for PY3 evaluation.

E.3. Key Findings

E.3.1. Key Impact Findings

The Lights for Learning program reported ex-ante gross energy savings of 1,148,572 kWh. The evaluation team recommended updates to several gross impact parameters, including estimated hours of use and installation rates. The evaluation team found a few minor discrepancies in measure counts that also affected the program's estimated gross energy savings. After adjusting for these discrepancies, the evaluation-adjusted ex post gross savings were 984,233 kWh, which represents a realization rate of 86 percent for energy savings. Evaluation-adjusted ex post gross demand savings were 93.3 kW, which represents a realization rate of 99 percent for demand savings. The evaluation team applied the DCEO planning estimate Net-to-Gross (NTG) Ratio of 0.80 to the ex-post gross energy savings to obtain the program's net energy savings estimate of 787,386 kWh and net demand savings estimate of 74.7 kW.[4]

Table ES-1 PY3 Lights for Learning Summary Gross and Net Savings Estimates

Savings Estimates	DCEO EEPS	DCEO Non-EEPS	Program Total
Program Reported Gross Energy Savings (ex-ante)	1,034,587 kWh	113,985 kWh	1,148,572 kWh
Evaluation-Adjusted Gross Energy Savings (ex-post)	886,848 kWh	97,385 kWh	984,233 kWh
Energy Savings (kWh) Realization Rate (based on Planning Estimate)	86%	85%	86%
Program Reported Gross Demand Savings (ex-ante)	84.4 kW	9.3 kW	93.7 kW
Evaluation-Adjusted Gross Demand Savings (ex-post)	84.1 kW	9.2 kW	93.3 kW
Demand Savings (kW) Realization Rate	99%	99%	99%
Net-to-Gross Ratio	0.80	0.80	0.80
Net Energy Savings	709, 478 kWh	77,908 kWh	787,386 kWh
Net Demand Savings	67.3 kW	7.7 kW	74.7 kW

Source: Lights for Learning planning documents, Navigant analysis of program tracking information

The PY3 Lights for Learning (PY3 L4L) program reported 29,223 products distributed during the program year, a four percent (4%) increase from the previous program year. The evaluation team found 29,265 total products distributed. For the impact evaluation, the evaluation team excluded energy efficiency products such as BITs Smart Strip 7-outlet power strips and Kill-A-Watt electricity usage monitors (62 units were purchased in PY3), because their direct energy savings are minimal and the program does not claim energy savings for these products. Products distributed as samples or for outreach purposes (385 units), whose impacts are unrepresentative and very small in relation to the overall population of

[4] DCEO used a NTG 80% value derived from the California Energy Efficiency Policy Manual, version 2 (2003).

products. After subtracting these products from the program reported distribution, the evaluation team included 28,818 products in its impact evaluation.

Table ES-2 includes PY3 L4L units purchased and distributed in DCEO-EEPS and DCEO non-EEPS sectors.

Table ES-2 PY3 Lights for Learning
Products Sold or Distributed

Units	DCEO- EEPS	DCEO Non-EEPS
CFL units purchased	**21,095**	**2,217**
LED units purchased	**4,893**	**513**
Subtotal, for Impact Evaluation	**25,988**	**2,830**
Combined Subtotal for Impact Evaluation	**28,818**	
Energy efficiency products purchased	**62**	
Units Distributed as Samples/Outreach	**385**	
Total all units Purchased and Distributed	**29,265**	

Source: Applied Proactive Technologies, Inc., Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011

Finding**:** The program is likely over-estimating its energy savings impacts.

Recommendation**:** Update gross energy savings planning assumptions consistent with the ComEd Residential ENERGY STAR® Lighting Evaluation Report.

Finding: The estimated net-to-gross ratio of 0.80 is not accurately reflecting program free-ridership and program spillover, based on other lighting program evaluations and the product structure of this program. The effort to measure free ridership failed in PY3 because the available sample sizes were too small.

Evaluation Recommendation: Conduct additional evaluation research to ascertain the program's potential free ridership and spillover to more accurately evaluate the program's net savings estimates through additional telephone discussions with fundraiser coordinators and program participants.

E.3.2. Key Process Findings

The Lights for Learning program continued to reach a broad audience in the PY3 program year, conducting 226 presentations to over 20,000 people in schools and organizations throughout Illinois. The Lights for Learning program participants conducted 176 fundraisers resulting in nearly $47,000 in proceeds to the participating schools and organizations. Table ES-3 provides a summary of PY3 Lights for Learning presentations and proceeds.

Table ES-3 PY3 Lights for Learning Participation and Proceeds

Performance Indicator	DCEO EEPS	DCEO Non-EEPS	Total Program
School Presentations	219	7	226
Participating Students	2,528	83	2,611
Participating Schools	158	9	167
Number of Fundraisers	168	8	176
Proceeds	$42,157.05	$4,643.70	$46,800.75

Source: Applied Proactive Technologies, Inc., Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011 .

Customers reported high satisfaction with the program staff and product offerings. The most common suggestion for improvement was to offer additional products to the fundraiser.

Overview of Accomplishments: 2008—2011 School Years

Over the last three school years, the Lights for Learning program has successfully reached over 57,000 students through almost 650 staff presentations. Over 7,500 people have participated in Lights for Learning fundraisers raising almost $150,000 for their schools and organizations. The program has sold or distributed over 94,000 energy efficient products over the last three years.

Table ES-4 Lights for Learning Performance Trends (2008-2011 School Years)

Performance Indicator	2008-2009 School Year	2009-2010 School Year	2010-2011 School Year	2008-2011 Totals
Staff Presentations	202	219	226	647
Estimated Attendance at Presentations	16,500	19,815	20,688	57,003
Participating Schools and Organizations	139	165	167	471
Fundraisers	161	178	176	515
Fundraiser Participants	2,394	2,527	2,611	7,532
Products Distributed or Sold	37,018	28,051	29,223	94,292
Fundraiser Proceeds	$43,902.25	$57,574.10	$46,800.75	$148,277.10

Sources: Applied Proactive Technologies, Inc., Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011;
Midwest Energy Efficiency Alliance, ENERGY STAR® Lights for Learning™ Fundraiser: Summary Report, Results, and Lesson Learned, State of Illinois, 2009-2010 School Year, July 12, 2010

Overall, the Lights for Learning program has increased its market presence over the last three years. Fundraiser proceeds were lower during the last school year due to lower costs of some popular products, including the 13W CFL (14% decrease); CFL Sample Pack (21% decrease) and Multi-color LED Holiday Lights (25% decrease). To counter this trend, the Lights for Learning program is planning to add new product offerings in its fundraiser.

Finding: Customers reported high levels of satisfaction, but recommended including additional products in the fundraiser.

Recommendation**:** Investigate the feasibility of adding new products to the fundraiser, such as a wider variety of LED lighting products.

Finding**:** Although the program's outreach and participation numbers were very similar to PY2, proceeds from the PY3 Lights for Learning fundraiser were down 18% from the previous year, due to lower costs for some of the program's most popular products, including the 13W CFL (14% decrease); CFL Sample Pack (21% decrease) and Multi-color LED Holiday Lights (25% decrease).

Recommendation**:** Seek to increase net product earnings while maintaining pricing competitiveness. Carefully gauge market interest and pricing to determine optimal pricing for products offered through the fundraiser. Most participants report purchasing products to help support the school or organization's fundraiser, so the program should consider offering products at a comparable cost to those offered at conventional product outlets, such as big-box retail stores. If EFI can supply the product at a lower cost, then the fundraiser can increase its effectiveness for participating schools and organizations by increasing the amount earned by the organization on these products.

Finding**:** The Lights for Learning program continued to implement fun and innovative marketing strategies in its educational presentation, fundraiser materials and website. Purchasers indicate that the program's marketing messages have an impact on their motivations to participate in the fundraiser.

Recommendation: Consider engaging fundraiser coordinators in an advisory group to help identify creative ways to reach new audiences and re-engage current and past participants. Continue to use social media and interactive websites to engage participants and the public.

Finding: The evaluation survey polled fewer participants than needed to support the target sample statistical confidence and precision. Although the Lights for Learning program staff and the evaluation team collaborated to identify ways to engage program participants and encourage them to participate in the telephone evaluation survey, the evaluation team was unsuccessful in reaching enough participants to extrapolate the telephone survey results to the entire program.

Recommendation: Consider integrating a brief customer survey as part of the ordering or delivery process, while purchasers are still engaged in the program and more likely to provide feedback. Consider including messages about the customer survey in educational presentations and fundraiser literature. Discuss additional survey delivery options, such as a web-based survey option, with program sponsors and evaluators to determine the effectiveness of such alternative feedback mechanisms.

Finding: The Lights for Learning program benefits from committed staff and relationships between the stakeholders, MEEA, APT, and EFI.

Recommendation: Continue the team approach and ensure continued highly satisfactory service to current customers. As appropriate to local school and community situations, enlist additional stakeholders relevant to expanding the program's reach to new organizations and schools.

E.4. Cost Effectiveness

Cost effectiveness is assessed through the use of the Illinois Total Resource Cost (TRC) test. Table ES-5 summarizes the unique inputs used to calculate the TRC ratio for the Lights for Learning Program in PY3. Most of the unique inputs come directly from the evaluation results presented in this report. Measure life estimates were based on similar ComEd programs, third party sources including the California Public Utilities Commission (CPUC) developed Database of Energy Efficiency Resources (DEER) and previous Navigant evaluation experience with similar programs. Program costs data came directly from DCEO. Incremental costs were estimated from program, survey data and similar ComEd programs. Avoided cost data came from both ComEd and Ameren and are the same for all programs.

Table ES-5. Inputs to TRC Model for Lights for Learning Program

Item	Value Used
Participants	23,104
Annual Gross Energy Savings	887 MWh
Gross Coincident Peak Savings	0.08 MW
Net-to-Gross Ratio	80%
DCEO Administration and Implementation Costs	$254,424
DCEO Incentive Costs	$191,610
Net Participant Costs	$41,891

Based on these inputs, the Illinois societal TRC for this program is 1.02 and the program passes the Illinois TRC test.

Section 1. Introduction to the Program

1.1 Program Description

The Lights for Learning (L4L) program targets K-12 schools and community organizations to engage students or members of an organization about the benefits of energy efficiency and energy conservation. The program conducts education and outreach to target markets through 1) educational presentations, 2) fundraisers featuring energy-efficient products, and 3) educational materials for schools and organizations.

The Lights for Learning program is administered by the Midwest Energy Efficiency Alliance (MEEA). Applied Proactive Technologies, Inc., (APT) is the program implementer in the state of Illinois. The Energy Federation, Inc. (EFI) serves as the provider of energy-saving products sold through the school fundraiser.

Implementation Strategy

The program team has continued to refine the program and adapt to changing market conditions over the years. Previous years' evaluation reports have detailed the program's delivery mechanisms, which have proven to be effective and remain intact. These delivery mechanisms include outreach to schools and teachers through electronic and mail communications. The program staff regularly attends key professional conferences and events to reach out to school districts, including engaging Chicago Public Schools.

Lights for Learning continued to expand its outreach to community organizations and attend public events, such as the Illinois State Fair, one of many such public events where the program staffed a trade show booth and distributed information to interested attendees. The program specifically targets new demographics and "hard to reach" market segments to expand its market presence. The program has installed kiosks at public locations, such as parks and the Brookfield Zoo.

The Lights for Learning program included additional content on the program's website (www.lights4learning.org). The website includes archives of the monthly "Watt's Going Down" newsletters, photos of participants and information about CFL recycling. The Lights for Learning program introduced a new poetry contest, the "Say it in 7" Poetry Contest, in which students submitted entries limited to seven words. New features included expanded social media features, such as the "2011 Shine Like an ENERGY STAR® Contest" where students participated by submitting short videos to the program.

Products Offerings in Program Year Three

Table 1-1 lists the ENERGY STAR® qualified products offered for sale through the L4L program in PY3.

Table 1-1. PY3 Lights for Learning Products Offered

Manufacturer	Description	Wattage	Lifetime Hours
Earthmate	Mini Spiral	13 Watt	10,000
Earthmate	Spiral	20 Watt	10,000
Earthmate	Spiral	23 Watt	10,000
Maxlite Mini Bulb	Capsule	13 Watt	8,000
GE	Reflector	15 Watt	6,000
Lightwiz	3-Way	33 Watt	10,000
TCP	Spiral 3 Pack	19 Watt	10,000
TCP	Sample Pack	13 Watt, 20 Watt, 23 Watt	10,000
Globe	CFL DeskLamp	13 Watt	10,000
TCP	Capsule 2 Pack	14 Watt	8,000
TCP	R30 Reflector	14 Watt	8,000
Feit	Par 38 Reflector	23 Watt	6,000
Greenlite	Color Changing Nightlight	0.8 Watt	30,000+
Diogen	25 Ft LED Holiday Light Strand,Warm White	3.4 Watt	30,000+
Diogen	25 Ft LED Holiday Light Strand, Multi-Color	3.4 Watt	30,000+

Source: *Applied Proactive Technologies, Inc., Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011.*

1.2 Evaluation Questions

The evaluation sought to answer the following key researchable questions.

Impact Questions:

- What are the gross impacts from this program?
- What are the net impacts from this program?

Process questions:

- Was the PY3 program implemented in a manner consistent with program design?
- How effective were the program implementation, processes and marketing efforts in PY3?
- Were fundraiser coordinators and fundraiser participants satisfied with their experience with the program?
- In what areas, if any, could the program improve its effectiveness?

Section 2. Evaluation Methods

2.1 *Analytical Methods*

This section describes evaluation team's methodology for the PY3 Lights for Learning evaluation.

Gross Program Impacts

For PY3 reporting of energy and peak demand impacts, DCEO implemented the default savings assumptions recommended in the PY2 Lights for Learning impact evaluation report for delta watts, hours of use, installation rate, mean coincident load factor, and indoor HVAC interaction factor. The evaluation team made minor modifications to some gross impact parameters consistent with the ComEd PY3 Residential ENERGY STAR® Lighting evaluation report.

Net Program Impacts

The primary objective of net savings analysis is to determine a program's net effect on customers' electricity usage, accounting for free-ridership and spillover. This requires estimating what would have happened in the absence of the program. Thus, after gross program impacts have been assessed, net program impacts are derived by estimating a Net-to-Gross (NTG) ratio that quantifies the percentage of the gross program impacts that can reliably be attributed to the program. Once free-ridership and spillover have been estimated, the Net-to-Gross (NTG) ratio is calculated as follows:

NTG Ratio = 1 – Free-ridership Rate + Spillover Rate

The PY3 evaluation used a NTG ratio equal to 0.80, the same program planning assumption used for the PY2 program evaluation.[5] The evaluation team implemented telephone surveys to collect NTG-related information from program participants who gave the Lights for Learning program their contact information. The starting sample size for this survey was 110 end-use participants (e.g. people who purchased products through the fundraiser). After calling participants up to five (5) times, the call center ceased calling and completed surveys with eight (8) participants. This resulting sample was too small to provide a valid estimate of free ridership so the evaluation team decided to use the previous year's program planning assumption again for the PY3 evaluation report.

Evaluations of other residential lighting programs, that cover similar products, have conducted surveys with a larger sample and have found lower NTG ratios than 80 percent. As well, the evaluation team determined that the Lights for Learning program includes enough significant differences in program design (e.g., education and outreach, delivery methods, implementation) to possibly warrant a different NTG Ratio than that of the ComEd Residential ENERGY STAR® Lighting program. Again, the survey

[5] The value of 80% is drawn from the program plan presented in ComEd's 2008-2010 Energy Efficiency and Demand Response Plan (November 15, 2007). Page D-2 of the ComEd plan provides a footnote stating the net to gross ratio of 80% is drawn from the California Energy Efficiency Policy Manual, version 2 (2003).

conducted was unable to garner sufficient certainty in its result to suggest a changed NTG value. Thus, additional research is necessary to more accurately estimate the program's free ridership.

2.2 *Process Evaluation Methods*

The data collected for the evaluation of the Lights for Learning program was gathered during a number of primary and secondary research activities between February through August, 2011. Primary research consisted of in-person interviews with Lights for Learning program staff and telephone conversations throughout the program year. The evaluation team contacted fundraiser coordinators by telephone and email. The evaluation team also conducted a short telephone survey with fundraiser participants.

The table below provides a summary of these data collection activities including the targeted population, the sample frame, and timing in which the data collection occurred.

Table 2-1. PY3 Lights for Learning Data Collection Activities

Data Collection Type	Targeted Population	Sample Frame	Sample Design	Sample Size	Timing
Review of Program Materials	Lights for Learning Program Participants	Promotional Materials	-	-	May-June 2011
In-depth Phone Interviews	MEEA	Contact from MEEA	LFL Administrative Program Manager	2	May 2011
	Applied Proactive Technologies	Contact from APT	LFL Implementation Manager and Staff	2	June 2011
Telephone Survey	Product Purchasers	Program contacts	104	8	June-July 2011
Telephone/email interviews	Fundraiser Coordinators	Program contacts	102	10	June-July 2011

Source: Navigant evaluation team analysis.

As in the previous program year, the evaluation team had difficulty reaching program participants. After several attempts, the call center reached only eight (8) participants from the 110 names provided by the program. The evaluation team was able to reach ten (10) fundraiser coordinators. In the future, the evaluation team recommends implementing the participant telephone survey and fundraiser interviews while school is in session.

Section 3. Program Level Results

3.1 Impact Analysis

3.1.1 Verification and Due Diligence

Verification and due diligence activities consisted of reviewing the program's tracking spreadsheets to verify measure counts. While the evaluation team found some minor discrepancies in measure counts, the Lights for Learning program appears to be accurately reporting program participation and products sold through the fundraiser.

3.1.2 Gross Program Impact Parameter Estimates

Table 3-1 provides a summary of the gross impact parameters used to derive evaluator recommended adjustments to first-year gross energy savings and coincident demand reductions. Key impact parameters for CFLs, including estimated hours of use, installation rate, delta watts and peak coincidence factor, were derived from the ComEd PY3 Residential ENERGY STAR® Lighting Evaluation Report.[6] Impacts for LED lights were estimated based on information from the Lights for Learning program materials, product specifications and the Energy Federation, Inc. database.

Table 3-1. PY3 Lights for Learning Evaluation Gross Impact Parameters

Gross Impact Parameter	Value
Purchased units	Program Tracking Data
Daily Hours of Use: CFLs	2.74
Daily Hours of Use: LED Nightlight	8.00
Daily House of Use: LED Holiday Lights	6.04
Installation Rate (standard CFL)	0.71[7]
Installation Rate (specialty CFL)	0.78
Coincidence Factor: CFLs	0.102
Coincidence Factor: LED Lights (all)	0.000
HVAC Interaction Factor (indoor lighting)	1.0
Delta Watts	ComEd PY3 Residential Lighting Evaluation, where possible

Source: Lights for Learning program tracking data, Navigant research and analysis.

Table 3-2 below provides the product efficient wattage used to calculate non-coincident displaced watts for each product. The evaluation team applied delta watts consistent with the ComEd PY3 Residential ENERGY STAR® Lighting Program evaluation for spiral CFL products. The L4L product efficient wattage and specifications were taken from the L4L annual report and from the Energy Federation Inc.

[6] Navigant, PY3 ComEd Residential ENERGY STAR® Lighting Program Evaluation DRAFT Report (Sept 16, 2011).
[7] Please see discussion of installation rate methodology in Section 2.1 for more detail about the evaluation-adjusted assumption.

web site (http://www.energyfederation.org). The evaluation team calculated delta watts for products not included in other residential lighting evaluations (e.g. specialty bulbs, etc.) based on product specifications from the program implementer.

Table 3-2. PY3 Lights for Learning
Gross Impact Parameters – Delta Watts

Product Type	L4L Efficient Product Wattage[8]	Program Reported Delta Watts[9]	Evaluation-Adjusted Delta Watts[10]
13W Spiral	13	47.0	47.0
13W Capsule	13	47.0	47.0
13W CFL Desk Lamp	13	47.0	47.0
TCP 14W 2Pack (Capsule)	14	46.0	46.0
14W R30 Reflector	14	46.0	26.0
15W Reflector	15	45.0	45.0
19W 3Pack	19	56.0	56.0
20W Spiral	20	55.0	55.0
23W Spiral	23	77.0	77.0
23W Reflector (Par 38)	23	77.0	52.0
33W 3-Way	33	117.0	117.0
Sample Kit (13W, 20W, 23W Spiral)	18.7	60.0	60.0
LED Nightlight	0.8	3.2	3.2
Multicolor 24' LED Holiday Strand	3.4	89.6	88.6
White 24' LED Holiday Strand	3.4	89.6	88.6

Source: Navigant analysis of PY3 program annual report data.

Table 3-3 provides the program-reported and evaluation-adjusted hours of use to calculate energy savings for each product.

[8] Product Efficiency Wattage derived from Source*: Applied Proactive Technologies, Inc., ENERGY STAR® Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011* and from Energy Federation, Inc. website (www.energyfederation.org).
[9] Program Reported Delta Watts from PY3 Program Tracking Database.
[10] Evaluation-Adjusted Delta Watts are applied consistently with ComEd PY3 Residential ENERGY STAR® Lighting Program PY3 Draft Evaluation Report (September 16, 2011). However, for specialty bulbs, Delta Watts are derived from Lights for Learning product information and the Energy Federation, Inc.

Table 3-3. PY3 Lights for Learning Gross Impact Parameters—Hours of Use

Product Type	Ex-Ante Hours/Day	Ex-Post Hours/Day	Days /Year	Data Source
CFLs (standard & specialty)	2.34	2.74	365	Evaluation Estimate for PY3
LED Nightlight	8.00	8.00	365	Energy Federation Inc.
25' LED Holiday Strand	6.04	6.04	45	US DOE Report

Source: Navigant research and analysis

Table 3-4 provides the program-reported and evaluation-adjusted assumptions for installation rate and mean coincident load factor used to calculate energy and peak demand savings for each L4L product. The PY3 evaluation does not address HVAC system interactive effects.

Table 3-4. PY3 Lights for Learning Gross Impact Parameters – Other

Gross Impact Parameter	PY3 Planning Estimate (Ex-Ante)	PY3 Evaluation Recommended (Ex-Post)	Source
Installation Rate (Standard CFL)	0.90	0.71	PY3 ComEd Residential Lighting Report
Installation Rate (Specialty CFL)	0.90	0.78	PY3 ComEd Residential Lighting Report
Installation Rate (LED Nightlight & Holiday Strand)	0.90	0.90	DEER 2008
Mean Load Coincidence Factor (all CFLs)	0.081	0.102	PY3 ComEd Residential Lighting Report
Mean Load Coincidence Factor (LEDs)	0.00	0.00	Evaluation Assumption for PY3
HVAC Energy Interactive Effects	1.00	1.00	Evaluation Assumption for PY3

Source: Navigant research and analysis

Table 3-5 provides impact estimates of per unit annual energy and demand savings, based on the program-reported delta watts values, the installation rates and mean load coincidence factors.

Table 3-5. PY3 Lights for Learning
Annual Measure Energy and Demand Savings

Program Measure	Ex-Ante kWh/unit	Ex-Post kWh/unit	Peak KW/unit	Non-Coincident KW/unit
13W Spiral	36.1	33.4	0.0034	0.0334
13W CFL Desk Lamp	36.1	36.7	0.0037	0.0367
13W Capsule	36.1	33.4	0.0034	0.0334
TCP 14W 2 Pack (Capsule)	35.4	35.9	0.0037	0.0359
14W R30 Reflector	35.4	20.3	0.0021	0.0203
15W Reflector	34.6	35.1	0.0036	0.0351
19W 3 Pack (Spiral)	43.0	39.8	0.0041	0.0398
20W Spiral	42.3	39.1	0.0040	0.0391
23W Spiral	59.2	54.7	0.0056	0.0547
33W 3-Way	89.9	91.3	0.0093	0.0913
23W Reflector (Par 38)	59.2	40.6	0.0041	0.0406
Sample Kit (13W, 20W, 23W Spiral)	46.1	42.6	0.0044	0.0426
LED Nightlight	8.4	8.4	-	0.0029
Multicolor 25' LED Holiday Strand	21.9	21.7	-	0.0797
White 25' LED Holiday Strand	21.9	21.7	-	0.0797

Source: Navigant analysis of L4L program tracking data.

3.1.3 Program Impact Results

The Navigant evaluation team calculated L4L program savings by summing the savings for each product type sold through the program, based on unit sales and savings per unit for each product type. The

savings for each product was calculated following standard algorithms, using the evaluation-adjusted impact parameters combined with the unit sales figures.

Table 3-6 includes PY3 Lights for Learning program-reported (ex-ante) and evaluation-adjusted (ex-post) gross and net energy savings. Measure-specific reporting is included in the Appendix.

Table 3-6. PY3 Lights for Learning
Summary of Energy Savings

Segment	Ex-Ante Gross kWh	Ex-Post Gross kWh	Realization Rate	NTG Ratio	Ex-Post Net kWh
DCEO – EEPS					
Total CFL	972,480	825,037	85%	0.80	660,029
Total LED	62,107	61,811	100%	0.80	49,449
Sub-total	1,034,587	886,848	86%	0.80	709, 478
DCEO Non- EEPS					
Total CFL	106,814	90,255	84%	0.80	72,204
Total LED	7,171	7,129	99%	0.80	5,704
Sub-total	113,985	97,385	85%	0.80	77,908
Total Program (DCEO EEPS and DCEO Non-EEPS)					
Total	**1,148,572**	**984,233**	**86%**	**0.80**	**787,386**

Source: Navigant analysis of PY3 program annual report data.

Table 3-7 includes PY3 Lights for Learning program-reported (ex-ante) and evaluation-adjusted (ex-post) gross and net demand savings. Measure-specific reporting is included in the Appendix.

Table 3-7. PY3 Lights for Learning
Summary of Coincident Demand Savings

Segment	Ex-Ante Gross kW	Ex-Post Gross kW	Realization Rate	NTG Ratio	Ex-Post Net KW
DCEO - EEPS					
Total CFL	84.4	84.1	100%	0.80	67.3
Total LED	-	-	-	-	-
Sub-total	84.4	84.1	100%	0.80	67.3
DCEO Non- EEPS					
Total CFL	9.3	9.2	99%	0.80	7.7
Total LED	-	-	-	-	-
Sub-total	9.3	9.2	99%	0.80	7.7
Total Program (DCEO EEPS and DCEO Non-EEPS)					
Program Totals	**93.7**	**93.3**	**100%**	**0.80**	**74.7**

Source: Navigant analysis of PY3 program annual report data.

3.2 Process Evaluation Results

3.2.1 Marketing and Outreach Strategy

The PY3 implementation strategy is similar to previous years and has proven effective as a way to increase energy-market awareness through educational presentations, provide schools and organizations with the opportunity to generate revenue through the program's fundraiser, and achieve energy and demand savings through distribution of energy efficient products. The roles, relationships and operating procedures between the stakeholders, MEEA, APT, and EFI remain unchanged and appear to be operating effectively for the program, based on interviews with the various stakeholders and the customer survey. The design and implementation strategy of the Lights for Learning program is effective and allows the program to perform at a high level with high satisfaction among program participants.

Marketing and outreach efforts and tools are working well and continue to increase and become more creative through the use of social media and the Lights for Learning website. The marketing materials that were evaluated in PY3 show the messages to be clear and actionable. Purchasers reflect the marketing materials' central messages in their motivations to purchase, including the financial benefits for schools, the personal financial savings, and the environmental benefits.

Customers continue to report high levels of satisfaction. Fundraiser coordinators gave the program very high marks for its creativity and for program staff interactions. Purchasers are satisfied with the quality and selection of the products. Participants are excited about the fundraiser because of the products' practicality and environmental benefits. While participants are satisfied with the fundraiser, the most common recommendation for improvement was to add additional products to the fundraiser.

3.2.2 PY3 Lights for Learning Program Participation

The PY3 Lights for Learning program continued to be a successful force in educating participants, increasing awareness in the public and raising funds for schools and other organizations. The Lights for Learning program benefits from dedicated program staff and a strong working relationship between program representatives from MEEA, APT and EFI.

The Lights for Learning program reports that it reached out to more than 20,600 attendees through its educational presentations, a four percent (4%) increase over the previous program year. The number of students participating in the fundraiser also increased in PY3 by approximately three percent (3%). However, the total number of fundraisers conducted in PY3 decreased by one percent (-1%) and total proceeds from all fundraisers decreased by eighteen percent (-18%). Proceeds from the PY3 Lights for Learning fundraiser were down from the previous year due to lower costs for some of the program's most popular products, including the 13W CFL (14% decrease), CFL Sample Pack (21% decrease) and Multi-color LED Holiday Lights (25% decrease). The economic downturn may also have adversely impacted the program's fundraising activity.

Despite lower fundraising revenue, the Lights for Learning program continued to reach a broad audience in the PY3 program year, conducting 226 presentations to schools and organizations throughout Illinois. The Lights for Learning program participants conducted 176 fundraisers resulting in $46,800.75 in proceeds to the participating schools and organizations. Table 3-8. PY3 Lights for Learning Participation and Proceeds provides a summary of PY3 Lights for Learning presentations and proceeds.

Table 3-8. PY3 Lights for Learning Participation and Proceeds

Performance Indicator	DCEO EEPS	DCEO Non-EEPS	Total Program
School Presentations	219	7	226
Participating Students	2,528	83	2,611
Participating Schools	158	9	167
Number of Fundraisers	168	8	176
Proceeds	$42,157.05	$4,643.70	$46,800.75

Source: Applied Proactive Technologies, Inc., Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011 .

3.2.3 School Fundraisers—Product Mix

Program participation is based on sales of individual products, as reported in the L4L annual report. Table 3-9 provides the unit sales of each measure offered during PY3 for DCEO-EEPS and Non-EEPS programs. The table below shows the types of products that are offered in the program and the number sold of each. The products representing the largest share of the total 28,880 products sold were 13 Watt CFLs (20.1%), 23 Watt CFLs (13.3%), LED Nightlight (12.6%), 14W 2-Pack (11.1%), CFL Sample Pack (10.7%), and 19W 3-Pack (9.7%).

Table 3-9. PY3 Lights for Learning

Fundraiser Product List and Amounts Sold

Product Type	DCEO EEPS	DCEO Non-EEPS	Total Program	% of Total Amount of Products Sold
13W Spiral	5,215	581	5,796	20.1%
13W CFL Desk Lamp	371	34	405	1.4%
13W Capsule	47	21	68	0.2%
TCP 14W 2 Pack (Capsule)	2,754	440	3,194	11.1%
14W R30 Reflector	1,428	153	1,581	5.5%
15W Reflector	72	-	72	0.2%
19W 3 Pack (Spiral)	2,577	228	2,805	9.7%
20W Spiral	2,281	208	2,489	8.6%
23W Spiral	3,476	366	3,842	13.3%
33W 3-Way	30	14	44	0.2%
23W Reflector (Par 38)	-	20	20	0.1%
Sample Kit (13W, 20W, 23W Spiral)	2,844	252	3,096	10.7%
LED Nightlight	3,337	301	3,638	12.6%
Multicolor 25' LED Holiday Strand	1,170	153	1,323	4.6%
White 25' LED Holiday Strand	386	59	445	1.5%
BITs Power Strips	21,095	2,317	40	0.1%
Kill-A-Watt Monitor	4,893	513	22	0.1%
TOTAL All Units	25,988	2,830	**28,880**	**100%**

Source: *Applied Proactive Technologies, Inc., Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011.*

3.2.4 Lights for Learning Accomplishments: 2008—2011 School Years

Over the last three school years, the Lights for Learning program has reached over 57,000 students through almost 650 staff presentations. Over 7,500 people have participated in Lights for Learning fundraisers raising almost $150,000 for their schools and organizations. The program has sold or distributed over 94,000 energy efficient products over the last three years.

Table 3-10. Lights for Learning Performance Trends (2008-2011 School Years)

Performance Indicator	2008-2009 School Year	2009-2010 School Year	2010-2011 School Year	2008-2011 Totals
Staff Presentations	202	219	226	647
Estimated Attendance at Presentations	16,500	19,815	20,688	57,003
Participating Schools and Organizations	139	165	167	471
Fundraisers	161	178	176	515
Fundraiser Participants	2,394	2,527	2,611	7,532
Products Distributed or Sold	37,018	28,051	29,223	94,292
Fundraiser Proceeds	$43,902.25	$57,574.10	$46,800.75	$148,277.10

Sources: Applied Proactive Technologies, Inc., Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011;
Midwest Energy Efficiency Alliance, ENERGY STAR® Lights for Learning™ Fundraiser: Summary Report, Results, and Lesson Learned, State of Illinois, 2009-2010 School Year, July 12, 2010

Overall, the Lights for Learning program has increased its market presence over the last three years. Fundraiser proceeds were lower during the last school year due to lower costs of some popular products. To counter this trend, the Lights for Learning program is planning to add new product offerings in its fundraiser.

3.3 Cost Effectiveness Review

This section addresses the cost effectiveness of the Lights for Learning Program. Cost effectiveness is assessed through the use of the Illinois Total Resource Cost (TRC) test. The Illinois TRC test is defined in the Illinois Power Agency Act SB1592 as follows:

> *'Total resource cost test' or 'TRC test' means a standard that is met if, for an investment in energy efficiency or demand-response measures, the benefit-cost ratio is greater than one. The benefit-cost ratio is the ratio of the net present value of the total benefits of the program to the net present value of the total costs as calculated over the lifetime of the measures. A total resource cost test compares the sum of avoided electric utility costs, representing the benefits that accrue to the system and the participant in the delivery of those efficiency measures, to the sum of all incremental costs of end-use measures that are implemented due to the program (including both utility and participant contributions), plus costs to administer, deliver, and evaluate each demand-side program, to quantify the net savings obtained by substituting the demand-side program for supply resources. In calculating avoided costs of power and energy that an electric*

utility would otherwise have had to acquire, reasonable estimates shall be included of financial costs likely to be imposed by future regulations and legislation on emissions of greenhouse gases.[11]

Navigant developed an Excel based TRC model that incorporates all relevant program level data including avoided costs, line losses, gross savings, free ridership, program costs and CO_2 reductions. It then calculates a TRC that meets the requirements of the Illinois Power Agency Act SB1592. The two electric distribution companies (EDCs) that pass funds to DCEO's programs, ComEd and Ameren, utilize different avoided costs in calculating the benefits that accrue from energy efficiency programs; therefore Navigant employed each utility's specific avoided costs to their corresponding energy and demand savings from each program.

Results

Table 3-11 summarizes the unique inputs used to calculate the TRC ratio for the Lights for Learning Program in PY3. Most of the unique inputs come directly from the evaluation results presented previously in this report. Measure life estimates were based on similar ComEd programs, third party sources including the California Public Utilities Commission (CPUC) developed Database of Energy Efficiency Resources (DEER) and previous Navigant evaluation experience with similar programs. Program costs data came directly from DCEO. Incremental costs were estimated from program, survey data and similar ComEd programs. Avoided cost data came from both ComEd and Ameren and are the same for all programs.

Table 3-11. Inputs to TRC Model for Lights for Learning Program

Item	Value Used
Participants	23,104
Annual Gross Energy Savings	887 MWh
Gross Coincident Peak Savings	0.08 MW
Net-to-Gross Ratio	80%
DCEO Administration and Implementation Costs	$254,424
DCEO Incentive Costs	$191,610
Net Participant Costs	$41,891

Based on these inputs, the Illinois societal TRC for this program is 1.02 and the program passes the Illinois TRC test.

[11] Illinois Power Agency Act SB1592, pages 7-8.

Section 4. Conclusions and Recommendations

This section includes the evaluation team's conclusions and recommendations from the PY3 Lights for Learning program evaluation.

4.1 Program Impacts

Finding: The program is likely over-estimating its energy savings impacts from CFLs.

Recommendation: Update gross energy savings planning assumptions consistent with the ComEd Residential ENERGY STAR® Lighting Evaluation Report.

Finding: The estimated net-to-gross ratio of 0.80 is not accurately reflecting program free-ridership and program spillover, based on other lighting program evaluations and the product structure of this program. The effort to measure free ridership failed in PY3 because the available sample sizes were too small.

Evaluation Recommendation: Conduct additional evaluation research to ascertain the program's potential free ridership and spillover to more accurately evaluate the program's net savings estimates through additional telephone discussions with fundraiser coordinators and program participants.

4.2 Program Processes

Finding: Customers reported high levels of satisfaction, but recommended including additional products in the fundraiser.

Recommendation: Investigate the feasibility of adding new products to the fundraiser, such as a wider variety of LED lighting products.

Finding: Although the program's outreach and participation numbers were very similar to PY2, proceeds from the PY3 Lights for Learning fundraiser were down 18% from the previous year, due to lower costs for some of the program's most popular products, including the 13W CFL (14% decrease); CFL Sample Pack (21% decrease) and Multi-color LED Holiday Lights (25% decrease).

Recommendation: Seek to increase net product earnings while maintaining pricing competitiveness. Carefully gauge market interest and pricing to determine optimal pricing for products offered through the fundraiser. Most participants report purchasing products to help support the school or organization's fundraiser so the program should consider offering products at a comparable cost to those offered at conventional product outlets, such as big-box retail stores. If EFI can supply the product at a lower cost, then the fundraiser can increase its effectiveness for participating schools and organizations by increasing the amount earned by the organization on these products.

Finding: The Lights for Learning program continued to implement fun and innovative marketing strategies in its educational presentation, fundraiser materials and website. Purchasers indicate that the program's marketing messages have an impact on their motivations to participate in the fundraiser.

Recommendation: Consider engaging fundraiser coordinators in an advisory group to help identify creative ways to reach new audiences and re-engage current and past participants. Continue to use social media and interactive websites to engage participants and the public.

Finding: The evaluation survey polled fewer participants than needed to support the target sample statistical confidence and precision. Although the Lights for Learning program staff and the evaluation team collaborated to identify ways to engage program participants and encourage them to participate in the telephone evaluation survey, the evaluation team was unsuccessful in reaching enough participants to extrapolate the telephone survey results to the entire program.

Recommendation: Consider integrating a brief customer survey as part of the ordering or delivery process, while purchasers are still engaged in the program and more likely to provide feedback. Consider including messages about the customer survey in educational presentations and fundraiser literature. Discuss additional survey delivery options, such as a web-based survey option, with program sponsors and evaluators to determine the effectiveness of such alternative feedback mechanisms.

Finding: The Lights for Learning program benefits from committed staff and relationships between the stakeholders, MEEA, APT, and EFI.

Recommendation: Continue the team approach and ensure continued highly satisfactory service to current customers. As appropriate to local school and community situations, enlist additional stakeholders relevant to expanding the program's reach to new organizations and schools.

Section 5. Appendices

5.1 *Measure Impacts by DCEO EEPs and DCEO Non-EEPS Territory*

Gross energy savings for each product is included in

Table 5-1 below, and gross coincident demand reduction in Table 5-2.

Table 5-1. PY3 Lights for Learning
Energy Savings and Realization Rates

Measure	Ex-Ante Gross kWh	Ex-Post Gross kWh	Realization Rate	Ex-Ante Gross kWh	Ex-Post Gross kWh	Realization Rate
	DCEO - EEPS			DCEO Non- EEPS		
13W Spiral	240,412	174,042	72%	26,784	19,390	72%
13W CFL Desk Lamp	17,103	13,602	80%	1,567	1,247	80%
13W Capsule	2,167	1,569	72%	968	701	72%
TCP 14W 2 Pack (Capsule)	126,959	98,823	78%	20,284	15,789	78%
14W R30 Reflector	65,831	28,963	44%	7,053	3,103	44%
15W Reflector	3,319	2,527	76%	-	-	-
19W 3 Pack (Spiral)	118,800	102,472	86%	10,511	9,066	86%
20W Spiral	105,154	89,082	85%	9,589	8,123	85%
23W Spiral	160,244	190,052	119%	16,873	20,011	119%
33W 3-Way	1,383	2,738	198%	645	1,278	198%
23W Reflector (Par 38)	-	-	-	922	811	88%
Sample Kit (13W, 20W, 23W Spiral)	131,108	121,167	92%	11,617	10,736	92%
LED Nightlight	28,031	28,063	100%	2,528	2,531	100%
Multicolor 25' LED Holiday Strand	25,623	25,376	99%	3,351	3,318	99%
White 25' LED Holiday Strand	8,453	8,372	99%	1,292	1,280	99%
Sub-total CFL	972,480	825,037	85%	106,814	90,255	84%
Sub-total LED	62,107	61,811	100%	7,171	7,129	99%
Program Total	1,034,587	886,848	86%	113,985	97,385	85%

Source: Navigant analysis of PY3 program annual report data.

Table 5-2. PY3 Lights for Learning
Coincident Demand (KW) Savings and Realization Rates

Measure	Ex-Ante Gross kW	Ex-Post Gross kW	Realization Rate	Ex-Ante Gross kW	Ex-Post Gross kW	Realization Rate
	DCEO - EEPS			DCEO Non- EEPS		
13W Spiral	20.86	17.8	85%	2.32	2.0	0.85
13W CFL Desk Lamp	1.48	1.4	93%	0.14	0.1	0.93
13W Capsule	0.19	0.2	85%	0.08	0.1	0.85
TCP 14W 2 Pack (Capsule)	11.02	10.1	91%	1.76	1.6	0.91
14W R30 Reflector	5.71	3.0	52%	0.61	0.3	0.52
15W Reflector	0.29	0.3	90%	-	-	-
19W 3 Pack (Spiral)	10.31	10.5	101%	0.91	0.9	1.01
20W Spiral	9.12	9.1	100%	0.83	0.8	1.00
23W Spiral	13.90	19.4	139%	1.46	2.0	1.39
33W 3-Way	0.12	0.3	233%	0.06	0.1	2.33
23W Reflector (Par 38)	-	-	-	0.08	0.1	1.03
Sample Kit (13W, 20W, 23W Spiral)	11.38	12.4	109%	1.01	1.1	1.09
LED Nightlight	-	-	-	-	-	-
Multicolor 25' LED Holiday Strand	-	-	-	-	-	-
White 25' LED Holiday Strand	-	-	-	-	-	-
Sub-total CFL	84.4	84.1	100%	9.3	9.2	99%
Sub-total LED	-	-	-	-	-	-
Program Total	84.4	84.1	100%	9.3	9.2	99%

Source: Navigant analysis of PY3 program annual report data.

5.2 *Impact Reporting by Utility Sector*

Table 5-3 includes data from ComEd public and private participation and Ameren public and private participation. Together, these totals comprise the DCEO-EEPS totals in the body of the report.

Table 5-3. PY3 Lights for Learning
Total Program Savings Estimates by Utility Sector

Impact	ComEd	Ameren	EEPS Total
Gross kWh (ex ante)	922,150	112,437	1,034,587
Gross kWh (ex post)	791,120	95,727	886,847
kWh Realization Rate	86%	85%	86%
Net-to-Gross Ratio	0.80	0.80	0.80
Net kWh	632,896	76,582	709,478
Gross kW (ex ante)	75.3	9.1	84.4
Gross kW (ex post)	75.2	9.0	84.2
kW Realization Rate	100%	100%	100%
Net-to-Gross Ratio	0.80	0.80	0.80
Net kW	60.1	7.2	67.3

Source: Navigant analysis of PY3 program tracking data.

The table below includes measure specific participation rates in ComEd and Ameren sectors.

Table 5-4. PY3 Lights for Learning
Total Program Participation by Product Type and Utility Sector

Product Type	ComEd	Ameren
13W Spiral	4,444	771
13W CFL Desk Lamp	337	34
13W Capsule	47	-
TCP 14W 2 Pack (Capsule)	2,460	294
14W R30 Reflector	1,335	93
15W Reflector	72	-
19W 3 Pack (Spiral)	2,325	252
20W Spiral	2,031	250
23W Spiral	3,125	351
33W 3-Way	30	-
Sample Kit (13W, 20W, 23W Spiral)	2,619	225
LED Nightlight	2,918	419
Multicolor 25' LED Holiday Strand	1,043	127
White 25' LED Holiday Strand	318	68
Total CFLs	18,825	2,270
Total Nightlights	2,918	419
Total LED Holiday	1,361	195
Subtotal	23,104	2,884

Source: Applied Proactive Technologies, Inc., Lights for Learning™ Year End Report (July 1, 2010 to May 31, 2011), September 16, 2011.

The table below includes measure specific savings estimates for the Commonwealth Edison utility sector.

Table 5-5. PY3 Lights for Learning
ComEd Utility Sector Savings Estimates

Program Measure	Ex-Ante Gross kWh	Ex-Post Gross kWh	Ex-Ante Gross Peak KW	Ex-Post Gross Peak KW	Ex-Post Non-coincident KW
13W Spiral	204,868	148,311	17.78	15	148.3
13W CFL Desk Lamp	15,536	12,356	1.35	1	12.4
13W Capsule	2,167	1,569	0.19	0	1.6
TCP 14W 2 Pack (Capsule)	113,406	88,274	9.84	9	88.3
14W R30 Reflector	61,544	27,077	5.34	3	27.1
15W Reflector	3,319	2,527	0.29	0	2.5
19W 3 Pack (Spiral)	107,183	92,451	9.30	9	92.4
20W Spiral	93,629	79,318	8.12	8	79.3
23W Spiral	144,063	170,861	12.50	17	170.8
33W 3-Way	1,383	2,738	0.12	0	2.7
Sample Kit (13W, 20W, 23W Spiral)	120,736	111,581	10.48	11	111.6
LED Nightlight	24,511	24,539		-	8.4
Multicolor 25' LED Holiday Strand	22,842	22,622		-	83.2
White 25' LED Holiday Strand	6,964	6,897		-	25.4
Total CFL	867,833	737,062	75.3	75.2	737.0
Total LED	54,317	54,058	-	-	116.9
Sub-total	922,150	791,120	75.3	75.2	853.9

Source: Navigant analysis of PY3 program annual report data.

The table below includes measure specific savings estimates for the Ameren Illinois utility sector.

Table 5-6. PY3 Lights for Learning
Ameren Utility Sector Savings Estimates

Program Measure	Ex-Ante Gross kWh	Ex-Post Gross kWh	Ex-Ante Gross Peak KW	Ex-Post Gross Peak KW	Ex-Post Non-coincident KW
13W Spiral	35,543	25,731	3.08	3	25.7
13W CFL Desk Lamp	1,567	1,247	0.14	0	111.1
TCP 14W 2 Pack (Capsule)	13,553	10,550	1.18	1	10.5
14W R30 Reflector	4,287	1,886	0.37	0	1.9
15W Reflector	-	-	-	-	-
19W 3 Pack (Spiral)	11,617	10,021	1.01	1	10.0
20W Spiral	11,525	9,763	1.00	1	9.8
23W Spiral	16,181	19,191	1.40	2	19.2
Sample Kit (13W, 20W, 23W Spiral)	10,373	9,586	0.90	1	9.6
LED Nightlight	3,520	3,524		-	1.2
Multicolor 25' LED Holiday Strand	2,781	2,755		-	10.1
White 25' LED Holiday Strand	1,489	1,475		-	5.4
Total CFL	104,647	87,974	9.1	9.0	197.8
Total LED	7,790	7,753	-	-	16.8
Sub-total	112,437	95,727	9.1	9.0	214.6

Source: Navigant analysis of PY3 program annual report data.

5.3 *Data Collection Instrument*

This section includes the telephone survey used by the call center to contact Lights for Learning program participants in the June and July, 2011. The same instrument was used as an interview guide to contact fundraiser coordinators for brief telephone interviews. Some fundraiser coordinators responded to survey questions via email.

Telephone Survey Instrument and Fundraiser Coordinator Interview Guide

DCEO Lights for Learning Program
Lighting Purchaser Survey
Summer 2011

Hello, my name is _____ from Opinion Dynamics. I'm calling on behalf of the Lights for Learning program to ask you some questions about your purchase of energy-efficient lighting products from the Lights for Learning fundraiser. My questions are for research purposes only. Your opinions are important to improving the program.
[If respondent asks how long, say "Approximately 15 minutes."]
According to our records, someone in your household submitted an order form of energy efficient lighting products from the Lights for Learning fundraiser. Are you that person? (IF NO: Is that person available to speak with us?)

[Sample frame will consist of purchasers of lighting products from the fundraiser in PY3 (July 1, 2010 – May 31, 2011)

Is it ok if I record our conversation today, in order to playback any information I was not able to make note of?

(CONTINUE WITH CORRECT CONTACT)
1. To the best of your knowledge, how many energy efficient lighting products did you purchase through the Lights for Learning program and of what types?

2. What is your relationship with the student/person from whom you purchased the products? What is your relationship with the school?

3. How did you learn about the Lights for Learning fundraiser? [Do not read, probe for each below if necessary...]
    1. (Directly from the student/person selling the bulbs)
    2. (Directly from the school)
    3. (Newspaper)
    4. (Television)
    5. (Lights for Learning website)
    6. (Direct mail/brochure)
    7. (Other, _____)

4. Did you hear about the program through any other ways? Which ways? Did you see any additional marketing for the program and where?

5. Do you know who is sponsoring the Lights for Learning program? What utility? If so, who?

6. What is the MAIN reason you chose to purchase energy efficient lighting products from the Lights for Learning fundraiser?

7. Prior to purchasing energy efficient lighting products from the Lights for Learning fundraiser, how familiar were you about CFLs (Compact Florescent Light bulbs)?

8. Prior to purchasing energy efficient lighting products from the Lights for Learning fundraiser, had you previously purchased energy-efficient lighting products for your home?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

9. Would you have purchased the same energy efficient lighting products without the program? If so, would you have purchased as many without the program?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

10. When you placed your order who filled out the form? The student? Parent? Or did you? How easy was it to fill out the form and participate in the program? Did you have any difficulties with the process? If so, what did you do?

11. About how long did you have to wait to receive the bulbs after your order? Did you find the wait to be long? Did you follow-up with anyone?

12. Did you receive all the bulbs you ordered? Were any broken?

13. How satisfied were you with the selection of lighting products offered through the program and why? Would you like to see other types of lighting products offered through the fundraiser?

14. How satisfied were you with the price of the lighting products offered through the program and why?

15. Prior to purchasing energy efficient lighting products from the Lights for Learning fundraiser, had you previously purchased other products from a school fundraiser?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

[ASK IF Q15=1]

16. Compared to other school fundraisers you have participated in, how does the Lights for Learning fundraiser compare ? Probe for…

a. The clarity of information
b. The ordering process
c. The timing for receiving your order

1. (Lights for Learning is better than other fundraisers)
2. (Lights for Learning is on par with other fundraisers)
3. (Lights for Learning is worst than other fundraisers)

17. How could the Lights for Learning fundraiser be improved?

INSTALLATION

18. How many of the energy efficient lighting products you purchased from the Lights for Learning fundraiser, are **currently installed inside your home**? [ASK THEM TO GIVE THEIR BEST GUESS EVEN IF NUMBER ISN'T PERFECT]

__ Enter #
0 None
98 (Don't know)
99 (Refused)

19. Where have you installed the bulbs in your home?

20. [Ask if they purchased SmartStrip] Are you using the SmartStrip(s) you purchased? Where is it installed? What kinds of appliances and technologies are you plugging into it?

21. How satisfied are you with the quality of the energy efficient lighting products that are installed in your home and why?

[ASK IF Q18# less than # of bulbs]

22. What did you do with the remaining energy efficient lighting products? (DO NOT READ) [ACCEPT UP TO 4 RESPONSES]

1. (In Storage) – FOLLOW UP INTENT TO INSTALL?
2. (Gave Away) – FOLLOW UP WHY?
3. (Lost)
4. (Broken)
5. (Installed in another home)
6. (Installed at work)
7. (Returned to fundraiser) – FOLLOW UP WHY?
8. (Installed but later removed) – FOLLOW UP WHY?

00. (Other_____

BENEFITS

23. What do you see as the main benefits to purchasing energy efficient lighting products from the Lights for Learning fundraiser? [MULTIPLE RESPONSE, UP TO 3]

24. Do you plan to purchase energy efficient lighting products from the Lights for Learning fundraiser again in the future?

1. Yes
2. No
3. Maybe
8. (Don't know)
9. (Refused)

[ASK IF Q24 = 2]

25. Why are you not planning to purchase energy efficient lighting products from the Lights for Learning fundraiser again in the future?

MARKET EFFECTS/SPILLOVER

26. Have you made other energy-efficiency improvements or purchases on your own?

1. (Yes)
2. (No)
98. (Don't know)
99. (Refused)

[ASK IF Q26 =1]

27. What action(s) did you take? Or products have you purchased? [Do not prompt] [ALLOW MULTIPLE RESPONSE]

1. (Installed a high-efficiency dishwasher)
2. (Installed a high-efficiency washer)
3. (Installed a high-efficiency dryer)

4. (Installed a high-efficiency refrigerator)
5. (Installed a high-efficiency water heater)
6. (Installed new windows)
7. (Installed new thermostats)
8. (Installed new furnace)
9. (Added insulation (includes windows, attic and door insulation))
10. (Bought a new stove)
11. (Replaced a TV)
12. (New Central HVAC system)
13. (Installed new doors)
97. (Other, _____)
98. (Don't know)
99. (Refused)

28. How influential was your participation in the Lights for Learning fundraiser in your decision to take additional energy-efficiency action on your own?

DEMOGRAPHICS

Who is your electrical service provider?

1 ComEd
2 Ameren

END. Those are all of the questions I have for you; if I have a quick follow-up question at a later date would it be alright if I was to call back at that time?

1 Yes
2 No

Thank you again for your time.