

Commonwealth Edison Company's
Energy Efficiency / Demand Response Plan
Annual Report
Plan Year 5

June 1, 2012 – May 31, 2013



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ES. Executive Summary

This report provides a comprehensive update on the fifth year¹ performance under ComEd's 2011 – 2013 Energy Efficiency and Demand Response Plan ("2011 – 2013 Plan"). It is intended to provide an outline of the successes and challenges encountered during Plan Year 5 ("PY5").² A brief summary of PY5 Department of Commerce and Economic Opportunity ("DCEO")-sponsored program results in ComEd's service territory is also provided in Section VI.

During PY5, ComEd's 2011 – 2013 Plan proposed a portfolio of initiatives that targeted both residential and business customers. Collectively, these initiatives ensured that program opportunities were available to all of ComEd's customers. Joint residential programs between ComEd, Nicor Gas, North Shore Gas, and Peoples Gas companies were implemented during PY5. Program Year 5 was also the first year of Third Party program implementation where outside companies proposed and implemented new energy efficiency programs. This promoted innovative thinking on approaches and

ComEd Residential Initiatives:

- Residential ENERGY STAR® Lighting
- Fridge & Freezer Recycling Rewards
- Multi-Family Home Energy Savings
- Single Family Home Energy Savings
- Elementary Energy Education
- Complete System Replacement
- Home Energy Reports
- Clothes Washer Rebates
- Residential New Construction

ComEd Business Initiatives:

- Prescriptive Incentives
- Custom Incentives
- Retro-Commissioning
- Commercial & Industrial New Construction
- Business Instant Lighting Discounts (BILD)
- Industrial Systems/Compressed Air
- Data Centers
- Small Business Energy Savings

niche markets. The ComEd portfolio included several other activities considered as development and educational initiatives. The resultant portfolio of initiatives was collectively packaged under the *Smart Ideas* banner.

¹ The fifth plan year runs from June 1st, 2012 through May 31st, 2013.

² Evaluation reports for Plan Year 5 programs are filed in ICC Docket No. 14-0075.

ComEd's 2011 – 2013 Plan was designed to address several key objectives –

- Create value for customers through a range of customer energy efficiency initiatives
- Meet energy goals approved by the Illinois Commerce Commission (“ICC” or “Commission”) while adhering to the spending screens
- Lay a solid foundation for energy efficiency programs going forward by investing in the program infrastructure needed to support comprehensive and integrated approaches to energy efficiency
- Develop a diverse portfolio of programs that minimizes portfolio risk while offering numerous energy efficiency opportunities across all customer groups
- Lay the groundwork for demand-side innovation in technology, practice and the integration of energy efficiency and demand response
- Create easy ways for ComEd's customers to participate in the programs

In accordance with the provisions of Section 8-103 of the Public Utilities Act (“Act”), 220 ILCS 5/8-103, that took effect August 28, 2007, ComEd's PY5 annual energy efficiency target was 920,987 megawatt-hours (“MWh”) with an overall budget of \$162.1M (\$121.6M was ComEd's allocation). The statutory goal was later modified to 827,575 MWh with an overall budget of \$159.0M (\$119.3M was ComEd's allocation). ComEd's *ex post* verified savings were 949,392 MWh, exceeding the approved goal by 15%.

Performance data related to these areas are included in Section VII of this report.

Plan Year 5 Results

ComEd launched its Plan Year 5 *Smart Ideas* portfolio of energy efficiency incentives on June 1, 2012, which ended May 31, 2013. Verified results show that ComEd had exceeded its statutory targets for energy efficiency and demand response. Table ES-1 presents energy efficiency savings achieved for PY5. This table indicates the *ex ante* savings estimates by ComEd and the verified *ex post* savings determined by the independent evaluator. In addition to program activity in PY5, there is recognition of savings from the deferred installation of compact fluorescent light bulbs (“CFLs”) (“CFL Carryover”) purchased during PY3 and PY4 from Residential ENERGY STAR Lighting and purchased during PY4 from Business Instant Lighting Discounts (BILD). This data is sourced from the independent evaluator’s (Navigant) final PY5 reports for ENERGY STAR lighting and BILD.

Table ES-2 shows the verified demand reductions by program. ComEd’s approved plan did not include a separate demand response program to meet its statutory goal of 10.7 MW, since the impacts of the other programs easily exceeds that 10.7 MW goal.

Table ES-1

Energy Efficiency Initiative	ComEd Ex Ante Estimated Net Savings (MWH)	Verified Net Savings Achieved (MWH)
Residential ENERGY STAR Lighting	305,449	287,135
Fridge & Freezer Recycling Rewards	31,869	30,531
Multi-Family Home Energy Savings	15,131	11,285
Single Family Home Energy Savings	934	973
Elementary Energy Education	1,760	2,236
Complete System Replacement	1,546	3,077
Home Energy Reports	92,687	97,442
Clothes Washer Rebates	770	1,203
Residential New Construction	30	201
C&I Prescriptive/Standard Incentives	174,671	186,433
C&I Custom Incentives	30,650	22,594
C&I Retro-Commissioning	18,190	17,599
C&I New Construction	20,433	22,190
Business Instant Lighting Discounts	62,883	91,829
Industrial Systems / Compressed Air	8,778	7,757
Data Centers	7,976	6,006
Small Business Energy Savings	25,206	33,573
Third Party Programs	7,639	2,914
CFL Carryover	128,077	124,414
Total Net MWh Saved	944,528	949,392
Statutory Goal	827,575	827,575
MWhs over Goal	116,953	121,817
MWhs (% of Goal)	114%	115%

Table ES-2 below shows the program level verified gross and net MW reductions determined by the independent evaluator.

Table ES-2

Energy Efficiency Initiative	Verified Gross Demand Reduction (MW)	Verified Net Demand Reduction (MW)
Residential ENERGY STAR Lighting	41.80	30.40
Fridge & Freezer Recycling Rewards	6.15	4.18
Multi-Family Home Energy Savings	.15	.12
Single Family Home Energy Savings	0	0
Elementary Energy Education	.19	.15
Complete System Replacement	2.29	2.27
Home Energy Reports	0	0
Clothes Washer Rebates	.23	.16
Residential New Construction	.07	.05
C&I Prescriptive/Standard Incentives	42.10	30.40
C&I Custom Incentives	5.03	2.31
C&I Retro-Commissioning	1.80	1.28
C&I New Construction	7.30	4.80
Business Instant Lighting Discounts	27.50	20.30
Industrial Systems / Compressed Air	1.31	.94
Data Centers	1.03	.47
Small Business Energy Savings	6.33	5.71
Third Party Programs	0	0
CFL Carryover	23.20	14.40
Total Net MW Saved	166.48	117.94

Banking

The ICC Order that approved ComEd's first Plan – the 2008 – 2010 Energy Efficiency and Demand Response Plan – allowed excess energy savings to be “banked” for future use, limiting ComEd to 10% of the energy savings above the statutory goal for the PY1 – PY3 Plan.

The ICC Order approving the present 2011 – 2013 Plan also permits banking as described in the Stipulation entered into by ComEd and various stakeholders and approved by the Commission. Specifically, the Commission approved the following banking provisions:

- ComEd's request to accumulate and apply “banked” kilowatt-hour (“kWh”) savings across years – specifically from PY1 through PY4 for application in PY5 – is approved.
- Consistent with the above, applying any banked savings or CFL carryover from PY1 through PY5 to PY6 is also approved.
- The above banking provisions are subject to the following restrictions:
 - In any given Plan year, no more than 15% of that year's compliance obligation should be met with banked savings from previous Plan years.
 - Except that, in any Plan year for which the statutory target has been adjusted downward to accommodate the rate impact screen, if the availability of banked savings, including banked savings in excess of 15% of the current year's target, plus planned program savings, would allow ComEd to come closer to reaching the statutory target, the target shall be readjusted upward accordingly.

ICC Docket No. 10-0570 (Order, Dec. 21, 2010) at 53. Consistent with this Order and the Commission's Order in ICC Docket No. 11-0593, ComEd's expected banking for PY5 is based on the overall adjusted statutory goal for ComEd and DCEO of 936,773 MWh. Although DCEO reported results that were under their goal, ComEd achieved energy savings that made up for DCEO's shortfall and exceeded the overall goal. As a result, ComEd is claiming all excess savings above 936,773

MWh. Because total savings for ComEd and DCEO are 1,047,764 MWh, ComEd’s expected savings for banking in PY5 is 110,991 MWh.

In total, ComEd’s allowable banking for the PY1 – PY5 period is 539,383 MWh, which also includes the Commission-approved banked savings from PY2 – PY4. If all excess savings above ComEd’s portion of annual goals could be banked, ComEd would have a cumulative bank of 797,619 MWh at the end of PY5, *i.e.*, ComEd exceeded its portion of statutory goals for PY1 – PY5 by nearly 34%, while exceeding each annual goal during that period. Table ES-3 summarizes ComEd’s expected banking through PY5.

Table ES - 3
ComEd Portfolio Banking (Net MWh)

Plan Year	ComEd Net Results	DCEO Net Results	Statutory Goal	Actual Banking	Cumulative Banked
PY1	163,717	17,377	188,739	0	0
PY2	472,132	34,076	393,691	39,369	39,369
PY3	626,715	54,130	584,077	58,408	97,777
PY4	944,142	106,475	720,002	330,615	428,392
PY5	949,392	98,372	942,209	105,555	533,947
Total	3,156,098	310,430	2,828,718	533,947	533,947

Selected Highlights of ComEd’s PY5 Smart Ideas Portfolio:

- ComEd’s PY5 portfolio was cost-effective. Based on the Illinois’ version of the Total Resource Cost (“TRC”) test, ComEd’s PY5 portfolio TRC was 2.83 versus the requirement of 1.0 for the electric measures only.
- Growth in the energy efficiency portfolio brought an additional **18 direct jobs to the ComEd service territory** on top of the 178 direct jobs through PY4 and helped to lay a foundation for

a robust energy efficiency implementation industry in Northern Illinois. The total estimate of 196 jobs does not include the indirect jobs (e.g., installation labor) required for many of the energy efficiency measures.

- **More than 12 million energy efficient bulbs were discounted** through **20** participating retail chains with **1050** individual store locations and 84 electrical distributors with 166 unique locations.
- **Over 48,000 inefficient appliances (i.e., refrigerators, freezers, room air conditioners) were removed from the ComEd system** and recycled in an environmentally friendly manner.
- **Over 40,000 homes** received low-cost energy efficiency product upgrades as part of the Multi-Family and Single Family Home Energy Savings initiatives and Joint Programs with the Gas Companies.
- **There were 492 residential new construction projects** completed in PY5. This is a new program to the portfolio that works with eligible builders to construct single family homes that are more energy efficient than code.
- **There were 350 trade allies enrolled** in *Smart Ideas'* Commercial and Industrial ("C&I") Prescriptive and Custom Incentives initiative.
- More than **\$37 million was paid in incentives** for **5,751 business projects**, resulting in \$170 million invested in energy efficiency upgrades in the business sector.
- **Small business completed 1,881 retrofits**, up from 690 in PY4. This program provides the assistance that small businesses need to overcome barriers to greater energy efficiency.
- **C&I New Construction completed 109 projects**, up from 50 projects in PY4. The program is focusing on the longer-term comprehensive projects.

Key Challenges in Plan Year 5

Although ComEd's residential programs exceeded expectations during PY5, ComEd believes that its overall success requires growth of its business programs. In PY5, there was an increase in savings from 370,637 net MWh to 396,024 net MWh. Although net savings increased, the number of projects slightly decreased. Continued growth in the portfolio will require greater customer participation and new offerings.

During PY5, ComEd continued participating in joint programs with gas utilities within its service territory (*i.e.*, Nicor Gas, Peoples Gas, and North Shore Gas). While this was an opportunity to grow programs and more easily reach customers, it requires considerable effort for both electric and gas utility personnel and implementation contractors. Coordination even affects electric and gas evaluation teams, even though Navigant was the lead independent evaluator for each utility.

Working with evaluation teams to understand program specific needs in approaching customer surveys and determination of NTG parameters, (*i.e.*, free ridership and spillover), is a continuing challenge. A specific example was based on initial survey results, the evaluator determined a realization rate of 93% for appliance recycling pickups. This was essentially the result of customer confusion during the survey and not remembering ComEd's role in the removal process. Follow-up surveys were conducted with more probing questions, and almost always customers did verify that they had recycled their appliance through the program.

An area of current high collaboration is looking at a new process for NTG determination for the C&I New Construction program. The prolonged time for design and construction activities often made it difficult to interview the primary actors in decision making if waiting until after project completions.

A new approach to conduct interviews early in the process and after completions has begun. This new process should provide fresher and more complete information for the evaluation.

Continuing to examine the evaluation process remains a challenge each year as programs evolve in the way they interface with customers.

TRC Results

Following the evaluation of programs, TRC calculations were made for each program and the portfolio as a whole. The evaluation of cost effectiveness is a legislative requirement, and measures performance at the portfolio level to ensure a TRC of 1.0. For PY5, ComEd's portfolio TRC, based on its electric savings and allowable non-energy benefits, was 2.83. Programs with energy savings from screw-in bulbs impacted by EISA required multiple TRC calculations, used assumptions from the PY5 TRM, which included: reduced expected useful life, avoided future replacement costs, and modeled future savings reductions as EISA impacts the availability of baseline replacement bulbs. For Residential Lighting, the variations in assumptions increased the number of required DSMore runs from 4 in PY4 to 20 in PY5.

ComEd's portfolio easily passed its cost-effectiveness test. For individual programs, one program (HES) has a calculated electric TRC below 1.0. In general, ComEd evaluates whether this is a single year or longer term issue, and if changes can be made to programs to improve their cost effectiveness. This is a joint program, run by a gas company, based largely on savings (benefits) coming from gas measures. The TRC as a joint program was not yet known at the time of this report, but ComEd would likely continue this program as long as gas companies are participating as the major contributor.

Individual program TRC values are provided in each program's description section. The TRCs calculated are based only on ComEd's program costs, electric kWh savings (gas savings for clothes washers – it was not a joint program) and non-energy benefits (e.g. water savings for clothes washers). Impacts from joint program implementation with gas utilities are not reflected and could raise some overall TRCs.

Change in Evaluation Retrospective Approach

There has been an on-going progression to base verified savings on deemed evaluation parameters. The Illinois TRM, version 1.0 was in effect for electric savings in PY5, and was used when applicable. In addition, the Stakeholder Advisory Group (SAG) provided recommendations for deemed NTG values for many program and program elements. Those areas not specifically identified in either the TRM or the SAG consensus process were evaluated retrospectively by the evaluation team(s).

I. Smart Ideas for Your Home®

Smart Ideas for Your Home® is comprised of a diverse set of residential programs, each targeting either a specific energy end-use such as lighting or adopting multiple measures within a home. Actual PY5 residential savings were 550,454 net MWh (including carryover), slightly below PY4 results, but nearly 30% increase over the planned target of 425,000 net MWh.

An important part of the sustained savings was the continued implementation of joint programs with the local gas utilities (*i.e.*, Nicor Gas, Peoples Gas and North Shore Gas). Through cost sharing, ComEd was able to continue participation in Single Family and Multi-family direct install programs. The preponderance of home heating within ComEd’s service territory is with natural gas, and likewise almost as many residences have gas hot water heaters. These direct install programs have shifted to become primarily gas programs, but ComEd has continued to participate and has often been able to provide program management experience. Three other programs were also offered jointly with one or more gas companies: Joint Elementary Energy Education, Residential New Construction, and Complete System Replacement, which offers gas and electric rebates when a customer installs a high efficiency furnace and a high SEER AC unit at the same time. None of these programs were implemented as a ComEd-only program.

The following sections discuss each of the program’s initiatives in greater detail.

Residential ENERGY STAR® Lighting

Program Description

ComEd’s Residential ENERGY STAR Lighting initiative (*originally known as Residential Lighting*) offered residential

Participating Retailers

Type of Store	No. of Stores	No. of Bulbs Sold
Big Box	99	1,401,194
DIY	124	5,544,589
Warehouse	38	3,016,440
Small Hardware	171	349,996
Grocery/Drug	188	177,520
Dollar Store	396	403,108
Specialty	34	5,047
Total	1050	10,897,894

customers instant discounts on select ENERGY STAR CFLs, LEDs, and fixtures purchased at participating retailers.

The initiative offered discounts on both traditional spiral CFLs; specialty CFLs, such as bathroom globes, reflectors and dimmable lamps; and LED bulbs and fixtures. Discounted fixtures included desk lamps, ceiling flush mounts and outdoor lamps. In PY5, over 50,000 LED bulbs and fixtures were incented in this program.

Discounts were designed to partially offset the higher cost of ENERGY STAR lighting products relative to comparable incandescent and halogen products and were administered primarily through a markdown on the price manufacturers charge to retailers. Point-of-sale coupons were used in the case of some small retailers.

To complement product availability, the program included an education element through the implementation of in-store point-of-sale material and product demonstrations conducted by *Smart Ideas* field representatives. This effort enabled consumers to directly discuss energy-efficient technologies with *Smart Ideas* representatives and receive information specific to their needs or concerns.

CFL Recycling

ComEd has always promoted recycling of used CFL bulbs through retail partnerships. Over time retailers have increased their own recycling efforts. As a result, ComEd's involvement in retail recycling is being phased out. ComEd has partnered with retailers to recycle over 360,000 CFL bulbs.

Plan Year 5 Activity

In PY5, except for standard bulbs, the ENERGY STAR lighting program continued to grow in participating retailers and total bulbs sold. Table I-1 presents the non-energy savings metrics.

**Table I-1
Program Metrics**

Program Statistics	Quantity
Standard CFLs sold	9,638,733
Specialty CFLs sold	1,197,896
CFL Fixtures sold	8,767
LED bulbs/fixtures sold	52,498
Total bulbs sold	10,897,894
Participating storefronts	1050
Field reps	14
Field rep demonstrations	342
Retail stores offering free recycling (possible through ComEd and Retailer subsidies)	221

Table I-2 compares Navigant’s *ex post* estimates of savings with ComEd’s initial goal and its *ex ante* estimate of MWh saved, and also presents the program’s electric TRC.

Table I-2

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Residential ENERGY STAR Lighting	220,000	305,449	287,135	131%	4.81

Fridge & Freezer Recycling Rewards

Program Description

The Fridge & Freezer Recycling Rewards (FFRR) is an appliance recycling program which promotes the retirement of inefficient second refrigerators and freezers, as well as room air conditioners, by offering ComEd residential customers a direct incentive and free pickup. JACO Environmental recycles the units in their Illinois-based facility to ensure that CFCs, foam insulation, and other materials in the old appliances are handled in accordance with the Environmental Protection Agency's *Responsible Appliance Disposal ("RAD") Program*.

Customers can receive \$35 payments for qualifying refrigerator and/or freezer units. The units must be between 10 and 30 cubic feet in size, empty and operational at the time of pickup. The unit must also be accessible with a clear path for removal. When recycling a refrigerator or freezer, customers can also recycle working room air conditioners for an additional \$10 incentive. During a few promotional periods, incentives were raised from \$35 to \$50, which resulted in increased program enrollments.

Plan Year 5 Activity

The FFRR program achieved 145% of its PY5 goal of 21,000 net MWh, while remaining within its planned budget. Additional marketing efforts were made to maintain participation during the typically slow winter period. The retail segment of the program, where customers buying new refrigerators or freezers can have their old, working appliance recycled at the time of delivery, included a total of three major retailers. Table I-3 details key measures of program performance.

**Table I-3
Program Metrics**

Program Statistics	Quantity
Refrigerators recycled	41,209
Freezers recycled	6,816
Room air conditioners recycled	634
Total appliances recycled	48,659
Appliances recycled via Retail	10,679
Number of Enrollments	57,013
Participants	43,198
Number of JACO employees	20
Number of JACO trucks	7

The program reported 48,805 units picked up for recycling, but evaluation determined from surveys a verification rate of 99.7%. The evaluation attributed 48,659 units for program results.

Table I-4 compares Navigant's *ex post* estimates of savings with ComEd's initial goal and its *ex ante* estimate of MWh saved and also presents the program's electric TRC.

Table I-4

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Fridge & Freezer Recycling Rewards	21,000	31,869	30,531	145%	2.19

Similar to PY4, in order to achieve the participation goal, a multi-channel marketing strategy was deployed emphasizing the promotional \$50 incentive level. This strategy was proven effective in increasing participation levels. The harvest rate for participants remained consistently above 80 percent.

Multi-Family Home Energy Savings

Program Description

Multi-family Home Energy Savings (MFHES) is a direct install program focusing on lighting and water measure savings. In PY5, this program was implemented jointly with the gas companies in the ComEd service territory, since the majority of tenant residences have gas water heaters. Lighting savings were achieved through replacement of inefficient screw-in bulbs with CFLs, and benefited from an expansion of available bulbs to include globes, commonly found above bathroom vanities.

During PY5, the MFHES program expanded its scope to offer direct installation measures in common areas of eligible multi-family properties. A secondary objective was to identify energy savings opportunities in the common areas and to channel customers to other programs offered by the utilities which would meet their needs.

Although hard to forecast, a number of buildings were “found” that used electric water heaters in tenant spaces, and therefore could provide kWh savings for installed EE water measures. ComEd paid 100% of the implementation costs for these “all-electric” buildings as no therm savings were available. Overall, implementing this program jointly with gas companies has enabled ComEd to reach a much larger population of its customers. However, ComEd is also now more dependent on gas companies meeting participation targets. ComEd missed its planning goal when gas companies reduced their program budgets and goals.

Plan Year 5 Activity

Table I-5 summarizes the initiative’s activities and savings breakdown:

**Table I-5
Program Metrics**

Program Metrics	
CFLs Installed	265,174
Water Efficiency Measures*	7,121
Vending Misers	9
Customers Touched	39,429
Tenant CFLs	261,030
Tenant water Measures	7,114
Common Area CFLs	4,144
Common Area Water Measures	7
Tenant CFL (MWh)	8,955
Tenant water Measures (MWh)	1,407
Common Area (MWh)	923

*Total is the sum of North Shore, People’s Gas, and Nicor program quantities

Table I-6 compares Navigant’s *ex post* estimates of savings with ComEd’s initial goal and its *ex ante* estimate of MWh saved and also presents the program’s electric TRC of 3.59.

Table I-6

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Multi-Family HES Total	12,000	15,131	11,285	94%	3.59

Single Family Home Energy Savings

Program Description

Smart Ideas' Home Energy Savings is a joint program with Nicor Gas that offers single family homeowners direct installation of low-cost, energy-efficient products with an energy assessment for a small customer co-payment. The standard co-payment was \$99, but \$49 promotions were offered at times. As a joint program, it has expanded to offer customers rebates on recommended weatherization upgrades and programmable thermostats. The incentives for weatherization are instant rebates of 70% of retrofit costs up to a maximum of \$1,750 per home.

Low-cost, energy efficient products installed as part of the Single Family Home Performance:

- CFLs
- Low-flow faucet aerators
- Low-flow showerheads
- Hot Water pipe insulation
- Programmable thermostats

The program's implementer, Conservation Services Group ("CSG"), conducted the energy assessments, developed retrofit recommendations, coordinated accepted projects with participating program contractors, and approved the instant rebates. The participating program contractors offered agreed upon fixed pricing for the weatherization projects. Although most of the weatherization measure savings resulted in therm savings, there were also verified savings of 230 MWh, which was 24% of total program electric savings. This program did not target electrically heated homes. As ComEd expected, the majority of electric savings came from direct installation of CFL bulbs (74%).

Plan Year 5 Activity

Table I-7 summarizes the initiative’s activities in terms of surveys and direct installs:

**Table I-7
HES Program Metrics**

Program Statistics	Electric Program Quantities	Net MWh Savings
Number of participating homes	2,760	NA
Direct Install Measures	19,072	742
CFL Installations	18,910	717
Low-Flow Showerheads	41	18
Kitchen and Bathroom Faucet Aerators	55	2.7
Hot Water Temperature Setback	402	0.1
Pipe Insulation (Linear Feet)	2,433	4.4
Weatherization Participants	825	230

Table I-8 compares Navigant’s *ex post* estimates of savings with ComEd’s initial goal and its *ex ante* estimate of MWh saved, and also presents the program’s electric TRC.

Table I-8

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Single Family HES Total	700	934	973	139%	0.66

Elementary Energy Education

Program Description

The PY5 Elementary Energy Education (“EEE”) program was joint with Nicor and focused on a broad learning experience. As an EE program, its primary intent is to reduce energy consumption from water heating and lighting by presenting a school study element on energy efficiency with 5th grade students and putting into practice energy efficiency tips and measures. This program was implemented by the National Energy Foundation (“NEF”).

The EEE program distributed kits with 3 CFL bulbs, an energy-efficient showerhead, energy-efficient kitchen and bath aerators, a shower timer, flow rate test bag, digital water and ambient temperature thermometer, and other fun and educational inserts.

Plan Year 5 Activity

Table I-9 summarizes the initiative’s activities under the joint program with Nicor Gas:

**Table I-9
EEE Program Metrics**

Joint Program Metrics	
Kits distributed	13,997
CFLs installed	41,991

Table I-10 compares Navigant’s *ex post* estimates of savings with ComEd’s initial goal and its *ex ante* estimate of MWh saved, and also presents the program’s electric TRC.

**Table I-10
Elementary Energy Education Electric savings**

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
CFL savings	N/A	N/A	1,199	N/A	
Water measure savings	N/A	N/A	1,037	N/A	
Total program savings	N/A	1,760	2,236	N/A	2.45

Complete System Replacement

Program Description

Complete System Replacement (“CSR”) is a joint gas/electric measure that was an off-shoot of energy-efficient gas furnace installations. If a customer replaces both a furnace with a high efficiency furnace and an air conditioning unit with a SEER 14.5 or higher, an additional rebate is available for the high efficiency AC unit from ComEd. ComEd does not have high SEER rebates as a standalone measure, but is offering a rebate for the complete system replacement. This program was an adjunct to the gas company’s residential furnace offerings. AC rebates ranged from \$600 to \$1,000 depending on gas utility and efficiency ratings.

This program has two methods of calculating savings – early replacement (“ER”) or replace on burnout (“ROB”). The customer received the same incentive, but the attributed savings either use the existing equipment SEER as baseline for ER, or minimum code requirement SEER (13 SEER) as baseline for ROB. In PY5, the evaluator interviewed participants and determined whether units would be classified as ER or ROB based on operability, condition of unit and cost to repair. In the longer term, the TRM should provide guidance to determine if replacements are ER or ROB during the application process.

Plan Year 5 Activity

Table I-11 summarizes the initiative’s activities:

**Table I-11
Program Metrics**

Program Metrics	Units
Participants	4521
Installed Projects	4,675

Installed projects had a 128% increase over PY4 projects.

Table I-12 compares Navigant's *ex post* estimates of savings with ComEd's initial goal and its *ex ante* estimate of MWh saved, and also presents the program's electric TRC.

Table I-12

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Complete System Replacement	2,200	1,546	3,077	140%	3.04

Home Energy Reports

ComEd continued its PY4 behavioral-based program with OPOWER with over 284,000 customers participating. During PY5, there were two modifications to the enrollment configuration. The first is that approximately 10,000 customers were targeted for termination of reports in autumn 2012 as part of a persistence study, with the termination lasting throughout PY5. The second is that, to compensate for the potential reduced savings due to this termination, a “fill-in” wave targeting 20,000 new customers was added in July 2012. Unintentionally, the 10,000 customers whose reports were terminated were re-instituted a few months later, preventing the initial analysis of persistence.

The purpose of this program is to target a segment of residential users and provide a comparison of their energy usage and the usage of similar customers. Targeted customers receive mailings with statistics on their usage, the comparison with similar “neighbors”, and useful hints regarding energy efficiency. Participants in this program are selected randomly from a larger group of customers who are high electric energy users. Given the general demographics of the target group, a similar control group must be chosen for comparison purposes. This control group receives no additional energy efficiency information and the savings associated with the target group is determined with a billing analysis comparison between this year and last year (or comparable usage periods) and the changes in the control group to address temporal effects such as weather and the economy.

Plan Year 5 Activity

As stated, the Home Energy Report expanded in PY5 to 284,000 participants. The verified results in PY5 were 97,442 MWh. Table I-15 shows the actual PY5 MWh saved compared to the program’s plan and ComEd’s *ex ante* estimates, and also presents the program’s electric TRC.

Table I-15

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Home Energy Report	68,500	92,687	97,442	142%	1.16

Clothes Washer Rebates

Program Description

The Clothes Washer Rebates program provided a \$75 instant rebate incentive to customers for the purchase of Energy Star-certified washing machines with a modified energy factor (“MEF”) of 2.0 or greater. Primarily, the program targeted top loading washers, but included some front load washers. This program was only available to ComEd customers and account verification was required.

This program was only planned to run during PY4 and PY5, so this is the final year of its run. There are consumer savings associated with water usage and water heating, but ComEd can only claim kWh savings toward its goals and the gas companies have chosen not to develop a joint program. As a result, this program has one of the highest first year cost/kWh in the residential portfolio (\$2.20/kWh).

Plan Year 5 Activity

In its second year, the program continued to grow through additional retailers and eligible machines. The PY5 target of 25,000 rebates was exceeded with a total of 29,961, nearly 20% over. Table I-16 summarizes the program’s key activities:

**Table I-16
Program Metrics**

Program Metrics	
CEE Tier 1 machines sold	8,180
CEE Tier 2 machines sold	364
CEE Tier 3 machines sold	21,417

Table I-17 shows the actual PY5 MWh saved compared to the program’s plan and ComEd’s *ex ante* estimates, and also presents the program’s TRC, which includes water and gas savings.

Table I-17

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Clothes Washer Rebates	500	770	1,203	156%	1.28

Residential New Construction

Program Description

The Residential New Construction (“RNC”) program was added to the portfolio in PY4, and PY5 saw limited savings. The program provides incentives to eligible builders to construct single family homes that are at least 10% more energy efficient than current code and install qualifying energy efficiency equipment. The RNC program is jointly offered by Nicor Gas and ComEd. The program implementer is Residential Science Resources.

The program structure relies heavily on raters to recruit builders to the program. The program pays incentives of \$500 per home to raters and \$300 per home to builders, and builders receive an additional incentive from ComEd for installing qualified ENERGY STAR electric appliances. Overall, a total of 688 new homes were constructed: 492 Joint Homes and 196 Nicor only territory Homes.

Plan Year 5 Activity

Table I-18 shows the program results, and the electric only TRC.

Table I-18

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Residential New Construction	100	30	201	201%	1.28

II. Smart Ideas for Your Business[®]

Smart Ideas for Your Business[®] (SIFYB) is comprised of a diverse number of incentives and delivery channels to ensure relevance and reach among ComEd's different business customer segments. The business portfolio achieved 396,024 MWh (including business CFL carryover) of net energy savings in PY5, corresponding to 99% of its goal.

Some highlights for PY5: the Commercial & Industrial ("C&I") Prescriptive and C&I Custom initiatives were tracked as individual offerings in order to differentiate between common energy efficiency improvement projects and more complex projects, and due to separate administration of programs, although they maintained common aspects. Compressed Air became the major component of the Industrial Systems program, which added target channels for refrigeration and process cooling measures. The Retro-Commissioning Program continued its emphasis on commercial measures after separating from the largely industrial, compressed air systems. Data Centers is a program addressing a specialized grouping of Prescriptive and Custom measures for new and retrofit data center applications. Small Business Energy Savings continued to target businesses under 100 kW in demand, but tried new geographical based marketing, aka as geo-targeted, to increase participation rates. C&I New Construction continued to grow in PY5 by adding longer term, comprehensive projects to its pipeline.

One discernable change for the SIFYB portfolio in PY5 was a concerted effort to create more referrals of projects across programs. This effort largely involved educating trade allies about other SIFYB offerings. ComEd also had Navigant examine the cross-cutting nature of this approach and provide recommendations to improve effectiveness. As an important enabler, ComEd undertook the development of a marketing database to record leads from multiple sources.

C&I Prescriptive/Standard Incentives

Program Description

Prescriptive/Standard incentives provided the customer with a menu of energy efficient measures that have been given pre-calculated incentive rebates based on their known energy efficiency performance. These incentives were available for common replacement or retrofit projects such as lighting; heating, ventilation and air conditioning (“HVAC”); motors; and commercial refrigeration technologies. This program was originally submitted as “Prescriptive”, but was later changed to “Standard” to be less confusing in the market. Standard is a more commonly used term.

In the PY4-PY6 Plan, Commercial Real Estate was envisioned as a separate program, but the measures were mostly from the Prescriptive/Standard Program. As a result, the Commercial Real Estate functioned almost entirely within the Prescriptive/Standard Program. Prescriptive/Standard Program goals and results reflect this combination. ComEd contracted with KEMA as the implementation contractor for the Prescriptive/ Standard incentive offerings. More recently, KEMA was purchased by DNV GL, but was operating as KEMA during PY5.

Plan Year 5 Activity

Incentives are subject to project caps of 50% of project costs, but annual premise level caps were eliminated. ComEd utilized technical service offerings called Smart Ideas Opportunity Assessments (“SIOA”). SIOAs are a means for helping customers identify economically feasible projects. The SIOAs were a 2 hour site assessment by a ComEd engineer offered to smaller businesses. Although the initial focus for SIOAs

***Program Satisfaction Metrics
(Pct. Satisfied)***

- *Overall Customer Satisfaction – 90%*
- *Satisfaction w/Measures Offered - 87%*
- *Satisfaction w/Incentive Amount – 82%*

were to develop Custom projects, a large number of Standard projects were initiated. In PY5, a total of 550 SIOAs were completed.

The Standard program elements continue to be challenged to expand program reach and offerings. Final savings were 28% under goal as some emphasis and measures were shifted to the Business Instant Lighting Discounts program. The Standard program also continued to undertake many initiatives in PY5 to expand the program potential, including:

- Incentive caps at premise level were removed
- Expanding the list of rebated measures
- Adding T12 lighting bonus incentive payments
- Experimenting with trade ally rewards

Table II-1 describes key program metrics during PY5.

**Table II-1
Program Metrics**

Program Statistics	Quantity
Number of applications received	4,059
Number of applications completed	3,260
Amount of Incentives Paid	\$18 M
Total Cost of Projects Supported	\$ 72 M
Participants	3,234
Installed Measures	7,137
Pct. Lighting Projects <i>(by MWh)</i>	75%
Pct. VSD Projects (inc. HVAC) <i>(by MWh)</i>	13%
Pct. Refrigeration Projects <i>(by MWh)</i>	3%
Pct. Other Projects <i>(by MWh)</i>	9%
Total SIOA completed	550

Table II-2 shows the actual PY5 MWh saved compared to the program’s plan and ComEd’s *ex ante* estimates, and also presents the program’s electric TRC.

Table II-2

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Prescriptive / Standard	258,400	174,671	186,433	72%	3.09

C&I Custom Incentives

Program Description

ComEd's Custom Incentives offering targeted commercial and industrial projects that included manufacturing process improvements or complex measures for which deemed savings or standardized savings algorithms are not appropriate (or available). Custom incentive amounts were based on a formal engineering estimate of the energy savings anticipated for specific customer projects, including process improvements or new technologies not covered under the Prescriptive incentive offering. Each custom incentive application and its energy savings estimate were reviewed on a case-by-case basis. The Custom Program paid \$0.07/kWh for energy savings. It also provided an option for early commitment where an incentive of \$0.06/kWh was paid on application approval. This option required a minimum of 500,000 kWh in approved savings.

ComEd contracted with KEMA (DNV GL) to assist in the administration of Custom incentive offerings.

Plan Year 5 Activity

The Custom program incentives are subject to annual limits or caps that are set per facility premise per year.

ComEd utilized the technical service offering, Smart Ideas Opportunity Assessments ("SIOA") as a means for

helping customers identify economically feasible projects. The SIOAs are a 2 hour site assessment by a ComEd engineer offered to smaller businesses.

- Program Satisfaction Metrics
(Pct. Satisfied)**
- Overall Customer Satisfaction – 80%
 - Satisfaction w/Contractor ability - 86%
 - Satisfaction w/Incentive Amount – 85%

The Custom program elements continue to be challenged to expand program reach and offerings. Final combined savings were 37% under goal, but the program undertook initiatives in PY5 to expand the program potential, including:

- Incentive caps at premise level were removed Expanding the list of rebated measures
- Experimenting with trade ally rewards

Table II-1 describes key program metrics during PY5.

**Table II-1
Program Metrics**

Program Statistics	Quantity
Custom applications received	807
Custom applications completed	564
Custom incentives paid	\$3.7 M
Total cost of projects supported	\$15M
Participants	112
Completed projects	137
Standard/Custom SIOA completed	550

Table II-2 shows the actual PY5 MWh saved compared to the program’s plan and ComEd’s *ex ante* estimates, and also presents the program’s electric TRC.

Table II-2

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Custom	35,900	30,650	22,594	63%	2.20

C&I Retro-Commissioning

Program Description

Retro-commissioning is a joint program with Nicor Gas, Peoples Gas, and North Shore Gas companies. The program completed 46 projects in PY5 for a total net savings of 17,599 MWh. This is lower than PY4 results of 50 projects for 25,021 MWh. This program was designed to improve the efficiency of

Retro-Commissioning provides building owners with low-cost adjustments to energy-using equipment to improve the efficiency of the building's operating system with a focus on building controls and HVAC systems.

the buildings' energy systems with low and no cost operational measures. ComEd contracted with Nexant to implement this program. Retro-commissioning is achieved primarily through qualified engineering consulting firms, known as Retro-commissioning Service Providers ("RSPs"), who are selected through a competitive RFP process. The number of RSPs increased to 11 from 9 in PY4.

The program required that facilities had to be at least five years old, have a peak demand of at least 500 kW, contain at least 150,000 square feet of conditioned floor space and possess a relatively high Energy Use Index ("EUI") compared to the EUIs of similar buildings. Additionally, no major renovation or large capital investment for the facility could be pending. Participants had to commit to spend between \$15,000 and \$30,000 to implement identified retro-commissioning measures that would provide an estimated total project simple payback of less than 1½ years, based upon electric and gas savings. Operations and maintenance staff had to express a commitment for active involvement in the process as well, including sending a staff member to Building Operator Certification (BOC) training.

Plan Year 5 Activity

The program fell short of its PY5 goal of 29,500 MWh of energy savings with only 46 participants. This shortfall was partly due to the program allowing a longer time frame to complete projects. With this policy, PY6 began its year with 53 accepted projects compared to 40 the year before.

Table II-3 compares Navigant's *ex post* estimates of savings with ComEd's initial goal and its *ex ante* estimate of MWh saved, and also presents the program's electric TRC.

Table II-3

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Retro-commissioning	29,500	18,190	17,599	60%	3.76

C&I New Construction

Program Description

The program is designed to capture long-term energy efficiency opportunities available during the design and construction of new buildings, substantial additions and major renovations in the non-residential market. In PY5, the program was operated jointly with Nicor Gas in the overlapping service territories, and ComEd offered only electric savings incentives in its remaining service territory. ComEd contracted with Energy Center of Wisconsin (“ECW”) for program design and implementation.

C&I New Construction Program offers:

- *Building Analysis*
- *Design Assistance*
- *Technical Education and training*
- *Financial Assistance*

Available Program “Tracks”:

- *Comprehensive – integrated building design*
- *Systems – when limited integration is available*
- *Small Buildings – no longer available for new projects*

The program uses a building sciences approach to expand marketplace knowledge and foster the design and construction of high performance commercial buildings that provide superior energy efficiency, integrated systems performance, comfort and highly productive indoor environments. The program provides an assembly of new construction technical assistance; whole building energy modeling and life cycle analysis; technical education and training; and financial incentives to building owners, designers, architects, and engineers to surpass the 2009 IECC standard for new construction practices by at least 10 percent. For projects accepted on or before December 31, 2012, IECC 2009 is used as the baseline. Projects accepted on or after January 1, 2013 used IECC 2012 as the baseline. All completed PY5 projects used the IECC 2009 code as baseline. During PY5, ECW conducted three all-day training sessions with 123 attendees to describe their design practices and to promote the program. Although just kicking off in PY4 as a joint program, the addition of gas measures allowed a more holistic view of energy savings for new buildings in the Nicor service territory.

In order to meet the needs of projects of various size, complexity and stage in the design cycle, the program originally offered three project tracks. A ‘comprehensive track’ offers the highest level of technical assistance and financial incentives to address building design, resulting in a holistic, integrated and efficient building design. The comprehensive option is most effective when the New Construction team is involved very early in the building design process. In PY5, the “involve New Construction Services early in the design” message had an impact as applications started coming in earlier in the design phase. The ‘systems track’ is intended for less complex projects, those with limited opportunities for integrated design, or those in the later stages of the design process. However, the program has transitioned to only a comprehensive track for new projects. A third track for the commercial new construction of small buildings offers assistance and incentives for improved lighting and daylighting features. One project was completed in the third track during PY5 (small buildings) but this track was not available for new projects in PY5.

Plan Year 5 Activity

The program exceeded its PY5 goal of 8,400 MWh of energy savings with verified savings of 22,190 MWh from 111 projects. In PY5 savings were generated from 59 projects on the “systems track”, 1 project on “small buildings” track, and 51 projects on the “comprehensive track”. In PY5, 121 applications were submitted, of which 102 were accepted, and completed within the program year. Given the typical long development time, the approved applications not completed in PY5 are scheduled to be completed in PY6 and later.

**Table II-4
Program Metrics**

Program Statistics	Quantity
Number of applications received	121
Number of applications approved	102
Number of applications completed	111
Amount of incentives paid	\$ 2.4 M
Building area affected (Sq. ft.)	13,992,672

Table II-5 compares Navigant’s *ex post* estimates of savings with ComEd’s initial goal and its *ex ante* estimate of MWh saved, and also presents the program’s electric TRC.

Table II-5

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
New Construction	8,400	20,433	22,190	264%	8.16

Business Instant Lighting Discounts

Program Description

Business Instant Lighting Discounts (BILD) originally began as Mid-Stream Incentives as a pilot in PY3, which was launched as a stand-alone program in PY4 when it incented only CFL bulbs. In PY5, the program changed its name to better resonate with its target participants, and was expanded to include not only CFLs, but LEDs, HIDs, and Linear Fluorescent bulbs as well. This program provides incentives to electrical distributors to reduce the purchase cost of lighting to its business customers.

Plan Year 5 Activity

During PY5, the most important activity was expanding participating electrical distributors – in part by increasing eligible products beyond just CFLs. In PY5, the program increased its participating distributors from 18 in PY4 to 84 at 166 unique locations, and bulb sales increased from 575,252 in PY4 to 1,315,819. Table II-6 summarizes the program’s activities:

**Table II-6
Program Metrics**

Program Metrics	
CFLs sold	597,438
LEDs sold	211,955
Linear florescents sold	503,627
HIDs sold	2,799
Total bulbs sold	1,315,819
Customers touched	3,205
Unique distributors	84

Table II-7 compares Navigant’s *ex post* estimates of savings with ComEd’s initial goal and its *ex ante* estimate of MWh saved, and also presents the program’s TRC.

Table II-7

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
BILD	32,700	62,883	91,829	281%	2.36

Industrial Systems / Compressed Air

Program Description

Compressed Air was launched as a full scale program in PY4 from a PY3 pilot in Retro-commissioning. In PY5, there was an additional expansion of target markets to include refrigeration systems and process cooling. So the program was renamed Industrial Systems, although Compressed Air comprises the major portion of projects at this time. One difference that Industrial systems has from a simple study-based program is that it recommends more capital intensive measures to achieve energy savings and offers a one-time incentive payment. In the more operational review, the engineering study will identify compressed air leaks to repair along with low cost/no cost measures to improve system operations. Smaller stand-alone air compressor projects are typically handled through the Custom Program.

ComEd selected Nexant, Inc. to be the program administrator responsible for all aspects of the program. Actual engineering studies are performed by specialized Compressed Air Service Providers (“CASP”), who directly interface with customers during engineering reviews and implementation of accepted recommendations. Nexant is responsible for the recruitment and training of the CASPs and overview of their work. Nexant is also responsible for recruiting and training service providers for the refrigeration and process cooling elements.

Plan Year 5 Activity

Industrial Systems did not meet its target as 29 applications were received but only 21 were completed versus the original target of 65 completions. A number of projects slipped into PY6 due to implementation timelines. At the end of PY5, 28 applications were accepted for PY6 implementation.

Table II-8 summarizes the programs activities:

**Table II-8
Program Metrics**

Program Metrics	
# of applications received	29
# of applications completed	21
# of approved CASP	27

Table II-9 compares Navigant's *ex post* estimates of savings with ComEd's initial goal and its *ex ante* estimate of MWh saved, and also presents the program's TRC.

Table II-9

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Industrial Systems / Compressed Air	19,700	8,778	7,757	39%	2.27

Data Centers

Program Description

The Data Centers Efficiency program was launched in June 2011. The Data Centers Efficiency program provides incentives to both new and existing data centers for implementing energy efficiency measures. Data center energy efficiency measures must result in a reduction of electric energy usage due to an improvement in system efficiency. Projects that result in reduced energy consumption without an improvement in system efficiency are not eligible for incentives.

ComEd selected Willdan Energy Solutions (Willdan) as its program administrator responsible for day-to-day operations. Willdan is responsible for all aspects of the program including participant coordination, technical service provider recruitment and training, logistical support, marketing / outreach and technical review for projects in the program. One of the main challenges in this program is proposing efficiency measures without impacting operating reliability (*i.e.*, keeping equipment on-line takes precedence over energy efficiency). Another challenge is establishing baselines for savings since there are few industry standards. The Data Center Program follows the incentive structure of the Custom Program. Both programs pay incentive of \$0.07/kWh for savings on eligible products. Data Center projects are also eligible for the Custom early commitment option, where savings can be locked in during application approval and incentives are based on \$0.06/kWh..

Plan Year 5 Activity

In PY5, 11 data center projects were completed. This is a large increase from only 2 projects in PY4 as the program has gained traction, albeit in a limited market.

Table II-10 shows Navigant’s *ex post* estimates of savings. . Shown are the verified savings and the program’s TRC.

Table II-10

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Data Centers	6,500	7,976	6,006	92%	1.58

Small Business Energy Savings

Program Description

The Small Business Energy Savings (“SBES”) Program was launched as a pilot in PY3. The SBES program is designed to achieve energy savings goals by educating ComEd/Nicor Gas and ComEd/Peoples Gas/North Shore Gas non-residential customers about electric and natural gas opportunities through on-site assessments. Energy advisors from Peoples Gas/North Shore Gas implementer Franklin Energy or Nicor Gas implementer Nexant conduct a high-level walk-through assessment of each site. At the time of the assessment, customers can receive direct installation of energy efficient measures at no cost to them. These direct installed measures include: low-flow faucet aerators and showerheads, pre-rinse spray valves, vending machine controls, compact fluorescent lights, and programmable thermostats.

In addition to direct installations, assessments identified additional retrofit savings opportunities which were eligible for incentives of 30 to 70 percent for select, low-cost natural gas and electric energy efficiency measures that would be installed by a local contractor at a second on-site visit. Participants must be both a ComEd customer with peak monthly demand of less than 100 kW and a Nicor Gas or Peoples Gas/North Shore Gas customer who uses less than 60,000 therms per year.

Plan Year 5 Activity

As previously stated, during PY5 gas measures were offered for both direct installed or contractor installed. In PY5, both electric and gas participation increased greatly from the previous year. For electric savings, the program achieved 377% of its planning goal. The small business target base is considered hard-to-reach, and implementation strategies to create awareness and develop trust within the local communities were extremely important. A series of geo-marketing pilot projects was completed in order to better target potential customers. A total of 302 projects and 13,195 project

measures were installed through the geo-marketing pilot. Table II-11 summarizes the initiative's activities:

**Table II-11
Program Metrics**

Program Metrics	
Assessments Completed	3,110
Direct Installed Electric Measures	1,245
Contractor Installed Electric Measures	189,563
Contractor Installed Projects (Electric)	1,652
Contractor Installed Projects (Gas)	1,465
Total ComEd Unique Projects	1,881

Table II-12 compares Navigant's *ex post* estimates of savings with ComEd's initial goal and its *ex ante* estimate of MWh saved, and also presents the program's electric TRC.

Table II-12

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal	ComEd PY5 TRC
Small Business Energy Savings	8,900	25,206	33,573	377%	1.52

III. R&D / Emerging Technologies

ComEd is allowed to spend up to 3 percent of its portfolio budget on research and development (“R&D”) / emerging technologies. For PY5, ComEd allocated \$2.5 million for these initiatives and spent \$1.2 million. Primary program activities for PY5 included a behavioral pilot for medium sized C&I customers (100kW – 1000kW); digital control for commercial HVAC rooftop units; and behavioral home energy reports with customers who have “smart meters”. These selected customers receive additional information and alerts via phone and email. No savings from R&D efforts were included in PY5 results.

IV. Third Party Programs

In ComEd's 2011 – 2013 Plan, ComEd issued RFP's for third party administered programs where ComEd would purchase net savings for an agreed upon payment (cents/kWh). The concept was to look for niche programs outside the utility programs and let market creativity have a chance at developing energy efficiency programs. Three contracts were awarded for the three-year period covered by ComEd's 2011 – 2013 Plan.

Dent On Energy

RLD Resources LLC ("RLD") offered a program to install smart thermostats/controllers for businesses, which act as low-cost automation, monitoring, and proactive control of HVAC systems. The targeted customers were end-users with between 100-400 kW in electrical demand.

Desktop Power Management

Resource Solutions Group ("RSG") proposed a computer efficiency suite with a centralized computer management ("CPM") software as the main component. This program was targeted towards private schools and business. The CPM would shut down individual desktop applications during off-hours.

CUB Energy Saver

Efficiency 2.0 was awarded the third program, a residential behavioral program offering on-line services to motivate participants to save energy. In PY5, program implementation was transferred to C3. This program was not to overlap participants with ComEd's existing residential behavior program, Home Energy Reports. The Efficiency 2.0 program was based on opt-in participation and expected to achieve greater savings through increased customer interactions.

Plan Year 5 Activity

For much of PY5, the Third Party Programs continued in start-up mode, establishing contractual agreements and targeting participants. In PY5, only the CUB Energy Saver program provided measured results of 2,914 net MWh. Evaluation of RLD results were deferred until PY6 because few results were reported.

Table IV-1

Program Results (Net MWh)	ComEd Planning Goal (MWh)	ComEd Estimated <i>Ex ante</i> Savings (MWh)	Navigant Verified <i>Ex post</i> Savings (MWh)	Pct. of Goal
Third Party Programs	20,000	7,639	2,914	15%

V. ComEd Summary

ComEd's *Smart Ideas* portfolio is the product of ComEd's Commission-approved 2011 – 2013 Plan, which was developed by ComEd in response to the requirements of Section 8-103 of the Act, the purpose of which is to encourage customers to reduce energy consumption.

In Plan Year 5 (June 1, 2012 through May 31, 2013), the *Smart Ideas* portfolio achieved 949,392 MWh in net energy savings, exceeding its adjusted statutory goal of 827,575 MWh by 15%. Since the energy efficiency program launched on June 1, 2008, ComEd has increased incremental annual energy savings by over 3,100,000 MWh with total customer savings estimated at over 7,200,000 MWh.

Since program inception, the *Smart Ideas* portfolio has put ComEd customers on track to save more than \$700 million in energy costs versus the Rider EDA charges of \$369 million. ComEd customers will continue to save money over the remaining lifetimes of their installed energy efficiency measures.

VI. DCEO Summary - ComEd Service Territory

Per the Act, DCEO was assigned 25% of the energy efficiency measures, which ComEd and DCEO agreed to define as 25% of the total portfolio spending screen. In addition, DCEO agreed to specific goals defined for the public sector and low income programs. The Act required 10% of the overall portfolio be dedicated for public sector customers. For low income customers, a target of 6% of the overall portfolio was set based on the number of households at or below 150% of the poverty level.

For PY5, DCEO's statutory portfolio goal for the ComEd service territory was 109,198 MWhs. The results for DCEO are provided below.

Table VI-1

Program	Expected kWh Savings	Realized Gross kWh Savings	Realized Net kWh Savings
Energy Code Compliance	0	0	0
Lights for Learning	532	588	512
Design Assistance	NA	NA	NA
Green Nozzle & Step	NA	84	84
Retro-Commissioning	11,045	9,727.7	9,040
Builder Owner Certification	NA	NA	453
Public Housing Authority	4,031	3,366	3,366
Affordable Housing Construction Standard	2,050	2,496	2,496
Custom	51,005	61,390	60,193
New Construction	1,850	19,377	18,135
Low Income Retrofits	1,932	1,992	971
Public Sector Boiler Tune-ups	NA	3,123	3,123
Totals	0	0	0
	92,447	102,143	98,372

ComEd is responsible for administering funds, received from ComEd customers, for the DCEO energy efficiency projects completed within the ComEd Service Territory. For PY5, DCEO submitted funding requests for \$34.5M of their spending screen budget of \$39.7M.

VII. Data Tables

Table VII-1 shows ComEd's performance, by program, for MWh saved. The table compares the Plan estimates with ComEd's *ex ante* results and Navigant's *ex post* results.

Table VII-1

	ComEd Target	ComEd Reported Results (<i>Ex Ante</i>)		Navigant Results (<i>Ex Post</i>)	
	Net MWH Savings	Net MWH Savings	Pct. Of Target	Net MWH Savings	Pct. Of Target
Residential					
Lighting Discounts	220,000	305,449	139%	287,135	131%
Home Energy Report	68,500	92,687	135%	97,442	142%
Fridge Freezer Recycle Rewards	21,000	31,869	152%	30,531	145%
Multi-Family Home Performance	12,000	15,131	126%	11,285	94%
Single Family Home Performance	700	934	133%	973	139%
Clothes Washer Rebates	500	770	154%	1,203	241%
Residential New Construction	100	30	30%	201	201%
Joint Elem Education	-	1,760		2,236	
Complete System Replacement	2,200	1,546	70%	3,077	140%
Total Residential	325,000	450,176	139%	434,083	134%
C&I					
C&I Prescriptive (inc. Real Estate)	258,400	174,671	68%	186,433	72%
C&I Custom	35,900	30,650	85%	22,594	63%
Mid stream C&I Lighting	32,700	62,883	192%	91,829	281%
Retro-Commissioning	29,500	18,190	62%	17,599	60%
New Construction	8,400	20,433	243%	22,190	264%
Compressed Air / Industrial Systems	19,700	8,778	45%	7,757	39%
Small Business	8,900	25,206	283%	33,573	377%
Data Centers	6,500	7,979	123%	6,006	92%
Total C&I	400,000	348,790	87%	387,981	97%
PY5 Program Totals	725,000	798,966	110%	822,064	113%
Third Party Admin Programs & CFL Carryover					
Third Party	20,000	7,639	38%	2,914	15%
Carryover	100,000	128,077	128%	124,414	124%
Portfolio Totals (with CFL Carryover)	845,000	927,043	110%	949,392	112%
Statutory Goal	827,575	927,043	112%	949,392	115%

Table VII-2 shows ComEd’s potential and actual savings banked for PY1 – PY5. These savings are available for use through Plan Year 6 to achieve applicable energy savings goals. Banked savings from PY1 – PY3 were limited to 10% of statutory goal when results exceeded goal.

Table VII-2

Plan Year	ComEd Net Results	DCEO Net Results	Statutory Goal	Actual Banking	Cumulative Banked
PY1	163,717	17,377	188,739	0	0
PY2	472,132	34,076	393,691	39,369	39,369
PY3	626,715	54,130	584,077	58,408	97,777
PY4	944,142	106,475	720,002	330,615	428,392
PY5	949,392	98,372	942,209	105,555	533,947
Total	3,156,098	310,430	2,828,718	533,947	533,947

Table VII-3 shows the comparison of the Plan budget versus Actual expenditures for PY5 for Rider EDA expenses. It should be noted that ComEd incurred additional internal labor costs that are not included as Rider EDA expenses, but are estimated in Table VII-4.

Table VII-3

	Planned Budget *	Actual Expenditures (Total Rider EDA Expenses)
RESIDENTIAL EE PROGRAM COSTS		
Residential ENERGY STAR Lighting	\$ 15,171,827	\$ 16,357,006
Home Energy Reports	\$ 2,618,979	\$ 3,450,807
Fridge & Freezer Recycling Rewards	\$ 6,875,200	\$ 7,252,552
Multi-family Home Energy Savings	\$ 1,944,549	\$ 2,056,179
Clothes Washer Rebates	\$ 2,934,000	\$ 2,652,437
Single Family Home Energy Savings	\$ 664,808	\$ 692,252
Complete System Replacement	\$ 3,883,140	\$ 1,942,137
Elementary Education Program	\$ -	\$ 322,119
Residential New Construction	\$ 265,461	\$ 66,746
Total Residential Programs	\$ 34,357,964	\$ 34,792,236
C&I EE PROGRAM COSTS		
C&I Standard/Prescriptive Incentives	\$ 38,748,129	\$ 25,027,730
C&I Custom Incentives	\$ 5,243,491	\$ 4,404,792
C&I Retrocommissioning	\$ 4,516,872	\$ 2,004,007
C&I New Construction	\$ 3,501,050	\$ 4,139,767
Industrial systems/Compressed Air	\$ 2,625,705	\$ 5,098,141
Business Instant Lighting Discounts	\$ 1,974,875	\$ 4,832,228
Small Business Energy Savings	\$ 4,691,503	\$ 7,494,245
C&I CACES	\$ 533,802	\$ -
Commercial Real Estate	\$ 1,832,619	\$ 1,031,909
Data Centers	\$ 752,962	\$ 1,541,150
Total C&I Programs	\$ 64,421,008	\$ 55,573,971
OTHER COSTS		
Third Party Program Admin.	\$ 2,000,000	\$ -
Demand Response	\$ 1,028,000	\$ 1,253,218
DCEO	\$ 39,703,707	\$ 34,541,388
R&D / Emerging Technologies	\$ 2,507,848	\$ 1,142,049
M&V	\$ 3,573,334	\$ 3,534,876
Educational/ Municipal/ Outreach/ EIO Energy Star	\$ 3,100,000	\$ 4,409,895
Other Portfolio Costs	\$ 5,793,713	\$ 6,692,860
Total Other	\$ 57,706,602	\$ 51,574,286
Total Portfolio Costs	\$ 156,485,574	\$ 141,940,492
Total On-Bill Financing Costs	\$ 160,000	\$ 135,261
Total PY4 Rider EDA Costs	\$ 156,645,574	\$ 142,075,753

* Plan Budget adjusted to Spending Screen PY5 as filed in PY5 Rate filing.

Table VII-4 shows the breakdown of PY4 by contractor, incentive, marketing and labor costs across the programs.

**Table VII-4
PY5 Rider Portfolio Expenses**

	Energy Efficiency Expenses						TOTAL Non-Rider EDA Employee Labor Costs	TOTAL Rider EDA COSTS with Non- EDA Labor
	Contractor Costs	Incentive Costs	Marketing Costs	TOTAL Non-Labor Costs	Rider EDA Labor Costs	TOTAL Rider EDA Expenses		
	a	b	c	d	e	f		
			a+b+c		d+e		f+g	
C&I EE PROGRAM COSTS								
C&I Prescriptive	\$ 5,341,014	\$ 17,971,939	\$ 1,452,277	\$ 24,765,230	\$ 262,500	\$ 25,027,730	\$ 401,864	\$ 25,429,594
C&I Custom	\$ 277,506	\$ 3,755,549	\$ 205,487	\$ 4,238,542	\$ 166,250	\$ 4,404,792	\$ 459,863	\$ 4,864,655
C&I Retrocommissioning	\$ 494,264	\$ 1,294,093	\$ 40,650	\$ 1,829,007	\$ 175,000	\$ 2,004,007	\$ -	\$ 2,004,007
C&I New Construction	\$ 1,509,245	\$ 2,422,858	\$ 76,414	\$ 4,008,517	\$ 131,250	\$ 4,139,767	\$ -	\$ 4,139,767
C&I Compressed Air	\$ 2,107,657	\$ 2,773,140	\$ 86,095	\$ 4,966,891	\$ 131,250	\$ 5,098,141	\$ -	\$ 5,098,141
C&I Midstream Incentives	\$ 861,731	\$ 3,696,526	\$ 265,221	\$ 4,823,478	\$ 8,750	\$ 4,832,228	\$ -	\$ 4,832,228
C&I Small Business Direct Install	\$ 2,890,903	\$ 4,122,471	\$ 305,872	\$ 7,319,245	\$ 175,000	\$ 7,494,245	\$ 53,410	\$ 7,547,655
Energy Efficiency RFP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C&I CACES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
C&I Commercial Real Estate	\$ 545,719	\$ 380,000	\$ 18,690	\$ 944,409	\$ 87,500	\$ 1,031,909	\$ -	\$ 1,031,909
C&I Data Center	\$ 780,455	\$ 633,078	\$ 40,116	\$ 1,453,650	\$ 87,500	\$ 1,541,150	\$ -	\$ 1,541,150
Total C&I Programs	\$ 14,808,495	\$ 37,049,654	\$ 2,490,821	\$ 54,348,971	\$ 1,225,000	\$ 55,573,971	\$ 915,137	\$ 56,489,108
RESIDENTIAL EE PROGRAM COSTS								
Residential Lighting	\$ 2,380,114	\$ 13,348,900	\$ 487,993	\$ 16,217,006	\$ 140,000	\$ 16,357,006	\$ 17,803	\$ 16,374,809
Home Energy Report	\$ 3,179,562	\$ -	\$ 131,245	\$ 3,310,807	\$ 140,000	\$ 3,450,807	\$ -	\$ 3,450,807
Appliance Recycling	\$ 4,137,436	\$ 1,784,248	\$ 1,330,869	\$ 7,252,552	\$ -	\$ 7,252,552	\$ 124,622	\$ 7,377,175
HVAC Diagnostics & w/Quality Installation (CACES)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Multi-family All-electric Sweep	\$ 502,127	\$ 1,394,469	\$ 37,084	\$ 1,933,679	\$ 122,500	\$ 2,056,179	\$ -	\$ 2,056,179
Appliance Rebate	\$ 309,963	\$ 2,247,075	\$ 60,400	\$ 2,617,437	\$ 35,000	\$ 2,652,437	\$ -	\$ 2,652,437
Single Family Home Performance	\$ 175,127	\$ 301,771	\$ 96,354	\$ 573,252	\$ 119,000	\$ 692,252	\$ -	\$ 692,252
Residential Complete System Replacement (CSR)	\$ 189,161	\$ 1,591,900	\$ 105,076	\$ 1,886,137	\$ 56,000	\$ 1,942,137	\$ 35,606	\$ 1,977,744
Joint Elementary Education Program	\$ 233,380	\$ 65,068	\$ 6,171	\$ 304,619	\$ 17,500	\$ 322,119	\$ -	\$ 322,119
Residential New Construction	\$ 25,523	\$ 37,274	\$ 3,948	\$ 66,746	\$ -	\$ 66,746	\$ 35,606	\$ 102,352
Total Residential Programs	\$ 11,132,392	\$ 20,770,704	\$ 2,259,139	\$ 34,162,236	\$ 630,000	\$ 34,792,236	\$ 213,638	\$ 35,005,874
THIRD PARTY PROGRAM COSTS								
Third Party Program Admin.	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 197,493	\$ 197,493
DCEO PROGRAM COSTS								
DCEO	\$ 34,541,388	\$ -	\$ -	\$ 34,541,388	\$ -	\$ 34,541,388	\$ -	\$ 34,541,388
DEMAND RESPONSE COSTS								
Central AC Cycling	\$ 1,253,218	\$ -	\$ -	\$ 1,253,218	\$ -	\$ 1,253,218	\$ -	\$ 1,253,218
EDUCATION / MARKET TRANSF COSTS								
Education/Outreach	\$ 4,023,165	\$ -	\$ -	\$ 4,023,165	\$ -	\$ 4,023,165	\$ 601,416	\$ 4,624,581
Municipal Outreach	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Market Transformation EIO/EDS	\$ 386,730	\$ -	\$ -	\$ 386,730	\$ -	\$ 386,730	\$ 160,229	\$ 546,959
Total Educational Market Transf Costs	\$ 4,409,895	\$ -	\$ -	\$ 4,409,895	\$ -	\$ 4,409,895	\$ 761,645	\$ 5,171,540
R&D / Emerging Technologies								
R&D / Emerging Technologies	\$ 1,142,049	\$ -	\$ -	\$ 1,142,049	\$ -	\$ 1,142,049	\$ 26,705	\$ 1,168,754
PORTFOLIO COSTS								
Portfolio Administration	\$ 3,478,203	\$ -	\$ -	\$ 3,478,203	\$ -	\$ 3,478,203	\$ 574,658	\$ 4,052,861
Labor (Non- Program Specific)	\$ -	\$ -	\$ -	\$ -	\$ 3,214,657	\$ 3,214,657	\$ -	\$ 3,214,657
Total Portfolio Admin Costs	\$ 3,478,203	\$ -	\$ -	\$ 3,478,203	\$ 3,214,657	\$ 6,692,860	\$ 574,658	\$ 7,267,518
Measurement & Verification (ComEd Only)								
Actual PY3 Measurement & Verification incurred	\$ 120,908	\$ -	\$ -	\$ 120,908.08	\$ -	\$ 120,908	\$ -	\$ 120,908
Actual PY4 Measurement & Verification incurred	\$ 3,058,974	\$ -	\$ -	\$ 3,058,974.09	\$ -	\$ 3,058,974	\$ -	\$ 3,058,974
Actual PY5 Measurement & Verification incurred	\$ 354,994	\$ -	\$ -	\$ 354,994	\$ -	\$ 354,994	\$ -	\$ 354,994
Total Portfolio	\$ 74,300,516	\$ 57,820,358	\$ 4,749,961	\$ 136,870,835	\$ 5,069,657	\$ 141,940,492	\$ 2,689,277	\$ 144,629,769
Total Portfolio - ComEd only	\$ 39,759,128	\$ 57,820,358	\$ 4,749,961	\$ 102,329,447	\$ 5,069,657	\$ 107,399,104	\$ 2,689,277	\$ 110,088,381