

**Commonwealth Edison Company's
2011 - 2013
Energy Efficiency and
Demand Response Plan**

October 1, 2010



Docket No. 10- _____

ComEd Ex. 1.0

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1 Executive Summary

1.1 Our Commitment

Commonwealth Edison Company's ("ComEd") 2011-2013 Energy Efficiency and Demand Response Plan ("Plan") represents our long-term commitment to enhance value for our customers through implementation of a robust, innovative and flexible portfolio of energy efficiency offerings. Our Plan builds upon our existing, successful portfolio, while expanding the portfolio's reach to address the continually changing regulatory and market environments. The Plan reflects an increasingly collaborative process that engages stakeholders and other parties, addresses all customer markets and embraces innovation.

Under ComEd's 2008 – 2010 Plan, we have achieved all of our objectives to date. We successfully attained the Plan Year 1 ("PY1") kilowatt-hour ("kWh") and kilowatt ("kW") statutory goals, believe the Plan Year 2 ("PY2") goals have been met (evaluations pending) and are on track to exceed the Plan Year 3 ("PY3") goals.¹ Additionally, we have achieved these results while spending below the budget (or "spending screen") for both PY1 and PY2. These results demonstrate that ComEd has managed an effective and efficient portfolio to date.

First Plan Highlights

- **C&I Prescriptive / Custom Incentives** were depleted early in the first two years due to overwhelming demand
- **Residential Lighting projects** to distribute over 22 million discounted CFLs
- **Appliance Recycling projects** to collect over 70,000 refrigerator/freezers
- **New, innovative concepts** were tested –
 - *Home Energy Reports (behavioral program concept)*
 - *ComEd Energy Challenge (municipal outreach concept)*
- **Awards Achieved**
 - **Outstanding Achievement in Energy Program Design and Implementation** – *Association of Energy Services Professional ("AESP")*
 - **2009 Illinois Governor's Sustainability Award**
 - **Education Award** – *Midwest Energy Efficiency Alliance ("MEEA")*
 - **2010 Excellence in ENERGY STAR Promotion Award Winner** – *U.S. Environmental Protection Agency ("EPA")*

¹ "PY__" refers to the Plan Year in question. For example, "PY1" refers to the first year of implementation from June 2008 through May 2009. This Plan covers PY4, PY5 and PY6, which are referenced throughout this document.

ComEd developed its second Plan under the guidance of five key themes. We believe each of these themes is required to ensure that ComEd has a robust and comprehensive portfolio of energy efficiency programs to offer to all of its customers. We have taken what we have learned during our first Plan and have enhanced our portfolio with new, exciting options for our customers. Overlaying our entire effort is our commitment to achieve the energy savings goals to the best of our ability. We believe this Plan achieves our objectives and satisfies our regulatory requirements.

- Plan Themes**
- Support our statutory requirements
 - Build upon the foundation
 - Be inclusive
 - Innovate
 - Own responsibility for performance

1.2 Statutory Goals / Proposed Goals

Section 8-103 of the Public Utilities Act (“PUA” or “the statute”), requires ComEd to implement energy efficiency and demand response programs to meet energy and demand reduction goals. Achievement of these goals, however, is subject to an annual budget set by the statute (“spending screen”). The following table summarizes these goals and the spending screens.

Table 1 – Legislative Goals

	<i>Yr. commencing June 1</i>	PY1 <i>2008</i>	PY2 <i>2009</i>	PY3 <i>2010</i>	PY4 <i>2011</i>	PY5 <i>2012</i>	PY6 <i>2013</i>	PY7 <i>2014</i>	PY8 <i>2015</i>
Energy Efficiency	<i>Incremental % of energy delivered</i>	0.2%	0.4%	0.6%	0.8%	1.0%	1.4%	1.8%	2.0%
Demand Response	<i>% of prior year eligible retail peak demand</i>	0.1%							
Spending Screens	<i>Maximum Increase in 'per kWh rate'</i>	0.5%	1.0%	1.5%	2.0%	2.015%	2.015%	2.015%	2.015%

The **annual energy efficiency goals**, which are defined by the statute as incremental annual energy savings, are calculated as a fraction of each year’s forecasted total annual energy deliveries. This goal increases every year until 2015, when it then levels off at 2.0%.

The **annual demand response goals**, which impact only residential and very small business customers, are defined as a 0.1% reduction of the prior year’s eligible retail peak demand. This goal is a constant percentage each year of the Plan and therefore does not increase annually.

The **spending screen** was first set for PY1 at no more than 0.5% of the amount paid by retail customers during the previous year (ending in May) and increases by 0.5% every year for the first four Plan years, leveling out at 2.015% in Plan Years 5 through 8.

Portfolio Goals. The following discussion summarizes our proposed statutory and modified goals for this Plan.

During Plan Years 4, 5 and 6, the statutory spending screen percentages are virtually flat at 2.0%, 2.015% and 2.015%, respectively, while the energy savings goals increase to 0.8%, 1.0% and 1.4%, respectively. Put another way, the funding available to support the portfolio over the three-year period increases by only 0.75% while the energy savings goals increase by 75%. This is in contrast to Plan Years 1 through 4 where the relative increases in budget and savings targets were approximately the same.

Where, as here, the spending screens do not provide adequate funding to meet the statutory savings goals, the statute provides that the measures must be reduced in order to stay within the spending screens,

the amount of energy efficiency and demand-response measures implemented for any single year shall be reduced by an amount necessary to limit the estimated average net increase due to the cost of these measures included in the amounts paid by eligible retail customers in connection with electric service to no more than the greater of 2.015% of the amount paid per kilowatthour by those customers during the year ending May 31, 2007 or the incremental amount paid for these measures in 2011. 220 ILCS 5/8-103(d)(5).

ICC's Role

With the kWh target continuing to increase through 2015 but the annual spending screen leveling out in 2012, there is a lack of symmetry between the increasing savings goals and flat budget. To address this issue, the statute requires the ICC by June, 2011 to "review the limitation on the amount of energy efficiency and demand-response measures implemented...and report to the General Assembly its findings as to whether that limitation unduly constrains the procurement of energy efficiency and demand-response measures".

When compliance with Section 8-103(d) requires such a reduction in measures, Section 8-103(i) permits the "efficiency standard specified in subsection (b) [to be] modified." 220 ILCS 5/8-103(i).

As a result, ComEd proposes that the statutory energy savings goals for PY5 and PY6 be modified to reflect the PY4 energy savings goal because all three Plan years have roughly the same budget. This provides symmetry between the goals and budgets, as reflected in the Table below.

Table 2 - Proposed Portfolio Goals / Spending Screen

	Yr. commencing June 1	PY4 2011	PY5 2012	PY6 2013
Statutory MWH Goal	<i>Energy Efficiency</i>	727,985	920,987	1,294,739
Proposed MWH Goal	<i>Energy Efficiency</i>	727,985	727,985	727,985
Statutory MW Goal	<i>Demand Response</i>	10.5	10.7	10.8
Spending Screen Projection	<i>\$Million</i>	\$ 160.1	\$ 162.1	\$ 162.8

Although Plan Years 4 through 6 each has roughly the same spending screen and proposed savings goals, PY5 offers some unique circumstances that we believe will allow us to exceed the modified goal and perhaps even meet the statutory goal for PY5. First, the independent evaluator has indicated that, as part of the Residential Lighting program element, an annual carryover factor should be incorporated into our savings calculations. The evaluator recognized that not all compact fluorescent lamps ("CFLs") purchased by customers are installed in the year they are purchased, but will be installed in the future. The evaluator has proposed that 50% of the savings from deferred installations be counted in the year after the purchase and the remaining 50% in the following year. These are essentially "free" kWh savings for the year in which they are measured, as the cost of the CFL occurred in a past year. If projections hold

true, we estimate that we will be able to apply over 50,000 “carryover” MWhs to PY5 from CFLs purchased in PY3 and PY4.

The second key factor for PY5 will be the redemption of “banked” kWh. In its final order approving ComEd’s first Plan, the Commission stated *“ComEd’s and DCEO’s request for Commission approval of ‘banked’ energy savings is granted, but, they may ‘bank’ no more than 10 percent of the energy savings required by statute in the year, in which, it is ‘banked’.”* Commonwealth Edison Co., ICC Docket No. 07-0540, at 41 (Final Order, Feb. 6, 2008). We project that by the end of PY4, over 110,000 MWhs of “banked” savings will have accumulated over the first four Plan years. Assuming our assumptions are correct, these kWh savings would be available to apply to PY5. However, there is risk associated with relying on these kWhs for PY5, because only PY1 banked numbers are known at this point. We are, therefore, making the assumption that we will perform at a certain level and that the independent evaluator will be in agreement with our performance for PY2 through PY4. Any negative impact in our performance or the evaluation could place these PY5 assumptions at risk.

Table 3 - Goal Calculation

Goals / Spending Screen Summary				
	PY4	PY5	PY6	Total
Spending Screen Summary				
ComEd	\$ 120,117,447	\$ 121,570,243	\$ 122,075,406	\$ 363,763,096
DCEO	\$ 40,039,149	\$ 40,523,414	\$ 40,691,802	\$ 121,254,366
Total	\$ 160,156,596	\$ 162,093,657	\$ 162,767,209	\$ 485,017,461
Proposed Demand Response Goals				
MW target	10.5	10.7	10.8	32.0
Proposed Energy Savings Goals				
Portfolio Goal	727,985	727,985	727,985	2,183,955
ComEd Goal	618,787	618,787	618,787	1,856,361
DCEO Goal	109,198	109,198	109,198	327,594
Projected kWh Attained each Year				
ComEd	645,287	666,440	659,338	1,971,065
DCEO	113,624	114,634	115,258	343,516
Total	758,911	781,074	774,596	2,314,581
Projected Additional kWh				
Projected CFL Carryover	50,602	56,849	55,432	
Projected Banked kWh	not required	122,927	39,864	
Projected kWh Total	809,513	960,850	869,892	2,640,255

We have set the total kWh target at the PY4 statutory target of 727,985 for PY4, PY5 and PY6. This assumes that DCEO achieves 15% of the target savings, which is 5% less than the 20% (of target savings) assigned to DCEO in the first Plan. The reduction of DCEO’s kWh target shifts more of the total goal to ComEd.

Demand Response Goal. Consistent with the statute’s directive to reduce both energy efficiency and demand response measures to comply with the spending screens, we have elected not to pursue a stand-alone demand response program as part of this Plan. We will continue to have the curtailable load available that was obtained under the first Plan, which is projected to be 30 MWs, and our Plan therefore will include demand response costs still associated with maintaining these MWs. However, we also project a significant incremental peak demand reduction from the proposed energy efficiency programs. In our Plan, we project to obtain 37, 36 and 38 MWs of peak demand in each of the three Plan years from the residential program elements. These MWs exceed the annual kW statutory goals of 10.5, 10.7 and 10.8 MWs, respectively.

1.2.1 Department of Commerce & Economic Opportunity

The statute also directs that ComEd and the Department of Commerce and Economic Opportunity (“DCEO”) each implement a portion of the energy efficiency measures in our Plan. Per the statute, we are to implement 75% of the measures and DCEO is to implement the other 25% of the measures. During the development of the first Plan and continuing with this Plan, ComEd and DCEO agreed that the “measures allocation” would be based on the spending screen such that ComEd retains 75% of the spending screen funds and the other 25% of the spending screen funds are allocated to DCEO.

Consistent with the first Plan and acknowledging DCEO’s role across the State with the other electric and gas utilities, ComEd and DCEO mutually agreed upon an appropriate segregation of markets and programs. DCEO’s efforts will continue to be in three primary areas: Low-Income Programs, Public Sector Programs and Market Transformation Programs. The DCEO programs are designed to meet specific portfolio requirements –

- The **Public Sector programs** are designed so that 10% of the overall portfolio is targeted at local governments, municipal corporations, school districts and community colleges.
- The **Low-Income programs** are designed so that their size is in proportion to low-income households’ share of utility revenue.
- The **Market Transformation programs** are designed to present specific proposals to implement new building and appliance standards that have been placed into effect.

Portfolio Requirements and DCEO

The statute requires that at least 10% of the portfolio’s energy efficiency measures be procured from units of local government, municipal corporations, school districts and community college districts (together called “public sector”). DCEO will undertake this requirement.

The statute directs ComEd to coordinate with DCEO in the implementation of programs targeted at households at or below 80% of area median income (“*low-income programs*”). These programs are to be sized such that they are at a level proportionate to the share of total annual utility revenues from households at or below 150% of the poverty level. As in the first Plan, ComEd and DCEO agreed that DCEO will continue to administer low-income programs.

1.3 Challenges / Opportunities

Several critical planning and implementation challenges extend over the planning horizon. How these challenges are addressed will greatly affect the shape of the portfolio and our ability to execute our Plan. We believe that clear Commission direction is necessary to resolve these issues. The following briefly describes each issue and our proposed approach (*extended discussions are in the body of the Plan*).

Statutory kWh Target vs. Spending Screen. This challenge is thoroughly discussed throughout this Plan as it is really the overriding issue in the Plan.

ComEd's Proposal – We believe the statutory kWh goal is achievable in PY4 because the spending screen increases in that year. Because the spending screens do not increase in PY5 or PY6, ComEd proposes modified goals for those years consistent with PY4. However, as described further in the Plan, ComEd may be able to achieve the PY5 statutory goal if banked and carryover kWh savings are realized and applied.

Annual Spending Screen Recalculation vs. Three Year Fixed kWh Target. For our first Plan, we proposed a three-year plan where both the kWh target and spending screen were fixed for all three years. During the docketed proceeding, it was argued that the statute requires the spending screen to be recalculated on an annual basis. The ICC concurred with this position. The result of this finding was that prior to PY2 and PY3 we recalculated the spending screen in each year, resulting in a reduction in our funding because of the decrease in delivery services revenue. This resulted in our recalibrating the portfolio, eliminating or reducing some portfolio activities, and boosting other program targets to levels that were extremely aggressive given the funding that was available.

ComEd's Proposal –To ensure symmetry, we propose that both the kWh target as well as the spending screen be recalculated each year to reflect the most recent data. This will ensure to a much greater extent that there is consistency between savings expectations and allowed budget.

Evaluation Uncertainty Mitigation. The uncertainty involved in the calculations of net-to-gross ratios (“NTGs”) and realization rates (“RRs”) results in major risk to ComEd that is very difficult to manage and may lead to well-intentioned, yet imprecise strategic decisions in terms of the long-term growth of the portfolio. Just as problematic, evaluation results that are critical to determining whether a utility met its annual energy savings goal are not available until four to five months into the subsequent year. These issues have been the subject of considerable discussion among stakeholders over the past two years.

ComEd's Proposal – Consistent with a framework developed through the Stakeholder Advisory Group (“SAG”), we propose that all programs’ NTGs and RRs be applied in a prospective manner only. Revised NTG and RR estimates would be applied to the evaluation of the Plan year beginning after the evaluation was completed. This approach would ultimately allow us to better allocate funds to the most cost-effective program that we can offer our customers.

Behavioral Programs. One of the most important and innovative concepts in energy efficiency is the use of information to influence energy use behavior in a measurable way. These “behavioral” programs are not tied directly to the installation of energy efficiency technology

(e.g., CFLs, T-8 lights), but use a variety of techniques developed in the field of Behavioral Economics to create incentives based on social norms to influence customers to reduce energy consumption.

ComEd Proposal – Based on our own pilot program and a review of existing literature, we are proposing to include a Home Energy Report program as a full-scale program element in this Plan. As designed, this program element will provide significant cost-effective kWh savings within the residential sector.

Education / Outreach. We believe that energy efficiency education and outreach is a key component for a successful, long-term energy efficiency strategy. This education and outreach strategy is not tied to individual program elements, but is intended to increase awareness and educate customers on the many benefits of energy efficiency.

Municipal Outreach Effort

We also intend to implement a municipal outreach effort, working with the Metropolitan Mayors Caucus to develop and implement activities designed to engage the municipalities in our energy efficiency efforts. Based on our Community Energy Challenge pilot program, we believe this is an untapped resource for energy efficiency delivery.

ComEd Proposal – We intend to develop and implement a comprehensive energy efficiency education/outreach strategy as part of this Plan. Our education and awareness strategy will plant the seed of energy efficiency, show how it impacts consumers, help customers learn about the *Smart Ideas* portfolio and encourage action to become advocates of energy efficiency. This Plan will have three areas of focus: advocacy, awareness and behavioral. The advocacy strategy will center on “train the trainer” educational initiatives to create energy efficiency advocates; the awareness strategy will provide general market knowledge about *Smart Ideas* programs; and the behavioral strategy will engage customers and reward their energy efficient behavior.

Role of CFLs in the Portfolio / Impact of Federal Lighting Standards. For many years the CFL has been the foundational technology for most energy efficiency portfolios. This dynamic will change in the next several years as federal legislation will force the current, most common incandescent bulbs off the market, changing the energy consumption baseline against which CFL programs are measured. The net result will be that CFL programs will become less cost effective and smaller in size.

ComEd Proposal - We believe that, while the federal standard will result in a new and more stringent lighting energy use baseline, the dominant CFL technologies will remain viable as a program option for the next three Plan years. Nevertheless, we have determined that a conservative approach would be most appropriate, resulting in the number of CFLs proposed in the Plan declining over time. Additionally, we assume that as the pending federal legislation nears, consumers will be more apt to turn to the CFL – this likely would result in a lower NTG ratio, which has been taken into account in the Residential Lighting program element’s modeling. The end result is that our portfolio becomes more expensive on a cent per kWh basis because the CFL’s role is diminished.

Demand Response Program. This challenge was discussed above in the Goals section.

ComEd Proposal – We will maintain the A/C Cycling program element at its current level in maintenance mode over the next three Plan years, but will not expand it due to budget

constraints. In terms of the MW goal, we propose that the MW savings associated with the residential energy efficiency programs be counted towards the kW goal.

Building a Technology Pipeline. For utilities, the energy efficiency program landscape has changed dramatically over the last decade as many of the traditional demand-side management (“DSM”) or energy efficiency measures no longer pass the required cost-effectiveness tests. This has occurred in many markets as improving federal energy efficiency standards have eliminated many technologies, such as high efficiency refrigerators, from utility energy efficiency portfolios. The end result is that utilities will need to find new opportunities to meet the energy efficiency savings goals that have been put in place.

ComEd Proposal – We believe the research and development (“R&D”) / emerging technology program element of the portfolio must play a critical role in the portfolio’s final composition. The identification and analysis of new concepts – whether technological or behavioral in nature, or new delivery mechanisms – is an important component of our ability to achieve significant energy savings now and in the future. We propose to budget our R&D expenses at the maximum 3% of overall budget as allowed by statute. Additionally, we propose that the R&D activities be evaluated by the independent evaluator and any kWh savings realized from these activities count towards the annual kWh goal. We also intend to collaborate with the SAG on the new concepts for consideration.

1.4 Key Planning Enhancements

While our planning approach is very similar to the approach used to develop our first Plan, there are some key differences that we believe strengthen this Plan:

- This Plan’s analysis is based much more on ComEd-specific data than the previous Plan. We now have access to actual program implementation data as well as the results of a ComEd-specific market baseline study. Additionally, we developed new building simulations that address updated codes and standards and associated building baseline issues.
- We purchased and implemented an industry-standard model, DSMore, for all cost-effectiveness modeling in this Plan. All modeling was conducted internally by ComEd’s Energy Efficiency (“EE”) planning team.
- Stakeholders have had the opportunity to play a much more active role in the development of this Plan, and we believe their involvement has resulted in the development of a more comprehensive portfolio. For example, in response to a stakeholder’s desire for a more comprehensive whole-home program offering, we have

Joint Electric – Gas Effort

A consistent theme, heard repeatedly over the last several years, is the need for a “whole house” program. Given the minimal electric heating in our service territory, it has been difficult, if not impossible, to develop a cost-effective program based on electric efficiency measures only. With the new gas energy efficiency legislation, ComEd has a unique opportunity to work with the two gas companies serving our service territory, Nicor and Integrys, to design “co-delivered” energy efficiency programs. We believe the effort and corresponding results that have been set forth both in our Plan and the gas utilities’ plans are virtually unprecedented in the country.

worked with two gas companies - Nicor and Integrys - to design a proposed joint offering.

- We have worked extensively with these gas utilities and have developed a variety of programs that we propose to co-deliver or coordinate together over the next three Plan years. There are several key benefits to this approach – (1) programs can be more comprehensive in nature, (2) customers can have a single point of contact for multiple measures, and (3) the utilities can realize synergies from jointly implementing these programs.

1.5 Portfolio Summary

Our portfolio will continue to offer two “umbrella” programs with a variety of program elements under each umbrella. We will continue to use the banner of “*Smart Ideas*,” with the residential sector program elements marketed under the “*Smart Ideas for Your Home*” brand and the commercial & industrial program elements marketed under the “*Smart Ideas for Your Business*” brand.



As required, the portfolio as a whole is cost-effective with a Total Resource Cost (“TRC”) test benefit-cost ratio of 2.36. The portfolio is designed to achieve the kWh goals discussed above, while not exceeding the estimated spending screen. The portfolio is also designed to meet the statutory demand response goals within the spending screen using the kW savings associated with the residential energy efficiency program elements.

TRC Results
At the Portfolio level,
the TRC test
produces a 2.36
benefit / cost ratio
for ComEd’s portion
of the portfolio.

The following tables present ComEd’s proposed portfolio. The first table summarizes each program element’s projected kWh savings and cost by year. The *Smart Ideas* programs will consist of 19 program elements. These program elements are designed to reach customers and incent energy efficiency improvement using a variety of technologies delivered through a variety of channels. The delivery channel is chosen to maximize the program’s productivity (*i.e.*, minimize cost per kWh).

The second table presents the key cost-effectiveness data for each of the program elements. Finally, the last table provides a breakdown of the portfolio level costs.

Table 4 - ComEd Program Elements - Energy Impacts and Costs

Programs	PY4		PY5		PY6		3 Yr Plan Total	
	Cost	Net MWHs						
C&I - EE Programs								
Prescriptive	\$ 38,912,858	238,252	\$ 38,912,858	238,345	\$ 38,747,353	233,195	\$ 116,573,069	709,792
Custom	\$ 6,105,332	28,796	\$ 5,367,038	35,996	\$ 6,758,643	43,195	\$ 18,231,013	107,987
Retro-commissioning	\$ 5,032,168	26,880	\$ 4,681,601	29,568	\$ 5,472,800	32,525	\$ 15,186,569	88,973
New Construction	\$ 2,612,468	5,502	\$ 3,624,597	8,402	\$ 4,641,273	12,604	\$ 10,878,338	26,508
Midstream Incentives	\$ 1,496,875	19,979	\$ 1,974,875	32,766	\$ 1,819,355	28,083	\$ 5,291,105	80,828
Compressed Air	\$ 2,072,573	18,151	\$ 2,785,636	19,967	\$ 3,453,753	21,963	\$ 8,311,962	60,081
Small Business Direct Install	\$ 3,389,913	5,960	\$ 4,856,232	8,940	\$ 4,861,174	8,940	\$ 13,107,319	23,840
Energy Efficiency RFP	\$ 1,483,350	4,995	\$ 2,493,982	13,499	\$ 2,895,560	16,201	\$ 6,872,892	34,695
C&I CACES	\$ 262,538	430	\$ 549,795	1,721	\$ 669,179	2,239	\$ 1,481,512	4,390
Commercial Real Estate	\$ 702,697	-	\$ 1,997,348	5,245	\$ 2,002,290	5,245	\$ 4,702,335	10,490
Data Center Efficiency	\$ 416,089	-	\$ 917,691	6,500	\$ 922,632	6,500	\$ 2,256,412	13,000
C&I TOTAL	\$ 62,486,861	348,945	\$ 68,161,653	400,949	\$ 72,244,012	410,690	\$ 202,892,526	1,160,584
RESIDENTIAL - EE Programs								
Lighting	\$ 18,371,504	181,601	\$ 15,336,556	133,937	\$ 13,284,736	96,029	\$ 46,992,796	411,567
Home Energy Reports	\$ 2,774,112	64,803	\$ 2,783,708	64,803	\$ 3,321,342	81,004	\$ 8,879,162	210,610
Appliance Recycling	\$ 8,378,891	33,371	\$ 7,039,929	31,782	\$ 7,044,871	31,782	\$ 22,463,691	96,935
CACES	\$ 4,153,558	8,233	\$ 4,031,396	9,606	\$ 4,444,864	10,978	\$ 12,629,818	28,817
M-F Home Performance	\$ 1,393,522	6,110	\$ 2,026,914	9,014	\$ 2,825,023	12,719	\$ 6,245,459	27,843
Appliance Rebate	\$ 2,973,983	1,786	\$ 2,975,182	1,786	\$ -	-	\$ 5,949,165	3,572
S-F Home Performance	\$ 364,890	438	\$ 747,173	1,085	\$ 1,110,501	1,681	\$ 2,222,564	3,204
New Construction	\$ 87,638	-	\$ 345,427	978	\$ 513,870	1,955	\$ 946,935	2,933
RESIDENTIAL TOTAL	\$ 38,498,098	296,342	\$ 35,286,285	252,991	\$ 32,545,207	236,148	\$ 106,329,590	785,481
Demand Response - AC Cycling Maint.	\$ 355,000		\$ 1,028,000		\$ 896,000		\$ 2,279,000	
Third Party Program Admin.	\$ 1,200,000	-	\$ 2,000,000	12,500	\$ 2,000,000	12,500	\$ 5,200,000	25,000
Total ComEd EE	\$ 102,539,959	645,287	\$ 106,475,938	666,440	\$ 107,685,219	659,338	\$ 316,701,116	1,971,065
DCEO								
DCEO	\$ 40,039,149	113,624	\$ 40,523,414	114,634	\$ 40,691,802	115,258	\$ 121,254,366	343,516
Portfolio-Level Costs								
Total Portfolio-Level Costs TOTAL	\$ 17,577,488		\$ 15,094,305		\$ 14,390,187		\$ 47,061,980	
PORTFOLIO TOTAL								
PORTFOLIO TOTAL	\$ 160,156,596	758,911	\$ 162,093,657	781,074	\$ 162,767,209	774,596	\$ 485,017,461	2,314,581
ComEd Portfolio Cost (less DCEO)	\$ 120,117,447	645,287	\$ 121,570,243	666,440	\$ 122,075,406	659,338	\$ 363,763,096	1,971,065

Table 5 - ComEd Program Elements - Key Cost-Effectiveness Results

Programs	First Year Costs (\$/kWh)			Lifetime Costs	TRC
	PY4	PY5	PY6	¢/kWh	Test
C&I - EE Programs					
Prescriptive	\$ 0.16	\$ 0.16	\$ 0.17	\$ 0.03	1.70
Custom	\$ 0.21	\$ 0.15	\$ 0.16	\$ 0.03	4.63
Retro-commissioning	\$ 0.19	\$ 0.16	\$ 0.17	\$ 0.07	1.81
New Construction	\$ 0.47	\$ 0.43	\$ 0.37	\$ 0.03	1.86
Compressed Air	\$ 0.11	\$ 0.14	\$ 0.16	\$ 0.02	5.29
Midstream Incentives	\$ 0.07	\$ 0.06	\$ 0.06	\$ 0.03	1.47
Small Business Direct Install	\$ 0.57	\$ 0.54	\$ 0.54	\$ 0.06	1.13
Energy Efficiency RFP	\$ 0.30	\$ 0.18	\$ 0.18	\$ 0.03	1.64
C&I CACES	\$ 0.61	\$ 0.32	\$ 0.30	\$ 0.06	1.02
Commercial Real Estate	\$ -	\$ 0.38	\$ 0.38	\$ 0.06	1.03
Data Center Efficiency	\$ -	\$ 0.14	\$ 0.14	\$ 0.05	1.30
RESIDENTIAL - EE Programs					
Lighting	\$ 0.10	\$ 0.11	\$ 0.14	\$ 0.01	4.66
Home Energy Reports	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	1.55
Appliance Recycling	\$ 0.25	\$ 0.22	\$ 0.22	\$ 0.03	2.43
CACES	\$ 0.50	\$ 0.42	\$ 0.40	\$ 0.06	1.02
M-F Home Performance	\$ 0.23	\$ 0.22	\$ 0.22	\$ 0.02	2.24
Appliance Rebate	\$ 1.67	\$ 1.67	\$ -	\$ 0.14	3.13
S-F Home Performance	\$ 0.83	\$ 0.69	\$ 0.66	\$ 0.09	3.99
New Construction	\$ -	\$ 0.35	\$ 0.26	\$ 0.02	1.17

Table 6 - ComEd Portfolio-Level Costs

	Annual Costs			3 Yr Plan Total
	PY4	PY5	PY6	
Portfolio-Level Costs				
Education / Outreach	\$ 3,270,441	\$ 2,746,090	\$ 2,196,773	\$ 8,213,304
Municipal Outreach	\$ 1,500,000	\$ 1,000,000	\$ 1,000,000	\$ 3,500,000
Market Transform. - EIO / EDS	\$ 500,000	\$ 500,000	\$ 500,000	\$ 1,500,000
M&V (3% of Spending Screen less DCEO)	\$ 3,603,523	\$ 3,647,107	\$ 3,662,262	\$ 10,912,893
R&D	\$ 3,603,523	\$ 3,647,107	\$ 3,662,262	\$ 10,912,893
Market Research	\$ 2,000,000	\$ 1,000,000	\$ 750,000	\$ 3,750,000
Legal	\$ 500,000	\$ 200,000	\$ 200,000	\$ 900,000
Tracking System	\$ 800,000	\$ 500,000	\$ 500,000	\$ 1,800,000
Labor (Non-program specific)	\$ 1,800,000	\$ 1,854,000	\$ 1,918,890	\$ 5,572,890
Total Portfolio-Level Costs TOTAL	\$ 17,577,488	\$ 15,094,305	\$ 14,390,187	\$ 47,061,980

1.5.1 Smart Ideas for Your Home

Smart Ideas for Your Home offers a wide range of options for residential customer energy management. The program is intended to offer customers multiple opportunities to participate in the energy efficiency services offered by ComEd while at the same time promoting comprehensive actions that can create the most value for customers. An important objective of this program is to use customer education, training, and technology to build a foundation for what we believe is the eventual convergence of energy efficiency and demand response. The specific program elements of the *Smart Ideas for Your Home* program include the following:

Residential Lighting. This is an existing program element that establishes partnerships with midstream channel actors (retailers and their suppliers) to provide customers with instant rebates at the cash register for qualifying lighting products (e.g., CFLs). Some retailers also participate in the program's CFL recycling component, where we subsidize the recycling fee for bulbs returned to the retailer for recycling.

Home Energy Reports. This is a new program element that represents our first foray into a behavioral modification program. We have piloted this concept over the last two years to assess its performance. In this program element, participants will be mailed an energy usage report explaining how they use energy within their households on a monthly/bi-monthly basis. A key indicator on the report is the comparison of how much energy the customer has used over the last two months compared to their "average neighbor" and "efficient neighbor".

Appliance Recycling. This is an existing program element that provides turnkey implementation services, including verification of customer eligibility, scheduling of pick-up appointments, appliance pick-up, recycling and disposal activities, and incentive processing. Secondary working refrigerators, freezers and window air conditioners are eligible appliances.

Central Air Conditioner Efficiency Services ("CACES"). This is an existing program element that contains two air conditioner offerings for residential customers – diagnostic and tune-up services, and quality installation services.

Multi-Family Home Performance. This is a modified version of an existing program element, with the key change being that it will no longer be limited to all-electric units but will now include gas-heated units and gas efficiency measures. In this program element, multi-family residents and building owners/managers will be provided with a quick and easy way to save energy through the direct installation of specific energy efficiency measures. *(This is a joint program offered with gas utilities.)*

Single-Family Home Performance. This is a modified version of an existing program element, with the key change being that it will no longer be limited to all-electric homes but will now include gas-heated dwellings and gas efficiency measures. This program element will offer three tiers of retrofit measures to single family homeowners. In Tier 1, participants will be provided with an energy assessment, as well as the installation of instant energy savings measures. In Tier 2, auditors will facilitate the scheduling and installation of additional weatherization measures during a subsequent visit. In Tier 3, auditors will encourage customers to go beyond the Tier 2 measures and complete the full requirements of the Home Performance with ENERGY STAR™ program. *(This is a joint program offered with gas utilities.)*

Appliance Rebates. This is a new program element that offers an incentive for the purchase of a high efficiency clothes washer. We will offer instant rebates on two types of clothes washers: 1) top loaders that have a modified energy factor (“MEF”) of 2.2, which is 75% greater than the federal standard, and 2) front loaders that have a MEF of 2.6 versus a baseline of 2.2 MEF, which represents an 18% savings increase over the baseline.

Residential New Construction. This is a new program element that will provide home builders with incentives, education and training, and marketing assistance to promote new homes that include the ENERGY STAR Advanced Lighting Package and the installation of high efficiency heating, ventilation and air conditioning (“HVAC”) units. *(This is a joint program offered with Nicor.)*

1.5.2 Smart Ideas for Your Business

Smart Ideas for Your Business offers a complementary set of energy management options to commercial and industrial (“C&I”) customers. A wide variety of individual technology or device incentives will be available, but the objective of the program over time is to move customers towards comprehensive whole building solutions. Customers may participate in this program through any individual program element, although ComEd will encourage customers to use the building benchmarking services available through the program as a first step toward adoption of a “whole building” perspective on energy management. Specific program elements will include:

C&I Prescriptive. This is an existing program element that provides an expedited, simple solution for C&I customers interested in purchasing efficient technologies that can produce verifiable savings. This program element primarily targets discrete retrofit opportunities such as lighting and HVAC systems. Streamlined incentive application and verification and quality control processes are employed to facilitate ease of participation and minimize the time required for incentive payment. Relationships with trade allies (*i.e.*, equipment vendors, installation contractors) are a key strategy for promoting prescriptive incentive availability to customers.

C&I Custom. This is an existing program element that provides incentives and technical assistance to aid in the evaluation and implementation of energy efficiency retrofit opportunities not covered by the Prescriptive Incentives program element. This program element will provide financial assistance to customers to support implementation of high-efficiency opportunities that are available at the time of new equipment purchases, facility modernization, and industrial process improvement. *(This is a joint program offered with gas utilities.)*

Retrocommissioning. This is an existing program element that provides retrocommissioning services, which involves re-optimizing building systems and operations through a network of commissioning service providers operating in our service territory. For smaller facilities, commissioning providers will conduct a targeted assessment of systems with substantial energy savings opportunities such as packaged HVAC units. Larger facilities will be eligible to receive a more comprehensive assessment of building systems and controls. *(This is a joint program offered with gas utilities.)*

C&I New Construction. This is an existing program element that promotes energy efficiency through a comprehensive effort to influence building design practices, and will have three participation tracks: a systems track, a comprehensive track, and a small buildings track. The systems track will serve smaller projects and projects in the later stages of the design process. The comprehensive track will serve large projects early in the design

process, offering a higher level of technical assistance and consultation on building design. The small buildings track will serve projects that are pursuing both lighting and daylighting applications. *(This is a joint program offered with Nicor.)*

Compressed Air. This is a new program element designed to assist customers in identifying inefficiencies in their compressed air systems. Incentives will be offered to customers to partially or completely pay for comprehensive assessments of their compressed air systems. These assessments will focus primarily on the identification and implementation of low- and no-cost improvements.

Midstream Incentives. This is a new program element designed to provide an expedited, simple solution for C&I customers interested in purchasing efficient technologies (e.g., CFLs) that can produce verifiable savings. The program primarily targets discrete replace-on-fail measures. The price of the item is reduced at the point-of-sale in a manner similar to the Residential Lighting program element.

Small Business Direct Install. This is a new program element that we are currently piloting. In this program element, there are three components to engage the customer – initial comprehensive site survey, immediate direct installation and scheduled direct installation. The initial comprehensive site survey will identify electric and gas measures available to the customer for either immediate installation or for longer-term incented projects. Some measures identified in the site survey will be installed immediately. Other measures will be installed at a later scheduled date by a pool of installation contractors. *(This is a joint program offered with gas utilities.)*

Energy Efficiency Request for Proposal (“RFP”). This is a new program element designed to offer large C&I customers the opportunity to competitively bid for incentive funding to implement large, cost effective energy saving projects. Customers will compete against other energy efficiency projects for available funding.

C&I Central Air Conditioner Efficiency Services (“C&I CACES”). This is a new program element that will operate in conjunction with the residential CACES program element, leveraging our existing network of contractors. C&I CACES will offer small business customers diagnostic and tune-up services for their air conditioning equipment.

Commercial Real Estate (“CRE”) Efficiency. This is a new program element that will provide energy efficiency opportunities to the commercial real estate sector by offering financial incentives to assist in overcoming unique barriers (e.g., owner/tenant split incentive issue) to energy efficiency program participation. Customers within this market sector will receive technical assistance as well as a financial analysis that will illustrate leasing provisions, operating expenses and the benefits of installing energy efficiency improvements.

Data Center Efficiency. This is a new program element designed to assist customers in addressing energy efficiency opportunities in both new and existing data centers. Funding for site evaluations will be offered as well as incentives to assist in the upfront costs of installing the identified energy efficiency opportunities. Eligible energy efficiency opportunities in this program will include row-oriented cooling systems, best-in-class uninterruptible power supplies (“UPS”), efficient floor layout, properly located vented floor tiles, and efficient lighting.

Efficiency Innovation - Third Party Administration. One additional kWh savings program that we will implement is our Third Party Administration program element. This program will not be under either of the *Smart Ideas* banners, but rather will offer the opportunity for a third party to implement an energy efficiency program in ComEd's service territory. Our intent is to conduct a request-for-proposal ("RFP") during PY4 asking third parties to bid in a proposed program concept. We will evaluate the bids to select one or multiple programs that further enhance our portfolio. The programs are projected to produce kWh savings in PY5 and PY6.

1.5.3 Education and Outreach

The last core component of our portfolio is the Education and Outreach / Market Transformation component. This component serves a two pronged function – (1) to promote and educate the various customer segments on the value of energy efficiency and (2) to use this education and outreach to drive customers toward energy efficiency activities to help transform the market.

Beginning with this Plan, a strategic shift in Education and Awareness initiatives will take place. We will create a foundation of energy efficiency knowledge, develop advocates for energy efficiency and foster behavioral change, ultimately leading to kWh reduction.

Education initiatives will focus on in-person communication and traditional learning opportunities to develop energy efficiency advocates. These interactive sessions will involve customers in energy usage problems, develop solutions and encourage continuous change. The purpose will be to impart energy efficiency knowledge and create advocates who are expected to pass along this information to their networks such as educators to their students, real estate agents to potential home buyers and sellers, and trade allies to potential business clients.

Awareness initiatives will focus primarily on delivering the message of energy efficiency and overall consumer energy management to the general market. The awareness initiatives may impart messages about *Smart Ideas* programs, but will generally remain program non-specific. General communications will deliver consistent communications across a variety of marketing, media and advertising channels.

Behavioral marketing will target specific customers in non-traditional and more focused ways. These marketing methods will enable behavioral change to be tracked, and in some cases will allow kWh savings to be measured. Behavioral marketing will be used to increase the effectiveness of awareness campaigns.

Additionally, we intend to leverage many of the lessons learned from the ComEd Community Energy Challenge pilot program through a formal Municipal Outreach effort. We will develop and implement a Plan to directly engage municipalities with our energy efficiency efforts. We believe this is an additional prime resource that can be leveraged, benefiting ComEd, the municipalities we serve, and our customers.

1.5.4 Evaluation, Measurement and Verification (“EM&V”)

The objective of any portfolio evaluation is multi-faceted. Evaluation efforts ideally should support the program administrator’s continuous improvement process by identifying the program’s actual performance, showing how this performance differs from the planned performance, and identifying opportunities to improve the processes employed to deliver, incent, market and track program performance over time. Effective evaluation efforts should be used to guide forward-looking program management decisions. Evaluation activities generally can be classified into the following categories:

- **Impact evaluation** – determination of program savings and cost-effectiveness
- **Process evaluation** – assessments of the effect of program structure and how program design, delivery, marketing and tracking affects program performance
- **Verification** – determination of the program participants’ compliance with program terms and of actual project savings for purposes of paying incentives
- **Market effects studies** – attempt to determine the extent to which a program or portfolio has changed or transformed market behavior

The statute addresses the first activity by requiring ComEd to provide for an annual independent evaluation of the cost-effectiveness of the portfolio as well as a full review of the 3-year results of the broader net program impacts. While the law is silent regarding process evaluations, it became clear during discussions with the SAG that process evaluations in the first several years of all programs, as well as broader impact evaluations, were critical to identifying early opportunities for portfolio improvement.

1.5.5 Key EM&V Issues

Net Savings Calculation Challenge. The challenge facing estimation of free ridership and spillover is that both factors are behavioral in nature and not directly measurable. Therefore, evaluators must use survey methods in an attempt to divine the motivations of customers and, specifically, to estimate how much of that motivation came from the influence of an energy efficiency program.

The validity and appropriateness of any single method for estimating net savings is subject to considerable debate within the evaluation community. Just as important, the method employed by an evaluator is strongly affected by the funding available to the evaluator and the type of program being evaluated. Upstream mark-down initiatives (e.g., Residential Lighting program element) do not track individual participants, severely complicating evaluation methods that require participant surveys. Surveys, interviews and store intercepts are considerably more expensive than the use of secondary methods such as comparisons of product market share across regions with and without a program in question.

Examples of Net Savings Challenges

In some cases – for example, the installation of a major industrial efficiency project – this divination is reasonably straightforward, although the process is still susceptible to customers providing self-serving answers to evaluator questions (bias). In other cases – often involving relatively small customer purchases like CFL bulbs that might have been purchased up to a year prior to the evaluation – the validity of the estimates relies almost exclusively on the ability of a customer to remember the circumstances of a small purchase made months ago.

Although we have evaluated NTG values from the key first-year evaluations, there is no certainty that these values will not change significantly from year-to-year. We have worked with the SAG to develop a framework that will minimize the retrospective risk of this variability. However, the portfolio is still at risk to the adverse results from one year to the next, which could impair our ability to achieve our goal in a subsequent year.

California Example

As an example of the complexities associated with Net to Gross analysis, a recent impact evaluation of California's residential lighting program used six different methods to evaluate net-to-gross in the same market; the results of these methods ranged from a low of 6% to a high of 74% for the same program and the same three-year timeframe.

Evaluated *ex post* net savings are not predictable, as changes in evaluation methods can have huge impacts that cannot be known until after the evaluation is complete. This creates substantial risk for us; a risk that is not necessarily symmetrical.

Prudent risk management typically would involve the use of an expected value for net savings in planning and administration. However, there is no way to estimate what that expected value should be. Given that ComEd faces only downside risk if it misses its energy savings goals, the only prudent course of action is to plan to meet a net savings target based on the net savings adjustments produced by the evaluation or our initial estimate of the net savings adjustment, whichever is most conservative.

Net-to-Gross Ratios. Our experience with the first year evaluation confirms our original position regarding deeming of NTG values in its application for approval in the first Plan. Retroactive application of evaluated net savings creates unmanageable risk and requires a level of spending higher than would otherwise be needed if our performance was assessed based on the net savings assumptions used in our approved Plan.

Instead, we firmly believe that any given Plan year's performance should be tracked and evaluated using NTG ratios estimated from prior years' evaluations. Although this can lead to a higher level of spending than would be needed if performance was based on verified gross savings or the net savings assumptions used in our Plan, it would improve program planning and mitigate evaluation risk.

We worked closely with the SAG to arrive at a framework that does just this, thereby minimizing the level of risk that program savings would be radically changed after the Plan year has ended and when no remedy would be available to address program performance. This framework provides that any adjustments to NTG ratio or realization rate values as a result of the independent evaluation will not be applied until June 1 of the Plan year following their final determination. We propose that this framework be accepted and implemented going forward, starting with the PY3 evaluations.

Deemed Savings Values. In our first Plan, we proposed deeming a very small subset of measures from our extensive measures list. The Commission granted deeming of that limited measure list. However, the Commission also directed that "actual savings" needed to be determined for use on a prospective basis and that these values should be revisited every three years (or more often as new technology changes require). Over the past three years, we worked with our implementation contractors and evaluation contractor to revise a number of measure-level savings values. These efforts helped ensure that the savings we report to all parties are appropriate for our service territory and our customers' operating conditions. All of

the evaluator-reviewed measure-level energy savings are provided in the Master Measures List, which can be found in Appendix B. We continue to refine savings calculations on an ongoing basis, and as such the deeming of specific measure-level savings for the duration of a three-year portfolio may not be appropriate.

ComEd proposes that the measure-level energy savings provided in the Master Measure List be provisionally deemed by the Commission, with the expectation that as measure-level savings are modified as a result of new efficiency standards, changes in market conditions, or feedback from ongoing evaluation efforts, new values will be calculated and used on a prospective basis. The timeframe for implementing new values would be the same as for the NTG and realization rate adjustments, which would become effective June 1 of the following Plan year.

Independent Program Evaluation Contractor. The statute requires each utility to “[p]rovide for an annual independent evaluation of the performance of the cost-effectiveness of the utility’s portfolio of measures... as well as a full review of the 3-year results of the broader net program impacts and, to the extent practical, for adjustment of the measures on a going-forward basis as a result of the evaluations.” 220 ILCS 5/8-103(f)(7). To fulfill this obligation, we contracted with Navigant (formerly “Summit Blue Consulting”) to provide all evaluation services for the first three-year Plan. This contract covered our portfolio, as well as all of DCEO’s programs in both the ComEd and Ameren service territory. Navigant provided annual process evaluations as well as annual impact evaluations for all of ComEd’s programs, in response to stakeholder feedback that comprehensive evaluations be conducted early in the program cycle.

ComEd’s contract with Navigant provides the Commission with oversight authority as prescribed in the Commission’s Order on Rehearing:

[T]his Commission has the right to: approve or reject the contract; direct it to terminate the evaluator, if the Commission determines that the evaluator is unable or unwilling to provide an independent evaluation; and approve any action by the utility that would result in termination of the evaluator during the term of the contract period.

Commonwealth Edison Co., Docket No. 07-0540, at 4 (Order on Reh’g Mar. 26, 2008). Additionally, Commission Staff have been invited to, and have participated in, our biweekly calls with the Navigant team to discuss pertinent evaluation issues. As evaluation documents are received from Navigant, Staff receives copies of all draft reports contemporaneously with ComEd.

The evaluation function actually performs two very important roles. First it provides the utility with continual access to the wealth of knowledge that the evaluator provides in an effort to make programs better and to identify issues that would necessitate a mid-course change in program targeting or delivery. Second, the evaluation function conducts an audit to determine if the utility “*did its job*” (*i.e.*, met the energy savings goal).

Both functions are valid, and the evaluation process must be designed to accommodate both the utility’s needs and the regulator’s auditing concerns. We also note that management of the evaluation effort is not a trivial process. During the first two years of the current Plan cycle, we committed one person nearly full-time to this process. Customer surveys for evaluations also require coordination with our implementation contractors, access to our tracking and customer information databases and coordination with our Customer Service and Account Management departments. Our close involvement in the evaluation process is paramount to achieving a sound evaluation.

These issues become more complex over time as portfolios grow and certain jointly-delivered electric and gas programs are deployed into the marketplace. Also, there is expected to be a divergence of program design and delivery relative to our first Plan. Specifically, Ameren's programs will likely be crafted to address a downstate market that is quite different from ours and will address the requirement that they integrate their gas and electric programs. DCEO's portfolio will also reflect its unique segments as well as its legislative mandate to provide integrated electric and gas programs. Therefore, it is unlikely that a single, consistent evaluation design can be implemented on a State-wide basis.

Another factor to be considered in the evaluation process for this Plan is our participation in the PJM capacity auction. We have committed the capacity value of our programs into the capacity market starting in June, 2012; in order to fulfill this commitment we must provide a final EM&V report to PJM annually, starting in May, 2012, that verifies the demand reductions associated with our energy efficiency programs. This evaluation requirement is best done in concert with the statutory EM&V efforts; if done separately, the cost to complete the final EM&V report could reach or exceed \$1 million annually starting in 2012. It would be counter-productive to have to duplicate this effort.

We have established strong working relationships with Nicor and Integrys, which we expect to leverage to ensure that both electric and gas savings impacts of joint programs are evaluated by a single contractor. The logistics of this process still need to be worked on and will be completed prior to the implementation of the programs.

In summary, we believe the current structure for evaluation administration has worked exceptionally well during the first Plan. We endorse a continuation of this process going forward because it achieves the proper balance of evaluator independence and utility involvement in the evaluation process that is required to deliver a robust, cost-effective portfolio of energy efficiency.

1.6 Cost Recovery

ComEd's Rider EDA – Energy Efficiency and Demand Response Adjustment (“Rider EDA”), which is the cost recovery mechanism authorized by Section 8-103 of the Act and approved by the Commission in Docket No. 07-0540, provides for the recovery of all incremental costs incurred by ComEd associated with energy efficiency and demand response plans approved by the Commission and implemented by ComEd. The rider also passes through the costs of such plans approved by the Commission and implemented by DCEO for ComEd customers. Rider EDA provides for annual reconciliation proceedings to true up the actual costs incurred with the revenues obtained through the application of the charge.

2 Introduction

2.1 Legislation Review

Section 8-103 of the Public Utilities Act (“PUA” or “the Act”) requires Illinois utilities, subject to its provisions, to implement energy efficiency and demand response programs to meet energy and demand reduction goals. Achievement of these goals, however, is subject to an annual statutory spending screen. The table below summarizes these goals and the spending screens.

Table 7 – Legislative Goals²

	Yr. commencing June 1	PY1 2008	PY2 2009	PY3 2010	PY4 2011	PY5 2012	PY6 2013	PY7 2014	PY8 2015
Energy Efficiency	<i>Incremental % of energy delivered</i>	0.2%	0.4%	0.6%	0.8%	1.0%	1.4%	1.8%	2.0%
Demand Response	<i>% of prior year eligible retail peak demand</i>	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Spending Screens	<i>Maximum Increase in 'per kWh rate'</i>	0.5%	1.0%	1.5%	2.0%	2.015%	2.015%	2.015%	2.015%

The **annual energy efficiency goals**, defined by the statute as incremental annual energy savings, are calculated as a fraction of each year’s projected total annual energy deliveries. This goal increases every year until 2015, when it then levels off at 2.0%.

The **annual demand response goals** are defined as a 0.1% reduction over the prior year’s eligible retail peak demand. This goal is a constant percentage each year of the Plan and therefore does not increase annually.

The **spending screen** increases by 0.5% every year for the first four Plan years and then levels out at 2.015%. Because the kWh target continues to increase through 2015 but the annual spending screen levels out in 2012, there is a disconnect between the available funding and the statutory kWh goal starting in 2012. The statute provides for this issue to be addressed by requiring the Illinois Commerce Commission (“ICC”) by June, 2011 to “*review the limitation on the amount of energy efficiency and demand-response measures implemented...and report to the General Assembly its findings as to whether that limitation unduly constrains the procurement of energy efficiency and demand-response measures.*” 220 ILCS 5/8-103(d).

2.2 Goal / Budget Overview

As will be explained further in Section 2.5, the spending screen beginning in PY5 and each year thereafter is roughly the same as the PY4 screen. Put another way, the funding available to support the portfolio over the three-year Plan increases by only 0.75% while the goal increases by 75%. This is in contrast to PY1 through PY4 when the relative increases in budget and savings targets were approximately the same. The law states “*the amount of energy efficiency and demand-response implemented for any single year **shall be reduced** by an amount necessary to limit the estimated average net increase due to the cost of these measures included in the amounts paid by eligible retail customers in connection with electric service to no more than the greater of 2.015% of the amount paid per kilowatthour by those customers during*

² “PY__” refers to the Plan Year in question. For example, “PY1” refers to the first year of implementation from June 2008 through May 2009. This Plan covers PY4, PY5 and PY6, which are referenced throughout this document.

the year ending May 31, 2007 or the incremental amount paid for these measures in 2011.” 220 ILCS 5/8-103(d)(5) (emphasis added). Consistent with the statute, ComEd proposes modified energy savings goals for PY5 and PY6 that are in line with the PY4 goal because the PY5 and PY6 budgets are virtually identical to PY4.

Based on the preceding factors, ComEd proposes the following statutory and modified goals.

Table 8 - Plan Year Goals / Spending Screens

	<i>Yr. commencing June 1</i>	PY4 2011	PY5 2012	PY6 2013
Statutory MWH Goal	<i>Energy Efficiency</i>	727,985	920,987	1,294,739
Proposed MWH Goal	<i>Energy Efficiency</i>	727,985	727,985	727,985
Statutory MW Goal	<i>Demand Response</i>	10.5	10.7	10.8
Spending Screen Projection	<i>\$Million</i>	\$ 160.1	\$ 162.1	\$ 162.8

The statute also directs that ComEd and the Department of Commerce and Economic Opportunity (“DCEO”) each implement a portion of the “energy efficiency measures” in ComEd’s Plan. Per the statute, ComEd is to implement 75% of the measures and DCEO implements the other 25% of the measures. During the development of the first Plan, ComEd and DCEO agreed that the “measures allocation” would be based on the spending screen such that ComEd retains 75% of the spending screen funds and the other 25% of the spending screen funds are allocated to DCEO.

The statute also requires that at least 10% of the portfolio’s energy efficiency measures be procured from units of local government, municipal corporations, school districts and community college districts (together called “public sector”). DCEO is required to coordinate this effort with the public sector.

Finally, the statute directs ComEd to coordinate with DCEO regarding the implementation of programs targeted at households at or below 80% of area median income (“*low income programs*”). These programs are to be sized such that they are at a level proportionate to the share of total annual utility revenues from households at or below 150% of the poverty level. As in the first Plan, ComEd and DCEO agreed that DCEO will continue to administer low-income programs.

2.3 Final ICC Order Review

On February 6, 2008, the ICC issued its final order approving ComEd’s first Plan. *Commonwealth Edison Co.*, ICC Docket No. 07-0540, at 41 (Final Order, Feb. 6, 2008) (“Order”). Several of the ICC’s conclusions are still relevant to this Plan.

- The application of the Total Resource Cost (“TRC”) test should be at the portfolio level to provide the utility with greater flexibility; however, the utility is not precluded from applying the TRC test at the measure or program level, if it so chooses. Order at 28.

- *We continue to apply the TRC test at the measure, program and portfolio levels. This does not preclude us, however, from including measures and/or programs from our portfolio on the basis of the TRC test.*
- ComEd must recalculate its spending screen projection on an annual basis. Order at 29-30.
 - *We have recalculated the spending screen for both PY2 and PY3, and propose to do so for PY5 and PY6.*
- ComEd may bank up to 10% of the energy savings over the kWh statutory goal in a year. Order at 41.
 - *We have banked savings in PY1 and project to bank savings in PY2 and PY3; ComEd proposes to modify the banking feature in this docket.*
- Over the first three year Plan, ComEd must develop energy savings values for deemed measures that are to be applied on a prospective basis. Order at 42.
 - *Through our end-use study and program evaluation results, we have developed measure energy savings values that can be deemed in this docket for use on a prospective basis.*
- For program evaluations, ComEd's programs should contain actual net-to-gross ("NTG") ratios. Order at 44.
 - *The independent evaluators have calculated or are in the process of calculating actual NTG ratios for all of our program elements. Also, we have developed a NTG framework in conjunction with the Stakeholder Advisory Group ("SAG").*
- The "Spillover effect" is to be included in the program analysis. Order at 44.
 - *The independent evaluator has designed its program evaluations to incorporate the spillover effect into all its program analyses.*

The list above is not intended to cover the full magnitude of the ICC's Order, but rather is included to review key issues that were addressed and relevant to this Plan.

2.4 ComEd's Energy Efficiency Portfolio Framework

ComEd's 2011-2013 Plan represents our long-term commitment to enhance value for our customers through implementation of a robust, innovative and flexible portfolio of demand-side solutions. This Plan builds upon our existing, successful portfolio of demand-side solutions while expanding the portfolio's reach to address the continually changing regulatory and market environments. The Plan reflects an increasingly collaborative process that engages stakeholders and other parties, addresses all customer markets and embraces innovation.

Five core themes support this vision, and our Plan is intended to embrace each of these themes to achieve a robust energy efficiency portfolio that best serves our customers. Each of these themes is critical to achieving the overall success of the portfolio. These themes are -

- **Support Our Statutory Requirements**
- **Build Upon the Foundation**

- **Be Inclusive**
- **Innovate**
- **Own Responsibility for Plan’s Outcome**

Each theme and its specific objectives are discussed below.

Support Our Statutory Requirements. Section 8-103 of the Public Utilities Act (“PUA”) establishes the threshold for performance by setting both annual energy savings targets and budgets. However, as the statute recognizes, simultaneously satisfying savings targets and spending limits might not be possible. Indeed, beginning in PY5, the spending screen is roughly the same as PY4 yet the energy saving goal increases substantially. Our proposed approach is to maintain a balanced portfolio, ensuring we offer energy efficiency programs to all customers while including a broad array of technologies. Consistent with the statute’s mandate to reduce the measures to stay within the budget, ComEd proposes to modify the goals.

In addition to the kWh targets, ComEd will continue its partnership with the Department of Commerce and Economic Opportunity (“DCEO”) in the development of its portion of the portfolio. This includes ensuring that the statutory goals associated with the public and low-income sectors are addressed in the Plan.

The following table shows the key objectives for this theme, how we have addressed these objectives to date, and how we plan to address them going forward.

“Support Our Statutory Requirements”		
Theme Objectives	First Three Plan Years	Proposed Actions
<ul style="list-style-type: none"> • <i>Achieve statutory targets (if possible)</i> 	Met our portion of the statutory target in PY1 and expect to achieve our portion of the statutory targets in both PY2 and PY3.	Expect to achieve statutory or modified targets, as applicable.
<ul style="list-style-type: none"> • <i>Work within spending screen constraints</i> 	Spent under the spending screen in PY1 and PY2 and project to be under the spending screen in PY3.	Design Plan such that expenditures are within the spending screen all three years.
<ul style="list-style-type: none"> • <i>Jointly develop Plan with DCEO</i> 	Developed portfolio working with DCEO to determine their contribution and program mix.	DCEO will continue with the same program mix for this Plan, which now also includes the gas companies.
<ul style="list-style-type: none"> • <i>Reach widest possible base of customers</i> 	Designed the portfolio to reach as many customers as possible within the constraints of the kWh target and spending screen.	Increase effort to touch a wider base of customers through both expanded program offerings and educational and outreach efforts.
<ul style="list-style-type: none"> • <i>Serve low-income sector</i> 	Served the low-income sector through DCEO’s portion of the portfolio.	DCEO will continue to serve the low-income sector through its portion of the portfolio.
<ul style="list-style-type: none"> • <i>Serve units of local government</i> 	Served the units of local government through DCEO’s portion of the portfolio. Designed and implemented the Community Energy Challenge using local governments to co-deliver efficiency programs.	DCEO will continue to serve the units of local government through its portion of the portfolio.

Build Upon the Foundation. Our second theme is to build upon the foundation of work developed during the first Plan. Many of the program elements implemented during this first cycle will continue to be the foundational components of ComEd’s portfolio going forward. The Residential Lighting program element will continue to be the cornerstone of the *Smart Ideas for Your Home* program over the next three Plan years. The Commercial and Industrial (“C&I”) Prescriptive, Custom and Retro-commissioning program elements will also continue to be key offerings within the *Smart Ideas for Your Business* program. The C&I Prescriptive program element will be the largest offering in the portfolio, accounting for approximately one-third of the energy savings across the entire portfolio.

The following table shows the key objectives for this theme, how we have addressed these objectives to date, and how we plan to address them going forward.

“Build Upon the Foundation”		
Theme Objectives	First Three Plan Years	Proposed Actions
<ul style="list-style-type: none"> • <i>Continue existing successful programs</i> 	Developed several program elements – residential lighting, appliance recycling, C&I prescriptive & custom – that have been cost-effective and produce substantial amount of energy savings.	Continue the key foundational program elements from the first Plan, expanding these programs where possible.
<ul style="list-style-type: none"> • <i>Maximize operating efficiencies</i> 	Managed effectively the implementation of the first set of energy efficiency programs, continually reducing program administration costs across the majority of the programs.	Continue to place focus and energy on the cost-effective management of the portfolio through sound contract management practices, continuous improvement processes, and leveraging of co-delivery opportunities.
<ul style="list-style-type: none"> • <i>Enhance marketing and educational outreach</i> 	Laid the groundwork for an educational and outreach platform for energy efficiency in the first Plan through outreach events, website content and our mobile education trailer.	Plan to expand on our current efforts, developing a more comprehensive energy efficiency education and awareness strategy that includes advocacy, awareness and behavioral components for market transformation, including a municipal outreach component.
<ul style="list-style-type: none"> • <i>Incorporate impacts of changes in codes and standards</i> 	Addressed the requirement to present specific proposals to implement new building and appliance standards through DCEO’s portion of the portfolio.	Include existing and upcoming codes and standards changes in ComEd’s measure and program analyses. For example, the upcoming EISA lighting requirements ³ had a major impact on the Residential Lighting program element; DCEO’s portion of the portfolio will continue to address new building and appliance standards.
<ul style="list-style-type: none"> • <i>Develop diverse portfolio</i> 	Developed a broad portfolio of programs with a few key target offerings for hard-to-reach customer segments.	Further diversify the portfolio both in terms of segmentation and targeting of programs, and include other portfolio level activities designed to engage more customers.
<ul style="list-style-type: none"> • <i>Identify and strengthen market research</i> 	Conducted an end-use saturation and market potential study of key residential and business sector; analyzed current program data to examine ComEd’s market and identify energy efficiency opportunities.	Strengthen our portfolio through such program elements as small business direct install, commercial real estate and data center efficiency; utilize our R&D funding to invest in and analyze new opportunities in

³ The Energy Independence & Security Act 2007 (“EISA”) is a federal law, which has broad-reaching implications aimed at the reduction of energy consumption.

		energy efficiency opportunities for our portfolio.
<ul style="list-style-type: none"> • <i>Build on previously developed marketing and delivery channels</i> 	Developed marketing and delivery channels as part of first Plan, determining most effective methods to deliver different program elements.	Continue to modify delivery and marketing channels to optimize programs, testing new concepts when deemed appropriate. Significantly enhance C&I market segmentation as a foundation for more active customer recruiting.

Be Inclusive. The third key theme is to continue to actively engage stakeholders in an ongoing review of portfolio performance and structure. There has been and will continue to be great value in the engagement of different groups who have an interest in the development of energy efficiency in the ComEd service territory. Over the past three Plan years, ComEd has actively engaged many groups, whether through the Stakeholder Advisory Group (“SAG”) or other means, to solicit input and feedback on our energy efficiency activities. We expect to continue this very important dialogue going forward.

We have collected data on customer awareness and behavior with respect to energy efficiency on an annual basis. As we learn more from our customers, we can better design and implement programs that most effectively meet their energy management needs.

The following table shows the key objectives for this theme, how we have addressed these objectives to date, and how we plan to address them going forward.

“Be Inclusive”		
Theme Objectives	First Three Plan Years	Proposed Actions
<ul style="list-style-type: none"> • <i>Work with stakeholders on programs</i> 	Developed the Stakeholder Advisory Group (“SAG”) that met regularly to address issues associated with the implementation of the first Plan and development of the second Plan.	Continue support of the SAG - it provides a unique opportunity to engage interested stakeholders on issues related to ComEd’s energy efficiency and demand response portfolio. Directly engage larger customers and industry associations.
<ul style="list-style-type: none"> • <i>Work with gas utilities on cooperative program design and delivery</i> 	Initiated co-delivery pilots with Nicor and the Chicagoland Natural Gas Savings Program to test the ability to co-deliver gas and electric programs.	Implement jointly with the gas companies seven program elements that will provide customers with combined electric and gas efficiency offerings while allowing the utilities to leverage infrastructure and minimize delivery costs.
<ul style="list-style-type: none"> • <i>Continue to solicit feedback from our customers</i> 	Conducted annual surveys on customers’ awareness and behavior around energy efficiency and periodic customer satisfaction surveys for key transactional program elements (Appliance Recycling and C&I Prescriptive Program).	Continue to solicit customer feedback on a regular basis by developing a comprehensive market research plan for the energy efficiency and demand response portfolio.
<ul style="list-style-type: none"> • <i>Strengthen ties with local and regional climate initiatives</i> 	Participated in the formation of, and worked extensively with, the Chicago Retrofit Steering Committee to develop a strategy for supporting the energy efficiency elements of the Chicago Climate Change Action Plan.	Continue participating in the Chicago Retrofit Steering Committee and work with other initiatives as they are developed over the next Plan; look for co-delivery opportunities to meet mutual goals.

Innovate. As our energy efficiency goals become more aggressive and the “low-hanging fruit” is plucked, it is important that we develop and deploy new technologies and delivery models for capturing remaining efficiency potential.

We believe it is essential that the portfolio evolve over time. Whether through new technologies, new delivery mechanisms, new program types or targeted customer segments, it is important that these concepts are properly investigated and analyzed to determine their potential viability and value to the portfolio.

Our Plan incorporates several program and technology innovations. Our proposed portfolio embraces the new concept of behavioral programs with the Home Energy Reports program element, which was successfully piloted in PY2 and PY3. We will continue to research and evaluate new technologies such as lighting and commercial refrigeration for inclusion in the C&I Prescriptive Incentive program element. This Plan expands retro-commissioning to streamline its delivery to smaller customers and to give it flexibility to include continuous commissioning. Two C&I program elements, Commercial Real Estate and Data Center Efficiency, are designed to target unique and underserved customer segments. The Energy Efficiency Request for Proposal (“RFP”) program element and the Efficiency Innovation - Third Party Administration program element are new portfolio components designed to solicit energy efficiency projects.

We intend to maximize the emerging technology and research and development (“R&D”) budget at the 3% level if budget allows and concepts are identified. We believe it is critical to focus attention on the development of a pipeline of energy efficiency innovation.

The following table shows the key objectives for this theme, how we have addressed these objectives to date, and how we plan to address them going forward.

“Innovate”		
Theme Objectives	First Three Plan Years	Proposed Actions
<ul style="list-style-type: none"> Identify creative programs for “hard-to-reach” segments 	Identified customer groups or sectors that were not fully engaged in program participation, such as small businesses.	Target specific customers groups, such as small business, commercial real estate and data centers, which are more difficult to reach or have unique needs that require unique solutions as opposed to standard program offerings.
<ul style="list-style-type: none"> Promote new, proven technologies 	Continued to stay abreast of research in the energy efficiency industry to identify new concepts or technologies for potential portfolio inclusion for application in the C&I and residential sectors.	Expect to continue to research new concepts in energy efficiency and, when they appear viable, test and pilot the concepts within the portfolio. The behavioral program, Home Energy Report, is a good example of a new concept that was piloted, and the inclusion of high efficiency washing machines similarly represents the incorporation of new technologies. We will also continue to add technologies to the C&I prescriptive technologies list.
<ul style="list-style-type: none"> Build on pilot programs 	Implemented several pilot programs that provided key insights as to their potential for full-scale implementation. These included a small business direct install program, continuous commissioning, home energy report, community energy challenge and several co-delivery pilots with gas utilities.	Plan to continue to implement pilot programs to test new technologies, services, delivery mechanisms and marketing approaches; several current pilots – Small Business Direct Install and Home Energy Report – will be expanded as part of this Plan.

<ul style="list-style-type: none"> • <i>Develop formalized R&D program</i> 	Identified and analyzed new program concepts as part of our R&D effort; if potential was determined, pilot programs were developed, implemented and evaluated.	Develop and implement a more structured and formalized R&D process as part of this Plan. Participate in Consortium for Energy Efficiency (“CEE”) and eSource emerging technologies activities.
<ul style="list-style-type: none"> • <i>Use customer financing mechanisms</i> 	Did not use customer financing mechanisms as a component of the first Plan.	Will explore the potential of leveraging customer financing options as a component of the portfolio.
<ul style="list-style-type: none"> • <i>Expand technology offering and program participation beyond lighting</i> 	Analyzed the first two Plan years’ program data, which showed that lighting technologies dominated the technology mix in both the residential and C&I sectors.	Offer new program elements, such as Home Energy Reports, Appliance Rebates, Data Center Efficiency, and EE RFP, and provide technical assistance to go beyond lighting and address whole building needs.
<ul style="list-style-type: none"> • <i>Continue to look for Smart Grid / AMI integration opportunities</i> 	Have recently implemented our first Advanced Metering Infrastructure (“AMI”) footprint in the service territory.	Investigate piloting an Integrated Demand Offering within the AMI footprint.

Own Responsibility for Plan’s Outcome. Final responsibility and accountability for our portion of the portfolio’s results rests with us. To achieve the best results possible, we will continue to strive to become best-in-class at all aspects of energy efficiency, from planning to implementation.

In addition, we believe the role of the independent evaluator is important for all parties to ensure that goals are being properly attained. ComEd will continue to work with all parties, including the evaluators, to reduce the evaluation uncertainty associated with the portfolio as this remains one of the key issues in the planning and management of the programs.

Lastly, we intend to develop and implement a formal risk management system for the portfolio that properly assesses the key risks and critical junctures associated with the portfolio.

The following table shows the key objectives for this theme, how we have addressed these objectives to date, and how we plan to address these going forward.

“Own Responsibility for Plan’s Outcome”		
Theme Objectives	First Three Plan Years	Proposed Actions
<ul style="list-style-type: none"> • <i>Drive to be best in design and delivery of programs</i> 	Developed and implemented the first Plan based on concepts that have proven successful across the country.	Use participation in Consortium for Energy Efficiency (“CEE”) to identify and qualify best practice program design. Enhance tracking system as a management tool. Implement benchmarking against other utility portfolios.
<ul style="list-style-type: none"> • <i>Develop leadership position with cooperatively-delivered programs</i> 	Worked with the gas companies, Integrys and Nicor, to develop and implement joint pilot programs.	ComEd engaged the gas utilities early in the planning process to develop jointly run programs as part of this Plan, which resulted in seven joint or coordinated programs.
<ul style="list-style-type: none"> • <i>Manage processes to reduce evaluation uncertainty</i> 	Identified the key issues impacting evaluation uncertainty and worked with the SAG to recommend viable solutions.	Propose an evaluation framework, developed in conjunction with the SAG, to address evaluation uncertainty; the key is that the NTG and Realization Rates are used on a prospective basis

		only.
<ul style="list-style-type: none"> • <i>Build customer awareness of energy efficiency</i> 	Conducted education and outreach efforts to increase customer awareness of energy efficiency.	Enhance our effort towards a formal educational and outreach program to continue to increase customer awareness of energy efficiency. Leverage other regional efforts such as Better Buildings and Home Performance with Energy Star.
<ul style="list-style-type: none"> • <i>Develop best-in-class risk management</i> 	Actively managed the key risks associated with the portfolio, and worked actively to develop a NTG framework that will help mitigate risk.	Implement a formal risk management process to manage and mitigate the key risks in the portfolio.
<ul style="list-style-type: none"> • <i>Adopt standardized measures and methodologies for quantifying energy savings</i> 	Worked closely with other parties – Ameren, DCEO, SAG, and independent evaluators – to develop and adopt standardized methodologies.	Plan to expand our efforts from the first Plan, by adding the gas companies to the mix of parties with whom we will work to develop standard methodologies for portfolio function such as program design, program delivery, and risk management.

2.5 Challenges / Opportunities

Several critical planning and implementation challenges extend over the planning horizon. How these challenges are addressed will greatly affect the shape of the portfolio and our ability to execute our Plan. We believe that clear Commission direction is necessary to resolve these issues. The following describes each issue and our proposed approach.

Statutory kWh Target vs. Spending Screen. Section 8-103 of the PUA requires electric utilities to achieve an annual kWh savings target that increases each year through 2015 when it levels off at 2.0% of energy delivered. However, the amount of money that utilities are allowed to spend to achieve these targets is subject to a statutorily set budget, or “spending screen”. The spending screen increases annually through PY4 and then levels off. Therefore, while savings goals continue to increase, funding does not.

Consistent with Section 8-103, ComEd proposes to reduce the measures to be implemented in order to stay within the spending screens, and accordingly proposes modified energy savings goals. Our analysis clearly indicates that achieving the savings targets in PY4 is possible because both the energy savings goal and spending screen increase. For PY5, ComEd believes it can exceed the modified goal and perhaps even meet the statutory goal when two factors are taken into account. First, the expected CFL carryover⁴ from the two previous years must be applied to PY5. Second, our “banked” kWh⁵ from previous years will need to be

⁴ For the Residential Lighting program element, it was determined in the first year evaluation that not all CFLs purchased in the program were installed in that year. However, the evaluators have determined that one-half of the uninstalled CFLs will be installed in the next Plan year and the other one-half installed two years out. The evaluators have agreed that the portfolio deserves credit for the kWh savings associated with these CFLs, starting in the Plan year they are installed.

⁵ The ICC final order allowed ComEd to bank 10% of any kWh savings that exceed the statutory goal. In calculating the PY5 projected energy savings, we are assuming we exceeded the annual statutory goal during each of the Plan years 1 through 4,

applied to PY5. Without the application of these two additional factors, it is not possible to achieve savings close to the PY5 statutory goal within the spending screen.

For PY6, which includes a 44% increase in the statutory target from approximately 900 GWH to 1,300 GWH, the statutory goal is not achievable under any scenario.

ComEd's Proposal – With respect to PY4, both the energy savings goal and spending screen increase, and ComEd therefore has designed its PY4 portfolio to achieve the statutory goal. Concerning PY5 and PY6, however, only the statutory energy savings goals increase – the spending screens remain set at roughly the PY4 level. Consistent with the statute's mandate that *"the amount of energy efficiency and demand-response measures implemented for any single year shall be reduced by an amount necessary to limit the estimated average net increase due to the cost of these measures included in the amounts paid by eligible retail customers in connection with electric service to no more than the greater of 2.015% of the amount paid per kilowatthour by those customers during the year ending May 31, 2007 or the incremental amount paid for these measures in 2011"* (220 ILCS 5/8-103(d)(5)), ComEd has reduced its measures so it does not exceed the spending screens. Similarly, consistent with Section 8-103(i), ComEd also proposes modified energy savings goals for PY5 and PY6 that are based on PY4. The statute also directs the Commission to address this situation, requiring that *"[n]o later than June 30, 2011, the Commission shall review the limitation on the amount of energy efficiency and demand-response measures implemented pursuant to this Section and report to the General Assembly its findings as to whether that limitation unduly constrains the procurement of energy efficiency and demand-response measures."* 220 ILCS 5/8-103(d).

Consistent with the themes outlined above, ComEd has proposed a robust, cost-effective portfolio that achieves significant kWh savings and represents a diverse cross-section of opportunities for customers of all rate classes to participate in the program. The goals that we propose the Commission adopt are the savings represented by the portfolio we propose. We have set savings targets for the largest and least expensive elements of the portfolio at levels that we believe stretch our ability to scale those programs. Achieving greater scale would, we believe, require a significant increase in program incentives and marketing costs.

Annual Spending Screen Recalculation vs. Three Year Fixed kWh Target. For ComEd's first Plan, we proposed fixing up-front both the kWh target and spending screen for all three years. During the docketed proceeding, it was argued that the statute requires the spending screen to be recalculated on an annual basis. The ICC concurred with this position. The result of this finding was that prior to PY2 and PY3 ComEd recalculated the spending screen. However, the kWh target for each year was not recalculated, which resulted in a disconnect between the budget and goals. Indeed, the recession over the past three years significantly altered the profile of revenue and sales from what was envisioned in the 2007 filing. Revenue and load have both declined from initial expectations. As a result, the PY3 spending screen was reduced by \$6 million from the Plan projection, which placed ComEd in a position of actually pursuing a savings target substantially above what the statute envisioned with substantially less funding than envisioned. This resulted in ComEd recalibrating its portfolio,

and we then apply these banked kWh savings toward PY5. These banked kWh are critical to achieving the PY5 goal. However, this will deplete the banked kWh savings, leaving minimal banked savings for PY6.

eliminating or reducing some portfolio activities, and boosting other program targets to levels that were extremely aggressive given the funding that was available.

ComEd's Proposal – To ensure symmetry and parity, the kWh statutory target and the spending screen each should be recalculated on an annual basis to reflect the most current revenue data. This will ensure to a much greater extent that there is consistency between savings expectations and allowed budget. For example, if the spending screen recalculation results in a 5% reduction in dollars, the kWh target would be reduced by a corresponding 5%. The opposite would also be true – if the spending screen were to increase 5%, the kWh target for that year would also increase 5%.

Evaluation Uncertainty Mitigation. ComEd believes that proper evaluation is critical to determining the actual impact of the portfolio. However, a unique aspect of measuring the impacts of energy efficiency is that one is trying to measure what would have happened in the absence of the programs. This is a very subjective measurement that can be dramatically impacted by such factors as evaluation methodology and budget. There is significant debate within the energy efficiency evaluation communities with respect to the validity of methods used to estimate certain key evaluation parameters, and even whether or not such estimates should be relied upon. The uncertainty involved in these calculations results in major risk to us that is very difficult to manage and may lead to well-intentioned, yet ultimately imprecise, strategic decisions in terms of the long-term growth of the portfolio. For example, a program that could be potentially “cheap” in relation to other programs but more “risky” in terms of its net-to-gross (“NTG”) ratio and realization rates (“RR”) could be passed over or minimized for another program that is projected to produce more stable, but costly results. Just as problematic, evaluation results that are critical to determining whether a utility met its annual goal are not available until four to five months into the subsequent year. This issue is discussed in much more detail in Section 7 Portfolio Evaluation, *infra*.

These two issues were the subject of considerable discussion among stakeholders over the past two years. We believe that parties reached general consensus on a modified approach that can significantly reduce evaluation risk while ensuring the credibility of the process is maintained.

ComEd's Proposal – Consistent with a framework developed through the Stakeholder Advisory Group (“SAG”), we propose that all programs’ NTGs and RRs, as estimated by evaluators, be applied in a prospective manner only. For a new program, the NTGs and RRs that are used for the program modeling would be used for evaluation in the first year of implementation, while new values would be established through program evaluation for subsequent years. These values would take effect at the start of the next Plan year following finalization of the evaluations. For on-going programs, a similar process would be implemented. Determinations as to whether ComEd met its goals would be made using NTG and RR values from the evaluation completed prior to the beginning of the subject Plan year. Revised NTG and RR estimates would be applied in an evaluation of the Plan year beginning after the evaluation was completed. This does not discount the importance of the NTG or RR as part of the evaluation. Rather, it serves to more appropriately balance evaluation risk with our ability to manage that risk, and allows us to manage the portfolio annually with much more assurance in terms of how the portfolio is performing. This approach would ultimately allow us to better allocate funds to the most cost-effective program that we can offer our customers.

ComEd worked closely with the SAG in the development of a NTG framework consistent with that outlined above. Although the SAG did not address the proposed RR framework we also believe the application of the realization rate should be subject to the same terms as the NTG ratio.

Behavioral Programs. One of the most important and innovative concepts in energy efficiency is the use of information to influence energy use behavior in a measurable way. These “behavioral” programs are not tied directly to the installation of energy efficiency technology (e.g., CFLs, T-8 lights), but use a variety of techniques developed in the field of Behavioral Economics to create incentives based on social norms to influence customers to reduce energy consumption. ComEd has conducted a pilot program around one such approach, called the “Home Energy Report”, during the past two years. The results, verified by independent evaluation, suggest this behavioral approach delivers verifiable energy savings at a fraction of the cost of most technology-based programs.

ComEd’s Proposal – Based on our own pilot and a review of existing literature, we are proposing to include the Home Energy Report as a full-scale program element in this Plan. As designed, this program element will provide significant cost-effective kWh savings within the residential sector.

Education / Outreach and Market Transformation. ComEd believes that energy efficiency education, outreach and market transformation is a key component for a successful, long-term energy efficiency strategy. This education and outreach strategy is not simply tied to individual program elements, but is intended to increase awareness and educate customers on the many benefits of energy efficiency and then use that education and outreach to drive customers to energy efficient activities to transform the market. We believe these activities lead to kWh savings, but that these savings are difficult to identify and measure at the customer level.

ComEd’s Proposal – We intend to develop and implement a comprehensive energy efficiency education and outreach strategy as part of this Plan. With the increased kWh targets, it is more important than ever to ensure that customers are aware and educated as to how energy efficiency can impact them. Our education and awareness strategy will plant the seed of energy efficiency, show how it impacts consumers, help customers learn about the *Smart Ideas* programs and encourage action to become advocates of energy efficiency. This Plan will have three areas of focus: advocacy, awareness and behavioral. The advocacy strategy will center around “train the trainer” educational initiatives to create energy efficiency advocates; the awareness strategy will provide general market knowledge about *Smart Ideas* programs; and the behavioral strategy will engage customers and reward their energy efficient behavior. One component of this effort will be a separate municipal outreach that we believe offers unique opportunities to work directly with our municipal customers.

Role of CFLs in the Portfolio / Impact of Federal Lighting Standards. For many years the CFL has been the foundational technology for most energy efficiency portfolios. The CFL program has been the “silver bullet” for many utilities, because it has provided kWh savings at a very low cost compared to other measures, effectively enabling portfolio managers to

include more expensive program elements within a portfolio and still achieve a relatively low average cost per kWh across the portfolio. This dynamic will change in the next several years as federal legislation will force the current, most common incandescent bulbs off the market, changing the energy consumption baseline against which CFL programs are measured. The net result will be that CFL programs will become less cost effective and smaller contributors to portfolio energy savings. After 2014, it is possible that CFLs will themselves become the baseline lighting technology, meaning that there no longer will be any savings associated with them as part of a utility's efficiency portfolio. At a minimum, a new baseline bulb will exist, reducing the savings for CFLs. The result will be a fundamental shift in energy efficiency portfolios around the country going forward, as utilities search for programmatic options to replace CFL programs.

ComEd's Proposal - We have spent considerable time and effort developing a strategy for how to address the new federal legislation in this Plan. We believe that, while the federal standard will result in a new and more stringent lighting energy use baseline, the dominant CFL technologies will remain viable as a program option for the next three Plan years. Nevertheless, we have determined that a conservative approach would be most appropriate, resulting in the number of CFLs proposed in the Plan declining over time. Additionally, ComEd assumes that, as the incandescent bulb phase-out nears, consumers will be more apt to turn to the CFL, which likely would result in a lower NTG ratio and has been taken into account in the program modeling. The end result is that ComEd's portfolio becomes more expensive on a per kWh basis as the CFL's role is diminished.

Demand Response Program. The statute defines demand response as “measures that decrease peak demand or shift demand from peak to off-peak periods.” In the first Plan, we expanded the implementation of our Air Conditioner (“A/C”) Cycling program to achieve the statutory goal for demand response through a stand-alone demand response program. This program allows residential central air conditioners to be cycled on and off during high energy use periods. Because of the hardware that we must procure and maintain for this program element, significant carrying costs are incurred over time for this program, and these costs would accumulate substantially for each year of new enrollments. The budget constraints in PY5 and PY6 have forced us to revisit our position on demand response programs.

To continue the program as currently designed, we project we would need expenditures of \$1.5 million, \$2.6 million and \$2.8 million for PY4, PY5 and PY6, respectively. Our program modeling has determined that the energy efficiency programs, as designed, will provide a substantial contribution to peak demand reduction (over 35 MW each year from the residential sector), which exceeds the statutory targets. Com Ed believes it is more cost-effective to focus program funds on energy-savings and recognize the corresponding demand reduction from these programs to satisfy the statutory annual demand response requirement than to continue to invest in the Central A/C Cycling program element.

ComEd Proposal – ComEd will maintain the A/C Cycling program at its current level in maintenance mode over the next three years, but will not grow the program because of the need to “reduce the amount of energy efficiency and demand-response measures” to fall within the spending screens. 220 ILCS 5/8-103(d)(5). However, the program will still incur costs related to the carrying costs of the equipment and incentive payments due to participation in our first Plan (PY1-PY3).

In terms of the MW goal, the independent evaluations of our PY1 programs showed a net peak reduction of 8.3, which is just short of the PY1 demand response goal of 11.7 MW (71% of goal). As PY1 projections are essentially one quarter of PY4, we can expect that number to greatly exceed the demand response goal in this Plan. Given that the energy efficiency goal increases every year, we can expect the kW associated with the energy efficiency programs to also increase every year. ComEd proposes that the MW savings associated with the energy efficiency programs be recognized to satisfy the demand response goal.

Building a Technology Pipeline. For utilities, the energy efficiency program landscape has changed dramatically over the last decade as many of the traditional demand-side management (“DSM”) or energy efficiency programs no longer pass the required cost-effectiveness tests. For example, because refrigerators on the market have become dramatically more efficient over time, the difference in energy usage between a standard refrigerator and a high efficiency refrigerator has diminished. The incremental cost between the two types of appliances often exceeds the incremental energy savings between the appliances, making the measure not cost-effective. This has occurred in many products as the increase in minimum federal energy efficiency standards have eliminated many technologies, such as high efficiency refrigerators, from utility energy efficiency portfolios. Consumer electronic devices are also showing similar improvement in their energy usage such that they also do not pass cost-effectiveness tests. Moreover, the pending EISA⁶ lighting standards will dramatically reduce the role of lighting in residential energy efficiency programs for both residential and business markets. The end result is that utilities will need to find new, potentially more expensive, opportunities to meet the energy efficiency savings goals that have been put in place.

ComEd Proposal – We believe the R&D and emerging technology element of the portfolio must play a critical role in the portfolio’s final composition. The identification and analysis of new concepts, whether technology, behavioral, or delivery mechanisms, is an important component of our ability to achieve significant energy savings now and in the future. ComEd proposes to budget its R&D expenses at the maximum 3% of overall budget as allowed by statute. While we could cut this portfolio level cost to achieve additional kWh savings, we do not believe this is wise in terms of building a solid energy efficiency portfolio going forward. Ignoring the investigation and analysis of new energy efficiency concepts could greatly hamper our ability to produce cost-effective kWh savings in the future. Additionally, ComEd proposes that the R&D activities (*i.e.*, pilot programs) be evaluated by the independent evaluator and any kWh savings realized from these activities count towards the annual kWh goal.

⁶ The Energy Independence & Security Act 2007 (EISA) is a federal law that has broad-reaching implications aimed at the reduction of energy consumption

3 Portfolio Goals

Section 3 discusses the portfolio goals that ComEd proposes for this Plan. As explained in Section 2, the statutory goals have been modified for PY5 and PY6 because the constraints imposed by the spending screen reduce the amount of energy efficiency measures that can be implemented. The table below illustrates this issue.

Table 9 – Spending Screens and kWh Targets

Annual Goal	Cycle 1			Cycle 2		
	PY1	PY2	PY3	PY4	PY5	PY6
EE Goal - % of Energy Delivered	0.2%	0.4%	0.6%	0.8%	1.0%	1.4%
Statutory EE Goal (MWh)	188,729	393,691	584,077	727,985	920,987	1,294,739
Modified EE Goal (MWh)				n/a	727,985	727,985
Spending Screen - Max. Increase	0.5%	1.0%	1.5%	2.0%	2.015%	2.015%
Spending Screen (\$M)	\$ 39.4	\$ 81.6	\$ 126.7	\$ 160.2	\$ 162.1	\$ 162.8

As shown above, it is important to note that the statutory kWh target increases by over 540,000 MWh from PY4 to PY6 (75% increase), but the spending screen has only a minimal increase of \$2.6 million.⁷

The statute contemplates a scenario where measures must be reduced in order to stay within the spending screens, and clearly states that -

[T]he amount of energy efficiency and demand-response measures implemented for any single year shall be reduced by an amount necessary to limit the estimated average net increase due to the cost of these measures included in the amounts paid by eligible retail customers in connection with electric service to no more than the greater of 2.015% of the amount paid per kilowatthour by those customers during the year ending May 31, 2007 or the incremental amount paid for these measures in 2011. 220 ILCS 5/8-103(d)(5).

When compliance with Section 8-103(d) requires such a reduction in measures, Section 8-103(i) permits the “efficiency standard specified in subsection (b) [to be] modified.” 220 ILCS 5/8-103(i). As a result, ComEd proposes that the statutory energy savings goals for PY5 and PY6 be modified to reflect the PY4 energy savings goal because all three Plan years have roughly the same budget. This provides symmetry between the goals and budgets.

ComEd will continue to offer a “robust” portfolio consistent with the statute’s directive that “the overall portfolio of energy efficiency and demand-response measures...represent a diverse cross-section of opportunities for customers of all rate classes to participate in programs.” In discussions with stakeholders, the robust portfolio approach has consistently been the preferred approach. ComEd has looked at whether a least-cost portfolio of programs could achieve the statutory goals, but does not believe it is possible. We have scaled the size of the lower-cost programs to the maximum level we feel is attainable at their current costs. For example, we believe we have boosted the Residential Lighting program element to its maximum performance level, in terms of bulbs and fixtures incented. Moreover, we believe that we must decrease the size of the program over time to accommodate the new federal lighting standards.

⁷ ComEd is not taking any position on whether the current spending screen should be lifted, but rather will wait for the report the Illinois Commerce Commission is required to file with the General Assembly no later than June 30, 2011.

Although Plan Years 4 through 6 each has roughly the same spending screen and proposed savings goals, Plan Year 5 offers some unique circumstances that we believe will allow us to exceed the modified goal and perhaps meet the statutory goal for PY5. First, we have worked with the independent evaluator to ensure that as part of the Residential Lighting program element a carryover factor is incorporated. In simple terms, it was realized that not all CFLs purchased by customers are installed in the year they were purchased, but will be installed in the future. The independent evaluator acknowledges the kWh savings associated with CFL carryover will exist in future years, giving us 50% of the savings from deferred installations in the year after the purchase and the remaining 50% in the following Plan year. These are essentially “free” kWh savings for the Plan year in which they are measured because the cost of the CFL occurred in a past Plan year. If projections hold true, we estimate that we will receive over 50,000 MWh in PY5 from CFLs purchased in PY3 and PY4.

The other key factor for PY5 will be the redemption of “banked” kWh. In its final order approving the first Plan, the Commission states that *“ComEd’s and DCEO’s request for Commission approval of “banked” energy savings is granted, but, they may “bank” no more than 10 percent of the energy savings required by statute in the year, in which, it is “banked”.*” *Commonwealth Edison Co.*, ICC Docket No. 07-0540, at 41 (Final Order, Feb. 6, 2008). We project that by the end of PY4, over 110,000 MWh of “banked” savings will be accumulated from the first four years of portfolio operation. If ComEd’s assumptions remain valid, these kWh savings would be available to apply in PY5 to make up the shortfall. However, there is risk associated with counting on these kWh to be available in PY5 because only PY1 banked numbers are known at this point. We are making the assumption that we will perform at a certain level and the independent evaluator will be in agreement with our performance for PY2 through PY4. Any negative impact in our performance or the evaluation would place these projections at risk.

ComEd further notes that in PY6 and beyond, the goals will become more difficult and costly to achieve. ComEd expects that its cost/kWh will begin to increase in the future as the cost to acquire customers (incentive plus marketing) increases and net-to-gross ratios fall. A good example is the CFL program where we expect the NTG ratio to decrease over time as the EISA standards take effect over the next several years. The lower NTG ratio means less kWh savings per CFL. This leads to a higher cost per kWh for this program.

ComEd proposes the following kWh targets for this Plan –

Table 10 - Goals / Spending Screen Calculation Summary

Goals / Spending Screen Summary				
	PY4	PY5	PY6	Total
Spending Screen Summary				
ComEd	\$ 120,117,447	\$ 121,570,243	\$ 122,075,406	\$ 363,763,096
DCEO	\$ 40,039,149	\$ 40,523,414	\$ 40,691,802	\$ 121,254,366
Total	\$ 160,156,596	\$ 162,093,657	\$ 162,767,209	\$ 485,017,461
Proposed Demand Response Goals				
MW target	10.5	10.7	10.8	32.0
Proposed Energy Savings Goals				
Portfolio Goal	727,985	727,985	727,985	2,183,955
ComEd Goal	618,787	618,787	618,787	1,856,361
DCEO Goal	109,198	109,198	109,198	327,594
Projected kWh Attained each Year				
ComEd	645,287	666,440	659,338	1,971,065
DCEO	113,624	114,634	115,258	343,516
Total	758,911	781,074	774,596	2,314,581
Projected Additional kWh				
Projected CFL Carryover	50,602	56,849	55,432	
Projected Banked kWh	not required	122,927	39,864	
Projected kWh Total	809,513	960,850	869,892	2,640,255

ComEd has set the total kWh target at the PY4 statutory targets of 727,985 for PY4, PY5 and PY6, respectively. This assumes that DCEO achieves 15% of the target savings, which is 5% less than the 20% (of target savings) that was assigned to DCEO in the first Plan. The reduction of DCEO's kWh target shifts more of the total goal to ComEd (85% of the goal), and we believe that we can achieve the modified goal. As discussed previously, for PY5 the addition of CFL carryover and banked MWhs may allow us achieve the PY5 statutory goal.

Additionally, due the budget constraint, we have reduced the demand response measures in this Plan. We will continue to have available the demand response capability that was obtained in the first Plan, which is projected to be over 30 MWs. However, we will also incur demand response costs still associated with maintaining these MWs. We also project a significant incremental peak demand reduction from the proposed energy efficiency programs in this Plan, ComEd projects to obtain 31, 35 and 38 MWs of peak demand over the three year Plan period from our residential program elements⁸. These MWs exceed the kW statutory goals 10.5, 10.7 and 10.8 MWs, respectively.

⁸ While the demand response requirement in the statute centers around residential and small C&I customers, ComEd will also obtain a large number of MWs from its C&I program elements. We currently project to obtain 67, 76 and 76 MWs in each year of this Plan.

4 ComEd's Planning Process

Section 4 introduces ComEd's planning process, which is consistent with the process used in the first Plan. The portfolio we propose is the product of a multi-stage analysis intended to gather and process the information required to determine program and portfolio cost-effectiveness as defined by Illinois statute. At a high level, the analysis can be broken down into three stages. The first stage is the measures analysis where the cost-effectiveness of the individual energy efficiency measures is determined with the Total Resource Cost ("TRC") test. At the measures stage, the TRC test is only looking at measure costs, which means that program administration costs are not included at this stage, because they are not relevant. The second stage is the bundling of cost-effective energy efficiency measures into programs and performing the cost-effectiveness analysis at the program level. The program administration costs are part of this TRC analysis. Lastly, in the third stage, the programs are bundled into the overall portfolio, which is also analyzed for cost-effectiveness. This step includes portfolio level costs in the cost-effectiveness test. It is also at this stage that the portfolio is balanced, with program participation levels being scaled up or down in an effort to satisfy multiple objectives, including cost-effectiveness, portfolio reach, satisfying the spending screens, and ensuring some funding for emerging technologies and education and outreach.

This section discusses changes in the process since our last Plan, DCEO's on-going role in the Plan and an overview of ComEd's planning process.

4.1 Key Planning Enhancements

Although ComEd's approach is very similar to the approach that led to the development of the first Plan, there are some key differences that we believe strengthen this Plan:

- This Plan's analysis is based much more on ComEd-specific data than the previous Plan. We now have access to actual program implementation data as well as the results of a ComEd-specific market baseline study. Additionally, ComEd developed new building simulations that address updated codes and standards and associated building baseline issues.
- We purchased and implemented an industry-standard model, DSMore, for all cost-effectiveness modeling in this Plan. All modeling was conducted internally by ComEd's Energy Efficiency ("EE") planning team.
- Stakeholders have had the opportunity to play a much more active role in the development of this Plan and we believe their involvement has resulted in the development of a more comprehensive portfolio. For example, in response to a stakeholder's desire for a more comprehensive whole-home program offering, we have worked with Nicor and Integrys to prepare a proposed joint offering.
- We have worked extensively with these gas utilities and have developed a variety of programs that we propose to co-deliver.

Each enhancement is discussed below.

ComEd-Specific Data. Given the accelerated timeframe in which the first Plan had to be developed and filed, we did not have the opportunity to develop much, if any, planning data specific to our service territory. In the final order approving ComEd's first Plan, the

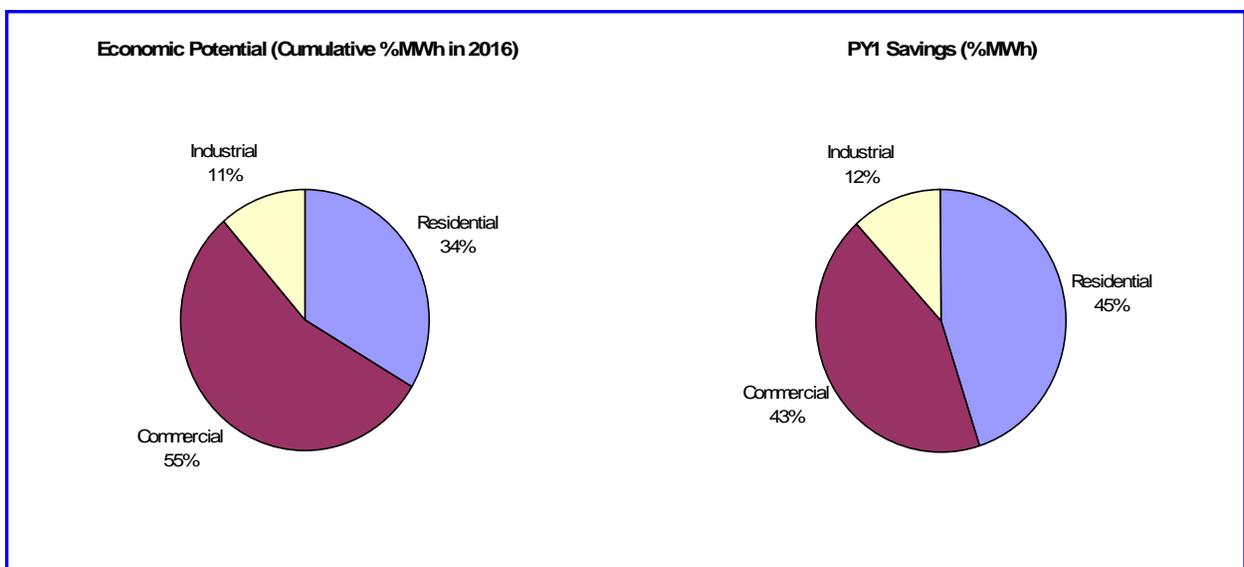
Commission noted this lack of ComEd-specific data and directed that this be addressed in future Plans.

We believe this Plan fully responds to this direction because critical program modeling data are now ComEd-specific. There are three primary sources for these data. First, the current programs and their respective evaluations have provided many of the inputs used in the development of this portfolio. This includes such critical inputs as actual program costs, evaluated NTG ratios, realization rates and program / technology penetration rates. Second, we conducted a comprehensive End-Use Baseline Study and Market Potential Study to gather ComEd-specific data for this analysis. Lastly, we created detailed building simulation models to determine the energy impacts on weather sensitive measures, incorporating new codes and standards into our analysis. Each source is discussed further below.

End-Use Baseline Study. The end-use baseline study provided three specific classes of ComEd-specific data across the residential, commercial and industrial customer classes.

- **Equipment saturation** - the percent of customers who own specific equipment
- **Efficiency penetration** - the percent of the installed equipment stock considered efficient
- **Market share** - current sales percentages for efficient equipment

Market Potential Study. The market potential study was designed to estimate what the potential is for cost-effective energy efficiency in our market. While subjective in nature, it provides directional information in terms of the customer classes, customer segments and end-uses offering more energy efficiency opportunities than other groups. For example, the following chart shows that while the residential sector represented 45% of the total kWh saved in PY1, the residential potential diminishes over time. Our analysis for this Plan is consistent with this finding, as the residential sector share of the total kWh savings declines each year over the planning horizon.



Building Simulation Models. For this Plan, we contracted with the Energy Center of Wisconsin to develop a library of building simulation models for prototypical buildings. These new models were constructed using eQuest building simulation software, which uses the DOE2.2 simulation engine. This collection of models is based largely on the data collected in the end-use baseline study. The development of the new models is part of our longer-term strategy to better reflect Illinois building characteristics and facility energy usage evaluation. ComEd plans to enhance this library over time by taking full advantage of the program data that is collected.

DSMore Model. ComEd acquired DSMore, an industry-standard demand-side management planning model, and has used the model to conduct the primary analyses for this Plan. DSMore is a multi-scenario cost-effectiveness calculator that evaluates measure and program cost-effectiveness against 693 different price/weather scenarios. DSMore’s cost-effectiveness tests are based on the methods prescribed by the California Standard Practice Manual and the National Action Plan for Energy Efficiency (“NAPEE”), which are consistent with the Illinois version of the Total Resource Cost test. DSMore’s key feature (and what sets it apart from competing software) is its ability to correlate historic price and weather data to develop forward-looking avoided costs. In addition to a “best case” determination of energy savings and avoided costs, DSMore also provides outputs for nine different weather/price combinations, which allows us to consider the impact of price shifts and weather extremes within the measure selection and program design process.

Stakeholder Input. After approval of our first Plan, we, along with DCEO and Ameren, established a Stakeholder Advisory Group (“SAG”). An independent facilitator was retained to manage the SAG Meetings for the utilities and DCEO. This group, consisting primarily of environmental and consumer groups, has been an additional information resource to us throughout the implementation of the first Plan and the development of this Plan. The SAG has been meeting for over two years, normally on a monthly basis.

ComEd views this effort as a success insofar as key parties have developed a shared understanding of the process of program planning, implementation and evaluation. The views of the SAG have been important in how we have crafted this Plan. We intend to continue to work with the SAG as a forum for review and discussion.

One key example of stakeholder involvement was the development of the NTG framework. This framework serves to dramatically reduce evaluation uncertainty for us in the future. The stakeholders worked together over several months to develop a framework that was accepted by all parties.

Stakeholder Advisory Group Members

- Ameren Illinois
- Center for Neighborhood Technology (CNT)
- Citizens Utility Board (CUB)
- City of Chicago
- ComEd
- Department of Commerce & Economic Opportunity (DCEO)
- Environment Illinois
- Environmental Law and Policy Center (ELPC)
- Future Energy Enterprise (FUTEE)
- ICC Staff
- Illinois Attorney General’s Office
- Metropolitan Mayors Caucus
- Midwest Energy Efficiency Alliance (MEEA)
- Natural Resources Defense Council (NRDC)

Electric / Gas Integration. A consistent theme, heard repeatedly over the last several years, is the need for a “whole house” program. Given the minimal electric heating in our service territory, it has been difficult, if not impossible, to develop a cost-effective program based on electric efficiency measures only. With the new gas energy efficiency legislation, we have a unique opportunity to work with the two local gas companies, Nicor and Integrys, to design “co-delivered” energy efficiency programs. There are several key benefits to this approach – (1) programs can be more comprehensive in nature, (2) customers can have a single point of contact for multiple measures, and (3) the utilities can realize synergies from jointly implementing the programs.

The three utilities – ComEd, Integrys and Nicor – have held biweekly meetings over several months to develop a framework for this coordinated effort. The framework was established and potential programs for joint implementation were developed and analyzed for both the residential and C&I sectors. ComEd has been engaged with both companies’ planning teams to work through many key logistical issues involved with managing joint programs. These issues included which programs to offer jointly, which markets in which to offer the programs, and the size of the programs. The size of the programs is a key element for ComEd because the gas utilities are only in their first cycle of programs, so their targets and expenditures are much lower relative to ComEd’s second cycle of expenditures. In many cases, the projected size of the program has been limited to the amount of budget the gas companies can allocate to the program.

In summary, the following seven programs are proposed to be co-delivered or coordinated by ComEd and the gas utilities. In addition, the utilities will coordinate efforts to enhance customer experience in several programs and outreach activities. Unless otherwise stated, the programs will be offered with both gas companies.

Current Joint Efforts

During PY3, ComEd partnered with Nicor to co-deliver a Multifamily Direct Install program element and a Single Family Retrofit program element. ComEd also partnered with the Chicagoland Governance Board (“CGB”) to co-deliver similar program elements. In addition, ComEd managed the delivery of Custom and Retrocommissioning program elements on behalf of CGB. These partnerships have provided the utilities valuable insight into joint program management and cost sharing mechanisms.

- **Smart Ideas for Your Home – Joint Program Elements**
 - Single-Family Home Performance
 - Multi-Family Home Performance
 - New Construction *(Nicor only)*
- **Smart Ideas for Your Business - Joint Program Elements**
 - Retro-commissioning
 - Small Business Direct Install
 - C&I Custom Incentives⁹

⁹ For the Custom Incentive program element, coordinated activities include collaborating in “back office” activities to ensure that projects with dual fuel savings receive incentives for each fuel type.

- C&I New Construction¹⁰ (*Nicor only*)

ComEd believes this effort has been very successful and will add value to the portfolio from both the utilities' and customers' perspectives.

4.2 DCEO's Role

Section 8-103 of the PUA requires the implementation of energy efficiency measures be split between ComEd and the Illinois Department of Commerce and Economic Opportunity ("DCEO"), with the latter being responsible for implementing 25% of the measures. Similar to the first Plan, ComEd and DCEO agreed that 25% of the measures would translate into 25% of the spending screen.

We both agreed upon an appropriate segregation of markets and programs. DCEO's efforts will continue in three primary areas: Low Income Programs, Public Sector Programs and Market Transformation Programs. The DCEO programs are designed to meet specific portfolio requirements –

- The Public Sector programs are designed so that 10% of the overall portfolio (or 40% of DCEO's spending) is targeted at local governments, municipal corporations, school districts and community colleges.
- The Low Income programs are designed so that their size is in proportion to low income households' share of utility revenue.
- The Market Transformation programs are designed to present specific proposals to implement new building and appliance standards that have been placed into effect.

4.3 Portfolio Analysis / Development

As stated previously, the planning process is a multi-stage process. First, energy efficiency measures were screened for cost-effectiveness. Second, program concepts were developed that consist of cost-effective measures bundled together.¹¹ Lastly, the portfolio was developed, balancing the cost-effective programs with the available funding and ensuring that the portfolio was diverse in terms of targeted customers and technologies. Each of these steps is summarized below.

4.3.1 Measure Screening

¹⁰ It is the intent of ComEd and Nicor to coordinate the offering of this program. We anticipate there will be new construction projects that could benefit both the gas and electric energy use, and joint offerings, where possible, will be made transparent to the customer

¹¹ In several instances, measures that did not pass the TRC test, but are considered emerging technologies, have been included in program bundles to promote these new technologies. An example includes LED lighting.

The planning process began with the list of existing measures offered during the first Plan. The savings for these measures have been fairly well documented through the individual program operations manuals and have been subject to scrutiny by the independent evaluator as part of the PY1 program evaluations. As a result, these values became a useful starting point for measures to be offered in this Plan.

The data associated with a number of measures required updating as a result of new minimum efficiency standards required under EPACT 2005¹² and EISA 2007. Some of the measures were affected during the latter years of the first Plan, while others will affect savings during this Plan. The table below summarizes the impacted measures.

Measures Impacted	Enactment	New Standards
<i>Commercial Air Conditioning</i>	EPACT 2005	New minimum efficiency standards effective January 1, 2010
<i>Incandescent Lighting</i>	EISA 2007	New efficacy standards to be phased in between January 1, 2012 and January 1, 2014
<i>Linear Fluorescent Lighting and Incandescent Reflector Lamps</i>	EISA 2007	New efficacy standards effective July 14, 2012
<i>Through-the-Wall Air Conditioners</i>	EPACT 2005	New efficacy standards effective January 23, 2010
<i>Water-Cooled and Evaporatively-Cooled Air Conditioners between 240 and 760 Kbtu/hr</i>	EPACT 2005	New efficacy standards effective January 10, 2011
<i>Residential Dehumidifier</i>	EISA 2007	New efficacy standards effective October 1, 2012
<i>Beverage Vending Machines</i>	DOE 2009	New efficiency standards effective August 31, 2012
<i>Commercial Refrigeration Equipment</i>	EPACT 2005 EISA 2007	New efficiency standards effective January 1, 2012
<i>Residential Clothes Washers</i>	EISA 2007	New Modified Energy Standard effective January 1, 2011
<i>Packaged Terminal Air Conditioners and Heat Pumps</i>	DOE 2008	New minimum efficiency standard for standard size units effective October 8, 2012 (non-standard units effective October 7, 2010)
<i>3-Phase General-Purpose Electric Motors</i>	EPACT 2005	New minimum efficiency standards effective January 1, 2011

The implications of these standards vary by program. Notably, the increased efficiency standards for commercial packaged air conditioners render most sizes not cost-effective for this Plan. Also, the new 3-phase motor efficiency standards are such that there is not currently a broad array of more efficient motors available to promote. The new lighting standards will affect the Residential Lighting program element significantly starting in 2013 as the key incandescent lamp wattages are effectively phased out of production. The scheduled standards for linear fluorescent lamps are expected to result in the phase-out of T-12 lamps from production in July 2012. As a result, a number of businesses will be required to update their fluorescent lighting systems to use T-8 lamps, which require ballast replacements. We believe that, given the

¹² Energy Policy Act of 2005 was a wide-ranging act that, among other things, enacted new efficiency standards for certain commercial and residential equipment.

typical stocking behaviors of business customers, this new standard will begin to affect the prescriptive program in the latter half of the 2013 Plan year.

Other programs and databases were reviewed for possible additional measures that could be included within our programs; these measures were identified based on a review of other program offerings and databases, including:

- Northwest Power and Conservation Council
- The California Database for Energy Efficiency Resources (“DEER”)
- Wisconsin Focus on Energy
- Xcel Energy 2010-12 Triennial Plan
- Michigan Measures Database
- Program concept suggestions from the SAG

We validated the energy savings, demand reduction, estimated useful life and incremental cost for each measure. In many cases, the energy savings vary by type of facility in which it is installed. In these cases, we evaluated these measures for each building type in order to assess the sector-specific savings and avoided costs.

Only Cost-Effective Measures?

Short answer, no. While the preponderance of our program elements includes all cost-effective measures, we have made several exceptions. We have included several lighting measures (e.g., LEDs) that we consider emerging technologies and while they do not pass TRC as of yet, we believe introducing them into the market will accelerate acceptance and lead to lower costs (and eventually cost-effectiveness). These measures make up a very small portion of our portfolio. Also, there are some C&I measures that may fail under different building/facility scenarios, but do pass the majority of the time. We do not attempt to discard a measure for “failing” individual building types.

A total of 1,956 measures were evaluated for cost-effectiveness. Of these, 1,444 had a TRC of at least 1.0.

Of the measures that did not pass the TRC test, most (314) were for commercial packaged air conditioning systems. Another significant group of measures that did not pass was LED and induction lighting (55 measures). Finally, a number of outdoor lighting measures did not pass the TRC test due to the low avoided cost associated with off-peak energy savings.

During the analysis, some measures were identified that passed the TRC test for some building types and not for others. In general, measures that passed the TRC test for the majority of applicable building types are considered to have passed the TRC test measure screen. Also, measures that did not pass the TRC test are not necessarily excluded from programs if their inclusion would advance the adoption of new technologies or permit deeper energy savings than would otherwise be achieved. For example, LED and induction lighting, which are relatively nascent technologies, will be included in residential and business programs.

Weather vs. Non-Weather dependent measures

A large number of energy efficiency measures are not dependent on outdoor weather; that is, they do not save more or less energy simply based on the outside temperature. For these measures, energy savings are calculated using generally-accepted engineering methods and equations.

For measures whose savings are weather-dependent (primarily air conditioning-related measures), eQuest building simulation models were used to quantify the energy savings. Measures were modeled using the Chicago-O’Hare weather station data for a typical meteorological year. The Energy Center of Wisconsin developed building models based on ComEd’s baseline and end-use study. These models, plus prototype models from other jurisdictions, were used in the development of energy savings for weather-dependent measures.

4.3.2 Program Screening

One of the key objectives of the program planning process is to ensure that all customers have access to some of our energy efficiency offerings. Some market segments, such as small business customers, historically have been hard-to-reach. Others, like manufacturing businesses, have shown low participation levels in the *Smart Ideas* program to-date. We have made an effort to adjust the original set of *Smart Ideas* program elements to include new elements that might more effectively reach these segments. We began with a review of programs being successfully implemented by other administrators and solicited and analyzed program concepts offered by members of the Stakeholder Advisory Group. Forty-two program concepts, including current program offerings, were identified through this process.

A two-stage screening was conducted on each program concept. The first screen included a high-level review of program viability, including:

- Existing performance history, if program is operating elsewhere
- Cost-effectiveness of program
- Transferability of program to ComEd service territory
- Ability of program to address customer sector gaps or to increase portfolio performance (rather than cannibalizing existing programs)

Internally, the results of the first-level analysis were reviewed and consensus was reached for those concepts that would move to the second screen. This screen provided a more rigorous analysis, including identification of key measures, program costs (*i.e.*, program marketing, incentives and delivery costs), determination of program potential and scale, and a second cost-effectiveness screening reflecting the more detailed savings and costs. These results were then reviewed within the planning team and consensus was reached regarding the final disposition of each program. In all, 19 program elements were developed for inclusion in this Plan, with 8 residential program elements and 11 C&I program elements. These 19 program elements are summarized below.

Program Element Analysis Summary	
Total Concepts	42
Passed First Screen	27
Passed Final Screen	19

Table 11 - Program Element Summary

C&I Program Elements	Program Status	Residential Program Elements	Program Status
Prescriptive Incentive	Existing	Lighting	Existing
Custom Incentive	Existing	Appliance Recycling	Existing
Retro-commissioning	Existing	Central A/C Efficiency Services ("CACES")	Existing
New Construction	Existing	Home Energy Reports	Pilot
Small Business Direct Install	Pilot	M-F Home Performance	Modified
Compressed Air	New	S-F Home Performance	Modified
Midstream Incentives	New	Appliance Rebate	New
Energy Efficiency RFP	New	New Construction	New
C&I Central A/C Efficiency Services	New		
Commercial Real Estate	New		
Data Center Efficiency	New		

4.3.3 Portfolio Balancing

Once all program elements were identified and their associated costs and savings developed, we assembled all program elements into a single, cohesive portfolio. Individual program elements were adjusted as needed to balance the spending screen constraints with the savings targets in each Plan year. In addition, portfolio cross-cutting costs, including program evaluation, education and outreach, tracking and reporting systems, and portfolio administration costs, had to be accounted for within the portfolio budget.

Balancing was done both on a year-by-year basis and between years to ensure continuity of key programs and to reflect the asymmetric funding/goal trajectories. For example, in PY4, the portfolio was designed to maximize energy savings as well as “fill the pipeline” with additional projects for PY5 and PY6. Our portfolio is expected to over achieve in PY4 with the expectation that this excess savings would be banked and applied to PY5 and possibly to PY6.

One of the key challenges within this portfolio involves the cooperative delivery of programs with the two natural gas utilities that serve customers in ComEd’s service territory. The natural gas efficiency portfolios have much more modest goals when compared with the electric portfolios. In addition, certain programs (most notably the residential Multi-Family and Single-Family Home Performance program elements) are dominated by gas for savings and cost allocations. As a result, the size of these programs is dependent on the program targets established by the gas utilities.

The final portfolio reflects a balancing of program elements and non-program activities across the three year Plan life that we believe best aligns us with the statutory requirements and our own portfolio objectives.

5 The ComEd Portfolio

Section 5 introduces the portfolio design, programs and program elements that we propose to implement as part of this portfolio. This portfolio is designed to achieve our key objectives by embracing the five themes discussed earlier.

5.1 Portfolio Design

This portfolio will continue to offer two “umbrella” programs with a variety of program elements under each umbrella. ComEd will continue to use the banner of “*Smart Ideas*” with the residential sector program elements marketed under the “*Smart Ideas for Your Home*” brand and the commercial & industrial program elements marketed under the “*Smart Ideas for Your Business*” brand.



**TRC Results -
At the Portfolio level, the TRC
test produces a 2.36 benefit /
cost ratio for ComEd's
portion of the portfolio.**

As required, the portfolio as a whole is cost-effective with a Total Resource Cost (“TRC”) test benefit-cost ratio of 2.36. The portfolio is designed to achieve the kWh goals discussed above, while not exceeding the estimated spending screens. The portfolio is also designed to meet the statutory demand response goals within the spending

screen using the kW savings associated with the residential energy efficiency program elements.

The following tables present ComEd's proposed portfolio. The first table summarizes each program element's projected kWh savings and cost by year. The *Smart Ideas* programs will consist of 19 program elements. The program elements are designed to reach customers and incent energy efficiency improvement using a variety of technologies delivered through a variety of channels. The delivery channel is chosen to maximize the program's productivity (*i.e.*, minimize cost per kWh.)

The second table presents the key cost-effectiveness data for each of the program elements. Finally, the last table provides a breakdown of the portfolio level costs.

Table 12 - Portfolio Overview - Energy Impacts & Costs

Programs	PY4		PY5		PY6		3 Yr Plan Total	
	Cost	Net MWhs						
C&I - EE Programs								
Prescriptive	\$ 38,912,858	238,252	\$ 38,912,858	238,345	\$ 38,747,353	233,195	\$ 116,573,069	709,792
Custom	\$ 6,105,332	28,796	\$ 5,367,038	35,996	\$ 6,758,643	43,195	\$ 18,231,013	107,987
Retro-commissioning	\$ 5,032,168	26,880	\$ 4,681,601	29,568	\$ 5,472,800	32,525	\$ 15,186,569	88,973
New Construction	\$ 2,612,468	5,502	\$ 3,624,597	8,402	\$ 4,641,273	12,604	\$ 10,878,338	26,508
Midstream Incentives	\$ 1,496,875	19,979	\$ 1,974,875	32,766	\$ 1,819,355	28,083	\$ 5,291,105	80,828
Compressed Air	\$ 2,072,573	18,151	\$ 2,785,636	19,967	\$ 3,453,753	21,963	\$ 8,311,962	60,081
Small Business Direct Install	\$ 3,389,913	5,960	\$ 4,856,232	8,940	\$ 4,861,174	8,940	\$ 13,107,319	23,840
Energy Efficiency RFP	\$ 1,483,350	4,995	\$ 2,493,982	13,499	\$ 2,895,560	16,201	\$ 6,872,892	34,695
C&I CACES	\$ 262,538	430	\$ 549,795	1,721	\$ 669,179	2,239	\$ 1,481,512	4,390
Commercial Real Estate	\$ 702,697	-	\$ 1,997,348	5,245	\$ 2,002,290	5,245	\$ 4,702,335	10,490
Data Center Efficiency	\$ 416,089	-	\$ 917,691	6,500	\$ 922,632	6,500	\$ 2,256,412	13,000
C&I TOTAL	\$ 62,486,861	348,945	\$ 68,161,653	400,949	\$ 72,244,012	410,690	\$ 202,892,526	1,160,584
RESIDENTIAL - EE Programs								
Lighting	\$ 18,371,504	181,601	\$ 15,336,556	133,937	\$ 13,284,736	96,029	\$ 46,992,796	411,567
Home Energy Reports	\$ 2,774,112	64,803	\$ 2,783,708	64,803	\$ 3,321,342	81,004	\$ 8,879,162	210,610
Appliance Recycling	\$ 8,378,891	33,371	\$ 7,039,929	31,782	\$ 7,044,871	31,782	\$ 22,463,691	96,935
CACES	\$ 4,153,558	8,233	\$ 4,031,396	9,606	\$ 4,444,864	10,978	\$ 12,629,818	28,817
M-F Home Performance	\$ 1,393,522	6,110	\$ 2,026,914	9,014	\$ 2,825,023	12,719	\$ 6,245,459	27,843
Appliance Rebate	\$ 2,973,983	1,786	\$ 2,975,182	1,786	\$ -	-	\$ 5,949,165	3,572
S-F Home Performance	\$ 364,890	438	\$ 747,173	1,085	\$ 1,110,501	1,681	\$ 2,222,564	3,204
New Construction	\$ 87,638	-	\$ 345,427	978	\$ 513,870	1,955	\$ 946,935	2,933
RESIDENTIAL TOTAL	\$ 38,498,098	296,342	\$ 35,286,285	252,991	\$ 32,545,207	236,148	\$ 106,329,590	785,481
Demand Response - AC Cycling Maint.	\$ 355,000	-	\$ 1,028,000	-	\$ 896,000	-	\$ 2,279,000	-
Third Party Program Admin.	\$ 1,200,000	-	\$ 2,000,000	12,500	\$ 2,000,000	12,500	\$ 5,200,000	25,000
Total ComEd EE	\$ 102,539,959	645,287	\$ 106,475,938	666,440	\$ 107,685,219	659,338	\$ 316,701,116	1,971,065
DCEO								
DCEO	\$ 40,039,149	113,624	\$ 40,523,414	114,634	\$ 40,691,802	115,258	\$ 121,254,366	343,516
Portfolio-Level Costs								
Total Portfolio-Level Costs TOTAL	\$ 17,577,488		\$ 15,094,305		\$ 14,390,187		\$ 47,061,980	
PORTFOLIO TOTAL								
PORTFOLIO TOTAL	\$ 160,156,596	758,911	\$ 162,093,657	781,074	\$ 162,767,209	774,596	\$ 485,017,461	2,314,581
ComEd Portfolio Cost (less DCEO)	\$ 120,117,447	645,287	\$ 121,570,243	666,440	\$ 122,075,406	659,338	\$ 363,763,096	1,971,065

Table 13 - Key Cost-Effectiveness Results

Programs	First Year Costs (\$/kWh)			Lifetime Costs	TRC
	PY4	PY5	PY6	¢/kWh	Test
C&I - EE Programs					
Prescriptive	\$ 0.16	\$ 0.16	\$ 0.17	\$ 0.03	1.70
Custom	\$ 0.21	\$ 0.15	\$ 0.16	\$ 0.03	4.63
Retro-commissioning	\$ 0.19	\$ 0.16	\$ 0.17	\$ 0.07	1.81
New Construction	\$ 0.47	\$ 0.43	\$ 0.37	\$ 0.03	1.86
Compressed Air	\$ 0.11	\$ 0.14	\$ 0.16	\$ 0.02	5.29
Midstream Incentives	\$ 0.07	\$ 0.06	\$ 0.06	\$ 0.03	1.47
Small Business Direct Install	\$ 0.57	\$ 0.54	\$ 0.54	\$ 0.06	1.13
Energy Efficiency RFP	\$ 0.30	\$ 0.18	\$ 0.18	\$ 0.03	1.64
C&I CACES	\$ 0.61	\$ 0.32	\$ 0.30	\$ 0.06	1.02
Commercial Real Estate	\$ -	\$ 0.38	\$ 0.38	\$ 0.06	1.03
Data Center Efficiency	\$ -	\$ 0.14	\$ 0.14	\$ 0.05	1.30
RESIDENTIAL - EE Programs					
Lighting	\$ 0.10	\$ 0.11	\$ 0.14	\$ 0.01	4.66
Home Energy Reports	\$ 0.04	\$ 0.04	\$ 0.04	\$ 0.04	1.55
Appliance Recycling	\$ 0.25	\$ 0.22	\$ 0.22	\$ 0.03	2.43
CACES	\$ 0.50	\$ 0.42	\$ 0.40	\$ 0.06	1.02
M-F Home Performance	\$ 0.23	\$ 0.22	\$ 0.22	\$ 0.02	2.24
Appliance Rebate	\$ 1.67	\$ 1.67	\$ -	\$ 0.14	3.13
S-F Home Performance	\$ 0.83	\$ 0.69	\$ 0.66	\$ 0.09	3.99
New Construction	\$ -	\$ 0.35	\$ 0.26	\$ 0.02	1.17

Table 14 - ComEd Portfolio-Level Costs

	Annual Costs			3 Yr Plan Total
	PY4	PY5	PY6	
Portfolio-Level Costs				
Education / Outreach	\$ 3,270,441	\$ 2,746,090	\$ 2,196,773	\$ 8,213,304
Municipal Outreach	\$ 1,500,000	\$ 1,000,000	\$ 1,000,000	\$ 3,500,000
Market Transform. - EIO / EDS	\$ 500,000	\$ 500,000	\$ 500,000	\$ 1,500,000
M&V (3% of Spending Screen less DCEO)	\$ 3,603,523	\$ 3,647,107	\$ 3,662,262	\$ 10,912,893
R&D	\$ 3,603,523	\$ 3,647,107	\$ 3,662,262	\$ 10,912,893
Market Research	\$ 2,000,000	\$ 1,000,000	\$ 750,000	\$ 3,750,000
Legal	\$ 500,000	\$ 200,000	\$ 200,000	\$ 900,000
Tracking System	\$ 800,000	\$ 500,000	\$ 500,000	\$ 1,800,000
Labor (Non-program specific)	\$ 1,800,000	\$ 1,854,000	\$ 1,918,890	\$ 5,572,890
Total Portfolio-Level Costs TOTAL	\$ 17,577,488	\$ 15,094,305	\$ 14,390,187	\$ 47,061,980

5.2 Portfolio Elements

ComEd's portfolio is constructed from four building blocks. Three of these are focused on specific customer groups or activities while the last building block, Education & Outreach and Market Transformation, is more general and cuts across all customer classes. The four building blocks are -

- **Residential Programs (“*Smart Ideas for Your Home*”)**
- **Business Programs (“*Smart Ideas for Your Business*”)**
- **DCEO Programs**
- **Education and Outreach and Market Transformation Activities**

5.2.1 *Smart Ideas for Your Home - Residential Program Elements*

ComEd's Residential Program “*Smart Ideas for Your Home*” is targeted at our residential customer segment. Residential customers total 3.5 million customers, accounting for 90% of our customers and approximately 35% of the overall kWh usage.

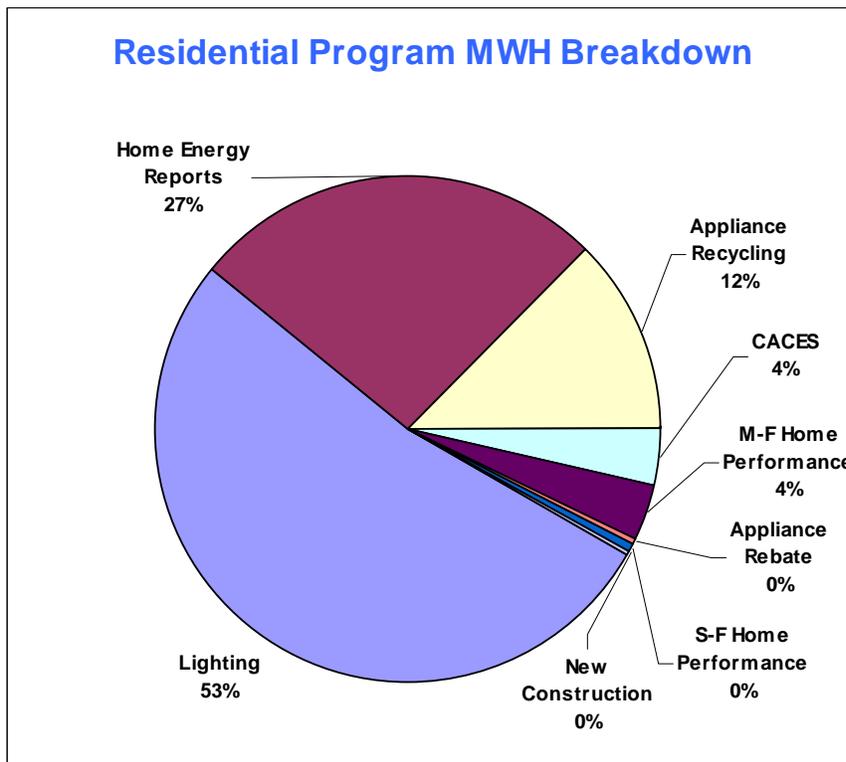
Smart Ideas for Your Home includes 8 program elements. These 8 program elements are projected to reduce energy usage by over 785,000 MWh over the three-year planning horizon. In PY4, this program is expected to attain 39% of total incremental energy savings, 33% in PY5 and 32% in PY6. The decrease of 7% over time is primarily due to the EISA legislation that gradually reduces the role of the compact fluorescent lamp (“CFL”) within the portfolio. This measure has been a driving force in the residential sector for most utilities across the country and will need to be replaced going forward.

Smart Ideas for Your Home will continue to offer a wide range of options for residential customer energy management, and is intended to reach all key market segments. The residential portfolio also reflects our view that certain program elements such as Residential Lighting and Appliance Recycling have reached their maximum scales absent a fundamental change in technology, incentive levels or delivery model. As this scale is reached, we need increasingly to explore technology and program options that typically will be more expensive or produce a lower yield per dollar. This is an evolution that every efficiency portfolio experiences, although in our case it is occurring at an accelerated rate in light of new federal efficiency standards and the rapid ramp-up in program activity we face. At the same time, the opportunity we now have to co-develop and co-deliver programs with the natural gas utilities provides us with new delivery options and new markets.

The table below summarizes the residential program elements, listing their current status in the portfolio, implementation date and involvement of the natural gas companies.

Residential Program Elements				
Programs	Program Status	Start Date	Electric Only or Electric / Gas	Program Snapshot
Lighting	Existing	on-going	Electric Only	Continuation of current program with EISA regulations being taken into account
Appliance Recycling	Existing	on-going	Electric Only	Continuation of current program
CACES	Existing	on-going	Electric Only	Continuation of current program with a new C&I component
Home Energy Reports	Pilot	Jun-10	Electric Only	New behavioral program that will deliver Home Energy Reports to 200,000 customers
M-F Home Performance	Modified	Jun-10	Electric / Gas	Change current all-electric program offering to a joint electric / gas offering
S-F Home Performance	Modified	Jun-10	Electric / Gas	Change current all-electric program offering to a joint electric / gas offering
Appliance Rebate	New	Jun-10	Electric Only	New Program that offers rebates for top tier clothes washers
New Construction	New	Jun-11	Electric / Gas	New Program offered jointly with Integrys for residential new construction that begins PY5

While there are 8 program elements within the program, 3 program elements drive the overall MWh impact. The Lighting program element and the Appliance Recycling program element will continue to produce significant savings through the next Plan. In addition, we expect the Home Energy Report program element will provide a significant and low-cost contribution to the portfolio. The pie chart below shows the projected MWh impact of each program element over the three year period.



The following pages give a detailed description of each of these program elements.

Residential Lighting

Program Element	Residential Lighting
Program Objective	
<p>Increase the market share of ENERGY STAR® qualified lighting products sold through retail sales channels by providing incentives to decrease customer costs, and information and education to increase consumer awareness and acceptance of energy efficient lighting technology. Eligible efficient lighting measures may include screw-in compact fluorescent lamps (“CFLs”), pin-based fixtures, and light emitting diodes (“LEDs”). A CFL recycling educational component will promote proper bulb disposal.</p>	
Program Description	
<p>The Residential Lighting Program is an existing program that we launched in our first Plan. We will partner with an implementation contractor who will establish partnerships with midstream channel actors (retailers and their suppliers) to provide customers with instant rebates for qualifying products. Some retailers currently participate in the program’s CFL recycling component, where ComEd subsidizes the recycling fee for bulbs returned to the retailer for recycling. In order to make it easier for consumers to recycle their bulbs, we will seek additional retailer locations to join the recycling effort.</p> <p>A midstream program approach leverages the normal retail sales channels for CFLs, creating opportunities for cooperative promotions with retailers and manufacturers, and supporting long-term market transformation goals. Instant rebates minimize the burden on consumers, lowering barriers to participation. A midstream approach also facilitates quick program ramp-up and provides detailed data to support evaluation of program impacts. Lastly, the bulb-recycling component offers consumers a convenient disposal option, and offers a mechanism for educating consumers about the importance of proper CFL disposal.</p> <p>The program currently employs two primary rebate delivery mechanisms:</p> <ul style="list-style-type: none">• Markdowns: In this primary rebate approach, we offer an instant rebate on qualifying products that are sold. Qualifying products are listed at a lower retail price on the shelves. In the markdown approach, retailers must provide store-level sales data for qualifying product, while also providing consumers with some indication that the product is discounted (e.g., point of purchase marketing). Our participating retailers currently post program-identifying stickers by each product’s shelf display in addition to other point-of-sale materials.• Coupons: A secondary approach is an in-store coupon that the customer fills out at the time of purchase in order to receive the instant rebate. Retailers submit completed coupons to our fulfillment agent for reimbursement of rebate expenditures, thereby providing us with tracking data for EM&V purposes. <p>With our current program experience, we find that the markdown approach is significantly more efficient and less costly than the coupon approach. Only a small group of retailers participate in the coupon approach because their store point-of-sale systems do not allow them to participate in the markdown approach.</p>	
Utility Coordination	
<p>Because this program offers electric-only energy savings, it will not be offered in coordination with the gas companies. However, we will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.</p>	

Program Element	Residential Lighting
Target Market	
This program is designed for residential customers purchasing lighting products through retail sales channels. All customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.	
Program Duration	
June 2011 through May 2014.	
Delivery Strategy	
We will renegotiate with our current residential lighting implementation contractor to provide services similar to the first Plan. If renegotiations do not produce desired results, an RFP will be conducted.	
Key elements of the implementation strategy include:	
<ul style="list-style-type: none"> • Retailer/manufacturer recruitment: As practiced in our current program design, we will issue an RFP during each respective Plan year to solicit participation by retailers and manufacturers in our service territory. The RFP will specify program requirements such as product specifications and performance criteria, product stocking objectives based on anticipated rebate volume, and data sharing requirements. Memoranda of Understanding (“MOU”) will be signed with selected retailers and manufacturers delineating roles and responsibilities and each party’s commitments in support of programmatic objectives. • Retailer education and outreach: Throughout current program implementation, field staff maintain regular contact with participating retailers to ensure the following: (1) retail sales staff are informed about the program offering, rebate process and benefits of ENERGY STAR lighting products; (2) retailers have an adequate supply of instant rebate coupons at the cash registers, if appropriate; (3) point-of-purchase (“POP”) displays are displayed properly and that qualifying products are stocked in accordance with retailer commitments; (4) program staff are responsive to retailer concerns and issues can be addressed promptly. The program will also keep retailers informed well in advance of planned promotional activities and cooperative advertising opportunities, keeping in mind that retailers typically require at least six months of advanced planning for advertising buys and other promotional activities; and (5) field staff schedule periodic in-store product demonstrations. • Incentive processing: As in the current program practice, a fulfillment agent will be retained to ensure prompt processing of vendor incentive payments. We will negotiate with retailers to determine how frequently store-level sales data and batched coupons will be submitted to the fulfillment house for processing. Since prompt incentive payment is essential to retailer satisfaction and ongoing program engagement, we will work with the fulfillment agent to establish processes and procedures that expedite incentive payments. • Bulb recycling: The CFL recycling component has already been incorporated into our existing lighting program. The recycling service is free to residential customers who turn in spent bulbs at participating retailers. We provide retailers with bins for bulb collection and offer training on proper packaging and labeling of spent lamps, as well as how to safely handle any broken bulbs. We also subsidize recycling fees and promote participating retailers in our marketing efforts. Retailers are responsible for arranging for transportation of collected bulbs to a recycling facility. 	
Marketing Strategy	
The overall marketing strategy will be to modify customer behavior to both purchase and install ENERGY STAR lighting products in their residences. Opportunity exists to leverage customer interactions and deliver information about lighting, the benefits of energy efficiency, cost savings, and to obtain customer preferences and contact information for ongoing and future targeted initiatives.	
The marketing strategy will continue to increase awareness on the availability and viability of ENERGY	

Program Element**Residential Lighting**

STAR lighting. Marketing will utilize specific messaging, targeted campaigns, measurable sales comparisons and behavioral marketing tactics.

Tactics will focus on point-of-purchase communications: such as in-store demos and product placement/special displays/end caps at select retail partners. Other general marketing collateral will leverage internal resourcing and use web communications to reach less penetrated customer segments. Other tactics may include: bill inserts, general consumer education and awareness, mass marketing, direct mail and electronic marketing. Wherever possible, tactics will include feedback mechanisms such as business reply cards and email collection for future messaging about energy efficiency and meaningful/actionable consumer offers. In future collateral, marketing will address issues discovered in previous program years including:

- Customers purchasing CFLs but waiting for incandescent bulbs to burn out before installing them
- Long-term energy and cost savings of CFLs
- Misconceptions surrounding ENERGY STAR lighting products
- Proper disposal of CFLs and available recycling locations

Marketing materials will continue to include the ENERGY STAR brand as a trusted source of quality products.

Key Messaging

- *ENERGY STAR lighting (CFLs and fixtures) use about 75% less electricity than incandescent bulbs and last about 10 times longer, and they are available in a wide range of styles & sizes*
- *Switch and Save*
- *Don't wait for your old light bulb to burn out – replace it today and start saving*
- *Look for the green Switch & Save sticker at participating retailers – find participating retailers at ComEd.com or call 888-806-2273*
- *Recycle used CFLs at participating retailers*

Energy Efficiency Measure Information

The measures listed below have been used for planning purposes, but ComEd may revise eligible measures and costs as needed in accordance with current market conditions, technology development, EM&V results, and program implementation experience. CFL incremental costs and kWh savings are weighted averages of bulb types forecast to be sold in PY4.

Measure	Incremental Measure Cost	Gross Annual kWh Savings
CFL standard	\$1.80	49.05
CFL specialty	\$5.91	42.70
Fixtures	\$20.65	60.03
LEDs	\$55.00	38.35

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs, while supporting portfolio level goals of providing high confidence in total portfolio savings, within the statutorily set budget. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for

Program Element Residential Lighting

program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important evaluation parameters to be reviewed include: bulbs sold by wattage; delta watts, hours of use, and installation rates for average bulb sold; and the NTG ratio. Since the program is largely designed for midstream incentive payments, end user information is not known and must be obtained through various sampling techniques.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop a program evaluation plan identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on the plan to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is high given that this program element represents a considerable share of the overall portfolio’s kWh goal. Anticipated impacts of the EISA 2007 legislation - which calls for the phase-out of many standard incandescent lamps – suggests that the potential for energy savings for a lighting program will decrease as incandescent bulbs are removed from the marketplace. To mitigate this program risk, we have worked closely with our implementation contractor to make a reasonable forecast of CFL sales as the bulb phase-outs enter the marketplace. For example, when 100-watt incandescents stop being manufactured as of January 1, 2012, we have assumed that these bulbs will remain in store inventory for two to three months before inventory is depleted; after that time, we will stop incenting 23-42-watt CFL equivalents with participating program retailers.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
CFLs	12,000,000	10,367,547	8,326,770	30,694,319
Fixtures	100,000	115,000	125,000	340,000
LEDs	2,000	2,750	5,000	9,750
Total	12,102,000	10,485,297	8,456,770	31,044,069

Projected Budget

Program Element Residential Lighting

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$4,143,552	\$3,155,655	\$3,166,858	\$10,466,065
Incentive	\$14,227,952	\$12,180,901	\$10,117,878	\$36,526,731
Total	\$18,371,504	\$15,336,556	\$13,284,736	\$46,992,796

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	181,601	133,937	96,029	411,567

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	4.66	3.60	\$0.01	\$0.10

Additional Benefits (if applicable)

Not applicable

Home Energy Reports

Program Element	Home Energy Reports
Program Objective	<p>Provide residential customers with a Home Energy Report (“HER”) that provides a comparison of the household energy usage information with similar type customers or “neighbors”. The intention of HER is to provide information that will influence customers’ behavior in such a way that they lower their energy usage. This is a behavioral modification program.</p>
Program Description	<p>This program element will operate as an opt-out only program, which means ComEd will select customers for participation in the program. Program participants will be mailed an energy usage report on how energy is used by their households on a monthly basis. The customer’s home energy usage is compared to the average usage of households that are geographically located in close approximation of one another and have similar characteristics such as dwelling size and heating type. The report displays a monthly neighbor comparison, a 12-month neighbor comparison, a personal comparison of this year’s usage versus last year and specific energy tips that are based on the characteristics and usage of the household. A key indicator on the report is the comparison of how much energy the customer has used over the last two months compared to their “average neighbor” and “efficiency neighbor”.</p> <p>This program element also provides customers online access to their home energy report, more detailed energy tip information including those relevant to the Smart Ideas program, and an online energy audit. Customers can also set energy savings goals, track their progress, and update their home profile information to ensure the accuracy of the report.</p> <p>We intend to expand this program from the current 50,000 residential customers to 250,000 by PY6.</p>
Utility Coordination	<p>Current provider limitations prevent this from being a joint program at this time. It is the intent of ComEd, Nicor and Integrys to revisit the potential to jointly offer this program in the future.</p>
Target Market	<p>This program targets residential single-family and multi-family customers who are among the top 25% of energy users in ComEd’s service territory. All such targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.</p>
Program Duration	<p>June 2011 through May 2014.</p>
Delivery Strategy	<p>We will negotiate with our current pilot program provider to provide implementation services. If negotiations do not produce desired results, an RFP will be conducted.</p> <p>The implementation contractor will utilize ComEd’s customer database to create customized energy usage reports. In the pilot program, we worked with the vendor to address all data extraction issues to ensure that accurate customer data was available. Consequently, expanding this service to a wider customer base should not demand significant additional developmental resources.</p> <p>As the program expands, additional call center personnel will be trained to field customer questions and manage program opt-out requests.</p>

Program Element**Home Energy Reports****Marketing Strategy**

Recent research indicates that information campaigns are not sufficient on their own to influence individuals to change their behavior. Behavioral marketing is defined as using human biases that are important for making decisions and incorporating those biases into marketing campaigns to make them more effective. The Home Energy Reports program element uses behavioral marketing by focusing on social norms.

The overall marketing strategy will largely operate as continued education and awareness of energy efficiency because this program is conducted on an opt-out basis. Marketing will primarily occur through customized messages on participants' reports. Program participants will also be reached via e-channels and through additional targeted mailings based on energy reduction needs. In addition, we intend to partner with retailers or consumer packaged goods companies to offer coded and measurable discounts and coupons that offer a call to action on energy reduction.

We will also explore other behavioral marketing initiatives that encourage action to earn social recognition, such as contests or neighborhood competitions.

Key Messages

- *Reduce your energy usage – check out more Smart Ideas at www.ComEd.com*
- *Become a more informed user of energy and see how easily you can save money on your monthly expenses*
- *Being more energy efficient and saving is as simple as slightly changing an existing habit or pattern – it's easy to do!*
- *Don't waste energy while you're away – set a programmable thermostat and start saving*

Energy Efficiency Measure Information

The incremental cost for HER is zero since the customer incurs no cost to participate in the program. All program costs are assumed to be program administrative costs.

Measure	Incremental Measure Cost	Gross Annual kWh Savings
Home Energy Report	\$0	324

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs, while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budget. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify customer participation and measure savings. We will provide tracking systems for customer participation that meet the evaluator's requirements. We will work collectively with the evaluator and other stakeholders to best represent *ex ante* program savings. Evaluators will determine program savings through appropriate sampling and surveys. Results of these activities will determine Gross MWh and Gross MW impacts for this program.

An independent evaluator has previously evaluated savings from the first seven months of our pilot program. Assuming a random assignment of a large number of treatment and control households, the evaluator derived a simple difference-in-difference statistic to provide a good estimate of the average annual household savings in energy use (measured in kWh) from the treatment. The difference-in-difference statistic is the difference between the nonparticipant and participant groups in the change in their rate of kWh use across the pre- and post-periods. Dividing the difference-in-difference statistic by

Program Element **Home Energy Reports**

the average energy use of the participant group in the pre-period gives the proportional reduction from the treatment. It is expected that as this program expands, program evaluation efforts for this program will occur as outlined in this Plan.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the Plan. We will review and comment on Plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is medium given that the Home Energy Reports program element represents a significant share of the overall portfolio's kWh reduction goal. Since behavioral programs of this type have not been part of the energy efficiency landscape for a long period and thus few program evaluations have been conducted, there is risk that the estimated energy savings associated with this program may be lower than anticipated. To mitigate this risk, we first piloted this program to test customer acceptance and savings potential. We also engaged our portfolio evaluator to assess program impacts. We used this evaluation and insight from the program implementer to make conservative forecasts in our planning assumptions. Should fewer energy savings per customer be realized from this program, one strategy to counterbalance this impact is to expand the number of program participants to increase the total energy savings impact.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	200,000	200,000	250,000	650,000

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$2,774,112	\$2,783,708	\$3,321,342	\$8,879,162
Incentive	\$0	\$0	\$0	\$0
Total	\$2,774,112	\$2,783,708	\$3,321,342	\$8,879,162

Net MWh Targets

Program Element	Home Energy Reports			
	PY4	PY5	PY6	Total
MWh savings	64,803	64,803	81,004	210,610
Cost-Effectiveness results				
	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.55	1.20	\$0.04	\$0.04
Additional Benefits (if applicable)				
Not applicable				

Appliance Recycling

Program Element	Appliance Recycling
Program Objective	Promote the retirement and recycling of inefficient, working refrigerators and freezers, as well as room air conditioners, from households by offering a turn-in incentive and free pick-up of equipment.
Program Description	<p>This program element is an existing program that we launched in our first Plan. We will continue to partner with an appliance recycling contractor to provide turnkey implementation services that include verification of customer eligibility, scheduling of pick-up appointments, appliance pick-up, recycling and disposal activities, and incentive processing. In contractor selection, preference will be given to appliance recycling companies that have recycling and disposal facilities located in Illinois or that are willing to construct such facilities given the anticipated volume resulting from the program.</p> <p>Turnkey program implementation through an appliance recycling contractor simplifies program delivery, reduces our administrative costs, and ensures a streamlined participation process. The program has been designed to minimize barriers to participation by offering incentives, convenient scheduling of appointments, and cost-free pick-up of qualifying equipment.</p>
Utility Coordination	Because this program offers electric-only energy savings, it will not be offered in coordination with the gas companies. However, we will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.
Target Market	The Appliance Recycling Program is designed for residential customers with working, inefficient second refrigerators, freezers and room air conditioners. All targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.
Program Duration	June 2011 through May 2014.
Delivery Strategy	<p>Key elements of the Appliance Recycling program implementation strategy include:</p> <ul style="list-style-type: none">• Outsourcing implementation: We will renegotiate with our current appliance recycling company to provide comprehensive, turnkey implementation services from eligibility verification to proper disposal and recycling of turned-in appliances to issuance of rebate checks. If renegotiations do not produce desired results, an RFP will be conducted.• Customer education and recruitment: We will continue to apply proven marketing tactics and strategies that have been utilized in prior customer recruitment campaigns. There will be strong consumer marketing and education components emphasizing how much it costs to operate an old secondary refrigerator or freezer, as well as the availability of program incentives and the free pick-up service.
Marketing Strategy	The primary marketing strategy will be to offer this program via bill inserts to residential customers. As needed, to achieve participation levels, the marketing strategy will also utilize proprietary and purchased data, conduct marketing research, and incorporate "lessons learned" from past program performance to identify key customer segments most likely to be responsive to this offer. The marketing programs will leverage customer interactions to deliver information about this program element, benefits of recycling the consumer's second working refrigerator, ability to save on their

Program Element**Appliance Recycling**

monthly bills, and the overarching message of energy efficiency. Through targeted communications, we will obtain customer preferences and contact information to improve effectiveness and efficiency of current and future campaigns. The marketing strategy will also educate customers and continue to increase awareness of the positive effects of appliance recycling and responsible energy management. Marketing will utilize specific messaging, targeted campaigns, and behavioral marketing tactics that have been proven successful or can be tested to measure performance.

Tactics will include a variety of targeted marketing communications materials such as: bill inserts, direct mail, ValPak, and general awareness advertising (e.g., radio). We will leverage customer interactions with behavioral marketing to enhance program promotion and effectiveness of campaigns. Such tactics may include contests, friend referrals, and measurable feedback mechanisms, such as business reply cards and emails, to determine which consumers have second refrigerators.

Additional marketing will be conducted through electronic channels, such as web content, paid search advertising, email campaigns, and online videos. Future marketing collateral and timing of program delivery will address barriers, such as lack of awareness, scheduling conflicts, and peak usage months of second refrigerators. Marketing will address these issues through messaging and timing, and will develop targeted campaigns to reach a variety of customer segments.

Relationships with retail partners, program implementers, and our corporate advertising department will be utilized to promote the program and raise awareness through highly targeted and mass media channels.

Key Messages

- *Second refrigerators and freezers can cost homeowners up to \$150 a year in electricity*
- *ComEd will pick up your old working second refrigerator*
- *ComEd will give you \$50 for each unit (limit 2)*
- *ComEd will recycle the appliance in an environmentally responsible manner*

Energy Efficiency Measure Information

In addition to free pick-up of eligible equipment, this program element will provide turn-in incentives, which are estimated below for planning purposes. In our experience with this program, customer participation rates tend to fluctuate at various times of the year, so we may revise incentive amounts to accommodate these variations.

Because it is not cost-effective to pick-up a room air conditioner alone, the program will only offer the room AC incentive to customers who are scheduled to turn-in a refrigerator or freezer as well.

Measure	Incremental Measure Cost	Gross Annual kWh Savings
Recycled Refrigerator	\$50	1,783
Recycled Freezer	\$50	1,943
Recycled Room Air Conditioner	\$10	80

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budget. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work

Program Element **Appliance Recycling**

collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important evaluation parameters to be reviewed include: identification of type and nameplate information from appliance picked up; determination of part use factor by appliance type; and NTG ratio. Regression analysis is expected to be used to determine expected MWh savings for each appliance.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation Plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the Plan. We will review and comment on Plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is medium given that the Appliance Recycling program element represents a significant share of the overall portfolio's kWh goal. There is a risk that customers will not be willing to turn in their old refrigerator or freezer, or that program awareness will remain low and, consequently, the program will not attract new participants. To mitigate this risk, we have incorporated program evaluation assumptions into our planning forecast, we are testing a higher incentive level to attract more customers, and we are allocating a larger marketing budget to increase program awareness. We will assess new evaluation data as it becomes available, and will make adjustments as necessary that will mitigate program risk.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Recycled Refrigerator	32,634	31,080	31,080	93,240
Recycled Freezer	8,190	7,800	7,800	23,400
Recycled Room AC	1,176	1,120	1,120	3,360
Total	42,000	40,000	40,000	120,000

Program Element **Appliance Recycling****Projected Budget**

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$6,325,931	\$5,084,729	\$5,089,671	\$16,500,331
Incentive	\$2,052,960	\$1,955,200	\$1,955,200	\$5,963,360
Total	\$8,378,891	\$7,039,929	\$7,044,871	\$22,463,691

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	33,371	31,782	31,782	96,935

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	2.43	1.40	\$0.03	\$0.25

Additional Benefits (if applicable)

Turning in and recycling a refrigerator or freezer not only reduces electricity consumption, but offers additional benefits in terms of reduced greenhouse gas (GHG) emissions per our chosen recycling process. Our implementation contractor employs the EPA's Responsible Appliance Disposal (RAD) recycling protocol, which contains materials that impact GHG emissions. This program has also had a positive impact on green job creation, with 37 jobs created through PY2 of our first Plan.

Central Air Conditioner Efficiency Services (“CACES”)

Program Element	Central Air Conditioner Efficiency Services (CACES)
Program Objective	
<p>Generate energy and demand savings through two activities: (1) by improving the operating performance of existing residential air conditioning (“AC”) units, and (2) by promoting proper sizing and installation of new standard and high efficiency AC units.</p>	
Program Description	
<p>CACES is a current program offering under the <i>Smart Ideas for Your Home</i> umbrella. This program element will continue to offer two key elements to residential customers: Diagnostic and Tune-Up Services and Quality Installation Services.</p> <p>Diagnostic and Tune-Up Services. Studies have shown that a majority of central AC units are improperly charged or have improper airflow, both of which can lead to significant performance degradation and inefficiency. The CACES program will continue to build the capability among HVAC contractors to address these issues and provide a value-added service to their customers. Program marketing efforts will continue to promote the value of these services to customers and the related energy saving benefits.</p> <p>A coordinated recruitment and training strategy will be employed to inform HVAC contractors of the opportunities and incentives available through CACES. Independent Participating Contractors are those contractors who agree to participate in the program via a signed participation agreement and perform diagnostic and tune-up services according to the program protocol. These contractors will receive training on the use of the required diagnostic tool to check refrigerant charge and airflow. Guidance will also be provided to assist in making adjustments or corrections to optimize system efficiency.</p> <p>Quality Installation Services. There are substantial energy efficiency and peak demand reduction opportunities associated with the proper sizing and installation of new central AC systems. Many new central AC units are under- or, more commonly, over-sized. Under-sizing can result in inadequate cooling. Over-sizing can result in frequent cycling and inefficient operation of the unit. Proper sizing of the units is typically accomplished using an industry-accepted method (such as the Manual J protocol developed by the Air Conditioning Contractors of America) that uses detailed heat load calculations. Quality installation of central AC units also requires calibration of the refrigerant charge and airflow.</p> <p>Quality Installation Services will be delivered through the same network of Independent Participating Contractors who offer Diagnostic and Tune-Up Services. This activity will help to promote the installation of equipment that exceeds a 13 SEER efficiency rating (the level of efficiency currently required under federal energy efficiency standards).</p>	
Utility Coordination	
<p>This program element offers electric-only energy savings and will not be offered in coordination with the gas companies. However, where possible, we will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.</p>	

Program Element	Central Air Conditioner Efficiency Services (CACES)
Target Market	
CACES is designed for customers with existing central AC units or who are planning to install new central AC units. All residential customers taking delivery service from ComEd are eligible for this program regardless of their choice of electricity supplier.	
Program Duration	
June 2011 through May 2014.	
Delivery Strategy	
<p>We will renegotiate with our current CACES implementation contractor to implement both this program element and the C&I CACES program element. If renegotiations do not produce desired results, an RFP will be conducted. The implementation contractor will implement all of the program tasks, which include:</p> <ul style="list-style-type: none"> • Contractor Recruitment and Training: The Implementation Contractor will recruit HVAC contractors to become Independent Participating Contractors and arrange for these contractors to participate in all of the required training. The training will address proper diagnostics and tune-ups, sizing, and quality installation requirements. • Customer Recruitment: The primary customer recruitment mechanism will be the direct marketing activities of participating Independent Participating Contractors. Program information will also be posted on our website, provided through a toll-free call center managed by the implementation contractor, and distributed in combination with various ComEd customer outreach and marketing tactics. • Project Implementation: Independent Participating Contractors will deliver diagnostic and tune-up services, ensure proper equipment sizing, and provide quality installation services according to the program requirements. The implementation contractor will provide ongoing support in the proper use of the diagnostic tool. • Contractor Incentive Application: Independent Participating Contractors will submit incentive applications for all qualifying services performed. The Implementation Contractor will perform an audit of all applications to ensure that required information and documentation has been provided. • Contractor Incentive Payment: Incentives will be paid to the Independent Participating Contractors on a per service basis for both Diagnostic and Tune-Up Services and Quality Installation Services. • Project Verification: The Implementation Contractor will site-verify a portion of all applications submitted by the Independent Participating Contractors prior to approval and payment of incentives. 	
Marketing Strategy	
<p>Weather conditions play a large role in the timing of marketing messages with this program, as service work can only occur when the outdoor temperature is above 55 degrees Fahrenheit. During key months leading up to and including the spring and early summer months, the overall marketing strategy for CACES will be to educate customers about AC efficiency services and awareness of the ComEd <i>Smart Ideas</i> program to leverage savings on their monthly bills.</p> <p>Additionally, the customer communications will raise program awareness by delivering information about energy efficiency and cross-selling our other <i>Smart Ideas</i> programs. We will also use that customer interaction to obtain customer preferences and contact information, including email addresses, to further educate customers and increase program awareness through more cost effective electronic marketing vehicles.</p>	

Program Element**Central Air Conditioner Efficiency Services (CACES)**

Marketing will utilize specific messaging, targeted campaigns, and behavioral marketing tactics to drive sign-ups for CACES. Tactics will focus on direct mail, bill inserts, door hangers and electronic channels. Messaging will reach residential customers with central AC systems, and may be targeted via segmentation. Other general marketing collateral will leverage our advertising and use web communications to help reach lightly penetrated customer segments. Where possible, tactics include feedback mechanisms such as business reply cards and email collection for future messaging about energy efficiency.

We may also consider a word-of-mouth, refer-a-neighbor type of program since we can use satisfied customers to pass on the message of AC cycling efficiencies. In addition to our marketing efforts, the program implementer and contractors participating in the program will deliver messaging to customers.

Key Messages

- *Is your central air conditioning system running efficiently?*
- *A properly installed cooling system can save households on average 20 percent on their cooling costs*
- *Be an advocate for energy efficiency and save money on your utility bill by having your AC system tuned up by a CACES contractor*
- *Visit www.ComEd.com/CentralAC or call 888-806-2273 to locate an independent participating contractor and be assured you're getting the best tune-up or new install*

Energy Efficiency Measure Information

The measures listed below have been used for planning purposes, but ComEd may revise eligible measures and costs as needed in accordance with current market conditions, technology development, EM&V results, and program implementation experience.

Incremental measure costs for this program are zero as there are no additional costs for a customer to have a CACES tune-up versus a non-CACES tune-up. All program costs are assumed to be program administrative costs.

Measure	Incremental Measure Cost	Gross Annual kWh Savings
AC Tune-Ups SF Detached	\$0	221
AC Tune-Ups SF Attached	\$0	163
AC Tune-Ups Multi-Family	\$0	148
13 SEER QIV – SF Detached	\$0	312
13 SEER QIV – SF Attached	\$0	180
13 SEER QIV – Multi-Family	\$0	63
>13 SEER QIV – SF Detached	\$0	986
>13 SEER QIV – SF Attached	\$0	647
>13 SEER QIV – Multi-Family	\$0	1419

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs, while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budget. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V

Program Element**Central Air Conditioner Efficiency Services (CACES)**

budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation which meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important CACES evaluation parameters to be reviewed include: size of AC units installed or serviced; building type for each unit; measured operating parameters for each unit; and the NTG ratio. Since these parameters are recorded electronically, audit verification of HVAC contractor performance is required and savings calculations can be made from collected data for each AC unit serviced or installed.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to help drive participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is low given that the CACES program represents a small share of the overall portfolio’s kWh reduction goal. We have incorporated existing program evaluation assumptions into our planning forecast. We will assess new evaluation data as it becomes available, making adjustments as necessary that will mitigate overall program risk.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
AC Tune-Ups	37,050	43,225	49,400	122,850
13 SEER QIV	1,170	1,365	1,560	10,920
>13 SEER QIV	780	910	1,040	2,730
Total	39,000	45,500	52,000	136,500

Program Element **Central Air Conditioner Efficiency Services (CACES)**

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$4,153,558	\$4,031,396	\$4,444,864	\$12,629,818
Incentive	\$0	\$0	\$0	\$0
Total	\$4,153,558	\$4,031,396	\$4,444,864	\$12,629,818

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	8,233	9,606	10,978	28,817

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.02	0.86	\$0.06	\$0.50

Additional Benefits (if applicable)

Not applicable

Multi-Family Home Performance

Program Element	Multi-Family Home Performance
Program Objective	Generate energy savings by direct installation of low-cost energy efficient products. The program will also provide prescriptive rebate information for more capital-intensive measures and energy efficiency educational materials to facility managers and multi-unit residents.
Program Description	<p>This program element provides multi-family residents and building owners/managers with a quick and easy way to save energy through the direct installation of specific energy efficiency measures.</p> <p>Implementation contractors will train and schedule equipment installers to retrofit living units in multi-family buildings. Contractors will install low-flow water saving devices, including kitchen and bath aerators and showerheads. The contractors will also install up to six CFLs in each unit. Educational information about the energy savings associated with these devices will be left in these units. This service will be provided at no cost to property owners/managers and occupants.</p> <p>The implementation contractors will also look for opportunities to recommend energy saving measures in common areas of multi-family buildings. The contractors will provide a summary report after the site visit, which will include higher cost efficiency recommendations along with ComEd's prescriptive rebate information.</p>
Utility Coordination	It is the intent of ComEd, Nicor and Integrys to offer this program jointly. There is a high potential for this program to benefit both gas and electric utility customers. The utilities will determine a framework for cost allocation based on savings/benefits to each utility's customers. The framework will be fair and equitable, and will increase the cost effectiveness of the overall program for participating utilities and their customers.
Target Market	Because this program will be operated jointly with Integrys and Nicor, we will target property managers and owners of both gas and all-electric multi-family residential buildings. All such targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.
Program Duration	June 2011 through May 2014.
Delivery Strategy	<p>Implementation contractors selected jointly with the gas companies through an RFP process will deliver the program. The contractors will work with ComEd and the gas companies to finalize the program design, develop marketing materials, conduct program marketing and outreach activities, and provide energy audits and direct installations in the target market.</p> <p>Key elements of the Multi-Family Home Performance Program implementation strategy include:</p> <ul style="list-style-type: none">• Targeted outreach to property owners and managers. The implementation contractors will work to build close relationships with property management companies, owners, associations, and their members to recruit participation in the program.• In-unit direct installs. The implementation contractors will schedule installation appointments with interested property owners/managers. The contractor(s) will install low-flow water saving devices and up to six CFLs in each unit. The contractor(s) will leave educational materials in each unit describing the work performed while promoting the energy-saving benefits.

Program Element

Multi-Family Home Performance

- **Energy Audits.** The energy audit will also identify opportunities for prescriptive rebates available through ComEd's and the gas companies' energy efficiency program offerings. If the property manager/owner is interested in purchasing prescriptive measures, we will direct the customer to our C&I Prescriptive Incentives Program. For electric non-direct install projects, we will reserve the right to site-verify installations prior to approval and incentive payment.

All installation work must meet rigid performance standards established by ComEd, the gas companies, and the program implementation contractor. A systematic approach to home improvement that addresses all aspects of building systems will be employed. We will work with the gas companies to establish inspection protocols for this program and will require that all work must meet or exceed the utilities' standards.

Marketing Strategy

This program's marketing strategy will be to employ highly targeted communication channels to building owners/managers. We will deliver information directly to building owners/managers about energy efficiency for their buildings, while obtaining customer preferences and contact information to enable more efficient future interactions. The marketing strategy will also educate customers about energy efficiency and continue to raise program awareness.

Tactics will focus on in-building signage communications and posters, flyers and door hangers

Where possible, cross selling opportunities will be utilized for other *Smart Ideas* offerings with a customer leave-behind, possibly including an email capture mechanism for ongoing energy efficiency communications.

Activities will largely be executed by the implementation contractor who will contact the building owners/managers directly and will rely on them to help communicate the program to their tenants in order to spread program participation awareness.

Marketing materials will be co-branded with participating gas companies and leverage customer interaction as an opportunity to deliver relevant information and obtain customer satisfaction feedback and contact information.

Key Messages

- *Joint offering to help your building become more energy efficient*
- *It's easy! Participate in turnkey programs that deliver immediate and ongoing energy savings*
- *FREE energy efficient products to keep energy costs down*
- *FREE installation by qualified technicians*
- *FREE common area assessment to discover other opportunities to take advantage of Smart Ideas for Your Business energy efficiency initiatives*

Program Element **Multi-Family Home Performance**

Energy Efficiency Measure Information

This program provides for an initial free on-site energy assessment, free installation of instant energy savings measures, and education regarding commercial and other joint program incentives.

A crew of installers will install up to six CFLs per unit and water-saving devices. The energy savings for the CFLs will accrue to ComEd. The energy savings for the water saving devices will accrue to the gas companies unless these devices are installed in all-electric buildings, whereby the electric savings will then accrue to ComEd.

The incremental costs listed below have been used for planning purposes. However, as the Multi-Family Home Performance Program evolves given the joint operation with the gas companies, ComEd may adjust incremental costs based on implementation experience.

Measure	Incremental Measure Cost	Gross Annual kWh Savings
9-Watt Spiral CFL	\$3.00	23.1
14-Watt Spiral CFL	\$3.00	38.4
19-Watt Spiral CFL	\$3.00	47.0

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budget. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important evaluation parameters to be reviewed include measures installed, kWh savings estimates for each measure, and NTG ratio. Participant contact information is referenced from our customer data. Typically for a direct install program installation rates are high, but participants are surveyed for removal rates and program influence.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Element **Multi-Family Home Performance**

Program Risk Assessment / Mitigation Plan

The level of potential risk is low given that the Multi-Family Home Performance program element represents a small share of the overall portfolio's kWh reduction goal. We have incorporated existing program evaluation assumptions into our planning forecast. We will assess new evaluation data as it becomes available, making adjustments as necessary that will mitigate overall program risk.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, joint operation with the gas companies, and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	38,105	56,210	79,315	173,630

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, joint operation with the gas companies, and program implementation experience.

Note – The number of participants is highly contingent on the gas companies' plans and budgets for the program.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$1,393,522	\$2,026,914	\$2,825,023	\$6,245,459
Incentive	\$0	\$0	\$0	\$0
Total	\$1,393,522	\$2,026,914	\$2,825,023	\$6,245,459

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	6,110	9,014	12,719	27,843

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	2.24	1.80	\$0.02	\$0.23

Additional Benefits (if applicable)

Not Applicable

Appliance Rebates

Program Element	Appliance Rebate
Program Objective	
Obtain energy savings by offering incentives for ENERGY STAR top and front loader clothes washers in the residential market.	
Program Description	
<p>With the average U.S. family washing close to 400 loads of laundry annually, clothes washers can equate to a significant share of energy consumption in a typical household. Replacing an inefficient unit with an ENERGY STAR brand can greatly impact both water usage and electric and gas consumption.</p> <p>Consumers who purchase top loaders may have buying motivations that differ fundamentally from front loader purchasers. Top loader consumers generally are more price-conscious and are not willing to trade up to the more expensive front loader models. Front loader consumers are more inclined to base their purchase decisions on the “bells and whistles” of the product rather than the unit price.</p> <p>In recognition of the different consumer buying motivations and given our desire to help transform the clothes washer market, we will offer instant rebates on two types of clothes washers: 1) top loaders that have a modified energy factor (“MEF”) of 2.2, which is 75% greater than the federal standard, and 2) front loaders that have a MEF of 2.6 versus a baseline of 2.2 MEF, which represents an 18% savings increase over the baseline.</p> <p>Customers will be encouraged to purchase one of these options when replacing older, less efficient equipment.</p>	
Utility Coordination	
With few rebates for clothes washers scheduled to be offered by the gas companies, there are no economies of scale that make it viable for us to offer this program in coordination with the gas companies.	
Target Market	
This program element is designed for residential customers purchasing new or replacement clothes washers through retail channels. All such targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.	
Program Duration	
June 2011 through May 2013.	
Delivery Strategy	
<p>We will renegotiate with our current residential lighting implementation contractor that was previously selected through a competitive bidding process, to incorporate this program into the current residential lighting program element. It is our intent to leverage existing field rep staff who may already be servicing common retail partners. If negotiations do not produce desired results, an RFP will be conducted.</p> <p>Key elements of the implementation strategy include:</p> <ul style="list-style-type: none">• Retailer/manufacturer recruitment: As practiced in our current Lighting program design, we will issue an RFP during each respective program year to solicit participation by retailers and manufacturers in our service territory. The RFP will specify program requirements such as product specifications and performance criteria, product stocking objectives based on anticipated rebate volume, and data sharing requirements. Memoranda of Understanding (“MOU”) will be signed with selected retailers and manufacturers delineating roles and responsibilities and each party’s	

Program Element

Appliance Rebate

commitments in support of programmatic objectives.

- **Retailer education and outreach:** During program implementation, field staff will maintain regular contact with participating retailers to ensure the following: (1) retail sales staff are informed about the program offering, rebate process, and benefits of ENERGY STAR appliances; (2) retailers have an adequate supply of instant rebated coupons at the cash registers, if appropriate; (3) point-of-purchase (“POP”) displays are displayed properly and that qualifying products are stocked in accordance with retailer commitments; and (4) program staff are responsive to retailer concerns and issues can be addressed promptly. The program will also keep retailers informed well in advance of planned promotional activities and cooperative advertising opportunities, keeping in mind that retailers typically require at least six months of advanced planning for advertising buys and other promotional activities.
- **Incentive processing:** As in the current Lighting program practice, a fulfillment agent will be retained to ensure prompt processing of vendor incentive payments. We will negotiate with retailers to determine how frequently store-level sales data and batched coupons will be submitted to the fulfillment house for processing. Since prompt incentive payment is essential to retailer satisfaction and ongoing program engagement, we will work with the fulfillment agent to establish processes and procedures that expedite incentive payments. Should some retailers offer mail-in rebates, the fulfillment agent will expedite prompt payments directly to the customer.

Marketing Strategy

The overall marketing strategy will be to leverage customer interactions at the point-of-sale to deliver information about appliance rebates. We will also use that customer touch-point to obtain customers’ preferences and contact information to maximize future communications about energy efficiency education and awareness. Marketing will utilize specific messaging, targeted campaigns, measurable sales comparisons, and behavioral marketing tactics.

Tactics will focus on point of purchase communications such as in store product placement and special displays. Messaging about the availability of this program will reach all residential customers, and may be targeted or modified depending on market segmentation and any propensity data we have to indicate purchase preferences. Other general marketing collateral will leverage our corporate advertising and use web communications to reach lightly penetrated customer segments.

Other tactics may include: bill inserts, general consumer education and awareness, mass media, direct mail and electronic marketing. Where possible, tactics will include feedback mechanisms such as business reply cards and email collection for future messaging about energy efficiency. We will work closely with the implementation contractor to develop and coordinate the timing of promotional campaigns.

Key Messages

- *The average household washes 400 loads per year using three precious resources: water, electricity and gas. Use an ENERGY STAR clothes washer and help conserve these resources.*
- *Lighten your load – replace your inefficient clothes washer and receive an instant discount of up to \$100, plus save on your monthly bill when you run energy efficient appliances*
- *Join in and be amongst your peers and neighbors in helping to reduce energy waste from older appliances that don’t use energy wisely*
- *Check out ComEd.com for participating retailers*

Program Element **Appliance Rebate**

Energy Efficiency Measure Information

This program will provide a \$75 rebate for the purchase of an ENERGY STAR top loader clothes washer and a \$100 rebate for an elite ENERGY STAR front loader clothes washer.

The incremental costs listed below have been used for planning purposes. However, as the Appliance Rebate program evolves, ComEd may adjust incremental costs based on implementation experience.

Measure	Incremental Measure Cost	Gross Annual kWh Savings
Top Loader Clothes Washer, Modified Energy Factor (MEF) = 2.2	\$100	120.4
Front Loader Clothes Washer, Modified Energy Factor (MEF) = 2.6	\$100	83.6

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is low given that the Appliance Rebate program represents a small share of the overall portfolio’s kWh reduction goal. We will monitor program results carefully, assess evaluation data as it becomes available, making adjustments as necessary that will mitigate overall program risk.

Program Element **Appliance Rebate**

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience. This program element is only projected to run for two years due to the high cost of the program on a cents/kWh basis and need to reduce measures in PY6.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	30,000	30,000	0	60,000

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$476,483	\$477,682	\$0	\$954,165
Incentive	\$2,497,500	\$2,497,500	\$0	\$4,995,000
Total	\$2,973,983	\$2,975,182	\$0	\$5,949,165

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	1,786	1,786	0	3,572

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	3.13	2.17	\$0.14	\$1.67

Additional Benefits (if applicable)

Replacing inefficient clothes washers with more efficient ones not only reduces electricity consumption, but offers additional benefits as well in terms of reduced gas and water consumption. Our cost effectiveness testing includes the impacts of these additional energy benefits.

Single-Family Home Performance

Program Element	Single Family Home Performance
Program Objective	Obtain energy savings in existing residential homes by overcoming market barriers to the installation of energy efficiency measures. The program promotes the installation of cost-effective energy saving improvements through a comprehensive whole house approach to efficiency that includes an assessment of the building envelope, HVAC / mechanical systems, water heating, appliances, and lighting.
Program Description	<p>This program element will offer three tiers of retrofit measures to single family homeowners:</p> <ul style="list-style-type: none">• Tier 1: Participants in this program will be provided with an energy assessment by a qualified energy auditor who will analyze the home's energy use. The auditor will also install instant energy savings measures such as faucet aerators, low-flow showerheads and CFLs. The homeowner will contribute a small co-payment toward the cost of the audit.• Tier 2: The auditor will facilitate the scheduling and installation of additional weatherization measures during a subsequent visit. Customers will receive an incentive of 50% of the project cost for weatherization measures installed, up to a maximum project cost as set by the gas companies.• Tier 3: The auditor will encourage the customer to go beyond the weatherization measures of Tier 2 and complete the full requirements of the Home Performance with Energy Star program, as described on the Department of Energy website.
Utility Coordination	It is the intent of ComEd, Nicor and Integrys to offer this program jointly. There is a high potential for this program to benefit both gas and electric utility customers. The utilities will determine a framework for cost allocation based on savings/benefits to each utility's customers. The framework will be fair and equitable and will increase the cost effectiveness of the overall program for participating utilities and their customers.
Target Market	Because this program will be operated jointly with Integrys and Nicor, we will target both gas and all-electric customers with single-family homes. All such targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.
Program Duration	June 2011 through May 2014.
Delivery Strategy	<p>An implementation contractor selected jointly with the gas companies through an RFP process will deliver the program. The contractor will work with ComEd and the gas companies to finalize the program design, develop marketing materials, conduct program marketing and outreach activities, and provide energy audits and direct installations in the target market.</p> <p>A network of regionally-based contractors will be identified, trained, and employed to perform home energy audits and install retrofit measures. Customers will be guided to the services appropriate to them by the implementation contractor. These services will include an energy audit, customer-specific energy efficiency recommendations, and the installation of energy saving measures.</p> <p>After a customer has expressed interest in the program, the implementation vendor will schedule a site visit to the home. During this visit, an energy auditor will conduct an energy audit and provide to the customer information on our <i>Smart Ideas</i> program and the gas companies' energy efficiency programs.</p>

Program Element

Single Family Home Performance

The auditor will explain to the customer the audit results and will provide audit recommendations. Water-saving devices, including low-flow showerheads, faucet aerators, and up to ten CFLs will be installed at no cost to the customer when possible. It is anticipated that the savings benefit from these measures will exceed the average cost to deliver the initial audit. Customers will be charged a small co-payment for this initial home assessment.

The auditor will also provide the customer with a combination report and proposal detailing recommended efficiency measures, available incentives for those measures, and their simple payback. The auditor will encourage the customer to implement the recommended measures. The customer will have the option to choose which measures, if any, to implement. If the customer chooses to proceed with an installation, the implementation contractor will schedule a subsequent appointment to conduct the installation work. It should be noted that the proposal generated by the auditor has guaranteed pricing for a set number of days as agreed upon between ComEd and the respective gas company.

At the second appointment, the implementation vendor will complete the installation of any further requested energy savings measures. This visit will be conducted by a qualified contractor trained in the installation of weatherization and other energy efficiency measures. Contractors will be trained, qualified, and scheduled by the implementation vendor. Typical measures would include blower door assisted air sealing, attic or wall insulation, pipe insulation, installation of programmable thermostats, and weather stripping. In all cases where the customer has chosen comprehensive air sealing, a blower door test will be performed to measure the reduction in air infiltration. These measures will be installed for the customer, and the customer will receive a 50% discount on the completed work, up to a maximum project cost as set by the gas companies. Customers proceeding with Tier 2 work will also have the cost of the initial audit credited against their project cost. Upon completion of the installation, customers will be asked to verify that all measures have been installed. The implementation vendor will invoice the customer for their share of the installed measures.

All installation work must meet rigid performance standards established by ComEd, the gas companies, and the program implementation contractor, and a systematic approach to home improvement that addresses all aspects of building systems will be employed. We will work with the gas companies to establish inspection protocols for this program and will require that all work must meet or exceed the utilities' standards.

Marketing Strategy

The marketing strategy will be to employ highly targeted communication channels to segments of families in communities likely to participate in an audit. We will leverage customer interactions to deliver information about energy efficiency for single family homes, obtain customer preferences and contact information, including email addresses that can be used to make ongoing and future communications more efficient and effective.

The marketing strategy will also educate customers about general energy efficiency and continue to increase awareness about the benefits of energy efficiency in their homes. Tactics will focus on direct mail, bill inserts, and possible local print and community outreach leveraging a word-of-mouth strategy. To the extent ComEd employs a local marketing strategy to gather up constituents along the way who have experienced a successful audit, we will consider incentives and rewards for participants.

Other general marketing collateral may include: a refer-a-friend program or a behavioral marketing tactic like neighbor comparison on carbon footprint before and after the home audit. Marketing efforts around this program will be done jointly with the gas companies and materials will be co-branded. For customers participating in the program, a variety of brochures with cross-selling opportunities on energy efficiency programs and other information will be provided by the contractor during home visits.

Key Messages

- *Obtain energy efficiency products and services, including CFLs, faucet aerators, and a customized home energy audit*
- *Be an advocate of energy efficiency and tell a friend about your audit, your savings, and how you're*

Program Element **Single Family Home Performance**

reducing your carbon footprint

- *Being socially responsible and an advocate of energy efficiency can set you apart from your peers and neighbors!*
- *Weatherize your home and save up to 50% on project costs*
- *Make your appointment today! Call 888-806-2273*

Energy Efficiency Measure Information

The program provides participants with a low-cost energy audit and free installation of instant savings measures. Participants may also receive further weatherization measures with a 50% project cost subsidy, up to \$1,250 per customer. Customers achieving Home Performance with ENERGY STAR standards will receive appropriate certification.

During the initial audit, auditors will install up to ten CFLs per home and water-saving devices. The energy savings for the CFLs will accrue to ComEd. The energy savings for the water saving devices will accrue to the gas companies unless these devices are installed in all-electric homes, whereby the electric savings will then accrue to ComEd. ComEd will realize electric savings on two weatherization measures: air sealing and duct sealing. Gas savings from installed weatherization measures will accrue to the gas companies.

The incremental costs listed below have been used for planning purposes. However, as the Single Family Home Performance program evolves given the joint operation with the gas companies, ComEd may adjust incremental costs based on implementation experience.

Measure	Incremental Measure Cost	Gross Annual kWh Savings
9-Watt Spiral CFL	\$3.00	23.1
14-Watt Spiral CFL	\$3.00	38.4
19-Watt Spiral CFL	\$3.00	47.0
Air infiltration reduction	\$235	14
Duct sealing (15 – 7 CFA)	\$310	256

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates and Net-to-Gross (“NTG”) ratios. ComEd will work to provide tracking systems for program measures and customer participation which meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Program Element **Single Family Home Performance**

Important evaluation parameters to be reviewed include: measures installed; kWh savings estimates for each measure; audit recommended measures installed; and NTG ratio. Participant contact information will be provided during sign up. Typically for a direct install program installation rates are high, but participants are surveyed for removal rates and program influence.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is low given that the Single Family Home Performance program element represents a small share of the overall portfolio's kWh goal. We have incorporated existing program evaluation assumptions into our planning forecast. We will assess new evaluation data as it becomes available, making adjustments as necessary that will mitigate overall program risk.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, joint operation with the gas companies, and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	2,100	5,200	8,150	15,450

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, joint operation with the gas companies, and program implementation experience. Non-incentive costs outweigh incentive costs since the electric measures are few compared to the number of gas measures installed, but the implementation budget is estimated based on avoided cost allocations between ComEd and the gas companies. Note that the number of participants is highly contingent on the gas companies' plans and budgets for the program.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$296,220	\$577,133	\$850,506	\$1,723,859
Incentive	\$68,670	\$170,040	\$259,995	\$498,705
Total	\$364,890	\$747,173	\$1,110,501	\$2,222,564

Program Element	Single Family Home Performance			
Net MWh Targets				
	PY4	PY5	PY6	Total
MWh savings	438	1,085	1,681	3,204
Cost-Effectiveness results				
	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	3.99	6.05	\$0.09	\$0.83
Additional Benefits (if applicable)				
The air infiltration and duct sealing measures offer gas savings in addition to electricity savings. Our cost effectiveness testing includes the impacts of these additional energy benefits.				

Residential New Construction

Program Element	Residential New Construction
Program Objective	
Obtain energy savings through raising builder and consumer awareness and understanding of the benefits of energy-efficient building practices, with a focus on capturing lighting and central air conditioning energy efficiency opportunities that are available during the design and construction of new homes.	
Program Description	
<p>To secure lighting energy efficiency opportunities in new home construction projects, this program element will provide home builders with incentives, education and training, and marketing assistance to promote new homes that include the ENERGY STAR Advanced Lighting Package (“ALP”). The ALP designation applies to lighting packages for new home construction that consist of a minimum of 60% ENERGY STAR qualified hard-wired fixtures and 100% ENERGY STAR qualified ceiling fans where installed. This program will also work with lighting manufacturers, distributors and retailers to promote stocking of qualified fixtures and replacement bulbs.</p> <p>The program will also offer an incentive for any central air conditioning equipment that meets or exceeds a 15 SEER efficiency rating (the level of efficiency currently required under federal energy efficiency standards is 13 SEER).</p>	
Utility Coordination	
It is the intent of ComEd and Nicor to offer this program jointly. There is a high potential for this program to benefit both gas and electric utility customers. The utilities will determine a framework for cost allocation based on savings/benefits to each utility’s customers. The framework will be fair and equitable and will increase the cost effectiveness of the overall program for participating utilities and their customers.	
Target Market	
This program will serve buyers of newly constructed homes by targeting home builders and promoting the installation of energy efficient lighting and central cooling equipment. All such targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.	
Program Duration	
June 2012 through May 2014.	
Delivery Strategy	
<p>An implementation contractor selected through an RFP process will administer the program element jointly for ComEd and Nicor. Key elements of the ALP and high SEER AC implementation strategy include:</p> <ul style="list-style-type: none">• Builder recruitment: The primary recruitment effort will target home builders in our service territory, with recruitment occurring through individual contact as well as through group outreach events for home builder associations. The program will offer builder education and training covering the differences between screw-in ENERGY STAR bulbs and hard-wired fixtures for lighting, and the quality installation protocol that requires the proper use of Manual J for equipment sizing for air conditioning, as well as calibration of refrigerant charge and airflow. Training will also include program participation processes and protocols, as well as the market differentiation benefits that builders may gain from promoting ALP and high efficiency central AC units in their residential new construction. Builders and other trade allies participating in the program will receive regular communications about program activities and ensure that they are informed and engaged participants.	

Program Element

Residential New Construction

- **Lighting supplier outreach:** The implementation contractor will work with lighting supply channels (*i.e.*, manufacturers reps, distributors, showrooms and retailers) to ensure adequate stocking of qualified product and replacement bulbs, and to facilitate opportunities for lighting suppliers to support builder participation in the program (*e.g.*, cooperative marketing, competitive pricing packages, training/education).
- **HVAC supplier outreach:** The contractor will also work with HVAC contractors to ensure adequate stocking of 15 SEER or greater central air conditioning units.
- **Customer recruitment:** The primary customer recruitment mechanism will be the sales and marketing efforts of builders that are promoting the ALP and high SEER AC units. ComEd and its implementation contractor will assist builders in marketing to consumers by providing templates and other marketing tools, as well as seek out cooperative mass market advertising opportunities in newspapers, home buyer guides, and other advertising vehicles.
- **Technical assistance:** The program implementation contractor will provide guidance regarding program offerings and participation processes to builders and other trade allies as needed to minimize confusion and barriers to participation.
- **Application submittal:** Builders will submit incentive applications and required documentation after ALP and high SEER AC installation have been completed. Incentive forms and participation processes will be kept simple and straightforward to minimize barriers to participation.
- **QA/QC:** Incentive applications will be subject to a QA/QC review to ensure all required forms and documentation have been submitted (*e.g.*, data on the total number of fixtures per home, model numbers for installed ENERGY STAR qualifying equipment), and that calculation of incentive totals are correct.
- **Project verification:** We will reserve the right to site-verify installation prior to approval and incentive payment.

Marketing Strategy

The marketing strategy will focus on both raising awareness and creating action, amongst both builders and consumer purchasers of newly constructed homes. Marketing messages will emphasize that there are distinct advantages to initially installing energy efficient components in all new construction. The marketing effort must first deliver knowledge about the benefits of energy efficiency and availability of this program element while obtaining customer contact information to reinforce energy efficiency and enable future interactions.

The program will provide a tangible benefit/incentive to influence the builder or consumer to participate. The marketing for this program will be messaged for two separate channels: the primary channel will be aimed at reaching builders, and the other channel will raise consumer awareness of the advantages of owning a home with energy efficiency components built into the design and construction of new homes.

All marketing efforts will leverage ENERGY STAR tools and resources, and materials will be co-branded with gas companies when appropriate. Tactics include outreach to home builders through builder associations, lenders, realtors and appraisers. Consumer outreach will be through cooperative print and radio to raise program awareness.

Key messages

- *Take advantage of ComEd's energy efficiency component programs right from the start!*
- *Keep your future replacement costs and expenses down by installing energy efficient components in your new home*
- *Our reliable and cost effective energy efficiency programs help protect your new investment*

Program Element	Residential New Construction	
<ul style="list-style-type: none"> (Building Suppliers) Be a trusted advisor and deliver value to your home purchasers by recommending energy efficient components 		
Energy Efficiency Measure Information		
<p>The measures and incremental costs listed below have been used for planning purposes, but ComEd may revise eligible measures and costs as needed in accordance with current market conditions, technology development, EM&V results, the joint program operation with Nicor, and implementation experience.</p>		
Measure	Incremental Measure Cost	Gross Annual kWh Savings
ALP – Multi-Family	\$208	1,238
ALP – Single Family, Attached	\$346	2,064
ALP – Single Family, Detached	\$415	2,476
15 SEER AC unit – Multi Family	\$40	416
15 SEER AC unit – Single Family, Attached	\$141	417
15 SEER AC unit – Single Family, Detached	\$182	510
EM&V Requirements		
<p>ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.</p>		
<p>Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent <i>ex ante</i> program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.</p>		
<p>Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.</p>		
<p>Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.</p>		
<p>To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.</p>		

Program Element	Residential New Construction				
Program Risk Assessment / Mitigation Plan					
<p>The level of potential risk is low given that the Residential New Construction program element represents a small share of the overall portfolio's kWh goal. However, given the continued depression of the new housing market, there is still a significant risk that market conditions will not be viable to launch this program during the Plan cycle. To mitigate this risk, we will carefully monitor the new housing market prior to program launch, monitor program results carefully, assess evaluation data as it becomes available, and will make adjustments as necessary that will mitigate overall program risk.</p>					
Projected Participation					
<p>The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.</p>					
	No. of Participants	PY4	PY5	PY6	TOTAL
Total		0	400	800	1,200
Projected Budget					
<p>The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. Initial budget levels are set based on conservative estimates of participation, given the current housing market slump and uncertainty over builder response. PY4 budget estimates include start-up expenses in preparation of a PY5 program launch.</p>					
	Budget	PY4	PY5	PY6	Total
	Non-Incentive	\$87,638	\$207,427	\$237,870	\$532,935
	Incentive	\$0	\$138,000	\$276,000	\$414,000
	Total	\$87,638	\$345,427	\$513,870	\$946,935
Net MWh Targets					
		PY4	PY5	PY6	Total
	MWh savings	0	978	1,955	2,933
Cost-Effectiveness results					
		TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
	Analysis Results	1.17	1.35	\$0.02	\$0.35
Additional Benefits (if applicable)					
Not applicable.					

Demand Response

For our first Plan, we achieved the demand response MW goal through the implementation of our Air Conditioner Cycling Program (formerly “Nature First”). This program cycles air conditioners on and off on peak days so as to reduce the peak load. We have implemented this program for over a decade and, for the first Plan cycle, had increased participation to achieve the statutory MW goal. Unique to this program element is the fact that its costs are capitalized due to the required purchase of switches for the air conditioners. This requires an annual carrying charge associated with this program that is cumulative over time. For the immediate future, this charge continues to grow on an annual basis. We project costs of \$1.5 million, \$2.6 million and \$2.8 million for PY4, PY5 and PY6, respectively, if we continue to add participants.¹³ Maintaining this program at its current level would result in costs of \$0.4 million, \$1.0 million and \$0.9 million for each year of the Plan.

We do not intend, however, to implement a stand-alone demand response program as an element of this Plan. Consistent with the statute’s directive to reduce energy efficiency and demand response measures to comply with the spending screens, we propose to simply maintain the demand response program at its current participation level. This approach seems particularly wise given that ComEd can still achieve the statutory demand response goal through the residential program elements. As we increase our effort to maximize kWh savings, it does not make sense to invest in a program that has cumulative costs that could dramatically impact the spending cap in future years. We propose to continue the AC Cycling program in maintenance mode so that the MWs obtained in the first three years are still available.

In terms of achieving the statutory MW goal going forward, ComEd believes the MWs obtained through the residential energy efficiency program elements fully meet the statutory MW goal. In fact, we expect to greatly exceed the statutory MW goal through these residential programs.

During development of the first plan it was uncertain what the demand impacts of residential energy efficiency programs would be, and the Central AC Cycling program was added to ensure compliance with the statutory demand response goals. For the current Plan, the demand reduction for residential programs is in the 35 – 38 MW range each year. These demand reductions have been accepted by PJM, in the same forward capacity auction that the AC cycling program is offered.

Net MW				
Programs	Net MW			
	PY4	PY5	PY6	Total
C&I - EE Programs				
Prescriptive	48.0	48.0	46.9	142.9
Custom	4.7	5.9	7.0	17.6
Retro-commissioning	3.8	3.5	3.8	11.1
New Construction	0.9	1.4	2.0	4.3
Compressed Air	2.8	3.0	3.3	9.1
Midstream Incentives	3.6	5.8	4.1	13.5
Small Business Direct Install	1.1	1.6	1.6	4.3
C&I CACES	0.2	0.7	0.9	1.8
Commercial Real Estate	-	2.0	2.0	4.0
Data Center Efficiency	-	0.9	0.9	1.8
Energy Efficiency RFP	1.1	2.8	3.4	7.3
C&I TOTAL	66.2	75.6	75.9	217.7
RESIDENTIAL - EE Programs				
Lighting	10.5	7.7	5.5	23.8
Home Energy Reports	11.7	11.7	14.7	38.1
Appliance Recycling	6.4	6.1	6.1	18.6
CACES	7.8	9.1	10.4	27.3
M-F Home Performance	0.3	0.5	0.7	1.5
Appliance Rebate	0.3	0.3	-	0.6
S-F Home Performance	0.0	0.1	0.1	0.2
New Construction	-	0.2	0.3	0.5
RESIDENTIAL TOTAL	37.1	35.7	37.8	110.5
Third Party Program Admin.	-	-	-	-
Total ComEd EE Programs	103.3	111.3	113.7	328.2

¹³ The PJM Base Auction clearing price for 2011 delivery year was \$110/MW-day. Clearing prices for 2012 and 2013 were \$16.46/MW-day and @\$27.73/MW-day. This drop was due to a large increase in capacity offered into the auction as a result of the inclusion of demand response and energy efficiency as qualified capacity resources in the auction.

The above table projects the MW impact for all program elements across the three Plan years. Because the statutory MW target only applies to the residential and very small business class, it is still apparent that the three year Plan residential totals of 37 MW, 36 MW and 38 MW greatly exceed the statutory MW goals of 10.5 MW, 10.7 MW and 10.8 MW, respectively.

We believe this approach, given the spending screen limitations, is the most appropriate approach to take at this juncture in the life of our portfolio.

5.2.2 Smart Ideas for Your Business - C&I Program Elements

ComEd’s “Smart Ideas for Your Business” program is targeted at ComEd’s commercial and industrial (“C&I”) customer segment. C&I customers total approximately 375,000, accounting for 10% of ComEd’s customers and approximately 65% of overall kWh usage.

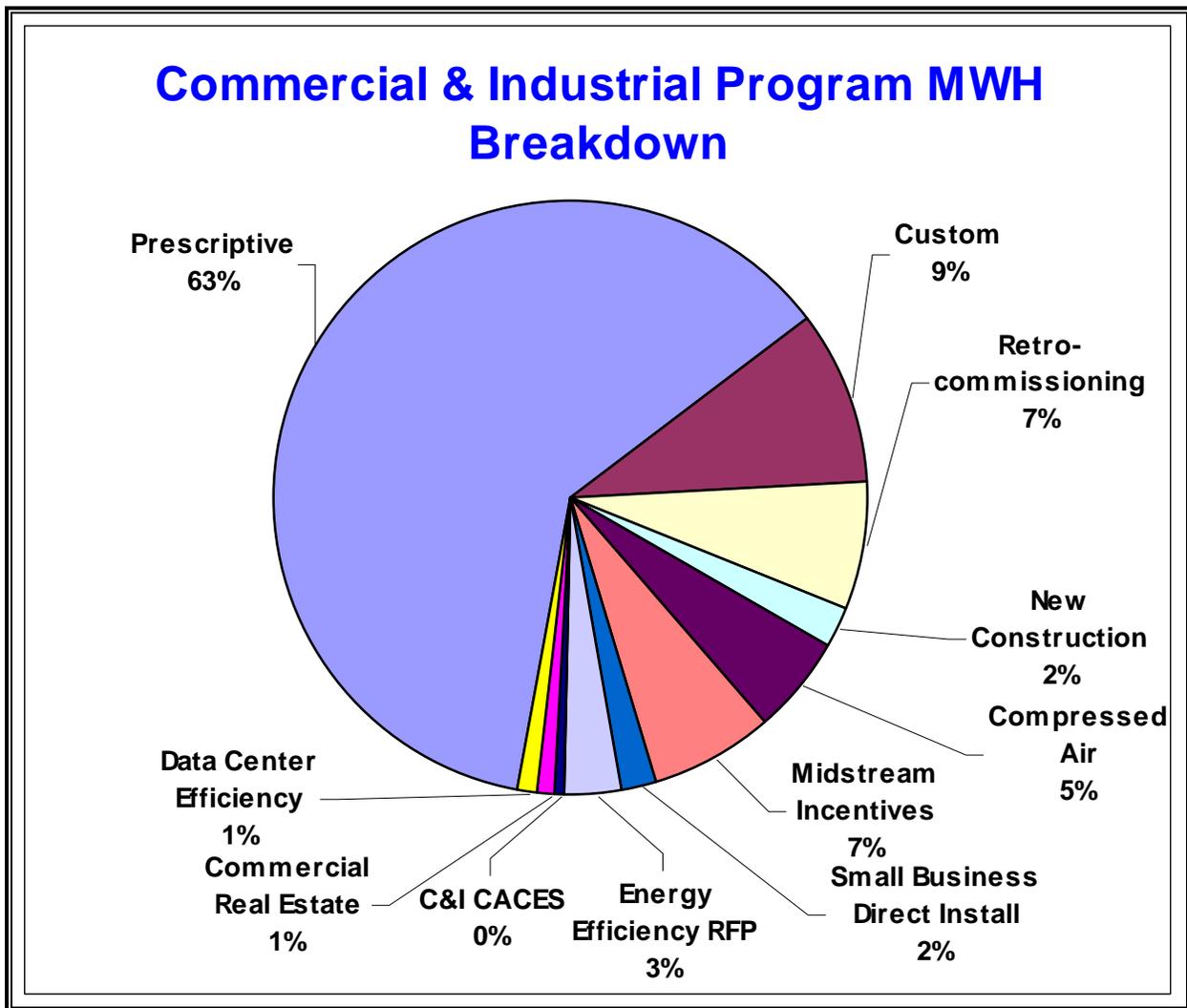
The *Smart Ideas for Your Business* program includes 11 program elements. Over the three Plan years, these 11 program elements are projected to produce energy savings of 1,160,000 MWh. In PY4, this program segment is expected to attain 46% of the portfolio kWh target, 51% in PY5 and finally 53% in PY6.

The *Smart Ideas for Your Business* program also will incorporate several program elements that have been jointly developed and will be co-delivered with Nicor and Integrys. In addition, the program will include several new program elements designed to reach specific high-potential or under-served market segments.

The table below summarizes the *Smart Ideas for Your Business* program elements, including their current status in the portfolio, implementation date, and involvement of gas companies.

Commercial & Industrial Program Elements				
Programs	Program Status	Start Date	Electric Only or Electric / Gas	Program Snapshot
C&I - EE Programs				
Prescriptive	Existing	on-going	Electric Only	Continuation of current program element
Custom	Existing	on-going	Electric / Gas	Continuation of current program element with gas measures also included
Retro-commissioning	Existing	on-going	Electric / Gas	Continuation of current program element with gas measures also included
New Construction	Existing	on-going	Electric / Gas	Continuation of current program element with gas measures also included
Small Business Direct Install	Pilot	Jun-10	Electric / Gas	Continuation of pilot program element with gas measures also included
Compressed Air	New	Jun-10	Electric Only	New program element featuring compressed air that will be offered with the retro-commissioning program element
Midstream Incentives	New	Jun-10	Electric Only	New program element that will offer midstream incentives to technology distributors for CFLs,.
Energy Efficiency RFP	New	Jan-11	Electric Only	New program element that will issue an RFP for large energy efficiency projects
C&I CACES	New	Mar-10	Electric Only	New program element that will offer the same air conditioner incentives as in the residential program for the C&I sector
Commercial Real Estate	New	Jun-11	Electric Only	New program element that will begin in PY5 and is targeted at the Commercial Real Estate customer segment
Data Center Efficiency	New	Jun-11	Electric Only	New program element that will begin in PY5 and is targeted at the data center customer segment

Although there are 11 program elements within the program, 4 elements drive the overall MWh impact. The C&I Prescriptive program element is by far the largest program in terms of both costs and MWhs saved. This program element will continue to be the foundation on which the C&I program elements are built. Three other program elements, C&I Custom, Retro-commissioning and Midstream Incentives, each account for over 7% of the total MWhs saved in the C&I sector. Combined with the C&I Prescriptive program element, these three program elements account for over 85% of the MWhs projected to be saved in the C&I sector. Other programs have been designed to address certain market segments. Two instances of this are the Commercial Real Estate and Data Center Efficiency program elements. Both elements are small in terms of kWh savings, but address specific segments we believe are currently underserved or offer kWh potential for the future. The pie chart below illustrates the projected MWh impact of each program element over the three-year period.



The following pages give a detailed description of the *Smart Ideas for Your Business* program elements.

C&I Prescriptive Incentives

Program Element	C&I Prescriptive Incentives
Program Objective	Offer a comprehensive menu of incentives for the installation of energy efficiency measures, motivating C&I customers to select high efficiency equipment when making purchasing decisions. The Prescriptive Incentives element is a key component of the comprehensive set of programs that will be available to C&I customers.
Program Description	<p>The C&I Prescriptive Incentives program element is an existing program that we launched in our first Plan. This program element will provide an expedited, simple solution for C&I customers interested in purchasing efficient technologies that can produce verifiable savings. The program primarily targets discrete retrofit opportunities such as lighting and HVAC systems. Streamlined incentive application and verification and quality control processes will be employed to facilitate ease of participation and minimize the time required for incentive payment.</p> <p>Relationships with trade allies (<i>i.e.</i>, equipment vendors, installation contractors) will be a key strategy for promoting prescriptive incentive availability to customers. Additional leads are expected from DCEO's market transformation programs – Smart Energy Design Assistance Program and Large-customer Energy Analysis Program.</p>
Utility Coordination	This program offers primarily electric-only energy savings, so it is not offered as a coordinated program. If a measure is introduced that offers the possibility to coordinate with the gas companies, we will pursue this option. However, in any event, we will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.
Target Market	This program is designed for C&I customers seeking to improve the efficiency of existing facilities. All targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.
Program Duration	June 2011 through May 2014
Delivery Strategy	<p>We will renegotiate with our current C&I Prescriptive / Custom program implementation contractor for similar services provided in the first Plan. If renegotiations do not produce desired results, an RFP will be conducted.</p> <p>Efficiency measure implementation and installation will be the responsibility of the customer and trade ally. ComEd Account Managers will help to market the program and identify potential candidate customers for participation.</p> <p>Key elements of the Prescriptive Incentive element implementation strategy include:</p> <ul style="list-style-type: none">• Trade ally recruitment and training: Trade allies will be a key delivery mechanism for the program element as they promote participation and available incentives to their customers. Trade allies will be recruited to participate in training sessions to inform them about program incentives, participation processes, and requirements. Trade allies actively participating in the Prescriptive element and other program offerings will receive regular communications about program activities and changes to ensure they are informed and engaged participants.• Customer recruitment: Customers will be recruited through marketing and outreach activities, Account Manager referrals, and trade allies. To ensure that C&I customers perceive our energy efficiency programs as a seamless set of offerings, cross-referrals from other programs will also be

Program Element

C&I Prescriptive Incentives

provided where appropriate.

- **Technical assistance:** The program implementation contractor will provide guidance regarding program offerings and participation processes to customers and trade allies as needed to minimize confusion and barriers to participation.
- **Application submittal:** Customers will submit incentive applications and required documentation after installation of qualifying energy efficiency measures has been completed.
- **QA/QC review:** Incentive applications will be subject to a QA/QC review to ensure all required forms and documentation have been submitted, and that calculation of incentive totals are correct.
- **Project verification:** We will reserve the right to site-verify installations prior to approval and incentive payment.
- **Incentive payment:** To minimize barriers to participation, we will seek to expedite incentive payment.

Marketing Strategy

Trade Allies and our account managers are the primary conduits for this program, and we will leverage their direct relationships with their commercial and industrial customers to market this program. The following are marketing strategies that will help meet program goals:

- Segment incentive offerings (and associated marketing materials) by market sector to increase relevancy to Trade Allies and target audiences. Example segment offerings include restaurants, hospitals, convenience stores, and industrial customers.
- Segment customers by energy intensity usage and target marketing through industry associations, trade shows, direct mail, and email marketing campaigns.
- Educate and leverage existing resources (Trade Allies, Account Managers, External Affairs Managers, call center) to their greatest potential to achieve broad-based awareness at the lowest possible cost.
- Leverage, grow and diversify Trade Ally relationships to extend reach and cultivate increased awareness among different customer segments.

Tactics include: direct relationship marketing via personal sales visits to large C&I accounts and trade allies. Other tactics include: direct mail, newsletters, customer events, and email communications to reach both large and small customers.

Key Messages

When communicating with customers, ComEd uses a few overarching key messages including:

- *Energy Efficiency reduces operating costs and improves the bottom line*
- *Rebates and incentives shorten payback periods for energy-efficient equipment and systems*
- *Investing in energy savings is a smart decision*

When communicating with trade allies, ComEd uses a few overarching key messages including:

- *Promoting energy efficiency can help you grow your business*

Program Element**C&I Prescriptive Incentives****Energy Efficiency Measure Information**

The C&I Prescriptive program element measures will include energy-efficient equipment that has broad application in nonresidential sectors such as T-8 and T-5 lighting, lighting and vending machine controls, premium efficiency motors, and variable frequency drives, as well as equipment with niche or targeted market applications such as commercial food service equipment and grocery refrigeration measures.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs, while supporting portfolio level goals of providing high confidence in total portfolio savings without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross ("NTG") ratios. We will provide tracking systems for program measures and customer participation which meet the evaluator's requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts that define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important evaluation parameters to be reviewed include: measures installed; average savings for each measure; operating hours of equipment; and the NTG ratio. Average savings are standardized in a reference manual, but operating hours are determined from surveys and site visits. Multiple market actors and end-use customers are surveyed to determine program influence.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is high given that the C&I Prescriptive program element represents a considerable share of the overall portfolio's kWh reduction goal. This program is highly dependent on the marketplace. For example, a specific technology could be adopted much more quickly than another and it is difficult to plan around what the uptake of any given measure could be. Also, because the Prescriptive program element is so large, small impacts in this element could have a large impact on the overall portfolio. To mitigate this risk we have taken a conservative approach in designing this program. Specifically, first year evaluation results were utilized to design this program element. Flexibility was also built into this program element for monitoring the uptake of specific technologies and to reconfigure incentive levels that will allow us to adapt to market conditions and achieve the savings goal. New lighting and motor efficiency standards were also included in our modeling assumptions. Lastly, we believe we have scaled this program to be as large as possible, given its current program design. To increase the program element size would require a significant redesign of

Program Element **C&I Prescriptive Incentives**

the program and a commitment of substantially more resources for higher incentives and more marketing.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results and program implementation experience. Note that as program costs increase and the spending screen limit is reached, the actual number of projects decreases slightly in PY6.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	2,978	2,979	2,915	8,872

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$11,491,378	\$11,449,488	\$11,616,673	\$34,557,539
Incentive	\$27,421,480	\$27,463,370	\$27,130,680	\$82,015,530
Total	\$38,912,858	\$38,912,858	\$38,747,353	\$116,573,069

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	238,251	238,345	233,195	709,791

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.70	2.38	\$0.03	\$0.15

Additional Benefits (if applicable)

Not Applicable

C&I Custom Incentives

Program Element	Custom Incentives
Program Objective	
<p>Identify and implement site-specific and unique cost-effective energy efficiency opportunities through measures not addressed by ComEd's Prescriptive Incentives program element. Many commercial and industrial projects involve multiple measures with interactive effects, process improvements or complex measures for which deemed savings or simple savings algorithms combined with prescriptive incentives are not appropriate. This program element will offer customized incentives based on calculated savings for specific customer projects.</p>	
Program Description	
<p>Over the long term, our energy efficiency portfolio is structured to provide a seamless set of energy solutions to C&I customers – from prescriptive incentives to retrocommissioning services to technical assistance and incentives to promote energy efficient facility design and construction. The Custom Incentives element is key to that strategy, providing incentives and technical assistance to aid in the evaluation and implementation of energy efficiency retrofit opportunities not covered by the Prescriptive Incentives program element. The Custom Incentives program element is an existing program that we launched in our first Plan</p> <p>This program element will provide financial assistance to customers to support implementation of high-efficiency opportunities that are available at the time of new equipment purchases, facility modernization, and industrial process improvement.</p> <p>The program element includes a number of technical assistance components to assist customers in the comprehensive evaluation of energy efficiency opportunities, including:</p> <ul style="list-style-type: none">• Audits or studies to assist customers in identifying efficiency opportunities and analyzing associated costs and savings.• Information and referrals to other portfolio initiatives such as efforts to facilitate energy benchmarking for commercial facilities. <p>We anticipate approving and co-funding with customers a limited number of studies as part of this program element. The anticipated co-funding percentage is 50% of the pre-approved study cost with a maximum co-funding amount of \$15,000 per study. Studies that may be considered for this funding include feasibility studies and engineering studies for energy efficiency projects. We will also consider adding a feature to encourage customers to implement the opportunities identified in the studies.</p> <p>Our program implementation contractor will conduct an internal review of all custom incentive applications to verify savings calculations, and we will reserve the right to site-verify data prior to approval and incentive payment.</p>	
Utility Coordination	
<p>It is the intent of ComEd, Nicor Gas and Integrys to cooperate in the offering of this program. There is high potential for this program to benefit both gas and electric customers. The utilities will determine a framework for cost allocation based on savings/benefits to each utility's customers. In addition, the utilities will collaborate in raising awareness of and educating customers on the benefits of energy efficiency. All such targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.</p>	
Target Market	
<p>The target market is C&I customers seeking to improve the efficiency of existing facilities through the implementation of energy efficiency measures not covered by ComEd's Prescriptive Incentive program element. All targeted customers taking delivery service from ComEd are eligible for this program element regardless of their choice of supplier.</p>	

Program Element**Custom Incentives****Program Duration**

June 2011 through May 2014

Delivery Strategy

We will renegotiate with our current C&I Prescriptive/Custom program implementation contractor for similar services provided in the first Plan. If renegotiations do not produce desired results, an RFP will be conducted.

Participation will be driven primarily by referrals from ComEd Account Managers and through direct outreach by ComEd or the implementation contractor. Project review and verification will be performed by the implementation contractor. Project QA/QC will be performed by the ComEd program manager in conjunction with the implementation contractor. Energy studies will be performed by third-party engineering consultants. Efficiency measure implementation and installation will be the responsibility of the customer.

Key elements of the implementation strategy include:

- **Trade ally recruitment and training:** Trade allies will be a less critical program component than in the Prescriptive Incentive element, but Custom Incentive offerings will be promoted to key segments of the trade ally market (e.g., specialized engineering firms, energy service providers), so they can promote participation and available incentives to their customers. Trade allies will be recruited to participate in training sessions regarding program incentives, participation processes, and requirements. Trade allies actively participating in this and other *Smart Ideas* offerings will receive regular communications about program activities and changes to ensure they are informed and engaged participants.
- **Customer recruitment:** Customers will be recruited primarily through direct outreach activities. As the program is targeted at larger customers, referrals by our Account Managers will also be a key element of customer recruitment. To ensure that C&I customers perceive our energy efficiency programs as a seamless set of offerings, cross-referrals from other programs will also be provided where appropriate.
- **Technical assistance:** We will provide both cost-sharing for facility assessment and engineering support to identify and assess the cost-effectiveness of energy savings opportunities not covered by our Prescriptive Incentives program element. In addition, Program staff will guide customers and trade allies through the participation process to minimize confusion and barriers to participation.
- **QA/QC review:** Incentive applications will be subject to a quality assurance review by program technical staff to ensure accuracy of anticipated savings and incentive calculations.
- **Project verification:** We will reserve the right to site-verify installations prior to approval and incentive payment.

Marketing Strategy

Trade Allies and our C&I account managers are the primary conduits for this program, and we will leverage their direct relationships with their commercial and industrial customers to market this program. Marketing strategies that will help meet program goals are as follows:

- Segment incentive offerings (and associated marketing materials) by technology type to increase relevancy to Trade Allies and target audiences. Example segment offerings include restaurants, hospitals, convenience stores and industrial customers.
- Segment customers by energy usage intensity ("EUI") and target marketing to segment through associations, trade shows, direct mail and email marketing campaigns.
- Educate and leverage existing resources (e.g., trade allies, C&I account managers, call center, implementation contractor outreach staff) to their greatest potential to achieve broad-based awareness at the lowest possible cost.
- Leverage, grow and diversify Trade Ally relationships to extend reach and cultivate increased awareness among different customer segments.

Program Element

Custom Incentives

Tactics include: direct relationship marketing through C&I customers via personal sales visits to their large accounts. Other tactics include direct mail, newsletters, customer events, and email communications to reach both large and small C&I customers.

Key Messages

When communicating with customers, ComEd uses a few overarching key messages including:

- *Energy Efficiency reduces operating costs and improves the bottom line*
- *Rebates and incentives shorten payback periods for energy-efficient equipment and systems*
- *Investing in energy savings is a smart decision*

Energy Efficiency Measure Information

The Custom Incentives program element measures will include any cost-effective electrical energy efficiency measure such as variable frequency drives (“VFDs”) on compressed air or domestic water booster pumps, process efficiency measures and those measures that are not covered by the Prescriptive program’s incentives or incentives provided through other programs in our energy efficiency portfolio.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important evaluation parameters to be reviewed include: identifying baseline energy usage that would be expected without efficiency incentives, modeling energy usage of equipment and systems that are installed, and the NTG ratio. This program largely depends on the engineering expertise of the implementer, and M&V validates the approach, assumptions and modeling to determine energy savings. A sampling of customer sites is audited as part of the M&V validation. Customers’ decision-makers are interviewed to determine program influence.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Element **Custom Incentives****Program Risk Assessment / Mitigation Plan**

The level of potential risk is highly dependent upon the complexity of the project and the level of analysis provided by the applicant. Assuming a balanced mix of project types, ranging from lighting to process controls, this program element has been assigned a medium risk factor. Because more complex projects often have more risk associated with them, we will assess the risk level of each project and will conduct a focused review designed to mitigate potential risk, which may include measurement and verification and in-depth ComEd peer review of the implementation contractor's analysis approach and calculations.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	400	500	600	1,500

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. Increased program expenditures are budgeted in PY4 to provide for extensive efforts in administering energy audits for the purposes of "building a pipeline" of potential energy efficiency opportunities for future Plan years.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$2,905,725	\$867,594	\$759,387	\$4,532,706
Incentive	\$3,199,607	\$4,499,444	\$5,999,256	\$13,698,307
Total	\$6,105,332	\$5,367,038	\$6,758,643	\$18,231,013

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	28,796	35,996	43,195	107,987

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	4.63	2.89	\$0.03	\$0.21

Additional Benefits (if applicable)

Not applicable

Retrocommissioning

Program Element	Retrocommissioning
Program Objective	
Obtain kWh savings through the identification and implementation of low cost operational adjustments that improve the efficiency of existing buildings' operating systems by optimizing the systems to meet the building's requirements, with a focus on building controls and HVAC systems.	
Program Description	
<p>The Retrocommissioning Program element is an existing program that we launched in our first Plan. Retrocommissioning ("RCx") services will be delivered through a network of commissioning providers operating in our service territory that have been trained in program protocols and participation processes. For smaller facilities, commissioning providers will conduct a targeted assessment of areas with substantial energy savings opportunities such as packaged HVAC units. Larger facilities will be eligible to receive a more comprehensive assessment of building systems and controls. To motivate participation, a cost sharing requirement for the cost of the RCx study is available to customers to assist in overcoming the barrier of customers' reluctance to spend money on a concept that is fairly new to them. To ensure high implementation under this approach, we will institute the following program elements:</p> <ul style="list-style-type: none">• Market the program to customers occupying "good candidate" buildings for retrocommissioning through focused efforts of our C&I Account Managers, the program's qualified retrocommissioning service providers, and the program implementation team.• Implement a detailed application screening process to qualify candidates having the highest potential for successful project completion.• Require customers to sign a Program Agreement at the end of the Planning Phase. The Program Agreement requires the participant to commit to spend at least \$10,000 or \$20,000 (depending on project size) to implement agreed-upon retrocommissioning measures resulting in a bundled estimated simple payback of 1.5 years or less. Retrocommissioning measure installation must be completed within the Plan year.• Design the Investigation/Implementation phase to ensure the customer, retrocommissioning service provider ("RSP") who will provide commissioning services, and installation contractor who will install recommended measures are engaged in finding and fixing problems. This element will create savings throughout the investigation/implementation process. In addition, the program will operate in a highly controlled manner with significant technical and managerial oversight provided on each project to ensure project success. <p>We will also offer financial incentives for assisting customers in overcoming first-cost barriers in implementing RCx study recommendations. Measure implementation support will be provided by the RSP and funded during the retrocommissioning process. This approach will also ensure measures are completed on time and installed properly.</p> <p>This program element will include a strong customer education component to promote the value of RCx services, targeting senior management decision-makers as well as facility operations and maintenance staff. Such education will be provided through program marketing activities, and may also be supported through other industry education and outreach, such as Building Operator Certification ("BOC") training. Benchmarking of facility energy use, also part of ComEd's planned market conditioning efforts, will support pre-screening efforts to identify buildings that would be good RCx candidates. Educational program components will promote participation by emphasizing the value of the RCx process, and also help to ensure savings persistence by promoting improved operations and maintenance practices.</p>	

Program Element**Retrocommissioning****Utility Coordination**

It is the intent of ComEd, Nicor Gas and Integrys to cooperate in the offering of this program. There is high potential for this program to benefit both gas and electric customers. The utilities will determine a framework for cost allocation based on savings/benefits to each utility's customers. In addition, the utilities will collaborate in raising awareness of and educating customers on the benefits of energy efficiency. All such targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.

Target Market

This program element will be targeted to medium to large C&I customers (having a peak demand of 500 kW or greater). All targeted customers taking delivery service from ComEd are eligible for this program element regardless of their choice of supplier.

Program Duration

June 2011 through May 2014.

Delivery Strategy

We will renegotiate with our current RCx program implementation contractor for similar services provided in the first Plan. If renegotiations do not produce desired results, an RFP will be conducted.

The implementation contractor will oversee RCx activities conducted by participating RSPs, review RCx studies and provide independent evaluation of savings estimates, and provide post-installation verification. Our Account Managers will help market this program element and identify potential customers for participation.

Key elements of the RCx implementation strategy include:

- **RSP recruitment and training:** RSPs will be selected and approved through competitive RFP processes; customers must work with an approved RSP to be eligible for the incentive. RSPs will be the key delivery mechanism as they promote RCx services and available incentives to their customers. RSPs will be required to participate in training sessions to inform them about program element incentives, participation processes, and RCx protocols and requirements. RSPs actively participating in the RCx program element and other program offerings will receive regular communications about program element activities and changes to ensure they are informed and engaged participants.
- **Customer recruitment:** Program staff, as well as RSPs, will recruit customers. As the program element targets larger customers, referrals by our Account Managers will be a key step in customer recruitment. To ensure that C&I customers perceive our energy efficiency programs as a seamless set of offerings, cross-referrals from other program elements will also be provided where appropriate.
- **Pre-screening:** To ensure that RCx efforts are focused on high-opportunity buildings, ComEd will promote benchmarking with EPA's Portfolio Manager rating system and other standard industry benchmarks as a pre-screening mechanism.
- **RCx study:** During the study phase, the RSP will conduct a facility assessment to diagnose problems and make recommendations for improvement opportunities, including an assessment of cost, savings and payback. Where applicable, the RCx study may include an assessment of energy savings opportunities eligible for incentives through our other C&I program offerings, and in all such cases the incentive levels established by those programs will be used.
- **Study review:** The implementation contractor will review the RCx study and ensure that it meets program standards and that those calculations and methodologies are correct.
- **Project implementation:** It will be the responsibility of the customer to implement those RCx study recommendations that have received program element approval and are eligible for implementation incentives.

Program Element

Retrocommissioning

- **Project verification:** All measures implemented by the customer will be site-measured and verified.

Marketing Strategy

RSPs are the primary conduit for this program and will market the program through their direct relationships with commercial and industrial customers. They will identify, communicate, and enroll customer participants through their own marketing initiatives and with the assistance of our Account Managers, which may be supplemented by the program.

The following are marketing strategies that will help meet program goals:

- Leverage, grow and diversify RSP relationships to achieve aggressive targets
- Educate and leverage existing resources (e.g., Trade Allies, ComEd Account Managers) to their greatest potential to more effectively and economically reach customer segments
- Segment customers by their building type (demand requirement: 500kW), and tailor communications and incentive offerings based on this information

Tactics include: Co-branded marketing collateral from ComEd. Other tactics to be utilized are direct mail, newsletters, trade shows, and email communications to market the program.

Key Messages

- *Retrocommissioning examines your building's systems to identify no-cost and low-cost opportunities that can reduce energy usage and save money, all with quick payback.*
- *Is your building out of shape?*

Energy Efficiency Measure Information

RCx will obtain kWh savings through the identification and implementation of low cost operational adjustments through such measures as VAV reset, air and coil balancing, temperature reset, thermostat control, HVAC filters and optimization that improve the efficiency of existing buildings' operating systems and that meet the building's requirements.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross ("NTG") ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator's requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important evaluation parameters to be reviewed include: identifying baseline energy usage that would be expected without efficiency incentives; modeling energy usage of equipment and systems that are modified; and the NTG ratio. This program largely depends on the engineering expertise of the implementer, and M&V validates the approach, assumptions, and modeling to determine energy savings. A sampling of customer sites is audited as part of the M&V validation. Customers' decision-

Program Element **Retrocommissioning**

makers are interviewed to determine program influence.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is low due to the program element's several performance thresholds that prevent over-commitment of funds to projects with low savings potential. Further, the feasibility of measures and the participants' willingness to pursue implementation is gauged at three distinct points during the project. Each measure is discussed at length with the participants to determine persistence and free-ridership issues. Measurement and verification on each measure further minimizes risk.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	63	70	80	213

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. Note that in PY4 additional dollars have been budgeted in the non-incentive budget to develop a more streamlined process for future years and to increase the number of potential projects in the pipeline.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$913,214	\$579,035	\$538,978	\$2,031,227
Incentive	\$4,118,954	\$4,102,566	\$4,888,822	\$13,110,342
Total	\$5,032,168	\$4,681,601	\$5,420,800	\$15,141,569

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	26,880	29,568	32,525	88,973

Cost-Effectiveness results

Program Element		Retrocommissioning			
		TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results		1.81	1.25	\$0.07	\$0.19
Additional Benefits (if applicable)					
Not Applicable					

C&I New Construction

Program Element	C&I New Construction
Program Objective	
Capture energy efficiency opportunities that are available during the design and construction of new buildings, major renovations of existing buildings, and tenant build-outs in the C&I market.	
Program Description	
<p>This program element will promote energy efficiency through a comprehensive effort to influence building design practices. To secure energy efficiency opportunities in new construction projects, it is necessary to overcome barriers such as design community resistance to adopting new ideas, increased first-cost for efficient options, and the common practice of designing for worst-case conditions rather than efficiency over the range of expected operating conditions. This program element will work to overcome these barriers through education and outreach to building owners, design professionals, building contractors and other trade allies, as well as by providing design assistance, technical assistance, support for the Leadership in Energy and Environmental Design (“LEED”) rating system, and incentives for efficient designs and measure implementation.</p> <p>This program element will have three participation tracks: a systems track, a comprehensive track, and a small buildings track.</p> <ul style="list-style-type: none">• Systems track: The systems track serves smaller projects and projects in the later stages of the design process. This track targets efficiency opportunities in key building system components. It provides technical assistance and incentives for construction that incorporates efficient systems (e.g., lighting, HVAC, and building envelope).• Comprehensive track: The comprehensive track serves larger projects that are early in the design process. This track offers a higher level of technical assistance and consultation on building design. We assess comprehensive energy efficiency opportunities and system interaction, and provide incentives based on whole-building energy simulation and achievement of whole-building performance targets.• Small Buildings track: The small buildings track serves smaller projects that are pursuing both lighting and daylighting. We provide incentives based on incorporating daylighting and reducing lighting power density. <p>The new construction market is facing ever-increasing code enhancements, which will continue to erode energy savings potential in the new construction market. IECC 2012, which will go into effect as ComEd implements its proposed Plan, will likely substantially reduce savings potential associated with the Small Buildings track and with the Systems track. In anticipation of the proposed code change and in order to meet aggressive goals, we recommend gradually shifting our focus to growing comprehensive applications and gradually ramping down the Systems and Small Buildings track. This gradual change will make the program easier to explain and comprehend for potential participants. It will also require projects to apply early in the design phase (design development or earlier) in order to qualify for incentives. This will increase program involvement before the major systems have been designed and specified and reduce free-ridership potential.</p> <p>A key element for success in a new construction program is securing the involvement of the professional design community. To encourage participation of the design community and to offset the costs of considering multiple design options, we will continue to offer incentives to project design teams.</p>	

Program Element	C&I New Construction
Utility Coordination	
<p>It is the intent of ComEd and Nicor to coordinate the offering of this program. We anticipate there will be new construction projects in our shared service territories. These projects could benefit from both coordinated efforts to impact gas and electric energy use. Joint offerings, where possible, will be made transparent to the customer. In addition, the utilities will collaborate in raising awareness of and educating customers on the benefits of energy efficiency.</p>	
Target Market	
<p>This program element is designed to target C&I customers with new construction, major renovation, or tenant build-out projects in the planning or design process. Architectural and engineering design firms will also be targeted and encouraged to submit applications early in the planning stages. All targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.</p>	
Program Duration	
<p>June 2011 through May 2014.</p>	
Delivery Strategy	
<p>We will renegotiate with our current C&I new construction program implementation contractor for similar services provided in the first Plan. If renegotiations do not produce desired results, an RFP will be conducted.</p> <p>Participation will be driven primarily through direct outreach by the implementation contractor or by ComEd, including referrals from ComEd Account Managers. The program will be delivered through the implementation contractor, which will provide design assistance, technical assistance, whole building modeling, outreach, and education. The following expectations and assumptions have been used for planning purposes, with actual incentive levels to be determined during the detailed implementation plan development.</p> <p>Implementation Incentives. The New Construction program element will offer implementation incentives to customers based on the incremental cost of the efficiency measures to help overcome first-cost barriers.</p> <ul style="list-style-type: none"> • The Systems track will provide standard incentives for an array of measures that meet specified criteria for system and component performance. In cases where a Systems track project includes measures not covered by the New Construction program element incentives, but which are eligible for incentives through ComEd's other C&I programs (e.g., the Prescriptive Incentives element), the incentive levels established by those program elements will be used. • The Comprehensive track incentives will be based on whole-building energy simulation and achievement of whole-building performance target above baseline conditions. • The Small Buildings track will provide standardized incentives for implementing daylighting strategies and for reducing lighting power density. <p>We reserve the right to establish a per-project incentive cap for New Construction program element projects during final program design.</p> <p>Design Team Incentives. Design team incentives will be offered to encourage early involvement in the design process and to provide partial compensation for the extra work involved in evaluating multiple efficiency options. Design team incentives are currently set at 10% of the implementation incentive.</p>	
Marketing Strategy	
<p>The program will be marketed to building owners, design professionals, developers, contractors, and trade allies through outreach and education. The following are strategies that will help meet program goals:</p> <ul style="list-style-type: none"> • Create long-term demand for high performance C&I design and construction practices • Provide integrated training and education to architects, designers and developers to foster a 	

Program Element**C&I New Construction**

community of advocates who understand the energy and non-energy benefits of high performance building; and who can, in turn, market these benefits to owner-occupied and developer/tenant groups to create “pull”

- Leverage relationships and outreach with professional allies in the design and construction communities to create interest and involvement in the incentive at the “new project start-up” phase
- Find prospects in the early design phase of building by utilizing ComEd account managers and existing relationships with trade associations and professional trade allies

Key Tactics include: targeted direct marketing toward professional organizations, direct mail, and formal education and training events.

Key messages

- *Planning to design or upgrade your building with energy efficiency measures is easier (and smarter) than you think*
- *The non-energy benefits of energy efficiency measures are significant and can lead to huge dividends in employee performance, tenant satisfaction and customer attractiveness*
- *The Smart Ideas New Construction incentive can provide you and your design team with technical and financial assistance*

Energy Efficiency Measure Information

For Systems track incentives, specified criteria for system and component performance have been established for lighting and HVAC measures. Comprehensive track incentives will be based on whole-building energy simulation and achievement of whole-building performance targets above baseline conditions.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation which meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important evaluation parameters to be reviewed include: identifying baseline energy usage based on current code requirements; modeling energy usage of equipment and systems which are installed; and the NTG ratio. This program largely depends on the engineering expertise of the implementer, and M&V validating the approach, assumptions, and modeling to determine energy savings. Customers’ decision-makers are interviewed to determine program influence.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall

Program Element**C&I New Construction**

savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is low given its MWh value relative to the overall portfolio and that we have assumed a conservative net-to-gross ratio to mitigate risk. The C&I New Construction program element represents a small share of the overall portfolio's kWh goal. We have incorporated existing program evaluation assumptions into our planning forecast. We will assess new evaluation data as it becomes available, making adjustments as necessary that will mitigate overall program risk.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	43	66	100	209

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$1,280,948	\$1,934,547	\$2,388,253	\$5,603,748
Incentive	\$1,331,520	\$1,690,050	\$2,253,020	\$5,274,590
Total	\$2,612,468	\$3,624,597	\$4,641,273	\$10,878,338

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	5,502	8,402	12,604	26,508

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.86	1.74	\$0.03	\$0.47

Program Element	C&I New Construction
Additional Benefits <i>(if applicable)</i>	
Not Applicable	

Compressed Air

Program Element	Compressed Air
Program Objective	
<p>Assist customers in identifying and implementing solutions that will address inefficiencies in their compressed air systems. Incentives will be offered to customers to offset the cost of a comprehensive assessment of their compressed air systems. The assessment will be utilized to identify low- and no-cost energy efficiency opportunities as well as opportunities for capital investments. Incentives will also be paid to customers for kWh saved through the implementation of the opportunities that were identified in the assessment.</p>	
Program Description	
<p>This concept was introduced in our first Plan as an additional component in the Retrocommissioning (“RCx”) program element. We identified this concept as having significant potential as a low-cost program element and have developed it into its own program element for planning purposes. For implementation purposes, it will continue to be administered through the RCx structure.</p> <p>This program element is designed to assist customers in identifying inefficiencies in their compressed air systems. Incentives will be offered to customers to partially or completely pay for comprehensive assessments of their compressed air systems. These assessments will focus primarily on the identification of low- and no-cost improvements. Incentives will also be paid for kWh saved through the implementation of the opportunities identified during the system assessment. Pre-approval is required prior to participation in the program.</p> <p>Full system assessments may also identify opportunities for capital investment. As capital investment measures related to energy-saving compressed air equipment are identified, incentives will be provided through the Custom Incentive program element.</p> <p>The System Assessment will include:</p> <ul style="list-style-type: none">• An assessment of operating compressed air systems, including analysis of supply and demand, and airflow or electric metering• A written report that identifies leaks and waste, and associated energy costs• A list of system recommendations, paybacks, rebate opportunities, and estimated energy savings• Pre-approval is required for study funding <p>For systems of 500 hp or larger, the incentive will pay for the entire cost of the assessment, subject to application approval and the customer’s commitment to implement a minimum amount of the measures identified. For systems between 100 – 499 hp, pre-approved Compressed Air Study costs will be eligible for reimbursement after corrective measures have been addressed and reviewed by the ComEd Program Manager and Program Implementer. The studies will be based on the customer’s existing system horsepower and identify a customer’s supply and demand baseline. All accepted program participants will be eligible to receive a one-time incentive of \$0.01/ kWh, up to a capped amount, for all measured and verified annual kWh savings that are achieved as a direct result of implementing the measures identified in the assessment. The cap for systems of 500 hp or larger will be the project’s total implementation cost. The incentive structure for systems between 100 – 499 hp is as follows:</p>	

Program Element**Compressed Air**

Compressed Air System Size - Active	Technical Assessment Incentive	Maximum Technical Assessment Incentive	Verified Incentive \$/kWh	Maximum Verified kWh Incentive	Maximum Total Incentives
100 to 149 hp	Up to 50% of Proposed Cost	\$2,000	\$0.01	\$1,500	\$3,500
150 to 249 hp	Up to 50% of Proposed Cost	\$3,000	\$0.01	\$2,500	\$5,500
250 to 499 hp	Up to 50% of Proposed Cost	\$6,000	\$0.01	\$5,000	\$11,000

For systems between 100 – 499 hp, customer reimbursement will also be contingent on customers repairing at least 50%, by volume, of all leaks identified during the assessment.

Utility Coordination

As this program offers electric-only energy savings, it will not be offered in coordination with the gas companies. However, ComEd will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.

Target Market

This program element is designed for industrial customers that have high potential for energy savings in their compressed air projects, although all customers with compressed air systems will be evaluated for inclusion into the program. All targeted customers taking delivery service from ComEd are eligible for the program regardless of their choice of supplier

Program Duration

June 2011 through May 2014

Delivery Strategy

This program element will be offered in conjunction with our current Retrocommissioning program element. We will renegotiate with our current Retrocommissioning program implementation contractor for similar services provided in the first Plan. If renegotiations do not produce desired results, an RFP will be conducted.

Efficiency measure implementation and installation will be the responsibility of the customer. Our C&I Account Managers will help to market the program and identify potential candidate customers for participation.

Key elements of the implementation strategy include:

- **Retrocommissioning Service Provider (“RSP”) recruitment and training:** RSPs will be a key delivery mechanism for the program element as they promote participation and available incentives to their customers. RSPs are selected for participation in the program through a competitive RFP process. RSPs will be required to participate in training sessions to inform them about program incentives, participation processes and requirements. RSPs will receive regular communications about program activities and changes to ensure they are informed and engaged participants.
- **Customer recruitment:** Customers will be recruited by program marketing and outreach activities, ComEd Account Manager referrals and, primarily, RSPs. To ensure that C&I customers perceive our energy efficiency programs as a seamless set of offerings, cross-referrals from other programs will also be provided where appropriate.
- **Technical assistance:** The program implementation contractor will provide guidance regarding program offerings and participation processes to customers and RSPs as needed to minimize confusion and barriers to participation.

Program Element

Compressed Air

- **Application submittal:** Customers will submit incentive applications and required documentation prior to beginning their assessment. Following implementation and to receive their \$0.01/ kWh incentive, customers must provide proof that measures were implemented.
- **QA/QC review:** Incentive applications will be subject to as QA/QC review to ensure all required forms and documentation have been submitted, and that calculation of incentive totals are correct.
- **Project verification:** ComEd will reserve the right to site-verify installations prior to approval and incentive payment.
- **Incentive payment:** To minimize barriers to participation, the program will seek to expedite incentive payment.

Marketing Strategy

RSPs are the primary conduit for this program and will market the program through their direct relationships with commercial and industrial customers. They will identify, communicate, and enroll customer participants through their own marketing initiatives. The following are strategies that will help meet program goals:

- Leverage, grow and diversify RSP relationships to achieve rigorous targets
- Educate and leverage existing resources (e.g., Trade Allies, ComEd Account Managers) to their greatest potential to more effectively and economically reach customer segments
- Segment customers by their building type (demand requirement: 500kW), and tailor communications and incentive offerings based on this information

Tactics will include: co-branded marketing collateral from ComEd, outreach through account managers, direct mail, newsletters, trade shows, and email communications.

Key Messages

- *Compressed Air Retrocommissioning examines your building's systems to identify no-cost and low-cost opportunities that can reduce energy usage and save money*
- *Is your compressed air system blowing energy dollars?*

Energy Efficiency Measure Information

The Compressed Air program element will include low-cost to no-cost measures such as optimizing air distribution systems, properly matching compressor size to load and installing compressed air controls that improve the efficiency of the customer's compressed air systems. Energy efficiency measures that will require a capital investment from the customer will also be offered.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs, while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross ("NTG") ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator's requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership

Program Element**Compressed Air**

and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Similar to the Retrocommissioning program element, we would expect important evaluation parameters to be reviewed, including: identifying baseline energy usage that would be expected without efficiency incentives; modeling energy usage of equipment and systems that are modified; and the NTG ratio. This program largely depends on the engineering expertise of the implementer, and M&V validates the approach, assumptions, and modeling to determine energy savings. A sampling of customer sites is audited as part of the M&V validation. Customers' decision-makers are interviewed to determine program influence.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk for large projects is low due to the several performance thresholds that prevent over-commitment of funds to projects with low savings potential. Risk is low to smaller projects due to the established incentive caps. Further, the feasibility of measures and the participants' willingness to pursue implementation is gauged at two distinct points during the project. Each measure is discussed at-length with the participants to determine persistence and free-ridership issues. Measurement and verification of each measure further minimizes risk for large projects. The program has also worked with the evaluators to create approved calculation templates to minimize calculation and assumption errors in smaller projects.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	26	31	37	94

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. We anticipate that the cost of acquisition (non-incentive costs) to engage our customers will increase over time as there are a limited number of our customers that can leverage our compressed air incentives. There are also fixed costs associated with compressed air projects regardless of size. Although we are working to engage our biggest users, most of our compressed air customers fall into the "Small Compressed Air" incentives. This means that a great majority of our customers particularly in PY6 will be smaller in size and kWh potential with similar administration costs.

Program Element **Compressed Air**

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$597,770	\$913,770	\$1,120,160	\$2,631,700
Incentive	\$1,474,803	\$1,871,866	\$2,333,593	\$5,680,262
Total	\$2,072,573	\$2,785,636	\$3,543,753	\$8,311,962

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	18,151	19,967	21,963	60,081

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	5.29	3.27	\$0.02	\$0.11

Additional Benefits (if applicable)

Not applicable

Midstream Lighting Incentives

Program Element	Midstream Lighting Incentives
Program Objective	Obtain energy savings by offering customers instant incentives on CFL bulbs through distributors of electrical supplies at the point of sale.
Program Description	<p>This program element is designed to provide an expedited, simple solution for C&I customers interested in purchasing efficient technologies that can produce verifiable savings. We expect the initial measures in this program to center around CFLs, but this program has the potential to branch out into other cost-effective technologies.</p> <p>This program can be ramped up quickly, and primarily targets discrete replace-on-fail measures. There is no application process for the customer to go through to get the incentive; rather, the price of the item is reduced at the point of sale in a manner similar to the Residential Lighting program element. Cooperation with distributors will be a key strategy for promoting measures incentivized through the midstream channel to customers.</p>
Utility Coordination	As this program offers electric-only energy savings, it will not be offered in coordination with the gas companies. However, ComEd will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.
Target Market	This program is designed for C&I customers seeking to improve the lighting efficiency of existing facilities. All C&I customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.
Program Duration	June 2011 through May 2014.
Delivery Strategy	<p>We will first look at current implementation contractors to see if synergies across program elements could lead to lower costs. The design of this program element is similar to the design of the Residential Lighting program element and we believe there are potential synergies in using the same contractor. If renegotiations do not produce desired results, an RFP will be conducted.</p> <p>We will deliver this program element through a mid-stream model that will employ instant incentives through C&I lighting distribution vendors to increase CFL sales to C&I customers. The implementation contractor will work with lighting distributors and manufacturers to develop a plan for selecting the products that will be eligible for incentives, developing the customer acquisition strategy, QA/QC and tracking the savings.</p>
Marketing Strategy	<p>The marketing strategy will focus on the existing resources of the Lighting distributors to layer the program offering onto their existing marketing efforts. The overall marketing strategy will be to modify C&I behavior to both purchase and install CFLs in their businesses. Opportunity exists to leverage customer interactions and deliver information about more efficient lighting, the benefits of energy efficiency and its resultant cost savings.</p> <p>Tactics will include: Point-of-purchase materials, sales tools and talking points to the in-market representative, and customer leave-behinds answering questions, and providing contact information for follow-up inquiries. The combination of the Lighting distributors existing marketing plans, along with the incentives offered through this program, will help to drive increased sales of CFLs to C&I customers.</p>

Program Element**Midstream Lighting Incentives****Key Message:**

- ENERGY STAR lighting (CFLs and fixtures) uses 75% less electricity than incandescent bulbs and lasts up to 10 times longer, and is available in a wide range of styles & sizes.
- Realize bottom line savings through continuous use, installation, and replacement of CFLs at your facility.

Energy Efficiency Measure Information

The Midstream Lighting Incentives element will offer the following measures. The incremental costs listed below have been used for planning purposes. However, as the Midstream Lighting Incentives program element evolves, ComEd may adjust incremental costs based on implementation experience and include additional measures such as low-wattage T8 lamps.

CFL Bulbs	Incremental Costs	Gross Annual kWh Savings
CFL	\$3.86	124
Specialty	\$3.88	125

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Similar to the Residential Lighting program element, important evaluation parameters to be reviewed include: bulbs sold by wattage; delta watts, hours of use, and installation rates for average bulb sold; and the NTG ratio. Since the program is largely designed for midstream incentive payments, end user information is not known and must be obtained through various sampling techniques.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Element **Midstream Lighting Incentives****Program Risk Assessment / Mitigation Plan**

The level of potential risk for this program element is medium. One risk for this program is the participation levels; however, participation levels can be influenced by increasing or reducing the number of participating distributors. Additionally, anticipated impacts of the EISA 2007 legislation - which calls for the phase-out of many standard incandescent lamps – suggests that the potential for energy savings for a lighting program will decrease as incandescent bulbs are removed from the marketplace. To mitigate this program risk, we have worked closely with our implementation contractor to make a reasonable forecast of CFL sales as the bulb phase-outs enter the marketplace.

Projected Participation

The table below lists the projected number of CFL bulbs that will be sold and have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

No. of Bulbs	PY4	PY5	PY6	TOTAL
Total	210,000	554,400	637,631	1,402,031

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$750,000	\$750,000	\$750,000	\$2,250,000
Incentive	\$746,875	\$1,224,875	\$1,069,355	\$3,041,105
Total	\$1,496,875	\$1,974,875	\$1,819,355	\$5,291,105

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	19,979	32,766	28,083	80,828

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.47	1.62	\$0.03	\$0.07

Additional Benefits (if applicable)

Not applicable

Small Business Direct Install

Program Element	Small Business Direct Install
Program Objective	
Provide small business customers with cost-effective turn-key energy efficiency retrofit services. Generate energy savings by direct installation of low-cost energy efficient products, and also provide incentives for more capital-intensive measures to maximize energy efficiency opportunities.	
Program Description	
<p>This program element is an expansion of a current pilot program, which is testing two different program delivery mechanisms in two different communities –</p> <ul style="list-style-type: none">• Trade Ally Marketed Program Delivery Approach - Selected trade allies will market the program directly to customers with the purpose of having them participate in a free energy survey. When customers agree, the implementation contractor will send an energy advisor to perform a site survey, and that is capable of installing low-cost efficiency measures (such as CFLs and beverage cooler controls) for the customer at no cost. At the end of the survey, the energy advisor will provide a report to the customer that outlines additional opportunities to increase efficiencies at the site. This will include pilot measures such as lighting fixture upgrades, AC tune-ups, and other upgrades.• Program Marketed Delivery Approach – This involves a traditional marketing campaign executed by an implementation contractor. Once the customer agrees to participate in the pilot, the implementation contractor will conduct the on-site survey. Similar to the Trade Ally Outreach approach, the on-site survey will identify energy efficiency measures (such as lighting and thermostats). The final aspect to the pilot’s objective is to see what delivery mechanism advances more non-lighting technologies. <p>This program element will incorporate lessons learned from the current pilot and assist in identifying the most cost-effective method for delivering this program. It is also designed to assist small business owners in overcoming existing barriers to achieving energy efficiency. Common barriers include time constraints, capital constraints, lack of energy efficiency awareness, lack of labor resources, and getting the decision-maker’s attention. There are three main ways this program element will circumvent these barriers to encourage program participation and ultimately change the small business owner’s perception to embrace energy efficiency products and strategies:</p> <ul style="list-style-type: none">• An Initial Comprehensive Site Survey – This site survey will identify a variety of electric and natural gas measures available to the customer for either immediate installation or longer-term projects. The brief survey report – to be delivered the same day – will provide information for the small business owner to make educated decisions on what measures to implement. This report will discuss financial options identified and available to the customer.• Immediate Direct Installation – There will be some measures the implementation contractor will install immediately during the site survey with the customer’s permission. These will include – on the electric side – a few CFLs and a beverage machine occupancy sensor, where applicable.• Scheduled Direct Installation – In addition to the immediate direct installation, customers will also be offered the opportunity to immediately schedule the installation of measures that require capital investment. To facilitate this, we will have agreements with a pool of installation contractors, which can be scheduled to perform installations of the measures identified in the site survey. For instance, it is projected some direct install measures may have incentives up to 70% of the market price. The customer will be responsible to pay the remaining balance of the project cost. <p>We have reviewed other direct install programs around the country and recognized that a financing element was in some cases offered to customers. Our current pilot study of this element includes a financing option for our customers. Based on results from our pilot study, this program element could include a financing component to help credit qualifying customers meet their portion of the retrofit cost. It is expected that this financing option would be delivered through the contractors and the program</p>	

Program Element Small Business Direct Install

may provide the contractors with an additional incentive.

Additional energy efficiency solutions for Small Business Customers could be identified based on the findings of the pilot that we are implementing during the first Plan.

Utility Collaboration

It is the intent of ComEd, Nicor and Integrys to offer this program jointly. There is a high potential for this program to benefit both gas and electric utility customers. The utilities will determine a framework for cost allocation based on savings/benefits to each utility's customers. The framework will be fair and equitable and will increase the cost effectiveness of the overall program for both utilities and their customers.

Target Market

This program is designed for small business customers. All targeted customers taking delivery service from ComEd are eligible for the program regardless of their choice of supplier.

Program Duration

June 2011 through May 2014.

Delivery Strategy

We will renegotiate with our current Small Business Direct Install pilot program implementation contractor for similar services provided in the first Plan. If renegotiations do not produce desired results, an RFP will be conducted.

It is the responsibility of the implementation contractor to recruit select trade allies for installation of direct install measures. The customer is responsible for paying the balance of installation costs for efficiency measure implementation and installation. Delivery efforts include coordinating with our C&I account managers where appropriate, developing a marketing strategy, and producing the corresponding materials.

Key elements of delivery strategy include:

- **Trade ally recruitment and training:** Trade allies will be a key delivery mechanism because they will be responsible for the installation of the direct install measures. Trade allies will be recruited via mailings, training events, and personal visits to provide market pricing for a targeted number of measures. These selected trade allies will be required to sign an agreement to provide these prices for any work they perform. During this process, minority-based enterprises ("MBE") and women-based enterprises ("WBE") contractors will be targeted to participate in this program.
- **Customer recruitment:** The pilot will help determine which recruitment mechanism is the most cost-effective approach to deliver energy efficiency programs to hard-to-reach small business customers. To ensure that C&I customers perceive our energy efficiency programs as a seamless set of offerings, cross-referrals from other *Smart Ideas* programs will also be provided where appropriate.
- **Technical assistance:** The implementation contractor will provide guidance regarding program offerings and participation processes to customers and trade allies as needed to minimize confusion and barriers to participation. Additionally, a Premise Energy Survey will be offered to customers that will include a high-level walk through energy survey at no cost to the customer and will provide a report to the owner, outlining other energy efficiency improvements that could be installed. There will be some measures the implementer will install immediately during the site survey with the customer's permission at no cost to the customer. These will include – on the electric side – a few CFLs and a beverage machine occupancy sensor, where applicable. This will educate the small business customers while providing the benefits of the program through the no-cost direct install measures. The customer has the option at this point to determine if they would like to go forward

Program Element

Small Business Direct Install

with the capital-intensive measures. Otherwise, the customer will just receive the survey and no-cost measures.

- **Application submittal:** Customers will be asked to complete an incentive application at the time of the site survey and before the start of the installation of qualifying capital-intensive direct install energy efficiency measures. This application explains program qualification, gathers pertinent customer information, and details the program terms and conditions. This tool also provides a checklist of recommended measures from which the customer will select to proceed with the project, and gives a detailed specification for each measure.
- **QA/QC review:** Incentive applications for the non-direct install measures will be subject to a QA/QC review to ensure all required forms and documentation have been submitted and that calculation of incentive totals are correct.
- **Project verification:** We will reserve the right to site-verify installations prior to approval and incentive payment.
- **Incentive payment:** To minimize barriers to participation, we will seek to expedite incentive payments.

Marketing Strategy

The marketing strategies includes the following:

- Supplement the direct-install efforts of the implementation contractor by developing Trade Ally relationships in local communities that can deliver education, training, and EE technologies to small C&I customers
- Promote free subscription to Energy Insights Online to cultivate energy usage understanding and energy efficiency mentality
- Educate and leverage existing resources (e.g., Trade Allies, ComEd External Affairs Managers, call center) to their greatest potential to achieve broad-based awareness at the lowest possible cost

Materials and tactics for Trade Ally marketing would include program materials and marketing collateral, sale tools, outreach, and training. Materials and tactics for marketing to customers would include direct mail, telemarketing, outreach events, newsletters, bill insets, and printed collateral.

Key Messages:

- *Simple, easy and FREE energy efficiency measures are available to your business through ComEd's Smart Ideas Small C&I Direct Install incentive*
- *These Energy Efficiency technologies can help you lower your energy bill*

Additionally, we will apply the principles that were learned from the two delivery methods that are being tested in the current pilot. One approach relies solely on the trade ally to deliver the projects while the other model incorporates a traditional marketing approach. These efforts include: targeted marketing by mail and phone; outreach to key influencers such as Chambers of Commerce and neighborhood and regional trade associations; outreach to targeted economic development organizations. Results from these efforts are expected in the first quarter of 2011, and the effectiveness of these two approaches will be analyzed at that time. This will allow the final program design to extract the lessons learned from the pilot and apply the best practices realized from the program.

Program Element**Small Business Direct Install****Energy Efficiency Measure Information**

The measure list for this new program will be determined by the results of the ongoing pilot program. Low-cost and no-cost measures will include such items as CFLs, pre-rinse spray valves, and aerators. Incented measures though this program can include T-8 and high powered T-8 lighting, CFLs, high bay fluorescent, HVAC tune-ups, vending machine controls, LED Exit Signs, leak detection and repair of compressed air systems, and programmable thermostats.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross ("NTG") ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator's requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Important evaluation parameters to be reviewed include measures installed, kWh savings estimates for each measure, and NTG ratio. Participant contact information is referenced from our customer data. Typically for a direct install program installation rates are high, but participants are surveyed for removal rates and program influence.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk for this program element is medium. Challenges exist in achieving the targeted goals for this program as we manage the receptiveness of trade allies for delivering this program to customers and utilize the most cost effective mechanism in program delivery as identified from our pilot program. There is also the lack of awareness of the benefits offered by energy efficiency elements, budget constraints, and other small business concerns that must be overcome to fully engage customers in energy efficiency efforts. The higher incentives, immediate direct installed measures, and personal attention given to the small business owner are all strategies to break down the barriers with these customers and mitigate the risk mentioned above.

Program Element **Small Business Direct Install****Projected Participation**

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	800	1,200	1,200	3,200

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. For a direct install program of this type, the non-incentive costs drive the program as they include the cost for the measures to be installed. As can be seen in the table below, the non-incentive budgets are higher than the incentive budgets. This is primarily due to the higher cost of the site surveys and the immediate direct install services.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$1,977,065	\$2,736,880	\$2,741,822	\$7,455,767
Incentive	\$1,412,848	\$2,119,352	\$2,119,352	\$5,651,552
Total	\$3,389,913	\$4,856,232	\$4,861,174	\$13,107,319

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	5,960	8,941	8,941	23,842

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.13	0.87	\$0.06	\$0.57

Additional Benefits (if applicable)

Not applicable

Energy Efficiency Request for Proposal (“RFP”)

Program Element	Energy Efficiency Request for Proposal (RFP)
Program Objective	
Realize energy savings through a competitive bid process for energy efficiency programs for large C&I customers. This program element creates opportunities for our largest customers to develop and implement projects that are beyond the scope of traditional custom and prescriptive offerings. This competitive bid process will offer customers the opportunity to submit proposals for incentive funding to implement large, cost-effective, energy saving projects.	
Program Description	
<p>This new program element is designed to offer large C&I customers (demand > 1 MW) the opportunity to competitively bid for incentive funding to implement cost effective energy saving projects, which will expand our current portfolio to include a program that may not sufficiently encourage large energy efficiency investment by our largest customers. Customers will compete against other energy efficiency projects for available funding. The submitted proposals will be reviewed, evaluated, and ranked against others that have been submitted, with the highest ranking bids being awarded available funding. Scoring of proposed projects will be assessed based on three criteria: energy savings, avoided utility cost, and project economics. Proposals that are not selected to participate in this program will be eligible to participate in our Custom Rebate program. To maintain eligibility for an incentive award, proposed projects may not begin and equipment may not be purchased, until written approval is received in the form of an acceptance letter.</p> <p>Program Criteria:</p> <ul style="list-style-type: none">• Maximum project incentive is \$500,000• Incentive cannot exceed 50% of the project cost• Payback cannot exceed 7 years• Projected annual energy savings must exceed 1,000,000 gross kWh <p>To be eligible for the program, customers must submit a program application that includes the following information:</p> <ul style="list-style-type: none">• Project Background – A detailed description of the proposed project will be required. It will include background details as to how this project was chosen (e.g., energy audits, planned maintenance upgrades, efficiency management plan), describe other energy efficiency opportunities that were explored, and address if the completion of this project could lead to similar projects. Other information included will be non-energy saving project benefits, how the project affects the facility, and if there are plans to measure the energy savings.• Statement of Need – The application must include a description of how the requested incentive will support the company’s financial goals. It may include return on investment, corporate hurdle, high risk, project payback, or project barriers.• Project Proposal – The application must also include a copy of the project proposal, including a description of the equipment to be installed, technical details with copies of manufacturer specifications, and total cost of the project.• Estimate of Savings – Applications must provide an estimate of the electrical energy and demand savings. Estimates of savings include a detailed examination of the baseline energy use and projected energy and demand reductions.	
Utility Coordination	
As this program offers electric-only energy savings, it will not be offered in coordination with the gas companies. However, ComEd will leverage opportunities for consumer education on this program via	

Program Element**Energy Efficiency Request for Proposal (RFP)**

other joint gas program customer outreach and engagement activities.

Target Market

This program is designed for C&I customers that have the potential to achieve at least 500,000 kWh in energy savings. All targeted customers taking delivery service from ComEd are eligible for the program regardless of their choice of supplier.

Program Duration

June 2011 through May 2014.

Delivery Strategy

Due to the nature of this program, ComEd intends to run this program with internal resources.

Participation will be driven primarily by referrals from ComEd Account Managers and through direct outreach by ComEd or the implementation contractor. Efficiency measure implementation and installation will be the responsibility of the customer. Our C&I Account Managers will help market the program and identify potential candidates for participation.

Key elements of this program element implementation strategy include:

- **Leverage Trade Allies:** ComEd Trade Allies are very active within the existing portfolio and are a natural leverage point to promote this offering. We will rely on our trade ally channel to prospect potential projects, recruit potential candidates, and assist candidates in submitting proposals. We will host training sessions or webinars to inform Trade Allies about program incentives, participation processes, and requirements. Trade Allies actively participating in the *Smart Ideas* program will continue to receive regular communications about program activities and changes to ensure they are informed and engaged participants.
- **Leverage ComEd Account Representatives:** All customers with electric demand 1 MW or greater have a ComEd Account Representative. These representatives will receive marketing support to identify potential candidates and to recruit customers for participation.
- **Provide Technical Assistance:** The implementation team will assist customers and trade allies with participation processes to minimize confusion and to remove barriers to participation.
- **Project Verification:** We will reserve the right to site-verify installations prior to approval and incentive payment.
- **Incentive Payment:** To minimize barriers to participation, we will seek to expedite the review process and the incentive payment process.

Marketing Strategy

Trade Allies and our account managers are the primary conduits for this program element and will market the program through their direct relationships with the C&I customers. The Marketing strategies that will help meet program goals are as follows:

- Segment customers by energy intensity usage and target marketing to segment through associations, trade shows, direct mail, and email marketing campaigns
- Educate and leverage existing resources (Trade Allies, Account Managers, External Affairs Managers, call center) to their greatest potential to achieve broad-based awareness at the lowest possible cost
- Leverage, grow, and diversify Trade Ally relationships to extend reach and cultivate increased awareness among different customer segments

Tactics include: direct relationship marketing through personal sales visits to large account customers. Other tactics include direct mail, newsletters, customer events, and email communications to reach

Program Element**Energy Efficiency Request for Proposal (RFP)**

both large and small customers.

Key Messages

When communicating with customers, ComEd will use a few overarching key messages including:

- *Energy Efficiency reduces operating costs and improves the bottom line*
- *Rebates and incentives shorten payback periods for energy-efficient equipment and systems*
- *Investing in energy savings is a smart decision*

Energy Efficiency Measure Information

This program element measure offering, while similar to the custom program element in terms of expected measures, is expected to include much larger and more comprehensive projects.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding the statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross ("NTG") ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator's requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Similar to the Custom program element, important evaluation parameters to be reviewed include: identifying baseline energy usage that would be expected without efficiency incentives, modeling energy usage of equipment and systems that are installed, and the NTG ratio. This program largely depends on the engineering expertise of the implementer, and M&V validates the approach, assumptions, and modeling to determine energy savings. Depending on the number of projects, the evaluation could be each individual project or a sampling of projects. Customers' decision-makers are interviewed to determine program influence.

Depending on the number of projects, the NTG ratio and the realization can be very important as one project could dramatically impact the overall program's cost-effectiveness. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is highly dependent upon the complexity of the project and the level of analysis provided by the applicant. Assuming a balanced mix of project types, ranging from lighting to process controls, this program element has been assigned a medium risk factor. Since more complex projects often have more risk associated with them, ComEd will assess the risk level of each project and will conduct a focused review designed to mitigate potential risk, which may include measurement and verification and ComEd peer review of the implementation contractor's analysis approach and calculations.

Program Element **Energy Efficiency Request for Proposal (RFP)**

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	10	27	32	69

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. Note that the PY4 budget contains higher non-incentive costs than the following Plan years because we expect to incur significant start-up costs in PY4. Additionally, we expect few projects to actually be completed in PY4, resulting in the lower incentive cost.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$756,931	\$530,689	\$538,931	\$1,826,551
Incentive	\$726,418	\$1,963,293	\$2,356,629	\$5,046,340
Total	\$1,483,349	\$2,493,982	\$2,895,560	\$6,872,891

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	4,995	13,500	16,202	34,697

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.64	1.92	\$0.03	\$0.30

Additional Benefits (if applicable)

Not Applicable

C&I Central Air Conditioner Efficiency Services (“C&I CACES”)

Program Element	C&I Central Air Conditioner Efficiency Services (CACES)
Program Objective	
Generate energy and demand savings by improving the operating performance of business air conditioning (“AC”) units at existing businesses.	
Program Description	
<p>This program element will operate in conjunction with the residential CACES program element and, where possible, leverage the existing network of Independent Participating Contractors to offer Diagnostic and Tune-Up services to business customers.</p> <p>Studies have shown that a majority of central AC units are improperly charged or have improper airflow, both of which can lead to significant performance degradation and inefficiency. Similar to the residential CACES program element, C&I CACES will build the capability among HVAC contractors to address these issues and provide a value-added service to their customers. Marketing efforts will promote the value of these services to customers and the related energy saving benefits.</p> <p>Some cross-over of current Independent Participating Contractors between the two CACES program elements is anticipated. Since many HVAC contractors specialize in only one market segment, an additional recruitment and training strategy is expected in order to augment the existing network of Independent Participating Contractors. This effort will inform HVAC contractors that primarily service business customers of the opportunities and incentives available through C&I CACES. Independent Participating Contractors are those contractors who agree to participate in the program via a signed participation agreement and perform diagnostic and tune-up services according to the program protocol. Technicians from these Independent Participating Contractors will receive training on the use of the required diagnostic tool to check refrigerant charge and airflow. Guidance will also be provided to assist in making adjustments or corrections to optimize system efficiency.</p>	
Utility Coordination	
Electric energy savings are the only savings available, so there will be no coordination with the gas companies. However, where possible, ComEd will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.	
Target Market	
C&I CACES is designed for the small to mid-sized business customer market. All targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier. Specific eligibility requirements will be refined upon program implementation.	
Program Duration	
March 2012 through May 2014.	
Delivery Strategy	
<p>We will renegotiate with our current residential CACES contractor that was previously selected through a competitive RFP process to leverage existing field rep staff. If negotiations do not produce desired results, an RFP will be conducted.</p> <p>One Implementation Contractor will oversee both the residential and C&I CACES program elements. The Implementation Contractor will implement all of the program elements, which include:</p> <ul style="list-style-type: none">• Contractor Recruitment and Training: The Implementation Contractor will recruit HVAC contractors to become Independent Participating Contractors and arrange for these contractors to participate in all of the required training. The training will address proper diagnostic and tune-up requirements.	

Program Element C&I Central Air Conditioner Efficiency Services (CACES)

- **Customer Recruitment:** The primary customer recruitment mechanism will be the direct marketing activities of Independent Participating Contractors. Program information will also be posted on our website, provided through a toll-free call center managed by the implementation contractor, and distributed in combination with various other customer outreach and marketing tactics.
- **Project Implementation:** Independent Participating Contractors will deliver diagnostic and tune-up services according to the program requirements. The implementation contractor will provide ongoing support in the proper use of the diagnostic tool.
- **Contractor Incentive Application:** Independent Participating Contractors will submit incentive applications for all qualifying services performed. The Implementation Contractor will perform an audit of all applications to ensure that required information and documentation has been provided.
- **Contractor Incentive Payment:** Incentives will be paid to the Independent Participating Contractors on a per service basis for Diagnostic and Tune-Up Services.
- **Project Verification:** The Implementation Contractor will site-verify a portion of all applications submitted by the Independent Participating Contractors prior to approval and payment of incentives.

The Independent Participating Contractors will be trained to identify opportunities for Prescriptive program rebates for business customers who could benefit from upgrades to high efficiency air conditioning units. Contractors will be provided with applications for prescriptive rebates to deliver to business customers as opportunities arise.

Marketing Strategy

The marketing strategy will focus on generating awareness amongst business decision-makers and facility operators that the CACES services are available. Since this program operates on a relatively small marketing budget, we will rely on participating contractors, the program implementer, and internal ComEd resources to identify opportunities where we can raise awareness of the program through existing marketing channels.

We will build cost-effective and highly targeted messaging, which may include direct mail and electronic channels. Identifying key business decision-makers remains a challenge and will be largely done through purchased data, internal data analysis, and input from partners in the field such as the contractors and program implementers.

Due to the time-sensitive nature of this program's benefits, the majority of marketing will be completed in the key months leading up to and including the spring and early summer months.

Key Messages

- *Is your air conditioning system running efficiently?*
- *A properly installed cooling system can save an average of 20 percent on cooling costs*
- *Did you know that ComEd offers programs for improving AC systems for businesses like yours?*
- *Add money back to the bottom line by having your cooling system properly installed*
- *Visit ComEd.com or call 888-806-2273 to locate a participating contractor*

Program Element C&I Central Air Conditioner Efficiency Services (CACES)

Energy Efficiency Measure Information

The measures listed below have been used for planning purposes, but ComEd may revise eligible measures and costs as needed in accordance with current market conditions, technology development, EM&V results, and program implementation experience. Incremental measure costs for this program are zero because there is no additional cost for a customer to have a C&I CACES tune-up versus a non-C&I CACES tune-up. All program costs are assumed to be program administrative costs.

	Incremental Measure Cost	Gross Annual kWh Savings
Unitary AC 65,000 Btuh or less - Grocery Tune-Up	\$0	310
Unitary AC 65,000 Btuh or less - Medical Tune-Up	\$0	535
Unitary AC 65,000 Btuh or less - Office Tune-Up	\$0	170
Unitary AC 65,000 Btuh or less - Restaurant Tune-Up	\$0	220
Unitary AC 65,000 Btuh or less - Retail Tune-Up	\$0	180
Unitary AC 65,000 to 135000 Btuh - Grocery Tune-Up	\$0	744
Unitary AC 65,000 to 135000 Btuh - Medical Tune-Up	\$0	1284
Unitary AC 65,000 to 135000 Btuh - Office Tune-Up	\$0	408
Unitary AC 65,000 to 135000 Btuh - Restaurant Tune-Up	\$0	528
Unitary AC 65,000 to 135000 Btuh - Retail Tune-Up	\$0	432

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Similar to the residential CACES program element, important C&I CACES evaluation parameters to be reviewed include: size of AC units installed or serviced; building type for each unit; measured operating parameters for each unit; and the NTG ratio. Since these parameters are inputted in an electronic Service Assistant, audit verification of HVAC contractor performance is required and savings

Program Element C&I Central Air Conditioner Efficiency Services (CACES)

calculations can be made from collected data for each AC unit serviced or installed.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We expect this evaluation plan to parallel the residential CACES evaluation plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is low given that the C&I CACES program represents a small share of the overall portfolio’s kWh reduction goal. We have incorporated existing residential CACES program evaluation assumptions into our planning forecast, we will assess new evaluation data as it becomes available, and we will make adjustments as necessary that will mitigate overall program risk.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

We plan to launch this program in March, 2012 to coincide with the beginning of the annual cooling season. Given our experience with the residential CACES program, we feel that an earlier launch date would not be prudent for this program element.

No. of Participants	PY4	PY5	PY6	TOTAL
AC Tune-Ups	1,250	5,000	6,508	12,758

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. Note that incentives are zero because the customer receives no direct incentive from this program. All costs associated with this program are assumed to be administration costs.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$262,538	\$549,795	\$669,179	\$1,481,512
Incentive	\$0	\$0	\$0	\$0
Total	\$262,538	\$549,795	\$669,179	\$1,481,512

Program Element	C&I Central Air Conditioner Efficiency Services (CACES)			
Net MWh Targets				
	PY4	PY5	PY6	Total
MWh savings	430	1,721	2,239	4,390
Cost-Effectiveness results				
	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.02	0.84	\$0.06	\$0.61
Additional Benefits (if applicable)				
Not Applicable				

Commercial Real Estate

Program Element	Commercial Real Estate (“CRE”) Efficiency
Program Objective	Provide energy efficiency opportunities to the commercial real estate sector by offering financial incentives to assist in overcoming unique barriers to energy efficiency program participation.
Program Description	<p>This new program element is designed to assist commercial real estate customers in overcoming participation barriers, such as the split-incentive. The split-incentive barrier occurs when a building owner does not pay for the electricity used in tenant space. This reduces the building owner’s motivation to make energy efficiency improvements within the tenant space. Additionally, the tenant may be hesitant to invest in an energy efficiency upgrade because they do not own the space and may not plan to occupy the space long enough to recoup their investment.</p> <p>Results from our potential study and program evaluation of Plan year 1 determined that we were not fully reaching the identified economic potential of the commercial sector. The study determined that the commercial office sector offered 30% of overall economic potential in our service territory. Program evaluation results from PY1 showed that we only achieved 9% of the economic potential for the commercial sector. Additionally, we overachieved available economic potential for lighting, but this can be attributed to the warehouse sector of our market. For these reasons, we have identified this program to reach the commercial segment.</p> <p>Customers within this market sector will receive technical assistance to help them identify energy efficiency opportunities as well as financial incentives to encourage owners and tenants to implement efficiency measures. They will also receive a financial analysis that will illustrate leasing provisions, operating expenses, and the benefits of installing energy efficiency improvements.</p> <p>This program is promoted as a bundled offer of our existing programs, and customers are encouraged to consider implementing a variety of energy efficiency measures. Customers can implement the efficiency measures by using existing end use incentive programs plus targeted bonus incentives where applicable.</p>
Utility Coordination	As this program offers electric-only energy savings, it will not be offered in coordination with the gas companies. However, ComEd will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.
Target Market	This program is designed for commercial real estate customers with office space of at least 50,000 sq. ft. All targeted customers taking delivery service from ComEd are eligible for the program regardless of their choice of supplier.
Program Duration	June 2012 through May 2014.
Delivery Strategy	This program element will not be offered until the second Plan year of this portfolio, as we determine the most cost-effective method for delivering this program. Financial incentives will be offered to reduce any capital funding barriers that may prevent the customer from installing the identified energy efficiency recommendations. Efficiency measure implementation and installation will be the responsibility of the customer. Our C&I Account Managers will help to market the program and identify potential candidate customers for participation.

Program Element

Commercial Real Estate (“CRE”) Efficiency

Key elements of the implementation strategy include:

- **Customer recruitment:** Customers will be recruited by marketing and outreach activities, our Account Manager referrals, and trade allies. To ensure that C&I customers perceive our energy efficiency programs as a seamless set of offerings, cross-referrals from other programs will also be provided where appropriate.
- **Technical assistance:** The program implementation contractor will provide guidance regarding program offerings and participation processes to customers and trade allies as needed to minimize confusion and barriers to participation. A financial analysis specific to the property will also be performed and provided to the customer.
- **Application submittal:** Customers will submit incentive applications and required documentation after installation of qualifying energy efficiency measures has been completed.
- **QA/QC review:** Incentive applications will be subject to a QA/QC review to ensure all required forms and documentation have been submitted, and that calculation of incentive totals are correct.
- **Project verification:** We will reserve the right to site-verify installations prior to approval and incentive payment.
- **Incentive payment:** To minimize barriers to participation, we will seek to expedite incentive payment.

Marketing Strategy

Trade Allies and our account managers will be the primary conduits to communicate and acquire participants for the Commercial Real Estate Efficiency program element. Typically, these representatives market the program through their direct relationships with the commercial customers with whom they are already working. Growth of this program will be supplemented with new strategies that will help meet program goals and are as follows:

- Educate and leverage existing resources (e.g., Trade Allies, Account Managers, External Affairs Managers, call center) to their greatest potential to achieve broad-based awareness at the lowest possible cost.
- Utilize existing customer and general commercial market data to identify new customer segments where we are currently under-penetrated. Leverage, grow, and diversify Trade Ally relationships to extend reach and cultivate increased awareness within these new customer segments.

Tactics to end-users (the commercial real estate managers): Use direct mail to generate awareness of the programs and incentives, and possibly use print if we can identify two or three must-read publications within this market. Additionally, we will work with commercial real estate associations to promote this program element and to recruit potential participants. Attending trade shows and speaking at industry events is also an effective strategy for raising awareness and driving participation.

Tactics to Trade Allies and ComEd Account Managers: Workshops, seminars, and webinars will be used as training opportunities to equip our Account Managers and Trade Allies with general information about the program, tools to help communicate the viability of the programs, and information on how to apply for the incentives. A variety of tactics, including electronic communications, direct mail, and in-person meetings will be considered, and we may even consider a portal on the web to use for a blog and information share, which could also be a repository for testimonials and case studies.

Key Messages

When communicating with customers, ComEd uses a few overarching key messages including:

- *Energy Efficiency reduces operating costs and improves the bottom line*

Program Element**Commercial Real Estate (“CRE”) Efficiency**

- *Rebates and incentives shorten payback periods for energy-efficient equipment and systems*
- *Investing in energy savings is a smart decision*

Energy Efficiency Measure Information

The Commercial Real Estate element measures will include the existing Prescriptive measures such as lighting, motors, and HVAC program. However, it is not the measure but the delivery and incentive mechanisms that differentiate this program element from the Prescriptive or Custom program elements.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

This program element is assigned a low risk factor given that its overall kWh contribution to the portfolio is relatively small while we attempt to grow this program element. Significant challenges exist in achieving the targeted goals for this program, due mainly to the state of the economy. Spending within all consumer sectors, including real estate, construction, manufacturing and service, has decreased over previous years. Business access to credit and capital expenditure budgets remains a major concern for implementing energy efficiency projects. Additionally the vacancy rates for commercial real estate are at historically high levels. This program element will provide building owners with tools to increase their occupied (leased) space.

Program Element**Commercial Real Estate (“CRE”) Efficiency****Projected Participation**

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	0	30	30	60

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$702,697	\$707,495	\$712,437	\$2,122,629
Incentive	\$0.00	\$1,289,853	\$1,289,853	\$2,579,706
Total	\$702,697	\$1,997,348	\$2,002,290	\$4,702,335

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	0	5,245	5,245	10,490

Cost-Effectiveness results

	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.03	1.07	\$0.06	\$0.38

Additional Benefits (if applicable)

Not applicable

Data Center Efficiency

Program Element	Data Center Efficiency
Program Objective	
Provide energy efficiency opportunities in both new and existing data centers that lead to energy savings. Incentives will be offered to customers to offset the cost of a preliminary study that will be utilized to identify current as well as new energy efficiency opportunities.	
Program Description	
<p>This new program element to our portfolio is designed to assist customers in addressing energy efficiency opportunities in both new and existing data centers (<i>i.e.</i>, a facility used to house computer systems and associated components). Funding for site evaluations will be offered as well as incentives to assist in the upfront costs of installing the identified energy efficiency opportunities. Although this program is designed to target a typical 1 MW sized facility, all sizes of data centers will be encouraged to participate. Special attention will be given to meet the specific needs of each of the three sizes of data centers as defined by the EPA, which include: Localized Data Centers (500-1,000 sq. ft.), Mid-tier Data Centers (1,000-5,000 sq. ft.), and Enterprise-class Data Centers (5,000+ sq. ft.).</p> <p>The following energy efficient opportunities, as evaluated by the Green Grid Organization, will be eligible for this program:</p> <ul style="list-style-type: none">• Row-Oriented Cooling Systems – Allows for shorter air paths (less fan power) and increased heat transfer with efficiency gains up to 15%. This efficiency upgrade, however, is only applicable to new high-density designs.• Best-in-Class UPS – Most Uninterruptible Power System (“UPS”) operate near 20% loading with 70% efficiency, while newer units with better load matching operate at about 90% efficiency. In both new construction and retrofits, savings of up to 10% of overall data center consumption are common.• Efficient Floor Layout – In both new designs and retrofits, cooling energy can be saved with hot-aisle/cold-aisle arrangements, producing savings up to 10%.• Properly Located Vented Floor Tiles – Requires a professional assessment, but can produce cooling savings leading to overall savings of up to 5%.• Efficient Lighting – A small measure compared to IT and cooling loads, but often easy to implement and can produce overall savings up to 3%. <p>It is expected that as this program expands, retrocommissioning of AC units and other energy efficiency opportunities will become available. Additionally, due to the continuous improvements in data center technology, there will be some flexibility available for customers to repeat studies to encourage continuous energy efficiency improvements.</p>	
Utility Coordination	
As this program offers electric-only energy savings, it will not be offered in coordination with the gas companies. However, ComEd will leverage opportunities for consumer education on this program via other joint gas program customer outreach and engagement activities.	
Target Market	
This program is designed for any data center seeking to improve the efficiency of new and existing facilities. All targeted customers taking delivery service from ComEd are eligible for the program regardless of their choice of supplier	
Program Duration	
June 2012 through May 2014.	

Program Element

Data Center Efficiency

Delivery Strategy

This program element will not be offered until the second year of this portfolio because we need time to determine the most cost-effective method for delivering this program. While consideration will be given to our current program implementers to administer this program, we will also explore selecting an implementation contractor through our RFP process.

Efficiency measure implementation and installation will be the responsibility of the customer. Our Account Managers will help to market the program and identify potential candidate customers for participation.

Key elements of the Data Center Efficiency program element implementation strategy include:

- **Trade ally recruitment and training:** Trade Allies will be a key delivery mechanism for the program element as they promote participation and available incentives to their customers. Trade Allies will be recruited to participate in training sessions to inform them about program incentives, participation processes, and requirements. Trade Allies actively participating in the *Smart Ideas* program receive regular communications about program activities and changes to ensure they are informed and engaged.
- **Customer recruitment:** Customers will be recruited by marketing and outreach activities, ComEd Account Manager referrals, and Trade Allies. To ensure that C&I customers perceive our energy efficiency programs as a seamless set of offerings, cross-referrals from other programs will also be provided where appropriate.
- **Technical assistance:** The program implementation contractor will provide site evaluations and guidance regarding program offerings and participation processes to customers and trade allies as needed to minimize confusion and barriers to participation.
- **Application submittal:** Customers will submit incentive applications and required documentation after installation of qualifying energy efficiency measures has been completed.
- **QA/QC review:** Incentive applications will be subject to a QA/QC review to ensure all required forms and documentation have been submitted and that calculation of incentive totals are correct.
- **Project verification:** We will reserve the right to site-verify installations prior to approval and incentive payment.
- **Incentive payment:** To minimize barriers to participation, we will seek to expedite incentive payment.

Marketing Strategy

Trade Allies and our account managers are the primary conduits for this program and will market the program through their direct relationships with their C&I customers. The following are the marketing strategies that will help meet program goals:

- Build awareness of data center project opportunities by identifying key customers and customer groups, and creating targeted communications to chief information officers, data center managers and facility managers
- Trade outreach through associations, trade shows, and newsletters
- Educate and leverage existing resources (Trade Allies, Account Managers, EAMs, call center) to their greatest potential to achieve broad-based awareness at the lowest possible cost

Tactics will include: direct mail, e-mail newsletters, customer events, and email communications to reach customers.

Program Element**Data Center Efficiency****Key messages**

- *Energy Efficiency reduces operating costs and improves your bottom line*
- *Rebates and incentives shorten payback periods for energy-efficient equipment and systems, providing lasting savings for years to come*

Energy Efficiency Measure Information

The Data Center Efficiency program will offer the following list of measures:

Energy Efficiency Measure	Incremental Costs (\$000s)	Targeted kWh Savings
Row Oriented Cooling Systems	\$467	1,500,000
Best in Class UPS	\$353	1,000,000
Efficient Floor Layout	\$353	1,000,000
Properly Located Vented Floor Tiles	\$239	500,000
Efficient Lighting	\$193	300,000
Install Blanking Panels in Servers	\$170	200,000
Economizer Cycle Cooling	\$353	1,000,000
Retro Commissioning AC Units	\$353	1,000,000

It is expected that as this program expands, retrocommissioning of AC units and other energy efficiency opportunities will become available. Additionally, due to the continuous improvements in data center technology, there will be some flexibility available for customers to repeat studies to encourage continuous energy efficiency improvements.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross (“NTG”) ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator’s requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

Program Element**Data Center Efficiency**

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

The level of potential risk is low due to potential overall impact to the portfolio. One key risk for this program element is the state of the economy. Budgets have decreased over previous years. Business access to credit and capital expenditure budgets remains a major concern for implementing energy efficiency projects. The strategies presented in this plan are designed to address these challenges by offering incentives consistent with our other programs to meet the needs of this specific group of customers. Additionally, our delivery strategy is designed to facilitate meetings with the main targeting audience, which includes chief information officers, data center managers, and facility managers to assist them in combining their efforts and understanding the benefits of how our program offerings can help them overcome some of their financial limitations.

Projected Participation

The following participation levels have been used for planning purposes. However, ComEd may adjust anticipated participation levels as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	0	6	6	12

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience.

Budget	PY4	PY5	PY6	Total
Non-Incentive	\$416,089	\$420,887	\$425,829	\$1,262,805
Incentive	\$0.0	\$496,804	\$496,803	\$993,607
Total	\$416,089	\$917,691	\$922,632	\$2,256,412

Net MWh Targets

	PY4	PY5	PY6	Total
MWh savings	0	6,500	6,500	13,000

Program Element	Data Center Efficiency			
Cost-Effectiveness results				
	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	1.30	2.50	\$0.05	\$0.14
Additional Benefits (if applicable)				
Not Applicable				

Market Transformation Program

In addition to the program elements described above, we propose to continue to offer two additional program elements under the Smart Ideas for Your Business program, Energy Insights Online (“EIO”) and Energy Usage Data Systems (“EUDS”), which were offered under our first Plan. These program elements are viewed as market transformation programs for the C&I sector. We believe the first step in a customer taking control of their energy management is to better understand their current energy usage. These program elements are designed to assist customers in better understanding their energy usage, and each is described below in more detail.

Energy Insights Online. Energy Insights Online (“EIO”) is a web-based energy consumption-tracking tool that was developed to help energy managers monitor energy usage for their businesses and reduce energy costs. Such data can be used to analyze consumption trends and load profiles. Identifying trends and load profiles is useful in discovering energy saving opportunities. ComEd has made EIO free to C&I customers that have recording meters at their facility and access to the internet.

By providing free energy data information to our customers, we strive to be the industry leader in data availability, data transparency, and data services to our customers.

We will continue to build awareness of the program via marketing training. The training emphasizes basic tool functionality, as well as data analysis and benchmarking. All marketing and training programs attempt to build a chain of action, from use of the tools to making efficiency investments via participation in the *Smart Ideas for Your Business* incentive program elements.

Energy Usage Data System. The Energy Usage Data System (“EUDS”) is a web-based tool that provides customers with an automated system to obtain aggregated, whole building energy usage on a monthly basis.

PROGRAM HIGHLIGHT

ComEd saw a significant increase in program awareness of and participation in its Energy Usage Data System as a result of its recent marketing / promotional campaigns.

Enrollments in the Energy Usage Data System increased from 70 to 1,434 - an increase of 1,948% over the past 3 years.

Prior to June 2008, obtaining whole building energy data was a fee-based, manual process. As part of our first Plan, we developed a system that automated provision of this data and enabled an electronic link to the U.S. EPA’s building energy benchmarking system known as Portfolio Manager. ComEd is one of the few utilities in the country to automate this data retrieval process.

EUDS enables customers to rate building energy performance, set investment priorities, verify and track progress of improvement projects, and work towards gaining EPA ENERGY STAR recognition. Since inception, there has been a **1,908%** increase in requests for data, and EUDS has provided over **20,000** months of whole building energy usage

PROGRAM HIGHLIGHTS

During 2008 and 2009, ComEd saw a significant increase in program awareness and participation in its Energy Insights Online program as a result of its marketing/promotional campaigns. These marketing efforts included bill messaging, training sessions, web sites, brochures, newsletters, and articles.

Energy Insights Online customer enrollments grew from 400 subscribers in 2008 to 3,371 subscribers over the last three years, an increase of 742%. Site visits to the Energy Insights Online web page increased 55%, from 5,511 to 9,093. In addition, 1,215 customers accessed the newly created online enrollment form.

for use in ENERGY STAR's Portfolio Manager.

We will continue to build awareness of the program via marketing as well as hands-on and web-based training. The training emphasizes basic tool functionality, as well as data analysis and benchmarking. All marketing and training programs emphasize ComEd incentive programs for increased participation in the *Smart Ideas for Your Business* portfolio. Over this Plan's timeframe, additional emphasis will be placed on integrating this tool with the *Smart Ideas for Your Business* program elements. We have budgeted \$1.5 million for the next three years.

5.2.3 Efficiency Innovation - Third Party Administration Program

Outside of the *Smart Ideas* program banner, ComEd plans to implement a new program element as part of its portfolio. This concept, *Efficiency Innovation*, will offer opportunities to identify innovative options for delivering energy efficiency to ComEd customers. We propose to set aside \$2.0M for this program in Plan Years 5 and 6. The goal will be to solicit innovative efficiency delivery proposals from third parties with a preference for options designed to strengthen the current portfolio's ability to reach challenging customer segments and the possibility of improving delivery efficiency or effectiveness. In particular, we will seek proposals that suggest that successful implementation will lead to an overall reduction in the portfolio's average cost per kWh. Innovations that prove themselves on the ground can be considered for broader deployment in subsequent portfolios.

The program description below details the concept.

Program Element	Efficiency Innovation - Third Party Administration Program
Program Objective	Provides diverse energy efficiency solutions through selected third party administrators to enhance our ability to reach the diverse needs of customers.
Program Description	<p>The Efficiency Innovation program element is designed to identify innovative options for serving hard-to-reach customer segments or improving program delivery efficiency and effectiveness. Potential benefits from this type of program offering include: potential for more stakeholder involvement, introduction of new ideas – both technologies and delivery mechanisms, ability to deliver energy efficiency to the “hard-to-reach” markets (including customers who are uncomfortable participating in a utility program), and potentially less overhead/administration program costs. There are also risks associated with this concept that include: not achieving the kWh target, potential confusion in the market place, negative public relations within the service territory, and potential to double count savings.</p> <p>Our objective is to encourage innovative solutions to customer energy management needs that potentially could be expanded in subsequent portfolios. Therefore, we will attempt to minimize bidder constraints. Basic criteria will likely include:</p> <ul style="list-style-type: none">▪ The proposed solution must pass the TRC test.▪ The proposed solution must target a hard-to-reach market segment.▪ The proposed solution will be subject to the same EM&V requirements as the other <i>Smart Ideas</i> program elements.▪ Payment will be on a performance basis. Although we may provide a limited amount of funding to winning bidders for program set-up, the majority of funds will be paid only upon demonstration of actual energy savings.▪ The proposed solution must be coordinated with existing <i>Smart Ideas</i> program elements to avoid

Program Element**Efficiency Innovation - Third Party Administration Program**

market confusion.

- The solution must offer the potential to reduce the portfolio's average cost per kWh.

We will implement this program as a pilot program in the second and third Plan years of this portfolio. We do not believe that there is sufficient time between the expected approval of this Plan and the beginning of Plan Year 4 to enable us effectively to launch this initiative at the same time that a variety of new *Smart Ideas* program elements are being launched. However, if time and resources permit, we may accelerate the implementation of this program element. We have reserved some funds for PY4 if we are able to accelerate the process. Results from the effort will determine the extent to which this program will be included in the subsequent Plan filing.

Target Market

This program is designed for residential and C&I customers. All targeted customers taking delivery service from ComEd are eligible for the program regardless of their choice of supplier

Program Duration

June 2012 through May 2014

Delivery Strategy

We will run this program through a competitive bid process. We will develop the criteria for the request for proposals ("RFP") (similar to the criteria listed above) and offer third parties the opportunity to "bid-in" their energy efficiency solutions.

The expectation is that we will produce the RFP in PY4 with the intent on using most of PY4 to accept and review proposals.

We will select the number of winners based on the quality of their proposals (*i.e.*, RFP criteria) and the availability of funds. While the logistics are still in the planning phase, we are considering putting together a proposal review team consisting of energy efficiency experts.

If no winners are selected, the funds dedicated for this program element will be redistributed into existing program elements.

Marketing Strategy

The selected Third Party administrators will have direct control over marketing their relevant program, but will be required to follow basic style guidelines.

Energy Efficiency Measure Information

The actual measures will not be known until proposals are accepted.

EM&V Requirements

ComEd and ICC Staff will retain an independent evaluation team to perform impact and process evaluations for the programs while supporting portfolio level goals of providing high confidence in total portfolio savings, without exceeding statutorily set budgets. These portfolio goals will likely require allocating EM&V resources and budget dollars between individual programs. Statutory EM&V budgets will be enforced at the portfolio level.

While we cannot fully describe the exact nature of the evaluation without knowing the specifics of the program elements, we would expect impact and process evaluations to be required in all cases.

Impact evaluations will verify measure implementation, customer participation, measure savings, measure realization rates, and Net-to-Gross ("NTG") ratios. We will provide tracking systems for program measures and customer participation that meet the evaluator's requirements. We will work collectively with the evaluator and other stakeholders to identify those estimates for measure savings that best represent *ex ante* program savings. Evaluators will determine program realization rates

Program Element**Efficiency Innovation - Third Party Administration Program**

through appropriate sampling, including direct measurements and surveys. Results of these activities will determine Gross MWh and Gross MW impacts of each program.

Additional surveying and analysis techniques will be used by the evaluators to determine free-ridership and spillover impacts, which define the NTG ratio. The Net MWh impacts are defined as the Gross MWh impact * NTG, and represent the energy savings directly associated with the individual program. Similarly, the NTG ratio determines the Net MW impact.

Process evaluations will be conducted by evaluators to determine adequacy of marketing approach, implementation channels, outreach activities, and customer satisfaction. Process evaluation information can be used by program implementers to increase participation and volume of overall savings.

To facilitate the impact and process evaluations, the evaluator will develop program evaluation plans identifying specific elements for evaluation, anticipated participants to be contacted, schedule for activities, and possible restrictions to the plan. We will review and comment on plans to ensure that they are consistent with actual program implementation.

Program Risk Assessment / Mitigation Plan

As this program will be a “pay-for-performance” design, we would expect the risk to ComEd to be low. One risk is that even if we do not have to pay out the funds due to non-performance by the Third-Party Administrator, we also would not have the energy savings that we expected for the portfolio. We will need to monitor these programs closely so that we can make adjustments in other parts of the portfolio, if necessary.

Projected Participation

Given the nature of the program, any projection of number of participants will not be known until proposals are accepted for implementation.

No. of Participants	PY4	PY5	PY6	TOTAL
Total	TBD	TBD	TBD	TBD

Projected Budget

The following budget has been used for planning purposes. However, ComEd may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. Note that no non-incentive or incentive figures can be estimated until actual programs are selected for implementation. As of now, only total program budget costs are known.

Budget	PY4	PY5	PY6	Total
Non-Incentive	n/a	n/a	n/a	n/a
Incentive	n/a	n/a	n/a	n/a
Total	\$1,200,000	\$2,000,000	\$2,000,000	\$4,100,000

Program Element	Efficiency Innovation - Third Party Administration Program			
Net MWh Targets				
The projected MWhs assume an average project of \$0.16/kWh.				
	PY4	PY5	PY6	Total
MWh savings	0	12,500	12,500	25,000
Cost-Effectiveness results				
	TRC Test Results	Utility Cost Test Results	Lifecycle \$/kWh	First Yr. \$/kWh
Analysis Results	TBD	TBD	TBD	TBD
Additional Benefits (if applicable)				
<i>Not Applicable</i>				

5.2.4 DCEO Programs

As discussed previously, the Department of Commerce and Economic Opportunity's ("DCEO") portion of the portfolio will consist of three primary components – public sector programs, low-income programs and market transformation programs. These programs are designed to be available across the entire state of Illinois and are funded as part of the electric and gas companies' portfolios.

Based upon the statutory requirement that DCEO implement 25% of the energy efficiency measures, ComEd proposes the same approach adopted in its first Plan, which allocates 25% of the overall portfolio's budget to DCEO to implement its programs.

Public Sector Programs. The Public Sector programs are designed to meet the requirement that 10% of the portfolio is directed to public sector entities. DCEO will build on the portfolio of Public Sector programs developed in the first Plan with the intent that at least 40% of DCEO's budget (10% of the total portfolio budget) be directed to local governments, municipal corporations, school districts and community colleges as required by law. DCEO will offer the following programs -

- **Public Sector Standard (prescriptive) program**
- **Public Sector Custom program**
- **Public Sector New Construction program**
- **Public Sector Retro-Commissioning program**
- **Lights for Learning program**

Low-Income Programs. The Low Income programs are designed to meet the requirement that a percentage of the energy efficiency measures target low-income households. DCEO will offer a portfolio of efficiency measures for low-income households (<150% of the poverty level) that is proportionate to their share of utility revenues (6%); DCEO will continue the following three low-income programs -

- **Affordable Housing Construction / Gut Rehab program**
- **Low Income Direct Install / Weatherization program**
- **Public Housing Authority program**

Market Transformation Programs. The Market Transformation programs are designed to meet the requirements to “present specific proposals to implement new building and appliance standards that have been placed into effect”. 220 ILCS 5/8-103(f)(2). DCEO will provide technical assistance and education to support achievement of long-term efficiency goals in all market sectors. These programs are designed to educate energy professionals and strategic energy decision-makers so that they have the necessary skills and information to implement energy efficiency strategies. DCEO will offer the following programs:

- **Small Energy Design Assistance**
- **Building Operator Certification**
- **Building Codes Enforcement**
- **Building Industry Training & Education**
- **Enhanced Implementation**
- **Large Customer Energy Assistance**

The DCEO portfolio is discussed in detail as part of DCEO’s separate filing.

5.2.5 Education & Outreach / Market Transformation

The last core component of ComEd’s portfolio is the Education & Outreach / Market Transformation component. This component has a two pronged function – (1) promote and educate the various customer segments on the value of energy efficiency and (2) use this education and outreach to drive customers toward energy efficiency activities to help transform the market. These activities by themselves will not necessarily lead to kWh savings that can be counted as part of the goal, but rather will lead to actions on the part of the customer that will increase the level of energy efficiency in the ComEd service territory.

It is not ComEd’s intent within this Plan to detail every education and outreach tactic that will be implemented over the next three Plan years. Rather, we lay out our strategy going forward and some examples of tactics that we would then expect to consider for implementation. Based on market research and participation in many customer outreach activities, ComEd has learned that many customers take energy usage for granted, are not aware of opportunities to reduce their energy consumption, or lack a compelling motivation to act to reduce energy use. By implementing the Education and Awareness initiatives listed below, we will provide an emotional reason for behavioral change by offering valuable, convenient solutions that are socially

desirable. In turn, we hope to become a more trusted resource to our customers. In addition to saving both energy and money, customers will gain an understanding of how their actions directly affect the environment.

Beginning with this Plan, a strategic shift in Education and Awareness initiatives will take place. We will create a foundation of energy efficiency knowledge, develop advocates for energy efficiency and foster behavioral change, ultimately leading to kWh reduction.

There are several levels of customer involvement that will be supported by education and awareness initiatives.

- Plant the seed of energy efficiency knowledge (e.g., explain what energy efficiency is)
- Show how energy efficiency impacts an individual consumer (e.g., you can save money when you use less energy) and create links between energy use, climate change, and livability
- Help consumers learn about *Smart Ideas* programs and other specific ways they can become more energy conscious
- Encourage action by becoming an advocate of energy efficiency and participating in *Smart Ideas* programs

Education initiatives will focus on in-person communication and traditional learning opportunities to develop energy efficiency advocates. These interactive sessions will involve customers in energy usage problems, develop solutions and encourage continuous change. The purpose will be to impart energy efficiency knowledge and create advocates who are expected to pass along this information to their networks, such as educators to their students, real estate agents to potential home buyers and sellers, and trade allies to potential business clients.

Awareness initiatives will be focused primarily on delivering the message of energy efficiency and overall consumer energy management to the general market. The awareness initiatives will include two facets: general communication and behavioral marketing. General communications will deliver consistent communications across a variety of marketing, media and advertising channels.

Behavioral marketing targets specific customers in non-traditional and more focused ways. These marketing methods will enable behavioral change to be tracked, and in some cases will allow kWh savings to be measured. Behavioral marketing will be used to increase the effectiveness of awareness campaigns.

The tactics listed below in the Advocacy, Awareness and Behavioral Strategies sections will be implemented in PY4 and will be rolled out in PY5 and PY6 based on available budget and results from PY4.

Advocacy Strategy. ComEd's education strategy will focus on formal opportunities to deliver energy efficiency knowledge to potential energy efficiency advocates. Through a "train the trainer" approach, we intend to inform, enable and equip those individuals in a position of influence to disseminate these messages into their communities and networks.

Tactics will include:

- Expand our current educational efforts, facilitated by the National Energy Education Development ("NEED") project, offering customized classroom curriculum on energy efficiency and conservation for schools in ComEd's service territory. Reach as many

schools, teachers, students and parents as possible throughout the three year Plan cycle, increasing reach from previous years.

- Actionable and trackable home energy efficiency kits are offered and distributed to families as part of the NEED workshop program
- Host education workshops for trade allies for the *Smart Ideas for Your Business* program
- Facilitate speaker bureaus and panel discussions targeted to realtors, building managers and community organizers
- Host community meetings and social interaction for municipalities and develop an RFP targeted to community-based organizations to develop innovative community-based approaches to building awareness and changing behavior

Awareness Strategy. Awareness initiatives will provide general market customers with knowledge about energy efficiency and the *Smart Ideas* programs, as well as how their energy usage impacts their bills and the environment. These efforts may incorporate *Smart Ideas*, but generally remain program non-specific. These marketing efforts will result in consumers being exposed to an ever-growing, additive knowledge base to facilitate market transformation.

General awareness initiatives and tactics to be implemented in PY4-6 will include the following:

- Earned media coverage for ComEd-sponsored exhibits, events and corporate sponsorships, including press releases, radio mentions and news coverage
- Promotion of event marketing to leverage Earth Day, Earth Hour and attendance and participation at community-sponsored events and energy efficiency fairs
- Mobile event outreach program highlighting general energy efficiency, *Smart Ideas* programs and offers with lighting and appliance manufacturers. Events will provide an opportunity for data collection, program tracking and actionable results
- Further engage commercial customers who are using benchmarking tools online by linking them up to appropriate *Smart Ideas* programs
- Business Expo for C&I customers and trade allies to build awareness of *Smart Ideas* programs and overall energy efficiency
- Outreach to C&I customers through specific trade organizations such as Building Owners and Managers Association (“BOMA”) and select regional economic development organizations, where ComEd will have access to speaking engagements, workshops and tradeshow
- Monthly email messages to over 400,000 subscribers promoting general energy efficiency and specific *Smart Ideas* programs
 - Subscriber list is expected to grow through a self-enrollment tool on ComEd.com and refer-a-friend campaigns
- Videos posted on the website regarding top energy wastes in the home

Behavioral Strategy. Recent research indicates that information campaigns are not sufficient on their own to incent individuals to change their behavior. Behavioral marketing is defined as

using human biases that are important for making decisions and incorporating those biases into marketing campaigns to make them more effective.

We need to understand the values and mindset of the target consumer in order to design high-impact messaging. Using behavioral marketing, ComEd will promote energy efficient behavior by building an informed, educated and involved audience, and rewarding them. These initiatives will be especially successful among residential customers who want to be seen as “doing the right thing” among peers or among their industry segment.

We will consider focus groups or online survey instruments as ways to identify which of the following beliefs most resonate with our residential customers. We can then better profile each segment according to the underlying identity:

- I care about the environment and will make appropriate choices about energy conservation based on an informed perspective - Greenies
- I am concerned about saving money and interested to learn how I can reduce energy consumption - Economical
- I am conscientious about my resources. I don't like to waste time, money, food, or energy – Practical
- Conservation is cool. I want to jump on the bandwagon – Trend watcher

As we gain further insights about the triggers for each of these audiences, we can integrate our program advertising, earned media and education more effectively.

Behavioral marketing tactics and initiatives include the following:

- Development of promotions and contests that will drive specific customer actions tied to *Smart Ideas for Your Home* initiatives.
- Create a contest where participants earn contest entries for watching an Appliance Recycling video, signing up for a pickup, and referring friends to the video.
- Offer contests, incentives and rewards to encourage customer competition and involvement, as well as promote energy efficiency.
- Host a reward contest if customers agree to an energy efficiency action such as turning up their thermostats 3 degrees in the summer or turning out their lights when they leave the room.
- Deployment of Web-based energy efficiency resources that afford us the ability to track and monitor users' energy consumption. Example include -
 - Online home energy audit that incorporates users' billing data
 - Educational/how-to videos
 - E-marketing informational and promotional offers
- Creation of electronic-based user applications to measure participation in energy reduction activities.
- Smart Phone application that tracks energy use and allows energy usage to be posted to Twitter to share with friends.

- Host an Annual Awards Ceremony to acknowledge significant events or people who are spearheading conservation and no waste initiatives – for many people, recognition is more of an incentive than winning a contest.
- Leverage social media as opportunities become available.

Some behavioral awareness activities will be measurable. As often as possible, tactics will be designed to capture and accumulate each individual’s energy savings and to track kWhs saved. Most general communication tactics will not be measured through kWhs saved, but reach and effectiveness will be measured through consumer perception research and surveys. As ComEd becomes more experienced in delivering behavioral marketing campaigns during PY3, and positive results are proven, we will shift our focus to behavioral marketing awareness.

More informed and educated consumers are more likely to modify their behavior and improve their energy efficiency. As customers become more knowledgeable about energy efficiency and *Smart Ideas* programs, there will be less of a need for general awareness tactics. Over time, more funds will be allocated towards more measureable initiatives that help to transform the market through actionable results.

For Educational and Outreach activities, we have allocated \$8.2 million in total for the next three Plan years.

5.2.6 Municipal Outreach

In keeping with one of our core themes for this portfolio – being innovative – we will work closely with a unique channel to reach our customers – community and municipal partnerships. We believe that utilities can do more in engaging cities and villages in their energy efficiency outreach efforts. One successful example of this type of outreach is ComEd’s pilot Community Energy Challenge (“CEC”) program, which was implemented in PY2. We launched the CEC to test specific hypotheses, such as:

- Could we use this channel to deliver our EE programs in a more cost effective manner?
- Is it possible to successfully link our EE programs to community-based sustainability efforts?
- Could community-based efforts more effectively reach and recruit hard-to-reach populations?
- Could municipalities successfully effect market transformation within their communities?

Community Energy Challenge (“CEC”)
ComEd invited 12 communities to participate in the CEC; 10 ultimately submitted energy plans that outlined how those municipalities would reduce energy among their local government operations, among their residents and among their local businesses. During the CEC competition period, these communities actively worked to realize energy savings from projects identified in their plans. In July, 2010, ComEd awarded a \$100,000 cash prize to the Village of Schaumburg – the community that “won” the challenge.

Some of the objectives of the CEC have been met and others are still being measured. The independent evaluator is evaluating the cost effectiveness of this unique program concept. Early feedback indicates those municipalities involved with the CEC were quite positive about

their experience and felt that their involvement enhanced their own community's sustainability efforts. Several communities connected with hard-to-reach populations and successfully engaged those groups in energy efficiency activities, and others felt that the CEC strengthened their already existing relationships with key community organizations, thus enhancing the effectiveness of their market transformation efforts.

We are keen to build on the success of, and lessons learned through, the Community Energy Challenge by building a stronger and more effective outreach partnership with all of the municipalities that we serve. As with the CEC, the objectives remain the same – leveraging these partnerships to deliver the *Smart Ideas* programs cost-effectively, linking our programs to community-based sustainability efforts, reaching and recruiting hard-to reach populations, and successfully effecting market transformation within communities.

Examples of tactics that we may employ in engaging municipalities include:

- Build a network of energy managers that could be “loaned out” to communities to assist their local small businesses in identifying energy efficiency opportunities.
- Establish an energy efficiency certification program whereby municipalities could earn “platinum,” “gold” or “silver” ratings for their energy efficiency activities in their communities.
- Allocate a pool of funds dedicated to community-based energy efficiency projects. Encourage municipalities to submit proposals for those funds that would be allocated to those projects with the highest energy savings or market transformation potential.
- Create a building code awareness and enforcement plan that would educate municipalities on the importance of enacting more stringent building codes and consistently maintaining effective building code enforcement.
- Provide *Smart Ideas for Your Home and Business* materials to municipalities for community-based events.
- Support municipalities' own energy efficiency challenges within their communities.
- Provide municipalities with energy usage profiles that break out usage by business, residential and governmental accounts. During the CEC, such information enabled municipalities to target their energy efficiency projects to specific customer classes rather than expend unnecessary resources on trying to reach all residents and businesses in their community.

We are currently working with the Metropolitan Mayors Caucus to craft an effective partnership with municipalities that will motivate this important constituent to help convey the relevance of energy efficiency within their communities. We have proposed a three-year budget of \$3.5 million.

6 Cross-Cutting Activities

The portfolio described in Section 5 is integrated and managed through a series of activities that extend beyond the boundaries of any given program element. These activities are budgeted as common costs across the portfolio and include portfolio management, evaluation, measurement and verification (“EM&V”), and emerging technology research and development (“R&D”).

6.1.1 Portfolio Management

Portfolio Management consists of several key activities required to properly manage the portfolio. These elements are Executive Management, Planning, Implementation and Administration, Market Research and Tracking & Reporting. These elements are considered Portfolio-level costs because they provide services across the entire portfolio. Each element is discussed further below.

Executive Management. This function is responsible for the development, communication and execution of ComEd's portfolio strategy, and includes the following activities:

- **Portfolio Strategy:** Develop the strategy guiding the composition of the portfolio, including allocation of available resources across sectors and programs.
- **External Coordination:** Communicate our strategy and progress to the Commission and the Stakeholder Advisory Group on a regular basis.
- **Internal Coordination:** Identify internal systems and functions that contribute to or are affected by program implementation and management. Coordinate activity to ensure internal tracking and reporting systems are in place and integrated as necessary. Ensure use of consistent messaging and provide general oversight of the planning and implementation.
- **Budgeting and Financial Management:** Set and manage the annual portfolio and individual program budgets consistent with the portfolio strategy and available resources. Track costs against budgets on a monthly basis.
- **QA/QC:** Manage overall portfolio quality assurance, reviewing data from individual programs and monitoring quality of internal systems and ComEd-provided services.
- **Communications and Marketing Strategy:** Coordinate development of the overall portfolio messaging, and ensure that program implementers meet ComEd-developed standards. Within this function, ComEd designs and executes its crosscutting awareness-building and education elements.

Planning. This function provides the analysis and ongoing market intelligence to support the Executive Management function. Key policy and planning activities include:

- **Program and Portfolio Analysis.** Analysis of the energy savings and cost-effectiveness of the program elements and of the portfolio as a whole. The planning process is ongoing and includes continual dialogue with the Stakeholder Advisory Group.
- **Program Metric Analysis.** Set and periodically adjust portfolio and individual program performance metrics related to savings acquisition, cost-effectiveness, quality control and customer service.
- **Budget Analysis.** Develop and review annual program implementation budgets relative to program metrics and performance.
- **Program Design.** Develop programs using known best practices from existing programs, prior program experience, and input from key stakeholders. Refine program design in collaboration with implementation team and stakeholders.

- **Evaluation Management.** Manage the independent evaluator contract, in conjunction with the ICC Staff, which includes managing the evaluation work and incorporating results into ongoing program and portfolio reviews.
- **Emerging Technology / R&D Management.** Manage a formal R&D structure, which includes identifying key emerging technologies and program concepts, and designing and executing research or pilot projects to test feasibility for inclusion in ComEd's portfolio.
- **Reporting:** Coordinate preparation of annual reports to the Commission and quarterly reports to the SAG on portfolio performance.
- **Rider EDA Management.** Manage preparation of annual Rider EDA reconciliation filings and mid-year adjustment filings, if required.

Implementation and Administration. This function provides for the implementation and administration of the program elements within our portfolio. These activities also involve critical coordination between internal and external systems. Major activities include:

- **Implementation Planning:** Develop plans and processes to implement and integrate the overall portfolio management structure with individual program elements. Identify implementation critical paths and respond accordingly. Produce final program designs, including setting incentive levels. Provide program feedback to planning team.
- **Support Back Office System Design and Implementation:** Identify requirements for program customer relationship management, financial incentive fulfillment, and tracking and reporting. Identify required new systems and system enhancements and coordinate procurement and installation.
- **Procurement Support:** Deliver many program services through third party vendors or implementation contractors. Request-For-Proposals will be developed for specific competitive services. Contracts for program element implementers will be developed and include performance provisions to mitigate ComEd's risk. ComEd will coordinate with internal corporate legal and procurement groups to ensure best practices and competitive pricing are realized.
- **Program Management:** Manage program implementation, including oversight of implementation contractors, through assigned *Smart Ideas for Your Business* and *Smart Ideas for Your Home* teams. These teams have responsibility for ensuring effective implementation processes are in place and followed, as well as for regular reporting of program progress. All programs undergo regular performance reviews, and we retain the right to replace underperforming contractors.
- **Trade Ally Network Management:** Ensure that program implementers maintain appropriate levels of involvement and communication with trade allies. Communicate program changes with trade allies, and solicit feedback regarding program performance with respect to ease of customer acquisition, incentive levels, marketing, and collateral requirements.
- **Management of Program Tracking and Reporting:** Ensure program implementers, as well as internal staff, consistently use the program's tracking system. Responsibilities include monthly system downloads and preparation of status reports on program performance and cost.

- **Internal EM&V:** Conduct ongoing program evaluation as a check on overall program quality and an early-warning system to spot potential performance or customer service issues using the weekly performance scorecards, as well as on-site verification and customer surveys.

6.1.2 Market Research

During the first Plan, we have conducted various market research projects associated with energy efficiency. For this Plan, we propose a more formal set of market research projects that will serve to support the information needs associated with design, implementation and evaluation of the portfolio. Key research activities will include:

- **Attitude, Awareness & Stated Behavior Research.** The primary objective is to measure and track customers' attitudes toward energy efficiency, awareness of our programs, and customers' stated behaviors relative to energy efficiency actions. We will conduct the research annually to quantify and assess the impact that our programs have on consumers' energy efficiency attitudes and behaviors over time.
- **Appliance & Equipment Saturation Research.** The primary objective is to measure the possession or ownership of appliances and equipment in the ComEd service area. This research will update the inventory of selected appliances and equipment within the residential, commercial and industrial sectors as well as estimate the market penetration of energy efficiency measures. By comparing the results from this proposed work with results from the market study completed earlier this year, we will begin to better understand saturation and penetration trends.
- **Program Assessment Research.** The primary objective is to measure customer satisfaction with a given program and with key elements of program implementation. This research will identify opportunities to adjust the management, delivery and marketing of a program to improve program performance.
- **New Program Potential Research.** The primary objectives are to assess customer interest in, and the appeal of, a prospective program concept or to evaluate alternative value propositions. This research will support customer-driven program design and implementation features, leading ultimately to greater customer interest, acceptance and adoption.

A research plan will be developed, reviewed and approved internally prior to the launch of any primary market research project. Each research plan will include:

- A defined list of research objectives and intended uses of research findings
- A description of the study's population and, if needed, a sampling plan with sample size requirements
- A description of the data collection methodology
- A list of potential survey questions or research topics to be explored
- A list of research project deliverables
- A timeline for key milestone activities
- A cost estimate

For market research activities, we have budgeted \$3.75 million over the next three Plan years.

6.1.3 Tracking & Reporting

During the first Plan, ComEd commissioned the development of a portfolio tracking and reporting database system. This system provides warehousing of all program data, and allows for the creation of a variety of reports and data analysis for the program managers, evaluators and implementing contractors. Features include:

- Web-based software for the *Smart Ideas for Your Business* implementing contractors, with application entry, process flow tracking, automatic customer notification, letter generation, warehousing of project documents, report generation and automatic email subscription to key reports.
- A web services interface for the *Smart Ideas for Your Home* program implementers that facilitates querying of ComEd's master customer database, uploading of customer enrollments and completions, and accessing measure-specific data to facilitate energy savings calculations and verifications.
- A Sharepoint portal with an ad-hoc report builder for use by the implementation team to develop and automatically receive custom reports and to view an online scorecard and various tracking data graphs.
- Integration of other key business intelligence data from ComEd's marketing data warehouse, legislative databases, ComEd's accounting ledger and other marketing tables of interest to program managers.
- Export capability of multiple tables for use by evaluation contractors in their EM&V efforts.

Planned enhancements to the system during PY4 through PY6 include:

- SQL Server Analysis Services, which will provide a greater ability to evaluate multiple program tables, develop and programmatically track certain Key Performance Indicators, provide business intelligence capabilities and support ComEd's dashboard development with built-in forecasting and trend projection capabilities.
- Integration of program data tables with an online Technical Reference Manual, which will ensure consistency between documented savings values and savings tracked and reported in the database.
- Opening of the online system for use by key trade allies participating in ComEd's business programs, allowing them to submit applications electronically and track their projects.
- Development of batch load process for multiple projects, to simplify entry of applications by chain accounts with multiple locations.
- Integration of new program elements into the tracking system, including front-end costs for possible PY7 programs if needed.

For the tracking system, we have budgeted \$1.8 million over the three-year Plan cycle to accommodate general maintenance and the enhancements discussed above.

6.1.4 Internal Resources

The responsibility for portfolio management falls under ComEd's Vice President for Marketing & Environmental Programs area. Within this area there are four groups, each of which has a major role in the portfolio – Energy Efficiency Planning and Measurement, Energy Efficiency Services, Demand Response & Dynamic Pricing and Marketing.

During the first 3 years, 20 employees or full-time equivalents (“FTEs”) have been fully assigned to one or more functions associated with the portfolio. As part of this Plan, ComEd proposes adding 5 additional FTEs to its budget in PY4, for a total of 25 FTEs to correspond with the increased size of the portfolio. This is consistent with our first Plan where 5 additional FTEs were added to the portfolio in both PY2 and PY3. These additional costs will not be included in ComEd base rates. At this time, ComEd does not plan any additional FTE increases in PY5 or PY6 due to the flat spending screen, but will revisit the resource needs on an annual basis.

NEED FOR INTERNAL RESOURCES

While we use third-party implementation contractors to support field implementation activities, internal staff is critical to manage contractor activity and performance and to coordinate and integrate the various implementation efforts. We believe our portfolio management model has effectively balanced internal and external resources and we plan to continue this model going forward.

6.1.5 R&D / Emerging Technologies

The Illinois statute states that a maximum of 3% of the overall portfolio's budget can be allocated toward emerging technologies and R&D efforts. As stated previously, we intend to allocate the full amount towards R&D for each year of this Plan. We believe the investment into new concepts in energy efficiency is critical to the future success of our energy efficiency portfolio.

One of the key new elements of this portfolio is our intent to develop a formal R&D process as part of this Plan. While we achieved much in terms of R&D during the first Plan, the process was much more reactive than proactive as we tended to address issues as they presented themselves. For this Plan, we intend to implement a structured process that identifies opportunities within the portfolio and researches potential responses to these opportunities. Additionally, we propose that all R&D projects be evaluated for kWh savings such that those savings can be applied to the annual kWh goal. We would expect these evaluations to be conducted by the independent evaluator.

Besides specific R&D projects, we will also continue to invest R&D budget dollars in organizations that support energy efficiency. Organizations such as E-Source and the Consortium for Energy Efficiency provide opportunities to take advantage of research being conducted at a national level, leveraging energy efficiency funds from across the country.

Within this Plan, we do not intend to attempt to identify the projects that will be funded over the course of this Plan. We intend to monitor the energy efficiency landscape and identify opportunities when they arise in collaboration with the Stakeholder Advisory Group. We also intend to monitor research at the national level. For example, to date much research on LEDs has been conducted at the national level and we believe that this research is applicable to our service territory. With this national research underway, we have taken the position that the need to do additional LED research is not necessary at this time. Examples of R&D projects that ComEd intends to investigate over this Plan's life include an integrated demand offering and "net/near zero" energy commercial new construction.

Potential R&D Project – An Integrated Demand Offering

An integrated demand offering ("IDO") would deliver a home solution for energy management and home automation leveraging breakthrough technologies. The intent of an IDO pilot would be to develop a total solution for single family residence, possibly in ComEd's Advanced Metering Infrastructure footprint, to demonstrate ComEd's experience in energy efficiency and demand response and new technologies. By integrating distinct energy efficiency and demand response programs and discrete technologies, ComEd could develop a robust and easy-to-use offering with the goal of maximizing energy savings and peak load reduction. Proven and new technologies that could be included in an IDO pilot could include smart meters, programmable communicating thermostats, smart plugs/switches, load control devices and smart appliances that could be controlled and displayed on devices such as in-home displays, smart televisions, websites and smart phone applications.

An IDO pilot could help ComEd better understand consumer needs and energy use behavior that new technologies enable. New technologies that customers are willing to adopt and use to better reduce and manage energy usage could be identified and appropriately integrated with current programs and incentives. The showcase homes could generate increased interest in energy efficiency, demand response and conservation while serving as an educational tool for end consumers to understand and see first-hand the potential benefits of new technologies. Finally, the goal of an IDO pilot would be to identify the technologies and features of a total home solution that would be easy-to-use for end consumers to manage and reduce their energy costs, as a potential future offering from ComEd.

6.1.6 Risk Management

Inherent in any portfolio of energy efficiency is the uncertainty associated with program performance, evaluation outcomes and funding continuity. These uncertainties lead to risks for us. There are two primary risks that we must manage within our portfolio:

- Achievement – the risk that we do not achieve the annual energy savings targets that are approved in our Plan.
- Budget – the risk that we exceed the spending screens.

In the first Plan, we conducted an analysis of the risks associated with the achievement of the portfolio. As a result of this risk analysis, we made specific adjustments to the portfolio in an effort to mitigate the risk of achieving the statutory targets for each of the three Plan years. While these adjustments, combined with program optimization efforts conducted by the implementation and planning teams over the past two Plan years have enabled us to surpass our statutory goals, a review of the risk parameters from the first analysis shows that certain risks were underestimated. Notably, the analysis showed that residential compact fluorescent lamps ("CFLs") contributed the greatest level of performance risk both from an installation rate

and a net-to-gross perspective. Business risks were not as well identified, particularly custom project realization rate and net-to-gross factors.

For this Plan, the risk scenario shifts somewhat:

- Statutory spending screens will adversely affect the ability to fund programs to meet statutory targets, requiring modification of those targets.
- Evaluations of core programs from the first year of portfolio implementation have allowed us to realign achievement risk factors.
- The Commission order approving the first Plan required ComEd to recalculate spending screens annually, which was not factored into the original risk analysis.
- Energy prices and forward capacity prices have dropped precipitously, further affecting the spending screen.

The first Plan used @RISK, an add-in to Microsoft Excel, to evaluate the risk contributions of individual measures. This method was appropriate because all measure and program level data was evaluated within a single, large Excel Workbook. For this Plan, the use of DSMore makes such an overarching risk analysis difficult as over 1,000 Excel Workbooks need to be manipulated simultaneously to conduct the same analysis. In addition, DSMore provides multiple price-weather scenario modeling within its core analysis; this allows us to evaluate price risk at the program and measure level.

The remaining performance risks for these programs were evaluated using Monte Carlo simulations on simplified DSMore files. Crystal Ball, a risk analysis software program, is useful in evaluating program-level risks associated with participation and evaluation.

For the risk analysis, we used Crystal Ball to evaluate the key inputs identified above. To facilitate this analysis, we developed program-level DSMore worksheets for eight of the largest programs in the portfolio. This was necessary because each program consists of multiple measures, and a single program may have several hundred Excel files that are aggregated up to the program level. Conducting a Crystal Ball risk analysis on such a large number of files would be an onerous and time-consuming task.

Each key input value was assigned a probability distribution that represents the range of values that would be expected to occur under a variety of operating and market scenarios.

Each program was simulated for 1,000 trials. The forecast mean for each program was then compared with the design target, and the 10% and 90% values were also tabulated for each program. The sum of the means was 19 GWh higher than the sum of the design targets over the three years. This suggests that we have been sufficiently conservative in our planning assumptions. The 10% lower bound is 175 GWh lower than the mean, which indicates that we may be at risk of missing our targets if all programs do not perform or evaluate as expected.

6.1.6.1 ComEd's Risk Management Process

Successful management of these risks depends on several factors:

- **Strong data tracking and reporting** – We currently collect implementation and tracking data on a daily or weekly basis for all programs. This allows us to monitor the progress and performance of our programs. Program managers can modify marketing tactics and incentive structures as needed to remediate program performance shortfalls.

- **Cross-program flexibility** – Occasionally a program will not respond to changes in marketing or incentives, and in those cases the program managers may decide it is best to shift funds to other programs in an effort to offset the savings shortfall.
- **Evaluation mitigation** – The least controllable risk identified in this analysis is the NTG risk, which is: a) determined after-the-fact, and b) usually obtained through surveys because it cannot be metered or otherwise measured. While we propose a mechanism that limits retrospective application of these values, an evaluated NTG from the PY4 evaluation will still be applied to PY6.

6.1.7 Portfolio Implementation Schedule

The table below indicates the implementation schedule for all 19 program elements. Key highlights include –

- The majority of the programs will either continue or begin in June 2011.
- Four program elements will start after June 2011 – C&I CACES (3/12), Residential New Construction (6/12), Commercial Real Estate (6/12) and Data Center Efficiency (6/12).
- One program element – Appliance Rebates – will only be implemented in PY4 and PY5

Project Timeline			
Program Elements	Net MW		
	PY4	PY5	PY6
C&I - EE Programs			
Prescriptive			
Custom			
Retro-commissioning			
New Construction			
Compressed Air			
Midstream Incentives			
Small Business Direct Install			
Energy Efficiency RFP			
C&I CACES			
Commercial Real Estate			
Data Center Efficiency			
RESIDENTIAL - EE Programs			
Lighting			
Home Energy Reports			
Appliance Recycling			
CACES			
M-F Home Performance			
S-F Home Performance			
Appliance Rebate			
New Construction			
Third Party Program Administration			
Third Party Program Administration			

 - indicates program implemented

6.1.8 Portfolio Budget

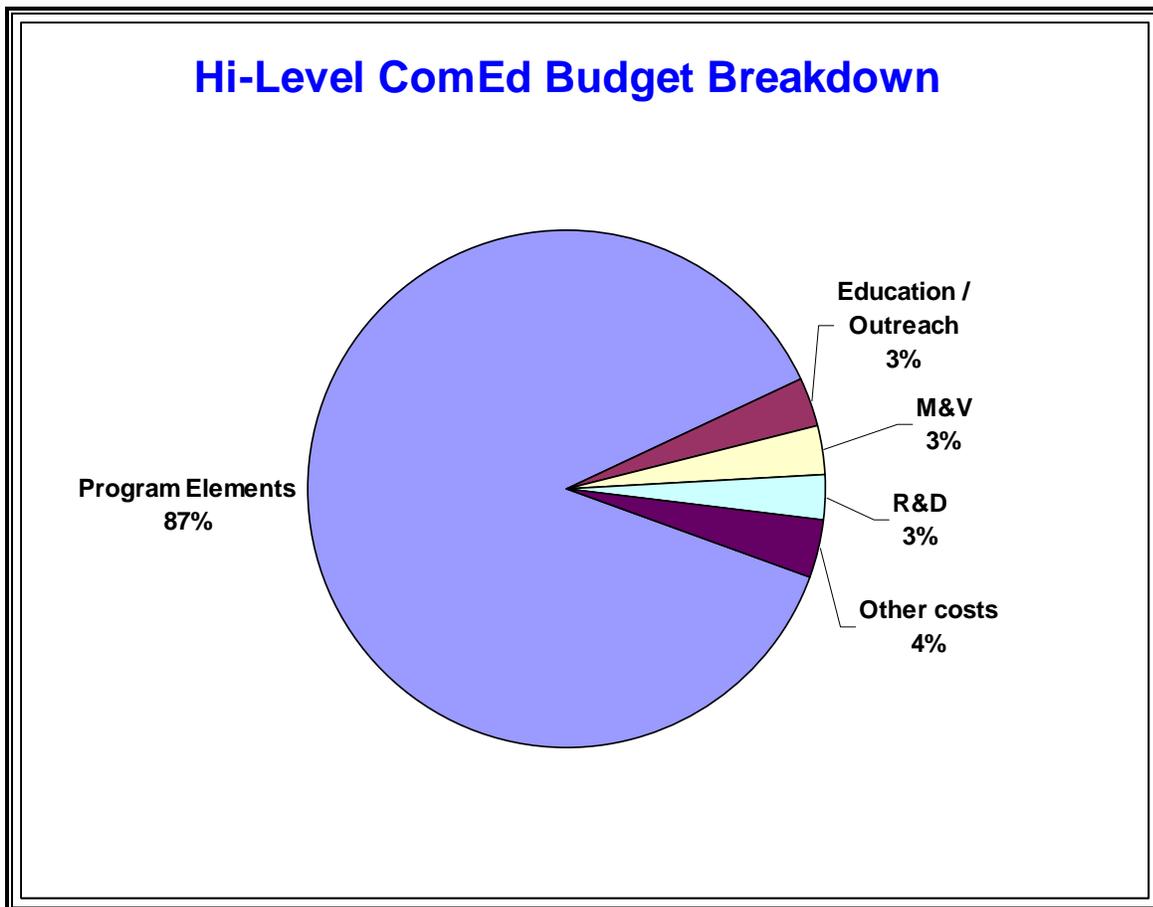
The table below presents the Portfolio budget for each program element or activity for each Plan year. Key highlights are presented and discussed following the table.

Programs	PY4	PY5	PY6	3 Yr Total
C&I - EE Programs				
Prescriptive	\$ 38,912,858	\$ 38,912,858	\$ 38,747,353	\$ 116,573,069
Custom	\$ 6,105,333	\$ 5,367,038	\$ 6,758,644	\$ 18,231,015
Retro-commissioning	\$ 5,032,168	\$ 4,681,601	\$ 5,472,800	\$ 15,186,569
New Construction	\$ 2,612,468	\$ 3,624,596	\$ 4,641,273	\$ 10,878,337
Midstream Incentives	\$ 1,496,875	\$ 1,974,875	\$ 1,819,355	\$ 5,291,105
Compressed Air	\$ 2,072,573	\$ 2,785,636	\$ 3,453,753	\$ 8,311,962
Small Business Direct Install	\$ 3,389,913	\$ 4,856,232	\$ 4,861,174	\$ 13,107,319
Energy Efficiency RFP	\$ 1,483,350	\$ 2,493,982	\$ 2,895,560	\$ 6,872,892
C&I CACES	\$ 262,538	\$ 549,795	\$ 669,179	\$ 1,481,512
Commercial Real Estate	\$ 702,697	\$ 1,997,348	\$ 2,002,290	\$ 4,702,335
Data Center Efficiency	\$ 416,089	\$ 917,691	\$ 922,633	\$ 2,256,413
C&I TOTAL	\$ 62,486,862	\$ 68,161,652	\$ 72,244,014	\$ 202,892,528
RESIDENTIAL - EE Programs				
Lighting	\$ 18,371,504	\$ 15,336,555	\$ 13,284,736	\$ 46,992,795
Home Energy Reports	\$ 2,774,112	\$ 2,783,708	\$ 3,321,342	\$ 8,879,162
Appliance Recycling	\$ 8,378,891	\$ 7,039,929	\$ 7,044,871	\$ 22,463,691
CACES	\$ 4,153,558	\$ 4,031,396	\$ 4,444,864	\$ 12,629,818
M-F Home Performance	\$ 1,393,522	\$ 2,026,914	\$ 2,825,023	\$ 6,245,459
Appliance Rebate	\$ 2,973,982	\$ 2,975,182	\$ -	\$ 5,949,164
S-F Home Performance	\$ 364,890	\$ 747,173	\$ 1,110,501	\$ 2,222,564
New Construction	\$ 87,638	\$ 345,427	\$ 513,870	\$ 946,935
RESIDENTIAL TOTAL	\$ 38,498,097	\$ 35,286,284	\$ 32,545,207	\$ 106,329,588
Demand Response - AC Cycling Maint.	\$ 355,000	\$ 1,028,000	\$ 896,000	\$ 2,279,000
Third Party Program Admin.	\$ 100,000	\$ 2,000,000	\$ 2,000,000	\$ 4,100,000
Total ComEd EE	\$ 101,439,959	\$ 106,475,936	\$ 107,685,221	\$ 315,601,116
DCEO				
DCEO	\$ 40,000,000	\$ 40,250,000	\$ 40,500,000	\$ 120,750,000
Portfolio-Level Costs				
Education / Outreach	\$ 3,000,000	\$ 2,500,000	\$ 1,000,000	\$ 6,500,000
Municipal Outreach	\$ 1,500,000	\$ 1,248,652	\$ -	\$ 2,748,652
Market Transform. - EIO / EDS	\$ 500,000	\$ 500,000	\$ 300,000	\$ 1,300,000
M&V (3% of Spending Screen less DCEO)	\$ 3,600,000	\$ 3,622,500	\$ 3,645,000	\$ 10,867,500
R&D	\$ 3,600,000	\$ 3,622,500	\$ 3,645,000	\$ 10,867,500
Market Research	\$ 2,000,000	\$ 1,000,000	\$ 247,588	\$ 3,247,588
Legal	\$ 500,000	\$ 200,000	\$ 200,000	\$ 900,000
Tracking System	\$ 800,000	\$ 500,000	\$ 500,000	\$ 1,800,000
Labor (Non-program specific)	\$ 1,800,000	\$ 1,863,000	\$ 1,928,205	\$ 5,591,205
Unallocated Funds	\$ 1,256,916	\$ -	\$ -	\$ 1,256,916
Total Portfolio-Level Costs TOTAL	\$ 18,677,488	\$ 15,094,307	\$ 14,390,185	\$ 48,161,980
PORTFOLIO TOTAL				
ComEd Portfolio Cost (less DCEO)	\$ 120,117,447	\$ 121,570,243	\$ 122,075,406	\$ 363,763,096

Key Budget Highlights –

- Each annual budget equals the annual spending screen
- The DCEO component of the portfolio is set at 25% of the total budget as required under the statute; details on the DCEO budget can be found in DCEO’s Plan, which is being filed in a separate docket.
- The EM&V component is set at 3% of the total budget, which is the maximum amount per the statute.
- The R&D component is set at 3% of the total budget, which is the maximum amount per the statute.
- 87% of ComEd’s budget is directly tied to program implementation.

The chart below shows a high-level breakdown of ComEd’s budget (DCEO’s budget is not included in the chart below).



The “Other Costs” include market research costs, legal costs, tracking system costs and non-program specific labor costs.

7 Portfolio Evaluation

7.1 Evaluation Overview

The objective of any portfolio evaluation is multi-faceted. Evaluation efforts ideally should support the program administrator's continuous improvement process by identifying the program's actual performance, showing how this performance differs from the planned performance, and identifying opportunities to improve the processes employed to deliver, incent, market and track program performance over time. Effective evaluation efforts should be used to guide forward-looking program management decisions. Evaluation activities generally can be classified in the following categories:

- **Impact evaluation** – determination of program savings and cost-effectiveness
- **Process evaluation** – assessments of the effect of program structure and how program design, delivery, marketing and tracking affect program performance
- **Verification** – determination of the program participants' compliance with program terms and of actual project savings for purposes of paying incentives
- **Market effects studies** – attempts to determine the extent to which a program or portfolio has changed or transformed market behavior

The statute addresses the first activity by requiring ComEd to provide for an annual independent evaluation of the cost-effectiveness of the portfolio as well as a full review of the 3-year results of the broader net program impacts. While the law is silent regarding process evaluations, it became clear during discussions with the SAG that process evaluations in the first several years of all programs, as well as broader impact evaluations, were critical to identifying early opportunities for portfolio improvement.

When we launched our first Plan in June 2008, there was relatively little data available to forecast program performance. At that time, most jurisdictions that were operating energy efficiency portfolios had been doing so for some time. The intrinsic risks associated with launching new programs in a state that had almost no structured energy efficiency portfolio mechanism in place were significant and raised questions such as:

- How fast would the marketplace respond to our new programs, given there was very little infrastructure developed?
- Would there be a dearth of activity due to this lack of infrastructure and awareness, or would there be a large "pent-up" demand for programs that would exhaust funds quickly?
- How much activity, particularly in the first Plan year, would be attributable to ComEd's programs, and how much would be attributable to the "free-riders", or activity that was already underway and the customers only participated in ComEd's programs to take advantage of new incentives?

7.2 Energy Savings Calculation

Energy savings. The key measurement, or outcome, of an energy efficiency program is the energy savings. Energy savings are reported in a variety of ways by utilities, evaluators and policy analysts. The two primary metrics represent savings as either gross or net.

- **Gross savings** represent the energy or peak demand reduction calculated as the product of the number of measures installed and each respective measure's verified energy or peak demand reduction.
- **Net savings** begin with the estimate of gross savings, and then adjust this estimate in an attempt to calculate the level of savings that is directly attributable to the program.

The difference between gross and net savings is accounted for by two factors:

- **Free riders** - these are customers who took advantage of incentives to install specific energy efficiency measures but would have installed the measures even in the absence of the incentive.
- **Spillover** - represents savings due to customers who were motivated to install measures because of the program but who did not actually receive an incentive.

Gross savings are estimated using well-understood and accepted methods for measuring per measure savings and for statistically estimating the number of such measures actually installed. Calculations of net savings require that estimates of free riders and spillover be developed, and the evaluation community uses a variety of methods to produce these estimates.

Net Savings Calculation Challenge. The challenge facing estimation of free ridership and spillover is that both factors are behavioral in nature and not directly measurable. Therefore, evaluators must use survey methods in an attempt to divine the motivations of customers and, specifically, to estimate how much of that motivation came from the influence of an energy efficiency program. In some cases – for example, the installation of a major industrial efficiency project – this divination is reasonably straightforward, although the process is still susceptible to customers providing self-serving answers to evaluator questions (bias). In other cases – often involving relatively small customer purchases like CFL bulbs that might have been purchased up to a year prior to the evaluation – the validity of the estimates relies almost exclusively on the ability of a customer to remember the circumstances of a small purchase made months ago.

The validity and appropriateness of any single method for estimating net savings is subject to considerable debate within the evaluation community. Just as important, the method employed by an evaluator is strongly affected by the funding available to the evaluator and the type of program being evaluated. Upstream mark-down initiatives, like our Residential Lighting program element, do not track individual participants, severely complicating evaluation methods that require participant surveys. Surveys, interviews and store intercepts are considerably more expensive than use of secondary methods such as comparisons of product market share across regions with and without a program in question.

As an example of the complexities associated with Net to Gross (“NTG”) analysis, a recent impact evaluation of California’s residential lighting program used six different methods to evaluate net-to-gross in the same market.¹⁴ The results of these methods ranged from a low of 6% to a high of 74% for the same program and the same three-year timeframe. Therefore,

¹⁴ Final Evaluation Report: Upstream Lighting Program, KEMA, Feb 8, 2010.

while we have evaluated NTG values from the key first Plan year evaluations, there is no certainty that these values will not change significantly year-to-year. We have worked with the SAG to develop a framework that will minimize the retrospective risk of this variability. However, the portfolio is still at risk to the adverse results from one year to the next and could still impair our ability to achieve our goal in a subsequent year.

Evaluated *ex post* net savings are not predictable, as changes in evaluation methods can have huge impacts that cannot be known until after the evaluation is complete. This creates substantial risk for us - a risk that is not necessarily symmetrical.

Prudent risk management typically would involve the use of an expected value for net savings in planning and administration. However, there is no way to estimate what that expected value should be. Given that ComEd faces only downside risk if it misses its statutory goals, the only prudent course of action is to plan to meet a net savings target based on the net savings adjustments produced by the evaluation or our initial estimate of the net savings adjustment, whichever is most conservative (*i.e.*, has the lower value).

7.3 Independent Program Evaluation Contractor

The statute requires each utility to “[p]rovide for an annual independent evaluation of the performance of the cost-effectiveness of the utility’s portfolio of measures... as well as a full review of the 3-year results of the broader net program impacts and, to the extent practical, for adjustment of the measures on a going-forward basis as a result of the evaluations.” 220 ILCS 5/8-103(f)(7)). To fulfill this obligation, we contracted with Navigant (formerly “Summit Blue Consulting”) to provide all evaluation services for the first Plan. This contract covered our portfolio, as well as all of DCEO’s programs in both the ComEd and Ameren service territory. We billed Ameren for the portion of the DCEO evaluation work conducted in Ameren’s service territory. Navigant provided annual process evaluations as well as annual impact evaluations for all of ComEd’s programs in response to stakeholder feedback that comprehensive evaluations be conducted early in the program cycle.

ComEd’s contract with Navigant provides the Illinois Commerce Commission with oversight authority as prescribed in the Commission’s Order on Rehearing:

[T]his Commission has the right to: approve or reject the contract; direct it to terminate the evaluator, if the Commission determines that the evaluator is unable or unwilling to provide an independent evaluation; and approve any action by the utility that would result in termination of the evaluator during the term of the contract period.

Additionally, Commission Staff have been invited to, and have participated in, our biweekly calls with the Navigant team to discuss pertinent evaluation issues. As evaluation documents are received from Navigant, Staff receives copies of all draft reports contemporaneously with ComEd.

The evaluation function actually performs two very important roles. First, it provides the utility with continual access to the wealth of knowledge that the evaluator provides in an effort to make programs better and to identify issues that would necessitate a mid-course change in program targeting or delivery. Second, the evaluation function conducts an audit to determine if the utility “*did its job*” (*i.e.*, met the savings goal).

Both functions are valid, and the evaluation process must be designed to accommodate both the utility's needs and the regulator's auditing concerns. We also note that management of the evaluation effort is not a trivial process. During the first two years of the current Plan cycle, we committed one person nearly full-time to this process. Customer surveys for evaluations also require coordination with our implementation contractors, access to our tracking and customer information databases and coordination with our Customer Service and Account Management departments. Our close involvement in the evaluation process is paramount to achieving a sound evaluation.

These issues become more complex over time as portfolios grow and certain jointly-delivered electric and gas programs are deployed to the marketplace. Also, there is expected to be a divergence of program design and delivery relative to our first Plan. Specifically, Ameren's programs will likely be crafted to address a downstate market that is quite different from ours, and will address the requirement that they integrate their gas and electric programs. DCEO's portfolio will also reflect its unique segments as well as its legislative mandate to provide integrated electric and gas programs. Therefore, it is unlikely that a single, consistent evaluation design can be implemented on a State-wide basis.

Another factor to be considered in the evaluation process for this Plan is our participation in the PJM capacity auction. We have committed the capacity value of our programs into the capacity market starting in June, 2012. In order to fulfill this commitment we must provide a final EM&V report to PJM annually, starting in May, 2012, that verifies the demand reductions associated with our energy efficiency programs. This evaluation requirement is best done in concert with the statutory EM&V efforts; if done separately, the cost to complete the final EM&V report could reach or exceed \$1 million annually starting in 2012. It would be counter-productive to have to duplicate this effort.

We have established strong working relationships with Nicor and Integrys, which we expect to leverage to ensure that both electric and gas savings impacts of joint programs are evaluated by a single contractor. The logistics of this process still need to be worked on and will be completed prior to the implementation of any joint program elements.

In summary, we believe the current structure for evaluation administration has worked exceptionally well during the first Plan. We endorse a continuation of this process going forward because it achieves the proper balance of evaluator independence and utility involvement in the evaluation process that is required to deliver a robust, cost-effective portfolio of energy efficiency.

7.4 Key Evaluation Issues

7.4.1 NTG Ratios

Our experience with the Plan Year 1 evaluation confirms our original position regarding deeming of NTG values as proposed in our first Plan. Retroactive application of evaluated net savings creates unmanageable risk and requires a level of spending higher than would otherwise be needed if our performance was instead assessed based on the net savings assumptions used in our approved Plan.

We firmly believe that any given Plan year's performance should be tracked and evaluated using NTG ratios estimated from prior years' evaluations. Although this can lead to a higher

level of spending than would be needed if performance was based on verified gross savings or the net savings assumptions used in our Plan, it would improve program planning and mitigate evaluation risk.

We worked closely with the SAG to arrive at a framework that does just this, thereby minimizing the level of risk that program savings would be radically changed after the Plan year has ended and when no remedy would be available to address program performance. This framework provides that any adjustments to NTG ratio values as a result of the independent evaluation will not be applied until June 1 of the Plan year following their final determination. We propose that this framework be accepted and implemented going forward, starting with the Plan Year 3 evaluations.

7.4.2 Realization Rates

We believe the same logic that applies to the NTG ratios should also apply to the individual program realization rates. The realization rate, which is the ratio of measured to projected savings, is a key input to any evaluation. Our experience with the first Plan year evaluation confirms our position regarding deeming of realization rates in this first Plan. Retroactive application of evaluated realization rates creates the same unmanageable risk that NTG ratios creates, and requires a level of spending higher than would otherwise be needed if our performance was assessed based on the net savings assumptions used in our approved Plan.

We firmly believe that any given year's performance should be tracked and evaluated using realization rates estimated from prior years' evaluations. Although this can lead to a higher level of spending than would be needed if performance was based on verified gross savings or the net savings assumptions used in our Plan, it would improve program planning and mitigate evaluation risk.

While this concept was not discussed directly with the SAG as the NTG framework was, the same logic applies. A framework similar to the NTG framework would minimize the level of risk that program savings would be radically changed after the program year has ended, when no remedy would be available to address program performance. The realization rate framework would work in the same way as the NTG framework where any adjustments to realization rate values as a result of the independent evaluation will not be applied until June 1 of the Plan year following their final determination. We propose that this framework be accepted and implemented going forward, starting with the PY3 evaluations.

7.4.3 Deemed Savings Values

In our first Plan, we proposed deeming of a very small subset of measures from our extensive measures list. The Commission granted deeming of that limited measure list. However, we also received instructions that "actual savings" needed to be determined for use on a prospective basis and that these values should be revisited every three years (or more often as new technology changes require). Over the past three years, we worked with our implementation contractors and evaluation contractor to revise a number of measure-level savings values. These efforts helped ensure that the savings we report to all parties are appropriate for our service territory and our customers' operating conditions. All of the evaluator-reviewed measure-level energy savings are provided in the Master Measures List, which can be found in Appendix B. We continue to refine savings calculations on an ongoing

basis, and as such the deeming of specific measure-level savings for the duration of a three-year portfolio may not be appropriate.

ComEd proposes that the measure-level energy savings provided in the Master Measure List be provisionally deemed by the Commission, with the expectation that as measure-level savings are modified as a result of new efficiency standards, changes in market conditions, and feedback from ongoing evaluation efforts, new values will be calculated and used on a prospective basis. The timeframe for implementing new values would be the same as for the NTG and realization rate adjustments, which become effective June 1 of the following Plan year.

8 Cost Recovery

ComEd’s Rider EDA – Energy Efficiency and Demand Response Adjustment (“Rider EDA”), which is the cost recovery mechanism authorized by Section 8-103 of the Act and approved by the Commission in Docket No. 07-0540, provides for the recovery of all incremental costs incurred by ComEd associated with energy efficiency and demand response plans approved by the Commission and implemented by ComEd. The rider also passes through the costs of such plans approved by the Commission and implemented by DCEO for ComEd customers. Rider EDA provides for annual reconciliation proceedings to true up the actual costs incurred with the revenues obtained through the application of the charge.

9 Glossary of Terms

Term	Definition
Back-Office Systems Development	Systems for managing the operation of an energy efficiency portfolio, including procurement of implementation services, incentives processing, tracking and reporting, and budgeting.
Breakthrough Equipment and Devices	Equipment or devices that represent a major change in consumers’ ability to manage their energy use.
Commissioning	A systematic process that results in the delivery of a building whose HVAC systems perform as intended.
Database of Energy Efficiency Resources (“DEER”)	A comprehensive database of energy efficiency measures, including measure savings and costs data, developed and maintained jointly by the California Public Utilities Commission and the California Energy Commission.
DOE-2 Building Energy Simulation Model	A building energy simulation model developed originally by the U.S. Department of Energy. The model simulates the energy performance of building prototypes specified by the user.
Educational/Awareness/Market	Activities that are undertaken to raise awareness of the benefits of energy efficiency among consumers, to teach customers how to

Term	Definition
Transformation Activities	manage their energy consumption, and to condition the market for energy efficiency by training efficiency providers in techniques for selling and delivering energy efficiency services.
EISA	The Energy Independence & Security Act 2007 is a federal law that has broad-reaching implications aimed at the reduction of energy consumption.
EPACT	Energy Policy Act of 2005.
Energy Efficiency & Demand Response Portfolio	The combination of programs and program elements proposed by ComEd to meet its energy reduction goals within the spending screens.
Energy Efficiency Measure	A device or practice that, if installed or adopted, results in a reduction in energy consumption without any reduction in the level of services provided.
Energy Efficiency Program Element	A collection of energy efficiency measures that is promoted to a specific customer segment using a consistent delivery strategy.
ENERGY STAR Portfolio Manager	An online tool developed by the U.S. Environmental Protection Agency that calculates the economic benefits of using various ENERGY STAR energy efficient measures.
Evaluation Contractor	A contractor hired to conduct program evaluations.
Evaluation, Measurement & Verification (“EM&V”)	The process for estimating the gross and net savings associated with program elements.
Free Riders	Customers who take advantage of a program’s financial incentives but who would have adopted the energy efficient devices or practices promoted by the program even in the absence of financial incentives.
Impact Evaluations	An evaluation (estimate) of the energy savings associated with a measure, program element, program or portfolio.
Implementation Contractor	A contractor hired by ComEd to manage the direct implementation of a program element.
Manual J®	Manual J is the national standard for calculating heat gain and heat loss, and is produced by the Air Conditioning Contractors of America (ACCA), the nationwide non-profit association of heating, ventilation, air conditioning, and refrigeration contractors.
Market Effects Studies	An assessment of the extent to which program elements, programs or the portfolio have influenced the types and quantities of energy efficient measures sold in the market.
Measure Bundling	The processes by which measures are combined into logical groupings for purposes of program element design and program elements are grouped together into programs for effective delivery to customers.
Measure Savings Values	The amount of energy saved by a given energy efficiency measure

Term	Definition
	when it replaces a less efficient device or practice.
Monte Carlo Simulation	A method for iteratively evaluating a deterministic model using sets of random numbers as inputs. Each key variable in a model is defined as a probability distribution. The Monte Carlo procedure runs the model many times, each time randomly selecting a value from the key variables' probability distributions.
Net-to-Gross (“NTG”) Ratios	The ratio of the net energy savings of a program to the gross savings. Gross savings are equal to the product of the number of measures installed under a program or program element and the per unit measure savings values. Net savings are the product of gross savings and an adjustment for free riders and spillover effects.
Non-weather-sensitive measures	Energy efficiency measures for which associated energy savings are not a function of local climate.
Process Evaluations	An assessment of the quality of program design and implementation.
Program Realization Rates	The ratio of <i>ex post</i> program savings to <i>ex ante</i> estimates of savings.
QIV	Quality Installation Verification
Retrocommissioning	The commissioning of an existing system that was never commissioned.
RFP	Request for Proposal
Rider EDA	Rider EDA (“Energy Efficiency Demand Response Adjustment”) is ComEd’s cost-tracking rider approved by the Commission in Docket No. 07-05040 to recover ComEd’s incremental costs related to energy efficiency and demand response plans.
RSP	Retrocommissioning Service Providers
SAG	Stakeholder Advisory Group
SEER	<i>Seasonal Energy Efficiency Ratio (SEER)</i> . The total heat removed from the conditioned space during the annual cooling season, expressed in Btu’s, divided by the total electrical energy consumed by the air conditioner or heat pump during the same season, expressed in watt-hours.
Smart Ideas for Your Business	A grouping of energy efficiency program elements all of which are promoted to business customers.
Smart Ideas for Your Home	A grouping of energy efficiency program elements all of which are promoted to residential customers.

Term	Definition
Spillover Effect	A program's or program element's ability to encourage energy savings due to adoption of energy efficient devices and practices without having to pay financial incentives to all adopters of the devices or practices.
SQL	<i>Structured-query-language</i> is a standardized language that approximates the structure of natural English for obtaining information from databases.
Stakeholder Advisory Group ("SAG")	Process by which ComEd and interested stakeholders meet to review the progress of existing programs and develop additional program ideas and program designs.
Total Resource Cost ("TRC") Test	A calculation comparing the benefits of an energy efficiency measure, program element, program or portfolio to the costs of that measure, program element, program or portfolio. A measure, program element, program or portfolio is considered to have passed this test if the ratio of benefits to costs exceeds 1.0 or the difference between benefits and costs is greater than \$0.
Trade Allies	Businesses and individuals engaged in the design, sales and installation of energy efficient devices and practices.
Weather-sensitive Measures	Energy efficiency measures for which associated energy savings are a function of local climate.
"Whole House" Solutions	A program design approach that promotes comprehensive improvements to residential dwellings.