

PROGRAM ELEMENT	<p><b>Custom Incentives</b></p> <p>responsibility of the customer.</p> <p>Key elements of the Custom Incentives element implementation strategy include:</p> <ul style="list-style-type: none"> <li>• <b>Trade ally recruitment and training:</b> Trade allies will be a less critical program component than in the Prescriptive Incentive element, but Custom Incentive offerings will be promoted to some key segments of the trade ally market (e.g., 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 the Custom Incentives element and other Business Solutions offerings will receive regular communications about program activities and changes to ensure they are informed and engaged participants.</li> <li>• <b>Customer recruitment:</b> Customers will be recruited primarily through direct outreach activities. As the program is targeted at larger customers, referrals by ComEd Account Managers will also be a key element of customer recruitment. To ensure that nonresidential customers perceive ComEd's energy efficiency programs as a seamless set of offerings, cross-referrals from other programs will also be provided where appropriate.</li> <li>• <b>Technical assistance:</b> This program element 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 ComEd's Prescriptive Incentives element. In addition, Program staff will guide customers and trade allies through the participation process to minimize confusion and barriers to participation.</li> <li>• <b>QA/QC review:</b> Incentive applications will be subject to a quality assurance review by program technical staff to ensure accuracy of anticipated savings and incentive calculations.</li> <li>• <b>Project verification:</b> ComEd reserves the right to site-verify installations prior to approval and incentive payment.</li> </ul>
Marketing Strategy	<p>ComEd will employ direct and network marketing (e.g., trade groups and business organizations) rather than mass marketing or advertising. Targets of the marketing strategy will be both the customer and key trade allies. ComEd Account Manager visits, direct mail, training presentations, participation in trade shows and trade association events all will be included in the recruiting approach. ComEd External Affairs Managers and Business Customer Service Center staff will also be trained in the program element's services and provided with program collateral. As with other program elements, a clear web presence for this element is important.</p>

PROGRAM ELEMENT	Custom Incentives
Incentive Strategy	<p>As the Custom Incentives element evolves beyond the initial ramp-up period and ongoing EM&amp;V activities track program performance, ComEd may adjust incentive levels based on implementation experience. However, the expectations and assumptions described below have been utilized for planning purposes.</p> <p><b>Study incentives</b></p> <p>In addition to study co-funding, the customer's share of the cost of an audit or study may be refunded if the customer implements cost-effective measures sufficient to achieve more than 75% of the identified energy savings. If the customer implements measures which achieve 50—75% of the identified savings, half of its share of the study cost may be refunded. If less than 50% of the identified energy savings are implemented none of the customer's share of the study costs will be refunded.</p> <p><b>Implementation incentives</b></p> <p>Incentives will be based on per-kWh value, subject to certain caps as described below. The incentive amount is subject to modification as needed to balance the program's financial requirements and savings goals.</p> <p>Caps that would reduce the total incentive amount include:</p> <ul style="list-style-type: none"> <li>• The incentive for each measure may not exceed 50% of the incremental cost for retrofits and 100% of the incremental cost for replacement.</li> <li>• Total incentive may be reduced if the project's energy savings provide the customer with a simple payback below one year.</li> <li>• Total incentive may be reduced if it exceeds a maximum per-project incentive cap that ComEd may establish during the final program design process.</li> </ul> <p>ComEd may also elect to offer, as part of the Custom Incentives element, an energy efficiency RFP process for large projects that would exceed \$500,000 in incentive costs. In an RFP solicitation, customers or third party entities would be allowed to develop proposals and submit them to ComEd for consideration. The incentive cost would be proposed as part of that proposal.</p> <p>All incentives are contingent on ComEd review and acceptance of savings estimates, and are subject to both pre-installation and post-installation verification.</p>
Milestones	<ul style="list-style-type: none"> <li>• <b>February 2008:</b> Commission approval</li> <li>• <b>April-June 2008:</b> Implementation contractor RFP and selection</li> <li>• <b>July-August 2008:</b> Final program design and protocol development</li> <li>• <b>September 2008:</b> Program launch</li> </ul>
EM&V Requirements	<p>The evaluation approach will be contingent on the evaluation resources available to the study and the results of an evaluation planning approach that focuses the evaluation resources on the programs with the most savings and highest risk of being inaccurate. This program has more risk of changed savings estimates (compared to other programs in the portfolio) because of the non-standard nature of the measures covered and the potential size of the projects.</p> <p>Anticipated energy savings will be estimated and agreed on for all appropriate projects through a rigorous QA/QC process prior to the offer of an implementation incentive. After implementation of the efficiency measures, a post-implementation inspection will be used to confirm proper installation and conformance with the measure specification. A statistically significant number of implemented projects will be evaluated to verify gross savings estimates. For those measures where reliable estimates of savings cannot be made prior to implementation, pre- and post-implementation monitoring may be used to determine savings.</p>

**PROGRAM ELEMENT**

**Custom Incentives**

The final EM&V specifications will be developed by the implementation contractor and approved by ComEd and the Program Evaluator.

Because this is an important program element, and one that targets large customers with non-standard measures it should be targeted for a rigorous evaluation. At this time, it is projected that the independent evaluation will employ on-site assessments of a representative sample of the participant's installation and use conditions to confirm the installation is "as planned and incentivized" to identify any differences between expected estimated savings and the as-installed and used conditions.

The evaluation will employ to the extent possible post-installation metering and verification monitoring of a representative sample of projects, along with the use of on/off-site interviews and purchasing policy reviews to assess NTG adjustment factors. The use of IPMVP protocols will be applied to selected samples that make up key portions of the gross energy savings projections. It is anticipated that IPMVP option B (Retrofit Isolation) will make up a substantial part of this assessment, however, options A (Partially Measured Retrofit Isolation) or option C (Whole Facility Measurement) will be employed when the other options are inappropriate for the installation or determined to be too expensive. Option D (Calibrated Simulation) may be used if the retrofits are facility related (rather than process related) and when other options are determined to be inappropriate or too expensive. If IPMVP options are determined to be beyond the budget available, engineering reviews of the project worksheets and project information will be performed, linked to on-site verification efforts to confirm the as-installed-and-used conditions and the baseline assumptions and participant decision approaches. The baseline condition to be applied in the impact analysis will be set at the pre-install condition if the project would not have gone forward without the program element, or at the alternative lower-efficiency technologies level if the installation were to have been taken without the program element, but installed at lower levels of efficiency. Where the projects are determined to have gone forward at the same level of efficiency without the program element, no energy savings will be credited to the program and the savings will be counted as free riders. Process interviews will be conducted with participants, trade allies, program managers and ComEd Account Managers and coordinated with the impact evaluation results to identify recommendations for program improvements.

**Administrative Requirements**

ComEd will be responsible for developing the implementation contractor RFP, implementation contractor selection, approving final program element design and marketing strategy, and monitoring contractor and goal performance. ComEd Account Managers will market the program to managed accounts.

The implementation contractor responsibilities include working with ComEd on final program design, marketing materials development, program marketing and outreach activities, project management and QA/QC activities, customer and contractor dispute resolution, tracking and reporting, and program element goal achievement.

**Estimated Participation**

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

	2008 Participation	2009 Participation	2010 Participation
Projects	105	414	529

PROGRAM ELEMENT	Custom Incentives																								
Estimated Budget	<p>The following budget has been used for planning purposes. However, ComEd reserves the right to adjust program budgets as necessary in accordance with current market conditions, EM&amp;V results, and program implementation experience.</p> <table border="1" data-bbox="497 422 1357 520"> <thead> <tr> <th>Budget Category</th> <th>2008</th> <th>2009</th> <th>2010</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Total</td> <td>\$2,520,000</td> <td>\$10,500,000</td> <td>\$13,400,000</td> <td>\$26,400,000</td> </tr> </tbody> </table>	Budget Category	2008	2009	2010	Total	Total	\$2,520,000	\$10,500,000	\$13,400,000	\$26,400,000														
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Total	\$2,520,000	\$10,500,000	\$13,400,000	\$26,400,000																					
Savings Goals	<p>The following savings goals have been used for planning purposes. However, ComEd reserves the right to adjust savings goals as necessary in accordance with current market conditions, EM&amp;V results, and program implementation experience.</p> <table border="1" data-bbox="497 751 1343 894"> <thead> <tr> <th colspan="2">2008</th> <th colspan="2">2009</th> <th colspan="2">2010</th> <th colspan="2">Total</th> </tr> <tr> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> </tr> </thead> <tbody> <tr> <td>18,932</td> <td>3.5</td> <td>74,475</td> <td>13.7</td> <td>95,244</td> <td>17.6</td> <td>188,651</td> <td>34.8</td> </tr> </tbody> </table>	2008		2009		2010		Total		MWh	MW	MWh	MW	MWh	MW	MWh	MW	18,932	3.5	74,475	13.7	95,244	17.6	188,651	34.8
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18,932	3.5	74,475	13.7	95,244	17.6	188,651	34.8																		
Other Program Metrics	<p>The principal program metrics are the annual energy and demand savings goals, and delivery at or below budgeted cost. Secondary metrics include energy audits performed, focused studies conducted, time-to-approve and time-to-pay, project pipeline, relative contribution of end uses to total savings, and customer complaint resolution. ComEd will monitor cost per kWh saved and cost-effectiveness.</p> <p>The program will also track marketing and outreach activities such as formal and informal presentations conducted, trade shows attended, open houses/tours conducted.</p>																								

<b>PROGRAM ELEMENT</b>	<b>Small C&amp;I CFL Intro Kit</b>																		
<b>Objective</b>	To provide of point-of-entry to ComEd's Business Solutions program for small business customers and to increase the market penetration of energy efficient lighting by offering free and discounted CFL bulbs to hard-to-reach small businesses via a direct mail process. Secondary objectives are to provide information and education to increase consumer awareness and acceptance of energy-efficient lighting technologies.																		
<b>Target Market</b>	The target market for the CFL Intro Kit Program element is small, hard-to-reach nonresidential customers. ComEd has 100,000 small businesses in its territory with watt-hour only meters and would target the upper half of these customers based on kWh usage would be targeted. All targeted customers taking delivery service from ComEd are eligible for this program element regardless of their choice of supplier.																		
<b>Program Duration</b>	January through May 2009. If ComEd's overall portfolio is on track to meet first-year goals, this program element may be postponed and implementation re-evaluated.																		
<b>Program Description</b>	<p>Small businesses typically face more substantial barriers to participation in energy efficiency programs than other commercial market segments due to financial and informational constraints. The CFL Intro Kit Program element is designed to overcome these barriers using a direct mail approach. Under this program element, ComEd will send small businesses an informational brochure with a tear-off coupon offering two free CFL bulbs. Coupons will be pre-printed with the customer's address, and customers will simply need to check off their desired CFL order and put the postage-prepaid coupon in the mail. The brochure accompanying the coupon will provide information on the benefits of energy-efficient lighting technology.</p> <p>The bulb order will be mailed directly to the customer, along with an order form offering a wider array of additional discounted lighting technologies, and information about other incentives and services available through ComEd's portfolio of energy efficiency programs.</p> <p>The direct mail approach has been employed in other hard-to-reach markets such as ComEd's targeted low-income CFL program, and is designed to minimize barriers to participation. The free bulbs and accompanying informational materials will lay the groundwork for the customer's future engagement of other energy efficiency program offerings for the small commercial market, particularly the direct installation program that may be part of ComEd's future planned energy efficiency portfolio.</p>																		
<b>Eligible Measures</b>	<p>The measures listed below have been used for planning purposes, but ComEd will reserve the right to revise eligible measures as needed in accordance with current market conditions, technology development, EM&amp;V results, and program implementation experience.</p> <table border="1"> <thead> <tr> <th>Measure</th> <th>Incremental Measure Cost</th> <th>Gross Annual kWh Savings</th> <th>Coincident Peak kW Savings</th> </tr> </thead> <tbody> <tr> <td>13 Watt Integral CFL</td> <td>\$4</td> <td>179</td> <td>0.04</td> </tr> <tr> <td>19 Watt Integral CFL</td> <td>\$6</td> <td>213</td> <td>0.05</td> </tr> <tr> <td>25 Watt Integral CFL</td> <td>\$7</td> <td>285</td> <td>0.06</td> </tr> </tbody> </table>			Measure	Incremental Measure Cost	Gross Annual kWh Savings	Coincident Peak kW Savings	13 Watt Integral CFL	\$4	179	0.04	19 Watt Integral CFL	\$6	213	0.05	25 Watt Integral CFL	\$7	285	0.06
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<b>Implementation Strategy</b>	<p>Key elements of the CFL Intro Kit Program's implementation strategy include:</p> <ul style="list-style-type: none"> <li>• <b>Customer recruitment:</b> Customers will be recruited using a direct mail approach.</li> <li>• <b>Order fulfillment:</b> A fulfillment contractor will be used to fulfill and track coupon mailings and CFL orders.</li> <li>• <b>Measure installation:</b> CFL installation will be the responsibility of the customer.</li> </ul>																		

PROGRAM ELEMENT	Small C&I CFL Intro Kit						
<p>Marketing Strategy</p> <p>Incentive Strategy</p>	<p>The program element will primarily employ a direct mail approach for the targeted market sector. Marketing collateral will consist of the direct mail brochure which includes additional energy efficiency tips and the tear-off coupon to be mailed back for CFL redemption.</p> <p>Business Customer Service Center staff will be trained and provided with program collateral. Due to the limited timeframe and targeted nature of this program offering, it will not be necessary to establish a web presence for the program.</p> <table border="1" data-bbox="502 600 1290 722"> <thead> <tr> <th>Measure</th> <th>Incentive Level per Unit</th> </tr> </thead> <tbody> <tr> <td>CFL bulb (75 W equiv.)</td> <td>Mail Order – Free Product</td> </tr> <tr> <td>CFL bulb (100 W equiv.)</td> <td>Mail Order – Free Product</td> </tr> </tbody> </table> <p>Specialty bulbs, outdoor lights, covered bulbs, and additional CFL fixtures will be available at a discount through mail order.</p>	Measure	Incentive Level per Unit	CFL bulb (75 W equiv.)	Mail Order – Free Product	CFL bulb (100 W equiv.)	Mail Order – Free Product
Measure	Incentive Level per Unit						
CFL bulb (75 W equiv.)	Mail Order – Free Product						
CFL bulb (100 W equiv.)	Mail Order – Free Product						
<p>Milestones</p>	<ul style="list-style-type: none"> <li>• <b>February 2008:</b> Commission approval</li> <li>• <b>April-June 2008:</b> Issue RFP and select fulfillment contractor</li> <li>• <b>July-September 2008:</b> Program planning</li> <li>• <b>January 2009:</b> Program launch; start of direct mail campaign</li> <li>• <b>January-June 2009:</b> Order fulfillment</li> <li>• <b>June 2009:</b> Program ends</li> </ul> <p>If ComEd's overall portfolio is on track to meet first-year goals, this program element may be postponed and implementation re-evaluated.</p>						
<p>EM&amp;V Requirements</p>	<p>The evaluation approach for this program element will be contingent on the evaluation resources available to the study and the results of an evaluation planning approach that focuses evaluation resources on the program elements with the most savings and highest risk of inaccurate ex ante estimates. This program element has less risk of estimated savings error because of the simplicity of the program, the target market and the single type of measure involved. ComEd proposed deemed savings values for incented CFL technologies, so that evaluation activity will focus on verification of installation.</p> <p>The evaluation effort will employ the use of surveys to determine whether the CFLs have been installed, the types of bulbs they replaced, the wattage of the replaced bulbs, and the self-reported operating hours of the bulbs. These assessments will be conducted between one and three months after the CFLs have been received by the customers. In cases where the bulbs have not been installed, their condition will be noted for the assessment and the evaluator will seek permission to call back in 30 days to see if the bulbs have been installed and to document the installation conditions. The survey will also ask about the reasons for the install or not install the CFLs as appropriate. The self-reported hours of operation will be adjusted to reflect the adjustment factors found in the evaluation literature for the same general type of program (small commercial give-a-ways) and target markets (hard-to-reach). If evaluation resources are available, the program will identify a sample of participants and install data loggers to document the hours of operation and use conditions and adjust impacts to reflect metered hours of operation.</p> <p>During the interviews with participants the evaluation contractor will explore program element operations, marketing and delivery aspects and provide recommendations for program element improvements. Information regarding non-installation decisions or low-hour use conditions will be explored to identify ways that the program can improve the installation rates and hours of</p>						

PROGRAM ELEMENT	Small C&I CFL Intro Kit																								
	<p>use. The process evaluation will also include interviews with program mangers and other allies as appropriate to assess program design, deliver and operations. The process evaluation will also explore product satisfaction issues and identify ways to overcome these barriers.</p>																								
Administrative Requirements	<p>The fulfillment contractor will handle most direct program administrative requirements. ComEd will manage the procurement of fulfillment services through an RFP process, provide overarching program design and marketing strategy, manage coordination with external stakeholders, and provide oversight of program QA/QC, tracking and reporting.</p> <p>Activities to be undertaken by the fulfillment contractor include customer mailings, response tracking and fulfillment, and reporting.</p>																								
Estimated Participation	<p>100,000 CFL bulbs will be available as part of this program element. After exhausting the initial target market of 50,000 wait-hour meter customers, additional mailings will be sent to other small businesses on the low demand end of the &lt;100 kW customer segment until all bulbs have been redeemed. Customers will receive one mailing only.</p> <p>If ComEd's energy efficiency portfolio is on track to meet 2008 goals, this program element may be postponed and implementation re-evaluated. ComEd reserves the right to adjust anticipated participation levels as necessary.</p> <table border="1" data-bbox="495 882 1346 976"> <thead> <tr> <th></th> <th>2008 Participation</th> <th>2009 Participation</th> <th>2010 Participation</th> </tr> </thead> <tbody> <tr> <td>CFLs</td> <td>100,000</td> <td>0</td> <td>0</td> </tr> </tbody> </table>		2008 Participation	2009 Participation	2010 Participation	CFLs	100,000	0	0																
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Savings Goals	<p>The following savings goals have been used for planning purposes. However, ComEd reserves the right to adjust savings goals as necessary in accordance with current market conditions, EM&amp;V results, and program implementation experience.</p> <table border="1" data-bbox="495 1417 1346 1564"> <thead> <tr> <th colspan="2">2008</th> <th colspan="2">2009</th> <th colspan="2">2010</th> <th colspan="2">Total</th> </tr> <tr> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> </tr> </thead> <tbody> <tr> <td>16,816</td> <td>3.5</td> <td>0</td> <td>0.0</td> <td>0</td> <td>0.0</td> <td>16,816</td> <td>3.5</td> </tr> </tbody> </table>	2008		2009		2010		Total		MWh	MW	MWh	MW	MWh	MW	MWh	MW	16,816	3.5	0	0.0	0	0.0	16,816	3.5
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MWh	MW	MWh	MW	MWh	MW	MWh	MW																		
16,816	3.5	0	0.0	0	0.0	16,816	3.5																		
Other Program Metrics	<p>The principal program element metrics are the annual energy and demand savings goals, and delivery at or below budgeted cost. The program element also will track the number of coupons mailed, response rate, and discounted bulb orders.</p>																								

<b>PROGRAM ELEMENT</b>	<b>C&amp;I Retrocommissioning</b>
<b>Objective</b>	Identify and implement low cost tune-ups and adjustments that improve the efficiency of existing buildings' operating systems by returning them to intended operation or design specifications, with a focus on building controls and HVAC systems.
<b>Target Market</b>	The program element will be targeted to nonresidential customers. All targeted customers taking delivery service from ComEd are eligible for this program element regardless of their choice of supplier.
<b>Program Duration</b>	January 2009 through May 2011.
<b>Program Description</b>	<p>Retrocommissioning ("RCx") services will be delivered through a network of commissioning providers operating in ComEd's 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, but also ensure that customers are invested in the process, ComEd will provide cost sharing for the cost of the RCx study. Financial incentives will also be provided to assist in overcoming first- cost barriers implementing RCx study recommendations.</p> <p>The RCx 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 also be supported through ComEd's market conditioning efforts 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>
<b>Eligible Measures</b>	RCx measure costs and savings used for program planning purposes include chilled and hot water loop temperature controls, cleaning of air-cooled condenser coils, and time clock controls for packaged systems. Other measures such as outdoor air and control strategy modifications will also be considered. ComEd reserves the right to revise eligible measures as needed in accordance with current market conditions, technology development, EM&V results, and program implementation experience.
<b>Implementation Strategy</b>	<p>An implementation contractor selected through an RFP process will administer the program element. The implementation contractor will administer the program element, oversee RCx activities conducted by participating commissioning providers, review RCx studies and provide independent evaluation of savings estimates, and provide post-installation verification. ComEd Account Managers can help to market the program element and identify potential candidate customers for participation.</p> <p>Key elements of the RCx implementation strategy include:</p> <ul style="list-style-type: none"> <li>• <b>Trade ally recruitment and training:</b> Commissioning providers will be the Program element's key delivery mechanism as they promote RCx services and available incentives to their customers. Commissioning providers will be recruited to participate in training sessions to inform them about program element incentives, participation processes, RCx protocols, and requirements. Trade allies 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.</li> <li>• <b>Customer recruitment:</b> Program staff, as well as trade allies, will recruit customers. As the program element targets larger customers, referrals by ComEd Account Managers will</li> </ul>

PROGRAM ELEMENT	C&I Retrocommissioning
	<p>be a key step in customer recruitment. To ensure that nonresidential customers perceive ComEd's energy efficiency programs as a seamless set of offerings, cross-referrals from other program elements will also be provided where appropriate.</p> <ul style="list-style-type: none"> <li>• <b>Pre-screening:</b> To ensure that RCx efforts are focused on high-opportunity buildings, ComEd will promote benchmarking with EPA's energy performance rating system as a pre-screening mechanism, and benchmarking will be supported by the market conditioning components of the energy efficiency portfolio.</li> <li>• <b>RCx study:</b> During the study phase, the commissioning provider will conduct a facility assessment to diagnose problems and make recommendations for minor low-cost adjustments that can be made immediately, as well as recommendations for more substantial 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 ComEd's other nonresidential program offerings, and in all such cases the incentive levels established by those programs will be used.</li> <li>• <b>Study review:</b> The program element implementation contractor will review the RCx study and determine implementation incentives based on projected savings.</li> <li>• <b>Project implementation:</b> 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.</li> <li>• <b>Project verification:</b> ComEd reserves the right to site-verify installations prior to approval and payment of implementation incentives.</li> </ul>
Marketing Strategy	<p>The RCx Program element will be marketed to customers and trade allies. ComEd Account Manager and External Affairs Managers will be trained and provided with program collateral. The Business Customer Service Center will be a secondary source of information.</p> <ul style="list-style-type: none"> <li>• <b>Customer marketing:</b> In direct marketing efforts, ComEd will target large customers and owners/operators of multiple buildings through direct mail and personal contact by ComEd Account Managers for managed accounts. ComEd will also conduct outreach to the Building Owners and Manager's Associations ("BOMA"), large real estate management companies and other business associations, and pursue opportunities to provide training and educational materials at trade shows and other association events.</li> <li>• <b>Trade ally marketing:</b> Outreach and training will be provided for commissioning providers, industry professionals and energy services companies that have business motivations for promoting RCx services to their customers.</li> <li>• <b>Cooperative marketing:</b> ComEd will seek to leverage trade ally advertising by pursuing cooperative marketing opportunities.</li> <li>• <b>Web:</b> Common to all programs, a clear web presence for the program element will be established.</li> </ul>

PROGRAM ELEMENT	C&I Retrocommissioning
Incentive Strategy	<p>ComEd will provide cost sharing for the RCx assessment and study, and up to a per-project cap of \$10,000. Implementation incentives will be offered on a dollars per kWh basis covering some of the incremental cost of implementing recommended energy efficiency measures. In cases where a project includes measures eligible for incentives through ComEd's other nonresidential program elements, the incentive levels established by those program elements will be used. ComEd reserves the right to establish a per-project incentive cap for RCx Program projects during final program element design.</p> <p>As the RCx Program element evolves beyond the initial ramp-up period and ongoing EM&amp;V activities track program performance, ComEd may adjust incentive levels based on implementation experience.</p>
Milestones	<ul style="list-style-type: none"> <li>• <b>February 2008:</b> Commission approval</li> <li>• <b>March-May 2008:</b> Implementation contractor RFP and selection</li> <li>• <b>June-July 2008:</b> Final program design and protocol development</li> <li>• <b>August-December 2008:</b> Trade ally recruitment &amp; training</li> <li>• <b>January 2009:</b> Program launch</li> </ul>
EM&V Requirements	<p>This program has more risk of eroded savings estimates (compared to other programs in the portfolio) because the measures can be removed, adjusted, reprogrammed, over-ridden, not maintained, or changed in other ways.</p> <p>The evaluation approach will use a representative sampling five-phase approach to estimate net savings impacts. The phases are:</p> <ol style="list-style-type: none"> <li>1. The evaluation contractor will review the assessment reports and the associated calculations for errors and omissions or unsubstantiated or suspect assumptions. When the evaluation contractor identifies items in which corrective calculations are needed, these will be conducted by the evaluation contractor and the estimates or the range of estimated savings will be revised.</li> <li>2. The evaluation contractor will review the baseline conditions noted in the assessment reports and conduct an on-site inspection after the installation of the measures are completed to confirm the pre-program baseline operations conditions. This activity will involve confirmation of pre-change, pre-existing building equipment, equipment conditions, operating logs, also typically involving discussions with participants to confirm the baseline conditions. Because this inspection would be best achieved as a pre-program/pre-change inspection, where possible and when coordination can be achieved, the evaluation contractor will visit the facility during the assessment phase to confirm the baseline conditions. However, the evaluation community knows that this is not always possible unless the evaluation contractors are brought into the process during the enrollment and early program efforts. The evaluation contractor will coordinate with the implementation contractor to make this happen to the extent possible. During this phase the evaluation contractor will also conduct a NTG assessment to identify the measures and actions that the participant had already planned to take without the program. This assessment will include an approach for estimating taking actions earlier than what would have occurred without the program to inform the net to gross ratio estimation process.</li> <li>3. The evaluation contractor will also conduct a post-installation inspection to confirm that the operational or equipment condition changes have been implemented in accordance with the assessment plan and that the operational environment is such that the savings are being achieved. In some cases this will require examinations of ancillary systems to confirm that</li> </ol>

PROGRAM ELEMENT	C&I Retrocommissioning										
	<p>the savings achieved on one system have not been shifted to other systems in the form of increased consumption. When this condition is found, the evaluation contractor will reduce the savings projected to account for the increase in consumption for the ancillary systems. Where possible and within budget, on-site measurement will be taken when those measurements can help reduce the risk of estimation error. However, due to the budget we do not envision the installation of metering or measurement equipment to capture on-going use conditions, nor do we envision the use of long term IPMVP metering or monitoring measurements.</p> <p>4. In the fourth phase of the effort, the evaluation contractor will conduct on- or off-site verification assessments to confirm that the measures and the savings are persisting. This will involve examinations of the operational environment to confirm the presence of the measure and the usage conditions. In some cases, to save costs, these examinations can be conducted via telephone interviews with the building's operations managers or maintenance staff. It is anticipated that these assessments will occur not earlier than 4 months after installation, but no later than one year after installation.</p> <p>5. In the fifth and final phase of the evaluation the contractor will develop site-specific ex post net energy impact assessments using the information collected in each of the previous phases. The information from the site-specific assessment will be used to develop a program evaluation report using project weighting and sample application strategies so that the sampled site-specific results are used to estimate program level savings.</p> <p>During the impact assessment on-site inspections and during the interview efforts, the evaluation contractor will also conduct a process evaluation assessment to obtain customer satisfaction and program interaction information. The process evaluation will also include interviews with program managers and other allies as appropriate to assess program design, delivery and operations.</p>										
Administrative Requirements	<p>ComEd will be responsible for developing the implementation contractor RFP, implementation contractor selection, approving final program design and marketing strategy, and monitoring contractor and goal performance. ComEd Account Managers will market the program element to managed accounts.</p> <p>Implementation contractor responsibilities will include working with ComEd on final program element design and RCx protocol development, marketing materials development, program element marketing and outreach activities, management and oversight of the commissioning provider network, QA/QC activities, tracking and reporting, and program element goal achievement.</p>										
Estimated Participation	<p>The following participation estimates have been used for planning purposes. They represent modeled facilities that provide the level of required savings. However, ComEd reserves the right to adjust anticipated participation levels as necessary in accordance with current market conditions, EM&amp;V and savings results, and program implementation experience.</p> <table border="1" data-bbox="497 1514 1343 1604"> <thead> <tr> <th></th> <th>2008 Participation</th> <th>2009 Participation</th> <th>2010 Participation</th> </tr> </thead> <tbody> <tr> <td>Projects</td> <td>45</td> <td>266</td> <td>450</td> </tr> </tbody> </table>		2008 Participation	2009 Participation	2010 Participation	Projects	45	266	450		
	2008 Participation	2009 Participation	2010 Participation								
Projects	45	266	450								
Estimated Budget	<p>The following budget has been used for planning purposes. However, ComEd reserves the right to adjust program budgets as necessary in accordance with current market conditions, EM&amp;V results, and program implementation experience.</p> <table border="1" data-bbox="497 1724 1359 1814"> <thead> <tr> <th>Budget Category</th> <th>2008</th> <th>2009</th> <th>2010</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Total</td> <td>\$409,000</td> <td>\$2,420,000</td> <td>\$4,090,000</td> <td>\$6,920,000</td> </tr> </tbody> </table>	Budget Category	2008	2009	2010	Total	Total	\$409,000	\$2,420,000	\$4,090,000	\$6,920,000
Budget Category	2008	2009	2010	Total							
Total	\$409,000	\$2,420,000	\$4,090,000	\$6,920,000							
Savings Goals	<p>The following savings goals have been used for planning purposes. However, ComEd reserves the right to adjust savings goals as necessary in accordance with current market conditions, EM&amp;V results, and program implementation experience.</p>										

**PROGRAM ELEMENT**

**C&I Retrocommissioning**

2008		2009		2010		Total	
MWh	MW	MWh	MW	MWh	MW	MWh	MW
1,090	0.1	6,456	0.7	10,903	1.2	18,449	2.1

**Other Program Metrics**

The principal program element metrics are the annual energy and demand savings goals, and delivery at or below budgeted cost. Secondary metrics include RCx studies conducted, total number of projects proceeding with implementation of RCx recommendations, time-to-approve and time-to-pay, project pipeline, and customer complaints and complaint resolution. ComEd will monitor cost per kWh saved and cost-effectiveness.

The program element will also track marketing and outreach activities such as trade ally outreach events/trainings conducted, customer outreach events and trainings conducted, and trade shows and industry association events attended.

<b>PROGRAM ELEMENT</b>	<b>C&amp;I New Construction</b>
<b>Objective</b>	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 nonresidential market.
<b>Target Market</b>	This program element is designed to target nonresidential 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. All targeted customers taking delivery service from ComEd are eligible for this program regardless of their choice of supplier.
<b>Program Duration</b>	June 2009 through May 2011.
<b>Program Description</b>	<p>The C&amp;I New Construction 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. The 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 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>The program element will have two participation tracks: a systems track and a comprehensive track.</p> <ul style="list-style-type: none"> <li>• <b>Systems track</b> Serving smaller projects and projects in the later stages of the design process, the systems track will target efficiency opportunities in key building system components. It will provide technical assistance and incentives for construction that incorporates efficient systems (e.g., lighting, HVAC, and building envelope).</li> <li>• <b>Comprehensive track</b> For large projects early in the design process, the comprehensive track will offer a higher level of technical assistance and consultation on building design. Program element services will assess comprehensive energy efficiency opportunities and system interaction, and provide incentives based on whole-building energy simulation and achievement of whole-building performance targets.</li> </ul> <p>A key element for success in a new construction program is securing the involvement of the professional design community. This will be a major activity in both tracks. To encourage participation of the design community and to offset the costs of considering multiple design options, a multi-tier incentive will be offered to the project design teams.</p>
<b>Eligible Measures</b>	For systems track incentives, specified criteria for system and component performance will be established for lighting, HVAC and building envelope measures. Comprehensive track incentives will be based on whole-building energy simulation and achievement of whole-building performance targets above baseline conditions. ComEd reserves the right to revise eligible measures as needed in accordance with current market conditions, technology development, EM&V results, and program implementation experience.
<b>Implementation Strategy</b>	<p>An implementation contractor selected through an RFP process will administer the program element. ComEd Account Managers, Economic Development, and New Business Departments will help to market the program element and identify potential candidate customers for participation.</p> <p>Key elements of the New Construction element implementation strategy include:</p> <ul style="list-style-type: none"> <li>• <b>Design/construction ally outreach:</b> A key element for success in a new construction program element is securing the involvement of the professional design community, which will be a major activity in both the systems and comprehensive program tracks.</li> </ul>

PROGRAM ELEMENT	<p><b>C&amp;I New Construction</b></p> <p>The program will employ targeted marketing, training and education offerings, lunch and learn presentations, individual contact and outreach through professional organizations to engage design professionals. Design and construction allies participating in the program element will receive regular communications about program activities and changes to ensure they are informed and engaged participants.</p> <ul style="list-style-type: none"> <li>• <b>Customer recruitment:</b> Customers will be recruited by program element marketing and outreach activities, ComEd Account Manager, Economic Development, and New Business Department referrals, design/construction professionals, and other trade allies. To ensure that nonresidential customers perceive ComEd's energy efficiency program elements as a seamless set of offerings, cross-referrals from other element will also be provided where appropriate.</li> <li>• <b>Technical assistance:</b> The implementation contractor will provide design assistance on a selective basis based on the magnitude of the energy savings opportunity. The assistance will involve principally energy simulation, as well as guidance regarding program element offerings and participation processes as needed to minimize confusion and barriers to participation.</li> <li>• <b>Incentive commitment:</b> As projects complete the design stage, a formal application for reservation of incentives will be required. Once approved, the program element commits to pay system or comprehensive incentives if the project is completed as designed. For systems track projects that include measures not directly covered by New Construction incentives, but which are eligible for incentives through ComEd's other Business Solutions offerings, the incentive levels established by those other programs will be used and the energy savings tracked as part of those program elements.</li> <li>• <b>Application submittal:</b> Customers will submit incentive applications and required documentation after project completion.</li> </ul> <p><b>Project verification:</b> Upon project completion, ComEd reserves the right to site-verify systems and measure installation or building performance as specified in the incentive commitment prior to approval and incentive payment.</p>
Marketing Strategy	<p>The program element will be marketed to building owners and managers and to design professionals, trade allies and contractors. The marketing to building owners and managers will stress the energy and non-energy benefits of a high performance building. This will be accomplished through media events for successful projects including grand openings and open houses, case studies, direct marketing, trade shows, and ComEd Account Manager contact.</p> <p>The marketing to the design professionals, trade allies and contractors will be targeted at securing involvement in projects early in the design phase. It will stress the value that bringing their customers a better building can have for their business. Targeted direct marketing, case studies, trade publications, trade shows, formal and informal presentations, and direct contact will all be employed.</p> <p>Common to all program elements, a clear web presence for the program will be established. ComEd Account Managers and External Affairs Managers as well as representatives from the Economic Development and New Business Departments will be trained and provided with program collateral. The Business Customer Service Center will be a secondary source of information.</p>

PROGRAM ELEMENT	<b>C&amp;I New Construction</b>
Incentive Strategy	<p>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><b>Implementation Incentives</b></p> <p>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"> <li>• 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 New Construction Program element incentives, but which are eligible for incentives through ComEd's other nonresidential programs (e.g., the Prescriptive Incentives element), the incentive levels established by those program elements will be used.</li> <li>• Comprehensive track incentives will be based on whole-building energy simulation and achievement of whole-building performance targets above baseline conditions.</li> </ul> <p>ComEd reserves the right to establish a per-project incentive cap for New Construction program element projects during final program design.</p> <p><b>Design Team Incentives</b></p> <p>Design team incentives will be offered to encourage early involvement in the design process and to provide partial compensation for the extra work involved evaluating multiple efficiency options. Design team incentives will be based on the level of improvement achieved through energy efficient design. For example, if the project achieves a 20% efficiency improvement the design incentive would be 5% of the implementation incentive. If the efficiency increase is 30% the design incentive would be 10% of the implementation incentive.</p> <p>As the New Construction program element evolves beyond the initial ramp-up period and ongoing EM&amp;V activities track program performance, ComEd may adjust incentive levels based on implementation experience.</p>
Milestones	<ul style="list-style-type: none"> <li>• <b>February 2008:</b> Commission approval</li> <li>• <b>July-September 2008:</b> Implementation contractor RFP and selection</li> <li>• <b>October-December 2008:</b> Final program design and protocol development</li> <li>• <b>January-May 2009:</b> Trade ally recruitment and training</li> <li>• <b>June 2009:</b> Program launch</li> </ul>
EM&V Requirements	<p>Because this is a new construction services program offering, the baseline condition for the purpose of estimating energy savings will be embedded within a two-stage process. The first stage will be to identify the energy efficiency levels associated with the applicable building codes that govern the participant's project. The second stage will be to identify the way in which the project would have been completed in the absence of the program element. The baseline code conditions will be set as the stage one baseline. That baseline will then be adjusted to reflect the as-would-have-been-built-conditions without the program element. The evaluation will employ a sampling strategy to conduct the evaluation and not target all projects. The sampling approach will use stratified sampling to sample different types of buildings and building projects consistent with the types of projects completed via the program.</p> <p>The as-would-have-been-built-conditions will be established via interviews with the designers, architects, engineers and project allies used to specify and complete the project. The as-would-have-been-built-conditions will be modeled to estimate the consumption of the building associated with the as-would-have-been-built-conditions. The evaluation will then identify the "as built" conditions that were influenced by the program to model the energy consumption of the building under the "as built" conditions. The evaluation contractor will employ on-site</p>

PROGRAM ELEMENT	C&I New Construction																								
	confirmation/verification inspections to identify the "as built" conditions and to assess if the "as built" conditions are being used consistent with the assumptions made by for the program element design. These comparisons will be used to estimate the energy impacts of the building as built.																								
Administrative Requirements	<p>ComEd will be responsible for developing the implementation contractor RFP, implementation contractor selection, approving final program design and marketing strategy, and monitoring contractor and goal performance. ComEd Account Managers, Economic Development, and New Business Departments will help to market the program and identify potential candidates for participation.</p> <p>Implementation contractor responsibilities include working with ComEd on final program element design, marketing materials development, program element marketing and outreach activities, project management and QA/QC activities, customer and contractor dispute resolution, tracking and reporting, and program goal achievement.</p>																								
Estimated Participation	<p>The following participation estimates have been used for planning purposes. However, ComEd reserves the right to adjust anticipated participation levels as necessary in accordance with current market conditions, EM&amp;V results, and program implementation experience.</p> <table border="1" data-bbox="525 888 1357 972"> <thead> <tr> <th></th> <th>2008 Participation</th> <th>2009 Participation</th> <th>2010 Participation</th> </tr> </thead> <tbody> <tr> <td>Projects</td> <td>0</td> <td>7</td> <td>24</td> </tr> </tbody> </table>		2008 Participation	2009 Participation	2010 Participation	Projects	0	7	24																
	2008 Participation	2009 Participation	2010 Participation																						
Projects	0	7	24																						
Estimated Budget	<p>The following budget has been used for planning purposes. However, ComEd reserves the right to adjust program budgets as necessary in accordance with current market conditions, EM&amp;V results, and program implementation experience.</p> <table border="1" data-bbox="525 1129 1357 1224"> <thead> <tr> <th>Budget Category</th> <th>2008</th> <th>2009</th> <th>2010</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Total</td> <td>\$100,000</td> <td>\$484,000</td> <td>\$1,550,000</td> <td>\$2,130,000</td> </tr> </tbody> </table>	Budget Category	2008	2009	2010	Total	Total	\$100,000	\$484,000	\$1,550,000	\$2,130,000														
Budget Category	2008	2009	2010	Total																					
Total	\$100,000	\$484,000	\$1,550,000	\$2,130,000																					
Savings Goals	<p>The following savings goals have been used for planning purposes. However, ComEd reserves the right to adjust savings goals as necessary in accordance with current market conditions, EM&amp;V results, and program implementation experience.</p> <table border="1" data-bbox="525 1329 1357 1476"> <thead> <tr> <th colspan="2">2008</th> <th colspan="2">2009</th> <th colspan="2">2010</th> <th colspan="2">Total</th> </tr> <tr> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> <th>MWh</th> <th>MW</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0.0</td> <td>596</td> <td>0.3</td> <td>1,908</td> <td>1.0</td> <td>2,504</td> <td>1.3</td> </tr> </tbody> </table>	2008		2009		2010		Total		MWh	MW	MWh	MW	MWh	MW	MWh	MW	0	0.0	596	0.3	1,908	1.0	2,504	1.3
2008		2009		2010		Total																			
MWh	MW	MWh	MW	MWh	MW	MWh	MW																		
0	0.0	596	0.3	1,908	1.0	2,504	1.3																		
Other Program Metrics	<p>The principal program element metrics are the annual energy and demand savings targets, and delivery at or below budgeted cost. However, given the nature of commercial new construction programs, project cycle time (time from initial contact to project completion), project completion rate (ratio of completed projects to initial contacts) and cost per project (including incentive and technical assistance costs) are very important gauges of program element performance. A new construction program element will tend to be among the most expensive program elements per unit of energy saved if extensive technical assistance is provided, and if costs are rising relative to other program elements, it could be necessary to scale-back the assistance offered or to scale-back the incentive levels.</p> <p>The program element will also track marketing and outreach activities such as formal and informal presentations conducted, trade shows attended, and open houses and tours conducted.</p>																								

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### ***3.4.3. The Department of Commerce and Economic Opportunity Portfolio***

In addition to the ComEd portfolio, the DCEO programs together represent a key slice of the overall portfolio described in this Plan. DCEO's programs target two important markets: the public sector, including units of local government and school districts, are served through five programs, and low-income customers, who will be served through four additional programs. Also, the DCEO portfolio includes three important market transformation and educational programs. As a whole, the DCEO portfolio is designed to complement and enhance the ComEd portfolio, resulting in a strong and robust overall Plan. While the detailed program information can be found in DCEO's own filing, below are short descriptions of each program and their primary objectives.

#### **Public Sector "Solutions"**

- ***Public Sector Prescriptive*** – This program element will offer incentives for the installation of energy efficiency measures to motivate the public sector to purchase high efficiency equipment to reduce electricity consumption at public facilities. This program is designed to complement ComEd's C&I Prescriptive Incentives program element that is targeted primarily at private sector customers.

The program's objective is to encourage public sector administrators, building operators, and others to purchase high efficiency equipment by providing a range of financial incentives.

- ***Public Sector Custom*** – This program element will provide financial incentives for kWh reductions identified through design assistance, energy performance contracting or other technical engineering analysis. The program will be designed to be complementary to the Public Sector Prescriptive program element in order to cover efficiency improvements not explicitly covered by that program.

The program's objective is to provide local governments, K-12 schools, community colleges, higher education and state buildings with financial incentives for electric energy efficiency improvements based upon a technical engineering analysis. This program will offer customized incentives based on calculated savings for specific customer projects. This program is designed as the public sector analog to ComEd's Custom Incentives program element.

- ***Public Sector New Construction*** - This program element will provide grants for new public sector buildings that exceed the current Illinois Energy Conservation Code for Commercial Buildings. The grants will increase on a square foot basis based on the level of performance above code (e.g., 10%, 20%). However, if certain jurisdictions or building types are under other institutional rules or legal requirements that already involve standards beyond the code, then incentives will only be provided for electricity reductions beyond those requirements.
- ***Public Sector Retrocommissioning*** – This program element will be delivered through a network of commissioning providers that have been trained in program protocols and participation processes. For smaller facilities, commissioning providers will conduct a

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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. This program will include a strong customer education component to promote the value of retrocommissioning services, targeting senior management decision-makers as well as facility operations/maintenance staff. Provider training and protocols will be coordinated with ComEd's Retrocommissioning program element.

- **Lighting For Learning** – This program element is an educational, fundraising opportunity for K-12 schools and related organizations, and involves the sale of ENERGY STAR® qualified CFLs. The program also introduces students, teachers and their communities to CFLs and specialty lighting applications.

### Low-Income “Solutions”

- **Low-income New Construction & Gut Rehab** - This program element is identical to the existing *Energy Efficient Affordable Housing Construction Program* (“EEAHCP”) with the addition of two items: (1) grants will be provided to both for-profit and not-for-profit affordable housing developers (only not-for-profit developers are currently eligible under EEAHCP), and (2) an additional electric energy efficiency measure will be added to the list of measures required by the program – 90% AFUE furnaces must have an electrically efficient air handler. Grantees must accept the full set of efficiency measures for funding; funding is not provided for individual measures.

The program's objectives are to identify and implement highly cost-effective low-income electric energy efficiency opportunities present only in gut-rehab and new construction projects, and extend an existing program delivery structure.

- **Low-Income Energy Efficient Moderate Rehab** - This program element is designed to complement the existing EEAHCP program. It is generally not possible to implement this set of standards in a moderate rehab project since the building is generally in better shape as is reflected in the rehab work scope. A number of multi-family moderate rehab projects have been denied funding under the EEAHCP over the past few years due to the inability to incorporate the complete set of energy standards. This program is designed to capitalize on the missed opportunities in moderate multi-family building rehab projects and maximize energy savings in these buildings, with an emphasis on capturing kWh savings.
- **Low-Income Energy Efficient Single-Family Remodeling** – This program element is designed to partner with existing programs to assist low-income single-family households with homes in need of rehab and repair. These existing programs include:
  - **Neighborhood Housing Services (“NHS”)**: NHS purchases single-family homes in need of significant repair. The home is rehabbed and then sold to an income-eligible household.
  - **Shore Bank**: Shore Bank has a loan program for homeowners and contractors to rehab single-family homes and small multi-family buildings. The program is targeted to low and moderate-income neighborhoods.
  - **Historic Chicago Bungalow Association (“HCBA”)**: HCBA has a number of programs for brick bungalow homeowners for repairs and energy efficient upgrades.
  - **Local Housing Departments or Authorities**: Various programs.

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In many cases, opportunities for energy savings are missed because of insufficient funds. DCEO would partner with these and other organizations with programs that promote home repair and rehab in low-income neighborhoods to capture available electricity savings.

- **Low-Income Energy Efficiency Direct Install** – This program element builds on existing programs administered by the Office of Energy Assistance at the Department of Healthcare and Family Services, the Center for Neighborhood Technology, the Illinois Housing Development Authority, and others that improve energy efficiency in existing low-income homes. These programs currently focus primarily on natural gas savings. Additional electric efficiency measures will be included to further reduce the energy bills of eligible households. When existing energy efficiency funding under recent legislation for electrically heated low-income households expires, the program eligibility will be expanded to include those households.

### **Market Transformation and Educational Programs**

- **Smart Energy Design Assistance Program** - This program provides clients with design assistance reports that detail energy cost reduction measures ("ECRM") that have been analyzed. Reports list ECRMs individually, but rather than encourage the client to invest in only the quickest reduction strategies, the reports bundle cost effective recommendations, accounting for interaction, to encourage clients to take advantage of the synergies that exist only when the whole building is analyzed.
- **Large-Customer Energy Assistance Program ("LEAP")**- This program assists large customers with the development of an energy management plan by using two separate methods. Companies may participate in a sustainable energy-planning workshop where "hands on" consulting and coaching support can be provided as a follow-up to the workshop in developing the energy management plan. Alternatively, companies may participate in a One-2-Five software based diagnostic tool session that benchmarks the manufacturer's energy management performance against over 1300 businesses worldwide and helps identify the best practices in energy management. The results from the diagnostic tool and survey will be combined into an energy efficiency action plan for the business to implement and achieve improvements, increase staff awareness, experience cost savings and enhance corporate reputation.
- **Building Industry Training & Education Program** – This program will provide statewide educational workshops on energy efficiency techniques and practices. The program's objectives are to train professionals from all aspects of the building industry in energy efficient practices and about energy efficient products and equipment, in order to develop the robust energy efficiency services market necessary to achieve the kWh savings goals in future years.

#### **3.4.4. The Elements of Innovation**

Section 12-103 authorizes ComEd to include, within its portfolio, up to 3% of its budget for "demonstration of breakthrough equipment and devices." Part and parcel to any long-term energy efficiency program is the development of newer, more efficient technologies that can achieve greater energy savings relative to those technologies already in the marketplace. The ComEd portfolio includes funding for such innovative technologies in the latter years of the Plan.

Although ComEd has not allocated proposed funding to specific projects, it will invest a portion of its budget in initiatives being undertaken by other utilities and organizations such as the

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Consortium for Energy Efficiency to promote the development of efficiency improvements in consumer electronics. Unlike appliances such as refrigerators or dishwashers, most consumer electronics do not offer consumers a choice of efficiency options. Instead, manufacturers determine the efficiency of the devices as a function of power supply design or, in the case of personal computers, installation of power management software. The electricity consumed by consumer electronics and associated power supplies is the fastest growing portion of residential load, however, and although it may be difficult to attribute savings to ComEd activities conducted in conjunction with other utilities, the growing importance of this load and its impact on consumer bills requires that ComEd explore opportunities to influence manufacturing standards.

In addition, ComEd believes that the merger of demand response and energy efficiency strategies is inevitable as a function of technological innovation and consumer demand. Moreover, a basic transformation in the market for energy services requires that consumers be given the tools and the options for managing their energy use in response to price. ComEd is committed to investment in emerging technologies that successfully enable demand-response and energy efficiency integration, including smart thermostats and a range of Zigbee<sup>5</sup> (or other open-source protocols) compatible controllers and smart devices that ultimately can be integrated to more dynamic price signals.

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<sup>5</sup> Zigbee is an open-source protocol developed to enable management of multiple controllers and switches within an energy management network. A variety of home and business energy management systems are now available that use the Zigbee protocol.

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## **4. Implementation Planning and Portfolio Management**

Implementation of the energy efficiency and demand response efforts outlined in this Plan requires continued planning at both the portfolio and program levels to further refine and expand the information presented. This section outlines the tasks and schedule for developing portfolio elements and introducing them to the marketplace in an orderly, cost effective manner. The section also addresses ComEd's approach to managing the portfolio.

### **4.1. Implementation Planning at the Portfolio Level**

Implementation planning at the portfolio level involves an ongoing assessment of program mix and timing to assure that the portfolio remains aligned with ComEd's objectives and the statutory goals. Specific implementation activities associated with the portfolio as a whole include program planning as informed by evaluation and market research, tracking system development and management, market assessment and market research, development and management of an overall marketing and communications strategy, and design and management of a back office, including processes for incentive fulfillment, procurement of implementation services, and integration with broader corporate services such as billing, accounting and web services.

#### **Portfolio Planning**

ComEd has developed a robust initial portfolio of programs to satisfy statutory objectives and deliver significant value to our customers. Nevertheless, we realize that this Plan represents the first step in a continual process of review and improvement. This process includes the following elements:

- Coordination of the development of final program designs and implementation plans to ensure statutory and corporate objectives are met and crosscutting activities are recognized and integrated across programs.
- Tracking program progress against the goal, identifying program performance issues and coordinating design or implementation changes to resolve the issues.
- Ongoing analysis of performance, technology and market risks and development of strategies for managing these risks.
- Coordination of ComEd's support for the evaluation process. Upon Commission approval of the Plan, we will begin working with stakeholders to develop the EM&V process, which could result in some modification of planning assumptions prior to formal launch. ComEd's proposed approach to evaluation is described in greater detail in Section 5.
- Coordination of ComEd's participation in the proposed stakeholder collaborative. There is merit in an ongoing discussion with stakeholders, which ensures that we have access to the ideas and information that can facilitate continuous improvement in the portfolio and increased value for customers. We propose to meet quarterly with a stakeholder group composed of the utilities, DCEO, the Commission Staff, the Attorney General and balanced

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representation from the environmental community, municipal governments and business to discuss portfolio progress, evaluation results and issues, and long-term portfolio planning.<sup>6</sup>

- Preparation of ComEd's next three-year plan based on input from stakeholders, review of market research, review of program performance, the results of any emerging technology research and pilot projects, and our ongoing review of program and portfolio best practice.

## **Market Research and Analysis**

This initial Plan is based on the best information available regarding the market into which the portfolio is to be introduced. However, lack of territory-specific data regarding energy efficiency measure saturations and housing and building stock limits our ability to conduct effective portfolio and program planning over the longer term. In addition, while the programs included in the portfolio are based on current practice across the utility industry, ComEd has not had the opportunity to test program design with customers through targeted market research. ComEd will, therefore, identify, plan and execute specific market assessment and market research projects over the next three years in an effort to improve its ability to design and target cost-effective efficiency and demand response programs. These projects could include:

- An appliance saturation study.
- Market characterization studies of key markets such as residential lighting, residential HVAC, commercial lighting, and new construction. Such studies would evaluate existing penetration of technologies as well as energy efficiency potential, and enable us to determine appropriate program baselines.
- Customer satisfaction surveys and focus groups designed to elicit customer feedback on program design and delivery.
- An energy efficiency delivery infrastructure assessment to identify gaps in the channels to market.
- Program process evaluations to assess program design and implementation processes.

## **Portfolio Communications Plan Development**

Maximizing market impact will require a consistent brand and message across the portfolio. As part of final program design, ComEd will develop overall messaging and set the standards and specifications to be used by ComEd and its program implementers in the use of the portfolio brand in program marketing. The initial step will be development of standards and specifications that can be incorporated into implementation contracts.

In addition, this activity will develop and coordinate integrated communications and education initiatives designed to:

- Build recognition of the various solutions programs offered by ComEd, focusing initially on its Residential and Business Solutions offerings, as well as on integration with the Public Sector, Schools and Low-Income Solutions offerings developed by DCEO.

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<sup>6</sup> Initially, we expect that this collaborative will meet more frequently.

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- Drive customers to the various solutions portals, which will facilitate comprehensive energy management action by customers.
  - Build broad awareness of the options available to customers to improve energy management and reduce their environmental footprints.

### **Establish and Develop Trade Ally Network**

A critical component to the successful implementation of these programs is the large number of trade allies – contractors, vendors and distributors – within the ComEd service territory. Whether ComEd or a third party acts as a program implementer, the trade allies typically provide the final link to most customers. Most of these allies have ongoing relationships with their customers, which make them a natural channel for delivering programs.

ComEd has developed an informal network of trade allies over the last 20 years. While we envision multiple implementation contractors operating within our service territory, we recognize the need to ensure seamless integration of programs with the trade allies in order to minimize market confusion. We will formalize this process at the portfolio level and extend the network with the following goals in mind:

- Ensure maximum geographic reach of the network, particularly for those residential and non-residential measures that comprise the majority of the savings goals.
- Make programs accessible to all eligible classes of customers, particularly the hard-to-reach small business markets.
- Strengthen the base of in-state allies and establish a long-term vendor focus on energy efficiency as a customer benefit.
- Establish cooperative marketing collateral for use by the allies to effectively promote programs in a manner that benefits them, their customers, and the programs.
- Work with DCEO to minimize trade ally confusion where programs from the three entities would operate concurrently.

### **Coordinate with Key Partners**

A variety of organizations are working currently to improve energy management practices in Northern Illinois. ComEd intends to work with these parties to ensure both that our individual efforts are coordinated and seamless for customers, and that our collective efforts create market leverage beyond that which could be achieved by each party working alone. The presence of multiple actors creates multiple opportunities to develop innovative approaches to program delivery for the benefit of our customers.

For example, ComEd will work with the City of Chicago to explore joint design and implementation of energy efficiency programs, including the coordination of existing programs, such as the City's HomeMod, Torrens, CHA, or other gas-related programs, with ComEd's electricity-related energy efficiency programs to provide a more complete package of energy management measures for customers.

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## Back-Office Systems Development

Back-office systems for application processing, tracking, reporting and incentive fulfillment are critical operational elements of the ComEd portfolio. Accurate acquisition, storage and reporting of data are essential for portfolio management, performance improvement and goal achievement. The system(s) must be capable of providing timely information to evaluate portfolio and program performance and support adjustments in program efforts and focus. The final design of the back-office systems must be consistent with portfolio administration and program implementation structures and current ComEd IT systems and resources.

Key system requirements include the ability to:

- Track the locations of each customer participant;
- Track each interaction with the participant;
- Track participant energy efficiency projects, including measures installed, estimated savings, and project costs;
- Track program-level implementation, marketing and administrative costs;
- Match participant information to account numbers and associated data on ComEd's current systems, and ensure ability to upload and download account information;
- Store, upload and download site and project information;
- Process and record incentive transactions; and
- Send to and receive from the program web site.

ComEd currently is evaluating whether the required functionality is most efficiently and cost-effectively obtained through modifications to legacy systems or acquisition of a third party system.

In addition to tracking system development, key back-office functions include development of policies and procedures for incentive fulfillment (where ComEd processes incentive applications), procurement of implementation services, coordination with corporate elements responsible for accounting, billing and customer service, and development of internal quality assurance/quality control processes.

## 4.2. Program Level

The program element templates presented in Section 3 are intended to provide sufficient detail on program design, implementation and evaluation to support stakeholder and Commission review of ComEd's portfolio. However, actual implementation must be based on much more detailed program designs and implementation plans. ComEd envisions that these detailed plans will be developed by ComEd in close cooperation with the entities selected to implement the programs and in consultation with the stakeholder collaborative. This process will ensure that our program implementers are vested in the programs we take to market, and that our final implementation approaches reflect the best information available from implementers, potential customers and other stakeholders. In addition, the program-level implementation planning process must ensure that the final program designs fit cohesively into the ComEd marketing and branding framework. Key program implementation planning steps include the following:

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## Selection of Implementation Contractors

In most cases, we envision that implementation will be provided by independent contractors and consulting firms hired through competitive solicitations. The contracts produced by this process are expected to include performance incentives and penalties related to achievement of program and program element metrics. This type of contract structure, however, requires that the implementation contractors be given the opportunity to propose detailed program designs and implementation plans that they believe provides them with the best opportunity to deliver proposed savings. Such proposals can provide a basis for cooperatively developing a final design prior to program launch.

Upon Commission approval of this Plan, ComEd will issue requests for proposals from qualified implementation contractors for implementation services. We anticipate contracts for the following:

- **Business Solutions.** We envision bundled delivery of prescriptive and custom incentives and retrocommissioning services. We believe the most effective C&I program is one that offers a broad range of solutions without requiring the customer to sort through a variety of specific program offerings. This program suite also will likely include one or more technical assistance and training programs such as Building Operator Certification ("BOC") training. Multiple contracts may be awarded in this category, e.g., for industrial markets, healthcare markets, and small business.
- **C&I New Construction.** This program element will be bundled under our Business Solutions program, although we may pursue a separate implementation contractor depending on the capabilities offered by bidders. This program is not expected to launch until June 2009, with final design commencing upon award of a contract no later than January 2009. However, because of the complexities associated with program design and implementation – particularly the setting of appropriate baselines and the fact that new construction programs typically work through different channels than retrofit and equipment replacement programs - ComEd intends to begin detailed program design and implementation planning in 2008.
- **Residential Solutions.** All program elements aimed at the residence itself (*i.e.*, Single-Family Home Performance, two HVAC programs, Advanced Lighting Package and Multi-family Sweep program elements) will be managed through a single contract. As with the Business Solutions approach, ComEd believes that integrating all residence-focused programs under a single implementation contract maximizes customer service and program effectiveness.
- **Residential Appliance Recycling.** This program element has unique requirements that are not easily bundled with other residential programs. However, our implementation contractor for this program will be required to work with the overall Residential Solutions team to ensure consistent messaging and customer access to the program element through the same portals and channels.
- **Residential Mid- and Upstream program elements.** The proposed residential lighting program element most likely will be delivered through retail channels, as would most other residential appliance programs. Components of these mid-stream and upstream programs will incent the retailers, distributors and manufacturers rather than the purchasing customers. Currently ComEd plans to have a single contractor manage all mid and

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upstream consumer products program offerings. As with the Appliance Recycling program, the implementation contractor for residential mid and upstream programs will be required to integrate messaging and customer access.

### **Selection of the Evaluation Contractor(s)**

Our proposal for portfolio evaluation is presented in greater detail in Section 5. However, the selection of the evaluation contractor and the development of evaluation protocols are critical elements of the final program design process. The evaluation protocols developed prior to program launch in June 2008 should include both program data collection and tracking standards to support evaluation, as well as establishment of initial savings values and NTG ratios that are not deemed with approval of this Plan. The project savings that are tracked for each program element should be based, to the extent feasible, on per measure savings that are agreed to at the outset of implementation for prescriptive measures. Where measure savings cannot be prescribed, the protocols should establish the calculations to be used to determine measure savings. This is standard practice in a number of jurisdictions, and will enable program implementers and ComEd to monitor progress against goals in real-time, and allow timely adjustments to program design or implementation to strengthen program performance. Similarly, knowledge of the NTG ratios to be applied allows the implementation teams to more accurately count and project net savings that, in some cases, will be at least a partial basis for contractor payment. Finally, having the evaluator available for consultation prior to implementation will allow us to develop final designs, including customer-screening criteria that will help minimize free-ridership.

### **Prepare Final Program Element Designs and Implementation Plans**

Final program designs will describe the final proposed structure of the program element, specific incentive levels or methods for calculating incentives, and marketing and recruiting strategies to ensure that goals are met. It is likely that as final designs are completed, assumptions used to prepare this Plan will be refined. Specifically, final design is likely to refine the types and costs of measures to be included, the level of incentives, and specific program costs based on the more detailed design. Therefore, the final step in each program element design will be a recalculation of program element cost-effectiveness to ensure that the program continues to pass the TRC test. The implementation plans will provide detailed roadmaps for program rollout and management, including customer qualification, incentive fulfillment, customer care, data capture and tracking, reporting, and quality control processes. The implementation plans also will include quarterly projections of installations and spending, as well as all proposed participation agreements and incentive forms. ComEd intends to hold one or more stakeholder collaborative meetings to review these designs and implementation plans prior to finalizing them. The evaluator would be expected to participate in these discussions.

### **Finalize Portfolio Strategy and Budget**

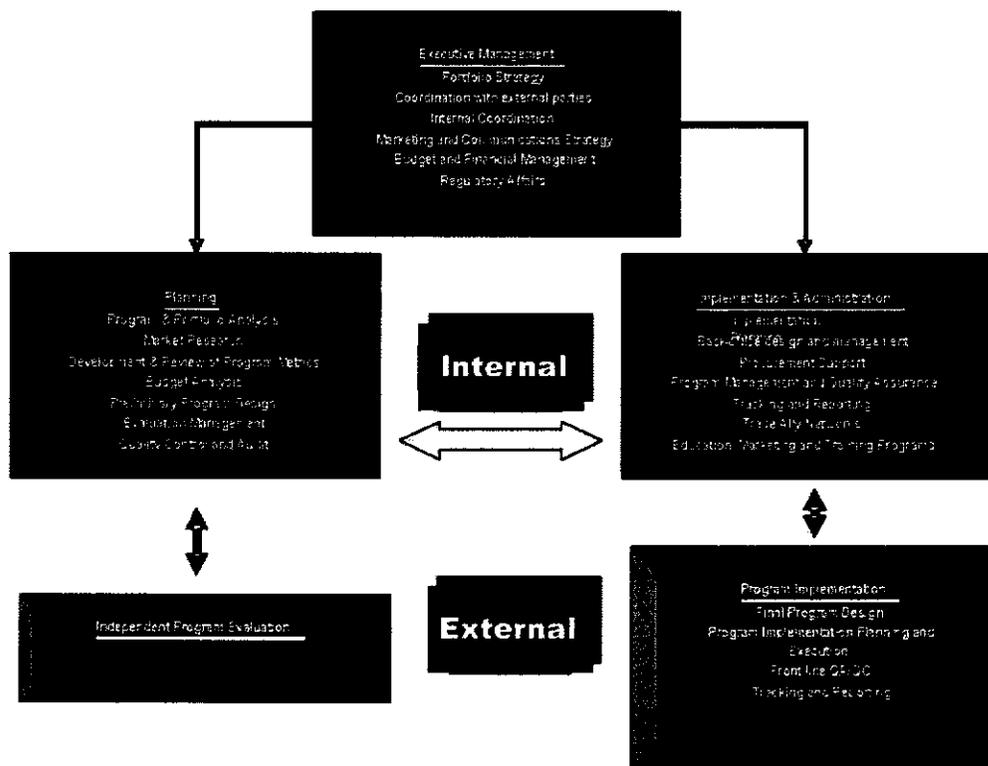
At the same time that ComEd is working with contractors to finalize the implementation plans for its resource acquisition programs, it will develop the structure for its market transformation initiatives and put in place the elements needed for program and portfolio management. Once final designs and implementation plans are complete, the portfolio budget will be rebalanced to ensure that it remains within the spending screens, and the portfolio will be checked to ensure that it remains cost-effective.

### 4.3. Portfolio and Program Management

Successful implementation of the ComEd Plan requires an effective and efficient process for managing several key functions at the level of both the individual programs and the portfolio. This section outlines these functions and ComEd's proposed approach to managing them.

Implementation is built upon five functions, several of which are largely internal to ComEd. These are illustrated in Figure 7.

**Figure 7.  
Portfolio Management Functions**



#### 4.3.1. Executive Management

ComEd's portfolio Executive Management function is responsible for the development, communication and execution of ComEd's portfolio strategy, and includes the following activities:

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- **Portfolio Strategy and Sponsorship:** Develop the strategy guiding the composition of the portfolio, including allocation of available resources across sectors and programs. The strategy will be reviewed and revised at least annually prior to ComEd's annual progress report filing before the Commission.
  - **External Coordination:** Communicate ComEd's strategy and progress to the Commission and external stakeholders on a regular basis. This will include working with the Commission, Staff and stakeholders to establish the collaborative process we have outlined above in Section 1.
  - **Internal Coordination:** Identify internal systems and functions that contribute to or are affected by program implementation and management. Ensure all internal stakeholders are involved in developing the final implementation plan. 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 annual program and administrative budgets consistent with the portfolio strategy and available resources. Track costs against budgets.
  - **QA/QC:** Manage overall portfolio quality assurance, reviewing reports 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 will design and execute its crosscutting awareness-building and education elements.

#### **4.3.2. Planning**

ComEd's portfolio planning function provides the analysis and ongoing market intelligence to support the Executive Management function. Key policy and planning activities include:

- **Program and Portfolio Analysis:** Energy savings and cost-effectiveness analyses of the programs comprising the portfolio and of the portfolio as a whole. Subsequent to Commission approval of this Plan, ComEd will manage development of detailed program designs and implementation plans. The planning process will be ongoing and will include continued dialogue with stakeholders.
- **Market Research:** As part of the continuing improvement process, ongoing market research with key customer groups will be conducted to test and verify key design assumptions for programs as they are developed. Market assessment and process evaluations will be designed and executed.
- **Development and Review of Program Metrics:** 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.

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- **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 contractors and stakeholders.
  - **Manage Evaluation:** As defined by the statute, third party EM&V services will be procured and ComEd will work with the contractor and stakeholders to develop specific EM&V protocols, including tracking and reporting requirements for each program. Third-party EM&V is expected to commence early and be ongoing. The planning function will be responsible for managing the evaluation work and incorporating results into ongoing program and portfolio reviews.
  - **Manage Emerging Technology R&D:** Identify key emerging technologies and program options, and design and execute research or pilot projects to test feasibility for inclusion in ComEd's portfolio.
  - **Reporting:** Coordinate preparation of annual and semi-annual reports to the Commission on portfolio performance. Manage preparation of reconciliation filings.

#### ***4.3.3. Implementation and Administration***

Also supporting the Executive Management function are a number of administrative activities that ensure development of and compliance with effective and efficient implementation guidelines. This function also involves critical coordination between internal and external systems. Major activities include:

- **Implementation Planning:** Development of plans and processes for implementing and integrating the overall portfolio management structure with individual programs. Develop implementation critical paths based on portfolio metrics and available resources.
- **Support Back Office System Design and Implementation:** Identify requirements for program customer relationship management, financial incentive fulfillment and tracking and reporting. Determine appropriateness of existing ComEd systems and define gaps. Identify required new systems/system enhancements and coordinate procurement/installation. Although ComEd maintains state-of-the-art systems to support current business processes, management of energy efficiency programs imposes at least some requirements that current systems cannot meet. To minimize disruptions to existing corporate systems, processes must be developed to support required upload/download of customer and cost information.
- **Procurement Support:** Third party vendors or implementation contractors will deliver many program services. Request-For-Proposals /Requests-For-Qualifications must be developed for specific competitive services. Contracts for delivery must be developed and include performance provisions to mitigate ComEd's risk. ComEd will coordinate with internal corporate legal and procurement groups.
- **Program Management:** ComEd will assign Residential and Business Solution program teams to manage program implementation, including oversight of implementation contractors. These teams will have responsibility for ensuring effective implementation processes are in-place and followed as well as for regular reporting of program progress. Weekly, monthly, quarterly and annual reporting will be required. All programs will undergo a semi-annual performance review, and ComEd retains the right to replace contractors that are underperforming.

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- **Management of Trade Ally Networks.** Ensure that program implementers maintain appropriate levels of involvement and communication with trade allies. Communicate program changes with allies, and solicit feedback regarding program performance with respect to ease of participation, incentive levels, and collateral requirements.
  - **Management of Program Tracking and Reporting:** Ensure third party implementers and vendors, as well as internal staff, consistently use the program's tracking system. Responsible for monthly system downloads and preparation of status reports including program performance and cost.
  - **Internal EM&V:** Using the program tracking and reporting system, as well as on-site verification and customer surveys, ComEd will conduct ongoing program evaluation as a check on overall program quality and an early-warning system to spot potential performance or customer service issues. This function also will manage third party contractors hired to perform verification services for certain programs (e.g., C&I custom incentives).

#### **4.4. Tracking and Reporting**

An important early implementation activity will be design and installation of a program-wide tracking and reporting system. At this time, a final decision has not been made as to whether existing corporate systems can be configured to serve the function or whether a system will be procured to run on top of corporate systems. The basic requirements for the system were outlined above.

ComEd will prepare weekly and monthly reports to support internal portfolio management. Quarterly reports will be prepared for the proposed stakeholder meetings. Finally, ComEd proposes semi-annual reporting to the Commission that will summarize program performance using tracking system data for the prior six months, and will include a description of key program design and implementation activities. Any proposed changes in the composition of the portfolio or its constituent elements or in program element budget allocations exceeding 20% will be described in the quarterly and semi-annual reports.

#### **4.5. Resources**

ComEd understands the magnitude of the task of implementing a portfolio of this size and scope and has begun to put in place the necessary resources. Internally, the responsibility of the portfolio management falls under the area of *Marketing & Environmental Programs*. Within this area, there are 4 groups that will each have a major role in the portfolio – *DSM & Energy Efficiency Program Planning, Energy Efficiency Services, Demand Response & Dynamic Pricing and Marketing*. While many of the current full-time equivalents (“FTEs”) in these areas will have active roles throughout the Plan cycle, ComEd has also has added 10 incremental budgeted FTEs to support portfolio planning and management. Seven positions are budgeted within the portfolio administration budget line item and the other three positions are allocated across the program element budgets. As the portfolio grows, ComEd expects that additional FTEs will be required. To plan for the future growth of the portfolio in size and scope, ComEd has budgeted for an additional 5 FTEs in 2009 and another 5 FTEs in 2010, for a total of 20 incremental positions over the life of this Plan. The costs of these FTEs will be included as costs charged through the rider and will not be included in ComEd base rates.

While we expect to use third-party implementation contractors, internal staff will be important to ensure contractor performance and to coordinate and integrate the various implementation efforts. We are also cognizant that Illinois, not having had a rich history of utility-administered energy efficiency programs, does not have the mature infrastructure that more historically active jurisdictions currently enjoy. This necessitates maintaining increased involvement from ComEd to ensure the trade ally networks and related infrastructure develop sufficiently.

For example, ComEd will work with the City of Chicago to explore joint design and implementation of energy efficiency programs, including the coordination of existing programs, such as the City's HomeMod, Torrens, CHA, or other gas-related programs, with ComEd's electricity-related energy efficiency programs to provide a more complete package of energy management measures for customers

Finally, we recognize that the Illinois energy efficiency and demand response mandates come at a time when many other states are either starting or substantially increasing their own energy efficiency and demand response goals. This effect can create a demand on the existing implementation contractor community that may result in costlier-than-anticipated proposals or a lack of qualified proposals for one or more programs. In this event, ComEd would evaluate alternative implementation management strategies to ensure the program goals are achieved within the allotted budgets.

#### 4.6. Portfolio Implementation Schedule

The following figures illustrate ComEd's proposed portfolio implementation schedule.

Figure 8. Program Element Launch Timeline

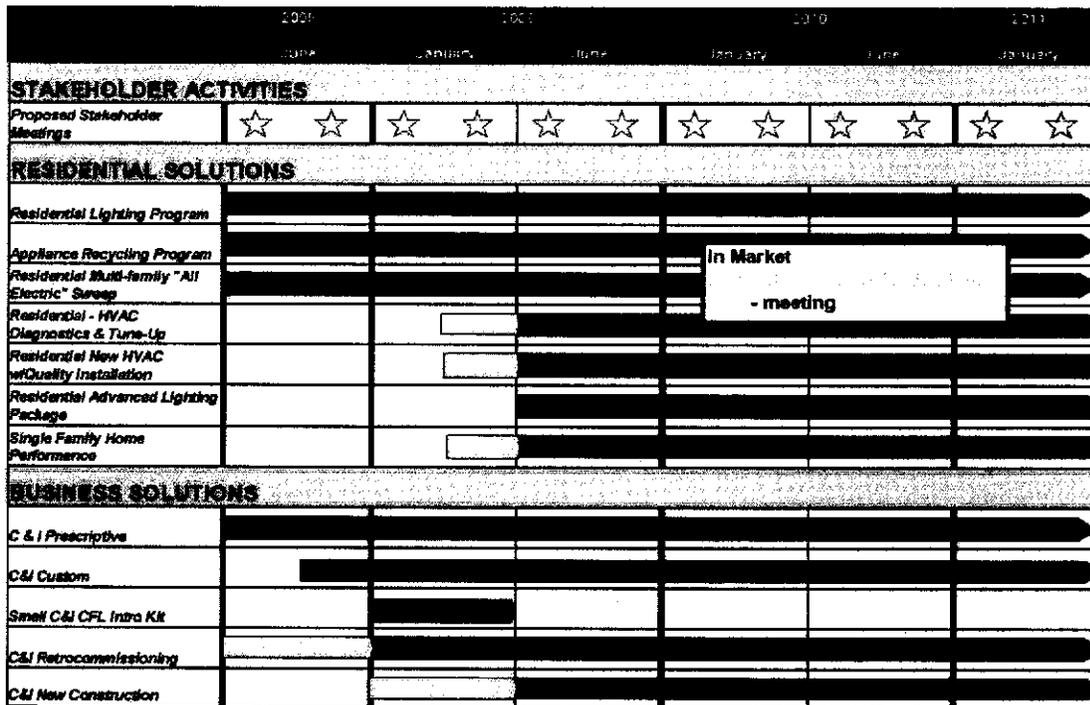
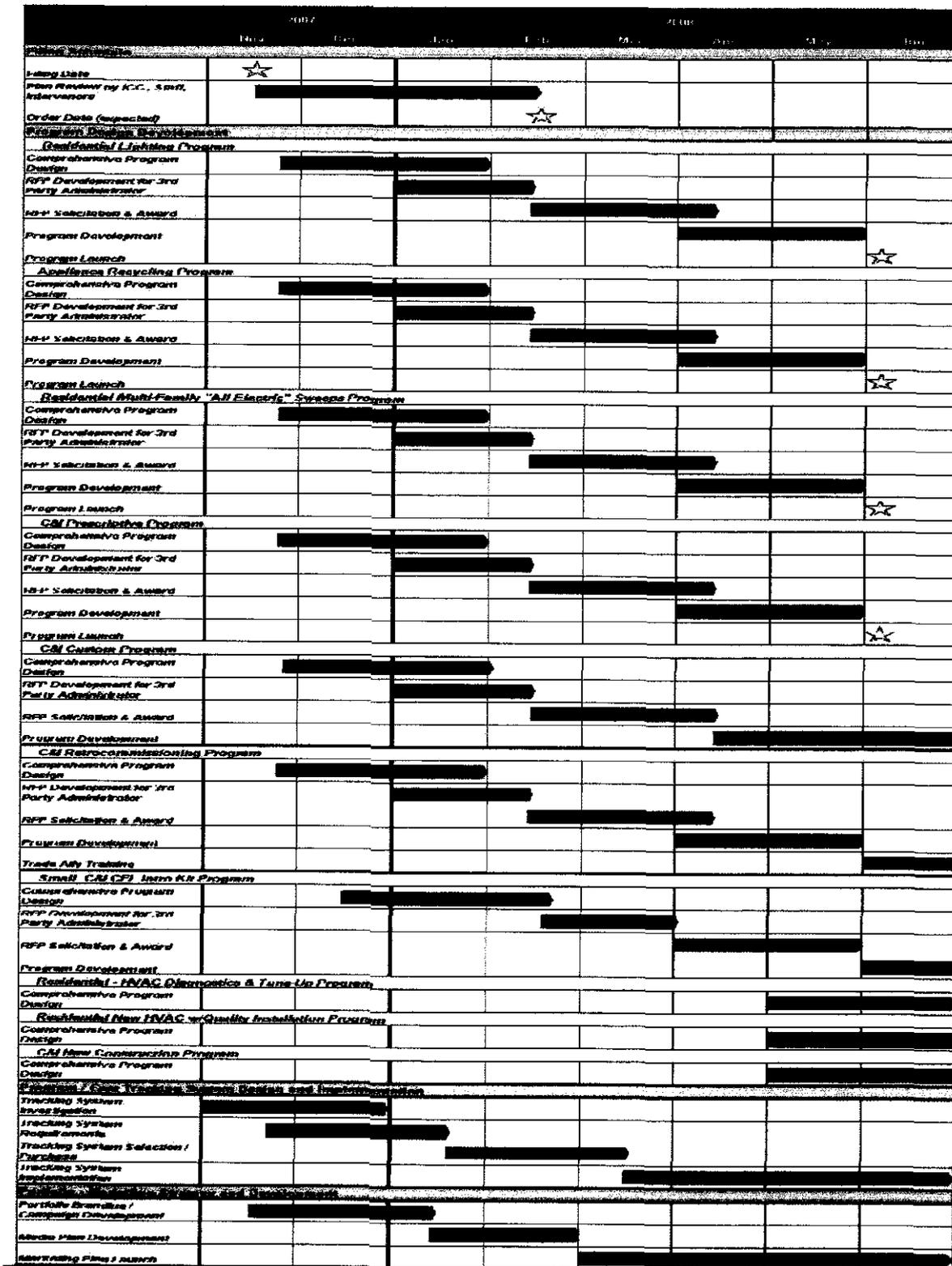


Figure 9. Pre-Implementation Timeline



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## **5. Evaluation, Measurement and Verification ("EM&V")**

### **5.1. Overview**

Program evaluation, measurement and verification ("EM&V") activities are central to the success of the ComEd portfolio and are used to estimate program savings impacts, monitor program performance, and ensure that incentives paid are proportionate with achieved savings (*i.e.*, preventing overpayment). These activities serve as a way to audit, both internally and independently, the actual level of savings being delivered and to maximize savings achieved for the given program budget amount.

EM&V activities generally can be classified as: (1) Impact evaluations – determinations of program savings and cost-effectiveness; (2) Process evaluations – assessments of the effect of program structure and how implementation has affected program performance; (3) Verification of program participant compliance with program terms and of actual measure savings for purposes of paying incentives; and (4) Market effects studies – attempts to determine the extent to which a program has changed the way a market behaves - for example, by influencing retailer stocking practices.

Impact evaluations are most often performed by organizations independent of those responsible for designing and implementing programs to ensure objectivity. In Illinois, Section 12-103 requires that ComEd retain independent third party evaluation services. Verification functions often are performed by program implementers or administrators to ensure that the program is paying only for actual installed and operating energy saving measures. Process evaluations and market effects studies typically are also prepared by independent evaluators, but process evaluations in particular are used less to verify performance than to help improve performance and, as such, require active participation by the program administrator/implementer.

An impact evaluation involves three basic determinations:

1. **The number of measures actually installed and operating.** Program tracking information will report claimed installations based on incentive applications or other records of program participation. The impact evaluation uses various sampling and statistical techniques to independently verify these claims. This activity is relatively straightforward and typically relies on follow-up phone or site surveys of participating customers.
2. **The amount of energy saved by the energy efficiency measures installed through the program.** ComEd's Plan is based on estimates of likely energy savings per measure. The evaluation will use a variety of techniques to independently calculate per measure savings. The methods required to independently verify per measure savings can be quite complex depending on the measure, and will involve activities such as placing measurement equipment on installed measures, conducting billing analysis or preparing engineering studies. A substantial amount of such work already has been done across the country for common measures that often can be used in other jurisdictions because the results will not vary significantly from place to place.
3. **The level of savings that can be attributed to the program.** Every program will have some participants who would have undertaken the action promoted even in the absence of program incentives ("free riders"). Similarly, every program will induce some customers to take actions without actually claiming incentives; in other words, such customers will be

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influenced by the program via retailer advertising or word-of-mouth to install measures that the program does not actually provide incentives for ("spillover"). The impact evaluation attempts to determine the net effect of free riders and spillover in determining the level of savings that can be attributed to the program. This net effect is known as the NTG ratio. The research and analysis required to independently establish attribution factors can be quite complex and may not be particularly precise given that it relies largely on the responses of program participants and non-participants to a battery of behavioral questions conducted some time (sometimes many months) after the participating customers took advantage of the program's services.

The product of the number of verified measures installed under a program, verified energy savings per measure, and the NTG ratio is the net savings realized per program. Depending on the rigor applied to each step and the availability of data, an impact evaluation can take six months or more to complete from the relevant date of reference. For example, an evaluation of year one program savings (June 2008 – May 2009) might not be completed until late 2009.

There are several EM&V related activities that will be undertaken at various levels and at different stages during the portfolio implementation process to support the purposes outlined above. Although some of these activities are inherently program management activities and therefore the responsibility of ComEd, we believe that all parties are best served by establishing a forum for ongoing stakeholder participation that provides the opportunity for parties to shape the structure of the evaluation process initially and as a function of the evaluation results. Key EM&V activities include the following:

- Select an independent program evaluation contractor(s);
- Establish appropriate program EM&V protocols and guidelines;
- Establish deemed savings values for prescriptive measures;
- Establish benchmark NTG values;
- Perform verification and due diligence of project savings;
- Provide an independent evaluation of program impacts; and
- Provide internal quality assurance/control.

## **5.2. Selecting an Independent Program Evaluation Contractor**

The credibility of program savings is based on the verification of reported savings by an independent evaluator. The evaluation process is managed differently in different jurisdictions, but in every case, the process relies on the use of an evaluation contractor without financial interest or the appearance of any conflict of interest with the utility or any of its implementation contractors.

By statute, ComEd has the responsibility to retain an independent evaluator to determine annual energy savings and portfolio cost-effectiveness. However, the importance of the EM&V process, the need to ensure its credibility and the expertise that can be brought by a number of our stakeholders, all suggest that the process for selecting this contractor will benefit from stakeholder participation. We have proposed a collaborative that would, in part, have stakeholders work with ComEd to develop a scope of work for the contractor that would be

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contained in the request for proposals. We would also work with stakeholders to develop a list of potential bidders to whom the RFP would be sent. While ComEd ultimately must take responsibility for the choice of contractor, we believe that the proposal review process would benefit from stakeholder participation. This process should begin as soon as the Commission issues its decision and the contractor should be in place by late April 2008.

### **5.3. Establish Appropriate Program EM&V Protocols and Guidelines**

EM&V protocols describe generally how evaluations will be carried out as well as the timing of evaluation activities and the format of evaluation reports. During the program design phase and prior to program launch, ComEd will work with its evaluation contractor and stakeholders to establish appropriate EM&V protocols specific to each program. All EM&V protocols will be developed in accordance to the International Performance Measurement and Verification Protocol ("IPMVP"), and will take advantage of the development of other recent similar protocols. The EM&V protocols will address the following:

- The type of evaluation required for each type of program element based on IPMVP guidelines. The guidelines include four basic options:
  - Option A: Deemed savings values.
  - Option B: Short-term field measurement of savings.
  - Option C: Detailed billing analysis.
  - Option D: Calibrated simulation analysis.
- The schedule for evaluation activities.
- The methods to be used in estimating and applying NTG ratios.
- The contents and format of evaluation plans to be prepared by the evaluator.
- The contents and format of evaluation reports.
- The allocation of available evaluation funding across time and evaluation activities.

With respect to the specific evaluation approach for each program, ComEd believes that deemed savings values (Option A) should be utilized to the extent possible where appropriate to help streamline the savings calculation process and leverage available evaluation budgets. For all other projects, such as comprehensive projects or custom rebates, a more robust EM&V method may be required. The level of EM&V performed should correspond to the level of savings attributed to specific measures in ComEd's Plan and the likely level of variability in measure savings.

These protocols should be completed prior to program rollout to ensure that the process going forward is transparent to all parties.

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## **5.4. Establish Deemed Savings Values for Prescriptive Measures**

ComEd proposes that certain measure savings values be deemed appropriate by the Commission for purposes of planning and evaluation. ComEd proposes that any changes in the deemed values that the evaluator believes are appropriate should be applied on a prospective basis only, meaning that if the independent evaluator modifies values deemed by the Commission or otherwise establishes new values, those values only should be applied in subsequent plan years and not to savings booked to that point or otherwise booked in the current Plan year. The specific measure savings values that ComEd proposes be deemed are included in the testimony of ComEd witness Val Jensen.

The measures for which ComEd proposes the Commission deem savings values primarily are common lighting measures used within the Residential Lighting program element, the Prescriptive Incentive program element, and the Small C&I CFL Intro Kit program element. In these cases, the majority of savings is expected to come from measures for which the savings are well understood and can be reasonably predicted. Deeming such standard measures is common under the International Program Measurement and Verification Protocol ("IPMVP") Option A, which provides for deemed savings values and verification of installations for prescriptive measures included in approved measure lists.

The independent evaluator still will be responsible for determining program savings based on independent verification of installation of these measures. ComEd would be responsible for tracking claimed installations and would (as noted below) conduct its own verification checks as part of program management due diligence.

## **5.5. Establish Benchmark Net-to-Gross Values**

In addition to deeming certain measure savings values, ComEd proposes that the Commission adopt deemed values for program NTG ratios. These values would be used by the evaluator in estimating program net savings. The NTG ratios that we propose the Commission deem as appropriate are the standard values used for program planning in California, and are specified in the California Energy Efficiency Policy Manual. These values are the product of substantial evaluation research and review. ComEd also proposes that the Commission explicitly define the NTG ratio as the sum of free rider and spillover effects. The specific NTG ratios that ComEd proposes be deemed are included in the testimony of ComEd witness Val Jensen.

As its budget allows, the evaluator is expected to conduct NTG studies that would update the deemed values proposed by ComEd. Those updated values only should be used by ComEd for planning purposes and by the evaluator for calculating program net savings in future Plan years. For the reasons articulated in Section 1 of the Plan and further explained in the testimony of Mr. Jensen and of Mr. Hall, failure to establish NTG ratio estimates prior to the beginning of program implementation, subjects ComEd, trade allies and customers to significant uncertainty and risk. Retroactive application of NTG ratio estimates different from those used for planning purposes can mean the difference between meeting savings goals and not meeting them as a function of nothing more than a calculation by the evaluator based on, at best, limited data.

ComEd believes that incorporation of any revised estimates of NTG ratios into program designs going forward is prudent, and ComEd intends to work collaboratively with stakeholders to design and implement programs that minimize the risk of free riders.

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## **5.6. Verification and Due Diligence of Project Savings**

ComEd will work with implementation contractors to develop and implement QA/QC, inspection and due diligence procedures for those programs for which deemed savings are not appropriate. These procedures will vary by program and are necessary to assure customer eligibility, completion of installations, and the reasonableness and accuracy of savings upon which incentives are based. The evaluation contractor will have responsibility for installation verification and estimation of savings for purposes of independent evaluation.

The activities that ComEd will undertake in performing EM&V procedures may include, but are not limited to, the following:

- Review of custom rebate applications and project proposals for eligibility and completeness.
- Inspect and verify a statistically valid sample of installations for purposes of ensuring compliance with program requirements.
- Prepare and facilitate EM&V plans where needed based on the project, and assure adherence to IPMVP protocols.
- Approve projects and incentive amounts for payment.

ComEd will retain third party engineering expertise for project evaluation and EM&V services as necessary. These activities are not intended to supplement independent evaluation activities, but rather to support effective internal program management.

## **5.7. Provide an Independent Evaluation of Program Impacts**

The master evaluation contractor will determine program and portfolio impacts based on the evaluation protocols described above. ComEd will implement a program tracking system that can support both ongoing program management and assessment and the independent evaluation. To maximize the efficiency of the evaluation given limited evaluation funds, final program designs and implementation plans will include detailed recording, tracking and reporting protocols.

ComEd envisions an annual evaluation of the portfolio to include estimates of gross and net program impacts, with semi-annual updates. These evaluations would be provided to all parties. The annual evaluations would be due no later than six months following the end of a program year.

## **5.8. Provide Internal Quality Assurance and Control**

In addition to the procedures outlined above for verifying savings from ComEd's proposed portfolio, we will implement appropriate internal controls to assure the quality of program design and implementation. ComEd will establish a consistent and integrated tracking and reporting system for all programs in the portfolio. ComEd will produce internal weekly and monthly reports on all customer interactions, including customers recruited, incentive applications, incentives processed, and installations verified, and will establish procedures for ongoing verification. ComEd will require implementation contractors or staff to routinely contact/visit a sample of participating and non-participating customers to assess the quality of program delivery and the installation of measures for which incentives were claimed. ComEd will track on an on-going

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basis, incentive fulfillment time, technical services delivery times (how long between customer request and audit completion for example), incentive documentation, and customer complaints among other metrics of program performance.

## **5.9. Commission Determination of Compliance with Statutory Goals**

Section 12-103(i) states that “[i]f, after two years, an electric utility fails to meet the efficiency standard specified in subsection (b) . . . as modified by subsections (d) and (e), it shall make a contribution to the Low-Income Home Energy Assistance Program . . . .” (“LIHEAP”). 220 ILCS 12-103(i). For a large electric utility such as ComEd, the required contribution is \$665,000. Furthermore, if a utility fails to meet the energy efficiency standard after year three of the Plan, it must make a required contribution to LIHEAP, and “in addition, the responsibility for implementing the energy efficiency measures of the utility making the payment shall be transferred to the Illinois Power Agency.”

ComEd proposes that the Commission set a schedule for reviewing whether ComEd has met the individual energy efficiency savings goals for the second and third years of the Plan set forth in Section 12-103(b). In particular, ComEd proposes that the Commission adopt the following review process:

After the second year of the Plan, the Commission shall determine whether or not ComEd achieved the goal for the year commencing June 1, 2009 and ending May 31, 2010. After the third year of the Plan, the Commission shall determine whether or not ComEd achieved the goal for the year commencing June 1, 2010 and ending May 31, 2011. The Commission shall base its review on the measure savings and NTG ratio values deemed by the Commission. In the event that the independent evaluator modifies those values or otherwise establishes new values, those values only shall be applied to the Commission's review prospectively (*i.e.*, to subsequent years of ComEd's Plan).

## **6. Cost Recovery**

Section 12-103(a) provides that “[i]t serves the public interest to allow electric utilities to recover costs for reasonably and prudently incurred expenses for energy efficiency and demand-response measures.” To achieve this legislative goal, Section 12-103(e) provides, in relevant part:

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A utility providing approved energy efficiency and demand-response measures in the State shall be permitted to recover costs of those measures through an automatic adjustment clause tariff filed with and approved by the Commission. The tariff shall be established outside the context of a general rate case. Each year the Commission shall initiate a review to reconcile any amounts collected with the actual costs and to determine the required adjustment to the annual tariff factor to match annual expenditures.

Each utility shall include, in its recovery of costs, the costs estimated for both the utility's and the Department's implementation of energy efficiency and demand-response measures.

Furthermore, Section 12-103(f)(6) requires that ComEd include as part of its Plan "a proposed cost-recovery tariff mechanism to fund the proposed energy efficiency and demand-response measures and to ensure the recovery of the prudently and reasonably incurred costs of Commission-approved programs."

These provisions offer the following guidance:

**Timely Cost-Recovery:** That Section 12-103(e) explicitly provides for the creation of a cost recovery mechanism outside of a general rate case suggests that the intent is to address regulatory lag and provide for timely cost recovery for utilities.

**Complete Cost-Recovery:** All of the incremental costs incurred by ComEd associated with the energy efficiency and demand response measures implemented under the Plan should be tracked and recovered. Moreover, Section 12-103(e) suggests the need for a cost-tracking rider that will true-up actual costs and revenues on a dollar-for-dollar basis.

As part of its Plan, ComEd is including proposed Rider EDA – Energy Efficiency and Demand Response Adjustment (attached hereto as Appendix F). Rider EDA is a cost-tracking rider that was designed to fulfill the requirements of Section 12-103 of the Act. Rider EDA is being established outside of a general rate case and will provide 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 will also pass through the costs of such plans approved by the Commission and implemented by DCEO for ComEd customers. Rider EDA also provides for annual reconciliation proceedings to true up the actual costs incurred with the revenues obtained through the application of the charge.

## Glossary of Terms

Term	Definition
<b>Back-Office Systems Development</b>	Systems for managing the operation of an energy efficiency portfolio, including procurement of implementation services, incentives processing, tracking and reporting and budgeting.
<b>“Breakthrough Equipment and Devices”</b>	Equipment or devices that represent a major change in consumers' ability to manage their energy use.
<b>Business Solutions Program</b>	A grouping of energy efficiency program elements all of which are promoted to business customers.
<b>Database of Energy Efficiency Resources (“DEER”)</b>	A comprehensive database of energy efficiency measures, including measure savings and cost data, developed and maintained jointly by the California Public Utilities Commission and the California Energy Commission.
<b>DOE-2 Building Energy Simulation Model</b>	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.
<b>Educational/Awareness/Market Transformation Activities</b>	Activities that are undertaken to raise awareness of the benefits of energy efficiency among consumers, teach customers how to manage their energy consumption, and condition the market for energy efficiency by training efficiency providers in techniques for selling and delivering energy efficiency services.
<b>Energy Efficiency &amp; Demand Response Portfolio</b>	The combination of programs and program elements proposed by ComEd to meet its statutory energy reduction goals within the spending screens.
<b>Energy Efficiency Measure</b>	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.
<b>Energy Efficiency Program Element</b>	A collection of energy efficiency measures that are promoted to a specific customer segment using a consistent delivery strategy.
<b>ENERGY STAR Portfolio Manager</b>	An online tool developed by the U.S. Environmental Protection Agency that calculates the economic benefits of using various ENERGY STAR energy efficient measures.
<b>Evaluation Contractor</b>	A contractor hired to conduct program evaluations.
<b>Evaluation, Measurement &amp; Verification (“EM&amp;V”)</b>	The process for estimating the gross and net savings associated with program elements.
<b>Free Drivers</b>	Customers who adopt the energy efficient devices or practices promoted by a program or program element without taking the financial incentives offered by the program.
<b>Free Riders</b>	Customers who take advantage of program financial incentives but who would have adopted the energy efficient devices or practices

Term	Definition
	promoted by the program even in the absence of financial incentives.
<b>Impact Evaluations</b>	An evaluation (estimate) of the energy savings associated with a measure, program element, program or portfolio.
<b>Implementation Contractor</b>	A contractor hired by ComEd to manage the direct implementation of a program element or program.
<b>International Performance Measurement and Verification Protocol ("IPMVP")</b>	A widely recognized set of procedures for conducting energy efficiency project and program evaluations.
<b>Market Effects Studies</b>	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.
<b>Measure Savings Values</b>	The amount of energy saved by a given energy efficiency measure when it replaces a less efficient device or practice.
<b>Monte Carlo Simulation</b>	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.
<b>Nature First Demand Response Program</b>	The name of ComEd's residential air conditioning direct load control program, described in Rider AC7 – Residential Air Conditioner Load Cycling Program 2007.
<b>Net-to-Gross ("NTG") Ratio</b>	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.
<b>Non-weather-sensitive measures</b>	Energy efficiency measures for which associated energy savings are not a function of local climate.
<b>Process Evaluations</b>	An assessment of the quality of program design and implementation.
<b>Program Bundling</b>	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.
<b>Program Realization Rates</b>	The ratio of <i>ex post</i> program savings to <i>ex ante</i> estimates of savings.
<b>Residential Solutions Program</b>	A grouping of energy efficiency program elements, all of which are promoted to residential customers.
<b>Rider EDA – Energy Efficiency Demand Response Adjustment</b>	ComEd's cost-tracking rider that was designed to fulfill the requirements of Section 12-103 of the Act and will provide for the recovery of all incremental costs incurred by ComEd associated with

Term	Definition
	the Plan approved by the Commission and implemented by ComEd.
<b>Spillover Effect</b>	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.
<b>Stakeholder Collaborative Process</b>	Process by which ComEd and interested stakeholders meet to review the progress of existing programs and develop additional program ideas and program designs.
<b>Total Resource Cost ("TRC") Test</b>	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.
<b>Trade Allies</b>	Businesses and individuals engaged in the design, sales and installation of energy efficient devices and practices.
<b>Weather-sensitive Measures</b>	Energy efficiency measures for which associated energy savings are a function of local climate.
<b>"Whole Home" Solutions</b>	A program design approach that promotes comprehensive improvements to residential dwellings.