

**STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION**

CENTRAL ILLINOIS LIGHT COMPANY)	
d/b/a AmerenCILCO)	
)	
CENTRAL ILLINOIS PUBLIC SERVICE COMPANY)	
d/b/a AmerenCIPS)	
)	Docket No. 07-0539
ILLINOIS POWER COMPANY)	
d/b/a AmerenIP)	
)	
Approval of the Energy Efficiency and)	
Demand-Response Plan)	

AMEREN ILLINOIS UTILITIES' PROPOSED ORDER ON UNCONTESTED ISSUES

JANUARY 14, 2008

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The Ameren Illinois Utilities hereby submit their Proposed Order on Uncontested Issues, in accordance with the ALJ's Scheduling Ruling. It is the Ameren Illinois Utilities' good faith belief that the issues identified in this Proposed Order have either been resolved through agreement or have not been actively contested in this Docket. The Ameren Illinois Utilities do not speak on behalf of other parties in this regard, however, and other issues may arise in briefing.

I. INTRODUCTION

On November 5, 2007, the Ameren Illinois Utilities filed their Petition seeking approval of their Energy Efficiency and Demand-Response Plan ("Plan") pursuant to 220 ILCS 5/12-103(f) of the Public Utilities Act ("PUA"). In accordance with recently passed legislation, P.A. 95-0481 (the "Act"), the Ameren Illinois Utilities were required to submit an Energy Efficiency and Demand-Response Plan ("Plan") in the manner prescribed by new Section 12-103 of the PUA. 220 ILCS 5/12-103. Specifically, Section 12-103(f) required that by no later than November 15, 2007, each electric utility shall file an Energy Efficiency and Demand-Response Plan with the Illinois Commerce Commission ("Commission"), to meet the energy efficiency and demand-response standards for 2008 through 2010. Accordingly, November 15, 2007, the Ameren Illinois Utilities filed their Plan in support of the Petition, supporting testimony and exhibits.

The Ameren Illinois Utilities' filing contained the following testimony and exhibits:

- Testimony of Stan E. Ogden, Vice President of Customer Service and Public Relations for the Ameren Illinois Utilities, supporting Ameren Exhibits 1.0 and 6.0.

- Testimony of Richard A. Voytas, Manager of Energy Efficiency and Demand Response for Ameren Services Company, supporting Ameren Exhibits 2.0, 2.1, 2.2, 2.3, 7.0, 7.1, 7.2, 7.3, and 7.4.¹
- Leonard M. Jones, Managing Supervisor – Restructured Services – Regulatory Policy and Planning, Ameren Services Company, supporting Ameren Exhibits 3.0, 3.1, and 8.0.
- Val R. Jensen, Senior Vice President with ICF International (a management, technology and policy consulting firm), supporting Ameren Exhibits 4.0, 4.1, 9.0, 9.1, 9.2, and 9.3.
- Vickiren S. Bilslund, Regulatory Specialist - Regulatory Policy and Planning, Ameren Services Company, supporting Ameren Exhibits 5.0 and 5.1.

The Ameren Illinois Utilities’ Plan (“Plan”) furthers their commitment to energy efficiency initiatives in Illinois by developing a robust set of programs for the residential, commercial and industrial customer classes. (Am. Ex. 1.0, p. 3.)

The Ameren Illinois Utilities’ Energy Efficiency and Demand Response Plan meets Section 12-103’s requirements, is consistent with Section 12-103’s objectives, and, for the reasons that follow, it is hereby approved.

II. PROCEDURAL HISTORY/BACKGROUND

¹ As of the time of filing this brief, it is the Ameren Illinois Utilities’ understanding that all of Mr. Voytas’s exhibits except Ameren Exhibit 7.0 are currently in the evidentiary record. A Petition for Interlocutory Review is before the Commission to determine this issue, and to determine whether Ameren Exhibit 7.0 should be admitted into evidence. The Ameren Illinois Utilities have made an offer of proof regarding the excluded evidence.

The Ameren Illinois Utilities' analysis and initial program design was shared with Illinois stakeholders through a series of workshops beginning in August of 2007 and extending through October. (Am. Ex. 1.0, p. 2.) These workshops provided a meaningful forum for feedback and education. (Am. Ex. 1.0, pp. 2-3.) These initial steps are only the beginning of a long-term commitment to a collaborative process which will develop meaningful, cost effective, long-term, sustainable energy efficiency and demand response initiatives. (Am. Ex. 1.0, p. 3.) The Ameren Illinois Utilities are also advancing energy efficiency initiatives for natural gas customers in separate proceedings. (*Id.*)

The following parties intervened in this case: Attorney General of the State of Illinois ("AG"); BlueStar Energy Services, Inc.; Citizens Utility Board ("CUB"); Constellation NewEnergy, Inc., Direct Energy Services, LLC, Integrys, Energy Services Corporation, and MidAmerican Energy Company as the Coalition of Energy Suppliers ("CES"); Constellation Energy Commodities Group, Inc.; ConsumerPowerline; Environmental Law and Policy Center ("ELPC"); Environment Illinois Research and Education Center; the Kroger Company; Natural Resources Defense Council ("NRDC"); and Air Products and Chemicals Company, Caterpillar, Inc., Illinois Cement Company, Cargill, Inc., and Enbridge Energy LLP, a coalition of Illinois Industrial Energy Consumers ("IIEC").

Commission Staff and the following intervenors filed direct testimony on December 14, 2007: Attorney General of the State of Illinois ("AG"), Citizens Utility Board ("CUB"), Environmental Law and Policy Center ("ELPC"), Natural Resources Defense Council ("NRDC"), and a coalition of Illinois Industrial Energy Consumers ("IIEC"). The Ameren Illinois Utilities filed their rebuttal testimony on December 21, 2007. An evidentiary hearing was held on January 4, 2007.

III. OVERVIEW OF SECTION 12-103

The Act provides that “[i]t is the policy of the State that electric utilities are required to use cost-effective energy efficiency and demand-response measures to reduce delivery load,” and that to do so “will reduce direct and indirect costs to consumers by decreasing environmental impacts and by avoiding or delaying the need for new generation, transmission, and distribution infrastructure.” 220 ILCS 5/12-103(a). Further, “[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.” *Id.* Thus, Section 12-103 provides that utilities should have the opportunity for full cost recovery for implementing energy efficiency and demand response programs.

The Commission is mindful of public comment and sentiment that customers want help in saving money on their energy bill. With this filing and the subsequent implementation of the energy efficiency and demand response programs, the Ameren Illinois Utilities will help address this concern. (*Id.*) Indeed, many of the societal benefits of implementing the proposed programs are ensured by the Ameren Illinois Utilities’ implementation of the terms of the statute. It is certainly also reasonable to expect net benefits from the Ameren Illinois Utilities’ proposal in the form of lower electricity prices, increased efficiency, environmental benefits, and overall reduction in dependence on fossil fuels.

The Act required the Ameren Illinois Utilities to jointly file, by November 15, 2007, a Plan with the Commission. This Plan must be designed to meet the following statutory requirements set forth in the Act:

In submitting proposed energy efficiency and demand-response plans and funding levels to meet the savings goals adopted by this

Act the utility shall:

(1) Demonstrate that its proposed energy efficiency and demand-response measures will achieve the requirements that are identified in subsections (b) and (c) of this Section, as modified by subsections (d) and (e).

(2) Present specific proposals to implement new building and appliance standards that have been placed into effect.

(3) Present estimates of the total amount paid for electric service expressed on a per kilowatt-hour basis associated with the proposed portfolio of measures designed to meet the requirements that are identified in subsections (b) and (c) of this Section, as modified by subsections (d) and (e).

(4) Coordinate with the Department and the Department of Healthcare and Family Services to present a portfolio of energy efficiency measures targeted to households at or below 150% of the poverty level at a level proportionate to those households' share of total annual utility revenues in Illinois.

(5) Demonstrate that its overall portfolio of energy efficiency and demand-response measures, not including programs covered by item (4) of this subsection (f), are cost-effective using the total resource cost test and represent a diverse cross-section of opportunities for customers of all rate classes to participate in the programs.

(6) Include 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.

(7) Provide for an annual independent evaluation of the performance of the cost-effectiveness of the utility's portfolio of measures and the Department's portfolio of measures, as well as a full review of the 3-year results of the broader net program impacts and, to the extent practical, for adjustment of the measures on a going-forward basis as a result of the evaluations. The resources dedicated to evaluation shall not exceed 3% of portfolio resources in any given year.

(g) No more than 3% of energy efficiency and demand-response program revenue may be allocated for demonstration of breakthrough equipment and devices.

220 ILCS 5/12-103(f).

As demonstrated below, the Ameren Illinois Utilities' Energy Efficiency and Demand Response Plan meets Section 12-103's requirements, is consistent with Section 12-103's objectives, and it is hereby approved.

IV. THE AMEREN ILLINOIS UTILITIES' COMPLIANCE WITH SECTION 12-103 OF THE PUBLIC UTILITIES ACT

A. The Ameren Illinois Utilities' Plan Is Designed to Meet Section 12-103's Energy Efficiency and Demand Response Savings Goals, Within the Statutory Spending Screens (Uncontested).

No party disputes that, in compliance with the Act, the Ameren Illinois Utilities' Plan is designed to "achieve the requirements that are identified in subsections (b) and (c) of . . . Section[12-103], as modified by subsections (d) and (e)." The Plan will reduce load based on energy delivered in the prior year by 0.2 percent in the year commencing June 1, 2008 and rising to 2.0 percent in 2015. (Ameren Ex. 1.0, p. 4.) Achievement of these targets will be subject to a cost cap of 2.0 percent prior year total distribution revenues. (*Id.*)

The Ameren Illinois Utilities retained ICF to provide support in the development of their Energy Efficiency and Demand Response Plan, including the cost-effectiveness analysis of energy efficiency and demand response measures and programs, and the development of initial program designs. (Ameren Ex. 4.0, pp. 4-5.) In addition, ICF was asked to support the Companies in the final development and analysis of the entire portfolio. (*Id.* at 5.) ICF provided an initial list of energy efficiency measures that could be considered in the analysis, and then developed required data for each measure, as described in the testimony of Ameren Illinois Utilities' witness Mr. Jensen.

Mr. Jensen explained that, as part of this data collection process, it is typical to prepare building energy simulations to estimate the energy savings associated with energy efficiency

measures, where those savings are affected by temperature. (Ameren Ex. 4.0, p. 5.) A given measure, such as an air conditioner, also depends on the type of building it is used in, and so ICF typically prepares these building energy simulations for a range of generic building types that reflect the building stock with a utility's territory. (*Id.*) The Ameren Illinois Utilities reviewed the building types suggested by ICF. (*Id.*) Based on the measure data that ICF collected or produced using building simulation, ICF prepared the analysis of measure cost-effectiveness described below. (*Id.*) The Companies reviewed the results of this in detail and helped refine inputs and calculations.

With respect to other elements of the process described below, ICF generally undertook each step and then reviewed the results in detail with the Ameren Illinois Utilities. (Ameren Exhibit 4.0, p. 5.) In particular, ICF worked closely with the Companies in the process of bundling measures into programs and designing the basic elements of each program. (*Id.*) The Ameren Illinois Utilities made final decisions with respect to program design, including general incentive levels, program implementation costs and participation rates based on an iterative process of program data refinement and cost-effectiveness analysis. (*Id.*)

1. The Ameren Illinois Utilities' Plan Is Designed to Meet Section 12-103's Energy Efficiency Goals

The statute requires the Ameren Illinois Utilities to meet certain energy efficiency targets. “‘Energy efficiency’ means measures that reduce the amount of electricity required to achieve a given end use.” 20 ILCS 3855/1-10; 220 ILCS 5/12-103(a). Section 12-103's energy efficiency goals require that, in the next three years,

[e]lectric utilities shall implement cost-effective energy efficiency measures to meet the following incremental annual energy savings goals:

- (1) 0.2% of energy delivered in the year commencing June 1, 2008;
- (2) 0.4% of energy delivered in the year commencing June 1, 2009;
- (3) 0.6% of energy delivered in the year commencing June 1, 2010
- ...

220 ILCS 5/12-103(b).

The Ameren Illinois Utilities’ testimony provided estimates of their incremental annual savings goals specified in the Act (220 ILCS 5/12-103(b)). (Ameren Ex. 2.0, pp. 22-23.) The basis for the forecast of delivery system sales for the Ameren Illinois Utilities is the 2007-2011 sales forecast. (*Id.*) The base 2008-2010 energy delivery sales forecast is:

Year	Sales (MWh)
2008	38,462,615
2009	38,865,191
2010	39,308,227

The incremental annual energy savings goals were then applied to each year of the forecasted sales in the following manner:

Year	Sales (MWh)	Savings Goals	Cum. Savings Targets (MWh)
2008	38,462,615	0.2%	76,925
2009	38,788,266*	0.4%	155,153 + 76,925 = 232,078
2010	39,076,149**	0.6%	232,078+234,457 = 466,535

$$* \quad 38,865,191 - 76925 = 38,788,266$$

$$** \quad 39,308,227 - 232,078 = 39,076,149$$

The estimated annual energy efficiency budget limits are such that the estimated average increase in the amounts paid by retail customers in connection with electric service due to the cost of energy efficiency measures increase by no more than 0.5% for each year of the 2008-2010 implementation plan. (Ameren Ex. 2.0, p. 23.) The annual energy efficiency budget limits are estimated to be:

Year	Budget Limit
2008	\$13,804,287
2009	\$29,048,741
2010	\$44,830,037

In the development of their energy efficiency and demand response portfolio, the Ameren Illinois Utilities applied the estimated budget limits to their entire portfolio. (Ameren Ex. 2.0, p. 24.) The energy efficiency cost-effectiveness metric specified in the Act is the total resource cost test (“TRC”).

The Ameren Illinois Utilities have thus identified cost-effective energy efficiency and demand response programs that represent a diverse cross section of opportunities for customers of all rate classes to participate in the programs; the annual load reduction goals have been calculated; and an estimate of the annual budget limits for the 2008-2010 implementation plan have been calculated. (Ameren Ex. 2.0, p. 24.)

The next step in the analysis is for the Ameren Illinois Utilities' energy efficiency team and ICF work together to identify a portfolio to meet the targeted load reductions without including placeholders for the DCEO energy efficiency portfolio. (*Id.*) The essence of a portfolio is balance – a mix of investments corresponding with different objectives and different risk profiles that help ensure goals are met even if individual programs under-perform. (*Id.*) The Ameren Illinois Utilities' Implementation Plan (included in Ameren Ex. 2.1, Appendix B) elaborates on this process. (*Id.*)

The initial Ameren Illinois Utilities' energy efficiency initial portfolio results, including the projected portfolio cost estimates, showed it is likely that we will approach the 0.5% average retail rate increase limits in each year of the 2008-2010 implementation plan. (Ameren Ex. 2.0, p. 24.) Knowing this, the Ameren Illinois Utilities provided guidance to DCEO indicating the Ameren Illinois Utilities' budget for the DCEO energy efficiency portfolio is 25% of the revenue requirements associated with the rate limits specified in the Act for each year of the implementation planning period. (*Id.*)

B. Ameren Illinois Utilities' Programs

The programs included in Ameren Illinois Utilities' energy efficiency 2008-2010 implementation plan, designed to meet these goals, are as follows:

Residential Solutions:

- Residential Lighting and Appliances
- Home Energy Performance
- Heating, Ventilating and Air Conditioning (“HVAC”) Diagnostics and Tune-Up

- New HVAC
- Refrigerator Recycling
- Residential Multi-Family

Business Solutions:

- Commercial and Industrial (“C&I”) Prescriptive
- C&I Custom Incentive
- New Construction
- Retro Commissioning
- Municipal Street Lighting

Each of the above programs are described in detail in Ameren Ex. 2.3 in the Implementation Plan document. Each program template addresses the following program parameters:

- Program objective
- Target market
- Program duration
- Program description
- Implementation strategy
- Exit Strategy
- Marketing strategy
- Eligible measures and incentive strategy
- Milestones
- Evaluation, measurement and verification requirements

- Administrative requirements
- Estimated participation
- Estimated budget
- Savings targets
- Program metrics
- Cost effectiveness tests

A description of each of the proposed programs follows below:

Residential Lighting and Appliances

The Residential Lighting and Appliances program will acquire cost-effective energy efficiency through customer incentives, with the intention of increasing sales of ENERGY STAR-qualified appliances and lighting products to residential customers, educating consumers (building awareness and branding) through advertising and promotions to purchase ENERGY STAR-qualified products, expanding the retail penetration of ENERGY STAR-qualified products, and coordinate with and leverage current EPA/ Department of Energy (“DOE”) efforts underway to promote qualified ENERGY STAR appliances and lighting products. (Ameren Ex. 2.0, p. 10.)

The goal and purpose of this program is to encourage customers to purchase more energy-efficient ENERGY STAR-rated appliances through the use of education and incentives. (Ameren Ex. 2.0, p. 10.) This program reduces the amount of electricity required to serve the end-use needs of the Ameren Illinois Utilities’ customers, to reduce delivery load, by reducing residential electricity consumption through utilization of more efficient lighting and appliances. Through this program, the Ameren Illinois Utilities will provide the tools to facilitate residential

customers' ability to reduce energy usage, which will decrease net future energy costs. The Ameren Illinois Utilities will receive the net benefit of a pro-rata decrease in electrical consumption for existing residential customers, thus allowing the Ameren Illinois Utilities to better manage long-term supply costs. Further, the Ameren Illinois Utilities anticipate that there may be a need to recycle CFLs in an environmentally acceptable manner, and the need to seek bids to recycle CFLs as part of its comprehensive ENERGY STAR-related initiatives.

Home Energy Performance

The Ameren Illinois Utilities plan to offer two residential programs targeting enhancement of a customer's existing infrastructure in this area. (Ameren Ex. 2.0, p. 11.) The first program is the Home Energy Performance program which will initially provide residential customers who heat their homes using electricity, with a home diagnostic and improvement program that, as it establishes itself, can evolve into a more comprehensive ENERGY STAR Home Performance program focused on developing a local home-performance industry. Contractors hired by the Ameren Illinois Utilities will provide an energy audit and arrange for installation of insulation measures as warranted by the audit. In addition, as warranted, the contractor will coordinate with the HVAC Diagnostics and Tune-Up program to deliver those program services. The second program, the Residential HVAC Diagnostics and Tune-Up program, will utilize HVAC contractors who are trained to use one of several tools used to check refrigerant charge and airflow over the coils of an AC unit. (Ameren Ex. 2.0, p. 12.) Based on an analysis provided by a technician, the contractor provides recommendations regarding charge and airflow, which would then be implemented by a technician

The purpose of the program is, through the use of Residential Home Energy audits, to provide customers with an option to receive expert information to complete comprehensive

retrofit packages for energy efficiency improvement for existing single family homes. (*Id.*) Through the Residential HVAC Diagnostic and Tune-Up program, customers will obtain energy and demand savings through improvement of the operating performance of residential central AC units.

This program will reduce the amount of electricity required to serve the end-use needs of the Ameren Illinois Utilities' customers, to reduce delivery load, by reducing residential electrical consumption through tuning up existing building shell and HVAC infrastructure and providing the tools to facilitate a residential customer's ability to reduce energy usage, which will decrease net future energy costs. (*Id.*) The Ameren Illinois Utilities will receive the net benefit of a pro-rata decrease in electrical consumption for existing residential customers, thus allowing the Ameren Illinois Utilities to better manage long-term supply costs.

Refrigerator Recycling

The Refrigerator Recycling program will promote the retirement and recycling of working secondary refrigerators and/or freezers manufactured before 1993. (Ameren Ex. 2.0, p. 12.) The Ameren Illinois Utilities will contract with an appliance recycling company to provide turnkey implementation services that include verification of customer eligibility, scheduling of pick-up appointments, appliance pickup, recycling and disposal activities, and incentive processing. (Ameren Ex. 2.0, p. 13.) In contractor selection, preference will be given to appliance recycling companies that have recycling/disposal facilities located in Illinois, or that are willing to construct such facilities given the anticipated volume resulting from the program. Recycling/disposal practices will be designed to prevent the release of chlorofluorocarbons ("CFCs") into the environment.

The program will promote the retirement and recycling of secondary, inefficient refrigerators from households by offering a turn-in incentive and free pickup of working equipment, as well as information and education on the cost of keeping an inefficient unit in operation. (*Id.*)

This program will reduce the amount of electricity required to serve the end-use needs of the customers, to reduce delivery load. By reducing residential electrical consumption through elimination of old and inefficient secondary refrigerators, the Ameren Illinois Utilities will provide customers with a mechanism to proactively impact future energy usage which will decrease net future energy costs. (*Id.*) The Ameren Illinois Utilities will receive the net benefit of a pro-rata decrease in electrical consumption for existing residential customers, thus, again, allowing them to manage long term supply costs.

Residential Multifamily Program

The Residential Multifamily program will provide installation of measures in tenant spaces related to central AC unit diagnostics and tune-up. (Ameren Ex. 2.0, p. 14.) It also provides significant incentives for replacement of standard efficiency common area lighting and incandescent and fluorescent exit signs with LED exit signs. More expensive or complex measures (windows, replacement of roof-top AC units) would be subject to an energy analysis to validate cost-effectiveness and incentive levels. The purpose of the program is to deliver cost-effective conservation services to the multi-family housing market, with a focus on common area improvements.

This program will also reduce the amount of electricity required to serve the end-use needs of the Ameren Illinois Utilities' customers, to reduce delivery load. By reducing

residential electrical consumption through more efficient lighting and properly tuned air conditioning, the Ameren Illinois Utilities will provide the tools to facilitate a residential customer's ability to reduce energy usage, which will decrease future energy costs. As with other programs described, the Ameren Illinois Utilities will receive the net benefit of a pro-rata decrease in electrical consumption for existing residential customers. This will, in turn, allow the Ameren Illinois Utilities to better manage long-term supply costs.

Commercial and Industrial (“C&I”) Prescriptive

The Ameren Illinois Utilities will offer two C&I incentive-based programs that target upgrades to existing infrastructure through prescriptive and custom incentives, with the objective of encouraging C&I customers to purchase more energy-efficient technology: the C&I Prescriptive Incentive Program and the C&I Custom Incentive Program. (Ameren Ex. 2.0, pp. 14-15.) The C&I Prescriptive Incentive Program will provide incentives for energy-efficient products that are readily available in the marketplace. (Ameren Ex. 2.0, p. 15.) The C&I Custom Incentive Program will provide financial assistance to customers to support implementation of high-efficiency opportunities, which are available at the time of new equipment purchases, facility modernization, and industrial process improvement. The purpose of these programs is intended to encourage C&I customers to purchase energy efficient technologies when upgrading their facilities.

This plan will reduce the amount of electricity required to serve the end-use needs of the Ameren Illinois Utilities' customers, to reduce delivery load. (Ameren Ex. 2.0, p. 15.) Through the use of incentives targeting new energy-efficient technologies, the Ameren Illinois Utilities will encourage C&I customers to replace older inefficient technologies with newer, more efficient technologies. (*Id.*) The net effect of these programs for customers will be to reduce the

cost of the technology upgrades and to lower long-term energy costs through more energy efficient processes.

New Construction

The Commercial New Construction Program will promote energy efficiency through a comprehensive effort to influence building design practices. (Ameren Ex. 2.0, p. 15.) The program will work with building owners/managers, design professionals, trade allies, and contractors to design and construct high- performance buildings that provide improved energy efficiency, strong environmental performance, systems performance and comfort. This will be accomplished through an integrated design process that results in improved efficiency in the building envelope, lighting, HVAC and other energy and resource-consuming systems.

The goal of this program is to capture energy efficiency opportunities which are available during the design and construction of new buildings, major renovations and tenant build-outs in the non-residential market that are being built to meet Leadership in Energy And Environmental Design (“LEED”) certification standards. (Ameren Ex. 2.0, p.16.) The LEED Green Building Rating System, developed by the U.S. Green Building Council (“USGBC”), provides a suite of standards for environmentally sustainable construction. Since its inception in 1998, LEED has grown to encompass over 14,000 projects in all of the 50 States and 30 countries covering 1.062 billion square feet (99 km²) of development area. The hallmark of LEED is that it is an open and transparent process where the technical criteria proposed by the LEED committees are publicly reviewed for approval by the more than 10,000 membership organizations that currently constitute the USGBC.

This Plan will also reduce the amount of electricity required to serve the end-use needs of the Ameren Illinois Utilities' customers, to reduce delivery load. (*Id.*) Through the use of education to promote energy-efficient design practices, the Ameren Illinois Utilities will encourage commercial builders to use energy efficiency best practices when planning and designing new construction projects. Commercial customers will be able to reduce future energy usage, which will decrease net future energy costs. The Ameren Illinois Utilities will receive the net benefit of a pro-rata decrease in electrical consumption for new commercial construction, thus allowing the Ameren Illinois Utilities to better manage long-term supply costs. (Ameren Ex. 2.0, p. 17.)

Retro Commissioning

The C&I Retro-Commissioning program is intended to help building owners and managers determine the energy performance of buildings, to identify major opportunities for improving performance through re-optimization of existing systems and replacement of under-performing equipment, and to provide financial support for taking recommended actions (in some cases). (Ameren Ex. 2.0, p. 17.) The program would provide several related sets of services including initial qualification based on benchmarking or quick facility assessments, more detailed facility assessments intended to identify opportunities for systems improvements, development of a retro-commissioning plan, training, direct installation of low-cost measures and verification of plan implementation and incentive fulfillment. Through the use of C&I energy audits, the purpose of the plan is to provide customers with the tools to improve the performance of energy-using equipment in their existing buildings by focusing on optimizing mechanical equipment and related controls.

This plan will also reduce the amount of electricity required to serve the end-use needs of the Ameren Illinois Utilities' customers, to reduce delivery load. By reducing C&I electrical consumption through more efficient processes and technologies, the Ameren Illinois Utilities will provide the tools to facilitate C&I customers' ability to reduce future energy usage, which will decrease net future energy costs. (Ameren Ex. 2.0, p 18.) The Ameren Illinois Utilities will receive the net benefit of a pro-rata decrease in electrical consumption for existing C&I customers, thus allowing better management of long-term supply costs.

Municipal Street Lighting

The Street Light program will target customers in the Ameren Illinois Utilities' service territory that have mercury vapor and/or incandescent street light fixtures that are owned by the Ameren Illinois Utilities. (Ameren Ex. 2.0, p.18.) The Ameren Illinois Utilities will use financial incentives to encourage adoption of the replacement bulbs. The Street Light program will target street lights owned by the Ameren Illinois Utilities with the objective of replacing older inefficient street lights with new high efficiency street lights.

This plan will reduce the amount of electricity required to serve the end-use needs of the Ameren Illinois Utilities' customers, to reduce delivery load. By replacing older, inefficient street light bulbs, the Ameren Illinois Utilities will be able to reduce street light electrical consumption through utilization of more efficient bulbs. The program will impact future energy usage, which will reduce future energy costs and receive the net benefit of a pro-rata decrease in electrical consumption for existing customers, thus allowing the Ameren Illinois Utilities to manage long-term supply costs.

1. The Ameren Illinois Utilities' Plan is Designed to Meet Section 12-103's Demand Response Goals.

The statute also requires the Ameren Illinois Utilities to “implement cost-effective demand-response measures to reduce peak demand by 0.1% over the prior year for eligible retail customers² . . . commenc[ing] June 1, 2008 and continuing for 10 years.” 220 ILCS 5/12-103(c). Demand response “means measures that decrease peak electricity demand or shift demand from peak to off-peak periods.” 20 ILCS 3855/1-10; 220 ILCS 5/12-103(a).

The Ameren Illinois Utilities developed their implementation plan in accordance with the demand response provisions of the Act. The Act requires that electric utilities shall implement cost-effective demand-response measures to reduce peak demand by 0.1% over the prior year for eligible retail customers. 220 ILCS 5/12-103(c). Eligible retail customers are retail customers that purchase power and energy from the electric utility under fixed-price bundled service tariffs (other than those retail customers whose service is declared competitive) and certain other customer groups, including customers who have self-generation, customers electing hourly pricing, or those customers who are otherwise ineligible for fixed-price bundled tariff service. (Ameren Ex. 2.0, p. 19.) Consequently, the first step was to estimate the peak load requirements associated with the eligible customer group.

The Ameren Illinois Utilities estimated the eligible customer group around which to develop the demand response implementation plan by estimating the load to serve per our power procurement plan. (Ameren Ex. 2.0, p. 19.) The Ameren Illinois Utilities’ estimate of the peak demand and the associated peak reductions for eligible customers for the 2008-2011 implementation planning period (a 0.1% reduction in the peak demand of eligible customers) is:

² Eligible retail customers are “those retail customers that purchase power and energy from the electric utility under fixed-price bundled service tariffs, other than those retail customers whose service is declared or deemed competitive under Section 16-113 and those other customer groups specified in this Section, including self-generating customers, customers electing hourly pricing, or those customers who are otherwise ineligible for fixed-price bundled tariff service.” 220 ILCS 5/16-111.5(a).

Year	Peak Demand Reduction (MW)
2008	5 MW
2009	10 MW
2010	15 MW

Ameren Illinois Utilities' witness Mr. Jones testified that in the first year (June 1, 2008 through May 31, 2009), the Companies expect to provide delivery service for 38,462,615 MWh before implementation of energy-efficiency measures. (Ameren Ex. 3.0, p. 4.) Multiplying the first year goal of 0.2% by expected sales gives 76,925 MWh. (*Id.*) In the second year (June 1, 2009 through May 31, 2010), the Companies expect to deliver 38,865,191 MWh before implementation of energy-efficiency measures. (*Id.*) The second year incremental goal equals [38,865,191 MWh less 76,925 MWh] times 0.4%, or 155,153 MWh. (*Id.*) The third year incremental goal equals [39,308,227 MWh less 76,925 MWh less 155,153 MWh] times 0.6%, or 234,457 MWh. (*Id.*) The Companies sales forecast, adjusted for energy-efficiency goals, were used in the determination of the cost limit for energy-efficiency and demand-response measures. (*Id.*) Ameren Ex. 3.1, columns 2 through 5 provide additional details on the calculation of energy-efficiency load reduction goals. (*Id.* at p. 5.)

The programs included in Ameren Illinois Utilities' 2008-2010 implementation plan that address demand response are:

Residential Solutions:

- Residential Air Conditioning ("AC") Unit Direct Load Control Program

Business Solutions

- Small Commercial Demand Credit Program.

ICF expert and Ameren Illinois Utilities' witness Mr. Jensen assessed the cost-effectiveness of demand response programs for the Companies. (Ameren Ex. 4.0, p. 30.) ICF found that the Residential AC load control program has an estimated TRC benefit-cost ratio of 1.73. (*Id.*) The Commercial Demand Credit program has an estimated benefit-cost ratio of 2.5. (*Id.*) Thus, both programs pass the TRC test.

Residential Air Conditioning (“AC”) Unit Direct Control

The residential demand response program, the AC Unit Direct Load Control, is based on fact that almost 100% of the Ameren Illinois Utilities' residential customers have a central AC system. (Ameren Ex. 2.0, p. 20.) These systems typically account for approximately half of a home's summer peak demand. Under the Direct Load Control program, the Ameren Illinois Utilities provide for free equipment and installation of a switch mounted on the outside AC unit that uses a one-way paging strategy. During summer peak periods, the Ameren Illinois Utilities would activate the switch, resulting in cycling of the central AC unit. Customers may receive an incentive in return for giving the Ameren Illinois Utilities the option to cycle their air conditioner.

The residential Direct Load Control program is designed to acquire peak demand reduction through fully-automated Direct Load Control demand response systems for the residential sector. (Ameren Ex. 2.0, p. 20.) This plan will allow the Ameren Illinois Utilities to cycle air conditioners, during periods of tight supply conditions through the use of automated switches. Through participation, residential customers will be paid an incentive in return for giving the Ameren Illinois Utilities the option of cycling their air conditioner.

This plan will reduce the amount of capacity required to serve the end-use needs of the Ameren Illinois Utilities' customers. (Ameren Ex. 2.0, p. 21.) Through the use of this program, the Ameren Illinois Utilities will be able to use a customer demand-response option to manage the need to purchase expensive peak power during periods when the transmission system is constrained or when market prices are high. These savings are then shared with participating customers through incentive payments as well in the form of future lower costs to acquire power supply to serve the needs of customers during peak periods.

Commercial Demand Credit Program

Under the Commercial Demand Credit program, the Ameren Illinois Utilities will work with customers to determine equipment which may be switched off through automated dispatch from the Ameren Illinois Utilities. (Ameren Ex. 2.0, p. 21.) To facilitate this effort, a Control Work Reaction Plan is developed through coordinated efforts with the customer. During peak demand periods, the Ameren Illinois Utilities (likely working through a third party implementation contractor) will notify the customer and activate a wireless signal that activates the switch, which in turn relays the equipment on and off. Customers are paid an incentive in return for giving the Ameren Illinois Utilities various cycling options. The purpose of the program is to target the acquisition of 2.5 MW of peak demand reduction through fully-automated Direct Load Control demand response systems for the small commercial sector who choose to remain on bundled service.

This plan will reduce the amount of capacity required to serve the end-use needs of the Ameren Illinois Utilities customers. (Ameren Ex. 2.0, p. 21.) Through the use of this program, the Ameren Illinois Utilities will be able to use a demand response option to manage the need to purchase expensive peak power during periods when the transmission system is constrained or

market prices are high. These savings are then shared with participating customers through incentive payments, as well in the form of future lower costs to acquire power supply to serve the needs of customers during peak periods. (Ameren Ex. 2.0, p. 22.)

2. Section 12-103's Statutory Spending Screens.

Ameren Illinois Utilities' witness Mr. Leonard Jones testified that the cost limit for energy-efficiency and demand-response measures has been determined to be \$13.8 million, \$29 million, and \$44.8 million for successive plan years one, two, and three, respectively. Year one consists of the period June 1, 2008 through May 31, 2009.

The Ameren Illinois Utilities' Plan, along with the Department of Commerce and Economic Opportunity ("DCEO"), anticipates spending up to the projected cost limit. Accordingly, the charge is expected to be 0.0360 ¢/kWh for the year beginning June 1, 2008.

The "cost limit" regarding implementation of energy efficiency and demand-response measures is defined by Section 12-103(d) of the Act, which calls for a series of checks to ensure spending on measures does not exceed specified cost per kWh limits. 220 ILCS 5/12-103(d). The specified cost per kWh limit multiplied by the expected kWh sales for the plan period produces the cost limit.

The measures implemented for energy-efficiency kWh reductions applicable to all delivered energy, regardless of the customer's choice of supplier for power and energy service. (Ameren Ex. 3.0, p. 3.) However, demand-response measures are applicable only to the load of the Companies' customers served through fixed-price "virtual" bundled service tariffs for customer groups whose service has not been declared competitive (i.e., customers with demands under 400 kW). (*Id.*, citing 220 ILCS 5/12-103(a).) There is no separate cost limit for energy-

efficiency and demand-response measures. Both requirements fall under a single cost limit calculation. (*Id.*)

Mr. Jones testified that the Ameren Illinois Utilities' cost limit has been calculated as if for a single electric utility, because Section 12-103(i) states Illinois electric utilities that are affiliated by virtue of a common parent company are considered a single electric utility. (*Id.*) The Ameren Illinois Utilities are affiliated by virtue of a common parent company, Ameren Corporation. (Ameren Ex. 3.0, p. 3.)

The Ameren Illinois Utilities have not determined a separate cost limit for each rate class, because the Act holds the Companies responsible for meeting the appropriate load reduction goals based on evaluating performance as a whole. (*Id.*, p. 4.) Accordingly, the cost limit is determined as a whole under a single electric utility structure.

Mr. Jones explains that the Act directs the utilities to reduce the amount of energy efficiency and demand-response measures implemented in any single year if the cost exceeds certain limits. (Ameren Ex. 3.0, p. 5, citing 220 ILCS 5/12-103(d).) The cost of measures are to be reduced to a level necessary to limit the estimated average increase paid by retail customers to: (1) in 2008, no more than 0.5% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2007; (2) in 2009, the greater of an additional 0.5% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2008, or 1% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2007; and (3) in 2010, the greater of an additional 0.5% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2009 or 1.5% of the amount paid per kilowatt hour by those customers during the year ending May 31, 2007. (*Id.*) The statute also prescribes rate

impact limitations for years beyond 2010 but they are not germane with respect the Plan at issue here. (*Id.*)

Determining the average ¢/kWh paid by customers requires estimating power and energy costs for customers served by a Retail Electric Supplier (RES). (Ameren Ex. 3.0, p. 5, citing 220 ILCS 5/12-103(a).) Section 12-103(a) states “For purposes of this Section, the total amount paid for electric service includes without limitation estimated amounts paid for supply, transmission, distribution, surcharges, and add-on-taxes.” (*Id.*) Mr. Jones explains that the approach used to estimate the amount paid for RES-served customers relies upon MISO Locational Marginal Prices (“LMP”) data for the first period, and a combination of MISO LMP and Platts Energy Trader information for future periods. (Ameren Ex. 3.0, p. 6.)

Since the first year evaluates average ¢/kWh values for the year ending May 2007, actual data was used to the extent available. (*Id.*) Specifically, hourly MISO LMP values were multiplied by hourly settlement data for the period from January 1, 2007 through the end of May 2007. (*Id.*) Hourly settlement data consists of actual hourly meter data of interval metered customers (generally those over 400 kW) and profile data for all other customers. (*Id.*) Data from June 2006 through December 2006 was not used because only 16% of total RES served load for the 12 months ending May, 2007 was delivered in that time, and hourly load information was not readily available. (*Id.*) Instead, the average cost developed using data from first five months of 2007 was used to extrapolate a cost for RES-provided kWh in 2006. (*Id.*)

For the second year, market prices were estimated using two sources. (*Id.*) First, historic LMP values were used to estimate off-peak prices. (*Id.*) Second, on-peak forward prices listed in Platts Energy Trader, shaped by the historic relationship of LMP prices for the 16 hour on-

peak period, were used. (*Id.*) This market price determination is similar to the approach used in AmerenIP's former Market Value Index tariff. (*Id.*) Historic hourly loads for each class were multiplied by estimated hourly prices to arrive at the total market-based cost. (*Id.*) An identical process was used to determine third year market prices, except on-peak forward prices were escalated by about 5% to reflect the expected increase between calendar year 2008 market forwards and 2009 market forwards. (*Id.*)

The supply cost estimates also include additional expenses such as provisions for distribution losses, capacity, ancillary services, MISO market settlement costs, Supply Cost Adjustments, and transmission services. (Ameren Ex. 3.0, p. 7.) Distribution losses add about 0.3 ¢/kWh to the cost estimates of DS-2, DS-3, and DS-5 customers, and about 0.08 ¢/kWh to DS-4 costs. (*Id.*) The lower distribution loss value for DS-4 reflects that a significant portion of these customers' total load is served at higher voltages where line losses are not as great. (*Id.*) Values for capacity and ancillary services reflect the approximate cost of procuring the same to serve the Companies' Rider RTP-L customers. (*Id.*) The additional cost is about 0.4 ¢/kWh, 0.33 ¢/kWh, and 0.26 ¢/kWh for DS-2, DS-3, and DS-4 customers, respectively. (*Id.*) The Supply Cost Adjustment is a cost that is added to the Company's bundled service customers' bills to recover the cost of the Companies procurement function, uncollectibles, and cash working capital expense. (*Id.*) A RES may have similar expenses, and thus these components were included. (*Id.*) The additional cost is about 0.03 ¢/kWh for all classes. (*Id.*) A proxy value for MISO market settlement costs was also included. (*Id.*) A value of 0.1 ¢/kWh was added to the cost estimate for DS-1 through DS-4 customers and 0.05 ¢/kWh for DS-5 customers. (*Id.*) A lower value for DS-5 customers was assigned since these customers operate under a known load pattern, allowing minimization of MISO market settlement costs. (*Id.*)

Finally, transmission service costs were added. (*Id.*) The monthly coincident peak for each class was multiplied by the present network rate to arrive at a total transmission cost for the class. (*Id.*) The total cost, divided by class kWh, yielded the estimated transmission cost per kWh. The estimated transmission costs ranged from about 0.25 ¢/kWh for DS-2, to 0.17 ¢/kWh for DS-4. (*Id.*)

To develop bundled rate and delivery services average costs per kWh, historic bundled service and delivery service values were provided through a query of the Companies' billing system. (Ameren Ex. 3.0, p. 8.) The Companies' forecast linked to the current operating budget provided expected future sales and revenue for both bundled service and delivery service customers. (*Id.*) Bundled service power prices were not adjusted to reflect future price expectations. (*Id.*) Approximately 1/3 of present power supply contracts will expire and be replaced on or about June 1, 2008. (*Id.*) Another 1/3 will each expire on or about June 1, 2009 and June 1, 2010. (*Id.*) The Companies do not know if future power supply contracts will be higher, lower, or stay the same. (*Id.*) This calculation assumes that power supply costs to serve the Companies' fixed price load will remain the same. (*Id.*)

Estimated delivery service prices were not adjusted to reflect the Ameren Illinois Utilities' recently filed delivery services rate cases. (Ameren Ex. 3.0, p. 8.) While the Companies believe their full requested increase is warranted, there is no guarantee that the increase will be granted. (*Id.*) Thus, we have erred on the side of ensuring that the increase is no more than an additional 0.5% of each respective year's average cents per kWh either paid or estimated based on current Delivery Service rates. (*Id.*)

The Ameren Illinois Utilities have estimated that average cents/kWh paid to be 7.192 ¢/kWh, 7.892 ¢/kWh, and 8.126 ¢/kWh for the years ending May 2007, May 2008, and May 2009, respectively. (Ameren Ex. 3.0, p. 9.)

Ameren Ex. 3.1 demonstrates the calculation of the cost limit based on the Companies' sales forecast and average cents per kWh applicable to each of the three planning years. (*Id.*) The limit for the first year is 0.5% of the year ending May 2007 value of 7.192 ¢/kWh, or 0.036 ¢/kWh. Multiplying 38,385,690 MWh (expected delivered sales for the plan period June 1, 2008 – May 31, 2009) by the first year limit per kWh of 0.036 ¢/kWh yields \$13.8 million. (*Id.*)

In the second year, the cost limit is the greater of 1.0% of the year ending May 2007 value (0.0719 ¢/kWh) which produces a limit of \$27.8 million, or an additional 0.5% of the year ending May 2008 cents/kWh value of 7.892 ¢/kWh (0.0395 ¢/kWh). (*Id.*) The 2008 amount adds \$15.2 million, which when added to \$13.8 million produces \$29 million. Thus, the total limit for the second year is \$29 million. (*Id.*)

In the third year, the cost limit is the greater of 1.5% of the year ending May 2007 value which produces a limit of \$41.9 million, or an additional 0.5% of the year ending May 2009 cents/kWh value of 8.126 ¢/kWh (0.0406 ¢/kWh). (*Id.*) The 2009 amount adds \$15.8 million, which when added to \$29 million produces \$44.8 million. (*Id.*) Thus, the total limit for the third year is \$44.8 million. (*Id.*)

The Ameren Illinois Utilities do not plan to update the cost limits for the second and third years of the plan to reflect updates to various cost elements, such as delivery service revenue, transmission revenue, and market cost information. (Ameren Ex. 3.0, p. 10.) While each of those cost items, and others, can influence the overall cost per kWh paid by customers, updating

the cost limit could result in significantly higher or lower spending limits. (*Id.*) This in turn could significantly impact the Companies' ability to implement the plan approved by the Commission. (*Id.*) The Companies seek to have the Commission approve a three year plan containing proposed programs to meet the MWh savings goals and budgets. (*Id.*) Updating the cost limit only every three years provides more stability to the proposed plans for energy efficiency and demand response measures that the Companies request the Commission to approve in this proceeding. (*Id.*)

3. No Party Contests That The Ameren Illinois Utilities' Plan, In Conjunction With DCEO's Plan, Is Designed to Comply With These Statutory Requirements.

Mr. Jensen testified that, in his opinion, the Ameren Illinois Utilities' energy efficiency portfolio, in conjunction with DCEO's portfolio, is designed to achieve the savings goals in Section 12-103(b) of the Public Utilities Act. (Ameren Ex. 4.0, p. 31.) Mr. Jensen testified that the explicit objective of the analysis process was to design a portfolio that would meet the savings goals, and the portfolio proposed by the Companies inclusive of the DCEO programs does meet the savings targets. (*Id.*)

Further, Mr. Jensen testified that the Ameren Illinois Utilities' proposed Plan portfolio complies with the Act's rate impact screen and spend cap. (Ameren Ex. 4.0, p. 44.) The Companies provided ICF with estimates of the maximum amount that could be spent per year, consistent with the rate cap. (*Id.*) The sum of the costs that ICF has estimated for the Companies' programs, the costs that DCEO estimates for its programs, and portfolio-wide costs for portfolio administration, evaluation and information, awareness and education programs is less than this maximum amount (in each year of the plan). (*Id.*)

Additionally, Mr. Jensen described the diversity of the programs in the Ameren Illinois Utilities' Plan. Mr. Jensen testified that the Ameren Illinois Utilities' portfolio includes both the programs developed by the Companies as well as those developed by the DCEO. (Ameren Ex. 4.0, p. 44.) Further, the programs developed by DCEO have been fully integrated into the Companies' portfolio and they contribute significantly to diversify by their focus on low income, municipal and educational sectors. (*Id.*) The programs included in the portfolio address most key end uses. (*Id.*) Within the residential sector, the programs address residential lighting, second refrigerators, new central and room air conditioners, air infiltration, central air conditioner charge and airflow, common area lighting in multi-family buildings, and advanced lighting packages in new homes. (*Id.*) Within the commercial sector, the programs incorporate measures addressing lighting, motors, air conditioning, building operations, commercial food service equipment, office equipment and ventilation. (*Id.*) The wide diversity of industrial end use and measures is addressed by the custom incentive program, which is designed to include all measures that can be found on a project basis to be cost-effective. (*Id.*) The programs within the portfolio are designed to evolve and incorporate additional measures over time. (Ameren Ex. 4.0, p. 45.) In addition, the programs are diverse across sectors and market segments. (*Id.*) The programs address residential customers living in existing single-family and multi-family homes, as well as low-income customers through programs offered by the DCEO for customers in existing renovated and new homes. (*Id.*) The portfolio also includes programs targeted at residential and commercial new construction. (*Id.*) The programs also address all commercial, industrial, institutional and governmental customers. (*Id.*)

Mr. Jensen also described the various customers for which energy efficiency and demand response programs are made available. (Ameren Ex. 4.0, p. 45.) The portfolio has wide

coverage of sectors and market segments. (*Id.*) Programs are designed for low-income residential customers, municipal customers, large and small commercial customers, renters, homeowners, industrial facilities, and existing and new construction markets. (*Id.*)

While Mr. Jensen concluded that the Ameren Illinois Utilities' energy efficiency portfolio, in conjunction with DCEO's portfolio, is designed to achieve the savings goals in Section 12-103(b) of the Public Utilities Act, he cautioned that there are a number of uncertainties that characterize the analysis. (Ameren Ex. 4.0, p. 31.) For example, if specific measures do not save as much energy as expected, if program participation is not what is estimated, or if the net-to-gross ratios chosen by the independent evaluator vary from those that we have used in our analysis, the verified net savings estimated by the evaluator could be different than the estimate. (*Id.*)

Because of this uncertainty, ICF performed a risk analysis of the portfolio. (Ameren Ex. 4.0, p. 31.) The statute prescribes both hard energy efficiency savings goals and penalties for failing to meet those goals. Thus, the Ameren Illinois Utilities need a portfolio that is sufficiently robust and flexible that they can meet their goals even if one or more programs do not deliver as expected. (Ameren Ex. 4.0, p. 31.) To determine how to create this robustness, it was needed to examine how overall portfolio performance would be affected by program- and measure-specific performance that did not match expectations. (*Id.*) In addition, identifying key portfolio uncertainties allows the Companies to target their efforts going forward more efficiently by focusing on improving the design of the programs that contribute the most to portfolio risk, and by designing away from the risk; that is, focusing on those programs for which there is greater confidence in key assumptions. (*Id.*) Mr. Jensen testified, however, that there always will be a trade-off between minimizing risk and minimizing cost. (Ameren Ex. 4.0, p.

32.) As is often the case, the least expensive options often carry the greatest risk. (*Id.*) Thus, designing away from the risk very often imposes a cost on the portfolio. (*Id.*)

The risk analysis involved establishing probability distributions around the four variables in the portfolio that represent program performance. (Ameren Ex. 4.0, p. 32.) These variables include: (1) measure energy savings, (2) projected measure installations, (3) net-to-gross ratios and (4) the engineering verification factor. (*Id.*) Measure energy savings is the difference in annual energy consumption between the baseline and efficient technologies. (*Id.*) Projected measure installations is the count of measures the program expects to install. (*Id.*) The net-to-gross ratio (“NTGR”) in the model is defined as one minus the free-ridership rate plus the spillover rate, where spillover is the fraction of program savings attributable to customers who were influenced by but did not formally participate in a program. (*Id.*) The engineering verification factor is the ratio of evaluated verified installations to gross tracking installations. (*Id.*) The estimated energy use reduction for a measure is the product of these four variables. (*Id.*)

ICF set probability distributions around each of these four variables for each program and ran a Monte Carlo simulation of the portfolio to see what effect these uncertainties would have given the structure of the portfolio. (Ameren Ex. 4.0, p. 32.) A Monte Carlo simulation is actually a large number of portfolio simulations, each of which includes different values of the variables around which distributions were set. (*Id.*) The results allow us to calculate the probability that the portfolio will meet its target given program performance uncertainty and to identify the uncertainties that contribute the most to portfolio risk. (*Id.*)

Mr. Jensen explained that the results of the Monte Carlo simulation showed that uncertainties contributing the greatest amount to portfolio risk are the NTGR for CFLs the residential and commercial sectors. (Ameren Ex. 4.0, p. 33.) However, this is not surprising for several reasons. (*Id.*) *First*, CFLs constitute a large portion of KWH savings in the Ameren Illinois Utilities' portfolio, as they do in many portfolios around the country. (*Id.*) *Second*, it is very difficult to predict the value that an evaluator will assign to the program NTGR based on ex post analysis. (*Id.*) Using NTGR from similar programs around the country is a reasonable approach and one that is consistently used. (*Id.*) Presumably, the independent evaluators will estimate NTGR for the Companies' programs, although given the low evaluation budget and the high cost of developing NTGR estimates, it is unclear if the evaluator will develop such program-specific estimates or not. (*Id.*) There is a correlation between the precision of NTGR and the evaluation budget; less precision means more uncertainty. (*Id.*)

Mr. Jensen testified that this risk does not materially affect his view of whether the Plan is designed to meet the statutory targets. (Ameren Ex. 4.0, p. 33.) Although CFL NTGR uncertainty contributes the most to the Companies' portfolio risk of all of the variables examined in the risk analysis, this particular risk can be and has been mitigated to some extent. (*Id.*) Mr. Jensen testified that, under any reasonable set of circumstances, the Companies must be able to realize substantial energy savings from the CFLs incented through its programs if they are to achieve their targets, as there are no other measures that can reach significant market share so rapidly and inexpensively. (*Id.*)

However, the Companies have three options for managing the risk. (*Id.*) The first is to ensure that programs that include CFLs are appropriately designed to reduce the likelihood of free-ridership. (*Id.*) The Ameren Illinois Utilities have done this by emphasizing designs that

require participants to pay some fraction of the cost of the bulbs or take some affirmative action to receive the bulbs. (Ameren Ex. 4.0, p. 34.) Second, the Companies can plan to move a greater number of CFLs through their program than they otherwise would, such that the net savings from the CFLs (after accounting for the NTGR) are sufficient to enable the Companies to meet their targets. (*Id.*) The Companies have done this, although the number of CFLs envisioned by the plan is well within the range of what other utilities have accomplished. (*Id.*) Finally, the Companies can accelerate (as much as is prudent) the introduction of other programs and measures that are not as susceptible to the NTGR uncertainty. (*Id.*) The Companies have done this by planning to accelerate the level of activity under its proposed retro-commissioning and custom incentive program elements. (*Id.*) In addition to these three options, assurance that the independent evaluator will calculate the NTGR as the defined above, that is, including both free ridership and spillover, substantially reduces risk since those two factors tend to offset one-another. (*Id.*)

4. Commission Conclusion

Upon review of the statutory requirements and evidence, the Commission finds that the Ameren Illinois Utilities' Plan is designed to meet Section 12-103's energy efficiency and demand response savings goals, within the statutory spending screens.

5. Flexibility to Manage the Portfolio Going Forward (Contested).

6. Other Parties' Recommendations Regarding the Plan (Contested).

C. The Ameren Illinois Utilities Satisfy the Statutory Requirements Regarding New Building And Appliance Standards (Uncontested).

Section 12-103(f) requires that the Ameren Illinois Utilities must “[p]resent specific proposals to implement new building and appliance standards that have been placed into effect.”

220 ILCS 5/12-103(f)(2). Because the Ameren Illinois Utilities are only aware of new building standards applicable to school buildings (as discussed by DCEO witness Jonathan Feipel), DCEO's programs are designed to address this issue. (DCEO Ex. 1.0, pp. 19-20, 26, 33) The Ameren Illinois Utilities are not aware of any new state standards applicable to appliances. (*See also* DCEO Ex. 2.0, p. 17.) No party has contested the Ameren Illinois Utilities' compliance with this issue.

1. Commission Conclusion

Upon review of the statutory requirements and evidence, the Commission finds that the Ameren Illinois Utilities' Plan satisfies the statutory requirements regarding new building and appliance standards.

D. The Ameren Illinois Utilities Provide Estimates of the Total Amount Paid for Electric Service Associated with the Plan (Uncontested).

The Ameren Illinois Utilities are required to "present estimates of the total amount paid for electric service expressed on a per kilowatt hour basis associated with the proposed portfolio of measures designed to meet the requirements that are identified in subsections (b) and (c) of this Section, as modified by subsections (d) and (e)," according to Section 12-103(f)(3). In his direct testimony and exhibits, Mr. Jones provides the estimates of the total amount paid for electric service, expressed on a per kilowatt hour basis, of the Ameren Illinois Utilities' portfolio of measures. No party contests that the Ameren Illinois Utilities have complied with this requirement.

The Ameren Illinois Utilities have estimated that average cents/kWh paid to be 7.192 ¢/kWh, 7.892 ¢/kWh, and 8.126 ¢/kWh for the years ending May 2007, May 2008, and May 2009, respectively. (Ameren Ex. 3.0, p. 9; *see also* Staff Ex. 1.0, pp. 9-10.)

Ameren Ex. 3.1 demonstrates the calculation of the cost limit based on the Companies' sales forecast and average cents per kWh applicable to each of the three planning years. (Id.) The limit for the first year is 0.5% of the year ending May 2007 value of 7.192 ¢/kWh, or 0.036 ¢/kWh. Multiplying 38,385,690 MWh (expected delivered sales for the plan period June 1, 2008 – May 31, 2009) by the first year limit per kWh of 0.036 ¢/kWh yields \$13.8 million. (Id.)

In the second year, the cost limit is the greater of 1.0% of the year ending May 2007 value (0.0719 ¢/kWh) which produces a limit of \$27.8 million, or an additional 0.5% of the year ending May 2008 cents/kWh value of 7.892 ¢/kWh (0.0395 ¢/kWh). (Id.) The 2008 amount adds \$15.2 million, which when added to \$13.8 million produces \$29 million. Thus, the total limit for the second year is \$29 million. (Id.)

In the third year, the cost limit is the greater of 1.5% of the year ending May 2007 value which produces a limit of \$41.9 million, or an additional 0.5% of the year ending May 2009 cents/kWh value of 8.126 ¢/kWh (0.0406 ¢/kWh). (Id.) The 2009 amount adds \$15.8 million, which when added to \$29 million produces \$44.8 million. (Id.) Thus, the total limit for the third year is \$44.8 million. (Id.)

1. Commission Conclusion

Upon review of the statutory requirements and evidence, the Commission finds that the Ameren Illinois Utilities have provided estimates of the total amount paid for electric service associated with the Plan, in accordance with the Act.

E. The Ameren Illinois Utilities Have Coordinated with State Agencies (Uncontested).

The Ameren Illinois Utilities have coordinated with state agencies to develop their respective plans in accordance with statutory requirements. (DCEO Ex. 1.0, pp. 6, 12, 20.) In coordinating with the Department of Commerce and Economic Opportunities (“DCEO”), Section 12-103 (e) provides that “[e]lectric utilities shall implement 75% of the energy efficiency measures approved by the Commission, . . . [and t]he remaining 25% of those energy efficiency measures approved by the Commission shall be implemented by the Department of Commerce and Economic Opportunity, and must be designed in conjunction with the utility and the filing process.” 220 ILCS 5/12-103(e).

The Ameren Illinois Utilities and DCEO coordinated, among other actions, energy efficiency measure screening issues, program design issues, and budget issues starting in mid-August 2008 and continuing through the preparations for this filing. (Ameren Ex. 2.0, p. 27.) There was consensus in the interpretation of the Act concerning allocating DCEO 25% of each electric utility’s energy efficiency budget – including portfolio administration costs and evaluation, measurement and verification costs. (*Id.*) There was also an understanding that the electric utilities’ budgets that address demand response programs should be removed from the overall budgets prior to assigning the 75%/25% split, since DCEO is not required to administer demand response programs in its portfolio. (*Id.*) There was consensus that DCEO would administer energy efficiency programs targeted to households at or below 150% of the poverty level (*Id.*), also in compliance with the Act. *See* 220 ILCS 5/12-103(f)(4). The DCEO programs are generally targeted to units of local government, municipal customers, school districts, community college districts and the low-income customer sector. (Ameren Ex. 2.0, p. 27.)

There are areas where DCEO energy efficiency programs and the Ameren Illinois Utilities’ programs complement each other. (*Id.*) DCEO has a category of program offerings

under the heading of “market transformation” that may complement the Ameren Illinois Utilities’ programs in terms of design assistance and customer information and education. (*Id.*)

Absent the requirement to develop a robust set of energy efficiency program options for the low income sector, it would be reasonable to assume that DCEO should be accountable to achieve 25% of the savings goals, given the DCEO allocation of 25% of the Ameren Illinois Utilities’ energy efficiency budget. (Ameren Ex. 2.0, p. 28.) However, since the costs to deliver meaningful low-income energy efficiency programs can be as much as five times more costly than delivering programs to the entire residential class, the Ameren Illinois Utilities and DCEO have an understanding that the DCEO energy efficiency portfolio will achieve a minimum of approximately 19% of the Ameren Illinois Utilities’ load reduction goals in 2008 and 2009 and 20% in 2010. (*Id.*) In any event, the Ameren Illinois Utilities and DCEO intend to work together to achieve the load reductions specified in the Act. (*Id.*)

Knowing the DCEO allocation of the Ameren Illinois Utilities’ energy efficiency budget for 2008-2009, as well as the DCEO allocation of the overall load reduction goals for each of the year, DCEO developed a robust set of programs to meet, among other things, the requirements of the Act. (*Id.*) The DCEO final portfolio was passed to the Ameren Illinois Utilities. (*Id.*) Working with ICF, we re-optimized the Ameren Illinois Utilities’ portfolio to include the DCEO portfolio. (*Id.*) Since the Ameren Illinois Utilities’ initial portfolio assumed 100% compliance with the load reduction goals specified in the Act, the re-optimization process involved reducing several of the Ameren Illinois Utilities’ program-estimated load reductions by amounts equivalent to the individual load reductions in the DCEO portfolio, such that the overall portfolio continued to meet the incremental annual energy savings goals in the Act. (Ameren Ex. 2.0, pp. 28-29.)

ICF on behalf of the Ameren Illinois Utilities analyzed the cost-effectiveness of the programs proposed by the Department of Commerce and Economic Opportunity. (Ameren Ex. 4.0, p. 30.) Mr. Jensen testified that DCEO provided all program data required for the cost-effectiveness analysis. (*Id.*) ICF processed these data such that the program cost-effectiveness could be calculated using the same process as was used for the Companies' programs. (*Id.*) Although ICF discussed certain assumptions with DCEO, they did not assist with program design or data collection. (*Id.*)

The results of that analysis are included in the Plan filed by the Companies. (*Id.*; Ameren Ex. 2.1.) Table 4 includes the results of the TRC screening for the DCEO programs.

1. Commission Conclusion

Upon review of the statutory requirements and evidence, the Commission finds that the Ameren Illinois Utilities have appropriately coordinated with state agencies in developing their Plan, in accordance with the Act.

F. The Measures and Programs Set Forth in the Ameren Illinois Utilities' Plan Are Diverse and Cost-Effective (Uncontested).

Section 12-103(f)(5) requires that electric utilities shall implement cost-effective energy efficiency measures to meet certain incremental annual energy savings goals. Specifically, in their compliance filing, the Ameren Illinois Utilities must

Demonstrate that its overall portfolio of energy efficiency and demand-response measures, not including programs covered by item (4) of this subsection (f), are cost-effective using the total resource cost test and represent a diverse cross-section of opportunities for customers of all rate classes to participate in the programs.

220 ILCS 5/12-103(f)(5). No party has disputed that the Ameren Illinois Utilities have met this requirement.

As shown in the program descriptions above, the programs in the Ameren Illinois Utilities' Plan are diverse and contain a wide variety of energy efficiency and demand response options for residential and commercial and industrial customers.

Further, the Ameren Illinois Utilities' programs are cost-effective. The testimony of Mr. Jensen and Mr. Voytas demonstrates that the Ameren Illinois Utilities' portfolio includes energy efficiency and demand response measures that are cost-effective under the statute's Total Resource Cost ("TRC") test. The TRC test is as follows:

"Total resource cost test" or "TRC test" means a standard that is met if, for an investment in energy efficiency or demand-response measures, the benefit-cost ratio is greater than one. The benefit-cost ratio is the ratio of the net present value of the total benefits of the program to the net present value of the total costs as calculated over the lifetime of the measures. A total resource cost test compares the sum of avoided electric utility costs, representing the benefits that accrue to the system and the participant in the delivery of those efficiency measures, to the sum of all incremental costs of end-use measures that are implemented due to the program (including both utility and participant contributions), plus costs to administer, deliver, and evaluate each demand-side program, to quantify the net savings obtained by substituting the demand-side program for supply resources. In calculating avoided costs of power and energy that an electric utility would otherwise have had to acquire, reasonable estimates shall be included of financial costs likely to be imposed by future regulations and legislation on emissions of greenhouse gases.

20 ILCS 3855/1-10.

Mr. Jensen's and Mr. Voytas's testimony includes an extensive discussion of the TRC test and the methodology ICF and the Ameren Illinois Utilities used to select and test the

measures, programs and portfolios comprising the Ameren Illinois Utilities' Plan. Only those programs passing the TRC test were included in the Ameren Illinois Utilities' Plan. No party has challenged these results.

1. Identification of Potential Energy Efficiency Measures.

For use in analyzing the cost-effectiveness of energy efficiency measures, the Ameren Illinois Utilities have identified approximately 1,000 energy efficiency measures ("measures") that touch all major customer classes, including residential, commercial, and industrial, including measures addressing all major end uses for electricity (e.g., lighting, refrigeration, space cooling, space heating, water heating and motors). (Ameren Ex. 2.0, p. 3; Ameren Ex.. 2.1, p. 20.) An energy efficiency measure is a device, appliance or practice that, when implemented in a home business or manufacturing process, results in a reduction in the amount of energy used per unit of useful service. (Ameren Ex. 2.0, p. 3; Ameren Ex. 4.0, p. 5.) A compact fluorescent light bulb is a common example of an efficiency measure when it is used to replace a standard incandescent light bulb. (Ameren Ex. 4.0, p. 5.)

A "program" (distinguished from a measure) is a combination of one or more energy efficiency or demand response measures with a set of incentives or other services and a process for recruiting customers to install or implement the energy efficiency or demand response measures. (Ameren Ex. 4.0, p. 6.) One simple example of a program is a commercial and industrial prescriptive incentive program, wherein a utility provides fixed incentives for a wide variety of standard commercial and industrial energy efficiency measures. (*Id.*) Within such a program structure, the utility often will work with trade allies such as lighting or HVAC contractors to recruit customers who would benefit from installing these measures. (*Id.*)

ICF selected the energy efficiency measures for the initial list of energy efficiency measures that might be considered for adoption by consumers in the Ameren Illinois Utilities' service territory was compiled from several sources, the principal of which was the Database for Energy Efficiency Resources (DEER) maintained by the California Energy Commission. (*Id.*) This database contains several hundred unique measures that could be applied in residential, commercial and industrial buildings. (*Id.*) When each of these measures is considered in its multiple applications, the list of measures included in the database is in the thousands. (*Id.*) For each measure, the database provides an estimate of the energy savings per unit, as well as the costs associated with installation of the measures. (*Id.*) All investor-owned utilities in California use this database as the primary source of measure information in the design and evaluation of energy efficiency programs in that state. (*Id.*) This database is used by other utilities and state agencies as well. (*Id.*) Other sources of information for the measure list included the Consortium for Energy Efficiency, the American Council for an Energy Efficient Economy (ACEEE), the U.S. EPA Energy Star Program and our own research. (Ameren Ex. 4.0, pp. 6-7.) The Consortium for Energy Efficiency is a not-for-profit organization funded by utilities and the federal government to develop various initiatives to promote energy efficiency measures. ACEEE is also a not-for-profit organization that has promoted policies favoring energy efficiency for several decades. (Ameren Ex. 4.0, p. 7.) ACEEE publishes a variety of research reports pertaining to energy efficiency technologies, potential and program best practices. (*Id.*)

The final database prepared for this analysis included approximately 1,000 measures. (*Id.*) Note that many of these measures are combinations or variations of basic measures, such as different wattages of compact fluorescent light bulbs or different configurations of what are known as T8 linear fluorescent lamps. (*Id.*) Also, a number of specific measures were analyzed

for multiple building types. (*Id.*) About 200 of these measures are found in the residential sector, 800 are non-residential measures. (*Id.*)

While the DEER database is a database constructed and maintained in California, many of the measures have equal applicability to any jurisdiction. (*Id.*) The database contains two basic types of measures. (*Id.*) *First*, there are weather-sensitive measures. (*Id.*) These are measures for which savings impacts are sensitive to local weather conditions. (*Id.*) While ICF used the DEER database as a source for basic weather-sensitive measure definitions, they developed independent estimates of measure savings based on weather conditions characteristic of the Ameren Illinois Utilities' service territory. (*Id.*) *Second*, there are non-weather-sensitive measures – measures for which energy savings are largely independent of weather. (*Id.*) Industrial motors and many lighting measures are examples. (*Id.*) In this case, measure savings from California are just as good as those from any other location, provided the methods for determining unit savings are valid and robust. (Ameren Ex. 4.0, pp. 7-8.) In that respect, the DEER database is preferred, as it is based on many years of program impact evaluations, continually reviewed by developers and users, and updated frequently. (Ameren Ex. 4.0, p. 8.)

Mr. Jensen testified that ICF's list of measures does not include all possible energy efficiency measures. (Ameren Ex. 4.0, p. 8.) Even though ICF's initial list included close to 1,000 measures, the list of all possible measures would be several times as large. (*Id.*) A list of all possible measures would require looking at every device or system that uses electricity in every possible building type, with every possible heating and cooling system. (*Id.*) It is standard practice when conducting a first-stage measure screening to restrict analysis to those measures within a set of common building types that could account for the majority of energy efficiency potential in a given area. (*Id.*) The goal of the measure screening process is to create the

building blocks for energy efficiency programs. (*Id.*) These programs should be designed such that if additional measures are considered important to include, they can easily be screened and included within the program without major redesign. (*Id.*) Mr. Jensen considers the list of measures examined to have been comprehensive. (*Id.*)

2. Calculation of Avoided Cost.

The next step in analyzing the cost effectiveness of energy efficiency measures is the calculation of avoided costs. (Ameren Ex. 2.0, p. 3.) The term “avoided cost” in the context of energy efficiency refers to the cost avoided through a reduction in energy usage, i.e., the societal benefit of energy efficiency. (*Id.*) A utility measures costs avoided through energy efficiency measures using two components: The first component is avoided capacity cost – achieved by avoiding capacity additions through energy efficiency or load management strategies. (*Id.*) The second component is avoided energy costs, which measures incremental energy savings. (*Id.*)

The basis for the Ameren Illinois Utilities’ avoided cost estimate comes from the Ameren Services’ Commercial Transactions Group, which develops and maintains the Ameren forward market price curve, capturing both the capacity and energy cost components of avoided costs, and serves as a basis for the Ameren Illinois Utilities’ avoided cost estimate. (Ameren Ex. 2.0, p. 4.) Ameren Services has provided ICF with the Ameren Illinois Utilities’ cost savings estimates of substituting energy efficiency and demand response resources for supply-side resources. (*Id.*) ICF then takes the Ameren Illinois Utilities’ estimates of avoided costs and applies them in the numerator of the total resource cost test to determine the cost effectiveness of individual energy efficiency measures. (*Id.*)

Unlike the energy marketplace, there is not a liquid visible market for capacity in the Midwest Independent Transmission System Operator (“MISO”) marketplace. (*Id.*) Therefore, the Ameren Illinois Utilities determined the avoided capacity cost component through different means. (*Id.*) The Ameren Services Commercial Transactions Group has information regarding several observable capacity transactions from which the market price for avoided capacity in the near term can be estimated. (*Id.*) For years further into the future, the avoided capacity cost is based on the projected installed cost of a combustion turbine generator peaking plant. (*Id.*) The actual values of avoided capacity costs provided by the Ameren Illinois Utilities to ICF are included in Ameren Ex.. 2.2. (*Id.*; Ameren Ex. 2.2.)

Unlike the relatively thin market information on capacity transactions, there is a robust, observable market for avoided energy costs through 2011. (Ameren Ex. 2.0, p. 5.) The Ameren Illinois Utilities determined the avoided energy cost component thus using a forward price curve for the near term based on observable market transactions. (*Id.*) Longer-term market prices were forecasted using the MIDAS Gold market model. (*Id.*) The MIDAS model is an electric generation economic dispatch model of the eastern interconnect region of the United States. (*Id.*) The observable market is potentially provided by all of the following sources: the website of the broker Prebon, an email from the broker Amerex, an email from the broker ICAP, Megawatt Daily, Intercontinental Exchange (“ICE”) End of Day report, ICE screen shot for intra-month pricing. (*Id.*) The average of the bid and offer determine the market clearing price, and if several sources are available for the same time frame, an average of the sources is used. (*Id.*) The actual values of avoided energy costs provided by Ameren Illinois Utilities to ICF are included in Ameren Ex.. 2.3. (*Id.*; Ameren Ex. 2.3.)

Emissions costs are also included in the estimation of avoided energy costs. (Ameren Ex. 2.0, p. 5.) For the observable market the assumption is made that market clearing prices include all known avoided costs, including emission avoidance. (*Id.*) For the modeled values that extend beyond the observable market we run the MIDAS model, which includes a SO₂, NO_x and mercury cost that is relevant to electric energy efficiency and consistent with long-term resource planning studies. (*Id.*)

The Act states: “In calculating avoided costs of power and energy that an electric utility would otherwise have had to acquire, reasonable estimates shall be included of financial costs likely to be imposed by future regulations and legislation on emissions of greenhouse gases.” 20 ILCS 3855/1-10. The Ameren Illinois Utilities choose to use the high carbon dioxide (“CO₂”) case assumptions in the analysis of the cost-effectiveness of energy efficiency measures, in light of the likelihood that federal CO₂ legislation will take effect beginning in 2012. (Ameren Ex. 2.0, p. 6.) The high CO₂ case assumes a value of \$15/short ton starting in 2012, increasing at 5% per year in real terms. (*Id.*)

The value of CO₂ emissions avoidance is captured in the cost-effectiveness analysis of the cost effectiveness of energy efficiency measures in terms of a dollar per short ton metric. (*Id.*) The dollar per short ton metric has to be converted to a \$/MWh metric. (*Id.*) The conversion factor is based on the average Ameren generating unit CO₂ emission rate of approximately 2,080 pounds per megawatt-hour (“MWh”). (*Id.*) At this rate, the conversion factor for all intents and purposes is 1.0. (*Id.*) In other words, \$15 per short ton of CO₂ is equivalent to \$15 per MWh. (*Id.*)

Based on the outline of the process described above, the Ameren Illinois Utilities' perspective on the timing and level of potential national greenhouse gas legislation was developed from the point of view, for resource planning purposes, that carbon legislation is likely to take effect beginning in 2012. (*Id.*) While Ameren Corporation has not taken a specific policy position on this legislation, Ameren Services has taken steps to prepare for this development, in the form of defining a high, stringent CO2 case, a moderate CO2 case and a modified "business as usual" case. (*Id.*) Carbon legislation, whether it is in the form of a tax or cap and trade mechanism, is forecast in terms of a dollar per short ton CO2 tax primarily to facilitate the calculation of avoided costs. (*Id.*)

Potential greenhouse gas legislation impacts the analysis of the cost effectiveness of energy efficiency measures for the Ameren Illinois Utilities 2008-2010 energy efficiency implementation plan, even though greenhouse gas legislation is not expected until 2012. (*Id.*) Even though the energy efficiency implementation plan covers the period 2008-2010, the energy efficiency measures included in the plan have measure lives that continue well beyond 2010. (*Id.*) For example, a compact fluorescent light ("CFL") can have an economic life ranging from seven to ten years. (*Id.*) Consequently, the computation of the benefit to cost ratio for a program is the ratio of the net present value of the total benefits of the program to the net present value of the total costs as calculated over the lifetime of the measures. (*Id.*) Therefore, to the extent that a measure's economic life extends beyond 2012, there is a greenhouse gas cost component captured in the benefit -to to-cost ratio for that energy efficiency measures. (*Id.*)

1. The TRC Analysis

In basic terms, Mr. Jensen explained that the Illinois TRC test compares the benefits realized by installing a measure with the costs to install that measure. (Ameren Ex. 4.0, p. 9.)

Benefits are calculated as the product of the measure's estimated energy and peak demand savings and the utilities avoided cost. (*Id.*) Costs are equal to the incremental capital, installation and operating and maintenance (O&M) costs. (*Id.*) The incremental cost is defined as the difference between the cost of the efficiency measure and the cost of the measure that otherwise would have been installed. (*Id.*)

To illustrate this last concept, consider the following scenario: A consumer has decided that her existing refrigerator no longer functions properly and that a new refrigerator is needed. She has a number of options for the new refrigerator, including a basic model that meets federal energy efficiency standards and a more expensive model that is more energy efficient. The incremental cost is the difference between the basic refrigerator and the higher efficiency model. (*Id.*) In some cases, this incremental cost is actually the full cost of a measure. (*Id.*) This would be the case, for example, when a consumer adds insulation to an attic, or when a commercial customer retrofits an existing set of lighting fixtures with more efficient fixtures. (*Id.*) In the case of the commercial customer, "retrofit" means that the equipment is being replaced while it is still functional. (*Id.*) Since the equipment would not otherwise require replacement, the full cost of the replacement technology would be counted in the calculation. (*Id.*)

In order to apply the TRC test to the individual energy efficiency measures identified, ICF gathered additional data and perform further analyses related to these measures. (Ameren Ex. 4.0, p. 10.) First, the measures that we examined were divided into two major classes: those with energy and peak demand savings that are not affected by temperature and those for which savings are weather-dependent. (*Id.*) The former class includes measures such as lighting, household appliances, motors, and many industrial processes. (*Id.*) The latter class includes measures such as air conditioning and building shell improvements (insulation). (*Id.*) For

example, an air conditioner will run for more hours and consume more electricity over the course of a summer in Carbondale than it will in Chicago, because the Carbondale summers are generally warmer. (*Id.*) An air conditioning efficiency measure will, therefore, save more energy when it is applied in Carbondale as opposed to Chicago. (*Id.*)

The savings and cost data associated with non-weather-sensitive measures were taken in most cases from the DEER database. (*Id.*) These measure data are frequently updated and are consistent in terms of cost basis. (Ameren Ex. 4.0, p. 11.) In several cases, DEER measure cost was supplanted with more recent local data. (*Id.*) The costs for compact fluorescent light bulbs in the residential sector were based on data collected by the Midwest Energy Efficiency Alliance as part of last year's Change-a-Light campaign. (*Id.*)

In the case of weather-sensitive measures, the Ameren Illinois Utilities developed independent estimates of measure savings using building energy simulation. (*Id.*) ICF employed the DOE-2 model, the industry standard for simulating the hour-by-hour energy use of a building and its component systems. (*Id.*) Separate estimates of measure savings for a wide range of measures were developed by simulating the operation of nine prototypical commercial building types and four prototypical residential homes. (*Id.*) The home types were single family with gas heat and central air conditioning, single family with electric resistance heat and central air conditioning, single family with an electric air source heat pump, and multi-family with gas heat. (*Id.*) These simulations were prepared using normal weather data characteristic of Central and Southern Illinois. (*Id.*) Several heating, ventilation and air conditioning (HVAC) types were also modeled for the commercial building types. (*Id.*) The building and HVAC types that were modeled are presented below:

Table 1: Building & HVAC Types Used in DOE-2 Model

Building Type	HVAC Types
Education	Chiller & Boiler; Pkg AC & Gas Furnace
Health Inpatient	Chiller & Boiler; Pkg AC & Gas Furnace
Lodging	Chiller & Boiler; Pkg AC & Gas Furnace
Retail	Chiller & Boiler; Pkg AC & Gas Furnace
Office - Large	Chiller & Boiler
Food Sales	Pkg AC & Gas Furnace
Food Service	Pkg AC & Gas Furnace
Office - Small	Pkg AC & Gas Furnace
Warehouse	Pkg AC & Gas Furnace

Second, in addition to collecting energy and demand savings data for the measures, the analysis requires estimates of the useful life of each measure. (Ameren Ex. 4.0. p. 12.) Measure lifetime is needed because the TRC test analysis needs to account for all of the energy savings realized by implementation of a measure over time. (*Id.*) For example, installing a compact fluorescent light bulb generates savings relative to an incandescent bulb for a number of years, depending on how many hours a year the bulb is used. (*Id.*) Third, the cost-effectiveness analysis requires a discount rate that is used to estimate the present value of the efficiency measure's costs and benefits. (*Id.*)

In order to properly value energy savings under the TRC test, ICF developed an appropriate hourly disaggregation of measure energy savings. (*Id.*) A utility's avoided costs typically can vary by hour and will be significantly higher during certain times of the year and hours than others. (*Id.*) If a simple average annual value for the Companies' avoided costs in ICF's calculation of the benefits of the energy efficiency measure were used, the calculation would underestimate the value of savings during high-cost hours of the year and overestimate the value during low-cost hours. (*Id.*)

The avoided energy and capacity costs that we used for the analysis were provided to ICF by the Ameren Illinois Utilities, as described above and in Mr. Voytas's testimony. (*Id.*) These costs were provided to ICF as hourly values for a twenty-year period. (*Id.*) Avoided capacity costs were provided as annual values per kilowatt for the forecast horizon. (*Id.*) ICF aggregated these hourly values into 36 bins (peak, off-peak and weekends/holidays) for each month to simplify the calculations. (*Id.*) Using normalized hourly load curves for non-weather-sensitive measures, ICF decomposed estimates of annual energy savings into hourly values and then re-aggregated the savings into the same 36 bins. (Ameren Ex. 4.0, p. 13.) The normalized energy savings per period were multiplied by the 36 period costs to yield an annual avoided energy cost for a specific measure. (*Id.*) In the case of the weather-sensitive measures, the DOE-2 model provides hourly estimates of energy savings. (*Id.*) These were normalized and aggregated into the same 36 costing periods, so that the same calculation of avoided energy costs could be performed. (*Id.*)

Using the data described above, ICF calculated the value of the TRC test for each of the measures in the database. (*Id.*) The product of estimated annual energy savings for each measure and the present value of the annual avoided costs were divided by the incremental cost of each measure. (*Id.*) Measures with a ratio of benefits to costs of 1.0 or greater were considered to pass the TRC test. (*Id.*) In general terms, the TRC test compares benefits (avoided costs times energy and demand savings) and costs (incremental capital, installation and O&M costs of measures + utility implementation and administrative costs). (*Id.*) The formal expression of the Illinois TRC test, which differs from the standard formulation of the TRC test described above, is as follows:

$$\text{TRC} = \text{Benefits/Costs}$$

$$BTRC = \sum_{t=1}^N \frac{UAC_t}{(1+d)^{t-1}}$$

$$CTRC = \sum_{t=1}^N \frac{PRC_t + PCN_t + UIC_t}{(1+d)^{t-1}}$$

Where:

BTRC =	Benefits of the program
CTRC =	Costs of the program
UAC _t =	Utility avoided supply costs in year t
UIC _t =	Utility increased supply costs in year t
<u>PRC</u> _t =	Program Administrator (Utility) program costs in year t
PCN =	Net Participant Costs

(Ameren Ex. 4.0, p. 14.) The TRC test often is applied to assess the cost effectiveness of individual energy efficiency measures as well as energy efficiency programs. (*Id.*) When the analysis of measures is prepared, a single measure's costs and benefits are reviewed without including variables such as Program Administrator Costs, since at this stage in the analysis, there are no program costs. (*Id.*)

ICF's calculation of cost-effectiveness incorporates both electricity savings and demand reductions. (*Id.*) Most energy efficiency measures reduce the total amount of electricity consumed over the course of a year, but also reduce peak demand. (*Id.*) Some measures, like a central air conditioner tune-up, have a greater impact on peak demand than installation of a residential CFL, since the CFL most likely is not on during the summer peak period. (*Id.*) When ICF calculates the cost-effectiveness of a measure, energy savings is multiplied by the avoided energy cost and estimated coincident peak demand savings by avoided capacity costs. (Ameren

Ex. 4.0, p. 15.) These costs are time-differentiated to ensure that the proper value of energy and peak demand reductions are captured over the course of a year, since avoided costs can vary substantially by time of day and time of year. (*Id.*)

The Illinois version of the TRC test differs from standard formulations of the test in several ways. (*Id.*) *First*, the standard formulation (the version included in the California Standard Practice Manual) includes the value of tax credits in calculating the benefits of an efficiency measure. *Second*, and most important, the standard formulation includes the value of all energy savings attributable to a measure, while the Illinois version includes only the value of electricity savings and excludes natural gas savings. (*Id.*) The latter difference is significant, because some energy efficiency measures produce both electricity and natural gas savings. (*Id.*) For example, adding insulation to a house will reduce both the electricity used for cooling and the natural gas or electricity used for heating. (*Id.*) Similarly, insulating a home's ductwork or sealing duct leaks saves both gas and electricity. (*Id.*) The Illinois TRC test, at least as it has been interpreted, excludes gas savings, which can be significant in a northern climate like that of the Companies' service area. (*Id.*) Measures such as those described above are assessed strictly on the basis of their electricity savings, and it is often the case that these savings alone will not exceed the cost of the measure. (*Id.*) As a result, the measures do not screen as cost-effective, and the number of measures that can be included in programs is limited. (*Id.*)

Mr. Jensen provided the results of the TRC measure screening, as presented in tables 2 and 3 below. (Ameren Ex. 4.0, p. 16.) Of the roughly 1,000 measures that were screened, approximately 580, or 64 percent passed with a benefit-cost ratio of 1.0 or greater. (*Id.*) Table 2 shows the numbers of measures passing the TRC test for each sector, as well as illustrates the number of any additional measures that would pass the TRC test if natural gas savings were

included. (*Id.*) Table 3 describes the measure types that passed the Illinois TRC test. (*Id.*) A measure type encompasses a number of specific measure configurations. (*Id.*) For example, the commercial T8 lighting measure includes a variety of light fixture configurations within the 8 commercial building types that were included in the analysis. (*Id.*) These measures are subsequently bundled into program “types.” (*Id.*)

Table 2. Number of Measures Passing the TRC Test

	Total # of Measures	# Passing Illinois TRC	# Passing with Gas Included
Residential	222	107	120
Non-Residential	732	476	478
Totals	954	583	598

Table 3. Types of Measures Passing the TRC Test

Residential Measures	Commercial Measures	Industrial Measures
Compact Fluorescent Lamps (*screw-ins and pin-based)	T12 to T8 linear fluorescent lamps (various combinations)	Compressed Air Improvements (controls, optimization, VSD installations)
T12 to T8 linear fluorescent lamps (various combinations)	Compact Fluorescent Lamps (screw-ins)	Fan improvements
LED Exit Signs	HID lighting upgrades	Pump Improvements
Electroluminescent Exit Signs	LED Exit Signs	Process Heating
2nd refrigerator pick-up and recycling	Electroluminescent Exit Signs	Refrigeration
Central AC Refrigerant Charge	LED Traffic and Pedestrian Signals	Machine Drive
Domestic Hot Water Wrap	Computer Power Management	HVAC
Hot Water Pipe Insulation	Variable Speed Drives and Temperature Control for Chilled Water and Hot Water Loops	T12 to T8 linear fluorescent lamps (various combinations)
Low-Flow Showerheads	Air Handler Coil Cleaning	Compact Fluorescent Lamps (screw-ins)
Increased Duct Size	Air Handler Scheduling	HID lighting upgrades
Reduced Duct Leakage	New Packaged Air Conditioning Units	Process Controls
Correct Central AC Sizing	Variable Air Volume Retrofits	Various Sector-Specific Process Improvements
14-SEER Central AC	Commercial Refrigeration	
Ceiling Insulation		
Wall Insulation		

Reduced Infiltration ENERGY STAR Dishwasher Faucet Aerators ENERGY STAR Window AC Ground Source Heat Pump ENERGY STAR Ceiling Fan ENERGY STAR De-humidifier ENERGY STAR Freezer High-Efficiency Water Heater Home Demand Response	Controls and Equipment Upgrades Occupancy Sensors Vending Machine Controls Efficient Street Lighting New Construction Standard T8 to Super T8 linear fluorescent lamps	
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(Ameren Ex. 4.0, pp. 16-17.)

2. Program Bundling

After the identifying of end-use measures, calculating avoided costs and determining of the cost-effectiveness of energy efficiency end-use measures, the Ameren Illinois Utilities and ICF took the next step in the analysis, by bundling measures into a robust set of programs for the residential, commercial and industrial customer classes. (Ameren Ex. 2.0, p. 7; Ameren Ex. 4.0, p. 17.) The ultimate objective is to design a cost effective portfolio of programs that Ameren Illinois Utilities can efficiently implement given the fact that the Ameren Illinois Utilities do not currently have an existing energy efficiency program infrastructure in place. (Ameren Ex. 2.0, p. 7.) Combining cost-effective measures into programs is a somewhat subjective process, which involves the combination of the knowledge of best practice energy efficiency and demand response programs and the overall Ameren Illinois Utilities energy efficiency/demand response portfolio objectives. (Ameren Ex. 2.0, pp. 7-8.) The Ameren Illinois Utilities retained Mr. Jensen, an expert in effective energy efficiency/demand response programs nationwide, to guide in this process. (Ameren Ex. 2.0, p. 8.)

Mr. Jensen explained that a program type is a general classification that references the types of measures that might be offered within a program targeted at a specific market. (Ameren Ex. 4.0, p. 17.) For example, all residential lighting and appliance measures passing the TRC test might be bundled into a lighting and appliances program. (*Id.*) The program types that ICF uses for this process are based on an ongoing review of program design and implementation. (*Id.*) The bundling process is used because very few, if any, programs are designed and implemented that include only one single measure. (*Id.*) Rather, program designers build programs around combinations of measures that might appeal to a given market and that can be delivered using similar channels. (*Id.*) The bundling process also is necessary because in subsequent steps, ICF estimates how many of each measure would or could be adopted by program participants and then sum the energy and demand reduction impacts of these measures.

Appendix B to the Companies' Plan (Ameren Ex. 2.1) includes a set of tables showing each measure and the program type to which it was assigned. Mr. Jensen explained that not all measures assigned to a program ultimately were included in the program, because not all were cost-effective. (Ameren Ex. 4.0, p. 18.)

Energy efficiency program "best practice" design and implementation involves the application of a number of considerations, as well as experience, to each individual case. (Ameren Ex. 4.0, p. 18.) Mr. Jensen testified that, considering the degree to which regulatory environments differ from state to state, there simply is too much variability across objectives, regulatory structures and program types to enable simple, broad conclusions about what is best in every case. (*Id.*) Best practices should be viewed partly as a function of the experience of the program administrator and implementer. (*Id.*) For example, best practices for a utility that has

been designing and managing programs for two decades may be different from best practices for an organization just entering the field. (*Id.*)

Various organizations have, however, reviewed and compiled best practices in the area of energy efficiency. (*Id.*) Mr. Jensen's reference to an ongoing review of best practice design and implementation refers to his review of a number of well-respected assessments of program best practice such as ACEEE's compendium of Exemplary Programs, and reviews of program best practice sponsored by the California Public Utilities Commission and the Energy Trust of Oregon. (Ameren Ex. 4.0, pp. 18-19.) It also is based on a review of the types of programs implemented by utilities often considered to be leaders in the field, such as Xcel energy, Northeast Utilities, Pacific Gas & Electric ("PG&E") and the Wisconsin Focus on Energy program. (Ameren Ex. 4.0, p. 19.) Finally, the Companies solicited the input of national experts in this area during a meeting of Illinois stakeholders in Lombard on September 13, 2007. (*Id.*) Based on Mr. Jensen's review of these sources and his experience in working with a number of utilities, best practice design generally includes the following considerations:

1. Programs should focus on technologies/market segments with relatively large untapped potential. Program designs that offer prescriptive rebates for common technologies across the entire C&I market are relatively simple to design and administer, and are very effective in tapping into large veins of efficiency potential in lighting, motors and HVAC systems.

2. Programs should leverage existing branding and delivery structures. For example, residential lighting, appliance, and new homes programs built around the ENERGY STAR brand can leverage the market awareness the brand enjoys.

3. Programs should employ simple, straightforward program design. The more complex the design, the more difficult the implementation and administration of the program, and the greater the level of organizational capacity required to manage the program. For example, prescriptive rebate programs that employ deemed savings values and standard rebate amounts for common technologies are basic building blocks of virtually every utility program portfolio. Resource acquisition programs tend to be more straightforward and resource-efficient than market transformation programs.

4. Incentives should be targeted at the point in the product value chain that yields the greatest leverage. For example, aiming the Ameren Illinois Utilities' incentives at large appliance retailers or manufacturers and having those entities provide the incentives to consumers would enable the Companies to achieve greater scale faster and minimize the resources the Companies would have to deploy. Similarly, using residential HVAC distributors as the delivery vehicle for an air conditioning incentive program takes advantage of the distributors' existing networks and natural incentives to "sell up."

5. Large customers can be most effectively tapped with custom incentive programs. These programs provide rebates for groups of measures based on calculated savings and have proved to be very effective at generating low cost (to the utility) savings. These programs also provide utility customer account managers with valuable tools for enhancing customer value. The design of these programs is straightforward, with the utility providing an incentive threshold that customer can design projects against.

6. Effective programs require close coordination of marketing, technical support and incentives. For most companies, this requires an effective internal structure for working across multiple organizations within the firm.

7. Effective portfolios represent a mix of education/consumer outreach, technical support and training, and incentive elements, each of which is structured to work with the others.

8. With the commoditization of many types of program services, it is possible for a utility to develop and manage effective programs with significantly fewer internal resources than was the case a decade ago. It is possible and cost-effective to outsource most program implementation services.

9. When working with upstream market participants such as national retailers or manufacturers, programs will be more effective if they employ structures with which these market participants are familiar. For example, if a retailer is used to working with a point-of-sale rebate, it will be most efficient to design a new program around this preference.

10. While there are exceptions, the most important of which is noted below, best practice programs have staying power. They become best practice because their sponsors have time to refine both design and implementation. Participation rates climb as program availability becomes known through market networks, and all points in the market chain have time to align with the program.

11. Finally, the point above notwithstanding, best practice, both in program design and in implementation, looks forward. Even though the immediate focus of a portfolio might be on achieving certain near-term targets, success ultimately is in transforming the market such that consumers make efficient decisions without direct financial incentives. Therefore, best practice requires utilities to look ahead to identify opportunities to move out of some program markets and into others to ensure program resources are efficiently allocated.

(Ameren Ex. 4.0, pp. 19-21.)

3. Program Design

Mr. Jensen testified to how programs are built. (Ameren Ex. 4.0, p. 21.) Program designers transform the general program types described in Appendix B to the Plan into a more detailed program design and then assemble the data needed to assess program cost-effectiveness. (*Id.*) The more detailed program design is based on a conceptual model of a program that describes how a particular method of delivering the measures, including proposed incentives, recruiting, marketing and implementation strategies, will motivate customers to acquire, install and use the efficiency measures. (Ameren Ex. 4.0, p. 22.)

A residential lighting program design, for example, would reflect the designers' understanding, based on their own and others' experience and available market research, of the specific combination of incentives, delivery mechanisms and marketing that will encourage customers to install compact fluorescent bulbs. (*Id.*) There are very different ways to accomplish this result, each of which has a different cost and likelihood of success. (*Id.*) For example, the Ameren Illinois Utilities could directly install the bulbs. (*Id.*) This would ensure

that the bulbs are in fact installed, but at a significant cost per bulb. (*Id.*) At the other extreme, the Ameren Illinois Utilities could work with CFL manufacturers to provide discounts on CFLs that are flowed through to the retail price. (*Id.*) This “upstream” incentive is used in combination with cooperative advertising with retailers to encourage consumers to purchase the bulbs at the discounted price and screw them in themselves. (*Id.*)

This model of program design informs the estimates of key program level data. (*Id.*) These data include the level of incentive per measure, the level of implementation, marketing and administrative costs per program, and the estimated level of program participation (the number of each measure that we expect to be installed). (*Id.*) Mr. Jensen testified that, in most cases, the sources of these data are other utility programs that have a structure similar to the prospective program ICF is analyzing. (*Id.*) As part of the analysis for the Ameren Illinois Utilities, ICF collected data from either the plans or reported results for programs offered by PG&E, Southern California Edison, Northeast Utilities (Connecticut Light and Power and United Illuminating), NSTAR, Efficiency Vermont, We Energies, Xcel energy, Arizona Public Service, Nevada Power, NYSERDA, PacifiCorp and the New Jersey Utilities. (Ameren Ex. 4.0, p. 23.) ICF reviewed data for multiple programs from a number of these program administrators. (*Id.*) This process notwithstanding, the program designs at this stage are still tentative; incentive levels are broadly defined, the list of eligible measures is based on a general screening process, and the details of program implementation have only been broadly sketched. (*Id.*) Detailed program design and implementation planning typically occurs once programs are approved. (*Id.*) At that point, the Companies would work with implementation contractors to develop much more detailed plans that include specific incentive levels and eligible measure lists. (*Id.*)

4. Analysis of Cost-Effectiveness of Programs

To determine cost-effectiveness at a program level, ICF reran the TRC test on the programs, rather than on the measures. (Ameren Ex. 4.0, p. 23.) Mr. Jensen testified to three differences between the screening process for measures and programs. (*Id.*) *First*, the PRC term in the cost equations set forth is set to zero when screening measures. (*Id.*) However, program-level screening requires that the PRC term take a value equal to the sum of the cost to implement and administer the program. (*Id.*)

Second, while the measure screening focused on the cost-effectiveness of a single measure, by definition, here, the focus is on the cost-effectiveness of a bundle of measures as these measures are adopted by program participants. (*Id.*) This means that at the program level, the number of measures that we expect to be adopted as a result of the program must also be projected. (*Id.*)

The third difference is directly related to the second. (Ameren Ex. 4.0, p. 24.) Mr. Jensen testified that every customer that receives an incentive for undertaking a specific program-sponsored activity is a participant, but not every participant is motivated to undertake that activity by the program. (*Id.*) Some fraction of program participants will be what is termed “free-riders” – participants that would have undertaken the desired action even in the absence of the program. (*Id.*) The estimated savings for a program must be reduced by the amount of savings attributed to these free riders. (*Id.*) At the same time, however, there will be customers who undertake the action the program is attempting to motivate based on the program’s influence, but who do not actually take any incentive from the program. (*Id.*) These customers are known as “free drivers” and the savings that their actions produce are termed “spillover”. (*Id.*) Just as the effects of free riders must be accounted for, so should the effects of free drivers. (*Id.*)

The net effect of free ridership and spillover is known as the net-to-gross ratio – the ratio of: (1) net program savings calculated as the net of free-ridership and spillover and (2) gross program savings, which are equal to the total number of measures installed and their associated savings. (Ameren Ex. 4.0, p. 24.) The net-to-gross ratio is a number calculated based on post-implementation evaluation of program impacts. (*Id.*) Using a series of questions posed to both program participants and program non-participants, evaluators attempt to determine which participants are free riders (i.e., would have undertaken a program-sponsored action even without the program) and which non-participants are free drivers (i.e., took action even though they did not avail themselves of the program incentives). (*Id.*) Program designers use the results of prior net-to-gross analyses as inputs to program cost-effectiveness calculations. (*Id.*)

The program cost data that were used in the analysis are based on the costs reported by utilities running similar programs in other parts of the country. (Ameren Ex. 4.0, p. 25.) These costs are reported in a variety of documents, including compendia of best practices, utility planning documents and evaluation reports. (*Id.*) ICF did not use these cost data directly, but rather calculated relative cost measures such as implementation cost per unit of energy saved so that data could be applied from different sized utilities to the Ameren Illinois Utilities. (*Id.*) The values used in the Ameren Illinois Utilities’ portfolio ultimately were based on professional judgment, taking into account the experience of other utilities, the Ameren Illinois Utilities’ service territory and the Companies’ level of experience related to specific programs. (*Id.*)

The participation data also are based on the actual or projected achievements of similar programs as prepared by the utilities managing the programs. (Ameren Ex. 4.0, p. 25.) Again, the final values used to develop the portfolio are based on the collective review of these data by ICF and the Ameren Illinois Utilities’ staff and the application of judgment. (*Id.*) For key

program elements, such as the Residential Lighting Program element, ICF calculated the number of compact fluorescent light bulbs that would need to be acquired given our participation assumptions and compared this number with what other utilities has been able to achieve, generally adjusting for the size of the utilities. (*Id.*) ICF also generally compared results to those they saw with the Commonwealth Edison Company analysis. (*Id.*)

For programs that ICF expected would play a smaller role in the portfolio initially, the participation assumptions were largely judgment-based, where the judgment was informed by ICF and the Ameren Illinois Utilities' understanding of the relative size of the market for a given program. (Ameren Ex. 4.0, p. 26.) In many cases, the Companies did not have recent or detailed data describing the composition of the service territory (for example, the number of T12 linear fluorescent fixtures currently installed in commercial space). (*Id.*) Participation rates were set to reflect the collective judgment as to levels of participation that could be achieved given the design of the programs and the fact that the programs were starting essentially from scratch. (*Id.*) Participation was adjusted downward in several cases because, based on ICF's analysis of program and portfolio risk, they concluded that the success of the portfolio was too dependent on the performance of a program. (*Id.*) In other cases, participation was boosted to reflect the Ameren Illinois Utilities' desire to acquire a larger share of savings from more comprehensive programs such as building retro-commissioning and custom incentives for business. (*Id.*) Lacking data on the size of specific program element markets and focused on designing a portfolio that would meet savings goals, a primary concern was avoiding over-estimates of program participation. (*Id.*) The estimates of participation used should be viewed not as targets or caps for any given program element, but as conservative estimates of market response. (*Id.*)

The principal source of the net-to-gross estimates was the California Energy Efficiency Policy Manual as referenced in the DEER online database. (Ameren Ex. 4.0, p. 25.) This manual contains a table of reference net-to-gross ratios.³ (*Id.*) This source contains tables of reference net-to-gross ratios. (*Id.*)

Table 4 shows the results of the program cost-effectiveness analysis:

Table 4: TRC Results for the Ameren Illinois Utilities and DCEO Programs

Program Name	TRC	Notes
Home Energy Performance	1.76	
Residential HVAC Diagnostics & Tune-Up	1.07	
Residential Appliance Recycling	1.15	
Residential Lighting & Appliances	1.68	
Residential Multifamily	1.48	
Commercial Demand Credit	2.50	
Residential DR - Direct Load Control	1.73	
C&I Prescriptive	1.37	
C&I Retro-commissioning	1.40	
Commercial New Construction	1.12	
Street Lighting	1.93	
C&I Custom	1.90	
DCEO Public Sector Prescriptive	1.62	
DCEO Public Sector Customized Program	3.04	
DCEO Public Retro-commissioning	4.47	
DCEO Lights for Learning	2.74	
DCEO Low Income New Const. Gut Rehab	0.59	
DCEO Low Income EE Moderate Rehab (MF)	0.50	
DCEO Single Family Rehab	0.32	
DCEO Low Income Direct Install	0.63	
DCEO Smart Energy Design Assistance Program	0.00	No Savings
DCEO Manufacturing Energy Efficiency Program	0.00	No Savings

³ Available at <http://eega.cpuc.ca.gov/deer/Ntg.asp>.

DCEO Building Industry Training & Education	0.00	No Savings
DCEO Public Sector New Construction	4.52	

(Ameren Ex. 4.0, p. 26.)

5. Portfolio Development

The Ameren Illinois Utilities' first and overriding energy efficiency portfolio objective is full compliance with the Act. (Ameren Ex. 2.0, p. 8.) Beyond meeting the Act's requirements, the Ameren Illinois Utilities view their mission in regards to energy efficiency as one of making consistent investment in innovation and a well-balanced portfolio of energy efficiency and demand response activities, combined with forward-thinking policy initiatives that will serve as a catalyst to a transformation of the market for energy services in the Ameren Illinois Utilities' service territories. (*Id.*) The Ameren Illinois Utilities have additional objectives for their 2008-2010 energy efficiency and demand response implementation plan. (*Id.*) Those objectives are:

- Provide coverage of hard-to-reach sectors such as low income and small commercial sectors;
- Address electric heating customer needs with a cost-effective program;
- Include, assuming budget availability, some educational/informational elements to promote changes in long-term customer energy consumption behavior;
- Strengthen customer service;
- Minimize rate impacts;
- Balance energy efficiency and demand response elements;
- Ensure portfolio flexibility; and
- Employ best practice portfolio design and program design.

(*Id.*)

Mr. Jensen described how the Ameren Illinois Utilities' energy efficiency portfolio was designed. (Ameren Ex. 4.0, p. 28.) Drawing from those programs that passed the TRC test, ICF worked with the Companies to build a portfolio that was designed to achieve the goals set forth in the statute subject to the spend cap. (*Id.*) In addition, ICF took into account other important considerations, such as how fast certain programs can be ramped up, and the risk profiles of the programs (i.e., the likelihood that actual savings will match expected savings). (*Id.*)

Mr. Jensen explained that the portfolio design step actually uses three distinct approaches to increase the likelihood of achieving the savings goals. (*Id.*) *First*, given the constraints noted above, ICF simulated a variety of different combinations of programs, start dates, ramp-up rates and participation rates to arrive at a phased combination of programs that would maximize savings under the statutory spend cap, but that also would yield program diversity, ensure that programs were available for all customer classes, and position the portfolio for the second planning/implementation cycle. (*Id.*)

Second, ICF bundled what are described above as programs into several broad "solutions" offerings. (Ameren Ex. 4.0, p. 28.) Mr. Jensen testified to ICF's belief that best practice design requires viewing the program offerings from the perspective of the customer. (*Id.*) If customers are faced with the variety of individual programs described above, they are required to sort out which program will offer them the solutions they seek. (*Id.*) This can easily lead to customer confusion and lower participation. (*Id.*) In addition, by operating a dozen programs as though they were independent is inefficient, leading to overlapping marketing, recruiting and delivery efforts. (*Id.*) Finally, the separate implementation of all of these programs inevitably will lead to missed opportunities to provide customers solutions that cut across multiple program elements. (*Id.*) Therefore, ICF has worked with the Companies to

bundle these individual programs as elements within two broad solutions programs – Residential Solutions and Business Solutions. (Ameren Ex. 4.0, p. 29.) Although, these solutions-based programs will involve multiple incentive types and services, the intent is to market the programs as the equivalent of super-stores, with several easy-to-find portals that will provide access to a full range of services. (*Id.*) For analysis purposes it was necessary to treat these elements separately so that ICF could estimate measure costs and savings. (*Id.*) However, as the Plan indicates, the portfolio will “go-to-market” as two broad programs. (*Id.*)

Third, ICF added a final layer of costs to represent cross-cutting portfolio administrative requirements such as incremental labor, evaluation and planning, as well as vital program elements that do not directly yield energy savings. (Ameren Ex. 4.0, p. 29.) These program elements include consumer information and education tools and initiatives, and technical assistance and training that would not otherwise fall under a specific energy-saving program. (*Id.*)

3. Commission Conclusion

Upon review of the statutory requirements and evidence, the Commission finds that the measures and programs set forth in the Ameren Illinois Utilities’ Plan are diverse and cost-effective, in accordance with the Act.

G. The Ameren Illinois Utilities’ Proposal to Recover the Costs Incurred Under their Plan Through Rider EDR is Reasonable and Should Be Approved (Uncontested).

1. Overview of The Ameren Illinois Utilities’ Rider EDR.

The testimony of Ameren Illinois Utilities’ witness Ms. Vickiren Bilsland (Ameren Ex. 5.0) describes and supports the automatic adjustment clause tariff that will be used to track

expenditures associated with the implementation of energy efficiency and demand-response (“EDR”) programs required by the Act. Section 12-103(e) permits utilities to recover the costs of such EDR programs through an automatic adjustment clause tariff, outside the context of a general rate case. 220 ILCS 5/12-103(e).

Section 12-103 provides that Illinois electric utilities affiliated by virtue of a common parent company are considered a single electric utility, and the Rider EDR recovery mechanism is designed accordingly. (Ameren Ex. 5.0, p. 3.) Through Rider EDR, the Ameren Illinois Utilities will determine the annual tariff factor based upon total projected delivered kWhs for the Ameren Illinois Utilities, using the approved program costs for the program year (which runs from June 1 through May 31). (*Id.*) As specified in Rider EDR, the EDR Charge is the component of the tariff whereby the costs, fees and charges related to approved program costs result in the annual factor to be applied. (*Id.*) The Commission may adjust the annual factor for amounts to be refunded to or collected from retail customers. (*Id.*) Retail customers of all three Ameren Illinois Utilities will experience the same EDR Charge. (*Id.*)

The Act provides specific requirements for processing DCEO’s approved energy efficiency measures. (*Id.*) In accordance with these requirements, the Ameren Illinois Utilities will apportion dollars to cover the costs of implementing DCEO’s share of the portfolio of energy efficiency measures, once DCEO has executed grants or contracts for energy efficiency measures and provided the Ameren Illinois Utilities with supporting documentation. (*Id.*) Charges collected by the Ameren Illinois Utilities for DCEO-implemented measures by shall be submitted to DCEO pursuant to Section 605-323 of the Civil Administrative Code of Illinois, as provided for in the Act. (*Id.*) The Ameren Illinois Utilities are not required to advance any monies to DCEO, but will rather forward such funds upon collection. (Ameren Ex. 5.0, pp. 3-4.)

Changes to the costs of energy efficiency measures as a result of Plan modifications will be reflected in the amounts charged and apportioned to DCEO. (Ameren Ex. 5.0, p. 4.) The Ameren Illinois Utilities may file a revised EDR Charge to reflect Commission-approved changes. (*Id.*)

Within the Program Year (from June 1 through May 31), Rider EDR also allows the Ameren Illinois Utilities to file adjustments to an EDR Charge as appropriate; that is, in the event that a revised EDR Charge would result in a better match between Rider EDR revenues and Program Costs, or where the Commission has changed the EDR Charge in the context of an Ordered Reconciliation Adjustment. (*Id.*) Rider EDR provides for an annual reconciliation in accordance with the requirements of the Act, which requires the Commission to initiate an annual reconciliation and to determine the required adjustment to the annual tariff factor. (*Id.*) The Ordered Reconciliation Adjustment will be reflected in the EDR Charge for the succeeding Program Year. (*Id.*) The Ameren Illinois Utilities will provide for the reconciliation via a tracking account, to be established by the Ameren Illinois Utilities to properly account for expenditures related to Commission-approved program measures, including those approved for DCEO. (*Id.*)

The Ameren Illinois Utilities will file an informational filing with the Commission no later than the 20th day of the monthly billing period immediately preceding the monthly billing period in which the EDR Charge is to become effective. (Ameren Ex. 5.0, pp. 4-5.) The informational filing shall be accompanied by work papers showing the determination of the EDR Charge. (Ameren Ex. 5.0, p. 5.) The details of this filing are spelled out in Rider EDR. (*Id.*)

Rider EDR does not operate to roll over dollars not expended in a given year. (*Id.*) Rider EDR is designed to ensure that the rate cap controls the amount of dollars that can be expended

for energy efficiency and demand response programs, in accordance with the Act. (*Id.*, See 220 ILCS 5/12-103(d). To demonstrate, if in Year 1 \$12 million is spent, and \$14 million is collected from customers as projected, the Ameren Illinois Utilities would refund the difference to the customers in accordance with the Act. In Year 2, the Ameren Illinois Utilities would set the charge to recover those amounts again up to the rate cap (which are approximately \$29 million (Ameren Ex. 5.0, p. 5)) and proceed to recover this amount from customers throughout the year. A reconciliation proceeding would follow in Year 3 as it did in the proceeding year. (*Id.*)

The Ameren Illinois Utilities will prepare and file an audit report and an annual report summarizing the operation of the automatic adjustment mechanism for EDR measures for the previous program year. (Ameren Ex. 5.0, p. 5.) The report will be submitted to the Commission in an informational filing, with copies of such report provided to the Manager of the Staff's Accounting Department and the Director of the Staff's Financial Analysis Division by August 31, beginning in 2009. (Ameren Ex. 5.0, pp. 5-6.) Such report will be verified by an officer of the Ameren Illinois Utilities. (Ameren Ex. 5.0, p. 6.)

The Ameren Illinois Utilities request that the new tariff, Rider EDR, become effective within 30 days after the conclusion of this proceeding. (*Id.*) The compliance tariff will include a footnote stating that "retail charges computed in accordance with this Rider become operational and are applicable for service provided on and after June 1, 2008." (*Id.*)

2. Single Charge Issue

[The Ameren Illinois Utilities have not contested this issue, but are unsure if it will be contested by Staff and/or other parties.]

3. Comments Regarding Specific Incremental Costs (Uncontested)

In direct testimony, Staff witness Theresa Ebrey sought clarification of the definition of Incremental Costs within Rider EDR. (Staff Ex. 2.0.) In rebuttal, Mr. Jones confirmed that, as presently worded, one could be left with the impression that only legal and consultant costs are subject to a date limitation. (Ameren Ex. 8.0, p. 2.) Mr. Jones clarified that the intent of the definition was to subject all incremental costs to the date limitation, not just legal and consultant costs. (*Id.*) Mr. Jones on behalf of the Ameren Illinois Utilities proposed the following language to address the issue:

Incremental Costs means costs incurred by or for the Company or recovered on behalf of DCEO in association with the Measures, incurred after the effective date of Section 12-103 of the Act, to be recovered pursuant to this Rider, and include, but are not limited to (a) fees, charges, billings, or assessments related to the Measures; (b) costs or expenses associated with equipment, devices, or services that are purchased, provided, installed, operated, maintained, or monitored for the Measures; (c) the revenue requirement equivalent of the return of and on a capital investment associated with the Measures, based upon the most recent rate of return approved by the ICC; and (d) all legal and consultant costs ~~associated with the Measures that are incurred after the effective date of Section 12-103 of the Act.~~

(Ameren Ex. 8.0, pp. 2, 3.) Counsel for the Ameren Illinois Utilities confirmed at the evidentiary hearing that the Ameren Illinois Utilities intend to modify Rider EDR in accordance with this proposed language. (Tr. at 95, 96.)

4. Miscellaneous Rider EDR Issues (Uncontested).

CUB Witness Christopher Thomas raised two issues regarding the Ameren Illinois Utilities' proposed Rider EDR in his direct testimony, CUB Ex. 1.0. Specifically, first, Mr. Thomas recommended that the Commission ensure that costs recovered in Rider EDR ultimately recover only the Ameren Illinois Utilities' actual costs and exclude inflation or other projected

asymmetrical costs. Second, Mr. Thomas recommended that, in the event the Ameren Illinois Utilities receive payments for demand response achieved through the direct load control programs, such proceeds offset costs recovered through Rider EDR. The Ameren Illinois Utilities resolved both of these issues in their rebuttal testimony. (*See* Pre-Hearing Memorandum of the Citizens Utility Board).

(a) Only Actual Costs Will Be Recovered Under Rider EDR.

In responding to Mr. Thomas' first recommendation, that the Commission ensure costs recovered in Rider EDR ultimately recover only the Ameren Illinois Utilities' actual costs incurred to implement energy efficiency and demand-response measures, Mr. Jones noted that Rider EDR provides for the recovery of expenses incurred by both the Ameren Illinois Utilities and the Department of Commerce and Economic Opportunity ("DCEO"). (Ameren Ex. 8.0, p. 5.) Mr. Jones expressed concern that Mr. Thomas' statement, "Rider EDR should include only Ameren's actual costs," explicitly excludes costs for measures administered by the DCEO. (*Id.*) The Ameren Illinois Utilities' Rider EDR appropriately recovers costs for both it and the DCEO, as directed in Section 12-103(e) of the Act. (*Id.*, citing 220 ILCS 5/12-103(e).)

As for ensuring that only actual costs of energy efficiency and demand response measures are ultimately recovered from customers, this too is consistent with the Act and Rider EDR. The Act states "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." (underline added). 220 ILCS 5/12-103(e). In compliance with this provision, Rider EDR provides for an Automatic Reconciliation Adjustment and an Ordered Reconciliation Adjustment that will ensure customers ultimately pay actual costs for energy efficiency and demand response measures. (Ameren Ex. 8.0, p. 5.) With

the additional clarification provided at the request of Staff (*See* Staff Ex. 1.0; Ameren Ex. 8.0, p. 2), Rider EDR accomplishes precisely the Act’s stated intentions.

(b) The Ameren Illinois Utilities Accepted CUB’s Proposed Tariff Language

Mr. Thomas also recommended that “Ameren must maximize the value of the direct load control program and return any financial benefits to customers by modifying Rider EDR.” (CUB Ex. 1.0, p. 2.) Mr. Thomas’ testimony also suggested tariff language to account for any future financial benefits from the use of demand response programs. (*Id.*, p. 8.) In rebuttal testimony, Mr. Jones noted that he is not aware of any Midwest Independent Transmission System Organization (“MISO”) administered programs that would presently provide a credit to Rider EDR. (Ameren Ex. 8.0, p. 6.) Nonetheless, Mr. Jones indicated that the Ameren Illinois Utilities do not object to adding the tariff language suggested by Mr. Thomas, in the event that a MISO program does indeed emerge. (*Id.*) Since the “Reimbursement of Incremental Costs” is based on an expectation of funds, Mr. Jones noted that this factor would also be subject to the Automatic Reconciliation Adjustment, which will true-up to actual cost experience. (*Id.*) Mr. Jones also noted the lack of need to address “productivity gains” in the context of Rider EDR, as Mr. Thomas discusses (CUB Exhibit 1.0, p.8), because Rider EDR will ultimately recover only the actual cost of energy efficiency and demand-response measures (as noted above). (*Id.*)

5. Commission Conclusion

Upon review of the statutory requirements and evidence, the Commission finds that the Ameren Illinois Utilities’ proposal to recover the costs incurred under the Plan through Rider EDR, as modified through agreement with Staff and other parties, is reasonable and should be approved.

H. The Ameren Illinois Utilities' Evaluation, Measurement & Verification Plan Comports with Standard Industry Practice and the Act and Should Be Approved.

Evaluation, measurement and verification (“M&V”) of the cost effectiveness of the Ameren Illinois Utilities/DCEO portfolio of energy efficiency programs is a central component of the implementation plan filing, for at least three reasons. First, the Act specifies economic penalties as well as potential governance penalties for failure to meet load reduction goals after years two and three of the implementation plan. Second, the Act specifies that the M&V budget may not exceed 3% of the total portfolio budget. Third, an issue raised during the Illinois statewide stakeholder energy efficiency meetings/discussions in August – November 2007 was the issue of pre-approval of “deemed” savings or savings based on stipulated values which come from historical values of typical projects.

The Ameren Illinois Utilities intend to meet the load reduction goals, and, if possible, exceed the load reduction goals specified in the Act. The Ameren Illinois Utilities’ intent is to be a performance leader in the delivery of cost-effective energy efficiency products and services to our customers. The opportunity to partner with customers is critical to strengthening customer service. It is essential that the Ameren Illinois Utilities work with stakeholders and the Commission to develop a common understanding of the ground rules for measurement and verification of savings attributable to the overall portfolio of energy efficiency measures.

The Act’s limit 3% for M&V is unavoidably restrictive in terms of being able to engage an M&V contractor to do a complete impact and process evaluation for every energy efficiency and demand response program in the Ameren Illinois Utilities’ portfolio. The National Action Plan for Energy Efficiency (“NAPEE”) published a draft in July 2007 of the Model Energy Efficiency Program Impact Evaluation Guide. The draft cites a rule of thumb that evaluation

costs range from 1% to 10% of program costs. The Guide also states that, in general, on a per unit basis, costs are directly proportional to the uncertainty of predicted savings (i.e., projects with greater uncertainty in the predicted savings warrant higher M&V costs). California recommends that evaluation spending be between 4 and 10 percent of the program budget. Since this is the Ameren Illinois Utilities' first implementation plan filing, there is uncertainty around all projected budget numbers, including customer participation in the proposed energy efficiency and demand response products and services. Mr. Voytas indicated that, in his experience, the M&V costs typically are closer to 10% of the portfolio cost range – especially in the early stages of an implementation plan.

If the M&V budget limit is 3% of the Ameren Illinois Utilities' estimated 2008 budget limit of approximately \$14 million, the M&V budget is approximately \$420,000. If the M&V budget of \$420,000 for 2008 is divided by a total of 14 programs for the Ameren Illinois Utilities and 12 programs for DCEO, the average M&V budget per program would be approximately \$16,000, which may barely cover the overhead associated with an M&V contractor evaluating a single program. Consequently, it will be necessary to set specific M&V goals and scale (degree of comprehensiveness) prior to the solicitation and engagement of an M&V contractor.

As will be discussed, it is prudent and cost effective to use deemed savings and deemed NTG ratios for some energy efficiency measure evaluations. Deemed savings and NTG ratios are used to stipulate energy efficiency measure savings and NTG ratios for projects with well-known and documented values. Examples are energy efficient appliances such as washing machines, computer equipment, refrigerators, and lighting retrofit projects with well-understood operating hours. The use of deemed values in savings and NTG ratios essentially depends on an

agreement or understanding between the stakeholders to an M&V process to accept stipulated values.

1. Banking Savings (Possibly Uncontested)

The Ameren Illinois Utilities did not request a banking of savings option or the ability to seek recovery of costs that exceed the spending limits in a given Plan year in their direct filing in this docket. (Ameren Ex. 8.0, p. 4.) However, the Ameren Illinois Utilities understand that such a proposal is under consideration in 07-0540, and that reason certain parties presented regarding that option in direct testimony in this Docket. (See AG Ex. 1.0, Staff Ex. 1.0.) Banking of savings refers to the ability to count kWh savings in excess of the annual goal in a given Plan year toward the following Plan year's goal. In such cases, forecast costs for the following Plan year's goals would also be adjusted downward to reflect the need to achieve lower kWh reduction in that year. (Ameren Ex. 8.0, p. 4.)

Staff witness Mr. Zuraski supports banking of savings. (Staff Ex. 1.0, p. 46.) Mr. Zuraski testified to his belief that, in the absence of banking, in any one plan year, there would be little reason for the Company to pursue savings above the goals set forth in the Act (or at a rate any faster than required by the Act). (*Id.*) Mr. Zuraski testified that achieving greater energy savings (or achieving energy savings at a faster rate) in one year, may make it more difficult to achieve the Act's goals in the following year, as the market for efficiency products and services becomes more saturated. (*Id.*) Thus, the lack of banking privileges may actually constitute a disincentive to achieving greater energy savings (or achieving energy savings at a faster rate). (*Id.*) Further, since there some uncertainty about future participation levels and future savings cannot be forecast precisely, this disincentive to achieving greater energy savings

(or achieving energy savings at a faster rate) may actually decrease the ultimate attainment of the Act's percentage savings goals. (*Id.*)

To the extent the Commission finds the banking option preferable, the Ameren Illinois Utilities have no objection to making the necessary changes to their Plan or related tariffs, as necessary. (Ameren Ex. 8.0, p. 4.) However, such a banking plan would have to be consistent with Section 12-103(e) of the Act. Section 12-103(e) requires, in part, a reconciliation of any amounts collected with the actual costs incurred and the subsequent adjustment to the annual tariff factor to match annual expenditures. 220 ILCS 5/12-103(e).

2. Commission Conclusion

3. Annualizing Savings (Uncontested)

“Annualizing savings” means that all savings are calculated as if the measure had been in place for the full year, regardless when a measure is installed during the year. It is the Ameren Illinois Utilities’ belief that the terms of the Act itself necessitates an annualization of energy savings, and the practice does not require testimonial support. For example, Section 5/12-103(b) states that “[e]lectric utilities shall implement cost-effective energy efficiency measures to meet the following incremental *annual* savings goals” (emphasis added), and provides a timeline and schedule that turns upon a June 1st date each year. Similarly, the goals of Section 5/12-103(c) turns upon a June 1st deadline, and are based on a “prior year” metric. For that reason, we are in general agreement with other parties’ testimony on this issue. We also do not disagree with testimony regarding public policy reasons for annualizing savings. (*See* Staff Ex. 1.0, pp. 14-16.)

4. Commission Conclusion

Upon review of the statutory requirements and record evidence, the Commission finds that the Ameren Illinois Utilities' proposal to annualize savings under the Plan is consistent with the Act and should be approved.

5. Use of Deemed Values (Contested)

6. Plan Administration/Implementation (Uncontested).

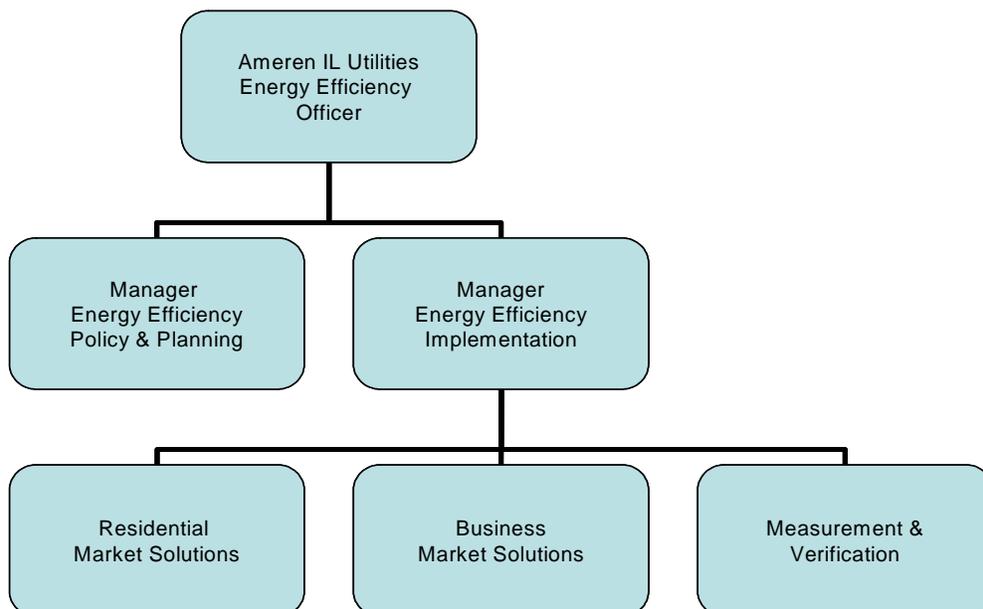
The implementation date for the Ameren Illinois Utilities' energy efficiency programs is set by the Act. The Act states that the utility will implement cost effective energy efficiency measures that reduce 0.2% of energy delivered in the year commencing June 1, 2008. 220 ILCS 5/12-103(b)(1). However, the Ameren Illinois Utilities would like to make available energy efficiency and demand response products and service options to help customers manage their electricity consumptions as soon as possible. (Ameren Ex. 2.0, p. 37.) Although aggressive, June 1, 2008 is achievable for programs in the Ameren Illinois Utilities' portfolio – if early action is taken in selecting third-party program implementers and the M&V contractor.

Based on preliminary feedback from multiple meetings with the Illinois statewide energy efficiency stakeholders on August 28th, September 13th, September 19th and 20th, October 16th and 17th, as well as other stakeholder teleconferences and other electronic communication exchanges, the Ameren Illinois Utilities are hopeful that their proposed plan will be approved by the Commission. (Ameren Ex. 2.0, p. 38.) With this assumption, the Ameren Illinois Utilities recommend that the stakeholder M&V process begin in early December 2007 with the goal of engaging an M&V contractor by February 1, 2008. Also, the Ameren Illinois Utilities recommend that an RFP to solicit bids for third-party implementers for proposed programs be

developed, vetted with stakeholders, and issued early in January 2008 with the goal of engaging third-party implementers by February 15, 2008.

These two actions alone, however, will not be enough to enable the Ameren Illinois Utilities to roll out 100% of their proposed programs on June 1, 2008. (Ameren Ex. 2.0, p. 38.) The Ameren Illinois Utilities will not roll out any programs that are not fully designed and include full back office support. Back office support includes all program and tracking systems that support both program management and program evaluation needs. It is likely that programs will be phased in as quickly as possible after meeting a series of quality control checks. The quality control checklists will be dependent on final program design. The checklists will be developed jointly by the Ameren Illinois Utilities, third-party implementers, and the M&V contractor.

The energy efficiency organization structure that the Ameren Illinois Utilities will put in place to effectively administer, manage, and deliver their portfolio of energy efficiency programs is as follows:



The functions of the Ameren Illinois Utilities' proposed program management and delivery activities include:

- General administration and coordination
- Program development, planning and budgeting
- Program/portfolio administration and management
- Program delivery and implementation
- Market assessment and program evaluation

The work associated with general administration and coordination focuses on contract management with all contractors associated with the Ameren Illinois Utilities' energy efficiency and demand response programs. (Ameren Ex. 2.0, p. 39.) The work also includes the development and maintenance of financial accounting systems associated with energy efficiency and demand response work. Finally, work includes the development and maintenance of reporting/information management systems; preparation of quarterly/annual reports; and maintenance of an IT system for reporting and tracking for the Commission as well as internal and stakeholder advisory groups.

The work associated with program development, planning and budgeting basically builds on the stakeholder participative process used in the development of the Ameren Illinois Utilities' energy efficiency and demand response portfolio. (Ameren Ex. 2.0, p. 39.) It involves facilitating the public or participative planning process. The work involves program design,

portfolio development, and budget estimation. The essence of the work is to build a common understanding as to the cost effectiveness of proposed programs.

Regarding program administration and management, the Ameren Illinois Utilities expect to engage third-party implementers to administer most of the programs in the Ameren Illinois Utilities' energy efficiency portfolio. (Ameren Ex. 2.0, p. 40.) There will also be energy delivery personnel assigned to manage and oversee individual programs. The Ameren Illinois Utilities' program managers and implementers, along with trade allies, stakeholders, and customers are expected to recommend program improvements based on experience and market response. The Ameren Illinois Utilities' program managers will also be responsible for quality assurance to ensure effective program delivery.

The following are the key components of program delivery and implementation:

- Program marketing/outreach: market individual programs; mass advertising;
- Program delivery services: energy efficiency audits, technical/design assistance, financial assistance/incentives, commissioning, contractor certification and training
- Participation in and implementation of regional and/or national market transformation initiatives
- Measurement and Verification of savings: develop M&V procedures; focus on verification to determine payments to contractors
- Project Development: Develop individual energy efficiency projects at customer facilities

The work associated with market assessment and program evaluation is as follows:

Market assessment involves the identification and characterization of specific energy efficiency and demand response market opportunities. Program evaluation for this work segment focuses on process evaluation for purposes of improving program effectiveness.

7. Commission Conclusion

Upon review of the statutory requirements and record evidence, the Commission finds that the Ameren Illinois Utilities' proposal to implement and administer the Plan is consistent with the Act and should be approved.

8. Collaborative Process (Contested)

I. Demonstration of Breakthrough Equipment and Devices (Uncontested)

Section 12-103(g) states that “[n]o more than 3% of energy efficiency and demand-response program revenue may be allocated for demonstration of breakthrough equipment and devices.” Mr. Voytas testified that, at this time, the Ameren Illinois Utilities do not plan to allocate a portion of their budget to the demonstration of breakthrough equipment and devices. (Am. Ex. 2.0, p. 2.) The Ameren Illinois Utilities' current budget projections to achieve annual incremental energy efficiency and demand response savings goals are such that there are not sufficient funds to address research and development initiatives related to energy efficiency and demand response in the 2008-2010 implementation plan. (*Id.*) The Ameren Illinois Utilities will focus on the successful implementation of energy efficiency and demand response programs in the first three-year implementation plan filing. (*Id.*) The Companies anticipate a gradual evolution to energy efficiency and demand response pilot programs, developed via a stakeholder process, which will address breakthrough equipment and devices in their second implementation plan filing. (*Id.*)

No party contested that the Ameren Illinois Utilities have met the requirement of Section 12-103(g). Staff witness Zuraski noted that the ambiguously worded statute “makes it difficult for Staff to factually assess whether or not the plan is consistent with the 3 percent ceiling on such spending.” (Staff Ex. 1.0, p. 8.) However, “by claiming that it is not funding any ‘research

and development initiatives,' perhaps the Company has done all that it can, at this time, to show that it is complying with the Section 12-103(g) restriction." (*Id.*)

1. Commission Conclusion

Upon review of the statutory requirements and record evidence, the Commission finds that the Ameren Illinois Utilities have demonstrated that no more than 3% of energy efficiency and demand-response program revenue will be allocated for demonstration of breakthrough equipment and devices under their Plan, in accordance with Section 12-103(g).

J. Other Contested Issues

1. Amortization of Costs (AG Proposal)

Dated: January 14, 2008

Respectfully submitted,

CENTRAL ILLINOIS LIGHT COMPANY
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CENTRAL ILLINOIS PUBLIC SERVICE
COMPANY d/b/a AmerenCIPS, and

ILLINOIS POWER COMPANY
d/b/a AmerenIP

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CERTIFICATE OF SERVICE

I, Laura M. Earl, certify that on January 14, 2008, I served a copy of the foregoing Ameren Illinois Utilities' Proposed Order of Uncontested Issues by electronic mail to the individuals on the Commission's Service List for Docket 07-0539.

/s/ Laura M. Earl
Laura M. Earl
Attorney for the Ameren Illinois Utilities