This document presents a summary of Demand Side Management (DSM) programs proposed by Navigant to be offered by KCP&L-KS, KCP&L-MO, and KCP&L Greater Missouri Operations (GMO). The programs presented cover a broad range of demographic, business, facility, and end-use markets. The program portfolio is divided into residential, business and demand response sectors. The intent of the programs presented here is to provide a sense of scope and scale, and to convey the general resources needed to facilitate customer participation in the various markets in which the programs will operate. The DSM program descriptions are proposed as guidelines for more detailed program planning; these are not intended to be operational per se. Program descriptions are first presented for the residential sector efficiency programs, then for the business sector efficiency (and CHP) programs, and finally for demand response (DR) programs.

KCP&L and GMO: Programs – Residential Sector

KCP&L's suite of residential programs is comprehensive and covers major end-uses and market segments. Modifications will achieve further penetration and additional cost-effective savings, including:

- Adding domestic hot water heating measures to the Cool Homes Program
- Creating a new energy education program for students
- Reviving the ENERGY STAR® Homes program based on the EPA's new Version 3.0 standard, with a performance-based incentive offering and alternative prescriptive incentive path

Table 1 presents an overview of nine residential sector programs. Detailed program descriptions follow.

Table 1. Residential Sector Programs

Program Name	New Program?	Market Sector	End Uses/Measures	Description
1. Low Income Weatherization	No	SF/MF	Whole house	Free income-qualified energy audit and direct install of measures
2. Cool Homes	No	SF/MF	HVAC and water heating	Prescriptive rebates paid for the installation of electric HVAC and electric heat pump DHW measures
3. Home Performance with ENERGY STAR	No	SF/MF	Whole house	Home Performance with ENERGY STAR – energy audit and prescriptive rebates paid for recommended electric HVAC, electric heat pump DHW and shell measures Financing: KCP&L will investigate offering financing by partnering with a third-party provider
4. Multifamily Rebate (Res)	KCP&L Proposed	MF	Whole house	Energy audit, direct install and prescriptive rebates paid for the installation of measures
5. Appliance Turn In	KCP&L Proposed	SF/MF	Refrigerators, freezers, room air conditioners	Incentives for recycling of old, working appliances
6. Efficient Products	KCP&L Proposed	SF/MF	Lighting and Appliances	Prescriptive rebates or upstream markdown for measures
7. Energy Reports	KCP&L Proposed	SF/MF	Behavioral	Monthly energy consumption reports with education and comparison to neighbors
8. ENERGY STAR Homes	Yes	SF/MF	Whole house	Prescriptive rebate for compliance with ENERGY STAR requirements or alternative measure package
9. Energy Education (5^{th}–8^{th})	Yes	SF/MF	Lighting	In-class energy education and free take-home energy kit

Title	**Low Income Weatherization Program**
Objectives	
The Low Income Program is a voluntary program designed to provide home energy weatherization services to utility company customers with limited income to assist them in reducing their electric energy use and managing their utility costs.	
Description	
The program will help facilitate the implementation of cost-effective electrical energy-savings measures in residential low-income households. In an ongoing effort, the utility company intends to work with the agencies responsible for implementing the federal LIHEAP program to leverage its funding, thereby increasing the number of homes served. If local weatherization agencies initially lack the resources to handle the additional workload, the implementation contractor will temporarily contract with private sector firms to address the overload. Additionally, the program intends to identify emerging opportunities for collaboration on projects that could benefit the community, such as neighborhood redevelopment initiatives. Such projects could provide viable options for targeted weatherization projects along with job-growth and training opportunities.	
Target Market	
The Low Income Program targets moderate and high use customers with total annual household income at or below 150% of federal poverty guidelines who receive electric service from the utility company. Services could include single family and multi-family buildings. Customer participation is limited to fund availability and utility company reserves the right to modify or terminate this program at any time, subject to	

Commission approval. The program will work closely with local weatherization agencies to develop outreach strategies for targeting diverse segments of the population.

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

Program Delivery

The Low Income Weatherization Program will be implemented by the utility company with necessary resources to administer the program. The utility company will utilize an internal program manager to conduct its own administration of the program. The utility company's program manager will maintain oversight of the program. An implementation contractor may be responsible for items such as incentive processing, rebate processing, communication with the customer to resolve application issues, and status reporting associated with the program, as directed by the utility company.
Key elements of the implementation strategy include:

- Coordination with local weatherization agencies to subsidize the cost of treating additional homes as well as specific electric measures not currently covered by LIHEAP funding. Payments will be made directly to the weatherization agency upon receipt of documentation of completed work. A start-up funding amount will be established to facilitate the first few months of jobs. Funds also will be available to supplement the agency's educational services currently provided.
- Recruitment and hiring of private-sector contractors. The utility company or its implementation contractor will use a competitive bid process to engage private sector contractors to manage work in areas where the local weatherization agency is unable to manage the volume of additional homes.
- Target owners of multi-family properties with low-income residents to provide turnkey work direct-install services for common areas and individual living units. Use a competitive bid process to engage contractors to perform the direct install work.
- It is envisioned that the utility company or its implementation contractor will play a key role in providing coordination and training for weatherization contractors, as needed.

Program Partners/Collaborative Resources

Partners include utility company internal staff, community assistance programs and others as needed to promote and encourage customer participation in the program.

Relationship to Other Programs

The Low Income Program is designed for residential customers; therefore, the program has a strong relationship through promotion with the utility company's other residential demand side management (DSM) programs, such as the Home Performance with ENERGY STAR®, ENERGY STAR Homes, Energy Optimizer, and Home Energy Analyzer.

Marketing Strategy

Marketing will be closely coordinated with the local weatherization agencies. Key elements of the marketing strategy include:

- Targeted outreach through local agencies
- Utility website and newsletter
- Press releases and Public Service Announcements

For the Low Income Weatherization Program, the utility company has identified the following internal and external print communications as possible marketing channels:

Externally Published Communications

- The Kansas City Star
- Greenability magazine or other sustainability publications

Internally Published Communications

- Newsletters
- Bill messaging
- On line promotion with the utility company's other e-Services products

Other marketing activities may include:

- Online advertising with Google AdWords
- Attend and present at conferences and public events, such as Chamber of Commerce meetings, to increase general awareness of the program and distribute program promotional materials
- Sponsor spots on public radio

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **Limited federal funding for LIHEAP weatherization services**	• Coordinate with weatherization agencies to subsidize the cost of weatherization for additional homes.
• **Lack of information about home energy use**	• A variety of energy analysis tools and educational materials

Incentive Strategy and Eligible Measures

Incentive Strategy

Equipment and installation costs for all eligible measures will be provided free to eligible customers and properties. All funding for the program will be provided by the utility company.

Eligible Measures

The following measures will be eligible under the Low Income Weatherization Program. The incentive cost shown below includes both labor and materials.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Res Faucet Aerators – Standard Faucet Aerators - Lo Flow	per unit	$13.00	$14.00	$14.00	$14.00	$15.00
Res No Pipe Insulation Pipe Insulated	per unit	$2.80	$2.90	$3.00	$3.00	$3.10
Res Showerhead - Standard (4 GPM)_Showerhead - Low Flow (1/2.5 GPM)	per unit	$46.00	$47.00	$48.00	$50.00	$51.00
No Blanket Water Heater Blanket/Tank Wrap	per unit	$18.00	$19.00	$19.00	$19.00	$20.00
_Room AC/HP – Standard Room AC/HP - High Efficiency - Early Retirement	per kBtu/h	$120.00	$130.00	$130.00	$130.00	$140.00
Shell - Base Ceiling Insulation Shell - Increased Ceiling Insulation	per sq ft (ceiling area)	$1.10	$1.20	$1.20	$1.20	$1.20
Shell - Base Infiltration Shell - Air Sealing	per sq ft (floor area)	$0.42	$0.43	$0.44	$0.45	$0.46
Shell - Base Wall Insulation Shell - Increased Wall Insulation	per sq ft (wall area)	$2.40	$2.50	$2.50	$2.60	$2.70
Shell - No Crawlspace/Basement Wall Insulation Shell - Crawlspace/Basement Wall Insulation	per sq ft (wall area)	$2.10	$2.10	$2.20	$2.20	$2.30
Res Screw In – Incandescent Screw In - 2x Incandescent Lamps	Per lamp	$5.60	$5.70	$5.80	$5.90	$6.10
Res Screw In – Incandescent Screw In - CFLs	Per lamp	$5.00	$5.10	$5.30	$5.40	5.50

Split/Packaged AC/HP - Air Sourced – Standard Sizing, Refrigerant Charge and Airflow Correction (QI)	per ton	$130.00	$130.00	$130.00	$140.00	$140.00

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the Low Income Weatherization Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	309,498	129	355,184	129	482,804	180
2015	866,175	306	936,736	303	1,248,841	417
2016	1,580,054	521	1,659,989	512	2,199,658	703
2017	2,374,724	768	2,448,641	749	3,238,553	1,028
2018	3,203,332	1,037	3,257,841	1,005	4,307,558	1,381

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the Low Income Weatherization Program over the estimated life of the program follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	309,498	309,498	129	129
2015	556,677	866,175	176	306
2016	713,880	1,580,054	216	521
2017	794,669	2,374,724	246	768
2018	828,609	3,203,332	270	1,037
		KCPL-MO		
2014	355,184	355,184	129	129
2015	581,552	936,736	173	303
2016	723,253	1,659,989	209	512
2017	788,653	2,448,641	237	749
2018	809,200	3,257,841	256	1,005
		KCPL-GMO		
2014	482,804	482,804	180	180
2015	766,037	1,248,841	237	417
2016	950,817	2,199,658	286	703
2017	1,038,894	3,238,553	324	1,028
2018	1,069,006	4,307,558	354	1,381

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Low Income Weatherization Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate for the life of each measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	0.8	0.8	0.8	0.9	0.9
Total Resource Cost (TRC)	0.6	0.6	0.6	0.6	0.7
Utility System Resource Cost Test (UCT)	0.6	0.6	0.6	0.6	0.7
Participant Cost Test (PCT)	2.0	2.0	2.0	2.0	2.0
Rate Impact Measure (RIM)	0.3	0.3	0.3	0.3	0.4

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	0.8	0.8	0.8	0.9	0.9
Total Resource Cost (TRC)	0.6	0.6	0.6	0.6	0.7
Utility System Resource Cost Test (UCT)	0.6	0.6	0.6	0.6	0.7
Participant Cost Test (PCT)	2.2	2.2	2.1	2.1	2.1
Rate Impact Measure (RIM)	0.3	0.3	0.3	0.3	0.3

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	0.8	0.8	0.8	0.9	0.9
Total Resource Cost (TRC)	0.6	0.6	0.6	0.6	0.7
Utility System Resource Cost Test (UCT)	0.6	0.6	0.6	0.6	0.7
Participant Cost Test (PCT)	2.2	2.2	2.2	2.1	2.1
Rate Impact Measure (RIM)	0.3	0.3	0.3	0.3	0.3

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover
The development of this program incorporated available information from market studies, consultant studies and the California DEER database on program impacts of free ridership and spillover in the initial program design. After one year of program implementation, the utility company will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.
Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, refining deemed savings measures, as well as, conducting primary and secondary research as part of impact and process evaluations.

Title	Cool Homes Program

Objectives

The primary goal of the Cool Homes Program is to encourage the utility company's residential customers to install energy efficiency measures in existing homes.

More specifically, the program is designed to:

(1) Provide incentives to homeowners for the installation of high efficiency heating, cooling and water heating equipment; and

(2) Provide a marketing mechanism for contractors to promote energy efficient equipment to end users.

Description

The Cool Homes Program will influence the installation of high-efficiency heating, cooling and water heating technologies through a combination of market push and pull strategies that stimulate demand, while simultaneously increasing market provider investment in promoting high-efficiency products.

The program will stimulate demand by educating customers about the energy and money-saving benefits associated with efficient equipment and providing financial incentives to overcome the first cost barrier. The program will stimulate market provider investment in promoting efficient products by offering HVAC contractors several services including training, educational materials, cooperative advertising and sales brochures.

The following general process will be followed to serve customers in the program:

- The Program Administrator will assign participating customers to a pre-approved HVAC contractor for service
- The HVAC contractor will evaluate the customer's HVAC or water heating equipment
- Customers with working air-conditioning equipment that can be re-commissioned to operate above an EER rating of 8.0 will be offered an opportunity to return the equipment as close as possible to manufacturer specifications at no cost to the customer. Re-commissioning efforts will be limited to refrigerant charge, non-ductwork air flow system adjustments, and basic filters.
- Where work is performed, a second evaluation will be completed to verify the re-commissioning modifications or ensure the quality installation of new equipment
- Incentives are provided to customers through the HVAC contractors to help offset equipment costs and provide for quality installation practices. Contractors

will pass the replacement equipment incentive to the Customer in the form of an itemized credit on the invoice.

Target Market

Residential customers installing new heat pumps or water heating equipment, or servicing existing air conditioning equipment. Products installed in single-family homes and multi-family dwellings of three units or less will be eligible for incentives.

Duration

The program will launch in year 1 and end in year 5.

Implementation Strategy

Program Delivery

The Cool Homes Program will be implemented by the utility company with necessary resources to administer the program. The utility company or its implementation contractor will be responsible for items such as incentive processing, rebate processing, communication with the customer to resolve application issues, and status reporting associated with the program, as directed by the utility company.

The utility company will utilize an internal program manager to conduct its own administration of the program. The utility company's program manager will maintain oversight of the program.

Utility Company Administrative Requirements

The utility company will be responsible for general administrative oversight of the program plan. It is estimated that a 1.0 full-time equivalent (FTE) will be required for program oversight. Key oversight functions include:

- Recruitment, selection, and management of an implementation support contractor(s)
- Coordination of marketing strategy/public relations among programs and market sectors
- Development and placement of marketing materials with input from the implementation contractor
- Coordination of all educational services
- Data warehousing
- Management of the evaluation contractor
- Goal achievement within budget

The utility company or its implementation contractor will be responsible for the following:

- Facilitate the recruitment of HVAC contractors and retail do-it-yourself stores to participate in the program and maintain regular communications

- Completing all program procedures from marketing through verification and payment and conducting a dry-run prior to launch
- Assessing current market conditions for energy efficiency equipment availability and pricing
- Utility company Program Manager and customer service staff training
- Preparing for stronger or weaker than expected participant response

Program Partners/Collaborative Resources
Partners include utility company internal staff, HVAC contractors, retailers and others as needed to promote and encourage customer participation in the program.

Relationship to Other Programs
The Cool Homes Program is designed for residential customers; therefore, the program has a strong relationship through promotion with the utility company's other residential demand side management (DSM) programs, such as the Home Performance with ENERGY STAR®, ENERGY STAR Homes, Low-income Weatherization, Energy Optimizer, and Home Energy Analyzer.

Marketing Strategy

Prospective customer participants will be identified in two primary ways:

- Participating HVAC contractors may identify existing customers within the Company service area that are suitable for the program.
- Customers interested in the program, but not identified through the above means may contact a participating HVAC contractor or the company directly. A listing of HVAC contractors will be posted on the utility company website.

The program includes customer educational and promotional pieces designed to assist residential customers with the information necessary to improve the energy efficiency of their entire home. The program also includes customer and trade ally education to assist with understanding the technologies and applications promoted, the incentives offered, and how the program functions.

Customer Marketing Tactics
The following customer marketing activities are anticipated:

- Promote program on www.kcpl.com Home Page, within site and in account payment portal (AccountLink)
- Provide promotional info embedded in the Home Energy Analyzer Program
- Direct mail campaigns
- Bill inserts and html email campaigns
- Print advertising in local newspapers and magazines
- Participation in Earth Day, Home Shows, and large customer employee fairs by providing brochures featuring the benefits and process to participate

Contractor Marketing Tactics
The utility company will increase its efforts with HVAC contractors with the following:

- Provide marketing support to drive program participation
- Provide reporting and marketing tools
- Provide information and documentation on the utility company's programs, procedures, policies and contacts
- Schedule contractor meetings at least once a year
- Provide updates on the utility company's energy efficiency applications, program updates, budgets/goals, etc.
- Facilitate networking
- Determine content for partner-only web portal

For the Cool Homes Program, the utility company has identified the following internal and external print communications as possible marketing channels:

Externally Published Communications

- The Kansas City Star
- Greenability magazine or other sustainability publications

Internally Published Communications

- Newsletters
- Bill messaging
- On line promotion with the utility company's other e-Services products

Other marketing activities may include

- Online advertising with Google AdWords
- Attend and present at conferences and public events, such as Chamber of Commerce meetings, to increase general awareness of the program and distribute program promotional materials
- Sponsor spots on public radio

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **First cost concerns for customers**	• Financial incentives and information on lifecycle savings
• **Consumer information**	• Education materials featuring the energy and non-energy benefits of premium equipment
• **Competing motivations for contractors (additional profit on premium products but concerns about being low-cost bidder.)**	• Program operated through contractors, who can choose to reduce their bid by the value of the incentive or pass directly to customer. Assistance with marketing materials and co-op advertising.
• **Urgency of replacement decision when equipment fails**	• Provide contractor cash-back rewards and training so that consumers can efficiently be informed of choices and high-efficiency technologies are stocked and available

Incentive Strategy and Eligible Measures

Incentive Strategy

The Cool Homes Program will pay a set incentive on a per-unit basis for installed, eligible measures.

Eligible Measures

The following measures will be eligible under the Cool Homes Program.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Split/Packaged AC/HP - Air Sourced – Standard HVAC Diagnostics and Tune Up (RCA)	per ton	$14.00	$14.00	$14.00	$15.00	$15.00
Res Hot Water Heater – Standard Hot Water Heater - Efficient	per unit	$9.40	$0.00	$0.00	$0.00	$0.00
Res Hot Water Heater – Standard Hot Water Heater - Heat Pump	per unit	$220.00	$210.00	$210.00	$220.00	$220.00
Split/Packaged AC/HP - Air Sourced – Standard Sizing, Refrigerant Charge and Airflow Correction (QI)	per ton	$32.00	$32.00	$33.00	$34.00	$35.00

Savings Targets

Expected cumulative annual energy and demand savings – year 1 to year 5

The expected cumulative annual gross and net energy and demand savings for the Cool Homes Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	2,252,458	2,027	2,437,726	2,180	3,309,094	2,996
2015	5,707,046	5,027	6,225,624	5,436	8,377,158	7,411
2016	10,173,682	8,854	11,121,482	9,579	14,931,287	13,030
2017	15,635,848	13,488	17,106,356	14,592	22,946,645	19,835
2018	22,048,653	18,892	24,105,345	20,415	32,327,814	27,749

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the Cool Homes Program over the five-year period follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	2,252,458	2,252,458	2,027	2,027
2015	3,454,587	5,707,046	3,000	5,027
2016	4,466,636	10,173,682	3,827	8,854
2017	5,462,165	15,635,848	4,634	13,488
2018	6,412,805	22,048,653	5,404	18,892
		KCPL-MO		
2014	2,437,726	2,437,726	2,180	2,180
2015	3,787,898	6,225,624	3,256	5,436
2016	4,895,858	11,121,482	4,143	9,579
2017	5,984,874	17,106,356	5,013	14,592
2018	6,998,989	24,105,345	5,823	20,415
		KCPL-GMO		
2014	3,309,094	3,309,094	2,996	2,996
2015	5,068,064	8,377,158	4,415	7,411
2016	6,554,129	14,931,287	5,619	13,030
2017	8,015,359	22,946,645	6,805	19,835
2018	9,381,169	32,327,814	7,913	27,749

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Cool Homes Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate, over the life of each measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.1	1.3	1.5	1.6	1.7
Total Resource Cost (TRC)	1.0	1.1	1.3	1.4	1.5
Utility System Resource Cost Test (UCT)	2.9	3.2	3.6	3.9	4.1
Participant Cost Test (PCT)	1.5	1.5	1.5	1.6	1.6
Rate Impact Measure (RIM)	0.6	0.7	0.8	0.9	0.9

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.2	1.3	1.5	1.6	1.7
Total Resource Cost (TRC)	1.0	1.2	1.3	1.4	1.5
Utility System Resource Cost Test (UCT)	2.9	3.2	3.6	3.9	4.1
Participant Cost Test (PCT)	1.6	1.7	1.7	1.7	1.7
Rate Impact Measure (RIM)	0.6	0.7	0.8	0.8	0.9

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.1	1.3	1.5	1.6	1.7
Total Resource Cost (TRC)	1.0	1.1	1.3	1.4	1.5
Utility System Resource Cost Test (UCT)	2.9	3.3	3.6	3.9	4.2
Participant Cost Test (PCT)	1.6	1.7	1.7	1.8	1.8
Rate Impact Measure (RIM)	0.6	0.7	0.7	0.8	0.8

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover
The development of this program incorporated available information from market studies, consultant studies and the California DEER database on program impacts of free ridership and spillover in the initial program design. After year of program implementation, the utility company will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.
Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, developing and refining deemed savings measure databases, as well as, conducting primary and secondary research as part of impact, market, and process evaluations.

Title	Home Performance with ENERGY STAR® Program

Objectives

The primary goal of the Home Performance with ENERGY STAR® (HPwES) Program is to help residential customers understand their energy use and identify opportunities for improving the efficiency of their homes through a comprehensive home audit. Additionally the program offers rebates and technical assistance to encourage the installation of energy-saving measures identified during the audit. The secondary goal of the program is to advance the development of a trained, building science focused, professional retrofit workforce that will over time transform existing baseline retrofit practices.

Description

The HPwES Program will work to coordinate the development of a statewide network of independent contractors trained and mentored on the delivery of a comprehensive energy analysis and measure installation under the Home Performance with ENERGY STAR model. The program will train contractors to Building Performance Institute (BPI) standards on building science and offer marketing and incentive packages to accelerate customer awareness and demand.

Customers who participate in the Program will receive a comprehensive Energy Audit from an approved and certified Contractor/Consultant. This process may be facilitated and quality controlled by a third party Program Administrator on behalf of the Company in accordance with established Program guidelines.

Customers will pay a market-based fee for the Audit and will be reimbursed up to $600 for the audit fee if at least one Qualifying Improvement listed on their final Audit report is completed. Participating customers will also be eligible for up to $600 in rebates for Qualifying Improvements. The criteria for Qualifying Improvements will be kept current with the Department of Energy, EPA Energy Star® standards.

Target Market

Residential customers in single-family homes and duplexes. The program targets promotion to customers with consumption and mean household income that are both above average to maximize savings impacts and the percentage of customers who implement improvements.

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

Program Delivery

The HPwES Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor may be responsible for items such as rebate processing, contractor training and communications and status reporting associated with the program, as directed by the utility company. The utility company will utilize an internal program manager to conduct its own administration of the program. The utility company's program manager will maintain oversight of the program.

Program Partners/Collaborative Resources

Partners include the Metropolitan Energy Center, Missouri Gas Energy, BPI certified program auditors and others as needed to promote and encourage customer and contractor participation in the program.

Relationship to Other Programs

The program is designed for residential customers; therefore, the program has a strong relationship through promotion with the utility company's other residential demand side management (DSM) programs, such as Cool Homes, ENERGY STAR Homes, Low-income Weatherization, Energy Optimizer, and Home Energy Analyzer.

Marketing Strategy

Prospective customer participants will be identified in two primary ways:

- Participating HVAC and Home Performance contractors may identify existing customers within the company service area that are suitable for the program.
- Customers interested in the program, but not identified through the above means may contact a participating contractor or the company directly. A listing of eligible contractors will be posted on the utility company website.

The program includes customer educational and promotional pieces designed to assist residential customers with the information necessary to improve the energy efficiency of their entire home. The program also includes customer and trade ally education to assist with understanding the technologies and applications promoted, the incentives offered, and how the program functions.

Customer Marketing Tactics

The following customer marketing activities are anticipated:

- Promote program on www.kcpl.com Home Page, within site and in account payment portal (AccountLink)
- Provide promotional info embedded in the Home Energy Analyzer Program
- Direct mail campaigns
- Bill inserts and html email campaigns

- Print advertising in local newspapers and magazines
- Participation in Earth Day, Home Shows, and large customer employee fairs by providing brochures featuring the benefits and process to participate

Contractor Marketing Tactics

The utility company will increase its efforts with HVAC contractors with the following:

- Provide marketing support to drive program participation
- Provide reporting and marketing tools
- Provide information and documentation on the utility company's programs, procedures, policies and contacts
- Schedule contractor meetings at least once a year
- Provide updates on utility company energy efficiency applications, program updates, budgets/goals, etc.
- Facilitate networking
- Determine content for partner-only web portal

For the HPwES Program, the utility company has identified the following internal and external print communications as possible marketing channels.

Externally Published Communications

- The Kansas City Star
- Greenability magazine or other sustainability publications

Internally Published Communications

- Newsletters
- Bill messaging
- On line promotion with the utility company's other e-Services products

Other marketing activities may include

- Online advertising with Google AdWords
- Attend and present at conferences and public events, such as Chamber of Commerce meetings, to increase general awareness of the program and distribute program promotional materials
- Sponsor spots on public radio

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **Lack of information about home energy use and which energy-saving actions to take first**	• A variety of energy analysis tools that provide prioritized recommendations
• **First cost concerns for customers**	• Financial incentives and information on lifecycle savings
• **Lack of experienced home energy analysts to address more complex home performance issues**	• Training and mentoring for providers
• **Hassle of finding contractors and arranging work**	• List of qualified contractors that meet program standards

Incentive Strategy and Eligible Measures

Incentive Strategy

The HPwES Program will pay a set incentive on a per-unit basis for installed, eligible measures.

Eligible Measures

The following measures will be eligible under the HPwES Program.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Res Faucet Aerators – Standard Faucet Aerators - Lo Flow	per unit	$5.30	$5.40	$5.50	$5.70	$5.80
Res No Pipe Insulation Pipe Insulated	per unit	$2.80	$2.90	$3.00	$3.00	$3.10
Res Showerhead - Standard (4 GPM)_Showerhead - Low Flow (1/2.5 GPM)	per unit	$27.00	$28.00	$28.00	$29.00	$30.00
No Attic Venting Attic Venting	per home	$170.00	$170.00	$180.00	$180.00	$180.00
No Blanket Water Heater Blanket/Tank Wrap	per unit	$8.10	$8.30	$8.50	$8.70	$8.90
Room AC/HP – Standard Room AC/HP - High Efficiency - Early Retirement	per kBtu/h	$31.00	$32.00	$32.00	$33.00	$34.00
Shell - Base Infiltration Shell - Air Sealing	per sq ft (floor area)	$0.11	$0.11	$0.11	$0.11	$0.12
Shell - Base Infiltration Shell - Self Install Weatherization	per home	$16.00	$16.00	$17.00	$17.00	$17.00
Res Screw In – Incandescent Screw In - 2x Incandescent Lamps	per lamp	$3.90	$3.90	$4.00	$4.10	$4.20
Res Screw In – Incandescent Screw In - CFLs	per lamp	$3.50	$3.60	$3.70	$3.70	$3.80
Res Screw In – Incandescent Screw In - LEDs	per lamp	$7.50	$7.00	$7.40	$7.80	$8.10
Shell - Standard Window Shell - ENERGY STAR Windows	per sq ft (window area)	$0.33	$0.34	$0.35	$0.36	$0.36

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the HPwES Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	**Program Demand (kW)**	**Program Energy (kWh)**	**Program Demand (kW)**	**Program Energy (kWh)**	**Program Demand (kW)**
2014	924,342	139	987,450	147	1,456,076	214
2015	2,198,711	350	2,294,881	366	3,335,177	525
2016	3,589,918	600	3,694,431	622	5,347,966	888
2017	5,084,963	886	5,182,216	913	7,495,694	1,302
2018	6,672,980	1,205	6,751,565	1,237	9,772,227	1,763

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the HPwES Program over the five-year period follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	13,920,374	13,920,374	1,798	1,798
2015	16,387,264	30,307,638	2,093	3,891
2016	15,935,492	46,243,130	2,113	6,004
2017	15,530,919	61,774,049	2,136	8,140
2018	14,964,883	76,738,932	2,129	10,269
		KCPL-MO		
2014	14,903,566	14,903,566	1,887	1,887
2015	16,626,818	31,530,385	2,096	3,983
2016	15,716,600	47,246,985	2,058	6,041
2017	14,979,488	62,226,473	2,034	8,076
2018	14,172,371	76,398,844	1,991	10,066
		KCPL-GMO		
2014	21,734,146	21,734,146	2,732	2,732
2015	23,535,519	45,269,666	2,971	5,703
2016	22,188,816	67,458,481	2,920	8,623
2017	21,108,453	88,566,934	2,892	11,514
2018	19,952,162	108,519,096	2,839	14,353

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the HPwES Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the life of each measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.1	1.2	1.3	1.4	1.5
Total Resource Cost (TRC)	0.8	0.9	1.0	1.1	1.1
Utility System Resource Cost Test (UCT)	1.4	1.5	1.8	2.0	2.2
Participant Cost Test (PCT)	2.4	2.3	2.3	2.2	2.2
Rate Impact Measure (RIM)	0.4	0.4	0.5	0.5	0.5

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.0	1.1	1.3	1.4	1.5
Total Resource Cost (TRC)	0.8	0.9	1.0	1.1	1.1
Utility System Resource Cost Test (UCT)	1.3	1.5	1.8	2.0	2.2
Participant Cost Test (PCT)	2.8	2.6	2.5	2.4	2.4
Rate Impact Measure (RIM)	0.3	0.4	0.4	0.5	0.5

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.1	1.2	1.3	1.4	1.5
Total Resource Cost (TRC)	0.8	0.9	1.0	1.1	1.1
Utility System Resource Cost Test (UCT)	1.4	1.6	1.8	2.1	2.3
Participant Cost Test (PCT)	2.8	2.5	2.5	2.4	2.4
Rate Impact Measure (RIM)	0.3	0.4	0.4	0.4	0.5

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover
The development of this program incorporated available information from market studies, consultant studies and the California DEER database on program impacts of free ridership and spillover in the initial program design. After one year of program implementation, KCP&L will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.
Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, developing and refining deemed savings measure databases, as well as, conducting primary and secondary research as part of impact, market, and process evaluations.

Title	Multifamily Rebate Program

Objectives

The Multifamily Rebate Program offers energy assessments and prescriptive rebates to motivate multi-family property owners/managers to install cost-effective energy efficiency measures in both common and dwelling areas of multi-family complexes, and common areas of mobile home parks and condominiums. An additional objective is to heighten property owners/managers and tenants awareness and understanding of energy efficiency.

Description

The Multifamily Program offers property owners a comprehensive service for reducing energy use in the common areas of their building as well as helping residents reduce energy use in their living units. Property owners will be given the opportunity to participate in either or both components of the program.

The utility company or its implementation contractor will send out an energy auditor and a crew of installers to retrofit common areas and living units in targeted buildings. The energy auditor will conduct a walk-through assessment of the building to identify major opportunities for efficiency retrofits. The crew will install CFLs/LEDs and common area lighting, along with water heater pipe wrap and several low-flow water-saving devices. Educational information about the energy savings associated with these devices will be left behind in all units. The service is provided at no cost to property owners and occupants. Additionally the program offers rebates and technical assistance to encourage the installation of energy-saving measures identified during the audit.

Target Market

The Multifamily Program targets property owners/managers of multi-family buildings, both apartments and condominiums, containing five or more units. Mobile home parks may also be targeted.

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

Program Delivery

The Multi-family Rebate Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor may be responsible for items such as rebate processing, contractor training and communications and status reporting associated with the program, as directed by the utility company. The utility company will utilize an internal program manager to

conduct its own administration of the program. The utility company's program manager will maintain oversight of the program.

Program Partners/Collaborative Resources
Partners include the Metropolitan Energy Center, Missouri Gas Energy, BPI certified program auditors and others as needed to promote and encourage customer and contractor participation in the program.

Relationship to Other Programs
The Multi-family Rebate Program is designed for multi-family property owners and managers to assist residential customers to use energy more efficiently; therefore, the program has a strong relationship through promotion with the Company's other residential demand side management (DSM) programs, such as the Cool Homes program, Home Performance with Energy Star program, Energy Star Homes program, Low-income Weatherization program, Optimizer, and Home Energy Analyzer.

Marketing Strategy

Recruitment efforts will first target property management companies in an effort to secure agreements to treat multiple properties through a single point of contact before targeting owners and managers of individual properties.

The utility company or its implementation contractor will use direct mail solicitation as well as presentations at local property owners' associations to recruit participants. Information regarding program requirements along with requests for service will be available on the website and available through the contact center.

The program includes educational and promotional pieces designed to assist property owners/managers with the information necessary to improve the energy efficiency of their buildings. The program also includes customer and trade ally education to assist with understanding the technologies and applications promoted, the incentives offered, and how the program functions.

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
For residents:	
• **Hassle of researching how to reduce their energy bills** • **Hesitancy to invest in products that may stay with the unit when they leave** • **Lack of information about potential energy savings**	• Turnkey service; work is done for them • Materials and installation are provided free to the resident • Leave-behind educational materials for residents
For property owners:	
• **Split incentive for property owners where residents are charged for common area utility costs** • **Hassle of making arrangements to install measures**	• Financial incentives to make the investment more attractive; additional benefit (goodwill) of offering the in-unit installs to their residents • Simple turnkey service

Incentive Strategy and Eligible Measures

Incentive Strategy

The Multi-family Rebate Program will pay a set incentive on a per-unit basis for installed, eligible measures.

Eligible Measures

The following measures will be eligible under the Multi-family Rebate Program (incentives include material and labor).

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Res Controls - No Occ Sensors Controls - Occupancy Sensors	per connected W	$0.10	$0.10	$0.10	$0.11	$0.11
Res Faucet Aerators – Standard Faucet Aerators - Lo Flow	per unit	$5.30	$5.40	$5.50	$5.70	$5.80
Res No Pipe Insulation Pipe Insulated	per unit	$2.80	$2.90	$3.00	$3.00	$3.10
Res Showerhead - Standard (4 GPM) Showerhead - Low Flow (1/2.5 GPM)	per unit	$27.00	$28.00	$28.00	$29.00	$30.00
No Blanket Water Heater Blanket/Tank Wrap	per unit	$8.10	$8.30	$8.50	$8.70	$8.90
Room AC/HP – Standard Room AC/HP - High Efficiency - Early Retirement	per kBtu/h	$31.00	$32.00	$32.00	$33.00	$34.00
Shell - Base Infiltration Shell - Air Sealing	per sq ft (floor area)	$0.11	$0.11	$0.11	$0.11	$0.12
_Shell - Base Infiltration_Shell - Self Install Weatherization	per home	$16.00	$16.00	$17.00	$17.00	$17.00
Res_Screw In - Incandescent_Screw In - 2x Incandescent Lamps	per lamp	$3.90	$3.90	$4.00	$4.10	$4.20
Res Screw In – Incandescent Screw In - CFLs	per lamp	$3.50	$3.60	$3.70	$3.70	$3.80
Res Screw In – Incandescent Screw In - LEDs	per lamp	$7.50	$7.00	$7.40	$7.80	$8.10
Shell - Standard Window Shell - ENERGY STAR Windows	per sq ft (window area)	$0.33	$0.34	$0.35	$0.36	$0.36

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the Multi-family Rebate Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	1,518,304	165	2,211,746	242	959,191	102
2015	3,289,848	368	4,710,961	529	1,936,888	210
2016	5,159,619	586	7,301,060	834	2,876,470	316
2017	7,146,484	822	10,023,630	1,160	3,803,234	423
2018	9,248,805	1,074	12,883,681	1,504	4,726,261	529

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the Multi-family Rebate Program over the five-year period follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	1,518,304	1,518,304	165	165
2015	1,771,544	3,289,848	202	368
2016	1,869,771	5,159,619	219	586
2017	1,986,865	7,146,484	236	822
2018	2,102,321	9,248,805	252	1,074
		KCPL-MO		
2014	2,211,746	2,211,746	242	242
2015	2,499,215	4,710,961	287	529
2016	2,590,099	7,301,060	305	834
2017	2,722,570	10,023,630	325	1,160
2018	2,860,052	12,883,681	345	1,504
		KCPL-GMO		
2014	959,191	959,191	102	102
2015	977,698	1,936,888	108	210
2016	939,582	2,876,470	106	316
2017	926,764	3,803,234	106	423
2018	923,027	4,726,261	107	529

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Multi-family Rebate Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.2	1.3	1.5	1.7	1.8
Total Resource Cost (TRC)	1.0	1.0	1.2	1.3	1.4
Utility System Resource Cost Test (UCT)	1.3	1.5	1.8	2.1	2.4
Participant Cost Test (PCT)	3.4	3.1	3.1	3.1	3.1
Rate Impact Measure (RIM)	0.3	0.4	0.4	0.5	0.5

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.1	1.3	1.5	1.7	1.8
Total Resource Cost (TRC)	0.9	1.0	1.2	1.3	1.4
Utility System Resource Cost Test (UCT)	1.3	1.5	1.8	2.1	2.4
Participant Cost Test (PCT)	3.9	3.6	3.5	3.5	3.5
Rate Impact Measure (RIM)	0.3	0.3	0.4	0.4	0.4

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.1	1.2	1.4	1.6	1.8
Total Resource Cost (TRC)	0.9	1.0	1.1	1.2	1.4
Utility System Resource Cost Test (UCT)	1.2	1.4	1.7	2.0	2.3
Participant Cost Test (PCT)	4.1	3.5	3.5	3.4	3.4
Rate Impact Measure (RIM)	0.3	0.3	0.4	0.4	0.4

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover
The development of this program incorporated available information from market studies, consultant studies and the California DEER database on program impacts of free ridership and spillover in the initial program design. After one year of program implementation, The utility company will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.
Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, developing and refining deemed savings measure databases, as well as, conducting primary and secondary research as part of impact, market, and process evaluations.

Title	Appliance Turn-In Program
Objectives	
The primary objective of the Appliance Turn-In Program is to encourage residential customers to remove inefficient, secondary appliances. The secondary purpose is to raise awareness of the energy savings benefits of ENERGY STAR® appliances.	
Description	
The average household replaces a refrigerator (or freezer) every ten years. However, many of these refrigerators and freezers being replaced are still functioning and often end up as energy guzzling back-up appliances in basements and garages, or are sold in a used appliance market. The Appliance Turn-In Program will target these "second" refrigerators and freezers, providing the dual benefit of cutting energy consumption and keeping these appliances out of the used market. Units removed will be recycled and disabled through a certified recycling agency.	
Target Market	
The program will target residential customer who are currently operating second refrigerators, freezers, as well as dehumidifiers.	
Duration	
The program will launch in 2014 and possibly end in 2018.	
Implementation Strategy	
Program Delivery The Appliance Turn-In Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor may be responsible for scheduling with customers, removing and disposing old appliances, incentive processing, and status reporting associated with the program, as directed by the utility company. The utility company will utilize an internal program manager to conduct its own administrative oversight of the program. **Program Partners/Collaborative Resources** Partners include utility company internal staff, various retailers, local Chamber of Commerce organizations, and others as needed to promote and encourage customer participation in the program. **Relationship to Other Programs** The Appliance Turn-In Program is designed for residential customers; therefore, the program has a strong relationship through promotion with the utility company's other residential demand-side management (DSM) programs, such as the Efficient Products, HVAC & Water Heating, Home Performance with ENERGY STAR®, ENERGY STAR	

Homes, Low-income Weatherization, Energy Optimizer, and Home Energy Analyzer.

Marketing Strategy

All marketing materials will carry a strong consumer education message emphasizing: the cost of operating second refrigerators and freezers and older, inefficient appliances, the benefits of early replacement with ENERGY STAR qualified models; and the importance of proper disposal and recycling of older units. Marketing materials will leverage the ENERGY STAR brand, which enjoys a high level of consumer recognition and favorable associations.

Customer Marketing Tactics

The following customer marketing activities are anticipated:

- Promote program on www.kcpl.com Home Page, within site and in account payment portal (AccountLink)
- Provide promotional info embedded in the Home Energy Analyzer Program;
- Direct mail campaigns
- Conduct telemarketing in conjunction with other campaigns
- Bill inserts and html email campaigns
- Print advertising in local newspapers and magazines
- Participation in Earth Day, Home Shows, and large customer employee fairs by providing brochures featuring the benefits and process to participate

For the Appliance Turn-In Program, the utility company has identified the following internal and external print communications as possible marketing channels:

Externally Published Communications

- The Kansas City Star
- Greenability magazine or other sustainability publications

Internally Published Communications

- Newsletters
- Bill messaging/inserts
- On line promotion with the utility company's other e-Services products

Other marketing activities may include

- Online advertising with Google AdWords
- Attend and present at conferences and public events, such as Chamber of Commerce meetings, to increase general awareness of the program and distribute program promotional materials
- Sponsor spots on public radio

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **Lack of awareness about operating costs for "second" refrigerators and freezers, as well as older units**	• Website and other collateral materials
• **Inconvenience of removing old units**	• Free pick-up/removal from customer site plus incentive
• **Cost of disposal**	• Free disposal and proper recycling

Incentive Strategy and Eligible Measures

Incentive Strategy

The customer will be offered free pick-up and recycling of their old operable second refrigerators, freezers and dehumidifiers. Typically, the customer would have to pay a municipal fee for appropriate disposal of the unit, so the free pick-up service provides an additional value to the customer (estimated at $120/appliance in 2014). In addition, the customer will be offered a cash rebate of $50/appliance (in 2014) to further motivate the turn-in of operable units.

Eligible Measures

The following measures will be eligible under the Appliance Turn-In Program.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Freezer – Standard Freezer - Recycle	per unit	$50.00	$51.00	$53.00	$54.00	$55.00
Refrigerator- Standard Refrigerator- Recycle	per unit	$50.00	$51.00	$53.00	$54.00	$55.00

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the Appliance Turn-In Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	774,216	123	788,452	126	1,067,602	170
2015	2,190,524	349	2,219,018	354	3,020,383	481
2016	4,102,766	654	4,138,098	660	5,656,969	902
2017	6,497,954	1,036	6,528,171	1,040	8,959,602	1,428
2018	9,345,892	1,490	9,352,566	1,491	12,886,719	2,054

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the Appliance Turn-In Program over the five-year period follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	774,216	774,216	123	123
2015	1,416,308	2,190,524	226	349
2016	1,912,242	4,102,766	305	654
2017	2,395,187	6,497,954	382	1,036
2018	2,847,938	9,345,892	454	1,490
		KCPL-MO		
2014	788,452	788,452	126	126
2015	1,430,566	2,219,018	228	354
2016	1,919,080	4,138,098	306	660
2017	2,390,073	6,528,171	381	1,040
2018	2,824,395	9,352,566	450	1,491
		KCPL-GMO		
2014	1,067,602	1,067,602	170	170
2015	1,952,781	3,020,383	311	481
2016	2,636,586	5,656,969	420	902
2017	3,302,633	8,959,602	526	1,428
2018	3,927,116	12,886,719	626	2,054

Net-to-Gross Factors

The Net to Gross Factor for all measures is 0.52.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Appliance Turn-In Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the life of each measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.6	1.7	1.8	1.9	2.0
Total Resource Cost (TRC)	1.3	1.4	1.5	1.6	1.7
Utility System Resource Cost Test (UCT)	0.7	0.8	0.8	0.9	0.9
Participant Cost Test (PCT)	7.3	7.3	7.3	7.3	7.3
Rate Impact Measure (RIM)	0.3	0.3	0.4	0.4	0.4

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.6	1.7	1.8	1.9	2.0
Total Resource Cost (TRC)	1.3	1.4	1.5	1.6	1.7
Utility System Resource Cost Test (UCT)	0.7	0.8	0.8	0.9	0.9
Participant Cost Test (PCT)	8.2	8.2	8.2	8.2	8.2
Rate Impact Measure (RIM)	0.3	0.3	0.3	0.3	0.3

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.6	1.7	1.8	1.9	2.0
Total Resource Cost (TRC)	1.3	1.4	1.5	1.6	1.7
Utility System Resource Cost Test (UCT)	0.7	0.8	0.8	0.9	0.9
Participant Cost Test (PCT)	8.6	8.6	8.6	8.6	8.6
Rate Impact Measure (RIM)	0.3	0.3	0.3	0.3	0.3

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

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Strategies to minimize free riders and maximize spillover
The development of this program incorporated available information from market studies, consultant studies and the California DEER database on program impacts of free ridership and spillover in the initial program design. After one year of program implementation, the utility company will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.
Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, developing and refining deemed savings measure databases, as well as, conducting primary and secondary research as part of impact and process evaluations.

Title

Efficient Products Program

Objectives

The primary goal of the Efficient Products Program is to encourage the utility company's residential customers to install energy efficiency measures in existing homes.

More specifically, the program is designed to:

(1) provide incentives to homeowners for the installation of high efficiency lighting and appliances; and

(2) provide a marketing mechanism for retailers to promote energy efficient equipment to end users.

Description

The Efficient Products Program promotes ENERGY STAR® appliances, lighting and home electronics. The program also promotes several products that are energy efficient, for which there are not yet ENERGY STAR labels, such as solid state lighting and light emitting diode technologies.

The program uses a two-pronged approach: (1) increasing supply of qualifying products through partnerships with retailers, manufacturers and distributors, and (2) creating demand through consumer awareness and understanding of the ENERGY STAR label and the benefits of energy efficiency.

Target Market

The program will target residential customers in the market for new lighting and appliances. Residential rental property owners also are eligible.

Duration

The program will launch in year 2014 and possibly end in 2018.

Implementation Strategy

Program Delivery

The Efficient Products Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor may be responsible for items such as incentive processing, rebate processing, communication with the customer to resolve application issues, and status reporting associated with the program, as directed by the utility company.

The utility company will utilize an internal program manager to conduct its own administration of the program. The utility company's program manager will maintain

oversight of the program.

Utility Company Administrative Requirements
The utility company will be responsible for general administrative oversight of the program plan. Key oversight functions include:

- Recruitment, selection, and management of an implementation support contractor(s);
- Coordination of marketing strategy/public relations among programs and market sectors;
- Development and placement of marketing materials with input from the implementation contractor;
- Coordination of all educational services;
- Data warehousing;
- Management of the evaluation contractor; and
- Goal achievement within budget.

The utility company and its possible implementation contractor(s) will follow industry best practices during final program design and start-up to ensure success, including:

- Assessing current market conditions for energy efficiency product availability and pricing;
- The utility company Program Manager, as well as customer service staff training, to ensure staff as versed on the program offerings should questions arise;
- Completing all program procedures from marketing through verification and payment and conducting a dry-run prior to launch; and
- Preparing for stronger or weaker than expected participant response.

Program Partners/Collaborative Resources
Partners include utility company internal staff, various manufacturers, retailers, local Chamber of Commerce organizations, and others as needed to promote and encourage customer participation in the program.

Relationship to Other Programs
The Efficient Products Program is designed for residential customers; therefore, the program has a strong relationship through promotion with the company's other residential demand side management (DSM) programs, such as the Cool Homes, Home Performance with ENERGY STAR, ENERGY STAR Homes, Low-income Weatherization, Energy Optimizer, and Home Energy Analyzer.

Marketing Strategy

The proposed marketing strategy includes:

- Building a strong, consistent message informing customers that the Efficient Products Program will result in annual cost savings by purchasing and installing energy efficient lighting and appliances;
- Recognition of customers' green lifestyle and through the positioning of the program as an essential component to their standard of living; and
- Strengthen the utility company's relationship with ENERGY STAR retailers.

The program includes customer educational and promotional pieces designed to assist residential customers with the information necessary to improve the energy efficiency of their entire home. The program also includes customer and trade ally education to assist with understanding the technologies and applications promoted, the incentives offered, and how the program functions.

Customer Marketing Tactics

The following customer marketing activities are anticipated:

- Promote program on www.kcpl.com Home Page, within site and in account payment portal (AccountLink)
- Provide promotional info embedded in the Home Energy Analyzer Program;
- Direct mail campaigns
- Conduct telemarketing in conjunction with other campaigns
- Bill inserts and html email campaigns
- Print advertising in local newspapers and magazines
- Participation in Earth Day, Home Shows, and large customer employee fairs by providing brochures featuring the benefits and process to participate

Retailer Marketing Tactics

The utility company will increase its efforts with retailers with the following:

- Schedule retailer meetings at least once a year
- Provide updates on the utility company energy efficiency applications, program updates, budgets/goals, etc.
- Facilitate networking
- Determine content for partner-only web portal
- Provide information and documentation on the utility company's programs, procedures, policies and contacts
- Provide reporting and marketing tools
- Provide marketing support to drive program participation

For the Efficient Products Program, the utility company has identified the following internal and external print communications as possible marketing channels:

Externally Published Communications

- The Kansas City Star
- Greenability magazine or other sustainability publications

Internally Published Communications

- Newsletters
- Bill messaging
- On line promotion with the utility company's other e-Services products

Other marketing activities may include:

- Online advertising will be used with Google AdWords
- Attend and present at conferences and public events, such as Chamber of Commerce meetings, to increase general awareness of the program and distribute program promotional materials
- Sponsor spots on public radio

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **First cost concerns**	• Customer incentives
• **Consumer information**	• Point-of-sale displays
• **Limited product availability**	• Field work with retailers
• **Retail sales force information**	• Field work with retailers
• **Retail sales force motivation**	• Potential "spiffs"

Incentive Strategy and Eligible Measures

Incentive Strategy

The Efficient Products Program will pay a set incentive on a per-unit basis for installed, eligible measures.

Eligible Measures

The following measures will be eligible under the Efficient Products Program. Incentive is per unit.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Res Controls - No Occ. Sensors Controls - Occupancy Sensors	per connected W	$0.10	$0.10	$0.10	$0.11	$0.11
No Home Energy Displays Home Energy Display	per home	$35.00	$36.00	$37	$38.00	$39.00
Res Pool Pump – Standard Pool Pump - High Efficiency	per unit	$43.00	$44.00	$45.00	$46.00	$47.00
Res Pool Pump – Standard Pool Pump - Timer	per unit	$30.00	$31.00	$32.00	$32.00	$33.00
Res Pool Pump – Standard Pool Pump - VSD	per unit	$370.00	$380.00	$390.00	$400.00	$410.00
Res Screw In – Incandescent Screw In - 2x Incandescent Lamps	per lamp	$1.00	$1.00	$1.10	$1.10	$1.10
Res Screw In – Incandescent Screw In - CFLs	per lamp	$1.00	$1.00	$1.10	$1.10	$1.10
Res Screw In – Incandescent Screw In - LEDs	per lamp	$7.50	$7.00	$7.40	$7.80	$8.10
Copier/Printer – Standard Copier/ Printer - ENERGY STAR	per unit	$6.90	$7.00	$7.20	$7.40	$7.50
Dehumidifier –Standard **Dehumidifier - ENERGY STAR**	per unit	$45.00	$46.00	$47.00	$48.00	$50.00
Power Supplies – Standard Power Supplies - 80 Plus	per unit	$4.10	$4.20	$4.30	$4.40	$4.50

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual net energy and demand savings for the Efficient Products Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	13,920,374	1,798	14,903,566	1,887	21,734,146	2,732
2015	30,307,638	3,891	31,530,385	3,983	45,269,666	5,703
2016	46,243,130	6,004	47,246,985	6,041	67,458,481	8,623
2017	61,774,049	8,140	62,226,473	8,076	88,566,934	11,514
2018	76,738,932	10,269	76,398,844	10,066	108,519,096	14,353

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the Efficient Products Program over the five-year period follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	13,920,374	13,920,374	1,798	1,798
2015	16,387,264	30,307,638	2,093	3,891
2016	15,935,492	46,243,130	2,113	6,004
2017	15,530,919	61,774,049	2,136	8,140
2018	14,964,883	76,738,932	2,129	10,269
		KCPL-MO		
2014	14,903,566	14,903,566	1,887	1,887
2015	16,626,818	31,530,385	2,096	3,983
2016	15,716,600	47,246,985	2,058	6,041
2017	14,979,488	62,226,473	2,034	8,076
2018	14,172,371	76,398,844	1,991	10,066
		KCPL-GMO		
2014	21,734,146	21,734,146	2,732	2,732
2015	23,535,519	45,269,666	2,971	5,703
2016	22,188,816	67,458,481	2,920	8,623
2017	21,108,453	88,566,934	2,892	11,514
2018	19,952,162	108,519,096	2,839	14,353

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Efficient Products Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over life of each measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.5	2.6	2.6	2.5	2.5
Total Resource Cost (TRC)	2.2	2.2	2.2	2.2	2.1
Utility System Resource Cost Test (UCT)	1.9	2.0	2.1	2.3	2.4
Participant Cost Test (PCT)	14.4	12.2	9.1	7.1	5.9
Rate Impact Measure (RIM)	0.4	0.4	0.4	0.5	0.5

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.5	2.4	2.4	2.3	2.3
Total Resource Cost (TRC)	2.1	2.1	2.1	2.0	1.9
Utility System Resource Cost Test (UCT)	1.9	1.9	2.1	2.2	2.3
Participant Cost Test (PCT)	17.2	13.4	9.6	7.4	6.1
Rate Impact Measure (RIM)	0.3	0.3	0.4	0.4	0.4

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.9	3.0	3.1	3.1	3.1
Total Resource Cost (TRC)	2.5	2.6	2.7	2.7	2.7
Utility System Resource Cost Test (UCT)	2.0	2.0	2.2	2.4	2.6
Participant Cost Test (PCT)	30.2	27.5	19.1	14.3	11.5
Rate Impact Measure (RIM)	0.3	0.3	0.4	0.4	0.4

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover

The development of this program incorporated available information from market studies, consultant studies and the California DEER database on program impacts of free ridership and spillover in the initial program design. After one year of program implementation, the utility company will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, developing and refining deemed savings measure databases, as well as, conducting primary and secondary research as part of impact and process evaluations.

Title	Home Energy Reports Program
Objectives	
The purpose of the Home Energy Reports Program is to provide customers with information about their energy usage that will encourage them to save energy through behavior changes and investments in home energy efficiency improvements.	
Description	
The Home Energy Reports Program provides residential customers with an energy report that provides an analysis of their household energy usage information along with comparison to similar customers or "neighbors." The intention of the energy report is to provide information that will influence customers' behavior in such a way that they lower their energy usage. This program element can operate as either an opt-in or opt-out program. With opt-in, a customer elects to participate. Opt-out means the utility company will select customers for participation in the program and customers will be given the opportunity to opt out of the program. Program participants will be mailed an energy usage report on how energy is used by their households on a regular basis. The customer's home energy usage is compared to the average usage of households that are geographically located in close proximity to one another and have similar characteristics such as dwelling size and heating type. The report will display a monthly neighbor comparison, a 12-month neighbor comparison, a personal comparison of the current year's usage versus the previous year and specific energy tips that are based on the characteristics and usage of the household.	
Target Market	
The target market for the program is residential single-family and multi-family customers of the utility.	
Duration	
The program will launch in 2015 and possibly end in 2018.	
Implementation Strategy	
Program Delivery The Home Energy Reports Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor will be responsible for items such as communication with the customer to resolve application issues, and status reporting associated with the program, as directed by the utility company. The utility company will utilize an internal program manager to conduct its own	

administration of the program. The utility company's program manager will maintain oversight of the program.

Utility Administrative Requirements
The utility company will be responsible for general administrative oversight of the program plan. It is estimated that a 0.25 full-time equivalent (FTE) will be required for program oversight. Key oversight functions include:

- Recruitment, selection, and management of an implementation support contractor(s)
- Coordination of marketing strategy/public relations among programs and market sectors
- Development and placement of marketing materials with input from the implementation contractor
- Coordination of all educational services
- Data warehousing
- Management of the evaluation contractor
- Goal achievement within budget

The utility company and its implementation contractor(s) will follow industry best practices during final program design and start-up to ensure success, including:

- The utility company Program Manager, as well as customer service staff training, to ensure staff are versed on the program offerings should questions arise
- Completing all program procedures from marketing through verification and payment and conducting a dry-run prior to launch
- Preparing for stronger or weaker than expected participant response

Program Partners/Collaborative Resources
Partners include utility company internal staff and others as needed to promote and encourage customer participation in the program.

Relationship to Other Programs
The Home Energy Reports Program is designed for residential customers; therefore, the program has a strong relationship through promotion with the utility company's other residential demand side management (DSM) programs, such as Cool Homes, Home Performance with ENERGY STAR®, ENERGY STAR Homes, Low-income Weatherization, Energy Optimizer, and Home Energy Analyzer.

Marketing Strategy

The overall marketing strategy will largely operate as a continued education and awareness of energy efficiency. Marketing will primarily occur through customized messages on participants' reports. Program participants may also be reached via e-

channels and through additional targeted mailings based on energy reduction needs. In addition, the utility company intends to partner with retailers to offer coded and measurable discounts and coupons that offer a call to action on energy reduction.

Key Messages

- Reduce your energy usage – check out more energy saving opportunities at www.kcpl.com
- Become a more informed user of energy and see how easily you can save money on your monthly expenses
- Being more energy efficient is as simple as slightly changing an existing habit or pattern

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **Lack of information about home energy use**	• A free home energy report that provides energy usage information and savings recommendations

Incentive Strategy and Eligible Measures

Incentive Strategy

There are no explicit incentives under this program.

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual energy and demand savings for the Home Energy Reports Program over the five-year period follow.

There are no explicit incentives offered under this program.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	**Program Demand (kW)**	**Program Energy (kWh)**	**Program Demand (kW)**	**Program Energy (kWh)**	**Program Demand (kW)**
2014	12,034,103	3,009	12,650,984	3,163	15,781,243	3,945
2015	21,073,588	5,268	21,980,347	5,495	27,632,567	6,908
2016	24,869,136	6,217	25,734,228	6,434	32,609,398	8,152
2017	26,417,085	6,604	27,116,511	6,779	34,641,509	8,660
2018	27,151,293	6,788	27,644,432	6,911	35,607,687	8,902

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the Home Energy Reports Program over the five-year period follow. We assume a 1-year measure-life for this program and calculate "annual" savings to be the same as "cumulative" savings. This differs from other programs, where cumulative savings are calculated to be the simple addition of each year's annual incremental savings.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	12,034,103	12,034,103	3,009	3,009
2015	21,073,588	21,073,588	5,268	5,268
2016	24,869,136	24,869,136	6,217	6,217
2017	26,417,085	26,417,085	6,604	6,604
2018	27,151,293	27,151,293	6,788	6,788
		KCPL-MO		
2014	12,650,984	12,650,984	3,163	3,163
2015	21,980,347	21,980,347	5,495	5,495
2016	25,734,228	25,734,228	6,434	6,434
2017	27,116,511	27,116,511	6,779	6,779
2018	27,644,432	27,644,432	6,911	6,911
		KCPL-GMO		
2014	15,781,243	15,781,243	3,945	3,945
2015	27,632,567	27,632,567	6,908	6,908
2016	32,609,398	32,609,398	8,152	8,152

2017	34,641,509	34,641,509	8,660	8,660
2018	35,607,687	35,607,687	8,902	8,902

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Home Energy Reports Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate for the assumed measure life.

Cost Test Ratios – KCPL-KS	**2014**	**2015**	**2016**	**2017**	**2018**
Societal Cost Test (SCT)	1.0	1.1	1.3	1.4	1.6
Total Resource Cost (TRC)	1.0	1.0	1.2	1.4	1.6
Utility System Resource Cost Test (UCT)	1.0	1.0	1.2	1.4	1.6
Participant Cost Test (PCT)	N/A	N/A	N/A	N/A	N/A
Rate Impact Measure (RIM)	0.4	0.6	0.9	1.2	1.5

Cost Test Ratios – KCPL-MO	**2014**	**2015**	**2016**	**2017**	**2018**
Societal Cost Test (SCT)	1.0	1.1	1.2	1.4	1.6
Total Resource Cost (TRC)	1.0	1.0	1.2	1.3	1.5
Utility System Resource Cost Test (UCT)	1.0	1.0	1.2	1.3	1.5
Participant Cost Test (PCT)	N/A	N/A	N/A	N/A	N/A
Rate Impact Measure (RIM)	0.3	0.5	0.9	1.2	1.5

Cost Test Ratios – KCPL-GMO	**2014**	**2015**	**2016**	**2017**	**2018**
Societal Cost Test (SCT)	1.1	1.1	1.3	1.5	1.7

Total Resource Cost (TRC)	1.0	1.1	1.2	1.4	1.6
Utility System Resource Cost Test (UCT)	1.0	1.1	1.2	1.4	1.6
Participant Cost Test (PCT)	N/A	N/A	N/A	N/A	N/A
Rate Impact Measure (RIM)	0.3	0.5	0.9	1.2	1.5

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					**

HIGHLY CONFIDENTIAL

2017	**	[redacted]
2018		
TOTAL		**

Strategies to minimize free riders and maximize spillover

The development of this program incorporated available information from market studies, consultant studies and the California DEER database on program impacts of free ridership and spillover in the initial program design. After one year of program implementation, the utility company will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party evaluation contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

Title	ENERGY STAR® Homes Program
Objectives	
The primary goal is to accelerate the adoption of energy efficiency in the design, construction and operation of new single-family homes by leveraging the EPA's ENERGY STAR® Homes certification.	
Description	
The ENERGY STAR Homes Program will recruit and educate selected builders and their trade allies on the benefits associated with building new homes to the ENERGY STAR standard. The program will provide education and rebates to inform and encourage architects, builders, and home buyers on the benefits of ENERGY STAR homes as well as requirements for gaining certification. The program will recruit and educate residential new construction market stakeholders on energy-efficient home design and construction, and inform them of the utility company incentives available for meeting the ENERGY STAR Homes requirements. Program staff will develop seminars and materials to train builders on energy-efficient building practices and to address the factors that generally prevent homebuilders' from incorporating energy efficiency into homes. The program will offer rebates to new homebuilders to encourage the adoption of ENERGY STAR recommended design practices and the installation of high-efficiency equipment and shell measures. The proposed incentives are designed to cover roughly 25% of the incremental costs of meeting the ENERGY STAR standard.	
Target Market	
New home builders who are not currently building homes to the ENERGY STAR standard.	
Duration	
The program will launch in 2014 and possibly end in 2018.	
Implementation Strategy	
Program Delivery The ENERGY STAR Homes Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor may be responsible for items such as incentive processing, rebate processing, communication with the customer to resolve application issues, and status reporting associated with the program, as directed by the utility company. The utility company will utilize an internal program manager to conduct its own administration of the program. The utility company's program manager will maintain oversight of the program.	

Program Partners/Collaborative Resources
Partners include utility company internal staff, home builders and their subcontractors, real estate agents, mortgage lenders, and others as needed to promote and encourage participation in the program.

Relationship to Other Programs
The program is designed for residential builders, equipment contractors and new homebuyers; therefore, the program has a strong relationship through promotion with the utility company's other residential demand side management (DSM) programs, such as the Home Performance with ENERGY STAR, Low-income Weatherization, Energy Optimizer, and Home Energy Analyzer.

Marketing Strategy

The program will be marketed to select builders primarily through direct business-to-business contacts. The utility company or its implementation contractor will develop opportunities to present the program at builder and other trade association meetings, and to place information in association newsletters. The program will be marketed to consumers at home shows and other events focused on home-building. The program also includes customer and trade ally education to assist with understanding the technologies and applications promoted, the incentives offered, and how the program functions.

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **Higher initial cost to meet the ENERGY STAR standard**	• Financial incentives, information on lifecycle savings and tax incentives
• **Lack of confidence among consumers that the higher initial investment will be recouped in the form of lower energy costs**	• Educational materials
• **Lack of awareness among homeowners regarding both the energy and non-energy benefits**	• Educational materials
• **Lack of awareness among builders/homeowners of energy efficient building practices**	• Educational materials and builder training

Incentive Strategy and Eligible Measures

New homes certified to ENERGY STAR 3.0 standards will be eligible for a $580 incentive. Participants also receive a performance bonus of $0.10 per kWh of savings estimated through energy use simulation modeling as an incentive to achieve greater energy savings. The performance bonus ensures equity in the distribution of incentives by creating a sliding scale based on energy saved, instead of a single prescriptive incentive regardless of project size or energy savings. Builders will be eligible for a payment of between $580 and $800 (in 2014), per qualifying home, depending on the level of efficiency achieved (see Eligible Measures table below).

Incentive Strategy

The Efficient Products Program will pay a set incentive on a per-unit basis for installed, eligible measures.

Eligible Measures

The following measures will be eligible under the Efficient Products Program. Incentive is per unit.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Code Minimum ENERGY STAR Plus (Exceeding V3.0)	per home	$800.00	$810.00	$830.00	$850.00	$870.00
Code Minimum ENERGY STAR V3.0	per home	$580.00	$590.00	$600.00	$620.00	$630.00

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the ENERGY STAR Homes Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	**Program Demand (kW)**	**Program Energy (kWh)**	**Program Demand (kW)**	**Program Energy (kWh)**	**Program Demand (kW)**
2014	681,678	141	228,656	47	1,009,890	210
2015	1,471,583	305	469,743	97	2,203,308	458
2016	2,401,094	498	729,229	151	3,626,363	754
2017	3,495,986	725	1,011,432	210	5,306,846	1,104
2018	4,756,586	987	1,312,784	272	7,238,953	1,505

Proposed incremental and cumulative annual energy and demand savings targets. Proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for ENERGY STAR Homes Program over five-years follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	681,678	681,678	141	141
2015	789,904	1,471,583	164	305
2016	929,511	2,401,094	193	498
2017	1,094,892	3,495,986	227	725
2018	1,260,600	4,756,586	262	987
		KCPL-MO		
2014	228,656	228,656	47	47
2015	241,088	469,743	50	97
2016	259,485	729,229	54	151
2017	282,203	1,011,432	58	210
2018	301,352	1,312,784	62	272

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the ENERGY STAR Homes Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate annual discount rate over the life of each measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.7	1.7	1.8	1.9	1.9
Total Resource Cost (TRC)	1.1	1.1	1.2	1.2	1.3
Utility System Resource Cost Test (UCT)	2.4	2.5	2.6	2.8	2.9
Participant Cost Test (PCT)	2.2	2.2	2.2	2.2	2.3
Rate Impact Measure (RIM)	0.5	0.5	0.5	0.5	0.5

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.7	1.7	1.8	1.8	1.9
Total Resource Cost (TRC)	1.1	1.1	1.2	1.2	1.3
Utility System Resource Cost Test (UCT)	2.4	2.5	2.6	2.7	2.8
Participant Cost Test (PCT)	2.3	2.3	2.3	2.4	2.4
Rate Impact Measure (RIM)	0.5	0.5	0.5	0.5	0.5

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.7	1.8	1.8	1.9	1.9
Total Resource Cost (TRC)	1.1	1.2	1.2	1.3	1.3
Utility System Resource Cost Test (UCT)	2.5	2.6	2.7	2.8	2.9
Participant Cost Test (PCT)	2.4	2.4	2.4	2.4	2.5
Rate Impact Measure (RIM)	0.5	0.5	0.5	0.5	0.5

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover
The development of this program incorporated available information from market studies and consultant studies on program impacts of free ridership and spillover in the initial program design. After one year of program implementation, the utility company will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.
Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor selected through a competitive bidding process. An integrated evaluation approach will be taken which includes: addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, developing and refining deemed savings measure databases, as well as, conducting primary and secondary research as part of impact and process evaluations.

Title	**Energy Education Program**

Objectives

The Energy Education Program is designed to influence students and their families to take actions that can reduce their home energy use and increase efficiency.

Description

The Energy Education Program provides curriculum, teacher training, and supplies for in-class instruction about how to use energy efficiently at home. The program will target students in the 5th through 8th grades, providing education and a "take-home" kit that raises awareness about how individual actions and low-cost measures can provide significant reductions in electricity and water consumption. The take-home kit will include items such as:

- Screw in CFL
- Low Flow Showerhead
- Faucet Aerator

Additional items could include:

- Shower timer
- Fun facts slide chart
- Light switch stickers
- Refrigerator/freezer and hot water temp gauges
- Weatherstripping
- Door Sweep
- Temperature thermometer
- LED lamp
- LED nightlight

Learning will be evaluated through pre-and post-testing. Additionally, students conduct pre- and post-course audits of their home's energy use and are asked to complete a survey about which conservation items they actually installed at home.

Target Market

The target market for the program is 5th through 8th grade students in elementary schools throughout the service area.

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

Program Delivery

The Energy Education Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor may be responsible for items such as promoting the program in local school districts, recruiting teachers, coordinating delivery of education services, and status reporting associated with the program, as directed by the utility company. The utility company will utilize an internal program manager to conduct its own administration of the program. The utility company's program manager will maintain oversight of the program.

Program Partners/Collaborative Resources

Partners include the utility company internal staff, local schools, the State Department of Education and others as needed to promote and encourage customer participation in the program.

Relationship to Other Programs

The Energy Education Program is designed for residential customers; therefore, the program has a strong relationship through promotion with the utility company's other residential demand side management (DSM) programs, such as the Cool Homes, Home Performance with ENERGY STAR®, ENERGY STAR Homes, Low-income Weatherization, Energy Optimizer, and Home Energy Analyzer.

Marketing Strategy

The utility company or its implementation contractor will promote the program at science teacher events, on their web site, through relationships with teachers, principals and superintendents, and through direct mail to superintendents when needed. Participating teachers are provided press release templates for their school's use in internal publications or with local members of the press.

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to residential customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **Low levels of energy efficiency literacy in the schools**	• Energy education materials provided by National Energy Foundation
• **Families too busy to learn about and/or undertake simple low-cost efficiency measures in the home**	• Free energy-saving kits and motivated students to help families install the measures

Incentive Strategy and Eligible Measures

Incentive Strategy

The Efficient Products Program will pay a set incentive on a per-unit basis for installed, eligible measures.

Eligible Measures

The following measures will be eligible under the Efficient Products Program. Incentive is per unit.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Res Faucet Aerators Standard Faucet Aerators - Lo Flow	per unit	$5.30	$5.40	$5.50	$5.70	$5.80
Res Showerhead Standard (4 GPM) Showerhead - Low Flow (1/2.5 GPM)	per unit	$27.00	$28.00	$28.00	$29.00	$30.00
Res Screw In Incandescent Screw In CFLs	per lamp	$2.50	$2.60	$2.60	$2.70	$2.70

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the Energy Education Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	1,840,423	193	2,452,950	256	1,939,816	205
2015	3,750,194	393	4,831,499	505	3,892,742	411
2016	5,447,088	570	6,861,156	716	5,604,364	592
2017	6,964,569	729	8,621,560	899	7,126,857	754
2018	8,318,045	870	10,152,751	1,058	8,483,857	898

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the Energy Education Program over the estimated life of the program follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-GMO		
		KCPL-KS		
2014	1,840,423	1,840,423	193	193
2015	1,909,771	3,750,194	200	393
2016	1,696,894	5,447,088	178	570
2017	1,517,481	6,964,569	159	729
2018	1,353,475	8,318,045	141	870
		KCPL-MO		
2014	2,452,950	2,452,950	256	256
2015	2,378,549	4,831,499	248	505
2016	2,029,657	6,861,156	212	716
2017	1,760,404	8,621,560	183	899
2018	1,531,191	10,152,751	159	1,058
		KCPL-GMO		
2014	1,939,816	1,939,816	205	205
2015	1,952,925	3,892,742	206	411
2016	1,711,623	5,604,364	181	592
2017	1,522,493	7,126,857	162	754
2018	1,357,000	8,483,857	144	898

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Energy Education Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate for the life of each measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.2	1.3	1.4	1.5	1.6
Total Resource Cost (TRC)	1.1	1.1	1.2	1.3	1.3
Utility System Resource Cost Test (UCT)	1.1	1.1	1.3	1.4	1.5
Participant Cost Test (PCT)	6.2	5.4	5.2	5.0	4.9
Rate Impact Measure (RIM)	0.3	0.3	0.4	0.4	0.4

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.2	1.3	1.4	1.5	1.6
Total Resource Cost (TRC)	1.1	1.1	1.2	1.3	1.3
Utility System Resource Cost Test (UCT)	1.1	1.1	1.3	1.4	1.5
Participant Cost Test (PCT)	7.4	6.3	6.1	5.9	5.7
Rate Impact Measure (RIM)	0.3	0.3	0.3	0.3	0.4

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.2	1.3	1.4	1.5	1.6
Total Resource Cost (TRC)	1.1	1.1	1.2	1.3	1.3
Utility System Resource Cost Test (UCT)	1.1	1.1	1.3	1.4	1.5
Participant Cost Test (PCT)	7.5	6.4	6.2	6.0	5.8
Rate Impact Measure (RIM)	0.3	0.3	0.3	0.3	0.3

Budget

The following budget has been used for planning purposes. However, the utility company may adjust program budgets as necessary in accordance with current market

conditions, EM&V results, and program implementation experience.

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover

The development of this program incorporated available information from market studies, consultant studies and the California DEER database on program impacts of free ridership and spillover in the initial program design. After one year of program implementation, the utility company will perform an evaluation, measurement and verification study, and these results will be incorporated into the program design. This process provides the input necessary to minimize free-ridership and maximize spillover.

Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

KCP&L (and GMO): Programs – Business Sector

KCP&L's existing programs provide the appropriate structure for reaching customers across the commercial and industrial market sectors. Strategic modifications will allow KCP&L to increase comprehensiveness and target key markets.

One change will be the addition of a Small Business Program that effectively addresses the barriers of this market to produce immediate energy savings across end uses. Another change will be the expansion of the prescriptive measures to include more end uses and measures. The measure options within the previous end uses will be broadened and additional end uses, such as commercial cooking and water heating, will be added. This will allow the program to "bundle" measures to target specific market sectors, such as:

- Hospitality – PTAC, hotel/motel room controls, vending machines and controls, CO sensors, pre-rinse spray valves
- Small grocery - door heater controls, door closers, ECM motors, refrigeration and vending controls, refrigeration tune up, LED case lighting
- Offices – Lighting, vending machines and controls, office equipment, CO sensors

The Custom Program will be modified to offer varying incentive levels for lighting and HVAC in order to better match these end uses to costs and the prescriptive incentive levels. In addition, the Custom Program will promote deeper savings with the addition of retro-commissioning and compressed air incentive categories and engagement.

Table 2 presents an overview of nine residential sector programs. Detailed program descriptions follow.

Table 2. Business Programs

Program Name	New Program?	Market Sector	Customer Size	End Uses/Measures	Description
1. New Construction	No	All	All	All	Custom incentives for new construction or major renovation projects
2. Building Operator Certification	No	All, with focus on manufacturing, office, college/university, medical, hospitals, hotels	Medium to large	Education	Program funds participation in building operator certification for building engineers directly responsible for day-to-day building operations

Program Name	New Program?	Market Sector	Customer Size	End Uses/Measures	Description
3. Prescriptive Rebates	No	All	All, with focus on medium to large	Existing measure categories: • Lighting and lighting controls • HVAC • Motors New measure categories include: • LED outdoor/parking lot lighting, traffic signals, area and street lighting, refrigeration case lighting, exit signs • Refrigeration • Variable Frequency Drives • Vending machines and controls • Office equipment • Hotel/motel room controls • CO sensors • Commercial cooking/food service • Water heating	Prescriptive rebates paid for the installation of program measures Measures will be bundled into applications and focused marketing and outreach conducted for high-potential market sectors: • Food Service/Restaurants • Retail • Hotel/Motel • Grocery • Offices • Healthcare • Commercial Real Estate Financing: KCP&L will investigate offering financing by partnering with a third-party provider

Program Name	New Program?	Market Sector	Customer Size	End Uses/Measures	Description
4. C&I Custom Rebates	No	New Construction and Retrofits	All, with focus on medium to large	All energy efficiency equipment installations not eligible for prescriptive rebates. Custom incentives for new construction or major renovation projects.	Requires engineering analysis to estimate energy savings. Program will pay for an investment grade energy audit. Targeted new initiatives for: • Retro-commissioning • Compressed Air • Agriculture • Data Centers Variable incentive levels for: • Lighting • HVAC • Retro-commissioning • Compressed air leak survey and repair Financing: KCP&L will investigate offering financing by partnering with a third-party provider

Program Name	New Program?	Market Sector	Customer Size	End Uses/Measures	Description
5. Small Business Direct Install (SBDI)	Yes	All, with focus on retail and small grocery	Under 200 kW	Lighting and controls, HVAC controls, select refrigeration measures Customers with multiplex refrigeration systems not eligible	Turnkey installation of program measures for small to medium-sized businesses including those with refrigeration systems. Energy audits are performed for every customer. Incentive levels than through the prescriptive program and cover ~70% of costs. Financing: Program provides subsidies to installation contractors who provide installment payment plans to small business participants
6. Combined Heat and Power (CHP)	Yes	Industrial and Large Commercial	> 200 kW	Steam Turbines and Gas Turbines	Financial incentives for installation of customer-sited self-generation Performance-based incentive based on annual output Generation units may be natural gas, waste heat, or biofuel fired

Title	New Construction Program

Objectives

The objectives of the New Construction program are to:

- Greatly improve the energy efficiency of all newly constructed facilities and facilities that are completely renovated or reconstructed in the utility service territory.
- Change building design and construction practices used by architects and engineers, contractors, and owners to include all cost-effective energy efficiency designs and equipment.
- Capture "lost opportunities" to reduce electric demand and energy usage in the commercial and industrial sector by providing participants with design assistance and custom incentives or performance contracting for the construction of energy-efficient buildings and facilities.

Description

The New Construction program is designed to capture energy efficiency opportunities through a comprehensive effort to influence building design and construction practices. The program will work with design professionals and construction contractors to influence prospective building owners and developers to construct high- performance buildings that provide improved energy efficiency, systems performance, and comfort. Energy saving targets will be accomplished by stimulating incremental improvements of efficiency in lighting, HVAC and other building systems. The program will seek to capture synergistic energy savings by encouraging the design and construction of buildings as integrated systems. A variety of different standards for new commercial construction exist, including LEED®, and advanced buildings from the New Buildings Institute.

An important focus of the program efforts will be moving the knowledge gained by designers and architects through program participation into their standard construction practices. The program has been designed to integrate educational activities into implementation while achieving energy savings from active construction projects.

Target Market

The target markets for the New Construction program are decision makers for the design and/or construction of new facilities and renovation contractors and developers.

This program will cover both new construction and buildings/facilities undergoing "major renovation," defined as construction that involves the complete removal, redesign, and replacement of two or more major building systems (building envelope, HVAC system, or lighting system). The eligible customer population for the program is all commercial and industrial projects under consideration in the utility service territory or accounts provided with electricity by the utility including government, institutions and non-profit facilities.

While the energy and peak load savings resulting from this program will be accrued by the building owners and occupants, the key target market of the program are the professionals most responsible for the design and equipment decisions—architects and engineers, design/builders, developers, and contractors.

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

The program will be implemented internally by utility staff, with technical support provided by outside consultants, where necessary. The utility company will assign a program manager to maintain oversight of the program. Program staff, or an outside consultant, will provide technical assistance services to participants, assist participants with program requirements, conduct technical assistance and simulation services, oversee contract technical specialists, perform quality control duties, and inspect measure installations.

Program Delivery

Program resources to achieve energy saving are applied through four primary offerings to participants (participants include design team members, contractors, owners and developers):

- **Targeted Education, Information, and Outreach** on integrated design practices and benefits will be provided directly to participants through the program and to the broader market by coordinating with outside efforts. Program staff time and resources will focus on information dissemination and teach/learn-by-example during projects with program participants. To encourage market transformation while recruiting program participants, the program will coordinate with outside efforts including LEED®, Advanced Buildings, ASHRAE, AIA and others. The credibility and relationships built through involvement in outside efforts will help the program recruit

construction projects that are early in the design process, when opportunities to integrate energy saving measures into the project are greatest.

- The program will offer **Technical Assistance Services** to provide capabilities that are not yet fully adopted in the market. Services may include facilitation in the design process, reviewing plans and construction bid documents, assisting with design selections, analyzing energy savings, and verifying installation and operation of measures. Technical assistance may be provided by the program administrator or by third parties contracted for their special expertise.
- The program will offer financial **Design Incentives** to the design team to help offset the costs of developing designs that provide as-built performance that is more energy efficient than their standard practice designs. Payments to the primary design team are made after the start of construction once program payment criteria have been met.
- The program will offer financial **Measure Incentives** to owners and developers to help reduce cost barriers to adopting electric/gas energy saving measures that have not yet been accepted as standard practice for construction. Payments are made after verification that measures are installed and fully operating or capable of full operation in the case of seasonal uses.

Technical assistance, design incentives and measure incentives will be offered in varying degrees on individual projects to balance the program resources applied with the potential for saving energy and changing behavior.

Utility Company Administrative Requirements

The utility company will administer all aspects of the New Construction Program. A dedicated program manager will be assigned to oversee all program functions, which includes the following:

- **Incentive processing:** including all functions required to receive, review and verify applications, and to pay the financial incentives.
- **Program performance tracking and improvement:** including tracking availability of qualifying products, incentive submittals and payments, and opportunities to improve the program.
- **Program reporting and administration:** including monthly, annual, and portfolio-level reporting of program activity, progress towards goals, and performance along key metrics meet regulatory and internal requirements.

Program Partners/Collaborative Resources

ENERGY STAR has considerable material on its website directed to commercial and industrial design and construction community, which the program will leverage through links from the program Web site and references in program articles and case studies. Materials include Commercial Building Design guidelines and strategies, "Designed to Earn the ENERGY STAR" program, the "ENERGY STAR Challenge" for architecture firms, communications materials, many types of training opportunities, and an extensive tools and resources library.

ENERGY STAR also offers opportunity for buildings to apply for an ENERGY STAR rating from the Environmental Protection Agency. The program will further enhance the benefit of program participation by promoting the ENERGY STAR rating as an additional outcome.

Relationship to Other Programs

The New Construction Program will be closely coordinated with all of the program offerings to business sector customers to ensure that the programs complement each other and do not overlap. The New Construction Program will be closely coordinated with the C&I Custom Rebate and Prescriptive Rebate programs to ensure that there is no confusion by customers or market partners about program eligibly and projects are channeled into the proper program.

Marketing Strategy

The primary focus of the program's marketing strategy will be to leverage the influence of the building design community on the construction practices and system selection in new construction and major renovations. The program will utilize established trade ally channels for educating and developing stakeholder awareness of the benefits of designing, building and promoting energy efficient construction standards. This will be accomplished through the following:

- Training seminars addressing specific aspects of high-efficiency building design and construction and the program incentives and eligibility.
- Direct outreach through one-on-one meetings with individuals and presentations to architectural and engineering firms.
- Articles and case studies with technical information, practical advice, and persuasive messages to be included in newsletters directed to design/build, published in trade journals, sent in direct mail, distributed at seminars, and made available on a utility website page.

- Demonstration projects to support the advancement of emerging technologies perceived to be risky or unproven.

Limited outreach to end use customers will be conducted. This outreach will target property managers and building owners. Industry groups, such as Building Owners and Managers Association (BOMA), conferences, and other similar venues will be used over direct or one-on-one strategies.

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program for new construction projects. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
Risk aversion for new designs and technologies	• Availability of case studies and access to demonstration sites
Higher first-cost	• Financial incentives to help offset incremental costs.
Lack of awareness regarding energy and non-energy benefits.	• Web site, case studies and other collateral materials
Lack of resources to conduct initial feasibility analysis to identify energy-saving design options	• Technical assistance provided through program. • Financial incentives to help offset the cost of energy simulations and design studies.

Incentive Strategy and Eligible Measures

Incentive Strategy

Owner incentives are calculated based on estimated annual kWh savings above the standard equipment efficiency or industry standard and paid at a rate of $0.13 per kWh. Energy savings must be modeled based using an approved energy modeling software.

Design Team incentives are calculated at 10 percent of the owner incentives.

Eligible Measures

Cost-effective electrical efficiency measures that improve upon the program's baseline are eligible for consideration in the program. Fuel switching (electric to alternative fuel) measures, hybrid fuel and grid connected renewable energy systems are not eligible

for incentives through this program.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
Desktop PC – Standard Power Management Enabling - Manual	per unit	$5.00	$5.10	$5.30	$5.40	$5.50
C&I Hot Water Heater – Standard Hot Water Heater - Solar Hot Water	per unit	$1100.00	$1200.00	$1200.00	$1200.00	$120.00
C&I Shell - Standard Roof Shell - Cool Roof	per sq ft (roof area)	$0.14	$0.14	$0.14	$0.15	$0.15
AC/HP – Standard AC/HP - Geothermal	per ton	$95.00	$97.00	$100.00	$100.00	$100.00
Base Drive - Standard Motor Drives - EE motor	per HP	$4.70	$4.80	$4.90	$5.00	$5.10
Chiller - Air Cooled – Standard Chiller - Air Cooled - Efficient	per ton	$58.00	$59.00	$60.00	$62.00	$63.00
Chiller - Water Cooled – Efficient Water Side Economizer w/Efficient Tower	per ton	$78.00	$80.00	$82.00	$83.00	$85.00
Chiller - Water Cooled – Standard Chiller - Water Cooled - Efficient	per ton	$29.00	$30.00	$30.00	$31.00	$32.00
Chiller - Water Cooled – Standard Water Side Economizer w/Efficient Tower	per ton	$78.00	$80.00	$82.00	$83.00	$85.00
Code Minimum High Performance - 30% savings	per sq ft (floor area)	$0.94	$0.97	$0.99	$1.00	$1.00
Code Minimum High Performance - 50% savings	per sq ft (floor area)	$1.60	$1.70	$1.70	$1.70	$1.80
Code Minimum High Performance - 70% savings	per sq ft (floor area)	$2.30	$2.30	$2.40	$2.40	$2.50
Comp Air – Oversized Comp Air - Sizing	per HP	$11.00	$11.00	$11.00	$11.00	$12.00
Comp Air - Standard Efficiency Comp Air - Replace 100+ HP motor	per HP	$4.30	$4.40	$4.50	$4.60	$4.70

Comp Air - Standard Efficiency Comp Air - Replace 6-100 HP motor	per HP	$6.30	$6.50	$6.60	$6.80	$6.90
Pumps/Fans – Standard Pumps/Fans - Efficient	per HP	$1.20	$1.20	$1.20	$1.20	$1.20
Standard Efficiency Pumps - Replace 1-5 HP motor	per HP	$4.80	$4.90	$5.00	$5.10	$5.20
Standard Transformer Efficient Transformers	per kVA	$2.10	$2.20	$2.20	$2.30	$2.30

Savings Targets

Expected cumulative annual energy and demand savings – time horizon

The expected cumulative annual gross and net energy and demand savings for the New Construction Program over the estimated life of the program follows.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	748,540	146	2,000,899	436	1,122,060	224
2015	1,796,856	346	4,758,235	1,025	3,191,078	632
2016	3,365,027	642	8,628,280	1,841	6,654,068	1,306
2017	5,734,199	1,085	14,053,690	2,974	12,122,186	2,365
2018	8,938,056	1,681	20,913,617	4,398	19,836,570	3,851

Proposed incremental and cumulative annual energy and demand savings targets – time horizon

The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the New Construction Program over the estimated life of the program follows.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	748,540	748,540	146	146
2015	1,048,317	1,796,856	200	346
2016	1,568,171	3,365,027	296	642
2017	2,369,171	5,734,199	443	1,085
2018	3,203,858	8,938,056	596	1,681
		KCPL-MO		
2014	2,000,899	2,000,899	436	436
2015	2,757,335	4,758,235	590	1,025
2016	3,870,046	8,628,280	816	1,841
2017	5,425,410	14,053,690	1,133	2,974
2018	6,859,927	20,913,617	1,424	4,398
		KCPL-GMO		
2014	1,122,060	1,122,060	224	224
2015	2,069,018	3,191,078	407	632
2016	3,462,990	6,654,068	675	1,306
2017	5,468,117	12,122,186	1,058	2,365
2018	7,714,385	19,836,570	1,487	3,851

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the New Construction Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the life of each measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.2	2.3	2.3	2.4	2.5
Total Resource Cost (TRC)	1.5	1.6	1.7	1.7	1.8
Utility System Resource Cost Test (UCT)	2.6	2.7	2.8	2.9	3.0
Participant Cost Test (PCT)	2.2	2.3	2.3	2.3	2.3
Rate Impact Measure (RIM)	0.8	0.8	0.8	0.8	0.8

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.2	2.3	2.3	2.4	2.4
Total Resource Cost (TRC)	1.6	1.6	1.7	1.7	1.8
Utility System Resource Cost Test (UCT)	2.6	2.7	2.9	2.9	3.0
Participant Cost Test (PCT)	2.4	2.4	2.4	2.4	2.4
Rate Impact Measure (RIM)	0.7	0.7	0.8	0.8	0.8

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.2	2.3	2.3	2.4	2.4
Total Resource Cost (TRC)	1.6	1.6	1.7	1.7	1.8
Utility System Resource Cost Test (UCT)	2.6	2.8	2.9	3.0	3.1
Participant Cost Test (PCT)	2.7	2.7	2.7	2.7	2.8
Rate Impact Measure (RIM)	0.6	0.7	0.7	0.7	0.7

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			**
2015					
2016					
2017					
2018					
TOTAL					

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			**
2015					
2016					
2017					
2018					
TOTAL					

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			**
2015					
2016					
2017					
2018					
TOTAL					

Strategies to minimize free riders and maximize spillover

The following strategies will be used by the New Construction Program to minimize free riders:

- **Try to reach participants earlier in the design phase.** Earlier involvement will allow the program to work more closely with participants to offer recommendations and technical assistance, increasing participants' savings and decreasing free-ridership. Outreach will focus on designers and developers as they are often the project decision makers for larger projects.
- **Increase advertisement of technical assistance to help participants incorporate more measures.** More aggressive technical assistance will achieve deeper savings at lower free-ridership rates by introducing participants to new ideas.
- **Do not accept completed projects.** The program will not accept projects that have already been completed. Program advertising will encourage potential participants to engage with the program early in the planning process.

Evaluation, Measurement and Verification Strategy

Program evaluation, measurement and verification (EM&V) are key elements of demand-side management (DSM) programs. EM&V is used to document and measure the effects of a program and determine whether the program met its goal with respect to being a reliable energy resource. EM&V is also used to help understand why certain effects occurred and identify ways to improve current programs and to select future programs.

Title	Building Operator Certification Program

Objectives

The objective of the Building Operator Certification (BOC) Program is to introduce building operations and maintenance personnel to training and techniques that would assist them in implementing energy efficiency measures in their facilities.

Description

The BOC Program is a competency-based training and certification program for operations and maintenance staff working in commercial, institutional, or industrial buildings. Operators earn certification by attending training and completing project assignments in their facilities. BOC achieves energy savings by training individuals directly responsible for the maintenance of energy-using building equipment and day-to-day building operations.

The BOC Program offers two levels of training and certification for building operations and maintenance professionals. Both levels are designed to improve job skills and lead to improved comfort and energy efficiency at the participant's facility or facilities.

BOC Level I training consists of seven courses and covers topics related to energy transfer, air movement, heating systems and maintenance, motors, cooling, ventilation and control systems, lighting, electrical safety, environmental health, and safety and indoor air quality.

The partners for the program include the Missouri Department of Natural Resources (MO DNR), Midwest Energy Efficiency Alliance (MEEA), and Northwest Energy Efficiency Coalition (NEEC).

Target Market

Building operations and maintenance personnel working in large commercial, institutional, or industrial buildings over 50,000 square feet.

Initial targeted markets include:

- Industrial and manufacturing facilities
- Hospitals
- Schools, Colleges and Universities
- Property Management firms, Office, Retail

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

The program is administered by the MEEA who conducts the classes and participant certification.

Program Delivery

One course is held every two to three weeks and is structured to allow for lecture, work in small groups, the completion of tests and assignments, and the performance of work at the participant's own facility. In addition to attending classes and passing all tests and quizzes, participants complete a series of assignments specific to their facility. Projects include facility benchmarking using ENERGY STAR® Portfolio Manager and a lighting survey. Participants who pass an exam at the end of each course and complete all coursework are eligible for certification. Level I certification must then be renewed each year by completing at least five hours of additional training. This training can be acquired through continued employment in the field of building operations, membership in relevant professional associations, enrollment in other courses on building operations and maintenance, or the completion of an energy efficiency project at the participant's facility, among other actions.

The utility company program team and MEEA implement the BOC Program in partnership. MEEA is the regional coordinator for the program. In this role, MEEA provides online registration for students, oversees the instructor recruitment process, and provides education materials for distribution to instructors and students.

Utility Company Administrative Requirements

The utility company will utilize an internal program manager to administer the program in coordination with MEEA and Missouri Department of Natural Resources (MO DNR) program managers. The utility company program manager is responsible for program outreach and recruitment, coordinating the training series schedule, securing classrooms, and generally managing program delivery. The utility company program manager also attends training sessions, tracks progress, and issues tuition rebates to graduates. As the program expands, additional call center personnel will be trained to field customer questions and manage program opt-out requests.

Program Partners/Collaborative Resources

The BOC is a collaborative effort between the utility company and the MO DNR, MEEA, and NEEC.

Relationship to Other Programs

The BOC program is designed for commercial and industrial facilities; therefore, the program has a strong relationship through promotion with the utility company's other business sector programs, such as the C&I Custom Rebates and Prescriptive Rebates.

Marketing Strategy

Marketing Tactics

Marketing will occur through target marketing to customers with dedicated facility operations personnel, business networks, and trade allies. Utility company account managers will identify prospective large customers that are qualified for the program and help to recruit their participation. The BOC program manager will conduct one-on-one outreach to the industry organizations of the BOC's target markets, providing program information to include in the organizations' newsletters or other venues. Presentations will be made at chapter events, if possible. Trade allies will be made aware of the BOC through the Market Partner channels so they can inform their facility manager clients of the training opportunity.

Key messages to be included in the program marketing include:

- Improve your buildings efficiency – Learn the latest information and technology and network with peers through this comprehensive seven part training series at www.kcpl.com/boc
- Become a more informed user of energy and see how easily you can save money on your monthly expenses
- Identify ways to reduce unscheduled maintenance and increase O&M staff capabilities

In addition, MEEA will also market the program and provide Web content on the class.

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to commercial and industrial customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
Finding time for training/staffing restrictions	• Scheduling classes with enough advance notice to allow participants to plan
Cost of training	• Financial incentives to offset incremental costs • Investigation of grant opportunities or other financial resources to offset the tuition costs
Management approval	• Case studies to show business value

Incentive Strategy and Eligible Measures

Incentive Strategy

The BOC Program does not pay financial incentives. Participants are reimbursed $575 upon successful completion of Level I or Level II certification.

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the BOC Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	530,370	61	834,289	95	634,229	72
2015	1,499,775	171	2,356,476	269	1,799,498	205
2016	2,807,962	321	4,409,033	503	3,381,161	386
2017	4,446,618	508	6,978,711	797	5,373,998	613
2018	6,396,282	730	10,034,048	1,145	7,760,873	886

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the BOC Program over the five-year period follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	530,370	530,370	61	61
2015	969,405	1,499,775	111	171
2016	1,308,187	2,807,962	149	321
2017	1,638,656	4,446,618	187	508
2018	1,949,664	6,396,282	223	730
		KCPL-MO		
2014	834,289	834,289	95	95
2015	1,522,187	2,356,476	174	269
2016	2,052,557	4,409,033	234	503
2017	2,569,678	6,978,711	293	797
2018	3,055,337	10,034,048	349	1,145
		KCPL-GMO		
2014	634,229	634,229	72	72
2015	1,165,269	1,799,498	133	205
2016	1,581,663	3,381,161	181	386
2017	1,992,837	5,373,998	227	613
2018	2,386,875	7,760,873	272	886

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the BOC Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.6	1.7	1.9	2.0	2.1
Total Resource Cost (TRC)	1.4	1.5	1.7	1.8	1.9
Utility System Resource Cost Test (UCT)	1.5	1.6	1.8	1.9	2.0
Participant Cost Test (PCT)	7.4	7.4	7.4	7.4	7.4
Rate Impact Measure (RIM)	0.5	0.6	0.6	0.7	0.7

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.6	1.7	1.9	2.0	2.2
Total Resource Cost (TRC)	1.4	1.5	1.7	1.8	1.9
Utility System Resource Cost Test (UCT)	1.5	1.6	1.8	1.9	2.0
Participant Cost Test (PCT)	9.3	9.3	9.3	9.3	9.3
Rate Impact Measure (RIM)	0.5	0.5	0.6	0.6	0.7

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.6	1.7	1.9	2.0	2.2
Total Resource Cost (TRC)	1.4	1.5	1.7	1.8	1.9
Utility System Resource Cost Test (UCT)	1.5	1.6	1.8	1.9	2.0
Participant Cost Test (PCT)	10.1	10.1	10.1	10.1	10.1

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover
The program will seek to minimize free riders through an assertive outreach and enrollment process that actively recruits new firms in key industries rather than a passive approach that enrolls participants who seek out training opportunities. Key industries will be targeted with persuasive presentations and materials describing the benefits of sending one or more participants through the BOC training curriculum.
Evaluation, Measurement and Verification Strategy
Program evaluation, measurement and verification (EM&V) are key elements of demand-side management (DSM) programs. EM&V is used to document and measure the effects of a program and determine whether the program met its goal with respect to being a reliable energy resource. EM&V is also used to help understand why certain effects occurred and identify ways to improve current programs and to select future programs.

Title	Prescriptive Rebates Program

Objectives

The objectives of the Prescriptive Rebates Program are:

- Increase the market share of energy efficient lighting and controls, heating, ventilation, and air conditioning (HVAC), refrigeration, water heating, and commercial cooking equipment
- Increase consumers' awareness of energy savings opportunities in their facilities
- Overcome financial barriers to allow customers to adopt more energy-efficient equipment

Description

The Prescriptive Rebates Program is designed to encourage and assist nonresidential customers to improve the energy efficiency of their existing facilities through the installation of a broad range of energy efficiency options that address all major end uses and processes. The program offers rebates to customers who install high-efficiency equipment and engages equipment suppliers and contractors to promote the rebate-eligible equipment. The program is designed for retrofit and replacement projects and offers fixed, per-unit financial rebates.

Target Market

All commercial and industrial accounts provided with electricity by the utility company are eligible to participate in the Prescriptive Rebate Program. Within this target market, emphasis is placed on targeting medium-sized customers, chain accounts, or other customers with the standard equipment types covered under the program.

Initial targeted markets include:

- Restaurants and other food service
- Hotels and motels
- Office buildings
- Grocery stores

- Agriculture

New construction and major renovations are eligible under the Prescriptive Rebates Program.

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

The Prescriptive Rebates Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor may be responsible for items such as rebate processing, contractor training and communications and status reporting associated with the program, as directed by the utility company. The utility company will utilize an internal program manager to conduct its own administration of the program. The utility company's program manager will maintain oversight of the program.

Key elements of the implementation strategy include:

- **Market Sector Approach.** For key market sectors with high potential for energy savings, all of the utility company programs will be bundled into a packaged program offering. To determine which market sectors should be targeted through this approach, the utility company will use research data, market analysis and customer segmentation to identify those with the highest potential.
- **Direct Outreach to Targeted Customers**. In coordination with the utility company account management team, the program will target high energy use customers and recruit their participation by leveraging the account manager's existing relationship with these customers.
- **Leveraged Outreach to Customers**. The program will leverage key industry and trade organizations, or other groups of customers, to promote the business sector programs to end use customers. Opportunities include making presentations at meetings, attending or hosting booths at events and conferences, hosting seminars, placing notices and energy efficiency content in newsletters or on association Web sites. Appropriate trade and industry associations include ASHRAE, BOMA, school administrators, or local governments.
- **Leveraging Trade Allies**. The unique nature of the supply chain for energy efficiency products and services provides the opportunity to coordinate program delivery with trade allies. Though utility company customers are the ultimate target market for the program, trade allies sell and install the efficiency measures and have significant influence with customers in their decision-making process. The program will provide resources to trade allies to encourage them to upsell their

customers to high efficiency options and channel them through the appropriate the utility program. Resources include a Market Partner directory on the utility company Web site, a monthly or quarterly newsletter to Market Partners with program updates and technical information, articles, and case studies, program collateral to be distributed by the Market Partners, and a program staff member to serve as an account manager specifically for trade allies.

- **Technical Assistance**. The program team assists customers and trade allies with engineering support to identify and analyze the cost-effectiveness of energy saving opportunities. If the project is eligible, the program team assists the customer and trade ally in completing a program application.
- **Quality Assurance**. Rebate applications are subject to a quality assurance review by program technical staff to ensure accuracy of rebate calculations.
- **Verification**. The program team provides on-site post installation verification for a statistically significant number of completed projects and also confirms proper installation and conformance with measure specifications.

The Prescriptive Rebate program's implementation strategy will include targeted outreach to key market sectors. To accomplish this, measures applicable to each industry or building type will be bundled into applications and focused marketing and outreach conducted to individual customers, customer groups or organizations, or to trade allies serving these sectors. Potential market sectors include:

- Food Service/Restaurants
- Retail
- Hotel/Motel
- Grocery
- Offices
- Healthcare
- Commercial Real Estate
- Agriculture

Program Delivery

The utility company will contract with a third-party program implementer to deliver the program. The program delivery will occur through direct outreach to eligible customer and by leveraging the relationships that contractors and equipment suppliers have to their customer base. The program delivery contractor will be responsible for the following functions:

- **Market Partner Relationship Management.** Development of relationships with equipment and maintenance suppliers to make rebate-eligible equipment and services available and to promote their participation in the program.
- **Program Marketing.** Including development and distribution of program

materials and assistance with direct mail or other promotion in collaboration with other utility company marketing.

- **Market segmentation strategies** will be developed to identify and target facilities with compressed air systems and those with good potential for retrocommissioning (RCx).
- **Screening guidelines** will be developed to help account managers and trade allies identify and qualify candidates having the highest potential for successful completion of HVAC, compressed air and RCx projects.
- **Participant recruitment and assistance:** including assisting customers and contractors with selection of measures and rebate application submittal, assisting customers and contractors with development of estimates and documentation for approval of prescriptive measure projects.
- **Rebate processing:** including all functions required to receive, review and verify applications, and to pay the financial rebates.
- **Program performance tracking and improvement:** including tracking availability of qualifying products, rebates submittals and payments, and opportunities to improve the program.

Utility Company Administrative Requirements

The utility company will administer all aspects of the Prescriptive Rebates program. A dedicated program manager will be assigned to oversee all program functions, which includes the following:

- **Rebate payment:** The utility company will distribute the incentive payments to the participants upon notice of completion and approval from the implementation contractor.
- **Satisfaction surveys.** All participants will receive a post installation satisfaction survey. The utility company will work with the implementation contractor to address and resolve any issues identified in these surveys.
- **Program reporting and administration:** including monthly, annual, and portfolio-level reporting of program activity, progress towards goals, and performance along key metrics meet regulatory and internal requirements.

Program Partners/Collaborative Resources

Several other sources of technical and financial assistance are available to business sector energy users to enable energy efficiency improvements. Information about these resources will be made available to the program participants and to trade allies through the program trainings and resources.

Relationship to Other Programs

The Prescriptive Rebates Program will be closely coordinated with all of the program offerings to business customers to ensure that the programs complement each other and do not overlap. The Prescriptive Rebates Program and the C&I Custom Rebates Program will be closely tied so that customers or trade allies developing energy efficiency rebates will work with one set of program materials, eligibility and rebate requirements, but individual measure rebates will be calculated using the appropriate rebate methodology and tracked by the utility company under the appropriate program.

Marketing Strategy

The unique nature of the supply chain for energy efficiency products and services provides the opportunity to coordinate program marketing along two distinct channels. Though utility company customers are the ultimate target market for the program, trade allies sell and install the efficiency measures and have significant influence with customers in their decision-making process. Therefore, the two channels will be focused on the end use customer and trade allies. The marketing activities that will be targeted toward each channel are described below:

Direct Marketing to Customers

- **Print.** Opportunities for printed materials include bill inserts and messages, direct mail to targeted customer groups, and program brochures and other literature such as case studies and resource listings.
- **Electronic.** The utility company Web site will include detailed program information on eligibility, rebate levels, and other requirements. E-mail updates announcements will be sent to assigned accounts.
- **Account Managers.** Larger business customers have an assigned account representatives who maintains an ongoing, one-on-one relationship with key customer contacts. The account executives will be leveraged to present the program to each of their assigned accounts as well as identify opportunities throughout the program cycle.
- **Industry Groups.** The program will seek out opportunities to present the program to industry groups whose membership falls within the targeted population of business customers. Candidates include the local chapter of the Building Owners and Managers Association (BOMA), Chambers of Commerce, and the Association of Facilities Engineering.
- **Past Participants.** The program will conduct follow up with past program participants to remind them of the availability of rebates for future energy

improvement projects. This outreach will be conducted via direct mailing and, where available, e-mail.

Marketing to Trade Allies

- **Industry Associations.** The program will develop relationships with industry association who represent trades working along the energy efficiency supply chain. These include local chapters of the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), Association of Energy Engineers (AEE) and the National Association of Energy Service Companies (NAESCO).
- **Workshops and Trainings.** A series of workshops will be held to educate trade allies on the availably of rebates, program requirements, and strategies for incorporating energy efficiency into their sales process.

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to commercial and industrial customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
Higher first-cost	· Financial rebates
Lack of time to pursue comprehensive energy analysis	· Lifecycle/payback information
Lack of awareness regarding energy and non-energy benefits	· Case studies, website and other collateral materials
Corporate purchasing policies that emphasize first cost rather than lifecycle cost	· Easy-to-read lists of qualifying products · Deemed savings and rebate levels reducing/eliminating customized calculations · Fast and simple application or direct rebate process at point-of-sale · Implementer working one-on-one with decision makers in targeted sectors
Lack of immediate availability of efficient products	· Aggressive outreach to trade allies · Increased demand generated by rebates encourages providers to stock qualifying product
Risk aversion to new technologies	· Financial rebate strategies to mitigate risk · Education and testimonials

Incentive Strategy and Eligible Measures

Incentive Strategy

Prescriptive rebates will be a fixed value for each equipment type and paid on a per unit basis. In addition, the following criteria will be applied to the entire project to determine the full rebate payment:

- Maximum facility rebate: $100,000/year
- Maximum customer rebate: $200,000/year
- Maximum % of total project cost: 50%

The maximum rebate a customer may receive is the lesser of the amounts listed above. The program team works closely with prospective customers to determine if projects qualify for rebates and assists them in completing a rebate application.

Deemed measure rebate levels will be established as a percentage of the incremental measure costs, which is the additional cost of a typical high-efficiency measure beyond a predetermined standard-efficiency alternative. Additional strategies may be employed to move the market and increase customer response, when needed.

Eligible Measures

The following measures will be eligible under the Prescriptive Rebate Program.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
C&I Controls - No Occ Sensors Controls - Occupancy Sensors	per connected watt	$0.19	$0.20	$0.20	$0.21	$0.21
C& Faucet Aerators – Standard Faucet Aerators - Lo Flow	per unit	$8.40	$8.60	$8.80	$9.00	$9.20
C&I Hardwired – Incandescent Hardwired - CFLs	per fixture	$23.00	$24.00	$24.00	$25.00	$25.00
C&I Hardwired – Incandescent Hardwired - LEDs	per fixture	$24.00	$25.00	$25.00	$26.00	$27.00
C& Linear Fluorescent - T12 Linear Fluorescent - Premium T8	per fixture	$50.00	$9.90	$10.00	$10.00	$11.00
C&I Linear Fluorescent - T12_Linear Fluorescent - T5	per fixture	$42.00	$0.00	$0.00	$0.00	$0.00
C&I Shell - Standard Duct Leakage Shell - Duct Sealing/Repair	per ton	$50.00	$52.00	$53.00	$54.00	$55.00
Base Refrigeration – Standard Humidistat (Anti-Sweat) Controls	per control	$180.00	$180.00	$190.00	$190.00	$200.00
Base Refrigeration – Standard LED Display Lighting	per door	$66.00	$68.00	$70.00	$71.00	$73.00
Base Refrigeration – Standard Strip Curtains	per sq ft of door	$9.80	$10.00	$10.00	$11.00	$11.00
Controls - Standard Tstat Controls - Programmable Tstat	per ton	$11.00	$12.00	$12.00	$12.00	$12.00

Copier – Standard Power Management Enabling - Networked	per unit	$34.00	$35.00	$36.00	$36.00	$37.00
Desktop Derived Server - Standard Power Supply Desktop Derived Server - 80 PLUS Power Supply	per unit	$2.00	$2.10	$2.10	$2.20	$2.20
Desktop PC - Standard Power Supply Desktop PC - 80 PLUS Power Supply	per unit	$2.00	$2.10	$2.10	$2.20	$2.20
Desktop PC – Standard Power Management Enabling - Networked	per unit	$17.00	$17.00	$18.00	$18.00	$19.00
Exit Sign – CFL Exit Sign - LED	per fixture	$11.00	$11.00	$12.00	$12.00	$12.00
Exit Sign – Incandescent Exit Sign - LED	per fixture	$38.00	$38.00	$39.00	$40.00	$41.00
High Intensity Discharge – HPS Hardwired - Ceramic Metal Halide	per fixture	$190.00	$200.00	$200.00	$210.00	$210.00
High Intensity Discharge – HPS High Bay - Premium T8	per fixture	$66.00	$68.00	$69.00	$71.00	$72.00
High Intensity Discharge – HPS High Bay - T5	per fixture	$74.00	$76.00	$78.00	$79.00	$81.00
High Intensity Discharge – HPS High Bay - T8	per fixture	$56.00	$57.00	$59.00	$60.00	$61.00
High Intensity Discharge – MH Hardwired - Ceramic Metal Halide	per lamp	$190.00	$200.00	$200.00	$200.00	$210.00
High Intensity Discharge – MH High Bay - Premium T8	per fixture	$66.00	$68.00	$69.00	$71.00	$72.00
High Intensity Discharge – MH High Bay - T5	per fixture	$74.00	$75.00	$77.00	$79.00	$81.00
High Intensity Discharge – MH High Bay - T8	per fixture	$56.00	$57.00	$59.00	$60.00	$61.00
Hot Water Heater – Standard Pipe Wrap/Insulation	per unit	$16.00	$16.00	$17.00	$17.00	$18.00
Hot Water Heater – Standard Tank Blanket	per unit	$71.00	$73.00	$75.00	$77.00	$78.00
Linear Fluorescent - T12 Linear Fluorescent - Premium T8 with Reflector/Delamping	per fixture	$61.00	$18.00	$19.00	$19.00	$19.00

Linear Fluorescent - T8 Linear Fluorescent - T8 with Reflector/Delamping	per fixture	$16.00	$16.00	$17.00	$17.00	$18.00
No Pre-Rinse Spray Valve Pre-Rinse Spray Valves	per unit	$150.00	$150.00	$150.00	$160.00	$160.00
Shell - No Duct Insulation Shell - Duct Insulation	per ton	$27.00	$28.00	$29.00	$29.00	$30.00
Shell - No Window Film Shell - Window Film	per sq ft (window area)	$2.50	$2.50	$2.60	$2.70	$2.70
Shell - No/Low Ceiling Insulation Shell - Increase Ceiling Insulation	per sq ft (ceiling area)	$0.27	$0.28	$0.29	$0.29	$0.30
C&I Hot Water Heater – Standard Hot Water Heater - Efficient	per unit	$48.00	$49.00	$50.00	$51.00	$52.00
C&I Hot Water Heater – Standard Hot Water Heater - Heat Pump	per unit	$780.00	$790.00	$810.00	$830.00	$850.00
C&I Hot Water Heater – Standard Hot Water Heater -Tankless	per unit	$250.00	$250.00	$260.00	$270.00	$270.00
C&I Pool Pump – Standard Pool Pump - High Efficiency	per hp	$92.00	$94.00	$96.00	$98.00	$100.00
C&I Pool Pump – Standard Pool Pump - VSD	per hp	$170.00	$180.00	$180.00	$190.00	$190.00
C&I Screw In – Incandescent Screw In - 2x Incandescent Lamps	per fixture	$0.30	$0.00	$0.00	$0.00	$0.00
C&I Screw In – Incandescent Screw In - CFLs	per fixture	$2.20	$2.00	$2.00	$2.10	$2.10
C&I Screw In – Incandescent Screw In - LEDs	per fixture	$16.00	$14.00	$13.00	$12.00	$10.00
Base Drive - Standard Motor Drives - EE motor	per HP	$4.70	$4.80	$4.90	$5.00	$5.10
Beverage Machines – Standard Beverage Machines - ENERGY STAR	per unit	$140.00	$140.00	$150.00	$150.00	$150.00
Beverage Machines – Standard Beverage Machines - Vending Miser	per sensor	$63.00	$65.00	$66.00	$68.00	$69.00
Chiller - Air Cooled – Standard Chiller - Air Cooled - Efficient	per ton	$58.00	$59.00	$60.00	$62.00	$63.00
Chiller - Water Cooled – Standard	per ton	$29.00	$30.00	$30.00	$31.00	$32.00

Chiller - Water Cooled - Efficient						
Comp Air - Standard Efficiency Comp Air - Replace 1-5 HP motor	per HP	$10.00	$11.00	$11.00	$11.00	$11.00
Comp Air - Standard Efficiency Comp Air - Replace 6-100 HP motor	per HP	$6.30	$6.50	$6.60	$6.80	$6.90
Hot Food Holding Cabinet – Standard Hot Food Holding Cabinet - ENERGY STAR	per unit	$640.00	$650.00	$670.00	$680.00	$700.00
Lighting Power Density – Standard Lighting Power Density - Reduced	per sq ft (floor area)	$0.11	$0.11	$0.11	$0.12	$0.12
Linear Fluorescent - T8 Linear Fluorescent - Premium T8	per fixture	$9.70	$9.90	$10.00	$10.00	$11.00
Motors – Standard Motors - Efficient	per Lin ft of case	$5.00	$5.10	$5.30	$5.40	$5.50
Packaged AC - Air Sourced – Standard Packaged AC - Air Sourced - Efficient	per ton	$38.00	$39.00	$39.00	$40.00	$41.00
Packaged HP - Air Sourced – Standard Packaged HP - Air Sourced - Efficient	per ton	$77.00	$79.00	$81.00	$83.00	$85.00
Packaged HP - Air Sourced – Standard Packaged HP - Water Sourced - Efficient	per ton	$73.00	$75.00	$77.00	$79.00	$80.00
Packaged Terminal AC/HP – Standard Packaged Terminal AC/HP - High Efficiency	per kBtu/h	$5.20	$5.30	$5.40	$5.50	$5.70
Pumps/Fans - No VSD Pumps/Fans - VSD	per HP	$150.00	$150.00	$160.00	$160.00	$160.00
Reach In Refrigerator/Freezer – Standard Reach In Refrigerator/Freezer - High Efficiency	per unit	$260.00	$270.00	$280.00	$280.00	$290.00
Screw In – Incandescent Screw In - Cold Cathodes	per fixture	$12.00	$11.00	$11.00	$11.00	$11.00
Standard Efficiency Fans - Replace 1-5 HP motor	per HP	$5.50	$5.60	$5.70	$5.80	$60.00

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the Prescriptive Rebate Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	12,579,930	2,484	20,139,179	4,105	18,837,923	3,743
2015	26,294,432	5,213	41,590,819	8,571	39,296,317	7,818
2016	43,696,880	8,680	68,816,314	14,244	65,321,337	12,993
2017	64,934,561	12,904	101,944,636	21,136	97,618,016	19,397
2018	89,813,535	17,846	140,743,722	29,190	135,949,444	26,980

Proposed incremental and cumulative annual energy and demand savings targets. Proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for Prescriptive Rebate Program over five-year period follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	12,579,930	12,579,930	2,484	2,484
2015	13,714,502	26,294,432	2,728	5,213
2016	17,402,448	43,696,880	3,467	8,680
2017	21,237,681	64,934,561	4,224	12,904
2018	24,878,975	89,813,535	4,942	17,846
		KCPL-MO		
2014	20,139,179	20,139,179	4,105	4,105
2015	21,451,640	41,590,819	4,466	8,571
2016	27,225,494	68,816,314	5,673	14,244
2017	33,128,322	101,944,636	6,892	21,136
2018	38,799,085	140,743,722	8,054	29,190
2014	18,837,923	18,837,923	3,743	3,743
2015	20,458,395	39,296,317	4,075	7,818
2016	26,025,019	65,321,337	5,175	12,993
2017	32,296,680	97,618,016	6,404	19,397
2018	38,331,428	135,949,444	7,583	26,980

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Prescriptive Rebate Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.8	3.0	3.2	3.3	3.4
Total Resource Cost (TRC)	2.0	2.2	2.3	2.4	2.5
Utility System Resource Cost Test (UCT)	3.1	3.4	3.6	3.7	3.9
Participant Cost Test (PCT)	2.9	2.8	2.8	2.8	2.8
Rate Impact Measure (RIM)	0.8	0.8	0.9	0.9	1.0

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.7	2.9	3.0	3.2	3.3
Total Resource Cost (TRC)	1.9	2.1	2.2	2.3	2.4
Utility System Resource Cost Test (UCT)	3.1	3.4	3.6	3.8	3.9
Participant Cost Test (PCT)	2.9	2.8	2.8	2.8	2.9
Rate Impact Measure (RIM)	0.7	0.8	0.8	0.9	0.9

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.6	2.8	2.9	3.1	3.2
Total Resource Cost (TRC)	1.9	2.0	2.2	2.3	2.3
Utility System Resource Cost Test (UCT)	3.1	3.4	3.6	3.7	3.8
Participant Cost Test (PCT)	3.4	3.2	3.2	3.3	3.3
Rate Impact Measure (RIM)	0.6	0.7	0.7	0.7	0.8

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			**
2015					
2016					
2017					
2018					
TOTAL					

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			**
2015					
2016					
2017					
2018					
TOTAL					

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			**
2015					
2016					
2017					
2018					
TOTAL					

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Strategies to minimize free riders and maximize spillover

The following strategies will be used by the Prescriptive Rebate Program to minimize free riders:

- **Try to reach participants earlier in the project development phase.** Earlier involvement will allow the program to work more closely with participants to offer recommendations and technical assistance, increasing participants' savings and decreasing free-ridership.
- **Do not accept completed projects.** The program will not accept projects that have already been completed. Program advertising will encourage potential participants to engage with the program early in the planning process.
- **Tie Implementation Contractor compensation to net program savings.** Performance metrics in the implementation contractor contract will be tied to net energy savings, rather than gross. This will give the implementation contractor sufficient motivation to enforce program requirements that discourage free ridership.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, developing and refining deemed savings measure databases, as well as conducting primary and secondary research as part of impact and process evaluations.

Title	C&I Custom Rebates Program

Objectives

The objectives of the Commercial and Industrial (C&I) Custom Rebates Program are:

- Influence customers to pursue a comprehensive set of energy efficiency measures in various building systems, including, but not limited to lighting, HVAC, water heating, compressed air, refrigeration, and controls;
- Increase consumers' awareness of energy savings opportunities in their facilities;
- Overcome financial barriers to allow customers to adopt more energy-efficient equipment and equipment maintenance; and
- Strengthen customer trust in the utility company as its partner in saving energy.

Description

The C&I Custom Rebates Program is designed to encourage and assist nonresidential customers to improve the energy efficiency of their existing facilities through a broad range of energy efficiency options that address all major end uses and processes. The program offers incentives to customers who install high-efficiency electric equipment and engages equipment suppliers and contractors to promote the incentive-eligible equipment. The program is designed for retrofit and replacement projects and offers financial incentives, paid on a fixed kWh basis, based on the project's first year energy savings.

Target Market

All existing commercial and industrial accounts provided with electricity gas by the utility company are eligible to participate in the C&I Custom Rebates Program. Within this target market, emphasis is placed on targeting large customers whose operations could most benefit from a custom approach to installing measures not covered by the Prescriptive Rebates Program.

Initial targeted markets include:

- Large manufacturing facilities

- Hospitals
- Schools
- Lodging/hospitality industry
- Agriculture

New construction or major renovation projects are not eligible through the Custom Rebate Program; these projects are eligible for incentives through the New Construction Program.

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

The C&I Custom Rebates Program will be implemented by the utility company with necessary resources to administer the program. An implementation contractor may be responsible for items such as rebate processing, contractor training and communications and status reporting associated with the program, as directed by the utility company. The utility company will utilize an internal program manager to conduct its own administration of the program. The utility company's program manager will maintain oversight of the program.

Key elements of the implementation strategy include:

- **Market Sector Approach.** For key market sectors with high potential for energy savings, all of the utility company programs will be bundled into a packaged program offering. To determine which market sectors should be targeted through this approach, the utility company will use research data, market analysis and customer segmentation to identify those with the highest potential.
- **Direct Outreach to Targeted Customers.** In coordination with the utility company account management team, the program will target high energy use customers and recruit their participation by leveraging the account manager's existing relationship with these customers.
- **Leveraged Outreach to Customers**. The program will leverage key industry and trade organizations, or other groups of customers, to promote their business sector programs to end use customers. Opportunities include making presentations at meetings, attending or hosting booths at events and conferences, hosting seminars, placing notices and energy efficiency content in newsletters or on association Web sites. Appropriate trade and industry associations include ASHRAE, BOMA, school administrators, or local governments.

- **Leveraging Trade Allies**. The unique nature of the supply chain for energy efficiency products and services provides the opportunity to coordinate program delivery with trade allies. Though utility customers are the ultimate target market for the program, trade allies sell and install the efficiency measures and have significant influence with customers in their decision-making process. The program will provide resources to trade allies to encourage them to upsell their customers to high efficiency options and channel them through the appropriate utility company program. Resources include a Market Partner directory on the utility company Web site, a monthly or quarterly newsletter to Market Partners with program updates and technical information, articles, and case studies, program collateral to be distributed by the Market Partners, and a program staff member to serve as an account manager specifically for trade allies.
- **Technical Assistance**. The program team assists customers and trade allies with engineering support to identify and analyze the cost-effectiveness of energy saving opportunities. This involves commissioning of a feasibility study to identify energy saving opportunities and understand the potential impacts of proposed improvements. The program team will work with the customer and trade ally to complete custom engineering calculations that assess the energy savings potential, payback horizon, project eligibility, and incentive amount. If the project is eligible, the program team assists the customer and trade ally in completing a program application. To ensure equitable program access, it is the customer's responsibility to provide viable projects with all required data and calculations. Some customers elect to do this work themselves or hire and pay for technical assistance to complete the custom project application requirements.
- **Quality Assurance**. Incentive applications are subject to a quality assurance review by program technical staff to ensure accuracy of savings estimates and incentive calculations.
- **Verification**. The program team provides on-site post installation verification for a statistically significant number of completed projects and also confirms proper installation and conformance with measure specifications.

The C&I Custom Rebates Program's implementation strategy will be enhanced in the new program cycle to better support the adoption of measures beyond lighting and controls. Many opportunities exist to address building systems in a more comprehensive manner. Initiatives around compressed air systems, heating, ventilation, and air conditioning (HVAC), and retro-commissioning (RCx) will be developed and promoted through the program. These are described more fully below.

- **Compressed Air Systems.** Compressed air systems are important, yet often neglected, elements of facility operations. A compressed air system will operate despite inefficient components and distribution system leaks. Because leaks do not present themselves explicitly during operation, these are often a low priority for

repair. Opportunities to reduce energy consumption of compressed air systems include repairing these leaks and installing more efficient system components where applicable.

- **Heating, Ventilation, and Air Conditioning.** HVAC systems are often complex, and energy usage depends on the equipment, operations, and maintenance. Opportunities to reduce energy consumption arise through the replacement of equipment and key components, as well as the optimization of operations.
- **Retro-commissioning**. RCx is a systematic facility investigation that identifies low-cost and no-cost facility improvement measures. RCx has been shown to provide significant cost-effective energy efficiency savings while enhancing the environment in existing commercial facilities and can solve issues of high energy and maintenance costs, occupant complaints, indoor environmental quality, and shorter than expected equipment lives. RCx enhances building performance without replacing major equipment through system optimization.

Program Delivery

The utility company will contract with a third-party program implementer to deliver the program. The program delivery will occur through direct outreach to eligible customer and by leveraging the relationships that contractors and equipment suppliers have to their customer base. The program delivery includes the following functions:

- **Market Partner Relationship Management.** Development of relationships with equipment and maintenance suppliers to make incentive-eligible equipment and services available and to promote their participation in the program.
- **Program marketing:** including development and distribution of program materials and assistance with direct mail or other promotion in collaboration with other utility company marketing.
    - Market segmentation strategies will be developed to identify and target facilities with compressed air systems and those with good potential for RCx.
    - Screening guidelines will be developed to help account managers and trade allies identify and qualify candidates having the highest potential for successful completion of HVAC, compressed air and RCx projects.
- **Participant recruitment and assistance:** including assisting customers and contractors with selection of measures and incentive application submittal, assisting customers and contractors with development of estimates and documentation for approval of custom measure projects.
- **Incentive processing:** including all functions required to receive, review and verify applications, and to pay the financial incentives.
- **Program performance tracking and improvement:** including tracking availability of qualifying products, incentive submittals and payments, and

opportunities to improve the program.

Utility Company Administrative Requirements

The utility company will administer all aspects of the C&I Custom Rebates Program. A dedicated program manager will be assigned to oversee all program functions, which includes the following:

- **Rebate payment:** The utility company will distribute the incentive payments to the participants upon notice of completion and approval from the implementation contractor.
- **Satisfaction surveys.** All participants will receive a post installation satisfaction survey. The utility company will work with the implementation contractor to address and resolve any issues identified in these surveys.
- **Program reporting and administration:** including monthly, annual, and portfolio-level reporting of program activity, progress towards goals, and performance along key metrics meet regulatory and internal requirements.

Program Partners/Collaborative Resources

Several other sources of technical and financial assistance are available to commercial and industrial energy users to enable energy efficiency improvements. Information about these resources will be made available to the program participants and to trade allies through the program trainings and resources.

Relationship to Other Programs

The C&I Custom Rebates Program will be closely coordinated with all of the program offerings to business sector customers to ensure that the programs complement each other and do not overlap. The C&I Custom Rebates Program and the Prescriptive Rebates Program will be closely tied so that customers or trade allies developing energy efficiency initiatives will work with one set of program materials, eligibility and incentive requirements, but individual measure incentives will be calculated using the appropriate incentive methodology and tracked by the utility company under the appropriate program.

Marketing Strategy

The unique nature of the supply chain for energy efficiency products and services provides the opportunity to coordinate program marketing along two distinct channels. Though utility customers are the ultimate target market for the program, trade allies sell and install the efficiency measures and have significant influence with customers in their decision-making process. Therefore, the two channels will be focused on the end

use customer and trade allies. The marketing activities that will be targeted toward each channel are described below:

Direct Marketing to Customers

- **Print.** Opportunities for printed materials include bill inserts and messages, direct mail to targeted customer groups, and program brochures and other literature such as case studies and resource listings.
- **Electronic.** The utility company Web site will include detailed program information on eligibility, incentive levels, and other requirements. E-mail updates announcements will be sent to assigned accounts.
- **Account Managers.** Larger C&I customers have an assigned account representatives who maintains an ongoing, one-on-one relationship with key customer contacts. The account executives will be leveraged to present the program to each of their assigned accounts as well as identify opportunities throughout the program cycle.
- **Industry Groups.** The program will seek out opportunities to present the program to industry groups whose membership falls within the targeted population of C&I customers. Good candidates are the local chapter of the Building Owners and Managers Association (BOMA), Chambers of Commerce (CoC), and the Association of Facilities Engineering (AFE).
- **Past Participants.** The program will conduct follow up with past program participants to remind them of the availability of incentives for future energy improvement projects. This outreach will be conducted via direct mailing, and where available, e-mail.

Marketing to Trade Allies

- **Industry Associations.** The program will develop relationships with industry association who represent trades working along the energy efficiency supply chain. These include local chapters of the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), Association of Energy Engineers (AEE) and the National Association of Energy Service Companies (NAESCO).
- **Workshops and Trainings.** A series of workshops will be held to educate trade allies on the availably of incentives, program requirements, and strategies for incorporating energy efficiency into their sales process.

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to commercial and industrial customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
Risk aversion to new designs and technologies	· Availability of case studies and access to demonstration sites
Higher first-cost	· Financial incentives to drive down payback and cover incremental costs
Lack of awareness regarding energy and non-energy benefits	· Web site, case studies and other collateral materials · Direct marketing to customers
Corporate purchasing policies that emphasize first cost rather than lifecycle cost	· Lifecycle and project payback information · Assistance with identifying other funding sources such as federal grant programs
Lack of resources to conduct initial feasibility analysis to identify energy-saving projects	· Technical advisors working one-on-one with decision makers in targeted sectors · Co-funding for audits/feasibility studies

Incentive Strategy and Eligible Measures

Incentive Strategy

Program incentives are based on energy savings on a per kWh basis for installed measures not covered in the Business Prescriptive Rebates or any other utility company program.

The incentive amount is calculated case-by-case for qualifying equipment or processes. The following criteria is used to determine incentive amounts:

- Lighting incentives: $0.09/kWh
- HVAC-R incentives: $0.12/kWh
- Retro-commissioning incentives: $0.09/kWh
- Compressed air incentives: $0.09/kWh
- Maximum facility incentive: $100,000/year
- Maximum customer incentive: $200,000/year

- Minimum project payback: 1.0 years
- Maximum % of total project cost: 50%

The maximum incentive a customer may receive is the lesser of the amounts listed above. The program team works closely with prospective customers to determine if projects qualify for incentives and assists them in completing an incentive application.

Co-funded feasibility studies and investment-grade audits up to a maximum of $15,000 to assist customers in identifying energy savings opportunities.

Additional strategies may be employed to move the market and increase customer response, when needed.

Eligible Measures

The program provides financial incentives for energy efficiency improvement projects that are not eligible under the Prescriptive Rebate Program or any other utility company program. Measures may include process optimization, various upgrades and tune-ups, and monitoring and control systems.

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
No Controls Fans - Controls	per sq ft (floor area)	$0.18	$0.19	$0.19	$0.19	$0.20
No Controls Pumps - Controls	per HP	$22.00	$23.00	$23.00	$24.00	$24.00
Other – Standard Other - Custom	per HP	$31.00	$32.00	$33.00	$33.00	$34.00
Other Process – Standard Other Process- Custom	per sq ft (window area)	$2.20	$2.20	$2.30	$2.30	$2.40
Oversized Pumps - Sizing	per sq ft (window area)	$2.20	$2.20	$2.30	$2.30	$2.40
Pumps - No Power Recovery Pumps - Power Recovery	per sq ft (window area)	$4.90	$5.00	$5.10	$5.20	$5.40
Shell - No Shading Shell - External Shading/Overhangs	per HP	$19.00	$20.00	$20.00	$21.00	$21.00
Shell - No Solar Shades Shell - Solar Shades	per HP	$9.20	$9.50	$9.70	$9.90	$10.00
Shell - Standard Glazing Shell - High Performance Glazing	per HP	$8.50	$8.60	$8.80	$9.10	$9.30

Standard Components Fans - Improve components	per HP	$8.70	$8.90	$9.10	$9.30	$9.50
Standard Practice Fans - Motor practices-1 (1-5 HP)	per HP	$13.00	$13.00	$14.00	$14.00	$14.00
Standard Practice Fans - Motor practices-1 (100+ HP)	per HP	$12.00	$12.00	$12.00	$13.00	$13.00
Standard Practice Pumps - Motor practices-1 (6-100 HP)	per HP	$12.00	$12.00	$13.00	$13.00	$13.00
Standard Fans - System Optimization	per HP	$39.00	$40.00	$41.00	$42.00	$43.00
Standard Pumps - System Optimization	per HP	$31.00	$32.00	$33.00	$33.00	$34.00
C&I Hot Water Heater – Standard Hot Water Heater - Solar Hot Water	per unit	$1100.00	$1200.00	$1200.00	$1200.00	$1200.00
C&I Shell - Standard Roof Shell - Cool Roof	per sq ft (roof area)	$0.14	$0.14	$0.14	$0.15	$0.15
AC/HP – Standard AC/HP - Geothermal	per ton	$95.00	$97.00	$100.00	$100.00	$100.00
Base Drive - Standard Motor Drives - EE motor	per HP	$4.70	$4.80	$4.90	$5.00	$5.10
Comp Air – Oversized Comp Air - Sizing	per HP	$11.00	$11.00	$11.00	$11.00	$12.00
Comp Air - Standard Efficiency Comp Air - Replace 100+ HP motor	per HP	$4.30	$4.30	$4.40	$4.60	$4.70
Comp Air - Standard Efficiency Comp Air - Replace 6-100 HP motor	per HP	$6.30	$6.50	$6.60	$6.80	$6.90
Pumps/Fans – Standard Pumps/Fans - Efficient	per HP	$0.78	$0.80	$0.82	$0.84	$0.86
Standard Efficiency_Pumps - Replace 1-5 HP motor	per HP	$4.80	$4.90	$5.00	$5.10	$5.20
Standard Transformer Efficient Transformers	per kVA	$2.10	$2.10	$2.20	$2.20	$2.30

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the C&I Prescriptive Rebate Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	**Program Demand (kW)**	**Program Energy (kWh)**	**Program Demand (kW)**	**Program Energy (kWh)**	**Program Demand (kW)**
2014	9,774,533	2,712	18,655,938	5,111	17,944,560	4,639
2015	22,745,256	6,310	42,771,767	11,708	42,017,085	10,853
2016	39,377,490	10,922	73,142,895	20,011	73,157,033	18,885
2017	59,790,738	16,579	109,967,284	30,076	111,694,805	28,815
2018	83,519,203	23,155	152,430,747	41,680	156,871,741	40,451

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the C&I Prescriptive Rebates Program over the estimated life of the program follows.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	9,774,533	9,774,533	2,712	2,712
2015	12,970,722	22,745,256	3,598	6,310
2016	16,632,235	39,377,490	4,612	10,922
2017	20,413,248	59,790,738	5,658	16,579
2018	23,728,464	83,519,203	6,576	23,155
		KCPL-MO		
2014	18,655,938	18,655,938	5,111	5,111
2015	24,115,829	42,771,767	6,597	11,708
2016	30,371,128	73,142,895	8,303	20,011
2017	36,824,389	109,967,284	10,065	30,076
2018	42,463,463	152,430,747	11,604	41,680
		KCPL-GMO		
2014	17,944,560	17,944,560	4,639	4,639
2015	24,072,525	42,017,085	6,214	10,853
2016	31,139,948	73,157,033	8,031	18,885
2017	38,537,772	111,694,805	9,930	28,815
2018	45,176,935	156,871,741	11,636	40,451

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the C&I Custom Rebates Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.7	2.8	2.9	3.0	3.1
Total Resource Cost (TRC)	1.9	2.0	2.1	2.2	2.3
Utility System Resource Cost Test (UCT)	3.3	3.4	3.6	3.8	3.9
Participant Cost Test (PCT)	2.7	2.7	2.7	2.7	2.7
Rate Impact Measure (RIM)	0.7	0.8	0.8	0.8	0.9

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.7	2.8	2.9	3.0	3.1
Total Resource Cost (TRC)	1.9	2.0	2.1	2.2	2.2
Utility System Resource Cost Test (UCT)	3.5	3.6	3.8	3.9	4.0
Participant Cost Test (PCT)	2.7	2.7	2.7	2.8	2.8
Rate Impact Measure (RIM)	0.7	0.7	0.8	0.8	0.8

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	2.5	2.6	2.7	2.8	2.9
Total Resource Cost (TRC)	1.8	1.9	2.0	2.1	2.1
Utility System Resource Cost Test (UCT)	3.2	3.3	3.5	3.6	3.8
Participant Cost Test (PCT)	3.0	3.0	3.0	3.0	3.0
Rate Impact Measure (RIM)	0.6	0.6	0.7	0.7	0.7

Budget

The following budget has been used for planning purposes. However, the utility company may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. Measure costs are included in the appendix.

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover

The following strategies will be used by the Custom Rebate Program to minimize free riders:

- **Try to reach participants earlier in the project development phase.** Earlier involvement will allow the program to work more closely with participants to offer recommendations and technical assistance, increasing participants' savings and decreasing free-ridership.
- **Require program application and authorization prior to project installation.** The program application process will be two-phase and require that a project application be submitted and approved by the program prior to project initiation.
- **Do not accept completed projects.** The program will not accept projects that have already been completed. Program advertising will encourage potential participants to engage with the program early in the planning process.
- **Tie Implementation Contractor compensation to net program savings.** Performance metrics in the implementation contractor contract will be tied to net energy savings, rather than gross. This will give the implementation contractor sufficient motivation to enforce program requirements that discourage free ridership.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

Title	Small Business Direct Installation

Objectives

The objectives of the Small Business Direct Installation (SBDI) Program are to:

- Serve an historically hard to reach customer segment by providing highly-discounted direct installation of energy efficiency measures.
- Provide streamlined, one-stop, turn-key energy efficiency service delivered through registered local contractors.
- Generate energy savings through direct installation of eligible measures and incentives.

Description

The SBDI Program is designed to encourage and assist small business customers to improve the energy efficiency of their existing facilities through turn-key installation and rapid project completion. The program includes lighting, refrigeration, air-conditioning, water heating and control measures that are typically low-cost with reliable, prescriptive energy savings and costs per unit.

Incentives are generally higher in the SBDI program as compared to similar measures installed through the Prescriptive Rebates Program. The SBDI is designed to assist small business owners to overcome the barriers to achieving energy efficiency faced by small businesses. These include time constraints, capital constraints, lack of energy efficiency awareness, and lack of labor resources.

Target Market

The SBDI program is designed for small business customers. The eligible customer population for the program is all existing small commercial accounts provided with electricity by the utility company with an average 12-month individual facility electricity usage of less than 300,000 kWh.

Within the target market, the focus of this program is small businesses most likely to have the types of equipment covered by the program. These include small grocery, office, retail, and restaurants.

Duration

The SBDI Program will launch in 2014 and possibly end in 2018.

Implementation Strategy

The utility company will implement the SBDI Program through a short list of prequalified installation contractors who provide uniform pricing for established services.

There are several methods for the contractors to encourage participation:

- **Initial comprehensive site survey.** The site survey will identify a variety of energy efficiency measures available to the customer for either immediate installation or longer-term projects. A survey report will be provided to the customer and will outline the energy efficiency measures proposed, the estimated energy cost savings, the capital investment required by the customer and financial options for funding their portion of the project costs, if any.
- **Immediate direct installation.** Contractors may be able to immediately install certain measures during the initial site survey, including screw-in CFLS or LEDs, as well as efficient exit signs.
- **Scheduled direct installation.** Customers will be offered the opportunity to immediately schedule the installation of identified measures that require capital investment.
- **Project financing.** Each delivery contractor will be required to offer the customer a financing option to cover their portion of the project cost.
- **Post-installation service.** An information packet will be prepared and provided to the customer. This information will include a description of the installed equipment, operating instructions or manuals, and maintenance instructions and schedules. Manufacturer's warranty information and the installation contractor's labor warranty will be clearly described.

Program Delivery

The program will be delivered to customers by qualified contractors that have passed a rigorous screening and qualification process and have been trained on the program requirements, processes, measures, and implementation standards. Delivery contractors will be required to meet the following criteria:

- Complete and sign the "Contractor Application & Agreement" document
- Be an established contractor with references, required licenses, and

insurance

- Offer installation warranties and provide service on manufacturer equipment warranties
- Complete work in a timely fashion
- Dispose of old equipment, even if customers request to keep it

The delivery contractors are the primary channel for customer recruitment, enrollment, facility assessments, measure installation, and post installation service. The delivery contractors will have responsibilities that fall into several activity areas.

- **Outreach and recruitment.** The delivery contractors will recruit participation through a neighborhood canvasing strategy. The geographic areas will be assigned and scheduled through the utility company. In advance of the canvasing, the utility company will conduct marketing activities to raise interest and awareness, and legitimize the delivery contractors' representatives.
- **Eligibility screening.** The contractors will provide guidance regarding program eligibility and participation processes to minimize confusion and barriers to participation.
- **Energy audit.** The contractors will provide a facility energy assessment at no expense to the customer. The assessment will include a comprehensive set of recommended measures, the measures eligible for installation through the SBDI, the incentives available through the SBDI and through the Prescriptive Rebates and C&I Custom Rebates Programs. The assessment will clearly indicate the customer copayment required as well as the project's financial payback.
- **Financial assistance.** Each delivery contractor will be required to provide a financing option to each customer to cover their portion of the copayment. Information about the financing will be provided in the audit package.
- **Project documentation.** The facility assessment will be tailored to the individual customer by using site-specific parameters, such as operating hours and baseline equipment, rather than deemed savings estimates. For example, a lighting measure savings calculation will depend on operation hours of the particular building.
- **Project scheduling and installation.** Once the customer agrees to

participate, the delivery contractor will schedule the installation of measures. Most installations will be able to be completed in a single visit.

- **Provide installation and equipment warranty.** The delivery contractor will provide service on the manufacturer warranties and provide a warranty on their installation services.

- **Reporting.** The delivery contractor will report program activities to the utility company in a format that meets regulatory and internal requirements, including progress toward program goals.

Utility Company Administrative Requirements

The utility company will be responsible for all aspects of program administration and delivery contractor oversight. These responsibilities include:

- **Contractor recruitment, screening, training.** Recruitment of qualified delivery contractors, screening them for eligibility, and training on the program's requirements and processes.

- **Contractor coordination.** Coordinating the marketing and outreach efforts of the different installation contractors.

- **General awareness campaigns.** Advance notification of neighborhood canvasing is essential to legitimize the delivery contractor. These may include advance letters or mailers, bill inserts, and brochures for distribution at local community events.

- **Targeted outreach to business and neighborhood organizations.** Using community leaders, faith-based organizations, and other local influencers to promote the program will overcome suspicion and increase program acceptance. This may benefit the community leaders if they are perceived as bringing beneficial services to their communities. The utility company will conduct this aspect of program outreach.

- **Program performance tracking and improvement.** Monitor contractor performance and resolve any issues.

- **Post-installation inspections.** Conduct post-installation inspections of completed sites. A sample of pre-installation inspections may also be conducted.

- **Satisfaction surveys.** All participants will receive a post installation satisfaction survey. The utility company will address and resolve any issues

identified in these surveys.

- **Program performance tracking and improvement.** Tracking of project status through the various program phases and delivery contractor performance to identify opportunities to improve the program.
- **Program reporting and administration.** Monthly, annual, and portfolio-level reporting of program activity, progress towards goals, and performance along key metrics meet regulatory and internal requirements.

Program Partners/Collaborative Resources

The utility company will conduct outreach to local community organizations to educate members on the availably of the program, its legitimacy, and the benefits to and requirements of the participants. These community organizations will include places of worship, neighborhood associations, and chambers of commerce.

Each delivery contractor will be required to work with an available financing entity(ies) to provide financing if the customer requires it to meet their project copayment. This includes incorporating information about the availability of low-cost financing into the program materials and ensuring that the financing application process, terms, and eligibility requirements are well-understood by the delivery contractor outreach representatives.

Relationship to Other Programs

In addition to delivering direct energy savings through the installed measures, the SBDI will be a channel for recommending more complex measures in the facility audit and providing the SBDI customer with information on the incentives available through the prescriptive and custom programs. Potential, additional measures not covered by the SBDI will be identified in the audit report, which will include information on their energy savings and installation cost. Information on the C&I Custom Rebates and Prescriptive Rebates Programs will be included in the audit packet.

Marketing Strategy

The primary method of participant recruitment will occur through direct and personal outreach by the individual delivery contractors. The delivery contractors will canvas a designated geographic area, offering to conduct or schedule site assessments. These areas will be selected in advance by the utility company and assigned to each delivery contractor. Each geographic market will be primed through targeted bill inserts and direct mail sent to eligible customers in advance of the scheduled field visits.

Marketing Tactics

The marketing tactics will include:

- Direct, door-to-door outreach
- Direct mail to eligible businesses
- Bill inserts to eligible businesses
- Program information provided on the utility company Web site

Marketing Channels

Utility company representatives will conduct outreach to local organizations such as chambers of commerce, places of worship, neighborhood associations, and industry associations. Outreach will be through one-on-one meetings with organization leaders, presentations to constituents at regular meetings, announcements on organization web sites or in newsletters, or email and postal mailings to membership lists.

Issues and Risk Management

There are many challenges associated with providing an energy efficiency program to small commercial customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
Hard to reach markets	Many ethnicities prefer to conduct business dealings within their established circles and are distrustful of outsiders, government, or corporations. The utility company will conduct outreach to local community organizations in advance of the contractor canvasing efforts to educate members on the availably of the program, its legitimacy, and the benefits to and requirements of the participants. These community organizations will include places of worship, neighborhood associations, and chambers of commerce.
Capital constrained target market	The program largely overcomes this barrier by setting the incentives higher than the standard prescriptive incentive, greatly reducing the customers' copayment. In addition, the contractors will work with available financing entities to incorporate information about low-cost financing into the program offering and ensure that the financing process, terms, and eligibility requirements are well-understood.
Skepticism	The contractor training will cover the appropriate messages that should be used by the recruitment personnel when describing the program to the

participants. In addition, the utility company's oversight of the program will be made clear through co-branding of the printed materials and proper identification for the program personnel. Lastly, general awareness of the program in the targeted communities will be promoted through community outreach, bill inserts and direct mail.

Incentive Strategy and Eligible Measures

Incentive Strategy

The SBDI will provide prescriptive incentives for a comprehensive set of lighting, refrigeration, and water heating measures with reliable saving and low cost. The incentives will be set at levels higher than the Prescriptive Rebates Program to overcome the unique challenges of this target market and delivery energy savings quickly.

Eligible Measures

The following measures will be eligible under the SBDI program (incentives include material and labor).

Measure	Unit	2014 Incentive	2015 Incentive	2016 Incentive	2017 Incentive	2018 Incentive
C&I Controls - No Occ Sensors Controls - Occupancy Sensors	per connected watt	$0.40	$0.41	$0.42	$0.43	$0.44
C&I Hardwired – Incandescent Hardwired - CFLs	per fixture	$64.00	$66.00	$67.00	$69.00	$70.00
C&I Hardwired – Incandescent Hardwired - LEDs	per fixture	$67.00	$69.00	$71.00	$72.00	$74.00
C&I Linear Fluorescent - T12 Linear Fluorescent - Premium T8	per fixture	$46.00	$47.00	$48.00	$49.00	$50.00
C&I Linear Fluorescent - T12 Linear Fluorescent - T5	per fixture	$37.00	$0.00	$0.00	$0.00	$0.00
C&I Shell - Standard Duct Leakage Shell - Duct Sealing/Repair	per ton	$41.00	$42.00	$43.00	$43.00	$44.00
Base Refrigeration – Standard Humidistat (Anti-Sweat) Controls	per control	$130.00	$130.00	$130.00	$140.00	$140.00
Base Refrigeration – Standard Strip Curtains	per sq ft of door	$6.90	$7.00	$7.20	$7.40	$7.50
Controls - Standard Tstat Controls - Programmable Tstat	per ton	$12.00	$12.00	$12.00	$13.00	$13.00

Exit Sign – CFL Exit Sign - LED	per fixture	$31.00	$31.00	$32.00	$33.00	$34.00
Exit Sign – Incandescent Exit Sign - LED	per fixture	$31.00	$31.00	$32.00	$33.00	$34.00
High Intensity Discharge – HPS High Bay - Premium T8	per fixture	$46.00	$47.00	$48.00	$49.00	$50.00
High Intensity Discharge – HPS High Bay - T5	per fixture	$54.00	$55.00	$56.00	$58.00	$59.00
High Intensity Discharge – HPS High Bay - T8	per fixture	$39.00	$40.00	$41.00	$42.00	$43.00
High Intensity Discharge – MH High Bay - Premium T8	per fixture	$46.00	$47.00	$48.00	$49.00	$50.00
High Intensity Discharge – MH High Bay - T5	per fixture	$54.00	$55.00	$56.00	$58.00	$59.00
High Intensity Discharge – MH High Bay - T8	per fixture	$39.00	$40.00	$41.00	$42.00	$43.00
Hot Water Heater – Standard Pipe Wrap/Insulation	per unit	$33.00	$34.00	$35.00	$35.00	$36.00
Hot Water Heater – Standard Tank Blanket	per unit	$68.00	$70.00	$71.00	$73.00	$75.00
Linear Fluorescent - T12 Linear Fluorescent - Premium T8 with Reflector/Delamping	per fixture	$52.00	$53.00	$54.00	$55.00	$57.00
Linear Fluorescent - T8_Linear Fluorescent - T8 with Reflector/Delamping	per fixture	$45.00	$46.00	$47.00	$48.00	$49.00
C&I Screw In – Incandescent Screw In - 2x Incandescent Lamps	per fixture	$4.80	$0.00	$0.00	$0.00	$0.00
C&I_Screw In - Incandescent_Screw In - CFLs	per fixture	$6.10	$6.30	$6.40	$6.60	$6.70
C&I Screw In – Incandescent Screw In - LEDs	per fixture	$18.00	$16.00	$14.00	$13.00	$12.00
Linear Fluorescent - T8_Linear Fluorescent - Premium T8	per fixture	$46.00	$47.00	$48.00	$49.00	$50.00
Screw In – Incandescent Screw In - Cold Cathodes	per fixture	$22.00	$22.00	$23.00	$23.00	$24.00

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the SBDI Program over the five-year period follow.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	2,915,678	634	4,570,015	1,022	4,616,659	1,013
2015	5,605,537	1,250	8,578,319	2,001	8,506,344	1,923
2016	9,044,385	2,040	13,555,800	3,227	13,208,026	3,033
2017	13,131,208	2,979	19,451,294	4,684	18,890,365	4,374
2018	17,908,358	4,073	26,341,003	6,384	25,595,250	5,954

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the SBDI Program over the five-year period follow.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	2,915,678	2,915,678	634	634
2015	2,689,859	5,605,537	616	1,250
2016	3,438,848	9,044,385	790	2,040
2017	4,086,823	13,131,208	938	2,979
2018	4,777,151	17,908,358	1,095	4,073
		KCPL-MO		
2014	4,570,015	4,570,015	1,022	1,022
2015	4,008,305	8,578,319	979	2,001
2016	4,977,481	13,555,800	1,226	3,227
2017	5,895,494	19,451,294	1,457	4,684
2018	6,889,710	26,341,003	1,699	6,384
		KCPL-GMO		
2014	4,616,659	4,616,659	1,013	1,013
2015	3,889,685	8,506,344	910	1,923
2016	4,701,682	13,208,026	1,110	3,033
2017	5,682,339	18,890,365	1,341	4,374
2018	6,704,885	25,595,250	1,580	5,954

Net-to-Gross Factors

The Net To Gross Factor for all measures is 1.0.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the SBDI Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the life of the measure.

Cost Test Ratios – KCPL-KS	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.9	2.0	2.1	2.2	2.3
Total Resource Cost (TRC)	1.4	1.5	1.6	1.6	1.7
Utility System Resource Cost Test (UCT)	1.6	1.7	1.8	1.9	2.0
Participant Cost Test (PCT)	3.4	2.8	2.7	2.7	2.7
Rate Impact Measure (RIM)	0.6	0.7	0.7	0.8	0.8

Cost Test Ratios – KCPL-MO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.9	2.0	2.1	2.2	2.2
Total Resource Cost (TRC)	1.4	1.4	1.6	1.6	1.7
Utility System Resource Cost Test (UCT)	1.6	1.7	1.8	1.9	2.0
Participant Cost Test (PCT)	3.7	2.9	2.9	2.8	2.8
Rate Impact Measure (RIM)	0.6	0.6	0.7	0.7	0.8

Cost Test Ratios – KCPL-GMO	2014	2015	2016	2017	2018
Societal Cost Test (SCT)	1.8	1.9	2.1	2.1	2.2
Total Resource Cost (TRC)	1.3	1.4	1.5	1.6	1.7
Utility System Resource Cost Test (UCT)	1.5	1.6	1.8	1.9	1.9
Participant Cost Test (PCT)	4.3	3.4	3.3	3.3	3.3
Rate Impact Measure (RIM)	0.5	0.6	0.6	0.6	0.7

Budget

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

KCPL- KS	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-MO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

KCPL-GMO	Non-Incentive Utility	Non-Incentive IC	Incentive	M&V	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover
The SBDI Program, by its nature, targets customers not likely to pursue energy efficiency upgrades on their own. These customers are not specifically targeted by other programs and are seldom the approached by providers of energy efficiency product s and services because of the higher costs relative to larger customers. The utility company will identify geographic areas with high concentrations of small businesses and the delivery contractors will solicit their participation proactively. The incentive levels are set higher than the standard prescriptive program to greatly reduce the customer out of pocket expense and motivate customers who would not otherwise be able to implement efficiency upgrades. The projects are implemented in a turnkey manner with minimal time and resource requirements by the customer.
Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

Title	Combined Heat and Power Program

Objectives

The primary goal is to accelerate the adoption of efficient customer-sited combined heat and power (CHP) systems through information, design assistance, and performance-based incentives.

The Combined Heat and Power Program will recruit commercial and industrial customers well suited to CHP. The program will provide education and system cost-effectiveness screening to interested customers, and will provide performance-based incentives to customers who install CHP systems.

The program will incent steam turbine- and gas turbine-based CHP systems fueled by natural gas or opportunity fuels available on-site, such as biogas and agricultural and wood waste products. CHP thermal output may be used for heating, cooling, or a combination of the two. The electrical capacity of installed systems typically must be 500 kW or greater. Smaller systems may be considered on a case-by-case basis if it can be shown through the application process to be cost effective.

Minimum system efficiency will be required to ensure an efficient use of resources. Long-term service contracts will be required to ensure that system lifetimes meet program expectations.

The program will provide system screening and design assistance, and will provide performance-based incentives ($/kWh) to qualifying CHP systems for up to 10 years. These incentives will encourage the adoption of efficient on-site CHP systems.

Target Market

Commercial, industrial, and other large customers with significant, consistent thermal loads who do not currently generate electricity on-site.

Duration

The program will launch in program year 2 (2015) and possibly end in 2018.

Implementation Strategy

Program Delivery

The program will be implemented internally by utility company staff. The utility company will assign a program manager to who will have broad responsibility for all aspects of the program.

Program Delivery

The utility company will deliver the program through direct outreach to eligible customer and to CHP project developers and manufacturers. The program delivery includes the following functions:

- **Relationship management.** Development of relationships with project developers and manufacturers to promote their participation in the program.
- **Program marketing.** Including development and distribution of program materials, as well as:
  - Market segmentation strategies will be developed to identify and target facilities with good potential for CHP.
  - Screening guidelines will be developed to help account managers and trade allies identify and qualify candidates having the highest potential for successful completion of projects.
- **Participant recruitment and assistance.** Including assisting customers and project developers with incentive application submittal, assisting customers.

Utility Company Administrative Requirements

The utility company will administer all aspects of the CHP Program. A dedicated program manager will be assigned to oversee all program functions, which includes the following:

- **Incentive processing.** Including intake, review and verification of project applications; and pay the financial incentives.
- **Project verification.** Post-inspection of installed projects to ensure that the projects meet the specifications in the incentive application.
- **Program performance tracking and improvement.** Including tracking availability of qualifying products, incentive submittals and payments, and opportunities to improve the program.
- **Reporting.** Including reporting of program activities to meet regulatory and internal requirements, including progress toward program goals.

Program Partners/Collaborative Resources

Other sources of technical and financial assistance are available to commercial and industrial energy users to enable energy efficiency improvements. Information about these resources will be made available to the program participants and trade allies through the program trainings and resources. One possible resource is described below.

- United States Clean Heat and Power Association (U.S. CHPA) offers advocacy, networking, education, and market information to companies in the business of CHP and works to develop sound clean energy policy and market place solutions. The U.S. CHPA documents the benefits of CHP to both the public and

to decision-makers by sponsoring conferences and workshops and preparing reports to educate and overcome barriers to CHP. U.S. CHPA offers their members the opportunity to network with each other and key government officials to promote greater understanding of the benefits of CHP and to ensure a strong industry.

Relationship to Other Programs

The CHP Program will be closely coordinated with all of the program offerings to business customers to ensure that the programs complement each other and do not overlap. Information about the program will be included when presenting the C&I Custom Rebates and Prescriptive Rebates Programs to eligible business customers with good potential for on-site generation.

Marketing Strategy

CHP systems are significant investments for customers not only in terms of cost but in operational commitment. The CHP market is heavily driven by project developers and manufacturers who have significant influence with customers in their decision-making process. The sales cycle for a CHP system is long, complex and requires a significant investment of time by the project developer. Therefore, program marketing efforts will be directed primarily at this group with supplemental activities directed at the end use customer. The marketing activities that will be targeted toward each channel are described below.

Marketing to Project Developers and Manufacturers

- **Industry Associations.** The program will develop relationships with industry associations who represent project developers and manufactures working along the CHP supply chain. Good candidates are the local chapter of the U.S. CHPA and the U.S. Department of Energy Mid-Atlantic Clean Energy Application Center.
- **Workshops and Trainings.** A series of workshops will be held to educate project developers and manufacturers on the availably of incentives, program requirements, and strategies for incorporating energy efficiency into their sales process.

Direct Marketing to Customers

- **Industry Groups.** The CHP Program will be presented to industry groups whose membership falls within the targeted population of business customers.
- **Account Executives.** Larger business customers have an assigned account representative who maintains an ongoing, one-on-one relationship with key customer contacts. The account executives will screen each of their assigned

accounts to determine which are good candidates for CHP.

- **Electronic.** The utility company web site will include detailed program information on eligibility, incentive levels, and other requirements.

Issues and Risk Management

There are many challenges associated with providing a combined heat and power program to large customers. Key issues and the associated risk management strategy follow.

Issue	Risk Management Strategy
• **Lack of awareness about the technology and economics**	• Educational materials and technical and economic screening services.
• **Uncertainty about long term project economics because of uncertainty in long term natural gas and electric rates.**	• Scenario analysis in economic screening. Target customers with access to opportunity fuels such as biogas and agricultural and wood waste.
• **Risk of premature retirement of systems due to maintenance problems.**	• Require a 10-year maintenance contract be purchased for all incented systems.
• **Risk of premature retirement of systems due to changes in project economics.**	• Provide performance-based incentives over a 10-year period.

Incentive Strategy and Eligible Measures

New, qualifying CHP systems will be eligible for an incentive of $0.03/kWh annually for up to the first 10 years of operation. CHP prime-movers can either be steam turbines or gas turbines with electrical capacity of 1 MW or greater. Fuel can either be natural gas or available on-site opportunity fuels derived from byproducts of site processes. System must include a 10-year service contract. Minimum annual installed system efficiency levels will be determined.

Savings Targets

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the Combined Heat and Power Program over the five-year period follow. CHP system installation are likely be much lumpier" than what is shown below.

	KCPL-KS		KCPL-MO		KCPL-GMO	
	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)	Program Energy (kWh)	Program Demand (kW)
2014	0	0	0	0	0	0
2015	556,923	76	3,162,284	432	2,300,230	314
2016	1,111,845	152	6,324,567	863	4,600,459	628
2017	2,779,613	379	15,811,418	2,158	11,501,148	1,570
2018	5,003,303	683	28,460,552	3,884	20,702,067	2,826

Proposed incremental and cumulative annual energy and demand savings targets. The proposed incremental annual energy and demand savings targets and cumulative annual energy and demand savings targets for the Combined Heat and Power Program over the five-year period follow. CHP system installation are likely be much lumpier" than what is shown below.

Savings at Meter	(kWh) Energy Savings targets – Incremental Annual	(kWh) Energy Savings Targets – Cumulative Annual	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
		KCPL-KS		
2014	0	0	0	0
2015	555,923	556,923	76	76
2016	555,923	1,111,845	76	152
2017	1,667,768	2,779,613	228	379
2018	2,223,690	5,003,303	303	683
		KCPL-MO		
2014	0	0	0	0
2015	3,162,284	3,162,284	432	432
2016	3,162,284	6,324,567	432	863
2017	9,486,851	15,811,418	1,295	2,158
2018	12,649,134	28,460,552	1,726	3,884
		KCPL-GMO		
2014	0	0	0	0
2015	2,300,230	2,300,230	314	314
2016	2,300,230	4,600,459	314	628
2017	6,900,689	11,501,148	942	1,570
2018	9,200,919	20,702,067	1,256	2,826

Net-to-Gross Factors

The CHP Program uses a net-to-gross factor of 1.0 to calculate net energy and demand savings.

Benefit-Cost Test Results

The Total Resource Cost Test is listed for the roll-up of the Combined Heat and Power Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate annual discount rate.

Test	2014-2033
Total Resource Cost (TRC)	1.4

Budget

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

KCPL- KS	TOTAL	KCPL-MO	TOTAL	KCPL-GMO	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					

**

Strategies to minimize free riders and maximize spillover

The following strategies will be used by the CHP Program to minimize free riders:

- **Do not accept completed projects.** The program will not accept projects that have already been completed or are underway. Program advertising will encourage potential participants to engage with the program early in the planning process.
- **Proactive Screening by Account Managers.** The utility account managers will assess each of their assigned accounts for cogeneration potential and propose the program to them. This will help to focus the program on future projects and decision-making, rather than projects that are underway.

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Evaluation, Measurement and Verification Strategy
All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

KCP&L (and GMO): Programs List – Demand Response

KCP&L currently offers demand response (DR) programs for both Residential and Business customers. KCP&L's existing DR program offerings will be maintained with modifications to increase flexibility in customer response and encourage greater long-term participation. New programs added are designed to target non-participating customer segments, end uses, and greater flexibility in customer response.

Table 3 presents an overview of nine residential sector programs. Detailed program descriptions follow.

Table 3. KCP&L Demand Response Programs

Program Name	New Program?	Market Sector	Customer Size	End Uses/Measures	Description
1. MPower	No	Business	Medium C&I (20-200 kW) Large C&I (>200 kW)	Interruptible/Curtail-able Tariff, where customers agree to reduce consumption by pre-specified amount during system reliability or economic events in exchange for incentive payment	Currently works well, so no modifications proposed If KCP&L wants to explore other options, potential modifications that could be tied to varying incentive levels to increase participation include: • Different notification options (e.g., 4 hour, 1 hour, etc.) • Various options for number of events and number of hours per event
2. Energy Optimizer	No	Res and Business	Residential Small C&I (<20 kW)	Direct Load Control program allows utility to remotely raise customer's thermostat setpoint or cycle HVAC equipment almost immediately (without notification)	Potential modifications: • Upgrading current paging system to broadband or other two-way communications • Offering load switches as well as thermostats to attract broader market

Program Name	New Program?	Market Sector	Customer Size	End Uses/Measures	Description
3. Time of Use	Yes	Res	All	Static time-based rates vary for on- and off-peak times during summer for residential customers	• New rate structure (hours and pricing) to increase adoption and customer benefits • Market TOU rate to new accounts • Based on findings from smart grid pilot, where applicable • Complements KCP&L's Optimizer program and serves as lower-cost demand-side rate alternative to dynamic time-based rates like Critical Peak Pricing • Requires infrastructure and integration costs (i.e., interval meter or other TOU-capable meter and back end integration)
4. Business Behavior-Based Demand-Side Rate	Yes	Business	All	Time-based rate for business customers	• Dynamic pricing option to replace existing Real-Time Pricing option • Incorporates behavior-based research with EPRI to determine specific rate structure • With and without enabling technology • Requires infrastructure and integration costs (i.e., deployment of AMI or site-specific interval metering with two-way communications and back end integration)
5. Small/Medium Business Curtailable Load	Yes	Business	Small C&I (<20 kW) Medium C&I (20-200 kW)	Curtailable load program like MPower where customers agree to reduce consumption by pre-specified amount, targeting smaller business customers	• Targeting mass market/mid-size business customers for direct load control of selected cost-effective loads (e.g., A/C, water heaters, pumps, etc.) • Single-circuit loads verified as on/off; fixed kW per participating load; no need for estimated peak demand or firm power levels • Could occur solely through KCP&L or with marketing assistance from third-party provider • Could operate within current MPower framework

Title	**MPower Program**
FERC Program Category	Interruptible/Curtailable Tariffs

Objectives

Develop capability to curtail loads from commercial and industrial customers to help meet system reliability or economic needs during periods of summer peak demand.

Description

MPower is a commercial and industrial customer peak load reduction program in which the utility company collaborates with customers to curtail (or reduce) their energy use during times of peak electric demand during June through September. Events may be called for reliability or economic reasons. Reductions are commonly achieved by reducing lighting and HVAC load, shutting down equipment, or switching facility load to an onsite generator.

MPower provides customers with two forms of financial incentives: 1) a monthly "participation payment" for being "on call" to reduce power consumption at KCP&L's request, and 2) an additional "event payment" for successfully reducing demand each time they are called upon to do so.

Event Conditions

The contracts between customers and KCP&L specify the following:

- Maximum Number of Curtailment Events: The utility can call on a customer a maximum number of times per curtailment season, typically ten, to participate in curtailment events. The contracts also allow that in certain pre-specified levels of extreme system emergency, the utility may call the customer to curtail load, even if the customer has already curtailed the maximum number of times per curtailment season.
- Curtailment Season: The curtailment season lasts from June 1 through September 30.
- Curtailment Hours: Curtailment hours may occur from 12:00 noon through 10:00 p.m. on Mondays through Fridays during the curtailment season.
- Notification: Customers are given at least four hours of notice prior to a curtailment event, but typically receive at least one day's notice.
- Event Duration: Events usually last between four and six hours, but can last anywhere between two and eight consecutive hours, with no more than one event per day.
- KCP&L may call events no more than three consecutive days per calendar week, and the cumulative number of hours may not exceed 80 during the curtailment season per customer.

Target Market

The target market for the program is utility commercial and industrial customers with capability to reduce at least 25 kW during the program season of June 1 through September 30.

The potential analysis for this program assessed the following rate class segments (adapted from FERC's DR potential study[1]):

- Medium C&I (20-200 kW)
- Large C&I (>200 kW)

Current electric customers on a non-residential rate, who are able to provide a minimum reduction of 25kW during the specified curtailment season and curtailment hours, are eligible to participate in the program. Eligible load types include, but are not limited to, industrial process equipment, agricultural and municipal pumping, cold storage, HVAC equipment, and lighting.

Duration

The program will launch in 2014 and possibly end in 2018.

Implementation Strategy

Program Delivery

The utility company implements the MPower Program with the necessary resources to administer the Program. The utility company uses an internal program manager to conduct its own administration of the program and maintain oversight of the program.

Program Partners/Collaborative Resources

Partners include utility company internal staff, third-party meter data vendor and external notification and administration manager.

Relationship to Other Programs

The program is designed for medium to large commercial and industrial customers; therefore, the program has a strong relationship through promotion with the utility company's other business demand-side management (DSM) programs, such as the Building Operator Certification, Prescriptive Rebates, and C&I Custom Rebates.

Marketing Strategy

The proposed marketing strategy includes:

- Targeted marketing through direct mail, energy consultant engagement of Tier 1 customers, and marketing to existing and former participants.
- Building a strong, consistent message informing customers that the MPower

[1] Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential*. Prepared by The Brattle Group, June 2009.

demand response program provides customers with an annual payment for agreeing to be "on call" to reduce their energy usage. In addition, customers can earn a payment each time they are asked to reduce usage and successfully do so.

Key Messages

- Save energy while getting paid to do so.
- The MPower Program allows customers to partner with the utility company and help manage summer peak demands and avoid costly generation growth.
- Find out more at www.kcpl.com.

Issues and Risk Management

Through August 2012, the program has succeeded in attracting participation of 393 KCP&L and 18 GMO customers representing 82.7MW and 11.1 MW of load respectively. As participation increases, the remaining prospects may see less value in the program or may have less ability to curtail load. In general, this is a mature program with well-understood risks including factors such as the possible attrition of participation if events are too numerous or lengthy.

Incentive Strategy and Eligible Measures

Customer compensation is defined within each customer contract and is based on contract term, Maximum Number of Curtailment Events and the number of actual Curtailment Events per Curtailment Season. Timing of all payments/credits is specified in the curtailment contract with each customer, and payments are paid to the customer in the form of a check or bill credit as specified in the contract. The credits are applied before any applicable taxes.

Compensation includes the following two components

1) Program Participation Payment

For each Curtailment Season, the customer receives a payment/credit based upon the contract term, the number of consecutive years under contract, and the Maximum Number of Curtailment Events. The Program Participation Payment for a Curtailment Season is equal to the per kilowatt of Curtailable Load rate as defined in the table below multiplied by the Maximum Number of Curtailment Events stated in the customer's contract.

CONTRACT TERM	# OF CONSECUTIVE YEARS UNDER CONTRACT	$/kW OF CURTAILABLE LOAD
One year	1	$2.50
One year	2	$2.50
One year	3	$3.25
One year	4	$3.25
One year	5	$4.50
Three years	1	$3.25
Three years	4	$3.25
Three years	5	$4.50
Five years	Any	$4.50

The Program Participation Payment is divided by the number of months in the Curtailment Season and applied as bill credits equally for each month of the Curtailment Season.

2) Event Payment
Variable fee of $0.35/kWh during events

Savings Targets

Savings per Unit

- Based on the program's 2012 savings, per participant savings are estimated at 211 kW in KCP&L and 620 kW in GMO.
- No kWh energy savings.

Expected cumulative annual demand savings. The expected cumulative annual gross and net demand savings for the MPower Program over the five-year period follows.

	KCPL-KS	KCPL-MO	KCPL-GMO
	Program Demand (kW)	**Program Demand (kW)**	**Program Demand (kW)**
2014	26,600	60,000	13,600
2015	60,000	131,000	51,300
2016	101,200	217,700	115,600
2017	150,000	316,400	207,000
2018	206,100	426,900	326,100

Proposed incremental and cumulative annual demand savings targets. The proposed incremental annual demand savings targets and cumulative annual demand savings targets for the MPower Program over the estimated life of the program follows.

Savings at Meter	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
	KCPL-KS	
2014	26,600	26,600
2015	33,400	60,000
2016	41,200	101,200
2017	48,800	150,000
2018	56,100	206,100
	KCPL-MO	
2014	60,000	60,000
2015	71,000	131,000
2016	86,700	217,700
2017	98,700	316,400
2018	110,500	426,900
	KCPL-GMO	
2014	13,600	13,600
2015	37,700	51,300
2016	64,300	115,600
2017	91,400	207,000
2018	119,100	326,100

Net-to-Gross Factors

All participants and all resulting demand savings are due solely to the program, since no customers would participate in curtailment events without the program. The demand savings are based on an estimated baseline consumption level.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the MPower Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	2014-2033
Societal Cost Test (SCT)	11.6
Total Resource Cost (TRC)	11.3
Utility System Resource Cost Test (UCT)	2.3
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	2.3

Cost Test Ratios – KCPL-MO	2014-2033
Societal Cost Test (SCT)	11.6
Total Resource Cost (TRC)	11.2
Utility System Resource Cost Test (UCT)	2.2
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	2.2

Cost Test Ratios – KCPL-GMO	2014-2033
Societal Cost Test (SCT)	11.1
Total Resource Cost (TRC)	11.0
Utility System Resource Cost Test (UCT)	2.2
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	2.2

Budget

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

KCPL-KS	TOTAL	KCPL-MO	TOTAL	KCPL-GMO	TOTAL
2014	**	[redacted]			**
2015					
2016					
2017					
2018					
TOTAL					

Strategies to minimize free riders and maximize spillover

Not applicable. See Net-to-Gross Factors above.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

Title	**Energy Optimizer Program**
FERC Program Category	Direct Load Control

Objectives

Develop capability to curtail residential and small commercial Air Conditioning (A/C) loads to help meet system reliability or economic needs during periods of summer peak demand.

Description

Residential and small commercial air conditioning (A/C) cycling program that allows the utility company to remotely raise the customer's thermostat setpoint or cycle the A/C equipment without notification. The program, marketed as the Energy Optimizer (EO) Program, addresses the need for load reduction on the utility company's system on peak summer days and focuses on residential and small commercial customers with peak demand less than 25 kW.

Customers who partner with the utility company in this program receive a free programmable thermostat that they can use to control their energy use throughout the year. Programmable thermostats can help reduce heating and cooling costs by automatically adjusting temperature settings throughout the day to match homeowners' schedules. As long as the customer remains in the program, participants can access their thermostat via the Internet and the utility company provides free maintenance and repair to the programmable thermostat as may be required due to normal use.

The thermostat contains a wireless receiver that responds to signals sent from the utility company when peak demand is at its highest and energy curtailment is needed. The receivers are used to initiate cycling or ramping events through one of several possible load reduction strategies:

- Cycle the outdoor compressor on and off at a level set by the utility company for no longer than four hours
- Adjust the temperature by immediately raising the temperature several degrees at the beginning of an event
- Raise the temperature one degree per hour for a few hours, up to three degrees
- A one hour pre-cooling option is available whereby the temperature of a building is lowered by a few degrees before the start of a cycling event

When operating properly, the thermostats display the word "SAVE" while the utility company has control of the thermostat. The thermostat returns to the original setting after the four hour period. Besides the thermostat display, there is no other customer notification of peak saving days.

Event Conditions

The contracts between customers and the utility company specify the following:

- Maximum Number of Curtailment Events: There is no limit on the total number of curtailments or number of consecutive days curtailed.
- Curtailment Season: The EO Program is designed to run from June 1 to September 30.
- Curtailment Hours: Curtailments can be called on non-holiday weekdays only.
- Notification: No notification is given prior to the event.
- Event Duration: Curtailment length is limited to a maximum of four hours per day per participant. The overall curtailment period can be lengthened by strategically and sequentially curtailing load across the service territory (although this reduces the maximum load reduction available for any one event).

Program participants are permitted to override the system once per month and must communicate their override request via the Internet or by telephone.

Target Market

The target market for the program is utility residential and small commercial customers able to curtail A/C load during the program season of June 1 through September 30.

The potential analysis for this program assessed the following rate class segments (adapted from FERC's DR potential study[2]):

- All Residential
- Small C&I (<25 kW)

All residential and some small commercial customers with an eligible central A/C system or heat pump (i.e., 2 tons or greater, with exceptions made for bulk systems of 1.5 ton units) are eligible. This program does not include chillers. A Honeywell thermostat is required and provided.

The customer must be able to receive event notification via communications technologies, which at present is via paging, but which may eventually include two-way radio communications or WiFi to allow more customers in rural areas to participate.

Duration

Ongoing through March of 2018. Program is currently active, but is not enrolling new customers pending regulatory discussions regarding cost recovery.

[2] Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential*. Prepared by The Brattle Group, June 2009.

Implementation Strategy

This program is a turn-key program provided by Honeywell Utility Solutions. Honeywell supplies the marketing, appointment setting, installation, service, and call center. This program is managed by a utility company Product Manager.

Energy Optimizer participants receive a Honeywell programmable thermostat and the installation of this thermostat at no cost. The installer inspects the customer's air conditioning system, helps program and test the thermostat, provides the customer with a Quick Reference Guide, and leaves the old thermostat with the customer.

Marketing Strategy

The following communications channels are examples of the channels used to reach customers with the Energy Optimizer marketing message:

- Promote program on www.kcpl.com home page, within www.kcpl.com, and on the AccountLink and Home Energy Analyzer portals
- Bill messages and bill inserts
- Email
- The Wire residential newsletter
- Homeowner association newsletters
- Participation in community events such as Earth Day, Home Shows, and employee fairs held by utility company business customers for their employees
- Participation in Chamber of Commerce meetings to increase general awareness of the program and distribute program promotional materials
- Direct mail, as needed

Web Presence
The Energy Optimizer website serves as an information source for existing and new participants, promoting an understanding of program benefits, and providing a link to (the program's current implementer) Honeywell's call center. Current website capabilities include online enrollment and a thermostat control center.

Sales Approach
Energy Optimizer is sold to the residential market primarily through direct marketing. There is some face-to-face selling that occurs at home shows and community events, but its impact is minimal. Direct marketing is used with the commercial market as well, but it is heavily supplemented by the direct sales efforts of the utility company's account management group.

The Energy Optimizer program is easy to understand, and as such, a utility company sales representative can be trained on how to sell the program with one or two brief one-on-one or group training sessions. These training sessions are conducted as needed as new sales representatives come on board. Most key accounts are presented with the Optimizer message by their utility company sales representatives.

Issues and Risk Management

Through August 2012, the program has succeeded in attracting participation of 41,816 KCP&L and 11,515 GMO customers representing 37.2 MW and 11.6 MW of load respectively. To increase participation in rural areas, new communications technologies may be needed to replace or supplement the existing one-way paging communications. In general, this is a mature program with well-understood risks including factors such as the possible attrition of participation if events are too numerous or lengthy. Mature program with minimal risk and fairly well established response rate.

Incentive Strategy and Eligible Measures

The customer owns the thermostat after three years.

Measure Incentive Levels per Unit

- Smart thermostat equipment ~ $200 value
- Smart thermostat installation ~ $180 value
- Smart thermostat all in cost ~ $500 value (dependent on volume)

Savings Targets

Savings per Unit

- Based on the program's 2012 savings, per home savings are estimated at 0.89 kW in KCP&L and 1.00 kW in GMO (weighted average for single family, multifamily, and commercial).

- No kWh energy savings.

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the Energy Optimizer Program over the five-year period follow.

	KCPL-KS	KCPL-MO	KCPL-GMO
	Program Demand (kW)	Program Demand (kW)	Program Demand (kW)
2014	27,000	18,000	22,000
2015	59,300	38,300	49,900
2016	94,900	60,800	82,500
2017	133,100	85,500	119,400
2018	173,200	112,500	160,400

Proposed incremental and cumulative annual demand savings targets. The proposed incremental annual demand savings targets and cumulative annual energy and demand savings targets for the Energy Optimizer Program over the five-year period follow.

Savings at Meter	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
	KCPL-KS	
2014	27,000	27,000
2015	32,300	59,300
2016	35,600	94,900
2017	38,200	133,100
2018	40,100	173,200
	KCPL-MO	
2014	18,000	18,000
2015	20,300	38,300
2016	22,500	60,800
2017	24,700	85,500
2018	27,000	112,500
	KCPL-GMO	
2014	22,000	22,000
2015	27,900	49,900
2016	32,600	82,500
2017	36,900	119,400
2018	41,000	160,400

Net-to-Gross Factors

All participants and all resulting demand savings are due solely to the program, since no customers would participate in curtailment events without the program. The demand savings are based on an estimated baseline consumption level.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Energy Optimizer Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	2014-2033
Societal Cost Test (SCT)	2.1
Total Resource Cost (TRC)	1.9
Utility System Resource Cost Test (UCT)	1.9
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	1.9

Cost Test Ratios – KCPL-MO	2014-2033
Societal Cost Test (SCT)	2.1
Total Resource Cost (TRC)	1.9
Utility System Resource Cost Test (UCT)	1.9
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	1.9

Cost Test Ratios – KCPL-GMO	2014-2033
Societal Cost Test (SCT)	2.1
Total Resource Cost (TRC)	1.9
Utility System Resource Cost Test (UCT)	1.9
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	1.9

Budget

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

KCPL-KS	TOTAL	KCPL-MO	TOTAL	KCPL-GMO	TOTAL
2014	** [redacted]				
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover

Not applicable. See Net-to-Gross Factors above.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

Title	**Residential Time of Use Pricing**
FERC Program Category[3]	Pricing with and without Enabling Technology
Objectives	
Time-based rate designed to reflect the average cost of generating and delivering power during peak and off-peak times, to increase customer benefits, and to encourage residential customers to consume less during peak times.	
Description	
Two-tiered pricing rate, called a Time of Use (TOU) rate that varies for peak and off-peak times during the summer for a residential customer with an Advanced Metering Infrastructure (AMI) meter. The TOU rate offers customers an opportunity to save on their electric bills by shifting usage from peak to off-peak hours, and addresses the need for load reduction on the utility company's system on-peak summer days. Peak hours are defined as non-holiday weekdays from 3:00PM to 7:00PM during the summer (May 16 to September 15); all other hours are considered off-peak. TOU peak prices are significantly higher than the standard summer flat rate, while off-peak prices, which account for more than 95% of all hours annually, are discounted from the standard rate. The actual TOU pricing tariff should be designed based on the findings from the company's SmartGrid Demonstration pilot[4] and current work with the Electric Power Research Institute (EPRI). In the future, the company may also consider adding a Critical Peak Pricing (CPP) component to the TOU rate, which would allow the utility to raise the rate to a pre-specified amount for a limited number of hours during times of system contingencies or high wholesale prices.[5] A portion of TOU participants will also receive a free enabling technology[6] that will help them control certain loads and increase their peak reduction. At least initially, this enabling technology will be the same programmable thermostat provided by Honeywell for the company's existing Energy Optimizer ("Optimizer") direct load control program. Programmable thermostats can help reduce heating and cooling costs by automatically adjusting temperature settings throughout the day to match	

[3] Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential*. Prepared by The Brattle Group, June 2009.

[4] The TOU pricing for the SmartGrid Demonstration pilot is 38 cents/kWh for peak hours and 6 cents/kWh for off-peak hours.

[5] This option is assessed in the Maximum Achievable Potential scenario of the "Demand-Side Resource Potential Study Report – Demand Response" submitted to GPES by Navigant.

[6] Enabling technology is defined here as devices that automatically control load and reduce consumption during high-priced hours. Examples of enabling technology for residential customers include programmable thermostats and load switches.

homeowners' schedules. As long as the customer remains in the program, participants can access their thermostat via the Internet and the utility company provides free maintenance and repair to the programmable thermostat as may be required due to normal use.

Target Market

The target market for the program is all utility residential customers. The customer must have an AMI meter in place to be eligible for this program. This meter must also be integrated with the utility's backend billing and customer information systems, which is considered an incremental cost to the utility for deploying this program.

For a customer to be offered enabling technology, they must also have an eligible central A/C system or heat pump (i.e., 2 tons or greater, with exceptions made for bulk systems of 1.5 ton units).

The potential analysis for this program assessed the following rate class segments (adapted from FERC's DR potential study[7]):

- Residential with central A/C
- Residential without central A/C

Duration

The program will launch concurrently with the installation of a Meter Data Management System (MDMS) in each utility territory to collect the AMI data and support the billing and customer information system needs for the program. Thus, the program will start in year 5 (2018) in KCP&L-KS and KCP&L-MO and possibly continue beyond 2018. The program would start in GMO after 2018.

Implementation Strategy

The program will largely be implemented in a manner similar to the Energy Optimizer Program. Program administration will be managed by a utility company Program Manager, with key components provided by a third-party implementation contractor. The implementation contractor will provide the ongoing marketing and, for customers with enabling technology, the appointment setting, installation, service, and call center.

Similar to the Optimizer Program, participants will receive a programmable thermostat, installed at no cost. The installer will inspect the customer's A/C system, help program and test the thermostat, provide the customer with a Quick Reference Guide, and leave the old thermostat with the customer.

[7] Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential*. Prepared by The Brattle Group, June 2009.

A key difference from the Energy Optimizer Program is that the TOU rate requires additional infrastructure, integration, operation and maintenance costs to provide the backend support for the AMI system. The first step in program implementation is ensuring these systems are operable.

Relationship to Other Programs

The program is designed for residential customers; therefore, the program has a strong relationship through promotion with the utility company's other residential demand-side management (DSM) programs, such as the Home Energy Analyzer and Cool Homes Programs.

The program also complements the company's existing Energy Optimizer Program for residential customers. While customers may not participate in both programs at the same time to avoid double-counting benefits and having to allocate incentives, the TOU Pricing Program provides interested customers with alternate options for reducing peak consumption that do not require direct load control or central A/C.

Marketing Strategy

The following communications channels are examples of the channels used to reach customers with the marketing message for time-based rates:

- Promote program on www.kcpl.com home page, within www.kcpl.com, and on the AccountLink and Home Energy Analyzer portals
- Bill messages and bill inserts
- Email
- The Wire residential newsletter
- Homeowner association newsletters
- Participation in community events such as Earth Day, Home Shows, and employee fairs held by utility company business customers for their employees
- Participation in Chamber of Commerce meetings to increase general awareness of the program and distribute program promotional materials
- Direct mail, as needed
- Customer call center

Web Presence

The TOU Pricing Program website serves as an information source for existing and new participants, promoting an understanding of program benefits, and providing a link to the program implementer's call center. Website capabilities could include online enrollment, a thermostat control center, and a bill calculator.

Sales Approach

The TOU Pricing Program will be sold to the residential market primarily through direct marketing, with some face-to-face selling at home shows and community events. In addition to direct marketing, the company's call center will be an integral

part of the marketing of the TOU rate. Each time a customer contacts the call center to activate a new account or with questions about high bills, the call center will offer the TOU rate as an opportunity to manage electricity bills and to lower monthly payments. Once the rate is established and the company has demonstrated customer satisfaction and smooth back-end billing operations, the company may make the TOU rate "opt out," where it is the default rate for new accounts, or even for all residential accounts.

The TOU Pricing Program should also be co-marketed with the Energy Optimizer Program and other efficiency programs aimed at central HVAC systems (e.g., Cool Homes).

Key Messages

The value proposition for TOU pricing can be difficult to convey for the mass market, since no direct incentive is involved. Thus, program messaging about the benefits to the customer is critical for high participation. Marketing messages may include information about:

- The customer's ability to save money on their electricity bill
- How participation helps manage summer peak demands and avoid costly generation growth
- For customers with enabling technology, how the thermostat can help them better control their comfort and electricity usage

Issues and Risk Management

Tariff design will be based on findings from the SmartGrid Demonstration pilot and current work with EPRI. Tariff design will consider revenue neutrality for participants and non-participants, including single family, multifamily, and a diversity of use patterns.

Incentive Strategy and Eligible Measures

TOU rates offer customers the opportunity to lower monthly bills by shifting usage from peak to off-peak hours. The benefit will vary by customer based on current usage patterns and the amount of usage shifted from peak to off-peak.

Similar to the Energy Optimizer Program, customers that participate in the TOU Pricing Program with an enabling technology will own the thermostat after three years.

Measure Incentive Levels per Unit

For participants with enabling technology:

- Smart thermostat equipment ~ $200 value
- Smart thermostat installation ~ $180 value
- Smart thermostat all in cost ~ $500 value (dependent on volume)

Savings Targets

Savings per Unit

- kW peak demand savings per home (weighted average for single family, multifamily) of:

Utility	Peak Demand Savings (kW/home)[8]	
	Without Enabling Tech	With Enabling Tech
KCP&L-MO	0.24	0.58
KCP&L-KS	0.33	0.81
KCP&L-GMO	0.28	0.69

- No kWh energy savings.

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the Residential Time of Use Pricing Program over the five-year period follow. The program would start in 2018 for two of the three utilities.

	KCPL-KS	KCPL-MO	KCPL-GMO
	Program Demand (kW)	Program Demand (kW)	Program Demand (kW)
2014	0	0	0
2015	0	0	0
2016	0	0	0
2017	0	0	0
2018	1,000	1,000	0

[8] Sources: Navigant analysis, customer and demand forecasts provided by GPES, and Electric Power Research Institute, *Understanding Electric Utility Customers - Summary Report*. Report #1025856, Final Report, October 2012.

Proposed incremental and cumulative annual demand savings targets.
The proposed incremental annual demand savings targets and cumulative annual demand savings targets for the Energy Optimizer Program over the five-year period follow. The program would start in 2018 for two of the three utilities.

Savings at Meter	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
	KCPL-KS	
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	1,000	1,000
	KCPL-MO	
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	1,000	1,000
	KCPL-GMO	
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	0	0

Net-to-Gross Factors

Not applicable. All participants and all resulting demand savings are due solely to the program, since no customers would participate in curtailment events without the program. The demand savings are based on an estimated baseline consumption level.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the Residential Time of Use Program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	**2014-2033**
Societal Cost Test (SCT)	4.3
Total Resource Cost (TRC)	3.8
Utility System Resource Cost Test (UCT)	3.8
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	

Cost Test Ratios – KCPL-MO	**2014-2033**
Societal Cost Test (SCT)	4.3
Total Resource Cost (TRC)	3.9
Utility System Resource Cost Test (UCT)	3.9
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	3.9

Cost Test Ratios – KCPL-GMO	**2014-2033**
Societal Cost Test (SCT)	3.6
Total Resource Cost (TRC)	3.1
Utility System Resource Cost Test (UCT)	3.1
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	3.1

Budget

The following budget has been used for planning purposes. However, the utility company may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. The program would start in 2018 for two of the three utilities with initial program start-up spending in the prior year.

KCPL-KS	TOTAL	KCPL-MO	TOTAL	KCPL-GMO	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover

Not applicable. See Net-to-Gross Factors above.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

Title	**Business Behavior-Based Demand-Side Rate**
FERC Program Category[9]	Pricing with and without Enabling Technology
Objectives	
Time-varying demand-side rate designed to reflect the cost of generating and delivering power during peak and off-peak times, which encourages business customers to consume less during peak times in response to higher retail electricity prices and provides benefits to the customer in terms of bill savings.	
Description	
A retail rate or tariff in which business customers are charged different prices for using electricity at different times during the day to induce a behavior change on the part of the program participant, with higher prices signaling to customers to consume less during peak times. Business customers have the opportunity to benefit from participation in the Business Behavior-Based Demand-Side Rate Program by responding to these price signals and reducing their electricity bill. The actual rate type will be chosen and designed based on the findings from the company's current work with the Electric Power Research Institute (EPRI) and, as applicable, the SmartGrid Demonstration pilot.[10] Potential rate options include the following: • Time of Use (TOU): Rate that varies for peak and off-peak times. • Critical Peak Pricing (CPP): Rate in which the utility charges a higher price for consumption of electricity during a specified number of hours on critical peak days in exchange for a reduction in non-peak energy charges, demand charges, or both.[11] CPP rates are often coupled with a TOU rate for additional impacts. • Peak Time Rebate (PTR): Conceptually very similar to CPP, except that the participant earns a rebate for reducing energy use from a baseline during a specified number of hours on critical peak days.[12] • Real-Time Pricing (RTP): Rate and price structure in which the retail price for electricity typically fluctuates hourly or more often, to reflect changes in the wholesale price of electricity on either a day-ahead or hour-ahead basis.[13]	

[9] Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential.* Prepared by The Brattle Group, June 2009.

[10] While this pilot is testing a Time of Use rate for residential customers, it may still be instructive for the design and deployment of a nonresidential program.

[11] Freeman, Sullivan & Co. *2011 California Statewide Non-residential Critical Peak Pricing Evaluation.* June 2012.

[12] Electric Power Research Institute. *Understanding Electric Utility Customers – Summary Report.* Report #1025856, Final Report, October 2012.

With the exception of TOU, times of high prices with these rates can be linked to conditions such as system reliability concerns or very high supply prices. The program will only be available to business customers with an Advanced Metering Infrastructure (AMI) meter.

A portion of participants will also receive a free enabling technology[14] that will help them control certain loads and increase their peak reduction. For small and medium business customers, this enabling technology will be a programmable communicating thermostat (PCT), which can help reduce heating and cooling costs by automatically adjusting temperature settings throughout the day to match the business's schedules. For large business customers, the enabling technology will be an Automated Demand Response (Auto-DR) system, which uses the customer's automated load control systems, such as an energy management system, to participate in DR events without manual intervention.

Customers without enabling technology manually curtail load in response to pricing signals communicated via delivery mechanisms such as text messages and phone calls, which avoid the need for additional investment in technologies.

Target Market

The target market for the program is all utility business customers able to reduce load during the program season of June 1 through September 30. The customer must have an AMI meter in place to be eligible for the program. This meter must also be integrated with the utility's backend billing and customer information systems, which is considered an incremental cost to the utility for deploying this program.

For small and medium business customers to be offered enabling technology, they must also have an eligible central A/C system or heat pump (i.e., 2 tons or greater, with exceptions made for bulk systems of 1.5 ton units) that is controllable by a PCT. Large business customers must have an automated load control system, such as an energy management system.

The potential analysis for the program assessed the following rate class segments (adapted from FERC's DR potential study[15]):

- Small C&I (<25 kW)
- Medium C&I (25-200 kW)
- Large C&I (>200 kW)

[13] Federal Energy Regulatory Commission, *2012 Assessment of Demand Response and Advanced Metering.* December 2012.

[14] Enabling technology is defined here as devices that automatically control load and reduce consumption during high-priced hours.

[15] Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential.* Prepared by The Brattle Group, June 2009.

Duration

The program will launch concurrently with the installation of a Meter Data Management System (MDMS) in each utility territory to collect the AMI data and support the billing and customer information system needs for the program. Thus, the program will start in year 5 (2018) in KCP&L-KS and KCP&L-MO and possibly continue beyond 2018. The program would start in GMO after 2018.

Implementation Strategy

Program administration will be managed by a utility company Program Manager, with key components provided by a third-party implementation contractor. For most customers, the implementation contractor will provide the marketing, enrollment, and, for customers with enabling technology, the appointment setting, installation, service, and call center. Engagement of Tier 1 customers may occur directly through the company's energy consultants. Participants who accept an enabling technology will receive the technology and it's installation at no cost for installations up to $2000. The customer will be responsible for any incremental costs required beyond this amount.

The program requires additional infrastructure, integration, operation and maintenance costs to provide the backend support for the AMI system, which are not required for the company's existing demand response programs. The first step in program implementation is ensuring these systems are operable.

As noted in the "Issues and Risk Management" section, the company may consider first deploying the program as a one- to two-year pilot to help learn customer preferences and encourage greater customer uptake and customer satisfaction when offered to the broader customer base.

Relationship to Other Programs

The program is designed for all business customers; therefore, the program has a strong relationship through promotion with the utility company's other business demand-side management (DSM) programs, such as the Building Operator Certification, Prescriptive Rebates, and C&I Custom Rebates.

The program also complements the company's existing MPower Program for business customers. While customers may not participate in both programs at the same time to avoid double-counting benefits and having to allocate incentives, this program provides interested customers with alternate options for reducing peak consumption that may allow for greater flexibility in response.

Marketing Strategy

Sales Approach

The proposed marketing strategy includes targeted marketing through direct mail, telemarketing, email, print ads, and web-based program promotion on the

www.kcpl.com home page, within www.kcpl.com, and on the AccountLink portals. Marketing could occur solely through the company or with assistance from a third-party marketing provider to develop marketing material, educate potential participants on the program, enroll the customer, and install the enabling technology.

In addition to these strategies, the company's call center will be an integral part of the marketing of this demand-side rate. Each time a customer contacts the call center to activate a new account or with questions about high bills, the call center will offer this demand-side rate as an opportunity to manage electricity bills and to lower monthly payments. Once the rate is established and the company has demonstrated customer satisfaction and smooth back-end billing operations, the company may make this demand-side rate "opt out," where it is the default rate for new accounts, or even for all business accounts.

The program should also be co-marketed with the MPower Program and the efficiency programs aimed at existing businesses (e.g., Building Operator Certification and rebates for controllable end use loads).

Key Messages

The value proposition for demand-side rates can be difficult to convey, since no direct incentive is involved in many of the rate types. Thus, program messaging about the benefits to the customer is critical for high participation. Marketing messages may include information about:

- The customer's ability to save money on their electricity bill.
- How their participation helps the utility company manages summer peak demands, avoid costly generation growth, and provide more reliable electricity service.
- The ease and flexibility of participation, with no upfront investment needed from the customer.
- For customers with enabling technology, how the technology can inform them about their energy usage for better control of their comfort and electricity consumption.

Issues and Risk Management

Tariff design is not within the scope of these efforts, but will be based on the company's current work with EPRI, and, as applicable, findings from the SmartGrid Demonstration pilot. Tariff design should consider revenue neutrality for participants and non-participants, including all business customer sizes and a diversity of use patterns.

Since less is generally known across the industry about participation and response rates in demand-side rates for business customers, as compared to residential customers, the company might consider first deploying this program as a pilot. The

pilot could help learn customer preferences regarding pricing structures and marketing messages to encourage greater customer uptake and customer satisfaction when offered to a broader customer base.

Incentive Strategy and Eligible Measures

Demand-side rates offer customers the opportunity to lower monthly bills by shifting usage from peak to off-peak hours. The benefit will vary by customer based on current usage patterns and the amount of usage shifted from peak to off-peak. Benefits will be seen as bill reductions for each of the rate types, with the exception of the peak time rate, where customers receive a rebate for reduced peak consumption.

Customers that participate in the program with an enabling technology will own the technology after three years. The equipment and installation of the enabling technology for each customer segment is valued as:

- Small C&I (<25 kW) ~ $380
- Medium C&I (25-200 kW) ~ $1050
- Large C&I (>200 kW) ~ $2000

These costs are assumed to escalate at 2.5 percent per year.

Savings Targets

Savings per Unit

- Ranges of kW peak demand savings per participant in KCP&L-KS, KCP&L-MO, and KCP&L-GMO:

Utility	Peak Demand Savings (kW/participant)[16]	
	Without Enabling Tech	With Enabling Tech
Small C&I (<25 kW)	0.0[17]	0.3 - 0.6
Medium C&I (25-200 kW)	2.6 - 3.8	4.1 - 6.0
Large C&I (>200 kW)	30.2 - 50.5	55.9 - 93.5

- No kWh energy savings.

[16] Sources: Navigant analysis, customer and demand forecasts provided by GPES, and Electric Power Research =Institute, *Understanding Electric Utility Customers - Summary Report*. Report #1025856, Final Report, October 2012.

[17] Savings for the Small C&I sector without enabling technology are negligible.

Expected cumulative annual energy and demand savings. The expected cumulative annual gross and net energy and demand savings for the program over the five-year period follow. The program would start in 2018 for two of the three utilities.

	KCPL-KS	KCPL-MO	KCPL-GMO
	Program Demand (kW)	Program Demand (kW)	Program Demand (kW)
2014	0	0	0
2015	0	0	0
2016	0	0	0
2017	0	0	0
2018	1,000	1,000	0

Proposed incremental and cumulative annual demand savings targets. The proposed incremental annual demand savings targets and cumulative annual demand savings targets for the program over the five-year period follow. The program would start in 2018 for two of the three utilities.

Savings at Meter	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
	KCPL-KS	
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	1,000	1,000
	KCPL-MO	
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	1,000	1,000
	KCPL-GMO	
2014	0	0
2015	0	0
2016	0	0
2017	0	0
2018	0	0

Net-to-Gross Factors

Not applicable. All participants and all resulting demand savings are due solely to the program, since no customers would participate in curtailment events without the program. The demand savings are based on an estimated baseline consumption level.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	**2014-2033**
Societal Cost Test (SCT)	4.3
Total Resource Cost (TRC)	3.8
Utility System Resource Cost Test (UCT)	3.8
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	3.8

Cost Test Ratios – KCPL-MO	**2014-2033**
Societal Cost Test (SCT)	4.3
Total Resource Cost (TRC)	3.9
Utility System Resource Cost Test (UCT)	3.9
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	3.9

Cost Test Ratios – KCPL-GMO	**2014-2033**
Societal Cost Test (SCT)	3.6
Total Resource Cost (TRC)	3.1
Utility System Resource Cost Test (UCT)	3.1
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	3.1

Budget

The following budget has been used for planning purposes. However, the utility company may adjust program budgets as necessary in accordance with current market conditions, EM&V results, and program implementation experience. The program would start in 2018 for two of the three utilities with initial program start-up spending in the prior year.

KCPL-KS	TOTAL	KCPL-MO	TOTAL	KCPL-GMO	TOTAL
2014	**	[redacted]			
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover

Not applicable. See Net-to-Gross Factors above.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

Title	**Small/Medium Business Curtailable Load**
FERC Program Category[18]	Other Demand Response
Objectives	
Curtailable load program targeting small/medium business customers for direct load control of selected cost-effective loads, like the residential MPower Program, where customers agree to reduce consumption by a pre-specified amount during times of peak electric demand.	
Description	
The Small/Medium Business Curtailable Load Program will target mass market/mid-size business customers for direct load control of selected cost-effective loads, including direct expansion air conditioning (A/C) units and electric water heating. The company will collaborate with participants to curtail (or reduce) their energy use during times of peak electric demand during June through September. Events may be called for reliability or economic reasons. The small/medium business segment is historically a difficult segment to engage in demand response (DR) programs. Although the company's Energy Optimizer (Optimizer) direct load control program has been available to small business customers, Optimizer has not specifically targeted the small business sector and relatively few of these customers participate. Similarly, MPower has been available to medium-sized business customers, but engagement of these customers to-date is relatively low, particularly in KCPL-GMO. This new program will be an expansion of the company's existing MPower Program to small/medium business customers and may be a subset within MPower. The program is also similar to the Optimizer Program in some ways, with a key difference that participants may nominate additional single-circuit loads that can be verified as on/off, such as electric water heaters, lighting, fans, and pumps. Most importantly, the program will use tailored marketing strategies and incentives to drive increased small/medium business participation. The program provides customers with two forms of financial incentives: 1) a monthly "participation payment" for being "on call" to reduce power consumption at the company's request, and 2) an additional "event payment" for successfully reducing demand each time they are called upon to do so. Unlike the MPower Program, participating loads are of a fixed kW amount, and there is no need for estimated peak demand or firm power levels for settlement. Customers will also receive any load	

[18] Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential.* Prepared by The Brattle Group, June 2009.

control devices required to participate and the installation of these devices at no cost. Such devices may include a programmable thermostat, similar to the Optimizer thermostat, or a load control switch, depending on the load type and customer preference.

Event Conditions

The contracts between customers and the company will specify the following:

- Maximum Number of Curtailment Events: The utility can call on a customer a maximum number of times per curtailment season, typically ten, to participate in curtailment events. The contracts also allow that in certain pre-specified levels of extreme system emergency, the utility may call the customer to curtail load, even if the customer has already curtailed the maximum number of times per curtailment season.
- Curtailment Season: The curtailment season lasts from June 1 through September 30.
- Curtailment Hours: Curtailment hours may occur from 12:00 noon through 10:00 p.m. on non-holiday Mondays through Fridays during the curtailment season.
- Notification: Notification varies by load type, with thermal loads (e.g., A/C, heat pumps, water heaters) receiving no notification prior to the event, like in most direct load control programs. For other load types, customers are given at least four hours of notice prior to a curtailment event, but typically receive at least one day's notice.
- Event Duration: Events usually last between four and six hours, but can last anywhere between two and eight consecutive hours, with no more than one event per day.
- The company may call events no more than three consecutive days per calendar week, and the cumulative number of hours may not exceed 80 during the curtailment season per customer.

Target Market

The target market for the program is utility small and medium business customers able to curtail load during the program season of June 1 through September 30.

The potential analysis for this program assessed the following rate class segments (adapted from FERC's DR potential study[19]):

- Small Business (<25 kW)
- Medium Business (25-200 kW)

Current electric customers on the Small or Medium General Service rate with

[19] Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential*. Prepared by The Brattle Group, June 2009.

curtailable single-circuit loads that can be verified as on/off and communications technologies capable of receiving event notification, such as SMRDS, WiFi, or the paging signals the company currently uses for the Optimizer program. Eligible load types include, but are not limited to, direct expansion A/C units, electric water heaters, lighting, fans, and pumps. No interval metering would be required to participate.

Duration

The program will launch in year 3 (2016) and possibly end in 2018.

Implementation Strategy

The program will occur within the current MPower framework; however, this program for smaller business customers will require some differences in program implementation. Key differences include the installation of load control devices for some participants in the program, direct control of the devices by the utility and greater emphasis on marketing and customer experience. The primary objective for program implementation should be to make participation (i.e., enrollment and during an event) as easy as possible for the small/medium business customer.

Program Delivery

The utility company implements this program with the necessary resources to administer the program. The utility company uses an internal program manager to conduct its own administration of the program and maintain oversight of the program.

Program Partners/Collaborative Resources

Partners include utility company internal staff, a third-party implementation contractor for the installation and management of the load control devices, and possibly a third-party marketing contractor. A single third-party vendor may be used to provide the entire program's outsourced needs.

Relationship to Other Programs

The program is designed for small to medium business customers; therefore, the program has a strong relationship through promotion with the utility company's other business demand-side management (DSM) programs, such as the Building Operator Certification, Prescriptive Rebates, and C&I Custom Rebates.

The program is intended to complement KCP&L's existing MPower and Energy Optimizer demand response programs, with the marketing and delivery of this program designed to be more attractive to the target customers. While a customer may be eligible for more than one of these programs, the customer's load will be limited to participating in only one program to avoid overestimating the net load available for an event.

Marketing Strategy

A key element of the marketing strategy will be to identify the customer segments and end uses that are best-suited for the program (e.g., based on relative ease of curtailment and minimal inconvenience) and to focus initially on that sub-market. Program implementers will develop expertise in conveying the simplicity and benefits to customers, thereby streamlining the marketing efforts. Marketing could occur solely through the company or with assistance from a third-party provider, similar to the successful hiring of Energy Curtailment Specialists, Inc. (ECS) as a sales and marketing agent in late 2007. Given the historic difficulties in marketing to small/medium business customers, it may be most effective to hire a third-party marketing contractor with performance incentives to create motivation for achievement and ensure expenditures are primarily for reductions achieved.

Another important element of the program's marketing will be developing strategies for identifying the key decision-maker at each business. Again, a third-party marketing contractor may be helpful for providing dedicated staff to track down these people within the businesses and scheduling follow on discussions.

The proposed marketing strategy includes:

- Targeted marketing through direct mail, telemarketing, email, print ads, and web-based program promotion on the www.kcpl.com home page, within www.kcpl.com, and on the AccountLink portals.
- Building a strong, consistent message informing customers that this demand response program provides customers with an annual payment for agreeing to be "on call" to reduce their energy usage. In addition, customers can earn a payment each time they are asked to reduce usage and successfully do so.

Key Messages

- Participation is easy and requires minimal upfront investment and minimal ongoing effort from the customer.
- Save energy while getting paid to do so.
- The program allows customers to partner with the utility company and help manage summer peak demands and avoid costly generation growth.
- Find out more at www.kcpl.com.

Issues and Risk Management

Without interval metering, one of the key challenges for the company will be verification of load reduction from the customer. This risk will be mitigated by enrollment of air conditioning (A/C), which provides a well-understood response rate, and fixed loads the customer can guarantee will be on during hours of program eligibility. Future evaluation, measurement and verification (EM&V) work will help refine the estimated response rates for these loads and other fixed load types.

In the future, the company may also consider providing participants with interval metering capable of communicating load reduction status directly to the utility and, possibly, back to the customer for real-time or near-real-time feedback on their event performance.

Incentive Strategy and Eligible Measures

Eligible measures include direct expansion A/C and single circuit fixed loads such as electric heat pumps, electric water heating, lighting, fans, and pumps. Air conditioning must be in regular use during the summer period and all units serving participating spaces must be controllable by the company. Fixed loads must either a) be guaranteed by the customer to be on during hours of program eligibility, or b) have continuous on/off logging and cellular data transferred nightly to be used to determine whether curtailment occurred. Customers will receive the load control devices (e.g., programmable thermostats, load control switches, etc.) and logging equipment required to participate, as well as the installation of these devices, at no cost to the customer.

Customer financial compensation is defined within each customer contract and is based on the type(s) and amount of Curtailable Load the customer nominates for the program, the number of months participating in the program each Curtailment Season, the number of actual Curtailment Events per Curtailment Season, and the duration of each Curtailment Event. Timing of all payments/credits is specified in the curtailment contract with each customer, and payments are paid to the customer in the form of a check or bill credit as specified in the contract. The credits are applied before any applicable taxes.

Financial compensation includes the following two components:[20]

1) Monthly Participation Payment
For each month in the Curtailment Season, the customer receives a payment/credit based upon the type(s) of Curtailable Load nominated for the program. Incentives for A/C will be paid at $10/kW of cooling capacity participating per month and incentives for fixed loads will be paid at $12/kW per month over the four month curtailment season. The Monthly Participation Payment is equal to these rates multiplied by the kilowatts of Curtailable Load for each month of the Curtailment Season in which the customer participates, as stated in the customer's contract.

2) Event Payment
Variable fee of $0.25/kWh during events.

[20] Sources: Navigant analysis and Global Energy Partners, *Tennessee Valley Authority Potential Study*, Report Number 1360, December 21, 2011.

Savings Targets

Savings per Unit

- kW peak demand savings per participant in 2014 are estimated to be:

Utility	Peak Demand Savings (kW/participant)[21]	
	Small C&I (<25 kW)	Medium C&I (25-200 kW)
KCP&L-MO	2.7	17.0
KCP&L-KS	1.8	15.6
KCP&L-GMO	2.0	11.6

- No kWh energy savings.

Expected cumulative annual demand savings. The expected cumulative annual gross and net demand savings for the program over the five-year period follows.

	KCPL-KS	KCPL-MO	KCPL-GMO
	Program Demand (kW)	Program Demand (kW)	Program Demand (kW)
2014	0	0	0
2015	0	0	0
2016	500	800	700
2017	1,100	1,600	1,300
2018	1,600	2,300	2,000

[21] Sources: Navigant analysis, customer and demand forecasts provided by GPES, and Federal Energy Regulatory Commission, *A National Assessment of Demand Response Potential*. Prepared by The Brattle Group, June 2009.

Proposed incremental and cumulative annual demand savings targets. The proposed incremental annual demand savings targets and cumulative annual demand savings targets for the program over the five-year period follows.

Savings at Meter	(kW) Demand Savings Targets – Incremental Annual	(kW) Demand Savings Targets- Cumulative Annual
	KCPL-KS	
2014	0	0
2015	0	0
2016	500	500
2017	600	1,100
2018	500	1,600
	KCPL-MO	
2014	0	0
2015	0	0
2016	800	800
2017	800	1,600
2018	700	2,300
	KCPL-GMO	
2014	0	0
2015	0	0
2016	700	700
2017	600	1,300
2018	700	2,000

Net-to-Gross Factors

Not applicable. All participants and all resulting demand savings are due solely to the program, since no customers would participate in curtailment events without the program. The demand savings are based on an estimated baseline consumption level.

Benefit-Cost Test Results

All five benefit-cost tests are listed for the roll-up of the program. The dollar values are on a present value basis with the assumption that all future cash flows start at the beginning of each annual period, discounted at the appropriate discount rate over the measure life.

Cost Test Ratios – KCPL-KS	2014-2033
Societal Cost Test (SCT)	1.9
Total Resource Cost (TRC)	1.8
Utility System Resource Cost Test (UCT)	1.0
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	1.0

Cost Test Ratios – KCPL-MO	2014-2033
Societal Cost Test (SCT)	1.9
Total Resource Cost (TRC)	1.8
Utility System Resource Cost Test (UCT)	1.1
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	1.1

Cost Test Ratios – KCPL-GMO	2014-2033
Societal Cost Test (SCT)	1.8
Total Resource Cost (TRC)	1.7
Utility System Resource Cost Test (UCT)	1.0
Participant Cost Test (PCT)	N/A
Rate Impact Measure (RIM)	1.0

Budget

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

KCPL-KS	TOTAL	KCPL-MO	TOTAL	KCPL-GMO	TOTAL
2014 **	[redacted]				
2015					
2016					
2017					
2018					
TOTAL					**

Strategies to minimize free riders and maximize spillover

Not applicable. See Net-to-Gross Factors above.

Evaluation, Measurement and Verification Strategy

All evaluation activities will be conducted by a third-party contractor. An integrated evaluation approach will be taken which includes addressing evaluation at the onset of program design, collecting evaluation data as part of program administration, assessing and documenting baseline conditions, establishing tracking metrics, as well as conducting primary and secondary research as part of impact and process evaluations.

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