

P.2.1.12 TOU Renew for 2014 Letter



KCP&L SmartGrid
TOU Renew for 2014 Letter

INSERT DATE

INSERT NAME
INSERT ADDRESS
INSERT ADDRESS

Dear KCP&L Customer,

Thank you for your continued participation in KCP&L's Time of Use rates program. As you know, this program is available only to residents of KCP&L's SmartGrid Demonstration Area and allows you to better manage your electricity costs while allowing KCP&L to better manage the demand for electricity across our system. As KCP&L prepares to conclude our 5-year SmartGrid project, this will mark the last year for the Time of Use rates program. This year, Time of Use rates will run from May 15 – September 15.

As a reminder, Time of Use designates "off-peak" hours (when rates are discounted from standard pricing) and "peak" hours (when rates are above standard pricing). Time of Use rates are intended to encourage customers to think about when they use electricity in addition to how much electricity they use, ultimately shifting usage to off-peak times when it is cheaper.

Time of Use rates are in place only during summer months.

- Peak hours = non-holiday weekdays (M-F) from 3-7 p.m.
(cost about \$.38/kWh)
- Off-peak hours = all other days/times (cost about \$.06/kWh)

Remember, your participation in Time of Use rates is at no risk to you. If you notice that your bill has increased, you may opt out of the program and request to be rebilled at standard rates for your most recent billing period.

We look forward to your participation in the program again this year. As always you can call the SmartGrid Support Team at (800) 535-7687 with any questions.

Sincerely,



Bill Menge
Director of SmartGrid
KCP&L



P.2.1.13 Demand Response Letters

KCP&L SmartGrid
Demand Response Letter
MySmart Thermostat

INSERT DATE

INSERT NAME
INSERT ADDRESS
INSERT ADDRESS

Dear KCP&L Customer,

Thank you for your continued participation in KCP&L's SmartGrid Demonstration program. We hope you are enjoying your KCP&L MySmart Thermostat. As you know, MySmart Thermostat helps you manage your heating and cooling, allowing you to save money on your monthly electric bill.

In addition, MySmart Thermostat allows you to participate in KCP&L demand response events. KCP&L's utility infrastructure and grid are designed to be able to reliably provide electricity whenever and wherever our customers need it. However, at certain peak times, which often occur on the hottest summer days, it is sometimes necessary for KCP&L to manage how electricity is flowing across our grid to ensure continued reliable service for all our customers. When this occurs, KCP&L calls on customers to help manage the load on the system through demand response events.

In order to test our system in the SmartGrid Demonstration area, we will conduct a number of demand response events this summer for SmartGrid customers. These will only occur on weekdays from 4:00 – 6:00 p.m. and not all participants will be impacted by each of the events. The exact dates of these events have not yet been determined, but the anticipated event schedule is as follows:

- July: 2-5 events
- August: 3-5 events

Notification of the exact date of the demand response event will be made through your programmable thermostat. When a demand response event occurs, KCP&L will automatically adjust your thermostat by 3 degrees. At the end of the two hour time period, your thermostat will automatically return to your previously programmed personal settings.

You are always free to opt out of any of the demand response events if you so choose. This can be done directly through MySmart Thermostat. As mentioned, these events are an important test of the functionality of our SmartGrid system.

As always you can call the SmartGrid Support Team at (800) 535-7687 or email them at smartgridinfo@kcpl.com with any questions.

Sincerely,



Bill Menge
Director of SmartGrid
KCP&L





KCP&L SmartGrid
Demand Response Letter
MySmart Home

INSERT DATE

INSERT NAME
INSERT ADDRESS
INSERT ADDRESS

Dear KCP&L Customer,

Thank you for your continued participation in KCP&L's SmartGrid Demonstration program. We hope you are enjoying your KCP&L MySmart Home (Home Area Network). As you know, MySmart Home helps you manage your home's appliances and energy use, allowing you to save money on your monthly electric bill.

In addition, MySmart Home allows you to participate in KCP&L demand response events. KCP&L's utility infrastructure and grid are designed to be able to reliably provide electricity whenever and wherever our customers need it. However, at certain peak times, which often occur on the hottest summer days, it is sometimes necessary for KCP&L to manage how electricity is flowing across our grid to ensure continued reliable service for all our customers. When this occurs, KCP&L calls on customers to help manage the load on the system through demand response events.

In order to test our system in the SmartGrid Demonstration area, we will conduct a number of demand response events this summer for SmartGrid customers. These will only occur on weekdays from 4:00 – 6:00 p.m. and not all participants will be impacted by each of the events. The exact dates of these events have not yet been determined, but the anticipated event schedule is as follows:

- July: 2-5 events
- August: 3-5 events

Notification of the exact date of the demand response event will be made through your programmable thermostat. When a demand response event occurs, KCP&L will automatically adjust your thermostat by 3 degrees. The rest of your MySmart Home equipment will not be affected. At the end of the two hour time period, your thermostat will automatically return to your previously programmed personal settings.

You are always free to opt out of any of the demand response events if you so choose. This can be done directly through MySmart Thermostat. As mentioned, these events are an important test of the functionality of our SmartGrid system.

As always you can call the SmartGrid Support Team at (800) 535-7687 or email them at smartgridinfo@kcpl.com with any questions.

Sincerely,



Bill Menge
Director of SmartGrid
KCP&L



This page intentionally blank

P.2.2 SmartGrid Welcome Kit

P.2.2.1 Welcome Kit Inventory, Magnet, Pen, CFL, Bag, and DVD



P.2.2.2 Welcome Kit Letter

Dear KCP&L Customer:

I want to take this opportunity to share some very exciting news with you. With the support of a grant from the United States Department of Energy, KCP&L is preparing to make significant upgrades to the electric system in your neighborhood. You and your neighbors will be among the first customers to realize the benefits of KCP&L's **SmartGrid** project.

Our SmartGrid project will give you:

- More information about your electricity usage,
- Greater control over how you use electricity, and
- Opportunities for cost savings.

Today we installed your new electric meter, which is the first step in connecting you to the SmartGrid. Your SmartGrid welcome kit includes information about the free smart grid tools and products available to you. These tools will help you manage how and when you use electricity, which can save you money on your monthly bill.

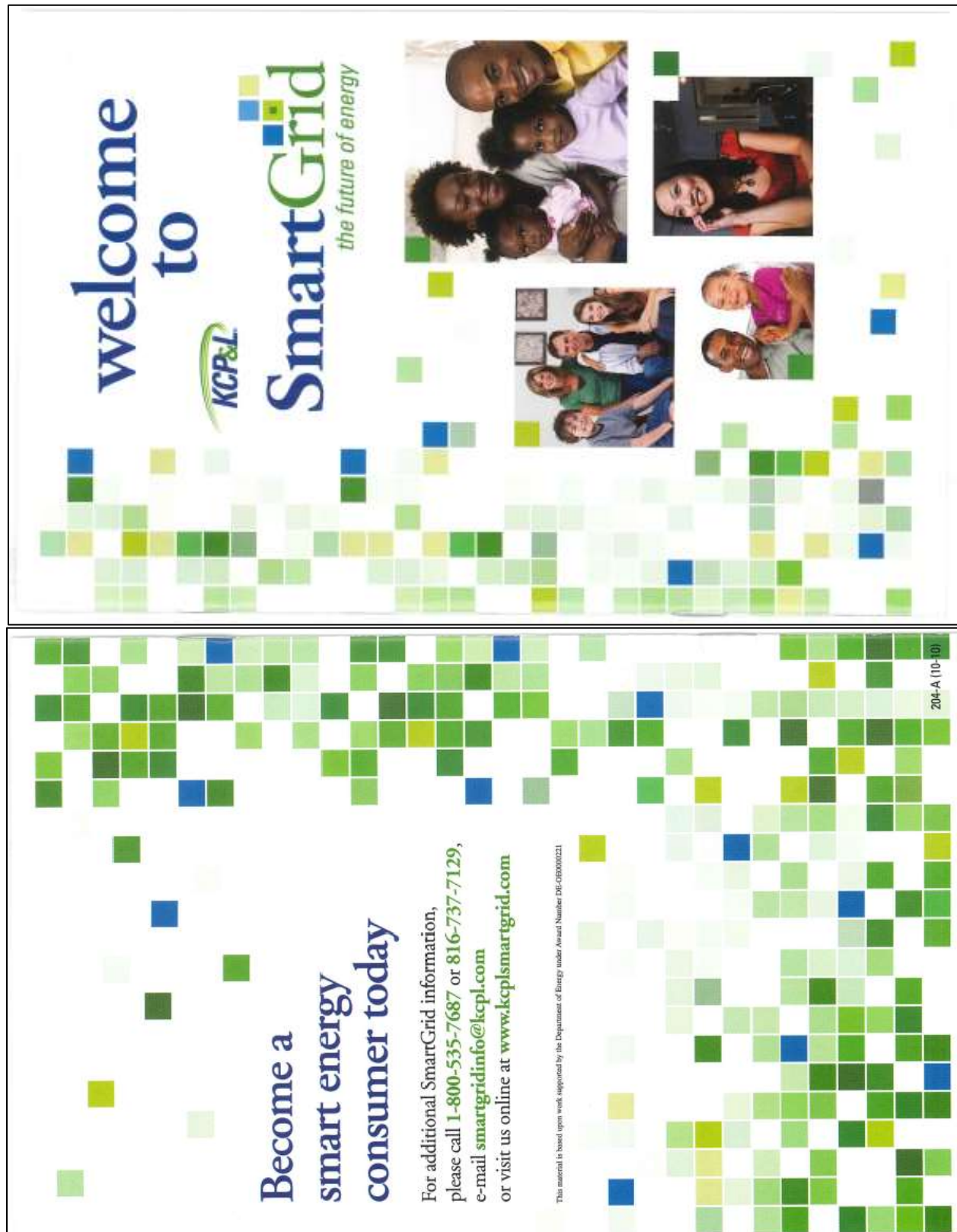
In addition, to make the SmartGrid project possible, KCP&L will be making infrastructure upgrades to our SmartGrid substation and utility lines throughout the SmartGrid project area. All of this means improved reliability, quicker outage response times and a reduced carbon footprint.

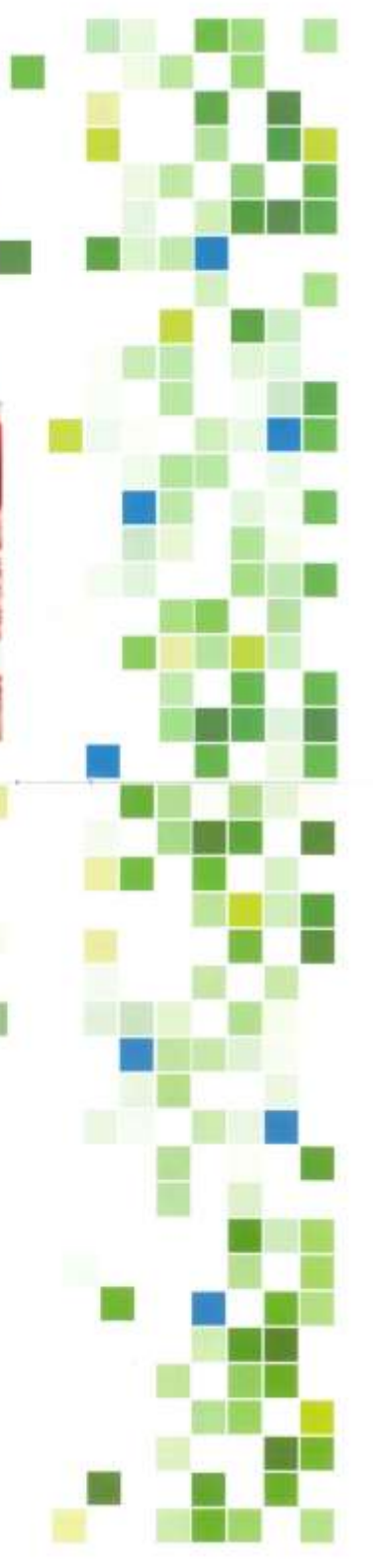
We promise to keep you fully informed as the SmartGrid project unfolds, so you know what to expect. In the meantime, to help you understand the many benefits of KCP&L's SmartGrid, please visit www.kcplsmartgrid.com or call 1-800-535-7687.

We look forward to working with you on this important project.

Sincerely,

Mike Degendorf
Senior Vice President, Delivery

P.2.2.3 SmartGrid Brochure



What it means to you...

KCP&L's SmartGrid project will deliver a number of important customer benefits:

Choice: Customers will be offered new products and services and can decide which make the most sense for them.

Control: The new tools and products will give customers the ability to manage their electricity use, which can help save money on monthly bills.

Convenience: The new SmartGrid system will improve reliability and enable KCP&L to provide even better customer service.

In addition, KCP&L is making significant infrastructure upgrades to our Midtown substation and network in the SmartGrid project area. These upgrades will improve electrical service throughout the SmartGrid area, helping us keep your lights on and respond quicker when there is an outage.

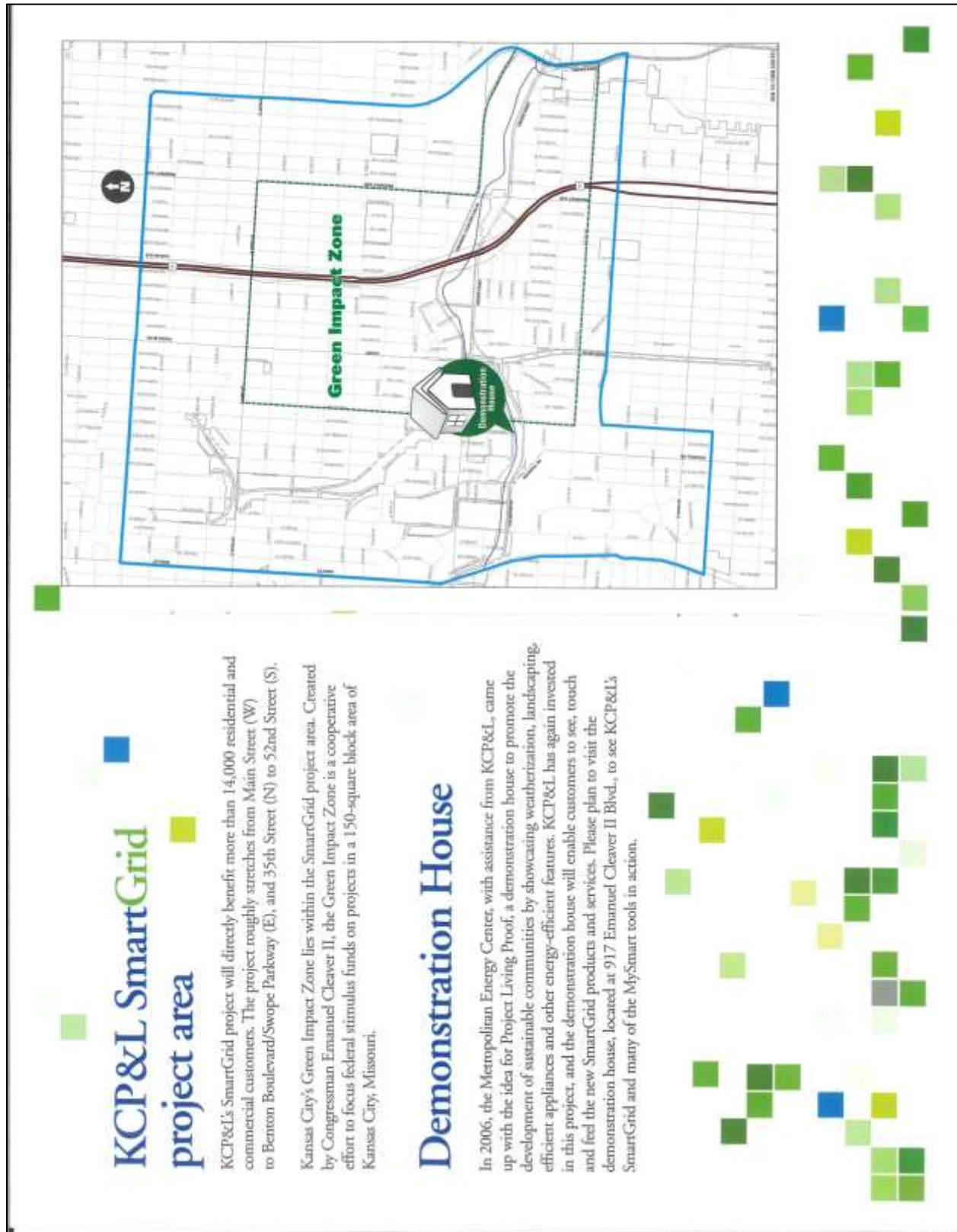
For more than 100 years, the way KCP&L has delivered electricity to our customers has remained relatively the same. That's about to change as a result of our SmartGrid project. SmartGrid is a new electrical system designed to improve the flow of communication and information between KCP&L and our customers.

In partnership with the U.S. Department of Energy, KCP&L and several industry partners are investing more than \$48 million in a SmartGrid project in a number of Kansas City neighborhoods.

At its core, SmartGrid will provide you with more and better information about how you use electricity. As a resident or business owner in the SmartGrid project area, you are one of the first people to have access to KCP&L's suite of MySmart products. SmartGrid will:

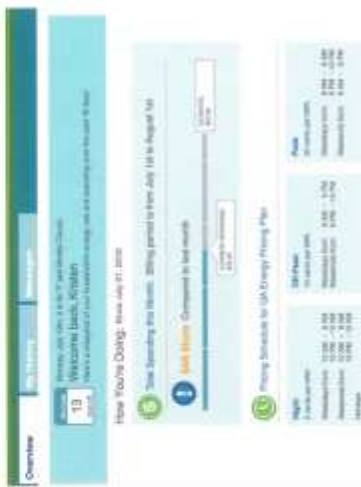
- Give you the tools to use energy more efficiently
- Help you make changes around your home or business which can save you money
- Improve reliability and our response to outages





Starting in 2010, KCP&L will introduce a variety of free "MySmart" tools and products that can help you manage your energy use. The first set of free SmartGrid products available to customers includes MySmart Portal, MySmart Display and MySmart Thermostat.

MySmart Portal – A personalized website that helps customers understand how they use electricity and enables them to make decisions that conserve energy, help the environment and save money.



MySmart Display – A hand-held electronic device for inside your home that takes information directly from your meter and presents it to you in easy-to-understand screens. The in-home display does not require an Internet connection.

MySmart Thermostat – For homes with central air conditioning, MySmart Thermostat can be programmed to automatically set temperatures based on the season, time of day and your schedule, resulting in savings in monthly heating and cooling bills.



MySmart Portal



A complete look at how you use energy is just a mouse click away.

Now you can stay up to date on your home or business energy usage from any computer with an internet connection. MySmart Portal shows you day by day how much energy you're using and estimates your KCP&L bill throughout the month. With this information, you can make informed decisions on how and when you want to use electricity. This puts the power in your hands.

You will be able to see the impact of things like weather on your energy usage, which may influence decisions to use your electricity differently at those times. You can take immediate action instead of waiting until your bill arrives to see how much you've spent. This puts you in control of your usage and your bill.

MySmart Portal is easy to use and provides useful reports to help you keep track of your usage. MySmart Portal will:

- Show your information in easy-to-understand charts
- Compare this month's bill against last month's bill
- Estimate your monthly bill
- Give you hourly, daily and monthly electricity usage
- Provide your billing history in chart format
- Compare your usage against similarly sized homes and businesses in your area
- Display messages from KCP&L about your usage

You can access MySmart Portal through www.kcpSMARTgrid.com. Register on AccountLink, KCP&L's online account management tool, and click on MySmart Portal to begin tracking your usage.

MySmart Display



A simple, easy-to-use device that puts the power in your hands.

With MySmart Display, you don't need an Internet connection to have access to valuable information that will show you how you're using electricity. MySmart Display is a hand-held electronic device for inside your home that receives information directly from your meter and presents it in an easy-to-understand format. You can use this information to start saving energy and money by doing things such as using a programmable thermostat, turning off lights when you're not in the room and unplugging electronic devices when not in use.

MySmart Display allows you to set a price limit on how much electricity you want to use in a month. Then it gives you signals with green, yellow and red lights to tell you if you're on track or getting close to your limit. MySmart Display won't stop you from using electricity; it just sends warning signals in case you want to change your energy habits before you reach your preset limit. You now have the opportunity to better manage your electricity usage and your budget.



My Smart Display will:

- Show how much electricity you use in your home
- Give you up-to-date bill information
- Estimate your bill for the month*
- Send messages from KCP&L about your usage and tips on how to save

(*Data not include meter and additional fees)

To learn how you can get a MySmart Display as well as tips to start saving energy and money, call 1-800-535-7687 or 816-737-7129, or visit www.kcp&lsmartgrid.com

MySmart Thermostat



Keeping cool while saving money just got a lot easier.

In a home with central air conditioning, the air-conditioning unit is typically the greatest user of electricity. That makes your thermostat a vital part of managing your energy usage.

With MySmart Thermostat, you can preset temperatures for nighttime or when you are at work. Then, you can set it to automatically return to your preferred temperature before you wake up or return home. MySmart Thermostat also will work with your furnace and heating system. You'll save energy, save money and still stay comfortable.



MySmart Thermostat also helps KCP&L control electricity demand on weekdays (never on weekends) by allowing us to raise or lower your temperature a few degrees. You will hardly notice a difference, but we'll be able to manage electrical demand, be more environmentally conscious and help manage costs. We'll notify you beforehand, and you can opt out as many times as you want to make it convenient for your lifestyle.

MySmart Thermostat is installed by a trained technician who sets it to accept signals from KCP&L when demands on the electrical system are high, like hot summer weekdays. The technician also will show you how to program it for maximum savings.

MySmart Thermostat can:

- Help save you up to \$180 a year by properly setting and maintaining the temperature settings (According to ENERGY STAR®)
- Automatically set temperatures based on the season and your personal preference
- Help you keep costs lower

Call 1-800-535-7687 to schedule a MySmart Thermostat installation by a trained technician.

Coming soon....

In 2011, as the SmartGrid project enters the next phase, we will introduce even more energy-saving tools and products for SmartGrid customers. These include:

MySmart Network – Select customers will receive a network system in their home or business that connects their lighting and electronic devices (computer, “smart” appliances, television, home security systems, etc.) and can be programmed to save them money.

Rooftop Solar Demonstrations – A limited number of rooftop solar panels will be installed on businesses, schools and other buildings in the SmartGrid project area. These will provide clean, renewable energy and allow KCP&L to test how solar power can be used more widely.

Electric Vehicle Charging Stations – These electric vehicle charging stations will be located throughout the SmartGrid project area and be available to customers who own the next generation of electric vehicles.

Time-of-Use Rates – This optional customer program would change your rate depending on the time of day electricity is used and the cost of supplying it at that time. Time-of-use rates encourage customers to save money by shifting consumption to off-peak periods.

You will hear more about these new products when we begin to roll them out next year in the SmartGrid project area.

KCP&L Connections

KCP&L's Connections program gives you access to resources that help make life easier during these challenging economic times. Connections provides payment options and ways to connect to assistance programs throughout the community.

United Way 2-1-1 – United Way 2-1-1 connects people with agencies providing utility bill and other assistance. Dial 2-1-1 to get connected to local agencies that can help.

Missouri Low-Income Home Energy Assistance Program (LIHEAP) – LIHEAP helps eligible households pay a portion of their home energy costs during the winter and summer. For information, call United Way 2-1-1 to locate your local office or visit www.dss.mo.gov/fsd/liheap.htm.

Hot and Cold Weather Program – This program helps customers who have delinquent accounts avoid disconnection or have service restored during the winter and summer months. Participation is simple. If you are worried about paying your bill in full, contact our customer service representatives and ask for a Hot or Cold Weather Program payment plan. In addition, qualifying Missouri customers who are elderly or disabled may be eligible for other special services.

Budget Billing – KCP&L averages your last 12 bills, giving you a fixed monthly payment regardless of seasonal ups and downs.

Adjustable Due Date – Customers receiving Social Security or governmental disability income may be eligible to change the due date of their electric bill to better coincide with receipt of their benefits.

Energy Efficiency Products and Services

In addition to SmartGrid, KCP&L has a full range of energy efficiency products and services available to help all customers save money, including:



Weatherization – If your income qualifies, you can take advantage of energy efficiency and weatherization services for your home.



Cool Homes – Qualify for up to \$850 in rebate incentives when you upgrade your working HVAC equipment with a higher efficiency system.



Home Performance with ENERGY STAR – Receive rebates for improving efficiency in your home by having a certified contractor perform a home energy audit.



Commercial/Industrial Rebates – Offset the cost of energy-efficient equipment for use in your facilities. Rebates are available for all customers, including Small General Service customers.

For more information about these and other programs, please visit www.kcpl.com/connections or give us a call at 1-800-526-3348 toll-free.

P.2.2.4 Information on LIWAP and EnergyWorks KC

Additional Green Impact Zone Resources

Low-Income Weatherization Assistance Program (LIWAP)

The Mid-America Regional Council recently received a \$4.5 million grant from the Missouri Department of Natural Resources to weatherize homes in the Green Impact Zone and surrounding neighborhoods. To qualify for no-cost assistance, customers will need to meet certain income guidelines. Priority is given to the elderly, families with children and people with disabilities.

If you qualify, a certified energy auditor will check your home for things that may be causing high energy bills. Then, LIWAP will pay to have a certified contractor make energy improvements to your home.

The Low-Income Weatherization Assistance Program can pay for things like:

- Caulking to seal air leaks
- Adding insulation to floors, walls and attics
- Cleaning and tuning of furnaces and air conditioners
- Water heater upgrades and pipe insulation
- In some circumstances, replacement of furnaces and air conditioners may be covered

Take the first step toward a healthier home by filling out the online interest form at www.greenimpactzone.org. A representative will then contact you to discuss the program.

Phone: 816-701-8300
Online: www.greenimpactzone.org

Additional Green Impact Zone Resources

EnergyWorks KC (EWKC)

EnergyWorks is an initiative in the Green Impact Zone focused on:

- Reducing energy use and utility bills in buildings
- Reducing the output of greenhouse gas emissions that damage our environment and economy
- Creating or retaining jobs that support a greener Kansas City
- Changing the energy efficiency market by making demand for energy efficiency a first choice in home improvement and creating the jobs necessary to do the work.

EWKC is funded with American Recovery and Reinvestment Act resources from the U.S. Department of Energy's Better Buildings grant program and administered by the City's Office of Environmental Quality.

As part of EWKC, the Metropolitan Energy Center (MEC) is working with building owners in the Green Impact Zone to obtain energy assessments, energy efficiency upgrades, rebate and tax credit programs and financing services. MEC also provides energy counseling, monitoring and performance feedback to program participants. In addition, KCP&L and Missouri Gas Energy on the Home Performance with ENERGY STAR® program to provide rebates to homeowners to cover the costs of energy audits and energy efficiency improvements.

Any building owner in the Green Impact Zone can learn more about EWKC by contacting the Metropolitan Energy Center. The MEC can be contacted by walk-in, telephone and on its website.

Address: 3810 Paseo Blvd, Kansas City, Missouri 64109
Main Office: 816-531-7283
Energy Line: 816-835-7593
Online: www.kcenergy.org

P.2.2.5 MySmart Product Response Form



MySmart Product Interest Form

☐ **MySmart Display**



A hand-held electronic device for inside your home that takes information directly from your meter and presents it to you in easy-to-understand screens. The in-home display does not require an Internet connection. Quantities are limited.

☐ **MySmart Portal**



A personalized website designed to show you how much electricity you use each day and help you estimate your bill before you receive it.

☐ **MySmart Thermostat**



For homes with central air conditioning, MySmart Thermostat can be programmed to automatically set temperatures based on the season, time of day and your schedule. This allows you to save energy, save money and still stay comfortable. Quantities are limited.

Name _____

Address _____

Home Phone _____ Cell Phone _____

email _____

This material is based upon work supported by the Department of Energy under Award Number DE-01000221.

204-10-1438 (10/10)

P.2.2.6 CFL Facts Sheet

Facts about CFLs



CFLs are made up of more than 50 parts, most of them in the ballast. Older CFLs used large and heavy magnetic ballasts that sometimes caused a buzzing noise. ENERGY STAR qualified CFLs use electronic ballasts, which don't buzz or hum and turn on instantly without flickering.

CFLs create the same amount of light as incandescent bulbs using only one-quarter of the energy and heat. ENERGY STAR qualified CFLs last between 6,000 and 15,000 hours, or 5 to 13 years, based on an average use of three hours per day. This is why it's important to check and make sure you can use CFLs with your existing controls, and only use bulbs marked "dimmable" with dimmer switches. Also note that CFLs are best used in places where they will be on for at least five minutes to prolong their life.

The average U.S. household has more than 40 incandescent light bulbs, ranging from table lamps to ceiling fixtures and larger homes can have even more. Lighting accounts for about 20 percent of annual household electricity bills, or over \$200 per year in the average household. Replacing incandescent bulbs with ENERGY STAR qualified CFLs provides significant benefits for consumers.

Types of bulbs



SPIRAL COMPACT FLUORESCENT U-SHAPE T-SHAPE CANDLE INCANDESCENT OUTDOOR REFLECTOR

of available in dimming style. Check by manufacturer.

The savings

SAVE ENERGY AND MONEY. Over its lifetime, one ENERGY STAR qualified light bulb eliminates the need for at least six incandescent bulbs and saves you more than \$10. By changing five bulbs to ENERGY STAR, you save more than \$50, which is energy savings equates to lighting your whole house for nearly nine months or running your ENERGY STAR washing machine for more than 3000 loads.

SAVE THE ENVIRONMENT. When you choose an ENERGY STAR qualified light bulb, you are helping protect the environment by reducing air pollution and greenhouse gas emissions. If you replace five regular light bulbs with ENERGY STAR qualified light bulbs, it would save as much greenhouse gases as planting nearly 47 trees or avoiding a 2,000 mile trip in your car.

SAVE TIME. An ENERGY STAR qualified light bulb will last six times longer on average than an equivalent incandescent bulb. The long life will save you five trips up a ladder to change out bulbs in hard-to-reach fixtures.

STAY COOL. Because ENERGY STAR qualified light bulbs run cooler, they reduce cooling needs during the summer.

For more information, visit www.kcpl.com/lighting

How to choose the right shade of light

WARM LIGHT:
CFLs with 2700-3000K range are considered "warm white" or "soft white." These bulbs and produce a warm, cozy glow.

BRIGHT WHITE LIGHT:
CFLs with 3500-4000K range are considered "bright white" or "cool white." These bulbs produce a bright, clean white light.

CLEAR LIGHT:
CFLs with 5000-6500K range are considered "clear" or "daylight." These bulbs produce a bright, clean white light.

Recycle used CFLs

When your CFL burns out, you can take it to be recycled. CFLs contain a small amount of mercury sealed within the glass tubing—usually less than 5 milligrams—about the size of the period at the end of this sentence. By comparison, an older thermometer contains about 500 milligrams of mercury.

- For help locating a recycling center that accepts CFLs, visit www.epa.gov/bulbrecycling or www.bulbrecycling.org. Search by ZIP code at www.epa.gov/bulbrecycling or www.bulbrecycling.org.
- If your CFL breaks, you can easily clean it up. Follow the U.S. EPA's recommendations for cleanup at www.epa.gov/cfl.

Light output and color

Watts are a measure of power; lumens are a measure of light. More lumens mean more light. ENERGY STAR qualified CFLs produce the same amount of lumens as incandescent bulbs, but use about one-quarter of the power.

Like all fluorescent lighting, CFLs are available in a wide variety of shades of white light, which allows you to customize the mood of your space. Many CFLs come in "warm" colors to match the yellowish light of incandescent bulbs, but you can also choose "cooler" colors with whiter or bluer light. The color of light is technically referred to as the "color temperature," which is measured on the Kelvin scale. Lower Kelvin numbers mean the light has a warmer glow, like a candle, while higher Kelvin numbers mean the light appears cooler, like the sky. The choice is yours and usually depends on where you will be using the light bulb. The chart(s) at the right and below can be used as a guide when purchasing CFLs.

TYPICAL COLOR TEMPERATURE	
1900K	Candlelight
2800K	40-watt Incandescent Bulb
3000K	Halogen Bulb
3200K	Sunrise/Sunset
3400K	1-hour from Dusk/Dawn
5000-5500K	Camera Flash
9000-12000K	Blue Sky

ENERGY STAR SAVINGS*

INCANDESCENT LIGHT BULB (WATTS)	ENERGY STAR QUALIFIED LIGHT BULB (WATTS)	ANNUAL SAVINGS	LIFETIME SAVINGS		
			8,000 Hours	10,000 Hours	15,000 Hours
40	9	\$4	\$20	\$24	\$52
60	13	\$5	\$31	\$34	\$79
75	20	\$7	\$37	\$44	\$91
100	23	\$9	\$51	\$68	\$128

*Savings based on national average electricity rate of \$0.11/kWh. SOURCE: ENERGY STAR

P.2.2.7 “Sorry We Missed You” Door Hanger

Sorry we missed you...

Today we installed your new electric meter, the first step in accessing the benefits of KCP&L's SmartGrid. Since there was a brief service interruption during the installation, please be sure to reset any digital clocks and appliances.

Free product offer

As part of our SmartGrid project, we want to offer you a **FREE** easy-to-use device, called

MySmart Display, that puts the power of the smart grid in your hands. MySmart Display provides real-time information you can use to monitor and manage your electricity usage and potentially save money on your monthly bill.



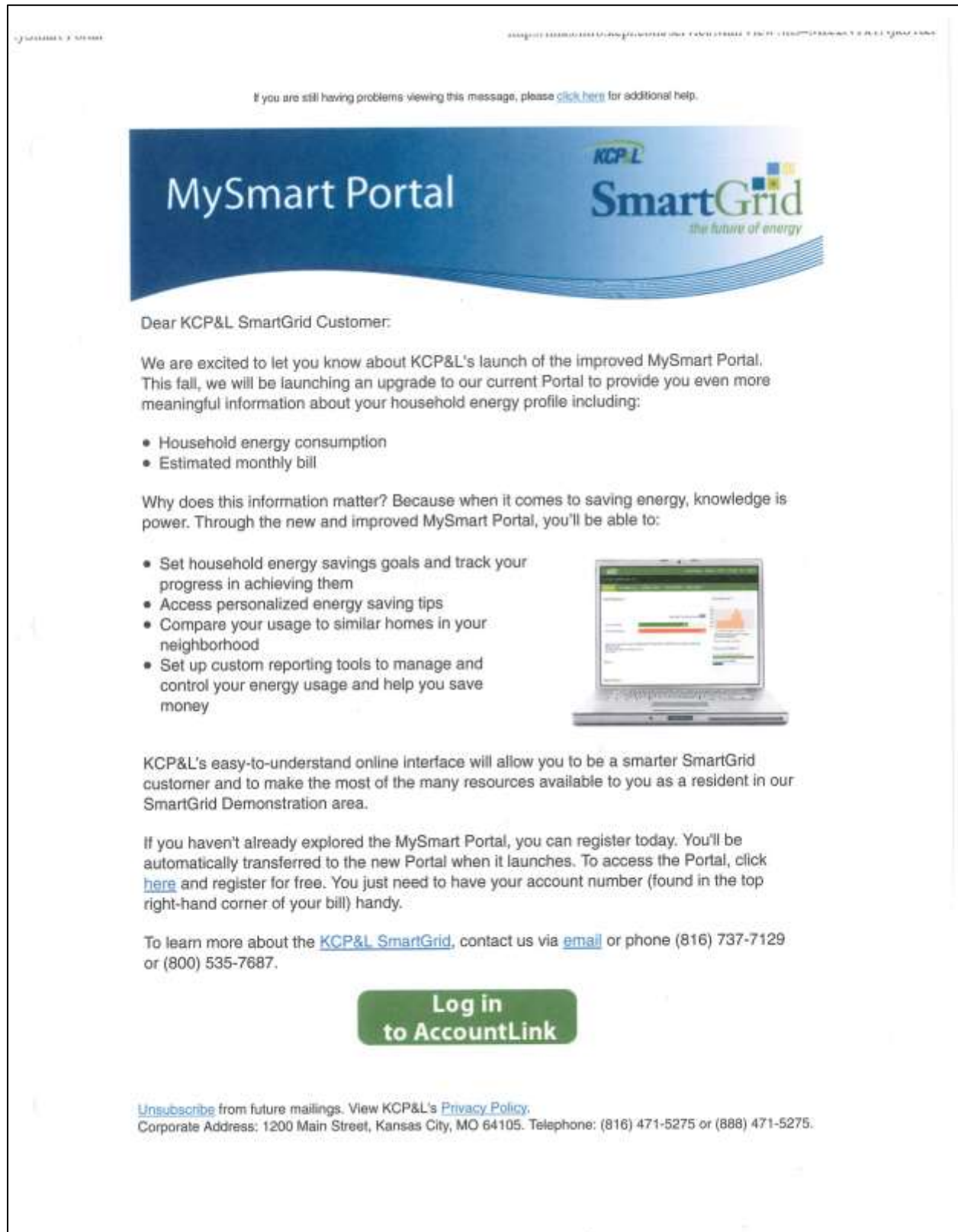
We will call you sometime over the next week to offer you a MySmart Display, or you can reserve one today by calling us at **1-800-535-7687** or **816-737-7129**.

You can also pick up your MySmart Display and learn about other smart grid tools and products by attending an upcoming KCP&L community event. A schedule is provided in this packet.

*We look forward to helping you
enjoy the many benefits of
KCP&L's new SmartGrid system.*

P.2.3 Email Communications

P.2.3.1 MySmart Portal – Launch Notifications



if you are still having problems viewing this message, please [click here](#) for additional help.



Dear SmartGrid Customer:

The launch of KCP&L's new MySmart Portal is just around the corner. We think you will find the improved Portal a powerful tool for monitoring and managing your household energy use.

As soon as the Portal is launched, we'll send you an e-mail with a link to the new MySmart Portal. If you are a current MySmart Portal user, you will continue to use your existing AccountLink username and password. If you've forgotten your AccountLink username or password please click [here](#) to retrieve it.

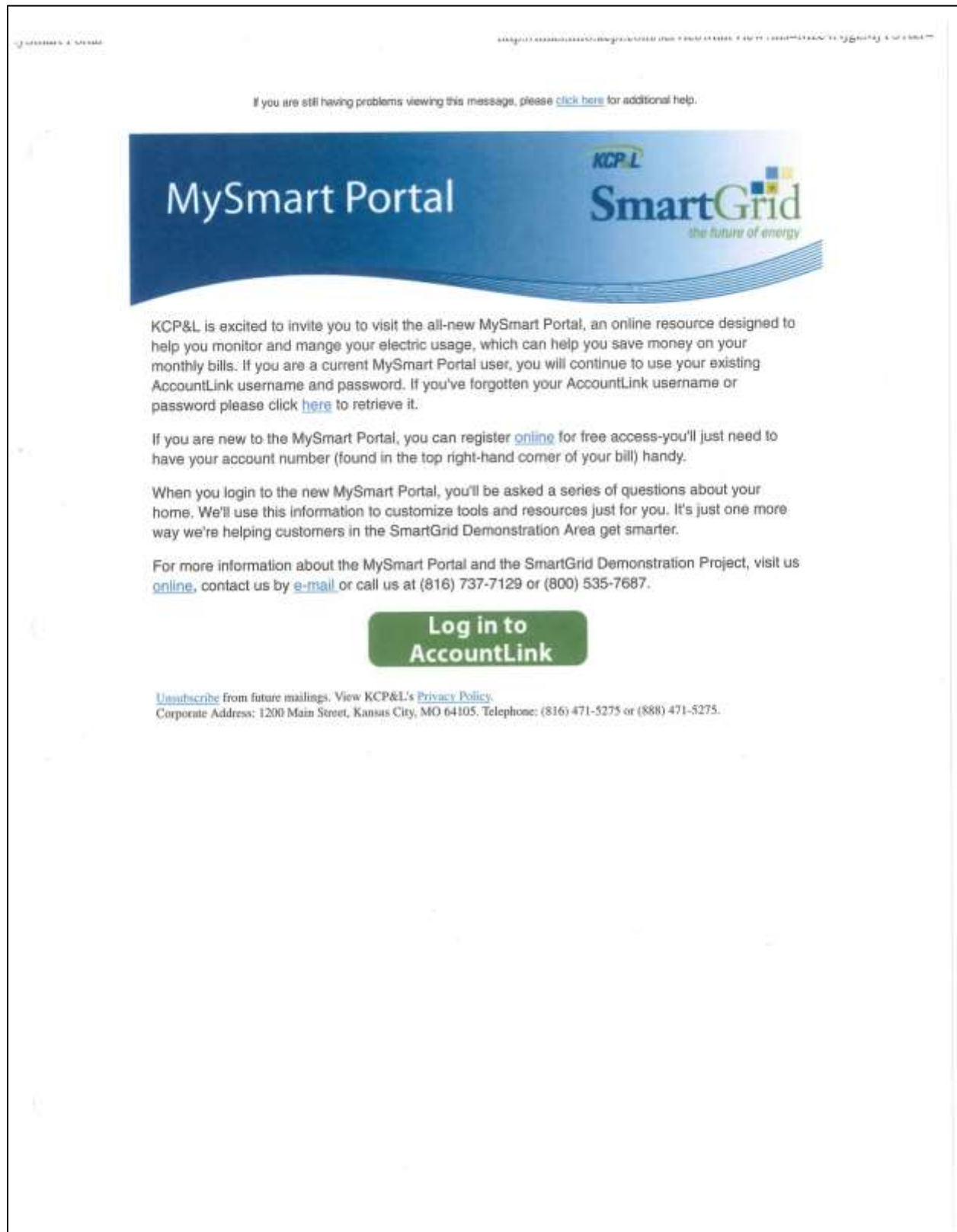
If you are new to the MySmart Portal, you can register [online](#) for free access to the Portal. Be sure to have your account number (found in the top right-hand corner of our bill) handy when registering.

When you log into the MySmart Portal, you'll be asked a series of questions about your residence. We'll use this information to customize tools and resources just for you, including:

- **Energy Usage and Costs:** Using information from your meter, you can see how your own daily patterns affect your energy usage and costs. Visual, easy-to-understand charts and graphs also will show how much you spend on heating and cooling, and the size of your carbon footprint.
- **Powerful Community Comparisons:** You can anonymously compare your own usage profile with similar homes in your area. MySmart Portal encourages everyone in your neighborhood to adapt, modify and compare behavior, based on personal goals. You also have access to forums that foster collaboration. Will you be the greatest energy saver on your block?
- **Personalized Insight and Tips:** MySmart Portal includes an energy advisory tool that provides clear and actionable advice to improve your home's energy efficiency. Your specific questions can be addressed and shared within your community.
- **Notification:** Your MySmart Portal can proactively notify you of important energy-related events coordinated by KCP&L. You can sign up to receive these alerts by e-mail or within the Portal.

Stay tuned for more information about the enhanced MySmart Portal, and in the meantime, you can learn more about the [KCP&L SmartGrid](#) by contacting us by [e-mail](#) or by phone at (816)737-7129 or (800) 535-7687.

[Unsubscribe](#) from future mailings. View KCP&L's [Privacy Policy](#).
Corporate Address: 1200 Main Street, Kansas City, MO 64105. Telephone: (816) 471-5275 or (888) 471-5275.



P.2.3.2 Get Smarter About Energy – Time-of-Use Program

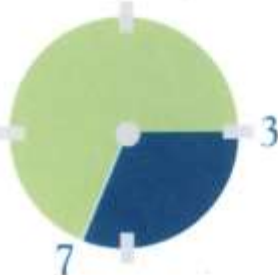
If you are still having problems viewing this message, please [click here](#) for additional help.



Get Smarter About Energy

As a resident of KCP&L's SmartGrid Demonstration Area, we are pleased to offer you another exciting opportunity to **Get Smarter** about your energy usage with the option to take advantage of **Time of Use** rates.

KCP&L's Time of Use rate program allows customers to **better manage their electricity costs** while providing KCP&L information about customer behavior. The program designates "off peak" hours (when rates are discounted from standard) and "peak" hours (when rates are above standard). Time of Use rates are designed to encourage customers to think about when they use electricity rather than just how much electricity they use, ultimately shifting electricity usage (grid load) from peak to off-peak periods.



Time of Use rates are only active during summer months (May 16 to September 15). During that time, **peak hours (when rates are raised to about \$.38/kWh) apply on non-holiday weekdays from 3 to 7 pm**. All other days and times during the summer months are designated as off-peak hours (when rates are discounted to about \$.06/kWh).

You can try out Time of Use rates with no risk. If you notice that your bill has increased after enrollment, you may opt out of the program and request to be re-billed at standard rates for your most recent billing period.

Are you interested in being among the first in Kansas City to take advantage of the Time of Use rates? Call us at (800) 535-7687 to sign up. And be sure to check out our other [SmartGrid products](#). They can also help you better manage your energy usage and monthly bill so you can make the most of Time of Use rates.

To learn more about other SmartGrid resources available to you, visit us [online](#) or contact us by [email](#) or phone at (816)737-7129 or (800) 535-7687.

[Unsubscribe](#) from future mailings. View KCP&L's [Privacy Policy](#).
Corporate Address: 1200 Main Street, Kansas City, MO 64105, Telephone: (816) 471-5275 or (888) 471-5275.

P.2.3.3 Time-of-Use Rates Letter

Time of Use Rates – Letter and Email Copy – W/ Guarantee
FINAL

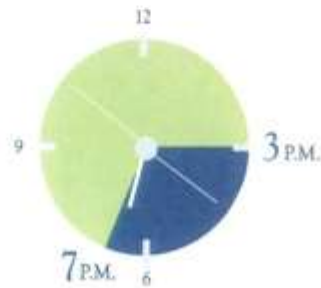
Dear Customer,

As a resident of KCP&L's SmartGrid Demonstration Area, we are pleased to offer you another exciting opportunity to **Get Smarter** about your energy usage with the option to take advantage of **Time of Use rates**.

KCP&L's Time of Use rate pilot program allows customers to better manage their electricity costs while providing KCP&L information about customer behavior. The program designates "off peak" hours (when rates are discounted from standard) and "peak" hours (when rates are above standard). Time of Use rates are designed to encourage customers to think about when they use electricity rather than just how much electricity they use, ultimately shifting electricity usage (grid load) from peak to off-peak periods.

Time of Use rates are only active during summer months (May 16 – September 15). During that time peak hours (when rates are raised to about \$.38/kWh) apply on non-holiday* weekdays from 3 to 7 pm. All other days and times during the summer months are designated as off-peak hours (when rates are discounted to about \$.06/kWh).

You can try out Time of Use rates with no risk. If you notice that your bill has increased after enrollment, you may opt out of the program and request to be rebilled at standard rates for your most recent billing period.



Are you interested in being among the first in Kansas City to take advantage of **Time of Use rates**? Call the SmartGrid Support Team at (800) 535-7687 to sign up. Then, look into other free SmartGrid Demonstration products at www.KCPLSmartGrid.com. These products can help you better manage your energy usage and monthly bill and make the most of **Time of Use rates**:

- ✓ **MySmart Portal** – Plan your Time of Use rates strategy by accessing MySmart Portal at www.KCPL.com/MySmartPortal, a free online tool that allows you to better monitor and manage your energy usage and make the most of off-peak rates.
- ✓ **MySmart Display** – Set alerts to remind you of changes in rates throughout the day and access real-time information about energy usage to help you reduce energy consumption and save money on your monthly bill.
- ✓ **MySmart Thermostat** – Maximize the impact of Time of Use rates by programming your thermostat to automatically adjust cooling based on peak hours (requires central air).
- ✓ **MySmart Home** – Connect your home's appliances and electronics to monitor and manage your energy use, while remotely monitoring and controlling your MySmart Thermostat and other appliances (requires central air and high-speed Internet access).

To learn more about other SmartGrid resources available to you, visit www.KCPLSmartGrid.com or contact us at SmartGridInfo@KCPL.com or (800) 535-7687.

Sincerely,

P.2.3.4 Your "Get Smarter" Guide – MySmart Home Offering

If you are still having problems viewing this message, please [click here](#) for additional help.

Your "Get Smarter" Guide

SmartGrid

the future of energy

You've tried KCP&L's Energy Optimizer programmable thermostat, now get even more connected with MySmart Home

Because you use KCP&L's Energy Optimizer programmable thermostat program, you already know about its convenience and potential savings on your monthly energy bills, all while keeping your home cool and comfortable. Now, with KCP&L SmartGrid, you can receive a FREE SUITE of MySmart products, giving you even more control over your money and your energy usage. It's called **MySmart Home!**

This internet-based system connects your home appliances, central air, water heater and electronics to your MySmart Home products to give you fast, valuable insight about your energy usage.

Just a few benefits and reasons to upgrade to MySmart Home:

- No more waiting until your electricity bill comes via mailbox or inbox. Remotely check your usage and control your thermostat, switch and plugs as often as you like with **MySmart Portal**—from anywhere—on any computer or smartphone with Internet access.
- See how much energy your lamp, washing machine or other electric appliances are using, as long as they are connected to a **MySmart Plug**.
- Set your **MySmart Switch** (optional) to control the temperature of your water heater easily and conveniently.
- A new **MySmart Thermostat**, programmable to adjust your home's temperature for optimal comfort and energy savings – just as you've done with the Optimizer.

Efficiency Tip

For every degree you raise your thermostat setting in the summer, you can expect to cut your energy consumption by 3 to 5 percent.

Smart Resources

- [KCP&L SmartGrid.com](#)
- [SmartGrid Fact Sheet](#)
- [KCP&L's Tips to Save](#)
- [Measure Your Savings](#)

MySmart Products

- MySmart Thermostat
- MySmart Home
- MySmart Portal
- MySmart Display

- Receive a **MySmart Hub** wireless router, which connects your MySmart products and meter with the SmartGrid network.

To learn more, visit KCPLSmartGrid.com. Enroll [online](#), call us at (800) 535-7687 or email SmartGridInfo@KCPL.com.

This material is based upon work supported by the Department of Energy under Award Number DE-OE0000221.

Get smarter at KCPLSmartGrid.com

[Unsubscribe](#) from future mailings. View KCP&L's [Privacy Policy](#). Corporate Address: 1200 Main Street, Kansas City, MO 64105.
Telephone: (816) 471-5275 or (888) 471-5275.

You are receiving this email because you are subscribed to receive Energy Solutions emails.

P.2.3.5 Your "Get Smarter" Guide – Time-of-Use Offering

If you are still having problems viewing this message, please [click here](#) for additional help.

Your "Get Smarter" Guide

As summer heats up, Get Smarter with KCP&L's Time of Use Rate

Kansas City's heat wave has everyone trying to keep cool. But, even when you're running your air conditioner to beat the heat, you can still save money on your electricity bill with KCP&L's Time of Use Rate—just one of the free programs for customers living in the [SmartGrid Demonstration Area](#).

Enroll to receive discounted rates during off-peak hours



It's always good to manage HOW MUCH energy you're using. Now you can also save energy and lower your electric bill by managing WHEN you're using the energy.

KCP&L's Time of Use Rate designates "off-peak hours," 20 hours a day when rates are discounted, and "peak hours," when rates are raised for four hours of the day. By enrolling in the Time of Use Rate you can save money by shifting some of your electricity usage to off-peak times.

- Time of Use rates are active May through September
- Peak hours are from 3 p.m. to 7 p.m. on non-holiday weekdays
- You can try out Time of Use Rates with no risk, if you live within the [SmartGrid Demonstration Area](#)

To enroll, call us at (800) 535-7687, email SmartGridInfo@KCPL.com, or learn more by visiting www.KCPLSmartGrid.com. While you're there, be sure to check out other SmartGrid products and tips that help you manage your energy usage AND keep cool this summer!

This material is based upon work supported by the Department of Energy under Award Number




Efficiency Tips

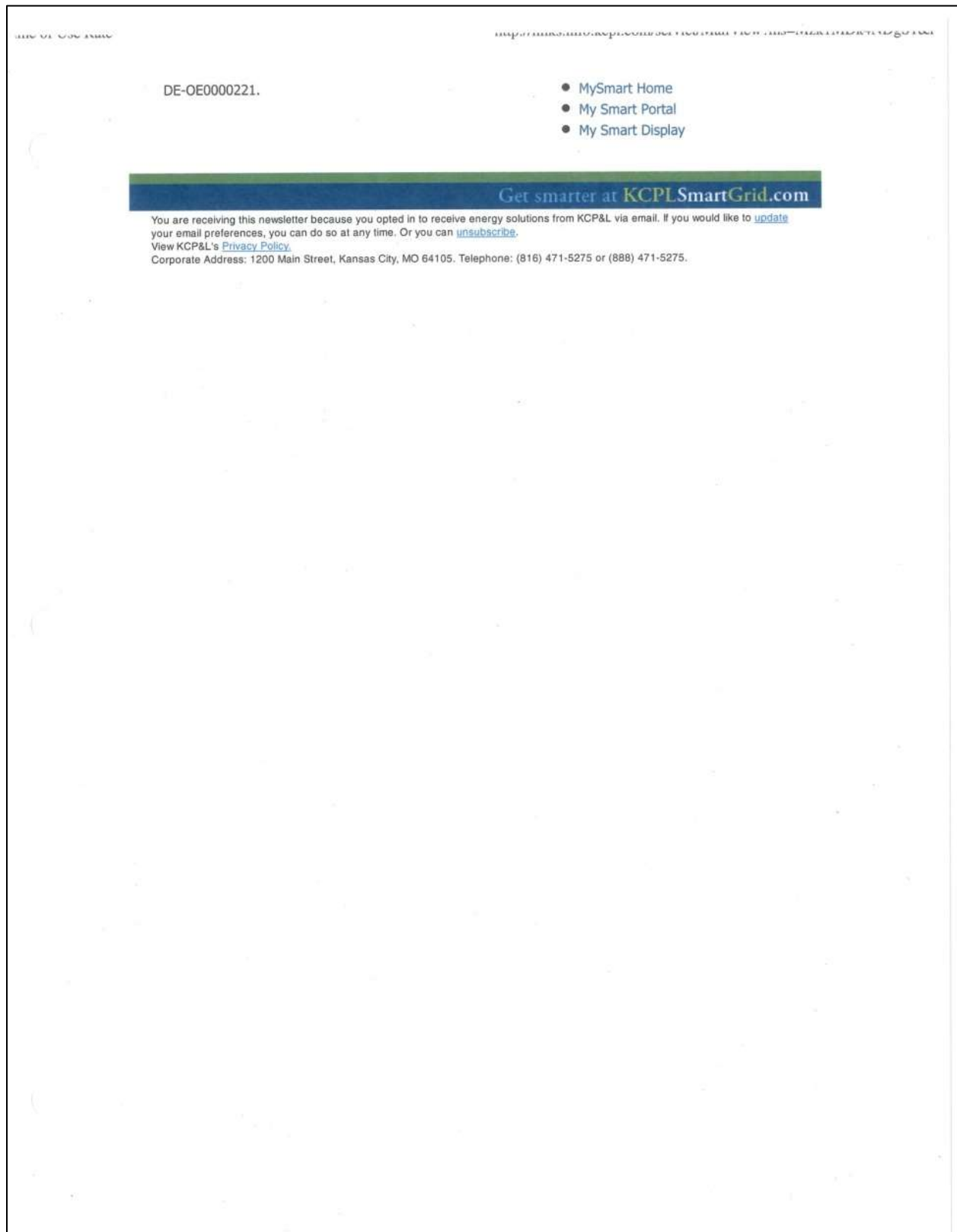
- Use your programmable [MySmart Thermostat](#) to automatically adjust the temperature in your home up a few degrees during peak hours for savings through the Time of Use Rate Program.
- Go to KCPLSmartGrid.com and fill out the [SmartGrid Interest Form](#) to see if you qualify for any of the FREE SmartGrid Demonstration products!

Smart Resources

- KCPLSmartGrid.com
- SmartGrid Fact Sheet
- KCP&L's Tips to Save
- Measure Your Savings

MySmart Products

- MySmart Thermostat



P.2.3.6 Your "Get Smarter" Guide – KCP&L SmartGrid Q&A

If you are still having problems viewing this message, please [click here](#) for additional help.

Your "Get Smarter" Guide

KCP&L SmartGrid is helping Kansas City GET SMARTER about energy!

KCP&L has been sharing lots of information with you about products and services offered to you, our customers living within the SmartGrid Demonstration area. But, for some new residents and longtime Kansas Citians, you're wondering what exactly IS this SmartGrid you keep hearing about?

Here are some answers to that question and a few more to help you GET SMARTER about KCP&L SmartGrid.

Q: What makes the SmartGrid "smart?"
 A: It's "smart" because it is an advanced technology-a type of communications network that has been integrated with the electric grid. It allows KCP&L to have digital two-way communication with customers, equipment and sensors on the grid. [Learn more.](#)

Q: What free products are potentially available to me?
 A: Check out the free SmartGrid products and services [here](#).

Q: How do I know if I am eligible for these free products?
 A: Fill out [this form](#) to see if you qualify!

Q: How much is KCP&L investing in my community for the SmartGrid project?
 A: KCP&L SmartGrid, a more than \$50 million project, is made possible by a grant from the U.S. Department of Energy and investment by KCP&L and its partners.

Q: Who lives in the KCP&L SmartGrid Demonstration Area?
 A: The SmartGrid Demonstration Area includes several neighborhoods in and around Kansas City's Green Impact Zone, where a total of 14,000 customers live and own businesses. See a [map](#) of the area.




Efficiency Tip

Get Smarter about all KCP&L is doing in our community through the SmartGrid Demonstration Project! Visit Project Living Proof, the KCP&L SmartGrid demonstration house, at 917 Emmanuel Cleaver II Blvd, Monday through Friday, 10 - 5 to see smart grid technologies at work.

Smart Resources

- [KCPLSmartGrid.com](#)
- [SmartGrid Fact Sheet](#)
- [KCP&L's Tips to Save](#)
- [Measure Your Savings](#)

MySmart Products

- [MySmart Thermostat](#)
- [MySmart Home](#)
- [MySmart Portal](#)
- [MySmart Display](#)

Don't see the answer to your question here? Don't worry!

To get even smarter about KCP&L SmartGrid, visit
www.KCPLSmartGrid.com, call us at (800) 535-7687 or
email SmartGridInfo@KCPL.com.

This material is based upon work supported by the
Department of Energy under Award Number
DE-OE0000221.

Get smarter at KCPLSmartGrid.com

[Unsubscribe](#) from future mailings. View KCP&L's [Privacy Policy](#). Corporate Address: 1200 Main Street, Kansas City, MO 64105.
Telephone: (816) 471-5275 or (888) 471-5275.

You are receiving this email because you are subscribed to receive Energy Solutions emails.

P.2.3.7 Your "Get Smarter" Guide – MySmart Home and MySmart Portal Information

If you are still having problems viewing this message, please [click here](#) for additional help.

Your "Get Smarter" Guide

Back to school doesn't mean your kids are the only ones who will Get Smarter! Try MySmart Home and MySmart Portal!

Summer break is ending and families are preparing to get the kids out of their swimsuits and back to school. While you're purchasing school supplies so they can learn more, why not Get Smarter about your energy consumption? You can offset those extra expenses by doing your part to manage and save money on your electricity bills. KCP&L is excited to offer you the **MySmart Portal** and **MySmart Home**, just two of the FREE PRODUCTS that can help you do just that.

Get Schooled about MySmart Portal and MySmart Home!

Central air and other home appliances can use a lot of electricity, especially during the most extreme weather months of the year. Not only is your AC working harder, but you're also operating more appliances and electronics while you're indoors.

But, there's good news! If you have high-speed Internet access, the web-based MySmart Portal is a tool that can give you detailed information about your electricity usage, allow you to compare it to other homes in your neighborhood and estimate your monthly bill.

And, even better news! If you have high-speed Internet access and central air, MySmart Portal can become a part of your MySmart Home. MySmart Home is an Internet-based home area network that allows you to manage appliances and electronics from the Internet, save money and includes:

- MySmart Hub (wireless router)
- MySmart Switch (water heater control)
- MySmart Plugs (small appliance control)




Efficiency Tip

Only run your washing machine and dishwasher when they are full. Also, using cold water and allowing dishes to air-dry can help save energy!

Smart Resources

- KCP&L SmartGrid.com
- SmartGrid Fact Sheet
- KCP&L's Tips to Save
- Measure Your Savings

MySmart Products

- MySmart Thermostat
- MySmart Home
- My Smart Portal
- My Smart Display

- MySmart Thermostat (digital thermostat)
- MySmart Meter (electric smart meter)

To learn more, visit www.KCPLSmartGrid.com. [Enroll online](#), call us at (800) 535-7687 or email SmartGridInfo@KCPL.com.

This material is based upon work supported by the Department of Energy under Award Number DE-OE0000221.

Get smarter at KCPLSmartGrid.com

[Unsubscribe](#) from future mailings. View KCP&L's [Privacy Policy](#). Corporate Address: 1200 Main Street, Kansas City, MO 64105. Telephone: (816) 471-5275 or (888) 471-5275.

You are receiving this email because you are subscribed to receive Energy Solutions emails.

P.2.3.8 Your "Get Smarter" Guide – KCP&L SmartGrid Fall Events

If you are still having problems viewing this message, please [click here](#) for additional help.

Your "Get Smarter" Guide

KCP&L SmartGrid's Hair-Raising Fall Happenings

It's the season for spooky costumes and scary movies, but understanding your energy usage doesn't have to be a fright! There are free products, tools and services we've developed to help you Get Smarter and take the mystery out of your monthly electricity bill.

We've also got some thrilling things taking place this Fall:

Check Out MySmart Portal's Wicked New Look

[MySmart Portal](#) is even better! With a really "smart," updated design, we know you will find the tool more visually appealing and easier to use - giving you access to valuable information and graphics that can help you stay in control of your energy use.

Visit Our Enchanted Innovation Park!

The KCP&L [SmartGrid Innovation Park](#) opened to the Kansas City community a few weeks ago. The park is located at 4724 Tracy Avenue in midtown Kansas City, Missouri. You are invited to explore and learn more about how KCP&L's SmartGrid is enhancing the electric grid in our community with new technologies.

Trick-or-Treat and Prowl Through the SmartGrid Demo House

This house is NOT haunted! But it is full of all the innovative SmartGrid tools and products for you to sample. Visit the [Demo house](#) on Halloween night to trick-or-treat and learn more about how you can save energy and money on your electricity bill each month.




Efficiency Tip

Did you know the average home has 55 power vampires-electronic devices that continue to suck energy when you aren't using them? You can see them glowing at night when you turn off the lights and they contribute to 10-20% of your home energy bill. Watch this [video](#) to learn more!

Smart Resources

- [KCP&L SmartGrid.com](#)
- [SmartGrid Fact Sheet](#)
- [KCP&L's Tips to Save](#)
- [Measure Your Savings](#)

MySmart Products

- [MySmart Thermostat](#)
- [MySmart Home](#)
- [MySmart Portal](#)
- [MySmart Display](#)

To learn even more about KCP&L's SmartGrid, MySmart Portal and other free MySmart products available to you, visit the newly redesigned [SmartGrid](#) website, or to enroll in these products, call us at (800) 535-7687 or email SmartGridInfo@KCPL.com.

This material is based upon work supported by the Department of Energy under Award Number DE-OE0000221.

Get smarter at KCPLSmartGrid.com

[Unsubscribe](#) from future mailings. View KCP&L's [Privacy Policy](#). Corporate Address: 1200 Main Street, Kansas City, MO 64105. Telephone: (816) 471-5275 or (888) 471-5275.

You are receiving this email because you are subscribed to receive Energy Solutions emails.

P.2.3.9 Your "Get Smarter" Guide – MySmart Portal Makeover

If you are still having problems viewing this message, please [click here](#) for additional help.

Your "Get Smarter" Guide

SmartGrid

the future of energy

Just in time for Fall - A MySmart Portal Makeover!

As a SmartGrid [MySmart Portal](#) customer, you already know about the benefits of your web-based MySmart Portal. It's easy-to-use, accurate and full of information. Hopefully you've been [accessing the portal](#) to get information on your electricity usage, and to monitor and estimate your monthly bill.

Now, MySmart Portal is about to get better! With a really "smart," updated design coming soon, we know you will find the tool more visually appealing and easier to use - giving you access to even more valuable information that can help you Get Smarter and potentially save energy and money!

MySmart Portal's updated look includes:

- A new "Billing and Usage" history page
- A "How Your Home Uses Energy" pie chart
- A "My Community" page, including:
 - Top Points Earners board
 - Last month's Total Community Savings chart
 - Last month's Your Total Savings chart

[Log in](#) to the portal on or after October 17 to see and take advantage of these user-friendly updates.

To learn even more about KCP&L's SmartGrid, MySmart Portal and other free MySmart products available to you, visit www.KCPLSmartGrid.com, call us at (800) 535-7687 or email SmartGridInfo@KCPL.com.

This material is based upon work supported by the Department of Energy under Award Number DE-OE0000221.

Efficiency Tip

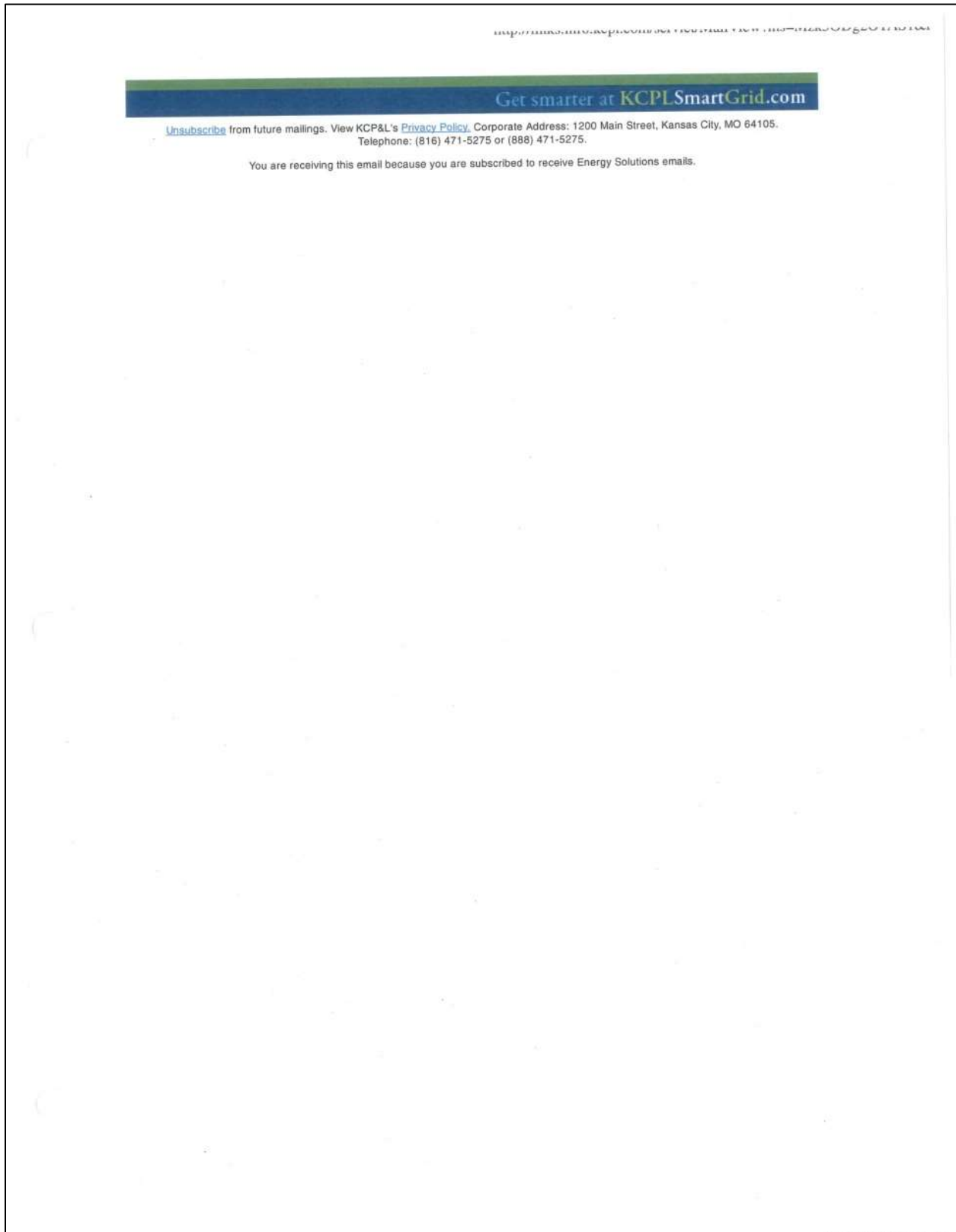
Did you know that if you have MySmart Home, you can use the MySmart Portal to set your thermostat from anywhere you have access to high-speed Internet?

Smart Resources

- www.KCPLSmartGrid.com
- SmartGrid Fact Sheet
- KCP&L's Tips to Save
- Measure Your Savings

MySmart Products

- MySmart Thermostat
- MySmart Home
- MySmart Portal
- MySmart Display



P.2.3.10 Your “Get Smarter” Guide – MySmart Program Information

If you are still having problems viewing this message, please [click here](#) for additional help.

Your “Get Smarter” Guide

Celebrate and Start a New, Energy-Saving Tradition!

Gratitude. Turkey and stuffing. Family and friends. Fun and laughter. It's Thanksgiving! We appreciate YOU for being a SmartGrid customer. Let us help you enjoy this year's holiday season even more. Now is the time to take advantage of your free SmartGrid tools and services while these product offerings last!

Saving energy and money is as easy as (pumpkin) pie!

[MySmart Home](#) can take some worries off your plate this Thanksgiving. With new improvements, we have the recipe to put you in control of your energy usage during autumn's cool down, and on into winter. You'll be grateful for these new features:

In the city or traveling, you can keep your home comfortable and efficient.

- With the MySmart Home network, you can program your [MySmart Thermostat](#) from anywhere through [MySmart Portal](#)
- Settings allow you to preset your home's temperature using daily schedules

You can also prevent your furnace and appliances from gobbling too much energy (and money).

- Review your appliances' energy consumption by connecting them to a MySmart Plug
- View messages from KCP&L about pricing programs and events

A harvest of possible savings is waiting for you!




Efficiency Tip

Make energy savings a centerpiece of your holiday experience this year! Take your family to the spectacular [KCP&L Plaza Lighting Ceremony](#) on Thanksgiving night (and like us on [Facebook!](#)). Then, if you choose to decorate at home, consider using newer mini-lights, which could save up to 70% of energy over the old-fashioned colored bulbs.

Smart Resources

- [KCPLSmartGrid.com](#)
- [SmartGrid Fact Sheet](#)
- [KCP&L's Tips to Save](#)
- [Measure Your Savings](#)

MySmart Products

- [MySmart Thermostat](#)
- [MySmart Home](#)
- [MySmart Portal](#)
- [MySmart Display](#)

To learn more about KCP&L's SmartGrid, MySmart Portal and other free MySmart products available to you, visit the newly redesigned SmartGrid website, or to enroll, call us at (800) 535-7687 or email SmartGridInfo@KCPL.com.

This material is based upon work supported by the Department of Energy under Award Number DE-OE0000221.

Get smarter at [KCPL SmartGrid.com](http://KCPLSmartGrid.com)

[Unsubscribe](#) from future mailings. View KCP&L's [Privacy Policy](#). Corporate Address: 1200 Main Street, Kansas City, MO 64105.
Telephone: (816) 471-5275 or (888) 471-5275.

You are receiving this email because you are subscribed to receive Energy Solutions emails.

P.2.3.11 Your "Get Smarter" Guide – MySmart Portal Can Help Keep Your Home Toasty and You Penny-wise!

If you are still having problems viewing this message, please [click here](#) for additional help.

Your "Get Smarter" Guide



**Don't be left out in the cold!
Find out how you can save money this winter and Get Smarter!**

Temperatures are fluctuating from mild to freezing. We have to check the weather forecast each day to find if the kids need shorts or heavy coats! Kansas City's transitional weather means winter is on its way. But frigid northern winds and wintry conditions don't have to leave you bitter cold when it comes to your electricity usage. With a computer and Internet access, you have the power to know your bill and avoid the chill with MySmart Portal and AccountLink from KCP&L.

MySmart Portal can help keep your home toasty and you penny-wise!

How is your home using energy? What are your peak times of usage? How can you adjust your thermostat when you're away from home? During the winter how much electricity are you using? How much money are you saving? MySmart Portal gives you the tools to answer these questions and more. And, it's free to customers who live within the KCP&L SmartGrid demonstration area that's YOU!

Avoid venturing out into the cold to pay your electric bill by using AccountLink.

There are no boots, gloves or parkas needed to pay your bill this winter. With AccountLink, you can see your account balance, amount due and pay your bill via credit/debit card or bank account. You can also view your usage history, sign up for notifications, set up automatic payments or switch to paperless billing.

MySmart Portal is available through AccountLink anywhere using your computer or smart phone and Internet access.



Efficiency Tip

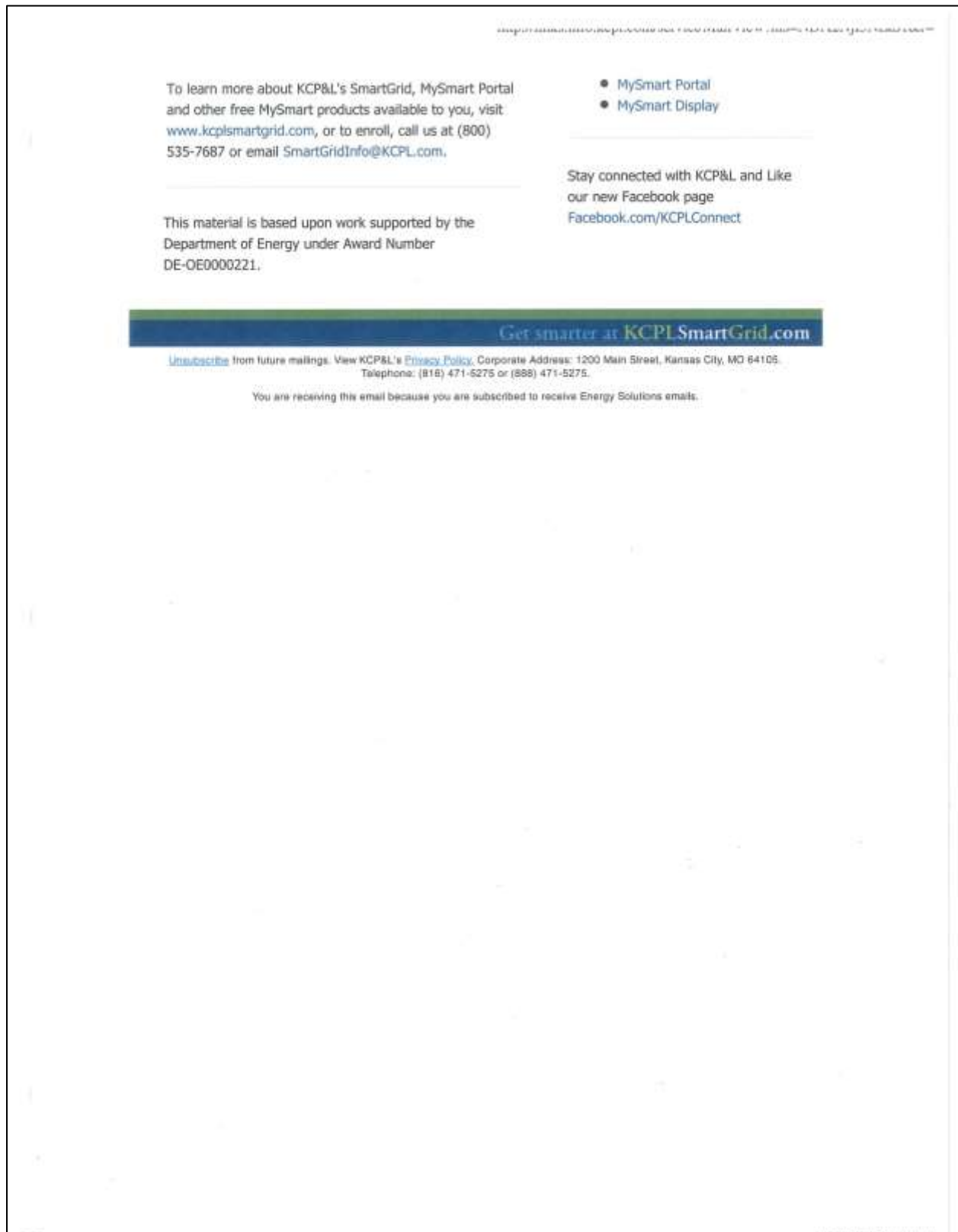
All year, but especially during winter, save energy by turning off lights when rooms are not occupied, closing your fireplace damper, shortening showers and unplugging electronics chargers when not in use. All of these actions are smart ways to help offset energy costs associated with your furnace running longer in extremely cold temperatures.

Smart Resources

- [KCP&LSmartGrid.com](#)
- [SmartGrid Fact Sheet](#)
- [KCP&L's Tips to Save](#)
- [Measure Your Savings](#)

MySmart Products

- [MySmart Thermostat](#)
- [MySmart Home](#)



P.2.3.12 Your "Get Smarter" Guide – Drop-Off MySmart Home Devices and Pick-Up CFL Light Bulbs

If you are still having problems viewing this message, please [click here](#) for additional help.



Your "Get Smarter" Guide

Drop-Off MySmart Home Devices and Pick-Up CFL Light Bulbs

Over the past few years, we hope you found your MySmart Home (Home Area Network) to be a useful tool to monitor and manage your energy usage. Now, as the five-year KCP&L SmartGrid Demonstration pilot project is coming to its planned end, we need your help. When the SmartGrid project is over, we want to make sure the MySmart Home devices are recycled properly. And, just for turning in your MySmart Home hardware, KCP&L will help you continue to save by providing FREE CFL light bulbs.

MySmart Home Devices to Turn In



This is the MySmart Home plug-in device and may be turned in. It will not control the outlet in your home once the SmartGrid pilot project concludes.



This is the MySmart Home gateway device and may be turned in. It will not operate as an Internet gateway once the SmartGrid pilot project concludes. Please remove this device from your router and computer.

MySmart Home Devices to Keep



Please keep your MySmart Home programmable thermostat. This is hardwired to your home's HVAC (heater and air conditioner) and will continue to operate even after the SmartGrid project is complete. KCP&L no longer has any direct communication with this unit.

A few MySmart Home users also have this load control switch. This

When:

Saturday, Oct. 25 from 10:00 a.m. – 2:00 p.m.

Tuesday, Oct. 28 from 4:00 p.m. – 6:00 p.m.

Where:

Anita B. Gorman Discovery Center
4750 Troost
Kansas City, MO 64110

What:

KCP&L will provide CFL light bulbs and Halloween candy to all SmartGrid customer who return their MySmart Home devices.

<http://links.info.kcpil.com/servlet/MailView?ms=NDcyNDc1NjkS1&r=MTEyNTU4OTIwODE3S0&j=NTQyOTExOTkwS0&mt=1&rt=0>[11/4/2014 3:04:33 PM]



switch will no longer control your electric hot water heater, and KCP&L no longer has any communication to this device. While it is not necessary, if you wish to have this device removed, please consult with a licensed electrician.

Thank you for your participation in the KCP&L SmartGrid project.

Please visit kcpl.com/save-energy-and-money/for-home for more energy saving tips.

Get smarter at KCPLSmartGrid.com

[Unsubscribe](#) from future mailings. View KCP&L's [Privacy Policy](#). Corporate Address: 1200 Main Street, Kansas City, MO 64105. Telephone: (816) 471-6276 or (888) 471-6276.

You are receiving this email because you are subscribed to receive Energy Solutions emails.

<http://links.info.kcpl.com/servlet/MailView?ms=NDcyNDc1NjkS1&r=MTEyNTU4OTIwODE3S0&j=NTQyOTExOTkwS0&mt=1&rt=0>[11/4/2014 3:04:33 PM]

This page intentionally blank

P.2.4 School Curriculum

P.2.4.1 MySmartSolar.edu Statement of Work

UMKC-KCP&L - PASEO Project Statement of Work E-SAVE through Automation and Education

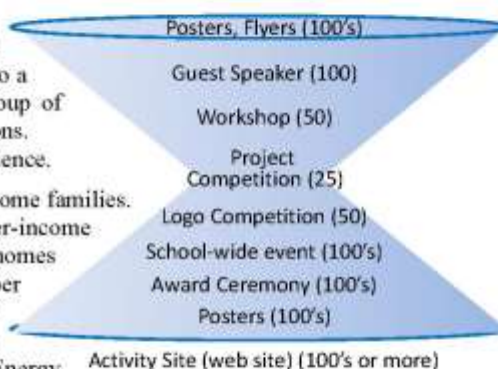
Project Members: Vijay Kumar, Cory Beard, Yugyung Lee, and Praveen Rao

Objective

This energy project is initiated by KCP&L in collaboration with the Paseo Academy of Fine and Performing Arts of Kansas City. They decided to use UMKC expertise to complete this project in collaboration with them. The UMKC team members are Dr. Vijay Kumar, Dr. Cory Beard, Dr. Yugyung Lee, and Dr. Praveen Rao of the Computer Science Electrical Engineering Department. A group of students will participate as developers of this scheme and help in deploying it within the local community. In this document we refer to the UMKC team coming from the as E-Save through Automation and Education Laboratory as E-Save.

The objective of this project is to promote wise use of energy in our community. It uses a funneling approach where information is spread to a wide audience of students so that a smaller group of students participate in project and logo competitions. Then their work is spread out again to a wide audience.

This work will be especially useful to low-income families. Figures from the United States suggest that lower-income families living in older, more poorly constructed homes consume an average of 28% more energy per square foot than higher-income households (report: Income, Energy Efficiency and Emissions: The Critical Relationship", Energy Programs Consortium, February 26, 2008.) A careful analysis identifies some of the important reasons for this relationship: (a) low income families consume less discretionary energy than high-income families but use more energy because their appliances are less energy-efficient (cost more to run), (b) low-income families have a limited ability to apply (or adapt to) effective energy saving strategies making them more vulnerable to higher energy prices, and (c) their houses are poorly insulated. A number of energy-saving programs that are appropriate for higher income households such as loans, grants, rebates, education, technical support, etc., are also appropriate for the lower income families. In addition, they also have a number of federal and state opportunities to make housing more affordable and able to conserve energy. We are all becoming increasingly aware of the overt and often not so overt attempts to educate the public (including organizations) to use energy *wisely*. Using energy wisely does not mean sacrificing comfort; rather it promotes the understanding that if everybody uses energy wisely then every household would have the same *level of comfort* and save energy too.



Collaboration

E-Save will work with the Paseo Academy of Fine and Performing Arts and whenever necessary use KCP&L resources (meeting room, printing facilities, etc.) to complete the project. The entire project (development, deployment, and report completion) will be completed in one

semester. The team from Paseo will consist of an interested group of students and a group of teachers who would mentor the team of students.

Tasks

The entire project consists of the following major tasks:

1. Workshop: Flyers and posters, guest speaker, workshop on solar energy
2. Project Competition: Conducting the projects, demonstration and judging of projects, student presentations at a school-wide event, awards ceremony, posters.
3. Activity Site
4. Logo Competition

Workshop

The workshop will be advertised to the Paseo student population through posters and flyers. Then a guest speaker will discuss solar energy and energy savings with the student body.

A workshop will be conducted at a KCP&L conference facility to teach Paseo students about solar energy, energy conservation, and the role of renewable energy in the overall use of energy. The workshop will also introduce the projects; it will (a) introduce the technical description of the entire work in terms of individual tasks, (b) identify/select interested students, (c) form working groups (4-5 students per group), (d) assign a task to a group, (e) assign a mentor teacher from Paseo and from E-Save to a group, (f) introduce a logo competition, (g) identify work location and work schedule, and (h) set up meeting schedules with E-Save, KCP&L, and Paseo to bring everybody on the same page.

In this workshop, each E-Save member will introduce individual task for student team followed by a question and answer session. The logo competition that is open to all Paseo student participants will be introduced in the workshop.

Project Competition

At most five students who selected the same project will form a group and the group will work on a project. Selections for the projects will be in collaboration with Paseo teachers. A Paseo teacher will lead each group. There will be 4 or 5 groups of at most five students per group. E-Save graduate students (if necessary E-Save professors) will serve as mentors to these groups and will be available to answer any questions or provide necessary help in their research.

The end products of each of the projects will be to display what was learned in creative ways that will be appealing to a broad audience of fellow students and their parents. This will take full advantage of the creative abilities they have developed at Paseo. Students will demonstrate (present) their projects in the E-Save lab. This will ultimately be judged as a competition between the teams with a cash award to the 1st, 2nd, and 3rd place teams. A panel of UMKC faculty, Paseo teachers, and KCP&L professionals will rank the presentations.

After the winning projects have been determined, several initiatives will be undertaken to disseminate and showcase the work that has been done. Poster will be created and displayed at Paseo. Then the students will present their projects at a school-wide event and awards will be given at an awards ceremony. It is also anticipated that there will be an event for the community such as an exhibition, musical event, or an art show where Paseo students, teachers, parents, and

administrators will join with KCP&L and UMKC. Local and national government officials (including Congressman Emanuel Cleaver II) and media representatives will be invited.

Activity site development and deployment

E-Save will have a different kind of electronic site called the "Activity-site" which will have the following components:

1. E-Save programs and resources (continuing education courses, programs, workshops, seminars, model home, etc.)
2. Information about state and federal initiatives, subsidies, rebates programs, etc.
3. Information about local companies' (KCP&L, B&V, etc.) initiatives and how to use them
4. E-Save schemes for personal visits to low-income families.

Note that from this Activity-site a low-income family can pull information to adapt to changes and push their points (demand, idea, suggestions, etc.) using available means (cell phone, internet, etc.) The Activity-site will be developed and will be housed at the E-Save server in the E-save lab (FH527). The lab will serve as a showcase for approaches and solutions promoted by E-Save. Low-income and high-income families, commercial organizations, and researchers from other universities can visit the lab to visualize the E-Save approach in promoting the wise use of energy. These will be done by prototypes developed using smart appliances, digital devices, computing resources, etc. A visitor will get hands-on experiences on E-Save systems and will be able to push his/her idea or suggestion to the Activity-site after discovering E-Save initiatives in the lab.

Logo Competition

Since Paseo is strong in the performing arts, E-Save will organize a logo competition for Paseo students. The theme of the logo must emphasize some aspect of solar energy. Students will present their logos to judges at the E-Save lab at UMKC. E-Save professors will serve as the judges for this contest. Prizes will be awarded to the most creative logos. Students will be given a chance to describe the special characteristics of their logos and what they are meant to convey. It is proposed that \$50, \$30, and \$10 cash awards will be given to the top logo creators.

The winning logos will be displayed on UMKC's website and on the Activity Site. They will also be used for posters at the end of the project.

Budget

E-save professors and three graduate students will manage the entire one-semester (Fall 2012) project. The budget of the entire project has E-Save part and KCP&L part.

- a. Faculty support for E-Save professors (Drs. Cory Beard, Vijay Kumar, Yugyung Lee, and Praveen Rao) will be \$25,000.
- b. Assistantships for three students for the entire semester will be \$12,000.

Total: \$25,000 + \$12,000 = \$37,000.

The cost of creating and deploying an Activity site (special web site) and poster design for the workshop are included in \$37,000.

We estimate that the cost of the workshop will be around \$3,000. This includes traveling cost to the KCP&L location where the workshop will be conducted and prize money for project and

logo competition. We suggest \$300 (first prize), \$200 (second prize), and \$100 (third prize). KCP&L is kind enough to bear the cost of material, supplies, printing, food, drinks, etc., for the workshop.

Total: \$37,000 + \$3,000 = \$40,000

Tentative Schedule

	Workshop	Project	Activity Site	Logo Competition
Nov. 2012	Workshop (11/19) Keynote Talks Site Visit (KCP&L) Quiz competition	Introduction to Projects (11/19) Project Forming and Planning	Activity Site Design (11/1 – 12/31)	Announcement of Logo Competition
Dec. 2012		Project Meetings (1)	Implementation of Projects (1/1 – 4/15)	Logo Competition – online submission (Due: Feb. 22)
Jan. 2013		Project Meetings (2)		Winner Selection
Feb. 2013		Project Meetings (3)		
Mar. 2013		Project Meetings (4)		
Apr. 2013		1) Project Evaluation (4/1 – 4/15) 2) Project Presentations (4/26) 3) Project Award Ceremony (4/26)	Activity Site is Open (4/26) - Projects - Logo - Activity Photos & Videos - Lecture & Workshop Notes - KCP&L Info	Logo Competition Award Ceremony (4/26)
May 2013	Exhibition Musical Event Art Shows Students, Teachers, Parents, KCP&L & UMKC, Media people are invited.	Student presentations at a school-wide event (May 2013)		

Deliverables

1. E-Save will conduct the workshop.
2. Full access to Activity Site
3. Workshop project report
4. Recognition to winners in a UMKC event
5. Publication of successful collaboration in UMKC newsletter and magazine.

P.2.4.2 MySmartSolar.edu Workshop



Project MySmartSolar.edu

November 19, 2012
KCP&L Headquarters
1200 Main St, KCMO

Workshop hosted by
Kansas City Power & Light

Workshop developed by
UMKC E-Save through Automation and Education

Workshop Speakers and Guests:
Dean Kevin Truman of UMKC School of Computing & Engineering
Superintendent Dr. Steve Green of Kansas City, Missouri School District
Principal Dennis Walker of Paseo Academy of Fine and Performing Arts

E-Save through Automation and Education Team
Vijay Kumar
Coty Beard
Yugyung Lee
Praveen Rao

KCP&L representatives
Vice Pres. Chuck Caisley
Rita Boyd
Gail Allen

Dr. Kumar

Solar Energy Workshop
E-Save through Automation and Education of the University of Missouri – Kansas City, Kansas City Power & Light, and Paseo Academy of fine and performing arts joined forces November 19th to focus community awareness on the global energy crisis. KCP&L hosted an alternative energy workshop developed by the UMKC E-Save lab to educate and strengthen the energy knowledge of Paseo High School students. The workshop allowed students to explore renewable alternative energy, solar energy, and discuss its potential impact on our future. Vice President of Marketing and Public Affairs, Chuck Caisley, kicked off the workshop by empowering Paseo students to take perspective and become knowledgeable of the future in solar energy.

“You’re going to shape what our future country looks like.”
- Caisley

“Have fun, learn, and become passionate about solar.”
- Dean Truman

UMKC School of Engineering, Dean Kevin Truman spoke to students about the growing opportunity in alternative energy and development. Truman emphasized the importance of students taking charge of their education and make use of that education to better the environment. Superintendent Dr. Steve Green, and Principal Walker of Paseo Academy discussed the importance of Paseo Academy in the partnership with UMKC and KCP&L. Paseo students have the potential of bringing a new level of creativity to energy efficiency and awareness projects, providing a new perspective on existing issues.

UMKC **KCP&L**



“My challenge to you is to make sure your fingerprints are all over this project, so that the carbon footprint that we leave is less and less.”
- Dr. Green

Throughout the solar energy workshop lectured by Dr. Cory Beard, professor from UMKC, students were led into group discussions on the potential impacts of solar energy. Students discussed the various types and uses of alternative energy and also looked into their own daily energy consumption through household appliances and explored ways to be more energy efficient.

An activity to start students on a creative path toward energy included a poster contest where students created and presented a poster to their peers about what inspires them to learn more about energy. Entries included anything from solar panel powered cell phones and vehicles to a high fashioned solar paneled dress.

Students were presented with energy projects described during the workshop, by Dr. Vijay Kumar, UMKC E-Save team professor. These projects give a select number of students the opportunity to use their creative talent. It is the goal for students to give light and inspiration to these projects and create, as Kumar describes, “beautiful energy.”

The plans for Paseo Academy students are to establish focus groups and with the help of Paseo teachers and the UMKC E-Save lab, complete and present energy inspired projects. Students will have the opportunity to enter these projects in a competition with other Paseo students for an award. Those students will leave these projects with a better understanding of solar and alternative energy and the opportunity to develop leadership abilities through teamwork.



Outside of the select student inspired projects, there is also a Paseo Academy wide logo competition where all students are eligible to participate. This logo competition organized by Dr. Praveen Rao gives students an opportunity to create a logo for MySmartSolar.edu. One logo will be selected to represent MySmartSolar.edu and an award will be presented to its creator. MySmartSolar.edu is looking for the most creative and energy inspired logo that will encourage others to learn more about energy and its efforts.

Visit E-Save through Automation and Education at facebook.com/ESaveUMKC and twitter.com/ESaveUMKC



Katib, Warnke, Das, Blackton, Jainwal, Rajendran, Konduru

Created by: Ashlee Warnke

P.2.4.3 UMKC Today – Solar Energy Workshop Empowers Students

This article could not be included in the report due to copyright restrictions. It can be viewed at the following website:

<http://info.umkc.edu/news/solar-energy-workshop-empowers-students/>

P.2.4.4 UMKC Today – Students Present Ideas for Energy-Efficient Kansas City

This article could not be included in the report due to copyright restrictions. It can be viewed at the following website:

<http://info.umkc.edu/news/students-present-ideas-for-an-energy-efficient-kansas-city/>

P.2.4.5 UMKC University News Article

This article could not be included in the report due to copyright restrictions. It can be viewed at the following website:

<http://info.umkc.edu/unews/umkc-e-save-event-pairs-creativity-with-education-and-fun/>

This page intentionally blank

P.2.4.6 MySmartSolar.edu Project Presentation & Awards



E-Save Through Automation and Education MySmartSolar.edu

Ashlee Warnke, Bradley Nordell, Vijay Kumar, Cory Beard, Yuyung Lee, Praveen Rao



The coordination between the University of Missouri – Kansas City, Kansas City Power and Light, and the Paseo Academy of Fine and Performing Arts proved beneficial and a positive experience for Paseo students. Paseo students were given the opportunity to explore energy and the potential capabilities that alternative sources of energy have to offer. The primary focus of the University of Missouri – Kansas City's E-Save through Automation and Education is to promote energy efficiency, particularly solar energy. Students were given the opportunity to take researched information and relate what they discovered into potential application. Over a course of several weeks,

students were tasked with creating a project (report and presentation) focusing on different real life applications in the use of energy efficiency and solar energy. Three different topics were given students which included focusing on energy efficiency within a school or grocery store, family home (new or old), and apartment complex (either from the tenant or landlord perspective). These energy topics were divided among nine different groups averaging five to seven students per group. Mentors from University of Missouri-Kansas City took part to help

guide, educate, inspire, and focus students on the projects. Furthermore, the role of the mentors extended beyond the educational purposes of the project, to also promote interest in higher education.

Students were given a unique opportunity to export the growing potential of solar and alternative energies



this particular effect is something that should be considered whilst improving this project for future students. Nonetheless, despite these problems the response was overall positive, where students showed great interest and unique creativity in the organization and production of the report and presentations.



The response of the students toward the project was a synthesis between excitement and interest in learning energy efficiency and solar energy, more specifically in applying what they learned to real life scenarios, but also indifference with respect to the report or the challenges faced in large group work i.e. getting everyone to do an equal part in either the research or presentation. The latter seemed to cause dissonance and dissociation of some group members. Furthermore,

The main issues with this project are due to the difficulty level of the report. More specifically the extensive amount of research and writing that was expected exceeded the skill set of these students based upon their educational background. So in order to improve this project we conclude that the dissolution of the reports and replacing them with classroom activities would increase the profit of educating and inspiring students in the long run while



problems we discussed above. Nonetheless, may inadvertently add more presentations to go through, which we feel would just add to the opportunity of more creative projects. The most prominent improvement of a smaller group would be to



fixing some of the indifference and disinterest of the students caused by the reports. To elucidate further, the daily classroom activities would include student participation with the mentors regarding energy efficiency, solar energy, and even the teaching of essential research skills, which include teaching students how to

Rather than a typical research paper, students were given the opportunity to use their creativity

properly use internet search engine like Google, citing sources, and writing a technical report that will benefit them in their future academic endeavors. These classroom activities would focus on the prevalent problems plaguing our present day world which include: improving energy efficient technology, and applying new types of renewable energy sources. We will also delve into questions like why individuals in our society have the attitude they do to energy efficiency, ways to improve which include short term and long term goals, solar cells and the science of how they work, to what they can do as students to help. A final change that we would make is the reduction of group size, from five to seven students to three to four students which would in principle fix the further

give the students more opportunity to express their ideas, which would increase both learning and inspiration towards the project topics. Despite several problems (which are expected in any new idea and/or project) that were discovered through the duration of this project, we learned a lot about what works and what does not; and in the end this is always a positive. The greatest success of the project was due not

just in educating students on energy efficiency or "green energy" but in the creative outcomes of the student presentations and the inspiration that the mentors had on students in accordance to their interest in higher education, showing them that a unique, important, versatile research and education can be attained by choosing to attend a University like the University of Missouri-Kansas City.



P.3 KCP&L Employees

P.3.1 The Source Articles

P.3.1.1 This Grant Will Help Map Our Future

This grant will help map our future
KCP&L's SmartGrid project now has leg\$!

The U.S. Department of Energy (DOE) notified KCP&L late last month that we will receive a grant of just under \$24 million to help fund a fully integrated SmartGrid demonstration project in the Green Impact Zone and Midtown areas of Kansas City, Mo.

Most of the grants awarded by the DOE will underwrite new SmartGrid specific technology, like smart meters, being added across whole service areas. Ours is called a "demonstration project" because KCP&L will install a complete end-to-end SmartGrid system in the urban core to identify and improve:

- Beneficial energy-efficiency measures
- Electricity storage capabilities
- Sustainable energy technology, and
- Electricity delivery systems.

Also, while other SmartGrid projects are targeted to affluent customer segments, KCP&L's project will deliver meaningful benefits to the 14,000 customers in the urban core located between Main St. and Swape Parkway, and reaching from 37th to 52nd Streets. The goal is to provide neighborhood stabilization and infrastructure investments that will change people's lives.

In a nutshell, KCP&L will provide area homes and businesses with an advanced two-way interactive meter and offer many homes in the community an energy management system, the Energy Optimizer programmable thermostat, energy audits, weather-

KCP&L called a press conference last month to announce that our company will receive a Department of Energy grant to help fund a SmartGrid demonstration in the Green Impact Zone and Midtown areas of Kansas City, Mo. Speakers included Congressman Emanuel Cleaver, II (at podium), as well as Kansas City Mayor Mark Funkhouser (center).

ization and other energy-efficiency upgrades. The area's updated metering system will accommodate smart appliances, time-of-use pricing options and advanced residential and commercial energy management systems.

Matt Rogers, a senior adviser to Energy Secretary Steven Chu, said Kansas City's project was interesting because it will show how urban customers use information about energy consumption and how the grid performs over a period of years.

Chu (in a statement) said KCP&L's project (along with the others receiving grants) will "further our knowledge and understanding of what works best and delivers the best results for the Smart Grid, setting the course for a modern grid that is critical to achieving our energy goals."

The project also will provide rooftop solar systems and battery storage to add renewable energy while reducing and shortening system outages, along with current smart applications like automated meter reading, smart switches and smart capacitors that improve customer delivery and service quality. KCP&L also will work with schools to educate children about energy efficiency and collaborate with community organizations to train and recruit workers from the urban core in green technologies.

continued on page 11

5 The Source | December 28/29

the City of Edgerton on September 11. The required certified letters were sent to 18 landowners/neighbors, and signs were posted at the site. The team made a presentation at the Edgerton Planning Commission meeting and public hearing on October 13.

Unanimous approval

Although three neighbors made comments at the hearing regarding their concerns about noise and property values, they also complimented KCP&L's outreach efforts and indicated that they appreciated the communications and being included early in the process.

The Planning Commission unanimously voted to recommend to the city council and approve the request with recommended conditions regarding lighting, sound levels and related acoustical upgrades.

On November 13, the Edgerton City Council unanimously approved the rezoning and CUP amendment, which included the following conditions:

- Units may be operated without time restrictions as long as total annual hours are within the air permit requirement.
- Plant species may be substituted to be more compatible with the climate.
- KCP&L must construct barriers around the fuel metering skid, extend the height of existing barriers around generator, add sound-absorbing material and redirect exhaust away from neighboring homes.
- KCP&L must maintain facility lighting with low-wattage bulbs and fixtures to reduce light in neighborhood.
- The noise level at the KCP&L property line must stay below 65 decibels between 6 a.m. and midnight and 55 decibels between midnight and 6 a.m.

Throughout the process, Jan Zimmers, manager, Community Affairs, coordinated the communications and outreach efforts. Updates were provided to the Kansas Corporation Commission, and Tom Robinson, manager, Government Affairs, maintained contact with city and county public officials. Johnson County Commissioner Calvin Hayden attended the neighborhood meetings and the planning commission meeting and complimented KCP&L's outreach effort. Council members also commented favorably on KCP&L's outreach process.

"It is very rewarding to achieve our objective while at the same time establishing positive relationships with neighbors and the city," Marvin added. "Team members were highly engaged, and their extensive collaboration over the seven-month period resulted in creative solutions that led to the project's success. This was a true example of the GPE Winning Culture in action, which we will most certainly recognize and celebrate." ■



SmartGrid project

continued from page 6

When the project is completed, we'll have a working blueprint for installing an end-to-end SmartGrid system throughout our service territory, with documented knowledge of what worked best for our customers. In addition, this project is expected to provide our region with a competitive advantage in attracting new business development and investment.

KCP&L is working with a coalition of SmartGrid industry partners who together will contribute an additional \$24 million to the project. Current partners include Siemens, QATL, Landis+Gyr, Intergraph, GridPoint and Kokam America Inc. (Dow Kokam), who will provide equipment, technical expertise and in-kind financial support. KCP&L's investment will be approximately \$8 million. Watch for more updates as this project continues to take shape. ■



During the press conference, Jason Jones, manager, Demand Response (far right), showcased the types of energy-saving products and services that will be incorporated into the SmartGrid demonstration project.

December 2009 • The Source 11

P.3.1.2 KCP&L's SmartGrid Update

KCP&L's SmartGrid Update

2010 focus is on infrastructure planning and smart meter installation

Just last fall, KCP&L received a Department of Energy grant to help fund a fully integrated, five-year SmartGrid Demonstration Project in northern Sanjour City. The SmartGrid project will help customers better manage their electricity use, improve service reliability, and reduce outages and energy delivery costs. It will become KCP&L's blueprint for future neighborhood energy efficiency projects and services, electricity storage capabilities, sustainable energy technology and electricity delivery systems. Here's a quick update of the project's progress.

- KCP&L is investigating all area sectors in the SmartGrid area to determine the best way to get the most out of the project. The first step is getting customers more control of their electricity use.
- The KCP&L SmartGrid Demonstration Project connects with the Department of Energy to support the project in June.
- On June 15, KCP&L will co-sponsor a Green Impact Zone, a day of energy conservation activities in the SmartGrid area. The day will include a SmartGrid tour, a SmartGrid workshop, and a SmartGrid contest.
- This summer we will initiate communications with customers to keep them fully aware of the project's initiatives and timing.
- Smart homes will receive an energy management system, in-home display and other energy efficiency upgrades.
- We are partnering with the Green Impact Zone and a group of community and neighborhood leaders to increase understanding of the project's many benefits.
- KCP&L's customer service department will train several representatives to handle smart grid questions and ensure accurate and consistent answers.
- We've launched a website at www.kcpandl.com to update customers on project details.

May 2010 | Page 9

Partnerships for the future

IT partners with local universities through KCP&L's workforce development initiative

The SmartGrid Alliance (SGA) has been a key partner in KCP&L's workforce development initiative.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

SGA is a coalition of local universities, including the University of Utah, that are committed to providing workforce development programs for KCP&L.

May 2010 | Page 9

P.3.1.3 KCP&L's SmartGrid

[illegible]

P.3.1.4 New KCP&L SmartGrid Customer Program Launches



New KCP&L SmartGrid customer program launches



Lead Lineman-Splicer Dave Derr hanging one of the new routers in the SmartGrid project area.

What's the purpose of this project?

KCP&L's SmartGrid Demonstration Project will test smart grid system technology "end to end" and learn what features customers respond to and value. The new technology will give area customers more information about their electricity use, greater control over how they use electricity and new opportunities for cost savings. All information gathered during the project will help KCP&L make important decisions when we roll out smart grid technology across our entire service territory.

Later this month, KCP&L's SmartGrid Demonstration Project will go live as the first smart meters are installed in the Green Impact Zone.



During meter rollout, customers will be offered a free programmable thermostat that can increase their home heating and cooling system's energy efficiency. Like our Energizer Optimizer thermostats, the new smart thermostats will help KCP&L manage peak demand on hot summer days by raising those customers' temperature a few degrees or cycling the



customer's air-conditioning compressor intermittently. Unlike the Optimizer, these new thermostats can also be used to manage loads on KCP&L's system for reasons other than meeting summer peak demand.

The project will introduce smart grid benefits to customers in stages. Over the next several months, all customers in the Midtown demonstration project area (approximately 14,000 residents and businesses) will receive a new smart meter. Once their meter is installed, they will have immediate access to a web portal (website location) that provides their actual, near real-time usage information to help them manage energy consumption.



WEB PORTAL

The SmartGrid website will connect area customers to their smart grid data via an enhanced KCP&L AccountLink portal that provides near real-time energy information and engages them in usage decisions. Customers will also receive educational materials and training on how to use the information to better manage their usage.

8 The Source | October 2010

energizers

Outstanding KCP&L employees who live the GPE IDEAL

LUCI WELCH, Help Desk Analyst II A team member who's proud to serve

GPE Ideal: Accountability

Nominated by: Jennifer Flandermeyer, Sr. Manager,
Operations Compliance Programs

Customers also will be offered a free in-home display (IHD), a device that presents real-time usage and billing information, allowing customers to monitor their energy usage without having to access the internet. To qualify to receive an IHD, customers must be willing to:

- Participate in two feedback surveys; and
- Attend a workshop on how to monitor their energy usage and use energy saving techniques and other resources, such as weatherization programs, available to them in the area.

The system behind the system

KCP&L already has installed a portion of the smart grid infrastructure to support the SmartGrid project. This includes identifying and addressing any individual meter safety issues, and adding meter collectors and routers to enable two-way communication to the smart meters.

Many upgrades are planned for the area's substation and distribution systems as well as multiple, state-of-the-art computer systems to coordinate and automate many aspects of these systems. Plans also include demonstration of a one megawatt storage battery that will charge when demands are low and help serve loads when demands are high. Although these behind the scenes systems enable positive customer experiences, they will be largely invisible to our customers. *

This material is based upon work supported by the Department of Energy under Award Number DE-CE0000222.

Help Desk Analyst Luci Welch wasn't sure she wanted to be an *Energizer* when the Winning Culture Council selected her for recognition. "I really don't do anything different than the other Help Desk people do every day," she said. "If you're going to single out one of us, you should recognize us all."

That's a sentiment that many *Energizers* have expressed. They are team players who care about their work and their co-workers. They are high achievers who aren't looking for, and often shy away from recognition as a KCP&L employee of the year.

Nominator Jennifer Flandermeyer, senior manager, Operations Compliance Programs, thinks Luci "truly understands the meaning of customer service and what it is to show leadership in a process. She goes above and beyond to get the job done, to provide excellent service and a great customer experience."

Luci likes working with people and learning about them. As a member of KCP&L's Help Desk support team, she creates and closes user e-mail accounts and troubleshoots customer's e-mail, PC, applications and printer problems. She also works on setting up and resolving issues with the company's smart phones. And the team is currently working to create a centralized knowledge base that will provide Help Desk reps with technical answers more quickly.

"We all strive to do a good job," she said. "None of us has all the answers, so the Help Desk works together with the IT Division to provide the best service we can."

"Luci is highly conscientious about the quality of service she delivers to our customers and often goes beyond the call of duty," said Opal Butler, supervisor, Client Services. "It's not unusual for her to make a personal sacrifice to accommodate a last minute request."

Senior Clerk Lisa Parker added, "I enjoy working with Luci because she's always positive and helpful on the company's cell phone issues."

Outside of work, Luci is the member of a Platte-Clay Electric Co-Op focus group that reviews the utility's customer service questions and discusses ways to improve service. She's also an associate board member of the Edison Credit Union. *



October 2010 | The Source 9

P.3.1.5 Smart Answers to SmartGrid Questions

Smart answers to SmartGrid questions

By now, you have heard of **KCP&L SmartGrid**. Because you may begin getting questions from friends, family and neighbors about the project, we're providing this short guide to help you answer their questions. Feel free to tear this page out and keep it for future reference. For questions not answered here, all customers are welcome to contact the **KCP&L SmartGrid support team** at 1-800-535-7687 or by e-mail at smartgridinfo@kcpl.com.



PROJECT OVERVIEW

- Over the next five years, KCP&L will build, operate and test a new, two-way smart grid system in Midtown Kansas City, Mo. The project will cover Kansas City residents served by the Midtown substation, which includes the Green Impact Zone, a 150-square block revitalization initiative led by U.S. Rep. Emanuel Cleaver II.
- The smart grid technology will provide customers with tools they can use to monitor, manage and potentially reduce their bills. As customers use these new resources, the company will identify which applications customers find most useful.
- Like any other technology, customers must learn how to use the system to enjoy its benefits. Multiple communications and workshops are planned, along with community outreach and limited advertising.

PROJECT BENEFITS

- **CHOICE:** Customers will be offered new products and services free of charge (see Products & Services section on page 8) and they can decide which ones make the most sense for them.
- **CONTROL:** The new products and tools will give customers the ability to manage their electricity use, which can help save money on monthly bills and also benefit the environment.
- **CONVENIENCE:** The new technology will enable KCP&L to provide faster customer service:
 - Previously, customer service reps could only view monthly data. Now they will be able to see near real-time usage information when customers have questions or need help.
 - The updated system will instantly re-route service to prevent outages and restore service more quickly when outages occur.

continued on page 8

November 2010 | The Source 7

Smart answers to SmartGrid questions continued from page 7

PRODUCTS & SERVICES

Throughout the project, KCP&L will offer new tools that provide customers more information, and empower them to make more energy-efficient decisions. Three products will be available to residential and small business customers this year. They include:

- **MySmart Portal** – A personalized website that helps customers understand how they use electricity and enables them to make decisions that conserve energy, help the environment and save money.
- **MySmart Display** – An easy-to-use plug-in monitor that provides information similar to MySmart Portal without the need for an Internet connection.
- **MySmart Thermostat** – For homes with central air conditioning, this programmable thermostat can automatically set temperatures based on the season, resulting in savings on monthly heating and cooling bills.



For additional information, visit us online at www.kcplsmartgrid.com



FUTURE PRODUCTS & SERVICES

In 2011, we will introduce additional energy-saving tools and products for project homes and businesses. These include:

- **MySmart Network** – Select customers will receive a network system in their home or business that connects their lighting and electronic devices (computer, "smart" appliances, television, home security systems, etc.) and can be programmed to save them money.
- **Rooftop Solar Demonstrations** – A limited number of rooftop solar panels will be installed on businesses, schools and other buildings in the SmartGrid project area. These will provide clean, renewable energy and allow KCP&L to test how solar power can be used more widely.
- **Electric Vehicle Charging Stations** – These electric vehicle charging stations will be located throughout the SmartGrid project area and be available to customers who own the next generation of electric vehicles.
- **Time-of-Use Rates** – This optional customer program would change rates depending on the time of day electric is used and the cost of supplying it at that time. Time-of-use rates encourage customers to save money by shifting consumption to off-peak periods.

COMMUNITY INVOLVEMENT

KCP&L is partnering with numerous community and neighborhood groups throughout the smart grid area to help create awareness and understanding of KCP&L SmartGrid.

- **Green Impact Zone** – This is a collaborative effort to focus federal stimulus funding, including KCP&L's grant from the Department of Energy, into five Midtown neighborhoods.
- **Neighborhood meetings** – KCP&L will continue meeting with neighborhood associations in the project demonstration area to talk face to face with residents and answer any questions they might have about KCP&L's SmartGrid.
- **Project Living Proof** – This early-1900s home, located at 917 Emmanuel Cleaver II Blvd., has been retrofitted to promote and showcase the development of sustainable communities. KCP&L has partnered with Metropolitan Energy Center in this demonstration house to enable customers to see, touch and feel the new smart grid products and services.

P.3.1.6 Employees Keep SmartGrid On Track



Project updates

Employees keep SmartGrid on track

This is an exciting year for the SmartGrid demonstration project because we'll finish rolling out all planned products and services.

"Our employees who live in the SmartGrid area (and their friends and family) have been a tremendous help," said **Gail Allen**, senior manager of Customer Solutions. We had 10 residents test smart options before we offered them to the entire area. "We're very grateful to these volunteers," said Gail. "Their patience and feedback helped us work out glitches before general rollout."



Employees like Marc McFarlin in telecommunications are helping test SmartGrid products and services.

2012 SmartGrid goals

- **MAY:** Start offering Time of Use rates. These rates offer discounted pricing during off-peak hours to spread out system load.
- **MID-YEAR:** Install 10 electric vehicle charging stations.
- **FALL:** Complete efforts to better monitor and automate our distribution system in the area.
- **BY YEAR-END:** Finish installing 180 kW of solar energy, and install 2,000 Smart Thermostats.

In 2013 and 2014, the SmartGrid team will spend the rest of the pilot engaging customers and collecting, reporting and analyzing data. For more information, visit kcpSMARTgrid.com.

One Mobile

The One Mobile project team has made steady improvements toward implementing the new order scheduling and routing tool. Some Construction & Maintenance (C&M) employees began using One Mobile last December.

"It's been a bumpy road," said Lead Lineman-Spicer **Charlie Adams**. "But the technical group has been easy to work with and made a lot of progress." Charlie's favorite part so far is having access to e-mail and Instant Messenger, which makes getting information easier.

Plus, "having real-time information makes project coordination easier and more efficient," added C&M Supervisor **Martin Putnam**. For example, he now knows what work has been completed each day, instead of waiting for weekly reports. This speeds up the materials ordering process.



Martin Putnam enjoys the real-time information One Mobile provides.

"A lot of people worked very hard to get the system off the ground," said Mobile Support Analyst **Tina Warner**. "We appreciate feedback from field crews using the system as we make enhancements and roll the system out to other work groups."

In the second quarter, the project team will launch a Daily Time function to the pilot group. Later in the year, all One Mobile technology will roll out to field service professionals, Measurement Technology and Revenue Protection.

Questions? E-mail onemobile@kcp.com.

 **The Source** | March 2012

P.3.1.7 Our "Top-To-Bottom" SmartGrid Model Leads The Industry

September 2012



the Source

An employee publication produced by Corporate Communications

Our "top-to-bottom" SmartGrid model leads the industry

From generation to end use, new technologies are powering this neighborhood brilliantly



Relay & Instrument Technician Mark Flores showcases a fiber optic distribution panel that sends real-time distribution information to operators at 501 Charlotte.

Many utilities claim to have a smart grid. But what they usually mean is they have smart meters that send automated reads.

That's a promising start, but when we envisioned our SmartGrid Demonstration pilot, we tried to think outside the meter box. "We wanted to create a modern, end-to-end network so we could learn how to get the most benefits out of new technology," said **Bill Menge**, SmartGrid director. "Right now, very few companies are taking smart grid technologies to this level."

“We're not sure how the SmartGrid pilot will impact our future yet. It's a daunting task to bring equipment from the 1950s into the 21st century; we'll have to wait and see how well these integrations perform before we can identify the best solutions for our company.”

—Bonnie Sullivan, relay & instrument technician

But what exactly is a complete smart grid network? Our pilot was conceived around the upgraded Midtown Substation and all the system features connected to it. That includes advanced generation, distribution, energy storage and customer end-use programs. In other words, almost anything that would make you say, "Hey, that's smart grid," is part of our demonstration project.

All these complicated efforts are fully integrated using telecommunications and information technology infrastructure. This equipment provides us with information we use to benefit our company and customers.

"Our hope is that the knowledge gained through our SmartGrid pilot will allow us to deliver better tools and technology to all of our customers in the future," said Bill. "Pilot results could even contribute to the way smart grids are implemented around the country."

continued on page 2



DID YOU KNOW

- The SmartGrid pilot area consists of **14 circuits connected** in our Midtown Substation, which serves 14,000 customers.
- According to the Institute for Electric Efficiency, nearly a third of all U.S. households had smart meters as of May. **By 2015, more than half of residents are expected to have smart meters.**
- The lithium battery at the Midtown Substation is 53 feet long, weighs 66,000 pounds and **has the ability to serve 500 homes for about an hour.**



SAFETY TIP

Have an optometrist examine your eyes annually to detect issues early and maintain optimal eye health.

Powering the future: SmartGrid pilot at a glance



“As technology changes, we need to adapt with it. For instance, with the addition of fiber optics, all our smart technologies now talk to each other. It’s all about communication.”

—Mark Flores, relay & instrument technician



Smart generation



We’ll soon have up to 180 kilowatts of solar energy in the SmartGrid area. Some panels use new lithium ion batteries that charge during the day and let us use that power at night.

We also installed a large, rechargeable lithium ion battery at the Midtown Substation. When demand is low, the battery lets us store cheaper electricity, which we use when demand and

costs are higher. This results in cost savings for customers. Plus, the battery:

- **Reduces stress on the grid** during high demand
- **Lets us use stored energy** to temporarily restore power after outages



Smart substation/distribution

We installed several new computer systems that allow real-time monitoring and control of substation equipment and the grid. This allows:

- **Greater reliability.** In many cases, the grid is self-healing. The system recognizes faults immediately and can reroute power automatically to keep the lights on.

- **Faster restoration.** When we need to send linemen, the system tells us exactly which customers are impacted, so we can restore power faster.

- **Reduced operations costs.** Our smart network tells us how well we’re operating. This ensures we perform the right maintenance to keep our grid in top shape.



Smart customers

In many parts of our service territory, we read meters manually. Meters in other areas send us automated readings and usage information. Smart meters do this, too, but they also give customers usage information in real time. This allows them to adjust usage patterns immediately to reduce their next bill.

Plus, we offer optional smart products and programs that help customers make wise energy choices and better manage bills. For example, Time of Use rates offer discounted electricity prices when demand is low and higher prices when demand is up. Customers who choose this option save money by changing when they perform tasks that require electricity, like washing laundry.

Smart future

While our SmartGrid pilot offers promising benefits, some technologies are still in their infancy, so it’s too soon to say how the pilot will impact our future. The plan for now is to analyze equipment capabilities, efficiencies and costs through 2015, when the pilot ends. We’ll use those results to decide the next steps for our company. We’ll also share what we learn with the industry in hopes of improving the technology and making it more viable.

To learn more about the pilot? Visit kcplsmartgrid.com.

The Source | September 2012

P.3.2 The E-Source Articles

P.3.2.1 SmartGrid Comes to Leadership Link



October 8, 2010

[Fall Festival right around the corner](#)

[SmartGrid comes to Leadership Link](#)

[KCP&L co-sponsors welcome for new president of UCM](#)

[SharePoint 2010 is coming](#)

[WILL book club meeting today](#)

[The United Way online auction begins next week](#)

[You are responsible for protecting information](#)

[Reminder: offices closed](#)

Company News

Fall Festival right around the corner: Come one, come all to KCP&L's Fall Festival. The employee appreciation event will be held Saturday, October 23, from 11 a.m. to 4 p.m. at the Agricultural Hall of Fame in Bonner Springs, Kan. The Fall Festival will be open to employees and retirees, and their immediate families.

The celebration recognizes the contributions of all employees with plenty of food, fun, festivities, family activities and contests with prizes including a Blu-Ray disc player, iPod Shuffle, digital camera, stuffed animals, sports memorabilia and gift cards. Medals will also be presented for the best Halloween costume worn by employees and children ages 0-5, 6-11 and 12-18. So, come prepared to party and compete!

To RSVP, click on the *Employee Event* banner on the intranet, then go to the *Register* link. Please register by Friday, October 15. Questions? Contact HR Service Center at (816) 276-5555.

SmartGrid comes to Leadership Link: Leadership Link videos are an opportunity to hear from KCP&L SmartGrid core team leaders about what is going on around the company. Don't miss next week's series when five core team leaders provide a project update.

- Bill Menge, director, SmartGrid, gives a quick progress overview;
- Gail Allen, senior manager, Customer Solutions, explains the products and services customers will begin receiving next week;
- Vicki Barszczak, lead project manager, Delivery, describes the customer service support network;
- Scott Grafelman, manager, Asset Management & Planning, explains the infrastructure that supports the project;
- Paul Solder, senior manager, Government Affairs, describes how customers can use the new products and services to

12/20/2010

Page 2 of 3

monitor and manage their energy usage and, potentially, reduce their bills.

These videos will be a resource for all employees as they receive questions from friends, neighbors and family about this exciting community and company initiative would be greatly appreciated. You can view the series by stopping by a PowerNet monitor (televisions in the break rooms) or by accessing it on the intranet [here](#). Additional information can also be found on the SmartGrid website, www.kcp-smartgrid.com

[-Top-](#)

P.3.2.2 SmartGrid Meter Rollout Has Begun



P.3.2.3 A Battery-Powered Substation?



P.3.2.4 KCP&L Opens Innovation Park to Promote SmartGrid

Oct. 12, 2012

KCP&L opens Innovation Park to promote smart grid: This morning, KCP&L's SmartGrid team hosted a ribbon-cutting ceremony to open our new SmartGrid Innovation Park. The event also was attended by Congressman Emanuel Cleaver II and about 100 other community leaders and representatives, as well as reporters.

The park, located north of our Midtown Substation, offers an educational opportunity for the public. "KCP&L is committed to this SmartGrid Demonstration Project as a way to learn new ways to reduce electricity delivery costs, enhance reliability and make Kansas City smarter about energy," said President and CEO Terry Bassham. "But we also want to share what we are learning, and this park is a great way for all of our customers to come and learn more about the smart grid."

Park visitors will see how we're enhancing the electric grid in Kansas City's urban core by viewing:

- Our sophisticated, lithium ion battery storage system, one of the largest of its kind in the country.
- An informational kiosk that explains our Demonstration Project, including how power is distributed with a smart grid, the customer in-home experience and the history of electric meters.
- One of 13 smart grid solar arrays.

To learn more about the Demonstration Project, visit kcplsmartgrid.com.



Terry Bassham met with community representatives at this morning's ribbon cutting ceremony for SmartGrid Innovation Park.

P.3.2.5 SmartGrid Demonstration is Wrapping Up

From: Corporate Communications
Sent: Tuesday, November 04, 2014 1:40 PM
To: All Great Plains Energy Employees
Subject: e-News



Nov. 4, 2014

[Got news? Tell us](#)

[Archives](#)

[Employee milestones](#)

- [Missouri rate case page now available](#)
- [SmartGrid Demonstration is wrapping up](#)
- [Open Enrollment closes Friday](#)
- [Slow down, speedsters!](#)
- [Support our veterans \(treats and ceremonies\)](#)
- [Check out new goods in company store](#)
- [Happy you, happy holidays!](#)
- [Looking for development opportunities this year?](#)
- [St. Joe United Way donuts & duct tape celebration](#)
- [Hawthorn helps get necessities to those in need](#)

Missouri rate case page now available

As you read in [Terry Bassham's email](#) last week, we've filed to increase rates for our KCP&L-Missouri customers. If approved, new rates will be effective September 2015. We know many of you have questions about the case and want you to be aware of resources to answer them:

- We've created a new [rate case page](#) on kcpl.com, where you can learn helpful info like rate case drivers and the rate case process. The page will be updated throughout the rate case, so check back later to learn more.
- We'll also send a [card](#) with talking points to all employees through interoffice mail this week.

SmartGrid Demonstration is wrapping up

Our [SmartGrid](#) pilot is nearing its end, but the lessons learned from the project will eventually benefit all of our customers. The pilot began five years ago in a section of Kansas City's urban core. The Department of Energy, KCP&L and vendor partners invested more than \$48 million in infrastructure, system upgrades and customer programs. These efforts created a utility network with two-way communications between our SmartGrid customers and grid, allowing us to:

- Improve area reliability and reduce outage times.
- Reduce energy delivery costs by managing our system more efficiently.
- Give customers more info and control over energy use.
- Enable a variety of distributed resources to become part of the grid.

Our [SmartGrid](#) and [Customer Intelligence](#) departments are analyzing pilot results and evaluating the best way to apply lessons learned going forward. We'll share SmartGrid insights with you in the first quarter of 2015.

P.3.3 Other Employee SmartGrid Communications

P.3.3.1 SmartGrid Important Announcement (email)

Page 1 of 2

Paxton Marjorie

From: Snider Paul
Sent: Monday, December 20, 2010 11:44 AM
To: Paxton Marjorie
Subject: FW: Important Announcement from Mike Deggendorf
Importance: High
Attachments: SmartGrid Grant Release 11-24 FINAL.pdf

From: Corporate Communications
Sent: Tuesday, November 24, 2009 12:18 PM
To: All Great Plains Energy Employees
Subject: Important Announcement from Mike Deggendorf
Importance: High

We are pleased to announce that KCP&L will receive a Department of Energy grant to help fund a SmartGrid demonstration in the Green Impact Zone and Midtown areas of Kansas City, Mo. As part of this five-year project, KCP&L will implement advanced technologies that facilitate real-time two-way communication between our utility and customers. These technologies, which include energy-efficient products and services, will improve reliability, reduce energy delivery costs, enhance information flow and reduce our environmental footprint.

We believe our project will serve as a blueprint for future SmartGrid implementation and demonstrate our vision of the "utility of the future" to our customers and stakeholders. As part of this project, we will introduce innovative products and services that will help customers manage their electricity demand and consumption. In turn, the information we gather will help us identify and test beneficial energy-efficiency measures, storage capabilities and supply and delivery processes. By implementing smart technologies, KCP&L will be better able to manage demand, defer the costs of expensive power plant construction and enhance the performance and efficiency of our grid.

The SmartGrid demonstration will take place in Kansas City's Midtown urban core, in an area reaching from Main St. to Swope Parkway and 37th St. to 52nd St. This area includes the Green Impact Zone, a slightly smaller 150-block area. Congressman Emanuel Cleaver announced plans to bring innovative advanced technologies to the Green Impact Zone last summer. Half of the funding for our project is being provided as part of the Department's federal stimulus funding to modernize the electric grid and enhance the security and reliability of the energy infrastructure. The remainder will be provided by KCP&L and our technical partners for the project.

Because the Smart Grid demonstration will involve an intensive effort over a five-year period, we have formed a team led by Ed Matthews to manage the project. Reporting to Matthews will be Phil Cosey, who will be the project manager for the Green Impact Zone, and Ed Hedges who will be responsible for Smart Grid planning. Representatives from the six partner companies working with KCP&L on the Smart Grid project will also report to Ed Matthews.

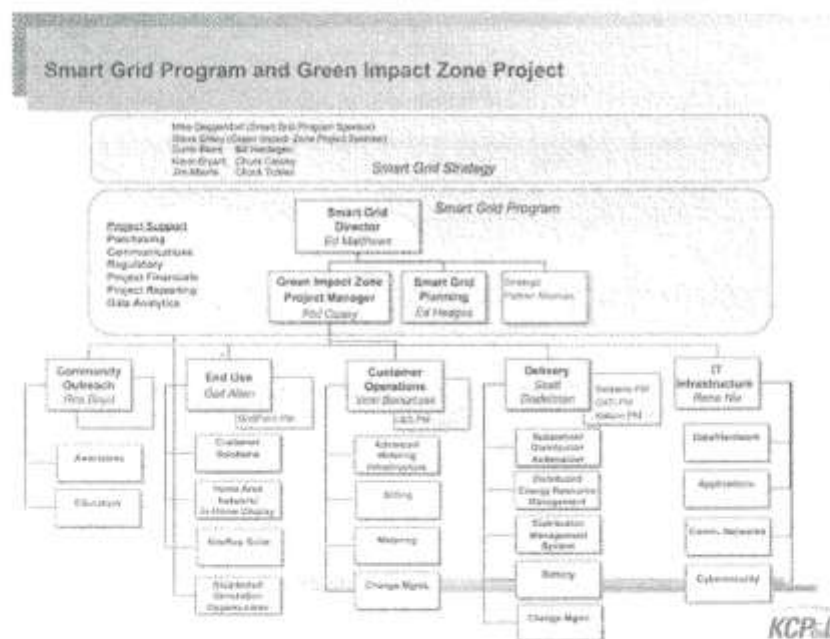
Team leaders for the five key project areas will coordinate their efforts with Phil Cosey. They are Rita Boyd, Community Outreach; Gail Allen, End-Use Products and Services; Vicki Barszczak, Customer Operations; Scott Grafelman, Delivery; and Rene Nix, IT Infrastructure. These leaders and their teams will be focused on the significant work ahead of us. While many members of SmartGrid team will not

12/20/2010

have all of there time dedicated to this project, we are committed to providing sufficient resources and focus to make this important effort a success. As the attached chart shows, additional members will be added to the team to manage specific functions.

The Smart Grid program will be supported by executive strategy team sponsors headed by myself (SmartGrid) and Steve Gilkey (Green Impact Zone). Additional team members include Jim Alberts, Curtis Blanc, Kevin Bryant, Bill Herdegen, Chuck Caisley and Chuck Tickles.

We are looking forward over the next five years to discovering the technologies that work best for our customers and our company as we explore the possibilities for the utility of the future. The lessons we learn and the research we collect will give KCP&L a regional advantage when determining where future federal and private dollars should be invested. A copy of today's media announcement is also attached. To learn more about our Smart Grid demonstration, visit www.kcpl.com and click on the "SmartGrid" icon.



12/20/2010

P.3.3.2 SmartGrid Project email to Delivery employees

Page 1 of 1

Paxton Marjorie

Subject: FW: Smart Grid Project**Attachments:** 204-10-1275 Fact Sheet-Smart Grid.pdf; SG Residential Customer Letter FINAL 8-31-10.docAll Employee e-mail from Mike Deggendorf (Sept. 7, 2010):

Earlier this week, all residential and commercial customers in KCP&L's SmartGrid project area received a letter and fact sheet (attached) introducing them to the project.

Because you interact with our customers, you have an important role in the project's success. That is why I'm sending this e-mail to the Delivery employees at F&M, Dodson and 1331.

Please take a few minutes to read the letter and fact sheet that are attached.

If you get customer questions about SmartGrid while working in the area, please feel free to share with them the benefits of the project. The smart grid will provide:

- Information and tools to help customers better manage their electricity use, which can result in lower monthly bills
- Improved system reliability (fewer outages; quicker outage response)
- A reduced carbon footprint (greener, more environmentally friendly energy)

You can also refer customers to the website at www.kcplsmartgrid.com for more information.

Thanks for your help and support with our customers in the SmartGrid project areas!

Mike Deggendorf

12/20/2010

P.3.4 SmartGrid Snippets

P.3.4.1 05/18/2012

5/18/2012

SMARTGRID SNIPPETS

RECENT ACTIVITY FROM YOUR SMARTGRID CORE TEAM



Key Milestones - Battery Arrived - Command Center 5.6 R1 installed in lab Resolved Issues - Installed "surprise" Service Pack for L&G Command Center 5.6 - eMeter resources participated in JDS - Manual intervention decision for TOU Bill Printing - GUI presentment in CIS for TOU billing - Completion of MRI agreement New Issues - Need to escalate nearly all vendors for response to Security Survey/Questionnaire - Bill Estimate does not work for TOU "Despite our resource constraints, our SmartGrid team is striving hard to complete tasks in a timely manner. Gaps in our Resource Plan continues to be a major concern of mine. We are prioritizing & rearranging tasks to facilitate the timely delivery of our program's implementation." Bill Menge, Director	Smart Distribution - Received Battery Control House - Finalized version 1.0 of Integration Diagram - Finalized outage plans for DMS /OMS /DSCADA testing in accordance with DSO requirements - Started network installation at Midtown - Completed 59/63 relays at Midtown - Finalized contract with Tropos for DA communications network - Issued POs for DA re-closers - Observed Initial FAT1 factory testing - Continuing daily calls with Siemens & Intergraph to keep FAT1 on track and begin designing FAT2 - Refining Go-Live scope and impacts - Working with Burns & McDonnell & The Structure Group, to identify additional DMS resources Education & Outreach - Established website refresh timeline - Presented education & outreach plans & tactics to Mike Deggendorf, Jeff Wolf, and Bill Menge - Completed Green Impact Zone "Meet Me At The Bridge" Event - Delivered cross-promotional emails to all SmartGrid email customers - MO & KS stakeholder updates	Smart Metering - Facilitated MDM Interface Design Joint Design Session with Siemens / eMeter, L+G, & Intergraph - Learned Service Pack for L+G Command Center 5.6 is required - L+G to provide bi-weekly updates on <i>Road Map</i> and releases - On-boarded IT contractor to lead MDM Phase 2 (D. Justman) - Escalated lack of communication with L+G and met on 5/11 - Defined UMKC SmartGrid EU lab assistance plan 1st Look for EU team at next portal release "F" (Famatina) - Honeywell's UMKC EMS is not OpenADR 2 compliant. Received proposals from L+G both communication ends to L+G NOC Smart Generation - Received Grid Battery on 4/26 - Wrote eSource article about the Battery Smart End-Use - Issued Lessons learned report on TOU/MDM Phase 1 - Printed T-Stat user guide - Announced 5thTendril Project Mgr - Finalized Webkey design, pending approvals
---	---	--



YOU have the power...
So make safe choices!









For KCP&L Internal use only.

P.3.4.2 06/01/2012

6-1-2012

SMARTGRID SNIPPETS

RECENT ACTIVITY FROM YOUR SMARTGRID CORE TEAM



Key Milestones

- Battery Livened
- Command Center 5.6 R1 in Production
- Meter Firmware Push started in Production
- 1st TOU Customers
- 1st HAN Customers

Resolved Issues

- Received Tendril Product Roadmap

New Issues

- Failed battery component needs replacement
- DA recloser controls not available till Aug

"Our Demo is getting more industry attention via requests for articles and interviews - both for the breadth of the project and our approach to customer engagement."

We've seen TANGIBLE results in recent weeks:

- 1st TOU & HAN customers
- 1st battery charge cycle
- SmartSub systems installed for site acceptance testing at Midtown."

Bill Menge, Director

Smart Distribution

- Began installation & Site Acceptance Testing (SAT1) for Siemens/ Intergraph Smart Sub components (SiCam, DMS Server, DCADA & User Interface)
- Tropos DA Communications setup in SG Lab at 801 Charlotte
- Siemens SiCam setup in SG Lab
- Onboarded *Structure* resource to assist with Smart Distribution schedule management and expediting
- Onboarded part time *Structure* resource to assist with DMS
- Moved Sensus integration to post go-live (not in original scope)
- DA recloser controls (SEL 651R) not available until August for testing
- ABB announced plan to acquire Tropos Networks, our Demo DA Communications provider.

Smart Generation

- Battery livened, charged and discharged.
- Minor component failure encountered in battery. To be replaced in 3 weeks.

Smart Metering

- Installed Command Center 5.6 R1 head end in production
- Began corresponding over the air meter firmware push for Command Center 5.6 R1

Smart End-Use (EU)

- Recruited 1st two TOU customers
- Recruited 1st eight HAN customers
- Site visit to Tendril for receipt of EU Product Roadmap
- Began reviewing alternative fixes for TOU bill estimates

Education & Outreach

- Presented education & outreach plans & tactics to Core Team
- Article in *SmartGrid News* related to web portal by G.Allen
- Intelligent Utility Daily* interviewed Menge
- SmartGrid Overview presentation to MO Society of Prof Engineers by Menge

General

- Scott Heldtbrink is new Executive Sponsor
- 5/31 Sponsor Meeting rescheduled to 6/14



SAT1 at Midtown



DCADA, SiCam, DMS Server, & UI at Midtown



Tendril Roadmap Presentation in Boulder, CO



Ed Hedges presenting EU vision to Tendril



For KCP&L Internal use only.

P.3.4.3 06/22/2012

6-22-2012

SMARTGRID SNIPPETS

RECENT ACTIVITY FROM YOUR SMARTGRID CORE TEAM



Key Milestones

- TOU ready for billing
- DOE Audit Started
- DOE Peer Review for 2012

Resolved Issues

- TOU Bill Estimator
- DOE "Go-Live" includes Functional DMS, Functional SmartSubstation and Tendril Famatina Portal
- Battery repair and re-commissioning set for week of 6/25

New Issues

- Meter firmware push experienced several failures
- Need assistance with CRM processes & info extraction

"It's good to see progress on the TOU Bill Estimator. This was not in the DOE scope, but customers seem to like this feature."

"38 TOU customers is more than I expected at this point in the game."

"Everyone's working hard & this project doesn't always have immediate or tangible rewards matching those efforts..."

Bill Menge, Director

Smart Distribution

- IT Completed installation of lab network hardware at F&M & 801 and are in final testing
- FAT for DERM completed in MN.
- Moved Sensus integration to post go-live (not in original scope)
- Successful DR test between OATI and Tendril

Smart Generation

- Battery site architectural plans at final stage (exclusive of educational signage)

Education & Outreach

- Monthly partner meeting with GIZ
- [Intelligent Utility Daily](#) article
- Outreach Events: Kaufmann Center, and GIZ LIHEAP
- SmartGrid overview presentation to IEEE GOLD Affinity Group (60)
- Outreach Case Study presented at EPRI SG Advisory Conference
- Submitted 10 abstracts for upcoming DistribuTech conference
- Potential scope reduction for Library partnership to single event vs series
- Bus signage contract completed. Buses to include All Star Game Shuttles

Smart Metering

- L&G continues to encounter technical issues with meter firmware broadcast for CC 5.6
- Siemens (eMeter) experienced 3rd communication outage since December

Smart End-Use (EU)

- TOU testing is completed and capable of bill calculation
- Recruited 38 total TOU customers
- Clarifying scope for UMKC ADR communications. Facilitated by attendance at Honeywell User Group
- IT tested proposed fix to TOU Bill Estimation issue. Appears to be ready for production

PMO & General

- Update at DOE Peer Review Conf
- D&T Started Annual DOE audit – no issues identified to date
- 2013-14 financial model/ budget distributed to Core Team
- May Financial Dashboard completed.
- PMP update to DOE (& all other DOE reporting completed)
- On-boarded Summer Interns
- 6/28 Sponsor Meeting to focus on 2013-14 budgets



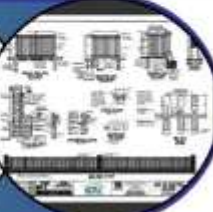
Sahan Fernando
Summer Intern



Brian Barnes
Summer Intern



[Intelligent Utility Article](#)



Architectural Design Elements at Battery Site



For KCP&L Internal use only.

P.3.4.4 07/17/2012

7-17-2012

SMARTGRID SNIPPETS

RECENT ACTIVITY FROM YOUR SMARTGRID CORE TEAM



Key Milestones

- 1st TOU Bills Issued
- EV Charger RFP Issued

Resolved Issues

- TOU Bill Estimator
- Battery repaired and re-commissioned
- Fiber installed to Battery Control House
- CRM resource added

New Issues

- L&G to migrate Command Center from 32 to 64bit server
- Potential delay in FAT for Siemens SiCam and HMI
- KCMO Library recently non-responsive on partnership

"Last week's billing mishap gave us an opportunity to improve how we handle such issues as a team – it made us stronger."

The roller coaster has hit the highest point and the thrill ride is here. Many moving parts are coming together and daily challenges being attacked."

Bill Menge, Director

Smart Distribution

- Battery repaired & re-commissioned
- Installed 1st DA device in SG Lab (S&C capacitor control)
- Received 1st faulted circuit indicator receiver w/ Tropos Radio for lab
- 2 Day Siemens SCADA Workshop
- Finalized battery site architectural improvement designs
- Daily status calls with Siemens and Intergraph (On-going activity)
- Fiber installed to battery control house

Smart End-Use (EU)

- EV charging RFP issued
- 1st TOU bills issued
- First meetings on success criteria and post-demo options (prior to presenting to VP Caisley)
- Weekly status call with Tendril and L&G (On-going activity)

Smart Metering

- Metrology produced bad demand reads resulting in artificially high bills. All customers re-billed & personally contacted. No other known ramifications. L&G investigating root cause
- L&G continued to encounter technical issues with meter firmware broadcast for CC 5.6. At 8 week mark now
- AMI Analyst Job description being market priced by HR

Smart Generation

- Battery site architectural plans completed

Education & Outreach

- New copy posted to current website
- Drafted layout for Website redesign
- MPSC Staff toured Demo House
- KCPL Interns toured Demo House
- Truman Medical Center "Mobile Market" partnership formed
- At least one abstract accepted for DistribuTech 2013
- First billboards in-place
- Began planning "Going Live" ribbon cutting event. Attempting to coordinate with rep Cleaver and Lineman's Rodeo
- Hosted HS Summer Intern



For KCP&L Internal use only.



Roland Maliwatt with MPSC Staff at Demo House



Truman Medical Center Mobile Market Bus



FCI Receiver with Tropos Radio in SmartGrid DA Lab



Summer Intern J. Summers (R) with Cassandra Johnson

P.3.4.5 08/03/2012

8-3-2012

58 days to "Going Live"

SMARTGRID SNIPPETS

RECENT ACTIVITY FROM YOUR SMARTGRID CORE TEAM



Key Milestones

- 2011 DOE Self Audit
- DMS operator training
- Remaining Budget Forecast

Resolved Issues

- Siemens presented schedule intended to meet 9/30 Scope
- Tendril coding errors for pricing display
- L&G upgraded to 64 bit server for Comm Ctr
- TOU billing code error fixed

New Issues

- Confirmed delay in FAT for Siemens SiCam and HMI
- Resignation of Integration Lead
- Internal resources to support bringing systems on-line w/ in KCP&L
- AMI analyst role needs to be filled before GC 5.7 upgrade
- SEL recloser control not available till 9/5

"SmartGrid team members will be working diligently to cover our resource shortages AND still get us to our 'Going Live' milestone on Sept 30."

Bill Menge, Director

Smart Distribution

- Operator Training on DMS user interface by Intergraph
- Began installation of Tropos field area network (FAN) for DA communication
- OMS/DMS Integration kick-off
- SEL Recloser relay delayed to 9/5

Smart End-Use (EU)

- EV Charger bids received and 30%+ higher than planned budget
- Portal & IHD pricing coding issue fixed by Tendril
- API REST calls fixed for Famatina portal
- Weekly status call with Tendril and L&G (On-going activity)
- TOU billing coding error found & fixed. All re-billed and called.

Education & Outreach

- Supported GIZ Homebuyer Workshop
- Supported GIZ Night Out Against Crime Event
- Next round of Billboards designed
- "Going Live" ribbon cutting event set for Oct 12
- Lineman's Rodeo Tours set for Oct 12
- Web-keys received. Ready to send.
- KCMO Library sustainability event tentatively set for Oct 10

Smart Metering

- L&G upgraded Head End server from 32 to 64bit to reduce 'clogging'
- L&G meter firmware broadcast for CC 5.6 at 10+ week mark now
- Installed AMI Collector in 801 lab
- Awaiting final eMeter Ph 2 Scope

Smart Generation

- DERM-to-ESB data exchange tested successful
- ESB-to-DERM waiting on HTTPS certificate. (M. Walters on vacation).

PMO & General

- DOE self audit submitted: no issues
- Escalation w/ Siemens introduces new Siemens project manager
- Budget forecast presented at Sponsor Meeting
- Added contract resource for short term DMS support
- Demo House & Battery Tour for Bodde, Bassham, & Heidtbrink
- MO Stakeholder Meeting – focus on Integration & Interoperability
- Structure's contract extended to year-end
- Responded to MPSC Cyber Security Docket
- Structure's Integration Architect resigned







DMS Operator Training

OMS-MDM Integration Kickoff

Billboard Copy

Bodde, Bassham & Heidtbrink touring Grid Battery

For KCP&L Internal use only.

P.4 State Agencies, Legislators and Regulators

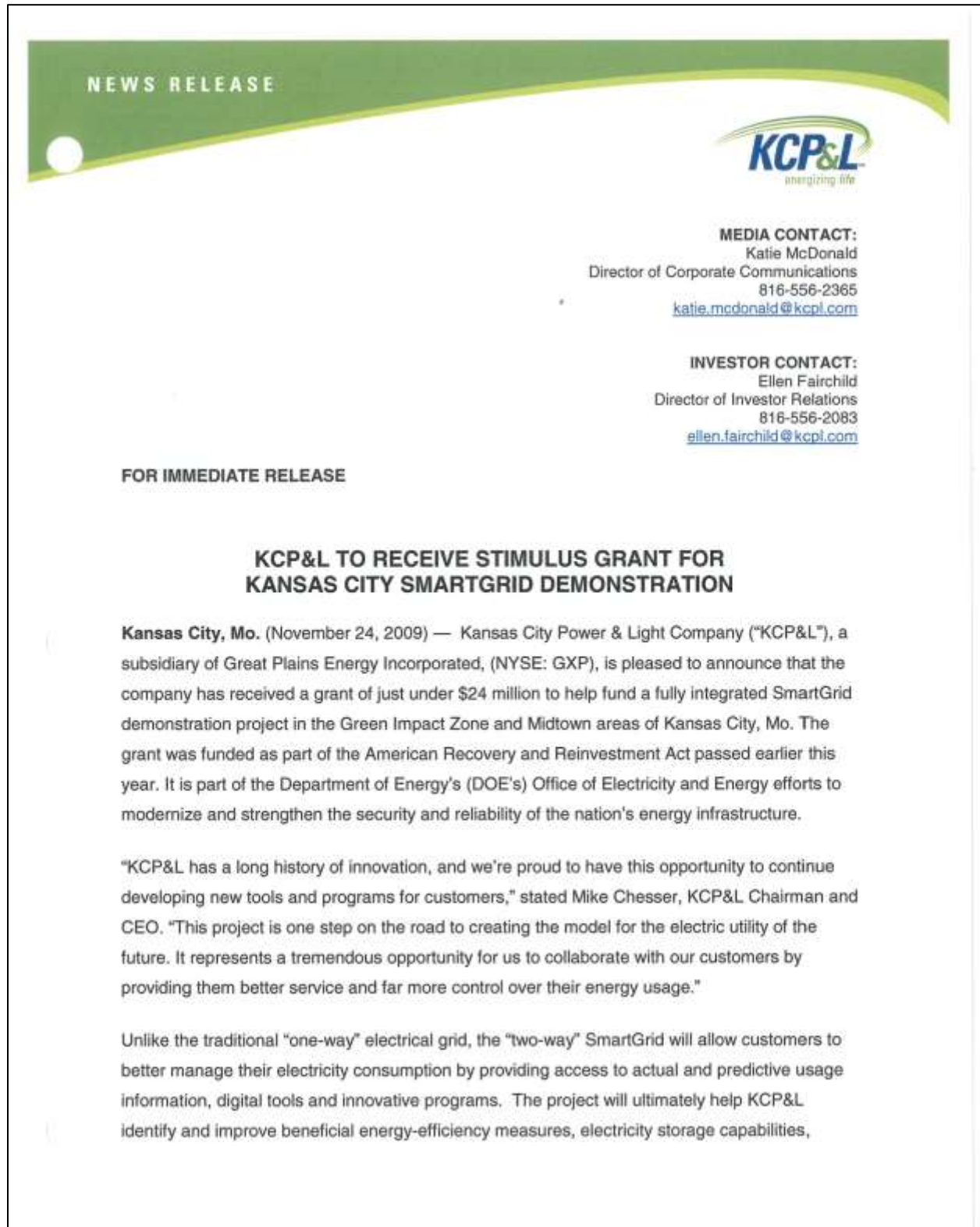
This page intentionally blank

This page intentionally blank

P.5 Electric Utilities and Smart Grid Industry

P.5.1 Industry Publications

P.5.1.1 Press Release – KCP&L to Receive Stimulus Grant for KC SmartGrid Demonstration, Nov. 24, 2009



sustainable energy technology and electricity delivery systems. Customers should realize many benefits as a result, including improved service reliability, reduced outages and energy delivery costs.

"The Green Impact Zone is an exciting project that will provide an excellent opportunity to learn the potential for investments in SmartGrid technologies, energy efficiency and weatherization, distributed generation and demand response programs," said PSC Chairman Robert M. Clayton III. "The Missouri Public Service Commission will watch, with great interest, this project as it moves forward and the lessons to be learned from it, including best practices and what investments bring the most cost-effective return. Congressman Cleaver, MARC, KCP&L and the other participants should be commended for their leadership and vision for Kansas City."

"We are grateful that the Department of Energy saw the unique importance of this project that seeks to make a series of comprehensive technology investments in areas that are in the greatest need. The Green Impact Zone SmartGrid initiative will complement other efforts to weatherize homes and create jobs in the urban core, while providing a platform for us to expand SmartGrid technology to other parts of our system," Chesser added. "I would like to thank Congressman Cleaver for his vision in creating the Green Impact Zone and we look forward to partnering with the community to complete this project."

KCP&L's SmartGrid demonstration project will be located in Kansas City's Midtown urban core, bounded by Main St. on the west, Swope Parkway on the east, 37th St. on the north and 52nd St. on the south. It overlays the innovative Green Impact Zone that Congressman Emanuel Cleaver II announced last spring, but also extends beyond it to other area Midtown homes and businesses to gather a larger sampling of customer needs and preferences.

"Typically, 'green' investments have been reserved for those who can afford the upfront cost. In neighborhoods like these, where the median income is less than \$20,000 a year, 'greening' is simply not possible," said Congressman Cleaver. "This plan removes that burden and reduces utility bills for those who need it most. We owe a debt of gratitude to KCP&L for taking the lead on this initiative and pulling together the right resources and partners to make the Green Impact Zone SmartGrid a reality. When you combine the SmartGrid with the job training, neighborhood stabilization and infrastructure investments also targeted here, 'green' is no longer an academic concept for someone else — it becomes a means to change people's lives right here in our urban core."

The total project is expected to cost more than \$48 million, half of which is being paid for with stimulus funding through the U.S. Department of Energy. KCP&L, working with a coalition of SmartGrid industry partners, is planning to contribute an additional \$24 million on the five-year project. Current project partners include Siemens, OATI, Landis+Gyr, Intergraph, GridPoint and Kokam America Inc. (Dow Kokam), who will provide equipment, technical expertise and in-kind financial support. The project is also receiving the support of The Electric Power Research Institute (EPRI), an independent, non-profit company that performs research, development and design in the electricity sector for the benefit of the public.

###

About KCP&L:

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at: www.greatplainsenergy.com or www.kcpl.com.

Forward-Looking Statements:

Statements made in this release that are not based on historical facts are forward-looking, may involve risks and uncertainties, and are intended to be as of the date when made. Forward-looking statements include, but are not limited to, the outcome of regulatory proceedings, cost estimates of the Comprehensive Energy Plan and other matters affecting future operations. In connection with the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, the registrants are providing a number of important factors that could cause actual results to differ materially from the provided forward-looking information. These important factors include: future economic conditions in regional, national and international markets and their effects on sales, prices and costs, including, but not limited to, possible further deterioration in economic conditions and the timing and extent of any economic recovery; prices and availability of electricity in regional and national wholesale markets; market perception of the energy industry, Great Plains Energy, KCP&L and GMO; changes in business strategy, operations or development plans; effects of current or proposed state and federal legislative and regulatory actions or developments, including, but not limited to, deregulation, re-regulation and restructuring of the electric utility industry; decisions of regulators regarding rates KCP&L and GMO can charge for electricity; adverse changes in applicable laws, regulations, rules, principles or practices governing tax, accounting and environmental matters including, but not limited to, air and water quality; financial market conditions and performance including, but not limited to, changes in interest rates and credit spreads and in availability and cost of capital and the effects on nuclear decommissioning trust and pension plan assets and costs; impairments of long-lived assets or goodwill; credit ratings; inflation rates; effectiveness of risk management policies and procedures and the ability of counterparties to satisfy their contractual commitments; impact of terrorist acts; increased competition including, but not limited to, retail choice in the electric utility industry and the entry of new competitors; ability to carry out marketing and sales plans; weather conditions including, but not limited to, weather-related damage and their effects on sales, prices and costs; cost, availability, quality and deliverability of fuel; ability to achieve generation planning goals and the occurrence and duration of planned and unplanned generation outages; delays in the anticipated in-service dates and cost increases of additional generating capacity and environmental projects; nuclear operations; workforce risks, including, but not limited to, retirement compensation and benefits costs; the ability to successfully integrate KCP&L and GMO operations and the timing and amount of resulting synergy savings; and other risks and uncertainties.

P.5.1.2 Press Release – KCP&L Selects Siemens for SmartGrid Demonstration Project, Nov. 24, 2009



Siemens USA Newsroom [Contact](#)

[Home](#) > [Newsroom](#) > [Press Releases](#) > [KCP&L Selects Siemens for Smart Grid Demonstration Project](#)

[Feature](#) | [Press Releases](#) | [In the News](#) | [Executive Pulse](#) | [Multimedia](#) ▼ | [Media Contacts](#)

KCP&L Selects Siemens for Smart Grid Demonstration Project

Category: Infrastructure & Cities (Smart Grid)

Tuesday, November 24, 2009 8:08 am EST

Dateline: ORLANDO, Fla.

Public Company Information:
NYSE: SI

Siemens Energy, Inc. has been selected by KCP&L, Kansas City, Missouri, to provide a Smart Grid demonstration project showing how the latest technologies will enable the advanced utility of the future. Partial funding for the project is from the American Recovery & Reinvestment Act's Smart Grid Investment Grant Demonstration Project program. Siemens' scope of the project includes Siemens Spectrum Power™ distribution management system to coordinate the Midtown substation, Siemens Smart Substation™ Controller and control of all intelligent distribution field equipment.

"Siemens is pleased to take a leadership role in the development and implementation of KCP&L's Smart Grid demonstration project"

KCP&L's Smart Grid demonstration project consists of four major components: distribution network automation, distribution network management, distributed energy resource and demand response management and advanced metering infrastructure and meter data management. The combination of functions will provide the basis with which to enable and manage the KCP&L Green Impact Zone in this project. The systems will be fully integrated with existing systems at KCP&L, functioning as an integral part of the KCP&L enterprise. As a whole, the program will verify a full range of standard modeling and information exchange protocols necessary to implement a functional, cost-effective and secure intelligent grid. The project will define, validate and verify the necessary parameters and potential solution adjustments for KCP&L to plan and implement a system-wide rollout of the successful technologies and processes.

"Siemens' technology will help KCP&L enhance service for the entire Kansas City Midtown area through improved reliability, reduced energy delivery costs, more efficient energy consumption, improved carbon footprint and enhanced information flow," said Ed Matthews, director, Smart Grid, KCP&L. "KCP&L believes this project will serve as a blueprint for future Smart Grid implementation and will accelerate a realization that the 'utility of the future' safely delivers reliable electricity with greater efficiency, reduced costs and improved environmental performance."

KCP&L will invest approximately \$48.1 million and deliver meaningful benefits to the 14,000 customers in the Green Impact Zone area.

The Spectrum Power distribution management system (DMS) and Smart Substation™ Controllers provide the operational backbone of the system supporting significant levels of automation on the feeders, complex and automated feeder reconfiguration decisions and tightly integrated supervision with the control centers.

The DMS serves as the primary point of integration for the facilities, consumer, electrical system, load, distributed energy resource and real-time substation and feeder information. It includes outage management, distribution supervisory control and data acquisition, distribution network analysis and integration with KCP&L's existing mobile workforce management system, geographic information system and other supporting systems.

The Smart Substation™ controller establishes an intelligent substation information technology infrastructure with the ability to make feeder and substation reconfiguration decisions, control field equipment, verify operations, track local grid capacity and coordinate with the control center. This "proactive" management of the distribution grid is a necessary step in preparing for the integration of significant levels of renewable and variable energy resources, controllable demand and demand response. With the addition of distributed energy resources, the DMS and Smart Substation™ become essential to managing Volt/VAr conditions, adaptively modifying protection equipment settings and managing crew safety.

"Siemens is pleased to take a leadership role in the development and implementation of KCP&L's Smart Grid demonstration project," said Mike Edmonds, vice president and general manager of Siemens Energy, Inc.'s Power Distribution Energy Automation business. "The approach is focused on increasing automation to improve grid reliability and increase controllability, while setting the stage for the integration of alternative energy sources and enhancing the opportunities for demand response."

Because Siemens understands the complete energy conversion chain, the company is able to transform today's grid into a living infrastructure that is smart enough to respond quickly, flexibly and comprehensively to society's energy needs. And Siemens also incorporates solutions for commercial and industrial applications as well as smart homes including building automation, IT systems integration, advanced lighting technology and energy efficient appliances for a comprehensive Smart Grid solution.

The Siemens Energy Sector is the world's leading supplier of a complete spectrum of products, services and solutions for the generation, transmission and distribution of power and for the extraction, conversion and transport of oil and gas. In fiscal 2008 (ended September 30), the Energy Sector had revenues of approximately EUR22.6 billion and received new orders totaling approximately EUR33.4 billion and posted a profit of EUR1.4 billion. On September 30, 2008, the Energy Sector had a work force of approximately 83,500. Further information is available at: www.siemens.com/energy.

About Kansas City Power & Light

Operating from headquarters in Kansas City, Missouri, KCP&L has evolved into a full-service energy provider and resource. The company was founded in 1882 and has become one of the Midwest's most affordable energy suppliers because of our leadership in fuel procurement, plant

P.5.1.3 Press Release – KCP&L Selects Intergraph Smart Grid Technology, Dec. 01, 2009

KCP&L Selects Intergraph(R) Smart Grid Technology

Solution to maximize network efficiency, reliability and performance for project funded by ARRA



HUNTSVILLE, Ala., Dec. 1 /PRNewswire/ -- KCP&L has selected Intergraph® smart grid technology for a demonstration project funded by the American Recovery and Reinvestment Act (ARRA) of 2009 to improve network operations and efficiency in an economically challenged area of Kansas City, Mo.

Using Intergraph utilities infrastructure and operations management technology, KCP&L will develop a comprehensive smart grid to improve reliability, increase energy efficiency and reduce costs in support of an urban revitalization program that could become a model for future efforts nationwide. Intergraph will provide KCP&L with its Smart Grid Operations Command-and-Control Center as well as related implementation, project management and training services.

"As an Intergraph customer for 20 years, we are confident in deploying the company's smart grid technology as the foundation for this crucial project," said Ed Matthews, smart grid director for KCP&L. "We look forward to expanding our use of Intergraph solutions to provide consolidated command and control of our smart grid network for optimal performance and service."

KCP&L has relied on Intergraph geographic information system (GIS) technology for many years to efficiently maintain and manage grid assets. The utility also leverages Intergraph InService mobile workforce management technology to empower field crews to work as productively and seamlessly as possible with the back office.

As a new addition to these solutions, KCP&L will now deploy the Intergraph Smart Grid Operations Command-and-Control Center. The command-and-control center will provide a GIS foundation to distribution management and SCADA functionality to maximize grid efficiency. By working with Intergraph on this smart grid project, KCP&L believes it will not only improve service to customers in the designated area, but also create new employment opportunities and foster economic development in Kansas City, as well as create a blueprint for future smart grid projects around the world.

"Utilities across North America are quickly realizing the unique value of Intergraph's geospatially-powered solutions for creating a common operating picture for the smart grid to achieve maximum efficiency and more informed decision-making," said Jay Stinson, vice president of Utilities & Communications at Intergraph. "We are excited to expand our expertise by working with KCP&L on this ARRA funded project that will have such a profound impact on both Kansas City and the electric industry as a whole."

For further details on Intergraph technology for electric utilities, please go to: <http://www.intergraph.com/utilities>.

P.5.1.4 Press Release – Landis+Gyr Supports SmartGrid Demonstration Project at KCP&L, Sept. 09, 2010**Landis+Gyr Supports Smart Grid Demonstration Project at Kansas City Power and Light**

ATLANTA, GA. – Sept. 9, 2010 – Landis+Gyr is deploying its Gridstream™ solution as the advanced metering and grid automation technology platform for Kansas City Power & Light's (KCP&L) comprehensive SmartGrid demonstration project.

The project includes significant infrastructure upgrades to the demonstration area substation and distribution network. The project provides customers with in-home displays, programmable thermostats, and home area networks, all designed to help customers manage their energy usage. KCP&L's SmartGrid project also includes installation of rooftop solar panels at both residential and commercial sites, electric vehicle charging stations and battery storage.

Beginning in October, Landis+Gyr and KCP&L will install Gridstream RF smart grid technology that enables two-way communication between the utility and the meter. The technology will be deployed in and around the "Green Impact Zone," which is a collaborative effort to focus federal stimulus funding on neighborhoods in Kansas City's Midtown urban core.

"Our SmartGrid project will give customers the information they need to better control how and when they use electricity, which can result in a lower monthly bill," said Mike Deggendorf, KCP&L Senior Vice President for Delivery. "It will also improve reliability and help us respond quicker to outages. Through this project we expect to learn a great deal about customer preferences as well as how various smart grid technologies work together, both of which will be critical as we look to build the utility of the future."

KCP&L's SmartGrid demonstration includes smart generation, distribution and consumption programs to improve efficiency and reliability. The Gridstream solution supports these objectives by providing grid automation, advanced metering and in-home networking capabilities with a single communications network.

"We're excited to participate in this ground-breaking demonstration project," said Richard Mora, CEO of Landis+Gyr North America. "The KCP&L project should validate many direct examples for involving the consumer directly in generation and conservation of energy. Landis+Gyr is working with utilities around the world on similar projects and is actively implementing standards-based systems that enable monitoring and control of distributed generation, charging stations, smart thermostats and appliances, and other load management tools."

Landis+Gyr's Gridstream RF technology uses a powerful radio mesh network to communicate with meters and distribution devices, such as monitors and switches. Gridstream devices use the Smart Energy Profile standard to communicate with smart appliances and in-home units. This technology is currently being deployed to millions of residential and commercial sites across the United States.

##

About Landis+Gyr

Landis+Gyr is the leading provider of integrated energy management solutions tailored to energy company needs. With a global presence and a reputation for quality and innovation, Landis+Gyr is unique in its ability to deliver true end-to-end advanced metering solutions. Today, the Company offers the broadest portfolio of products and services in the electricity metering industry, and is paving the way for the next generation of smart grid. With annualized sales of more than US\$1.25 billion, Landis+Gyr operates in over 30 countries across five continents, and employs nearly 5,000 people with the sole mission of helping the world manage energy better.

About KCP&L:

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L

P.5.1.5 Press Release – Tendril Selected for KCP&L Smart Grid Demonstration Project, Oct. 13, 2010**Tendril Selected for KCP&L Smart Grid Demonstration Project**

Boulder, Colo.– October 13, 2010 – [Tendril](#), a leading energy management technology provider that is helping to drive the large-scale deployment of the Smart Grid, has been selected for a four-year-long Smart Grid Demonstration Project for KCP&L. Rollout of the project to 14,000 homes and businesses served by KCP&L will begin soon. This demonstration project will use the Tendril platform, an end-to-end energy management and consumer engagement solution.

The Tendril solution will provide home energy management devices such as in-home displays, load control switches, smart thermostats and appliances, as well as capabilities to support emerging technology such as Electric Vehicle (EV) recharging and Distributed Generation. The Tendril platform helps customers gain insight and control over their energy use by utilizing products and applications that communicate directly with KCP&L's existing infrastructure, and subsequently provide customers with the information they need to make good energy management choices day to day. The platform also allows the utility to better understand customer energy usage patterns and better manage load to avoid major service interruptions.

"One of the main goals of the project is to demonstrate how consumers can assist the utility in energy conservation," notes Tendril CEO Adrian Tuck. "The key is creating an awareness of behavior around Energy Efficiency and promoting active engagement."

The project will deliver two levels of technology to participants:

All customers will have access to Tendril Tracker, an energy management portal that presents historical energy usage data aimed at educating customers on their energy usage patterns.

It will also provide community comparison features so that consumers can compare their usage to other KCP&L customers with a similar profile, as well as receive recommendations on energy saving behaviors and choices.

Customers can also elect to receive, in addition to the energy management portal, the following:

- Tendril Insight: An in-home display that records energy use and displays near real-time feedback and forecasted bill information on energy consumption and cost
- Tendril Set Point: A smart thermostat that can be programmed manually or remotely via the Internet
- Tendril Volt: A smart outlet for device control and monitoring
- Optional control capability for ZigBee® compliant third-party devices

Additional elements include:

Plug-in Hybrid Electric Vehicle (PHEV)/Plug-In Electric Vehicle (PEV) charging stations – The Tendril Electric Vehicle application, an Internet delivered software interface will assist consumers and the utility in managing the recharge activities of EVs both in the home and in public charging stations.

8.50 x 11.00 in

P.5.1.6 Press Release – KCP&L Launches SmartGrid Project, Nov. 10, 2010

P.5.1.7 Press Release – OATI is Selected for the KCP&L SmartGrid Demonstration Project, Jan. 28, 2011**For Immediate Release**

For more information contact:
Jerry Dempsey, Vice President
Open Access Technology International, Inc.
763.201.2000

OATI webDistribute is Selected for the KCP&L Smart Grid Demonstration Project

Open Access Technology International, Inc. (OATI) has been selected by Kansas City Power and Light (KCP&L), to integrate OATI webDistribute into KCP&L's Smart Grid Demonstration Project. OATI webDistribute will provide KCP&L the platform and the applications needed to improve power system reliability, economics, and environmental compliance by integrating Demand Response (DR) and Distributed Energy Resources (DER) with power system and energy market operations.

OATI webDistribute is a U.S. patent pending solution, designed with scalability, built on a modern web platform in a Software-as-a-Service environment, and supports industry standards for enterprise and business-to-business interoperability. OATI webDistribute provides a unique combination of capabilities to address the current and the emerging Smart Grid requirements, including high-penetration of variable generation, DR/DER programs, and plug-in electric vehicles. In addition, OATI webDistribute provides ancillary services from demand-side resources for balancing variable generation, environmental compliance tracking, and distribution congestion management. It is also designed with capabilities for incremental deployment, while leveraging existing utility legacy systems and data, smart metering, and communications capabilities. OATI webDistribute adheres to stringent cyber security and information privacy measures, and is compliant with NERC CIP standards.

"The proposed solution brings together key functional components, including customer and resource management, DR and DER dispatch and control, Distribution Grid Monitoring and Congestion Management, as well as integration with system operations," stated Sasan Mokhtari, President and CEO of OATI.

"KCP&L's SmartGrid demonstration project will serve as the foundation to plan and study the feasibility of a broader roll out of the smart grid technologies," said Mike Deggendorf, KCP&L senior vice president of Delivery. "The technology provided by OATI is vital to helping us reach this goal."

OATI (www.oati.com) is an industry leading provider of Smart Grid, Energy Trading and Risk Management, Transmission Scheduling, Congestion Management, and Market Management products and services, with headquarters in Minneapolis, Minnesota and an office in Redwood City, California. For more information please contact sales@oati.net.

OPEN ACCESS TECHNOLOGY INTERNATIONAL, INC.
3300 Berkshire Lane North | Mail Drop F | Minneapolis, MN 55441 | OFFICE 763.201.2000 | FAX 763.201.5333 | www.oati.com
This document contains proprietary and confidential information of OATI, Inc. Do not copy or distribute without explicit permission of OATI, Inc.

P.5.1.8 Press Release – KCP&L has selected Siemens to implement Smart Grid technology, Feb. 02, 2011

Kansas City Power & Light Partners With Siemens for Smart Grid Demo... <http://www.printthis.clickability.com/pt/cpt?expire=&title=Kansas+City...>



PRINT THIS

SAN DIEGO, Feb. 2, 2011 /PRNewswire/ -- **Kansas City Power & Light (KCP&L) has selected Siemens to implement Smart Grid technology innovations to demonstrate the feasibility and benefits of a comprehensive Smart Grid solution. The project includes the Siemens Smart-Substation™ controller, which enables intelligent substations, and the Siemens Spectrum Power™ Distribution Management System (DMS), which facilitates operations information management and security.**

SIEMENS

(Logo: <http://photos.prnewswire.com/prnh/20070904/SIEMENSLOGO>)

The KCP&L Smart Grid demonstration is part of the American Recovery & Reinvestment Act's (ARRA) Smart Grid Demonstration Project program. It will apply the latest advances in energy technology focused around intelligent substations to help monitor and manage energy delivery, integrate renewable energy sources and enable consumers to actively manage their energy usage. The project covers the Green Impact Zone (GIZ) of the Missouri initiative and surrounding neighborhoods. The GIZ (www.greenimpactzone.org) is designed to reinvigorate an urban area of Kansas City, Missouri.

This key demonstration project encompasses the pertinent aspects of a Smart Grid. It includes four major components: distribution network management, distribution network automation, distributed energy resource and demand response management. It will utilize an advanced two-way metering infrastructure, meter data management, demonstration of time-of-use pricing and state-of-the-art customer end-use tools. In addition, hybrid electric vehicle charging, utility-scale battery storage and roof-top solar technology will provide the basis for enabling and managing renewable and sustainable energy resources within the project area. The project represents a substantial step forward in establishing interoperable end-to-end Smart Grid solutions based on existing and proposed National Institute of Standards and Technology (NIST) standards.

"The demonstration project will define, validate and verify the value proposition and potential solution adjustments for KCP&L," said Mike Deggendorf, KCP&L senior vice president of Delivery. "This will serve as the foundation to plan and study the possibility of broader implementation of Smart Grid technology."

The project includes the Siemens Smart-Substation™ controller that provides an intelligent substation information technology platform to enable real-time substation and feeder automation, Volt/VAR control and demand management. The controller will integrate a variety of feeder devices from multiple vendors using the international substation standard IEC 61850 to provide improved data availability, increased flexibility and interoperability.

The Siemens Spectrum Power™ Distribution Management System (DMS) will facilitate operations information management and security, in real-time, coordinating control center supervision with smart substation and feeder automation. The DMS will be integrated with a number of KCP&L's existing and planned systems, including geographic information systems (GIS), meter data management system (MDMS), distributed energy resource management (DERM) and others.

Kansas City Power & Light Partners With Siemens for Smart Grid Demo... <http://www.printthis.clickability.com/pt/cpt?expire=&title=Kansas+City...>

"Siemens is proud to work with KCP&L to break new ground in the evaluation and adoption of Smart Grid technologies. This benchmark project offers a vast potential in understanding value and benefits essential to promoting efficient energy distribution," said Thierry Godart, vice president and general manager of Siemens Energy, Inc.'s Energy Automation business in North America. "Technologies installed in the system will build a solid framework and prepare the grid to support expansion of consumer options. This includes high impact renewable energy options, charging stations for electric vehicles, home energy management and other possibilities."

Siemens understands the complete energy conversion chain and is able to transform today's grid into a living infrastructure that is smart enough to respond quickly, flexibly and comprehensively to society's energy needs. Siemens also incorporates solutions for commercial and industrial applications as well as smart homes, including building automation, IT systems integration, advanced lighting technology and energy efficient appliances for a comprehensive Smart Grid solution.

The **Siemens Energy Sector** is the world's leading supplier of a complete spectrum of products, services and solutions for the generation, transmission and distribution of power and for the extraction, conversion and transport of oil and gas. In fiscal 2010 (ended September 30), the Energy Sector had revenues of approximately EUR25.5 billion and received new orders totaling more than EUR30.1 billion and posted a profit of more than EUR3.6 billion. On September 30, 2010, the Energy Sector had a work force of more than 88,000. Further information is available at:

www.siemens.com/energy.

About KCP&L

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at www.greatplainsenergy.com or www.kcpl.com.

SOURCE Siemens Energy, Inc.

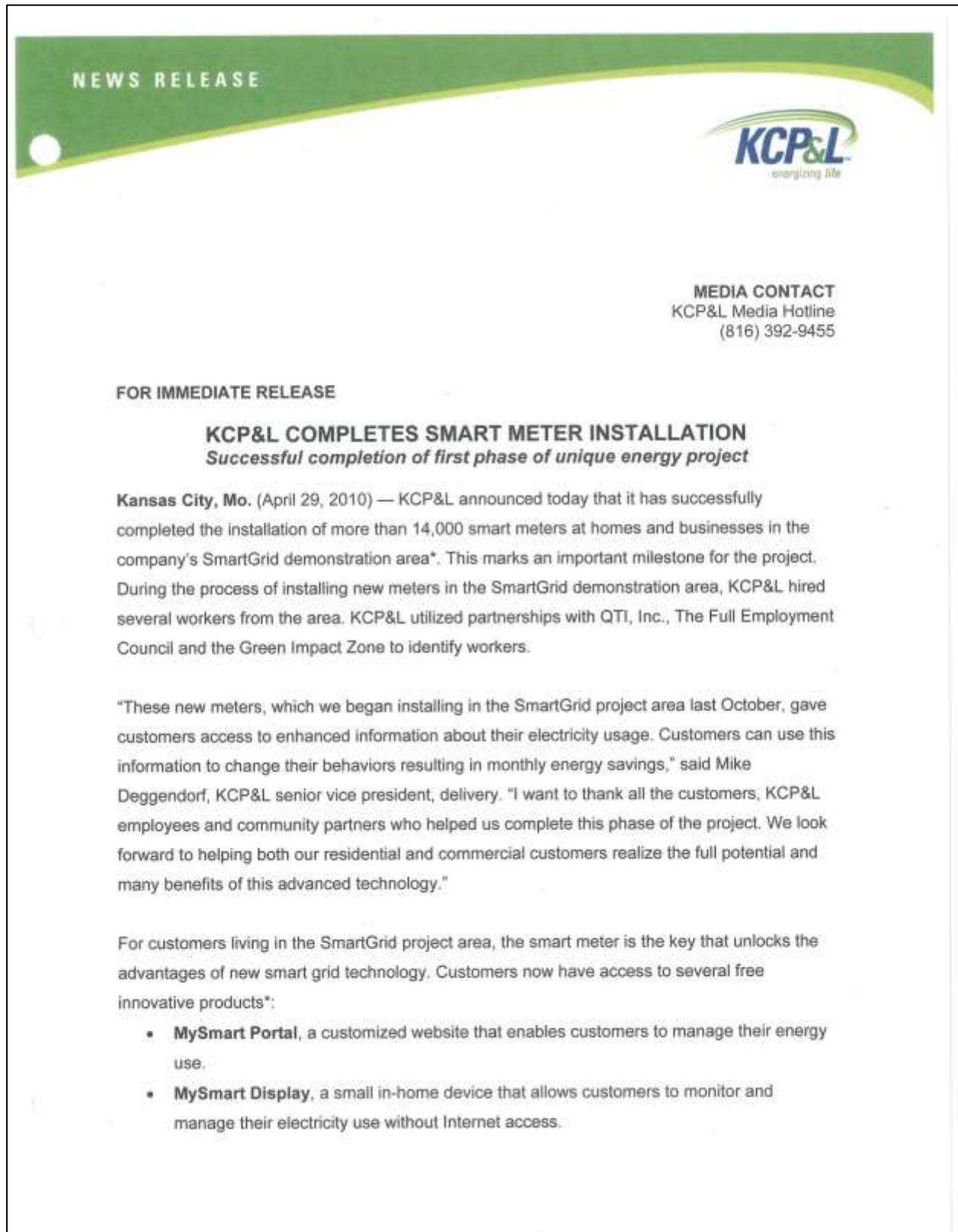
RELATED LINKS

<http://www.siemens.com/energy>

Find this article at:

<http://www.pnwswire.com/news-releases/kansas-city-power-light-partners-with-siemens-for-smart-grid-demonstration-project-115100944.html>

☐ Check the box to include the list of links referenced in the article.

P.5.1.9 Press Release – KCP&L Completes Smart Meter Installation, April. 29, 2011

- **MySmart Thermostat**, a programmable thermostat that can be used to preset temperatures based on season and personal preference.

KCP&L is partnering with a number of neighborhood and community organizations on the SmartGrid project, including the Green Impact Zone and the Metropolitan Energy Center. These organizations, along with Missouri Gas Energy, are all supporters of Project Living Proof, a demonstration house located at 917 Emanuel Cleaver Blvd that showcases KCP&L's SmartGrid as well as weatherization, landscaping and energy-efficient appliances. **Project Living Proof will host an open house on Saturday, April 30, from 11 a.m. until 2 p.m.**

"At the Project Living Proof house, customers can experience firsthand the full suite of SmartGrid products as well as learn more about how they can save energy and money," added Deggendorf. "We look forward to working with our community and project partners to introduce additional SmartGrid tools later this year, including a new MySmart Portal, a home area network, electric vehicle charging stations and several solar projects."

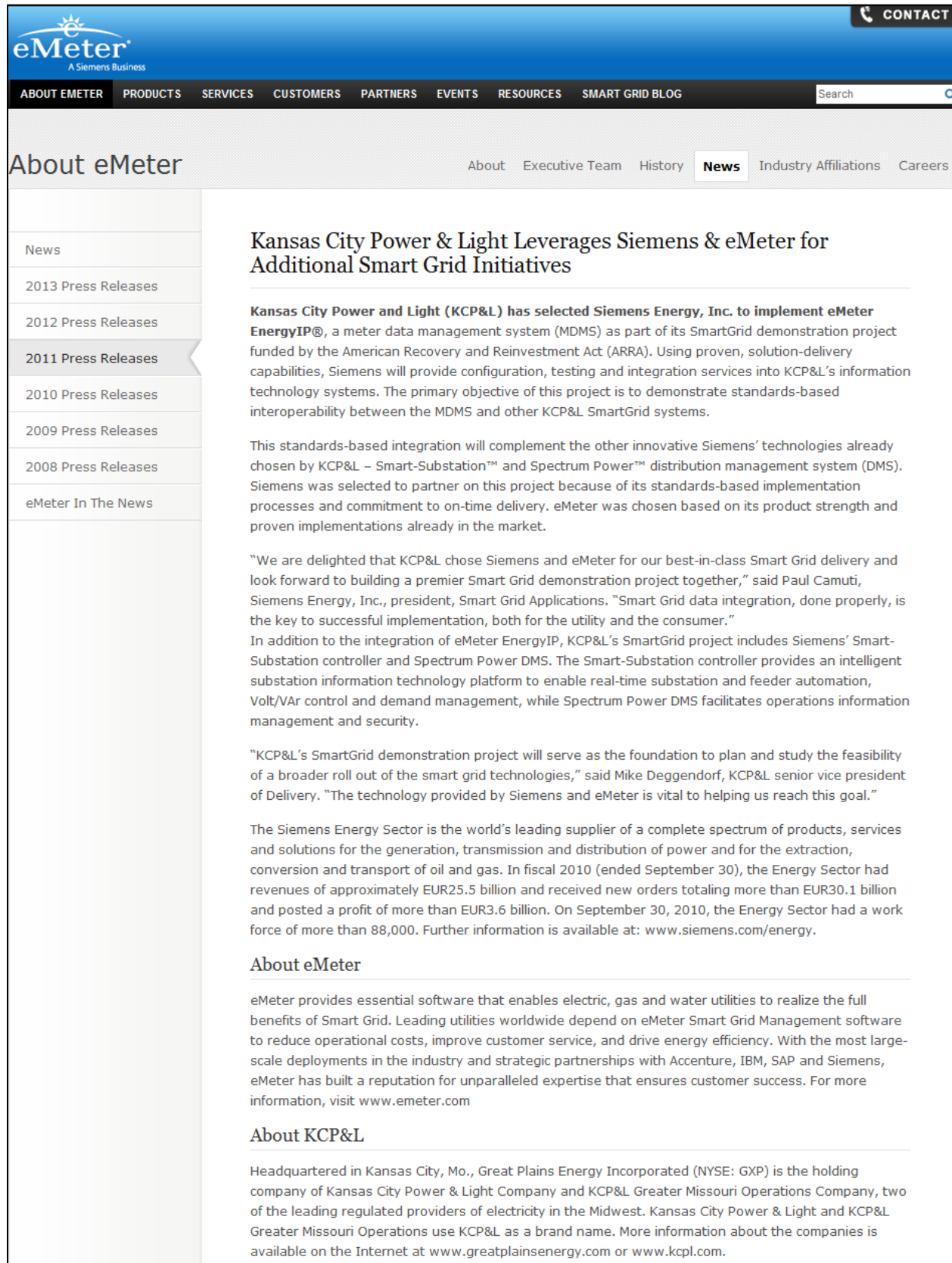
KCP&L SmartGrid was announced in November 2009 with the award of a \$24 million grant from the Department of Energy, which is being matched by KCP&L and its SmartGrid project partners. This initiative is a five-year demonstration project that will serve as the blueprint for potential expansion of smart grid technology to other areas of the KCP&L service territory.

*For a map of the SmartGrid demonstration area, product feature videos and other additional information about KCP&L SmartGrid please visit www.kcplsmartgrid.com.

####

About KCP&L:

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at www.greatplainsenergy.com or www.kcpl.com.

P.5.1.10 Press Release – KCP&L using Siemens, eMeter for smart Grid initiatives, May. 23, 2011


The screenshot shows the eMeter website, a Siemens Business. The header includes the eMeter logo, a 'CONTACT' button, and a navigation menu with links: ABOUT EMETER, PRODUCTS, SERVICES, CUSTOMERS, PARTNERS, EVENTS, RESOURCES, SMART GRID BLOG, and a search bar. Below the header, the 'About eMeter' section is active, with sub-links: About, Executive Team, History, News, Industry Affiliations, and Careers. The main content area displays a press release titled 'Kansas City Power & Light Leverages Siemens & eMeter for Additional Smart Grid Initiatives'. The release text states that KCP&L has selected Siemens Energy, Inc. to implement eMeter EnergyIP®, a meter data management system (MDMS) as part of its SmartGrid demonstration project. It details the project's goals, the integration of Siemens' Smart-Substation controller and Spectrum Power DMS, and quotes from Siemens and KCP&L executives. The release also mentions the project's role in the broader smart grid rollout and provides contact information for further details.

About eMeter

eMeter provides essential software that enables electric, gas and water utilities to realize the full benefits of Smart Grid. Leading utilities worldwide depend on eMeter Smart Grid Management software to reduce operational costs, improve customer service, and drive energy efficiency. With the most large-scale deployments in the industry and strategic partnerships with Accenture, IBM, SAP and Siemens, eMeter has built a reputation for unparalleled expertise that ensures customer success. For more information, visit www.emeter.com

About KCP&L

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at www.greatplainsenergy.com or www.kcpl.com.

P.5.1.11 Press Release – L+G Helps KCP&L Reach Important Milestone in SmartGrid Project, May. 10, 2011**Landis+Gyr Helps KCP&L Reach Important Milestone in SmartGrid Project;
Utility Completes Initial Gridstream Smart Meter Installation**

ATLANTA, GA. – May 10, 2011 – Kansas City Power & Light (KCP&L) has reached an important milestone in its *SmartGrid* demonstration project by completing the installation of Landis+Gyr's Gridstream™ Advanced Metering Infrastructure system and smart meters.

KCP&L completed installation of over 14,000 FOCUS AX-SD and S4e advanced meters in less than six months. At the same time, the utility provided in-home displays to residents who requested one and launched a web portal for monitoring energy use and cost as part of a comprehensive consumer outreach campaign.

"The new meters, which we began installing in the SmartGrid project area last October, give customers access to information on their electricity usage, which they can use to save money on their monthly bills," said Mike Deggendorf, KCP&L Senior Vice President for Delivery. "We are committed to on-going outreach to our customers that includes providing access to energy information to help customers make better decisions about how they use energy."

KCP&L's Smart Grid Demonstration project is partially funded by a grant from the Department of Energy. The demonstration area includes the Green Impact Zone, a collaborative effort to focus federal stimulus funding on neighborhoods in Kansas City's midtown urban core, and surrounding neighborhoods.

"Landis+Gyr is excited to be working with KCP&L on this groundbreaking project to promote better energy management among a broad spectrum of consumers. As a longtime advanced metering partner with KCP&L, we also are continuing to demonstrate a practical migration path for utilities to add the most advanced smart grid technology available," said Prasanna Venkatesan, Senior Vice President of Systems and Services at Landis+Gyr.

Gridstream RF technology uses a powerful radio mesh network to communicate with meters, in-premise devices and distribution automation equipment. Gridstream devices use the Smart Energy Profile standard to communicate with smart appliances and in-home units. This technology is currently being deployed to millions of residential and commercial sites across North America.

##

About Landis+Gyr

Privately held Landis+Gyr is the leading global provider of integrated energy management products tailored to energy company needs and unique in its ability to deliver true end-to-end advanced metering solutions. Today, the Company offers the broadest portfolio of products and services in the electricity metering industry, and is paving the way for the next generation of smart grid. With annualized sales of more than US\$1.5 billion, Landis+Gyr operates in 30 countries across five continents, and employs 5,000 people with the sole mission of helping the world manage energy better.

About KCP&L:

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at www.greatplainsenergy.com or www.kcpl.com.

MEDIA CONTACTS:

Dan Jacobson
Landis+Gyr
218-562-5195
dan.jacobson@landisgyr.com

Courtney Beatty

P.5.1.12 Press Release – Tendril Announces Shipments of Energize Consumer Engagement Tech., June. 20, 2011**Tendril Announces First Shipments of Tendril Energize Consumer Engagement Technology**

Boulder, Colo.–June 20, 2011 – [Tendril](#), the energy platform company, today announced it has shipped [Tendril Energize™](#), its revolutionary application suite of consumer-facing home energy management tools, to several energy providers including Cape Light Compact, KCP&L and Origin Energy.

The Tendril Energize applications are built on [Tendril Connect™](#), the company's cloud-based software platform for utilities, energy service providers and third party product and service providers. Based on field research grounded in behavioral science and cognitive psychology, Tendril Energize provides a web portal as well as mobile and other applications to create an active learning experience where consumers can gain insight into their energy use and learn how to control consumption based on their unique goals. The result is persistent and active consumer participation in managing their home energy use with meaningful results.

By engaging consumers, Tendril Energize enables energy service providers to accelerate consumer participation along an energy value chain that encompasses energy efficiency, demand response, direct load control and orchestrated home energy management systems (e.g., distributed generation, solar, electric vehicles), allowing them to meet their business objectives and regulatory requirements.

KCP&L is using Tendril Energize as part of the SmartGrid Demonstration Project, a complete, two-way utility infrastructure upgrade to 14,000 homes and businesses in a number of Kansas City's Midtown and urban core neighborhoods.

"One of the goals of KCP&L SmartGrid is to give customers increased information about how and when they use energy, empowering them to make decisions that save energy and money," said Mike Deggendorf, KCP&L senior vice president,

delivery. "Tendril Energize is one of the tools helping us to achieve this goal and better understand the way our customers use energy."

Tendril Energize features include:

- **Personalized energy savings goal and progress tracking:** Energize allows consumers to set a meaningful and achievable goal around energy use based on the amount of money they would like to save on their electric bills, and track their progress toward the goal. Users can see their energy use to date as it compares to their monthly goal.
- **Personalized, recommended actions to achieve the energy savings goal:** Consumers are provided with personalized, concrete steps they can take to meet their goal based on their home energy use. These include simple actions like air-drying laundry or installing low-flow showerheads, to progressively more challenging and energy efficient steps like replacing old appliances with more efficient ones or upgrading to a programmable, controllable thermostat.
- **Peer comparisons:** Consumers can see how their energy usage compares to their peers based on household and locale.
- **Active learning with social and expert support:** Consumers can use Tendril Energize's "Ask an Expert" feature to receive advice on a specific issue or an answer about energy usage from Tendril's team of energy efficiency experts. A Facebook-style news feed gives consumers access to experts' advice as well as comments from other users. Consumers can also share information and tips, creating a dialogue and shared experience.
- **Smart in-home device insight and control:** Tendril Energize enables consumers to install and control a full complement of smart in-home devices made available to them through optional utility energy efficiency or demand management programs. Devices include load control switches, programmable thermostats, in-home displays and smart outlet devices. Consumers can incrementally add to their home area network as needed.
- **Pricing information:** Consumers have access to clear information on energy pricing schedules, detailing times at which each price is in effect, including information on peak and off-peak periods. Tendril Energize supports a

variety of pricing programs, including flat rate pricing, variable rate (TOU) pricing programs as well as critical peak pricing.

- **Mobile access:** In addition to the web portal, consumers whose utilities have deployed Tendril Energize can access a mobile Energize application for iPhone and Android. The app delivers energy usage information, action plans and the ability to remotely control devices in their home, such as programmable thermostats. The mobile Energize applications are available today on the iTunes and the Android Market app stores.

"The power of our cloud-based software platform, on which Energize is built, is that it facilitates multiple connections between utilities, their customers, and third party product and service providers," said Adrian Tuck, CEO, Tendril. "It provides information, unleashes action and unlocks value for the consumer, the energy service provider and the entire energy ecosystem."

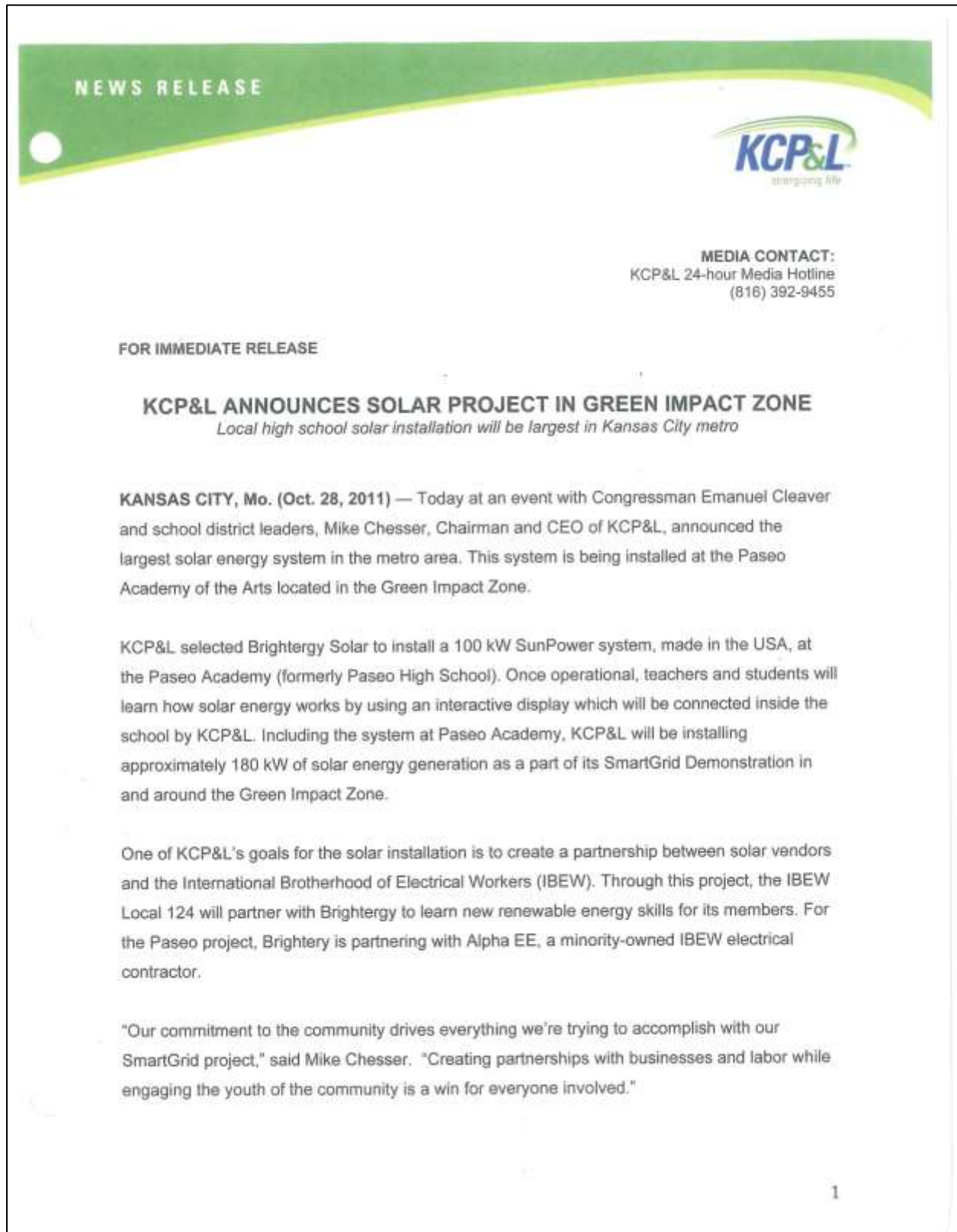
Tendril Energize is powered by Tendril Connect, an open standards-based, scalable and secure software-as-a-service (SaaS) platform that enables energy providers and third-party energy ecosystem partners to deliver applications that empower consumers to actively participate in home energy management programs, such as energy efficiency, demand response, direct load control, electric vehicle and appliance management, and eventually, distributed generation.

Tendril Energize was first unveiled in February 2011 at DistribuTECH, the nation's leading tradeshow focused on utility energy distribution and efficiency. For more information about Tendril Energize, please visit <http://www.tendrilinc.com/application/energize/>.

Note to editors:

Members of the press interested in an online demo of Tendril Energize, please contact tendril@schwartzcomm.com.

High-resolution photos of Tendril Energize and the mobile apps for iPhone and Android devices are available for download at <http://www.tendrilinc.com/news/media-resources/media-kit/tendril-energize-screen-shots/>.

P.5.1.13 Press Release – KCP&L Announces Solar Project in Green Impact Zone, Oct. 28, 2011

"The Green Impact Zone is all about sustainability and making this area better tomorrow than it is today," said U.S. Congressman Emanuel Cleaver, II. "Some have called this area the 'Murder Factory'. Together, we are working to turn it into the 'Opportunity Factory', an energy-efficient community with more jobs, better housing and safer neighborhoods. A place we are proud to call home."

In late 2009, KCP&L received a grant from the Department of Energy through the American Recovery and Reinvestment Act to create a smart grid in and around the Green Impact Zone. The \$48M project includes \$24M from the federal government and \$24M of private investment by KCP&L and its partners. KCP&L's SmartGrid is modernizing and automating the electric grid by integrating renewables and new technologies. Through a variety of tools, the SmartGrid is giving customers access to advanced energy information so they can manage their usage and potentially save money on their monthly bill.

In addition to installing more solar energy systems in 2011, future initiatives for the SmartGrid project include installing electric vehicle charging stations, connecting a large battery storage system, substation automation and additional customer tools.

####

About KCP&L:

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at www.greatplainsenergy.com or www.kcpl.com.

About Brightergy:

Brightergy serves commercial and residential customers by providing solar energy design, financing, installation, and monitoring services. The company's BrighterFinance and BrighterLease financing options make it possible for building owners to switch to clean renewable energy without the high up-front cost. Headquartered in Kansas City, Brightergy's regional offices also serve St. Louis and Boston. Additional information about the company can be found online at www.brightergy.com.

P.5.1.14 Press Release – OpenADR Alliance Demonstrates Interoperability with OpenADR2.0, Nov. 09, 2011


Standardize. Automate. Simplify.
Member Login

[Home](#)
[About Us](#)
[Resources](#)
[Products](#)
[Join](#)
[News & Events](#)
[FAQ](#)
[Contact Us](#)

OpenADR Alliance Demonstrates Interoperability With the new OpenADR 2.0 Smart Grid Standard

Successful PlugFest Drives Adoption of Automated Demand Response Systems

Morgan Hill, CA, Nov. 9, 2011: The OpenADR Alliance, a nonprofit corporation created to foster the development, adoption and compliance of a Smart Grid standard known as Open Automated Demand Response (OpenADR), today announced the successful completion of an interoperability test event – a step that is critical for implementing the OpenADR 2.0 standard for demand response in commercial, industrial and residential customer applications. Alliance member Kansas City Power & Light (KCPL) hosted a two-day PlugFest event, which provided early implementers of the OpenADR 2.0 standard an opportunity to test their products for interoperability with other members of the Alliance.

During the event Alliance members conducted a series of tests that included connectivity between servers and clients, and event scheduling, cancelation and modification -- all key elements in basic OpenADR 2.0 implementations. Members of the OpenADR Alliance participating in the PlugFest included: Akuacom, a unit of Honeywell, EnernNOC, Intertek, IPKeys, Johnson Controls, Open Access Technology International, Inc. (OATI), QualityLogic and Tendril.

"The positive outcome among participants at last week's PlugFest brings us closer to our goal of finishing the basic OpenADR 2.0 profile by the end of the year," said Rolf Bienert, technical director of the OpenADR Alliance. "These member events foster the collaboration necessary to ensure the rapid deployment of the OpenADR 2.0 standard which will help ensure grid reliability throughout the industry."

The industry demand to lower the cost, improve the reliability and accelerate the speed of Automated Demand Response (Auto-DR) and Smart Grid implementations in the United States has led to the rapid adoption of OpenADR 2.0. The OpenADR 2.0 technology is based on the Organization for the Advancement of Structured Information Standards (OASIS) and builds on the successful OpenADR 1.0 specification supported by over 60 companies worldwide. The OpenADR Alliance will provide utilities, Independent System Operators (ISOs), regulators and controls suppliers with a selection of certified OpenADR 2.0 products for cost-effective Demand Response (DR) implementation.

A second PlugFest event for OpenADR 2.0 is planned for November. Companies interested in learning more about OpenADR 2.0 are encouraged to register for a free Webinar scheduled for **Nov. 10, 2011 at 10:00 AM PST**. To register visit: <https://www3.gotomeeting.com/register/128908662>.

About the OpenADR Alliance

The OpenADR Alliance is fostering the development, adoption, and compliance of the Open Automated Demand Response (OpenADR) standard through collaboration, education, training, testing, and certification. The OpenADR Alliance intends to work with related organizations such as the Smart Grid Interoperability Panel, Organization for the Advancement of Structured Information Standards (OASIS), North American Energy Standards Board (NAESB), Utilities Communications Architecture International User's Group (UCAIug), Wi-Fi Alliance™, ZigBee Alliance™ and others as appropriate.

The OpenADR Alliance is open to all interested stakeholders sharing a common interest in facilitating and accelerating the use and adoption of the OpenADR standard for price- and reliability-based demand response. More information can be obtained at <http://www.openadr.org/>

#

P.5.1.15 Press Release – KCP&L Begins EV Charging Pilot Program Using ChargePoint Network, Nov. 14, 2011


[FIND STATIONS | READ THE REVIEW](#)
[SIGN UP | LOG IN](#)

[EV Drivers](#)
[Products & Services](#)
[Partners](#)
[Support](#)
[About Us](#)

[About Us > 2011 > Press Releases](#)

KCP&L Begins Electric Vehicle Charging Pilot Program Using Coulomb Technologies' ChargePoint Network

Utility Taps ChargePoint Network for Data Gathering at Eight Partner Locations: Retail, Manufacturing Plant, Corporate Office, Municipal, Community College and Hospital

Campbell, Calif., November 14, 2011 – Coulomb Technologies today announced that KCP&L, an investor-owned utility headquartered in Kansas City, Mo., is using Coulomb's ChargePoint® Network to access essential electric vehicle (EV) charging station data collected for a three-year pilot program in and around the Kansas City region. The program consists of eight diverse program-partner EV charging sites including a community college, hospital, manufacturing plant, corporate office, municipal and retail locations. The charging network is used to gather data from EV drivers including usage, number of charging events, number of kilowatt hours used and how it translates to greenhouse gas savings.

KCP&L serves more than 800,000 customers in 47 northwestern Missouri and eastern Kansas counties. KCP&L selected Coulomb distributor Carbon Day Automotive and its local reseller LilyPad EV to install the 10 EV charging stations throughout the Kansas City metropolitan area.

"We are pleased that ChargePoint Network is the enabler for this pilot project to provide data collection for vehicle use and charging patterns," said Pat Romano, president and CEO at Coulomb Technologies. "This program highlights a new industry of clean transportation in the Kansas City area and the need for and benefits of EV infrastructure throughout the region."

KCP&L's pilot project is funded by U.S. Department of Energy award DE-EE0002538, an American Recovery and Reinvestment Act grant project awarded to the Metropolitan Energy Center (MEC). KCP&L is working with the Kansas City Regional Clean Cities Coalition, a program of MEC, to administer the grant.

"In order to fulfill the requirements of this pilot program we needed a turnkey networked electric vehicle solution," said Roland Maliwat, KCP&L sustainability products manager. "ChargePoint Network was a great solution to help us meet those requirements."

ChargePoint Network provides access to essential charging station data. It includes: a web-based application that lets KCP&L customize their EV charging operations to measure and manage their success, 24/7 driver support, and access to the largest and most brand-loyal network of EV drivers in the world.

For more information about KCP&L's pilot please visit the website at www.kcpl.com/stations.

About LilyPad EV

LilyPad EV is the Kansas and Missouri reseller for Coulomb Technologies. LilyPad EV sells, installs, and maintains Coulomb Electric Vehicle Charging Stations under Midwest distributor Carbon Day Automotive in Chicago. LilyPad EV proudly partners with area Plug In Readiness Task Forces, and other interested parties, to actively help regions prepare for the arrival of plug in vehicles. LilyPad EV is a member of the Kansas City, St. Louis, and Springfield, Missouri Plug in Readiness Task Forces. Our purpose is to ensure that people who purchase electric vehicles will be able to charge them as necessary...where they live, work, play, and shop. Our business model helps organizations move towards their sustainability goals while creating a new revenue streams. Visit www.lilypadev.com for more information or contact us at info@lilypadev.com.

About KCP&L

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at www.greatplainsenergy.com or www.kcpl.com.

P.5.1.16 Press Release – ABB (Tropos) to supply broadband wireless to KCP&L, Aug. 29, 2012

Press Release



ABB to supply broadband wireless network to KCP&L

Newly-acquired Tropos Networks' GridCom® wireless IP mesh network to extend advanced distribution automation solutions for KCP&L's SmartGrid Demonstration Program

Raleigh, NC, August 29, 2012 – ABB, the leading power and automation technology group, today announced that Tropos Networks, a leading supplier of reliable wireless IP broadband networks for the smart grid which was recently acquired by ABB, will supply KCP&L with a wireless communication network with advanced distribution automation features for KCP&L's SmartGrid Demonstration Program.

Tropos' GridCom® wireless IP mesh network will extend the KCP&L SmartGrid IP network to reclosers, capacitors and fault indicators in the field, providing direct monitoring and control communications with substation-based distribution automation controllers and the centralized distribution management system. It will help KCP&L optimize energy delivery through active Volt/VAR optimization and feeder load transfers.

The Tropos GridCom network also paves the way for enhancing power reliability by centrally monitoring fault indicators and automatically configuring around faults, reducing the impact and duration of outages, which is a cause of increasing concern for customers.

This order is the first reported since ABB's recent acquisition of Tropos. The addition of the Tropos product lines to ABB's existing portfolio of communications systems expands the offering for customers in the power, transportation, mining and public infrastructure sectors. The merger also reinforces ABB's increased focus in the North American market, complementing its global presence in utility and industrial communications.

"Our Tropos GridCom network provides the high-capacity, low-latency and security required to support the applications we will deploy to implement our advanced distribution automation vision," said Ed Hedges, manager SmartGrid Technology Planning for KCP&L. "Tropos' support for standards such as IEC 61850 and IP, was also a key consideration in selecting them as our distribution automation communications network vendor. The Tropos network will enable KCP&L to deliver electricity more reliably and efficiently to our customers."

"We are excited to work with KCP&L to create a reliable, high performance distribution communications network," said Tom Ayers, president and chief executive officer, Tropos Networks. "This project will create a leading edge distribution automation solution at KCP&L that will help keep them at the top of the list for grid reliability and provide a model for other utilities in the Midwest."

KCP&L's Smart Grid Demonstration Program has received financial support from a Smart Grid Demonstration Grant (SGDG) funded by the U.S. Department of Energy (DOE) under the American Recovery and Reinvestment Act (ARRA). Of the program's more than \$49.8 million cost, \$23.9 million is being underwritten by SGDGD funds.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 147,000 people. The company's North American operations, headquartered in Cary, North Carolina, employ about 27,000 people in multiple manufacturing, service and other major facilities.

About KCP&L: Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More

P.5.1.17 Press Release – KCP&L Officially Opens Innovation Park, Oct. 12, 2012

"This exciting development captures the essence of the hard work going on in Kansas City's Green Impact Zone," said Congressman Cleaver. "This is a giant step forward and I commend the hundreds of people who have spent thousands of hours in this public/private partnership to get us to this day. For decades, this part of Kansas City has suffered from disinvestment and disappointment, but now continues the transformation into an economically thriving and energy-efficient treasure in the very heart of the city."

In addition to opening the park at the event, KCP&L also announced the future locations of its SmartGrid electric vehicle charging stations and solar arrays. For a list of these locations visit www.kcplsmartgrid.com.

With the help of a grant from the United States Department of Energy, KCP&L is investing more than \$50 million in the SmartGrid Demonstration Project through 2015. The SmartGrid Demonstration Area includes several neighborhoods in and around Kansas City's Green Impact Zone. Approximately 14,000 customers live and own businesses in the SmartGrid Demonstration Area. For more information visit www.kcplsmartgrid.com.

####

About KCP&L:

Headquartered in Kansas City, Mo., Great Plains Energy Incorporated (NYSE: GXP) is the holding company of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, two of the leading regulated providers of electricity in the Midwest. Kansas City Power & Light and KCP&L Greater Missouri Operations use KCP&L as a brand name. More information about the companies is available on the Internet at www.greatplainsenergy.com or www.kcpl.com.

P.5.1.18 Press Release – KCP&L Pilots New Energy Storage System, Oct. 16, 2012

KCP&L Pilots New Energy Storage System

Oct 16, 2012 5:41 PM

[KCP&L](#), [MRIGlobal](#), and [Exergonix Inc.](#) have announced the installation and trial of a new smart grid energy storage technology in Kansas City.

The new technology is a nano-battery cell developed by Exergonix, a Lee's Summit-based firm. The one-megawatt battery is in its first live smart grid test and was installed this summer at the KCP&L SmartGrid Innovation Park near 48th Street and Troost Avenue. The battery will support KCP&L's SmartGrid Demonstration Area, which encompasses the MRIGlobal facilities in Kansas City.

The battery installation was unveiled at a community ribbon cutting for the SmartGrid Innovation Park. The park is part of an educational effort to explain new technology in the urban core and to help consumers get smarter about energy.

With the installation, KCP&L is testing the battery system's effectiveness for managing energy on the electric grid. The battery stores solar energy produced in the Demonstration Area, and is used to support energy delivery during peak demand times of the day.

Exergonix uses a patented lithium ion storage system, which integrates a higher energy density battery and advanced electronic controls.

MRIGlobal supports the trial by conducting independent tests and analysis on the performance of the battery. MRIGlobal experts will examine environmental and economic performance, as well as the technical operations, durability, and reliability of the system.

MRIGlobal has significant expertise in energy, including in solar and wind energy and other sustainable sources like algae and biomass. MRIGlobal has managed and operated the National Renewable Energy Laboratory for the U.S. Department of Energy since its inception in 1977.

Smarter Grid

[Worldwide Capacity of Advanced Batteries for Utility-Scale Energy Storage Will Multiply Nearly 200-fold by 2022](#)
[Smart Grid Customer Engagement Working Group Tops 120 Members](#)
[Smart Grid Survey Indicates Strong Growth Potential for Energy Storage, Distributed Generation and Microgrids](#)
[Power Line Communications Node Shipments to Reach Nearly 68 Million by 2020](#)
[IUS Technologies Brings Smart Grid Power Distribution Technology from Asia to U.S. Market](#)
[» More from this section](#)

P.5.1.19 Press Release – OATI Completes Acceptance Testing of Smart Grid Solution, Dec. 04, 2012**OATI and KCP&L Announce Completion of Acceptance Testing on Smart Grid Solution**

OATI successfully concludes acceptance testing on OATI distributed Energy Resource Management Application with KCP&L

December 04, 2012 - Open Access Technology International, Inc. (OATI) and KCP&L are pleased to announce the successful completion of acceptance testing of webDistribute, OATI's Distributed Energy Resource Management (DERM) solution as part of the KCP&L SmartGrid Demonstration Project. The webDistribute solution passed all acceptance criteria and will allow KCP&L to utilize customer-side resources to deal with distribution grid reliability and economic issue.

One of the key objectives of this project is to show interoperability among various vendors and legacy KCP&L systems. Using proven industry standards, such as IEC 61968 and IEC 61850, as well as evolving standards such as OpenADR 2.0, has been a key factor for the success of the project.

In partnership with KCP&L, OATI webDistribute is provided as a DERM system to KCP&L's SmartGrid Demonstration Project, funded in-part by the American Recovery and Reinvestment Act. The system interfaces with KCP&L's Customer Information System (CIS), Geographical Information System (GIS), Meter Data Management (MDM), and Distribution Management System (DMS) to present a full view of customer-side Demand Response (DR) and Distributed Energy Resources (DER) to the distribution grid operator. OATI webDistribute also interacts with Home Energy Management Portal, Vehicle Charge Management System, and commercial Building Management Systems to schedule and control customer-side assets. This allows the use of customer-side resources to address distribution grid reliability and economic issues.

"Our SmartGrid Demonstration Project is an opportunity for us to learn about the future application of new and efficient ways of delivering electricity to our customers," said KCP&L's SmartGrid director, Bill Menge. "We want to take what we've learned and develop a blueprint for future applications. OATI's webDistribute has helped us cross an important milestone in that process."

"OATI is proud of our contribution to the success of KCP&L's SmartGrid Demonstration Project," said Sasan Mokhtari, Ph.D., President and CEO of OATI. "KCP&L has been a valued partner, and we hope to continue our relationship well into the future."

OATI webDistribute receives up-to-date grid models from the DMS and determines the control strategies for customer-side assets. OATI webDistribute is provided as Software-as-a-Service from OATI's state-of-the-art Data Center in Minneapolis, Minnesota. It will control customer-side assets directly, through the Home Energy Management Portal, or via the DMS.

P.6 Targeted Education & Outreach Initiatives

P.6.1 Residential SmartEnd-Use Products

P.6.1.1 MySmart Products Flyer – Version 1



MySmart Products

MySmart Display



KCP&L's MySmart Display gives you access to valuable information that will show you how your home uses electricity. MySmart Display is a hand-held electronic device for inside your home that receives information directly from your meter and presents it in easy-to-understand charts and graphs. Quantities are limited.

MySmart Display will:

- Show how much electricity you use in your home
- Give you up-to-date bill information
- Estimate your month bill, excluding taxes and customer charges
- Send messages from KCP&L about your usage and tips on how to save

MySmart Portal



With KCP&L MySmart Portal, you can stay up to date on your electricity usage from any computer with an Internet connection. Through KCP&L's online account management tool, AccountLink, My Smart Portal shows you in real-time how you're using electricity, allowing you to change your habits and start saving.

The easy-to-use MySmart Portal will:

- Estimate your monthly bill, excluding taxes and customer charges
- Give you hourly, daily, and monthly electricity usage
- Compare your usage against the other homes in your community
- Send you messages from KCP&L about your usage

Visit www.kcplsmartgrid.com/portal to enroll today! All you need is your account number and e-mail address.

MySmart Thermostat



With KCP&L's MySmart Thermostat, you can pre-set temperatures for nighttime or times when you are away from home, making it convenient for your lifestyle. Air-conditioning and heating units use a lot of energy, but with a programmable thermostat, you can keep those utility costs lower. Quantities are limited.

MySmart Thermostat will:

- Help save you up to \$180 a year by properly setting and maintaining the temperature settings*
- Automatically set temperatures based on the season and your personal preference
- Help you keep costs lower

* According to www.energystar.gov

This material is based upon work supported by the Department of Energy under Award Number DE-DE0000321.

394-70-1437 (03/08)

P.6.1.2 MySmart Product Interest Form – Version 1



MySmart Product Interest Form

☐ **MySmart Display**



A hand-held electronic device for inside your home that takes information directly from your meter and presents it to you in easy-to-understand screens. The in-home display does not require an Internet connection. Quantities are limited.

☐ **MySmart Portal**



A personalized website designed to show you how much electricity you use each day and help you estimate your bill before you receive it.

☐ **MySmart Thermostat**



For homes with central air conditioning, MySmart Thermostat can be programmed to automatically set temperatures based on the season, time of day and your schedule. This allows you to save energy, save money and still stay comfortable. Quantities are limited.

Name _____

Address _____

Home Phone _____ Cell Phone _____

email _____

This material is based upon work supported by the Department of Energy under Award Number DE-01000221.

204-10-1438 (10/10)

P.6.1.3 **MySmart Products Door Hanger**



Special Offer!

You have the potential to save money on your electric bill!

As a customer in the SmartGrid Demonstration Area, you may be eligible to receive FREE products to help you manage your monthly electric bill - potentially saving you money.

Go to <http://www.kcpSMARTgrid.com/eligible> OR complete, detach and mail the postage-paid card below, and KCP&L will contact you to determine if you qualify for the following FREE MySmart products:

-  **MySmart Thermostat**
Automatically sets temperatures based on the season and your personal habits and preferences.
-  **MySmart Home**
Monitors and controls the electricity appliances and electronics use from any computer with Internet access.
-  **MySmart Display**
Takes information directly from your electric meter and displays it for you in real-time.
-  **MySmart Portal**
Allows you to monitor and manage your electricity usage and estimate your monthly bill.
-  **Time of Use Rates**
Allows you to better control costs by managing when you use electricity in the summer.



First Name _____

Last Name _____

Address _____

Phone Number _____

To learn even more about how KCP&L's SmartGrid project is enhancing the electric grid in our community:

- Check out KCP&L's SmartGrid Innovation Park at 4324 Tracy Ave., Kansas City, MO 64110.
- Visit the Metropolitan Energy Center's Project Living Proof at 917 Emanuel Cleaver Blvd., Monday through Friday, 10-5. KCP&L is the lead sponsor and is using Project Living Proof as a demonstration house for its SmartGrid products, rooftop solar and an electric vehicle charging station.
- Call the SmartGrid Support Team at (800) 535-7087 or email SmartGridInfo@KCP&L.com.



This demonstration project was made possible by the Department of Energy and Environment, MO-00000002, 000-00-00000000



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 221 KANSAS CITY, MO

POSTAGE WILL BE PAID BY ADDRESSEE

SMARTGRID SUPPORT TEAM
KCP&L
PO BOX 418679
KANSAS CITY MO 64179-0030



P.6.1.4 **MySmart Products Now What? Postcard**

P.6.1.5 MySmart Products Flyer – Version 2



MySmart Home



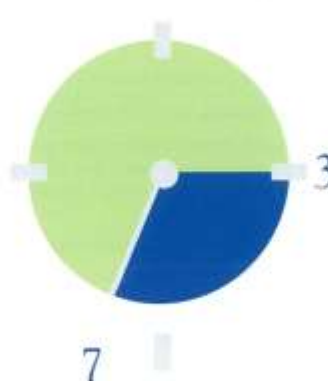
Requirements: Reside within SmartGrid Project demonstration area, have central air and high-speed internet access

MySmart Home is an Internet-based home area network (HAN) that allows you to remotely manage appliances and electronics. MySmart Home is made up of a group of devices – including a MySmart Home hub, MySmart Thermostat, MySmart Home plugs and MySmart Home switch – that are managed via the MySmart Portal to monitor and control energy usage in your home. MySmart Home will:

- Allow you to connect your home's appliances and electronics while remotely monitoring and controlling your MySmart Thermostat and other appliances from any computer with Internet access
- Deliver a detailed account of how much electricity you are using each hour
- Allow you to partner with KCP&L to reduce demand on the electrical grid by participating in demand response events

Call the SmartGrid Support Team at (800) 535-7687 to request the MySmart Home.

Time of Use Rates



Requirements: Reside within the SmartGrid project demonstration area

KCP&L's Time of Use rate program allows customers to better manage their electricity costs while providing KCP&L information about customer behavior. Time of Use rates designate "off-peak" hours (when rates are discounted to about \$.06/kWh) and "peak" hours (when rates are raised to about \$.38/kWh). This difference in rates is designed to encourage customers to think about when they use electricity rather than just *how much* electricity they use, ultimately shifting grid load from peak to off-peak periods. Time of Use peak rates apply during summer months (May 16 – September 15) on non-holiday weekdays from 3 to 7 pm. All other days and times during the summer months are designated off-peak. Time of Use Rates will:

- Empower you to better manage energy costs by shifting electricity consumption to off-peak times, when deeply discounted rates are offered
- Help you maximize the savings potential of other tools like MySmart Thermostat, MySmart Display and MySmart Home
- Allow KCP&L to evaluate the effectiveness of Time of Use Rates in motivating customers to change behavior and shift load demands

Call the SmartGrid Support Team at (800) 535-7687 to sign up for Time of Use Rates.

This material is based upon work supported by the Department of Energy under Award Number DE-00000221. 204-10-1437 (10/12)

Get smarter at KCP&LSmartGrid.com



MySmart Portal



Requirements: Reside within SmartGrid Project demonstration area

KCP&L's MySmart Portal is a Web-based tool that allows you to monitor and manage your electricity usage. Having this information helps you make smarter decisions about how you use energy, which can save you money on your monthly bill. MySmart Portal will:

- Estimate your monthly bill, including taxes and customer charges
- Give you summaries of hourly, daily and monthly electricity usage
- Compare your usage to other homes in your neighborhood

Visit the MySmart Portal at www.kcpl.com/mysmartportal to get started.

MySmart Display



Requirements: Reside within SmartGrid Project demonstration area

MySmart Display is a portable electronic device that takes information directly from your electric meter and displays it for you in real-time. It helps you set goals for your energy consumption and to track your progress. MySmart Display will:

- Show how much electricity your home is using at any given time or over a specific time span
- Give up-to-date billing information
- Estimate your monthly bill, including taxes and customer charge

Call the SmartGrid Support Team at (800) 535-7687 to request the MySmart Display.

MySmart Thermostat



Requirements: Reside within SmartGrid Project demonstration area and have central air

MySmart Thermostat works with your heating and cooling systems, allowing you to pre-set temperatures for any time during the day or when you are away from home. Then, you can set it to automatically return to your preferred temperature. You'll save energy, save money and still stay comfortable. MySmart Thermostat will:

- Help you control your energy use by pre-setting your heating and cooling schedule throughout the day
- Automatically set temperatures based on the season and your personal habits and preferences
- Allow you to partner with KCP&L to reduce demand on the electrical grid by participating in demand response events

Call the SmartGrid Support Team at (800) 535-7687 to request the MySmart Thermostat.

This material is based upon work supported by the Department of Energy under Award Number DE-060005221.

204-10-1437 (12/12)

Get smarter at KCPLSmartGrid.com

P.6.1.6 **MySmart Product Interest Form – Version 2**


MySmart Product Interest Form

SmartGrid
the future of energy

Get Smarter! With Free SmartGrid Products from KCP&L.

The SmartGrid demonstration project is a collaboration between KCP&L and the U.S. Department of Energy. The project is designed to provide you with more frequent and enhanced information about how you use electricity. The SmartGrid demonstration project's free products and resources will:

- Give you the tools to use energy more efficiently
- Help you make changes around your home or business that can save you money
- Improve reliability in the electricity supply and KCP&L's response to power outages.

In addition, KCP&L is making significant infrastructure upgrades to its Midtown substation and network within the SmartGrid demonstration area to improve electrical service.

Residents in the SmartGrid demonstration area (see reverse for map of boundaries) are the first in KCP&L's service territory to have access to a suite of free products designed to help you manage your electricity usage and monthly bill. They include:

Product	Description	Requirements*
MySmart Portal	Free web-based tool that allows you to monitor and manage your electricity usage	-Reside within SmartGrid Project demonstration area
Time of Use Rates	Voluntary summer rates that offer discounted rates during off-peak times (20 hours/day) and higher rates during peak times (4 hours/day), encouraging customers to think about when they use electricity rather than just how much electricity they use, ultimately shifting grid load from peak to off-peak periods.	-Reside within SmartGrid Project demonstration area
MySmart Display	Free portable electronic device that takes information directly from your electric meter and displays it for you in real-time	-Reside within SmartGrid Project demonstration area
MySmart Thermostat	Free programmable thermostat that can be automatically set based on the season time-of-day and your schedule	-Reside within SmartGrid Project demonstration area -Home equipped with central air
MySmart Home	Free virtual hub that connects your home's appliances and electronics while remotely monitoring and controlling your MySmart Thermostat and other appliances.	-Reside within SmartGrid Project demonstration area -Home equipped with central air -Home equipped with high-speed Internet connection

*Some products have more detailed requirements that will be explained by a KCP&L SmartGrid Support Team representative when they contact you.

To learn which free SmartGrid products you qualify for, please provide the details requested below. A KCP&L SmartGrid Support Team representative will contact you with more information.

Name*: _____ KCP&L Account Number: _____

Street Address*: _____ Email Address (if applicable)*: _____

Daytime Phone*: _____ Evening Phone: _____

Do you have central air in your home?*: _____ Do you have high-speed internet access in your home?*: _____

*Response required.

This material is based upon work supported by the Department of Energy under Award Number DE-CE0000231.

204-10-1439-907/10

Get smarter at **KCP&LSmartGrid.com**

P.6.1.7 MySmart Product Interloop Mailer

Get Smarter
*with FREE SmartGrid products
and programs from KCP&L*

We've got news!

As a resident in KCP&L's SmartGrid Demonstration Area, you are eligible for FREE products and programs to help you better manage your electricity usage and save money on your monthly bill.

With SmartGrid, there is something for everyone!

◀ Open up to learn more! ▶

KCP&L
SmartGrid
the future of energy

Visit **KCPLSmartGrid.com/Qualify**

Get Smarter

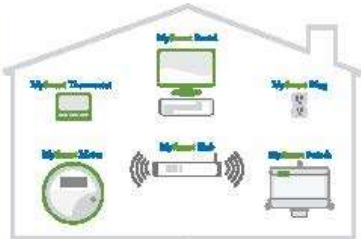
with FREE SmartGrid products and programs from KCP&L



MySmart Home

✓ Yes!

If so you may qualify for MySmart Home.



Do you have central air and high-speed Internet access?

MySmart Home:

- Monitor and control the electricity appliances and electronics are using from any computer with Internet access.
- Control your energy use by pre-setting your heating and cooling schedule throughout the day.
- Reduce demand on the grid by participating in demand response events, improving reliability.

✓ No!

If you have central air but no high-speed internet access, you may qualify for MySmart Thermostat.

Open to learn more.



MySmart Thermostat



SmartGrid

the future of energy

Visit KCPLSmartGrid.com/Qualify

Get Smarter

with FREE SmartGrid products and programs from KCP&L

 MySmart Home	✓ Yes? Then you may qualify for MySmart Thermostat.		 MySmart Thermostat
◀ Does your home have central air? ▶			
MySmart Thermostat: - Control your energy use by pre-setting your heating and cooling schedule throughout the day. - Automatically set temperatures based on the season and your personal habits and preferences. - Partner with KCP&L to reduce demand on the grid by participating in demand response events.		✓ No Central Air? Don't worry. Open up to see what other products and programs are available.	



Visit KCPLSmartGrid.com/Qualify

Get Smarter

with FREE SmartGrid products and programs from KCP&L





You're still eligible for these great FREE SmartGrid products and programs!

MySmart Portal:

- A Web-based tool that allows you to monitor and manage your electricity usage and estimate your monthly bill.

MySmart Display:

- A portable device that takes information directly from your electric meter and displays it for you in real-time.

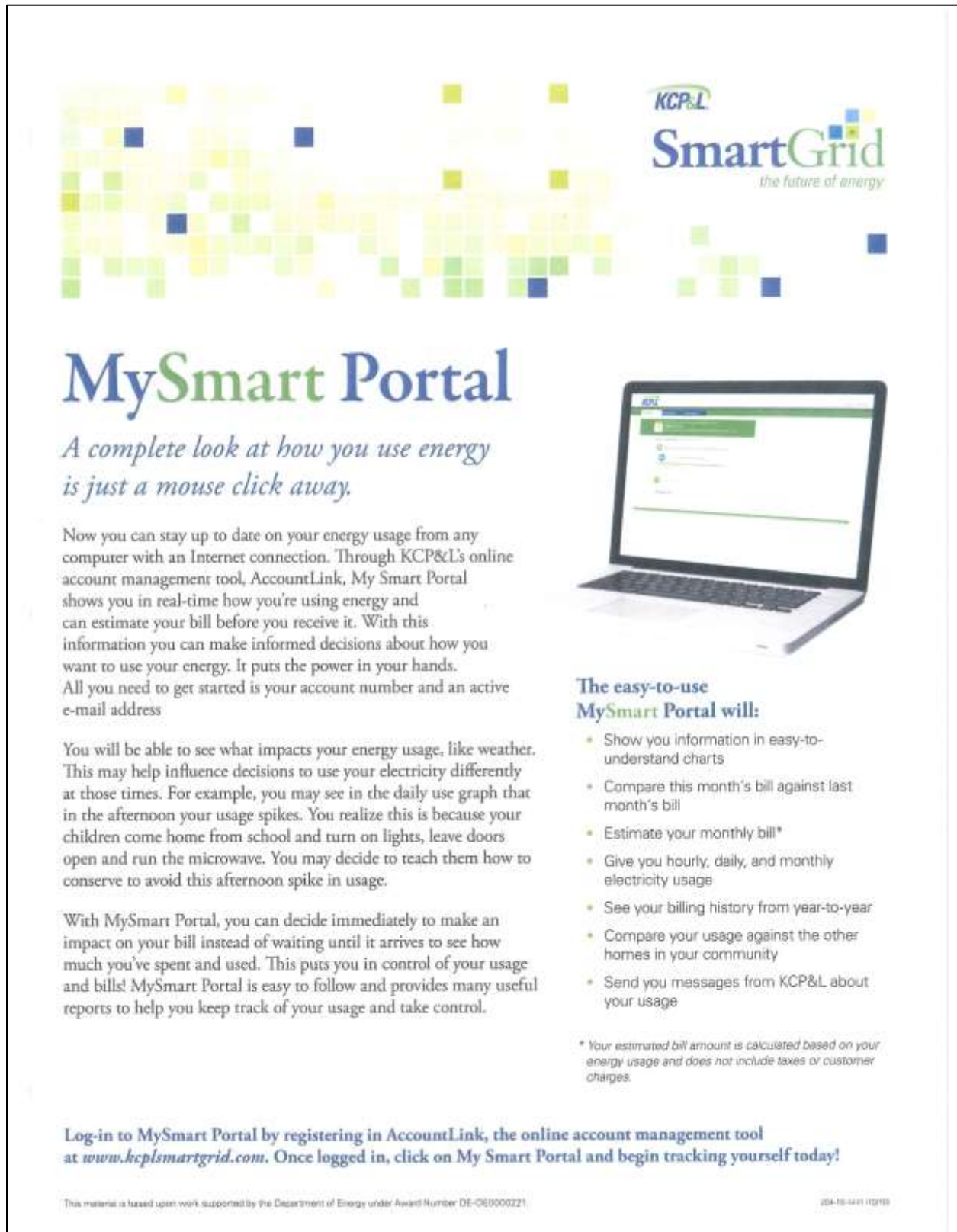
Time of Use Rates:

- A voluntary rate program during the summer months that allows you to better control your electricity costs by managing when you use electricity.

Contact the SmartGrid support team at (800) 535-7667 or email SmartGridinfo@kcpl.com to learn more about SmartGrid products and programs.



Visit KCPLSmartGrid.com/Qualify

P.6.1.8 **MySmart Portal Flyer**


The flyer features a header with the KCP&L logo and the SmartGrid logo with the tagline "the future of energy". The background is decorated with a pattern of yellow and blue squares. The main title "MySmart Portal" is prominently displayed in a large, stylized font. Below it, a subtitle reads "A complete look at how you use energy is just a mouse click away." The text describes the benefits of the portal, such as real-time energy usage monitoring and bill estimation. A laptop image shows the portal's interface. A list of features is provided under the heading "The easy-to-use MySmart Portal will:". A disclaimer note is included at the bottom right. The footer contains login instructions and a small text line about funding support.

KCP&L SmartGrid
the future of energy

MySmart Portal

A complete look at how you use energy is just a mouse click away.

Now you can stay up to date on your energy usage from any computer with an Internet connection. Through KCP&L's online account management tool, AccountLink, My Smart Portal shows you in real-time how you're using energy and can estimate your bill before you receive it. With this information you can make informed decisions about how you want to use your energy. It puts the power in your hands. All you need to get started is your account number and an active e-mail address.

You will be able to see what impacts your energy usage, like weather. This may help influence decisions to use your electricity differently at those times. For example, you may see in the daily use graph that in the afternoon your usage spikes. You realize this is because your children come home from school and turn on lights, leave doors open and run the microwave. You may decide to teach them how to conserve to avoid this afternoon spike in usage.

With MySmart Portal, you can decide immediately to make an impact on your bill instead of waiting until it arrives to see how much you've spent and used. This puts you in control of your usage and bills! MySmart Portal is easy to follow and provides many useful reports to help you keep track of your usage and take control.

The easy-to-use MySmart Portal will:

- Show you information in easy-to-understand charts
- Compare this month's bill against last month's bill
- Estimate your monthly bill*
- Give you hourly, daily, and monthly electricity usage
- See your billing history from year-to-year
- Compare your usage against the other homes in your community
- Send you messages from KCP&L about your usage

* Your estimated bill amount is calculated based on your energy usage and does not include taxes or customer charges.

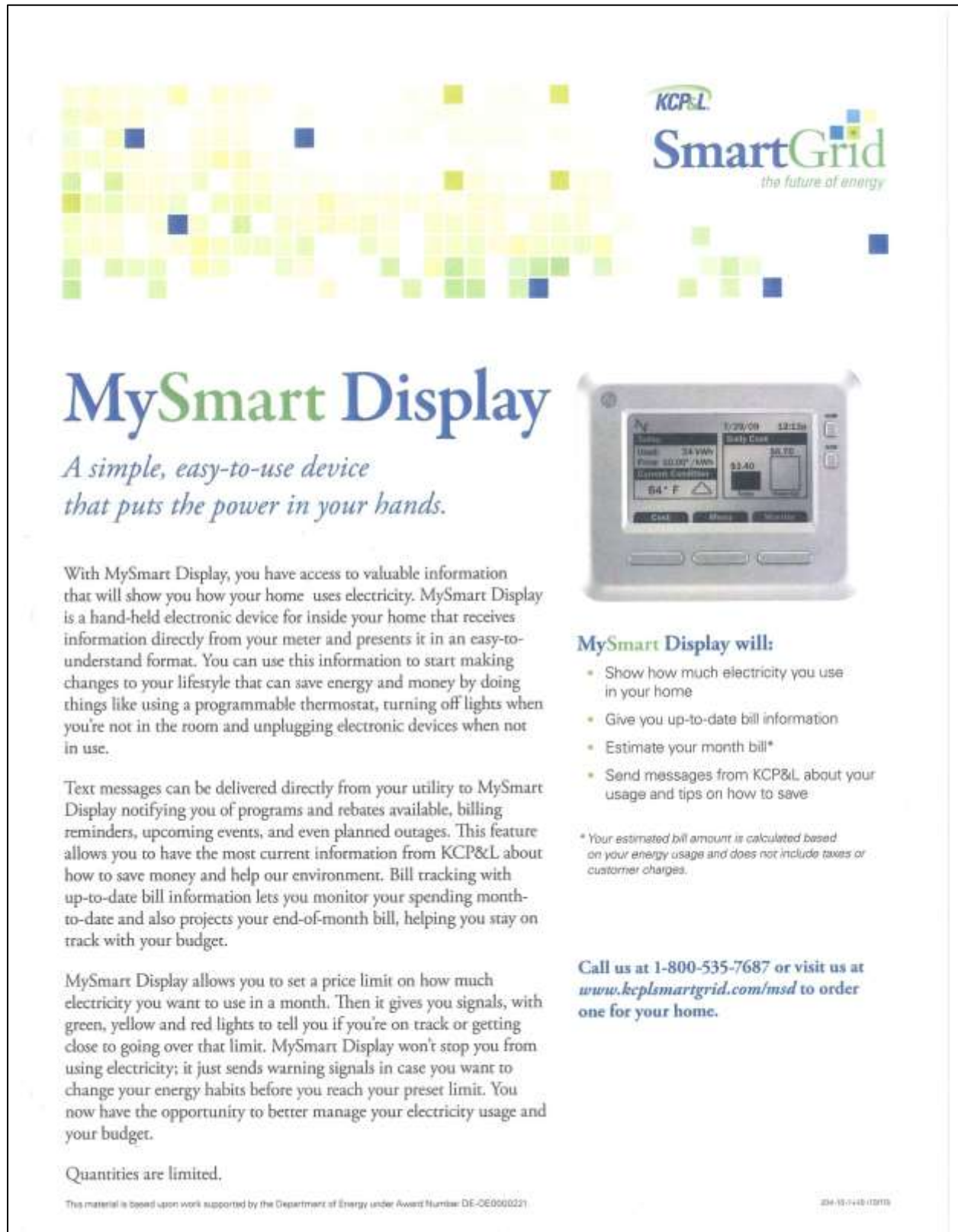
Log-in to MySmart Portal by registering in AccountLink, the online account management tool at www.kcplsmartgrid.com. Once logged in, click on My Smart Portal and begin tracking yourself today!

This material is based upon work supported by the Department of Energy under Award Number DE-CE0000221.

204-10-0431 1/2/15

P.6.1.9 MySmart Portal Postcard



P.6.1.10 MySmart Display Flyer


The flyer features a header with the KCP&L logo and the SmartGrid logo with the tagline "the future of energy". Below this is a large graphic of a city skyline composed of yellow and green squares. The main title "MySmart Display" is in a large, stylized font, followed by the subtitle "A simple, easy-to-use device that puts the power in your hands." To the right is a photograph of the MySmart Display device, which is a handheld electronic device with a screen showing energy usage statistics and a temperature display. Below the title and subtitle, there are three paragraphs of text. The first paragraph describes the device's function. The second paragraph discusses text messages and bill tracking. The third paragraph explains the preset limit feature. To the right of the text is a list of features under the heading "MySmart Display will:". At the bottom, there is a call to action with a phone number and website, and a small disclaimer.

MySmart Display

A simple, easy-to-use device that puts the power in your hands.

With MySmart Display, you have access to valuable information that will show you how your home uses electricity. MySmart Display is a hand-held electronic device for inside your home that receives information directly from your meter and presents it in an easy-to-understand format. You can use this information to start making changes to your lifestyle that can save energy and money by doing things like using a programmable thermostat, turning off lights when you're not in the room and unplugging electronic devices when not in use.

Text messages can be delivered directly from your utility to MySmart Display notifying you of programs and rebates available, billing reminders, upcoming events, and even planned outages. This feature allows you to have the most current information from KCP&L about how to save money and help our environment. Bill tracking with up-to-date bill information lets you monitor your spending month-to-date and also projects your end-of-month bill, helping you stay on track with your budget.

MySmart Display allows you to set a price limit on how much electricity you want to use in a month. Then it gives you signals, with green, yellow and red lights to tell you if you're on track or getting close to going over that limit. MySmart Display won't stop you from using electricity; it just sends warning signals in case you want to change your energy habits before you reach your preset limit. You now have the opportunity to better manage your electricity usage and your budget.

Quantities are limited.

This material is based upon work supported by the Department of Energy under Award Number DE-CE0000221

MySmart Display will:

- Show how much electricity you use in your home
- Give you up-to-date bill information
- Estimate your month bill*
- Send messages from KCP&L about your usage and tips on how to save

* Your estimated bill amount is calculated based on your energy usage and does not include taxes or customer charges.

Call us at 1-800-535-7687 or visit us at www.kcplsmartgrid.com/msd to order one for your home.

204-10-1440 (12/11)

P.6.1.11 MySmart Display Letter (Blue Zone Letter)



KCP&L SmartGrid
 MySmart Display
 Blue Zone Letter

Dear [NAME],

As a resident of KCP&L's SmartGrid Demonstration Area, you are eligible to receive a **FREE** MySmart Display — a portable electronic device that takes information directly from your electric meter and displays it for you in real-time. With MySmart Display you can track:

- The amount of electricity you use
- The cost of that electricity
- Up-to-date account information
- An estimate of your next monthly bill



It also empowers you to control your monthly bill by guiding your use of electricity. You will start by establishing a goal for your electricity costs for the month. Then, MySmart Display will signal you with green, yellow, and red lights to tell you if you're on track or at risk of missing your goal. Don't worry; MySmart Display won't stop you from using energy. It simply alerts you to your usage trend and gives you an opportunity to change your behavior so you can keep costs in check.

Call (800) 535-7687 to sign up for your
FREE MySmart Display from KCP&L.

Why is KCP&L offering this powerful tool to you free of charge? MySmart Display is part of KCP&L's SmartGrid Demonstration Project, which is designed to generate knowledge about customer needs and electricity usage patterns. KCP&L believes this project will serve as a blueprint for future smart grid implementation and will accelerate the "utility of the future" — one that safely delivers reliable electricity with greater efficiency and improved environmental performance. You can learn more about the SmartGrid Demonstration Project at www.kcplsmartgrid.com.

To learn more about MySmart Display or to register to receive one, please call (800) 535-7687. Supplies are limited, so call today to begin better managing your electricity usage and monthly bills.

Sincerely,



Bill Menge
 Director, KCP&L SmartGrid

P.6.1.12 MySmart Display Postcard



P.6.1.13 MySmart Display Gift Card Offer Postcard

P.6.1.14 MySmart Display Drop Off Postcard


The postcard features a decorative header with a pattern of green and blue squares. Below this, the KCP&L logo is positioned above the 'SmartGrid' logo, which includes the tagline 'the future of energy'. A photograph of a MySmart Display unit and its packaging is centered. The main title, 'MySmart Display Drop Off', is written in a large, bold, blue font. Below the title, a paragraph of text explains the program: 'Over the last five years, MySmart Display helped KCP&L SmartGrid customers monitor and manage their energy usage. Now, as the SmartGrid project comes to an end, you can turn-in your KCP&L SmartGrid MySmart Display and receive a **FREE 6-pack** of CFL light bulbs.'

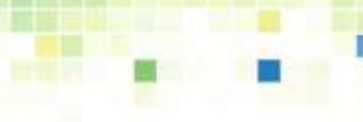


This postcard provides detailed information about the MySmart Display Drop Off event. It features the same decorative header and logos as the previous postcard. The main title, 'MySmart Display Drop Off', is followed by a paragraph explaining the project's conclusion and the incentive for returning displays. The event details are listed in a structured format:

- What:** Saturday, Oct. 25 from 10:00 a.m. – 2:00 p.m.
Tuesday, Oct. 28 from 4:00 p.m. – 6:00 p.m.
- Where:** Anita B. Gorman Discovery Center
4750 Troost
Kansas City, MO 64110
- When:** KCP&L will provide FREE CFL light bulbs and Halloween candy to any SmartGrid customer who returns their MySmart Display.

 A note at the bottom encourages visitors to visit kcpl.com for more energy saving tips. On the right side, the KCP&L SmartGrid logo is accompanied by the address: P.O. Box 418679, Kansas City, MO 64141-8679. A small disclaimer at the bottom left states: 'This material is based upon work supported by the Department of Energy under Award Number DE-CE0000227 (2007-2012) 02/11'.

P.6.1.15 MySmart Display Quick Start Guide



Troubleshooting continued

It has been more than seven days since plugging in MySmart Display. Now what?

If MySmart Display is directly behind the electric meter box, data may not display. Make sure your MySmart Display is not behind the meter and at least 3' away.

Also, if it's too far from the meter (such as more than 50' away), the two devices might not be able to communicate with each other. In this case, move MySmart Display closer to the meter (but not directly behind it).

MySmart Display does not display price.

Once MySmart Display is ready and communicating with your meter, your energy price information should be displayed. If this is not the case, please contact us.





SmartGrid

the future of energy

MySmart Display Quick Start Guide



Now you can take control of your household energy consumption.

Contact Us

If you encounter any issues, have questions or need additional information, please contact us.

Phone: 1-800-335-7687 or 816-737-7129
 Email: smartgridinfo@kcpkl.com
 Website: www.kcpklsmartgrid.com

MySmart Display is a free, easy-to-use hand-held device for your home that tracks how much electricity you are using and estimates your upcoming bill. You can use this information to manage your energy usage and potentially save money on your monthly electric bill.

This document is a draft and does not represent the final design of the SmartGrid system. © 2008 KCP&L

304-12-1418 (10/10)

Getting Started

Please note, your MySmart Display will not function for (up to) seven days after your new meter is installed. If you are receiving the MySmart Display at an event, please allow for 3-5 days for KCP&L to activate your display. If you're not sure whether you received a new KCP&L smart meter yet, please call 1-800-535-7687.

Unpack your new MySmart Display. You should have:

- Your new MySmart Display hardware device.
- Power cord.
- Screws for mounting, if desired.

Plug the power cord into the back of the MySmart Display device, and plug the other end into an outlet. Your MySmart Display device will automatically activate.

When will I see energy info on MySmart Display?

After you receive your new smart meter from KCP&L, it may take up to seven days before MySmart Display provides details about your home's energy consumption and cost. Initially, your MySmart Display will present a temporary screen like the one on the left. When your MySmart Display receives energy data from your meter, it will look similar to the example below:

Temporary Screen During Initial Phase



Example Screen Once MySmart Display is Ready



View the Introductory DVD

Once your MySmart Display is activated and showing data, be sure to watch the **MySmart Display Introduction DVD**, which is included in your KCP&L SmartGrid welcome kit. The DVD contains a short video about the device's benefits and how to use each screen.

What can MySmart Display do?

MySmart Display is equipped to help you track and manage your energy usage. The device lets you:

- View current household electricity use, both in kilowatts and dollars per hour.
- View an estimate of your upcoming monthly bill. Please note: the estimated bill amount is calculated based off your energy usage and does not include taxes or customer charges.
- Configure alerts to notify you when your current usage exceeds the target budget or limit that you set based on consumption and price. You will still be able to use electricity; it is just a visual reminder.
- Receive text messages from KCP&L about upcoming events and rebates available to you.

Troubleshooting

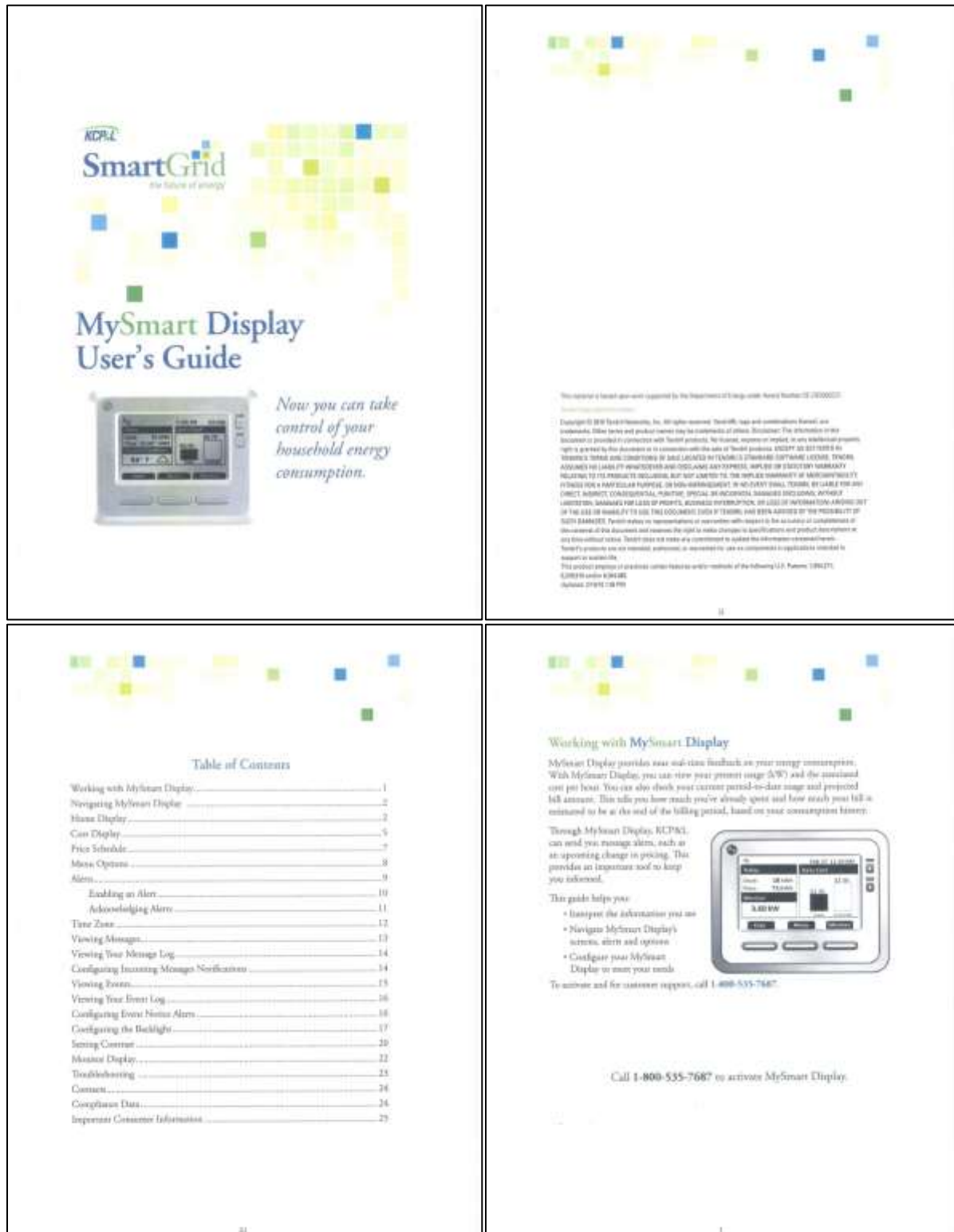
MySmart Display won't activate.

Activation may take up to seven days. During the first week, turn on MySmart Display, and then check it daily to see if the device is now displaying a screen that is similar to the illustration shown on the right on the previous page. In some cases you may need to move the MySmart Display closer to (but not directly behind) your electric meter box.

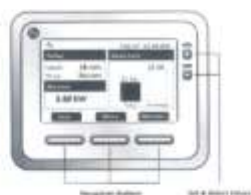
MySmart Display is activated, but doesn't display data.

As noted above, you may need to wait up to seven days before the KCP&L setup procedures are completed. Thank you for your patience!

Continued on reverse.

P.6.1.16 MySmart Display User's Guide

Navigating MySmart Display



MySmart Display has two sets of buttons:

- Three buttons along the bottom of the device correspond to labels displayed on the MySmart Display screen. Click the button below a label to access that function or screen. The labels associated with the buttons change based on the current content of the screen.
- Two buttons on the right side of the device let you increase or decrease values when you define alerts or threshold settings. You can also use these buttons to scroll through available options for a given setting. Like the navigation buttons, the labels associated with these buttons change based on the current screen content.

Home Display

MySmart Display offers you information at a glance to help you make informed decisions about your energy usage. The information displayed on the Home screen on the next page is updated continuously to give you the most current information. From this screen, you can review:

- Present household consumption in terms of cost and real current daily consumption.
- Daily cost.
- A graphical comparison of your daily cost between today and yesterday.

2



Home Screen

The information displayed on the Home screen consists of:

- The Timestik symbol indicates MySmart Display is connected to the meter for optimal operation.
- **Today's Date and Time** – The date and time are automatically loaded on your Home screen during the registration process of your MySmart Display.
- **Today** – This screen tracks data for the current day.
 - **Cost** – This figure indicates how much electricity you have used since midnight of the previous day. It is measured in kilowatt-hours (kWh) and is updated with every meter read every 15 minutes.
 - **Price** – The amount you are charged per kWh. This figure is received from KCP&L and is updated only when KCP&L releases a new price.

3



Kilowatt (kW) vs. Kilowatt-hour (kWh)

MySmart Display displays your instantaneous demand (kilowatts) on the Monitor screen and the amount of energy you used over a period of time (kilowatt-hour) on the Home screen.

A kilowatt (kW) is a unit of measure for the amount of power used at a given instant. A kilowatt-hour (kWh) is the unit of measure for the amount of energy used over a period of time. When you use 1 kilowatt for 1 hour, you've used a kilowatt-hour. An electric heater with one heating element might use 1 kilowatt. Used for an hour, it would use 1 kilowatt-hour. When you buy electricity you are charged by the kilowatt-hour (kWh).

- **Monitor/Current Rate** – This screen toggles between two displays:
 - **Monitor** – Shows your household energy demand in kilowatts (kW).
 - **Current Rate** – The current price rate applied to your kilowatts. This rate is from the pricing program you are enrolled in with your utility company.
- **Daily Cost** – This screen helps you track your current energy cost as it accumulates for the day, and compares it to your total energy cost from the prior day.
 - **Today** – This is updated every 15 minutes.
 - **Yesterday** – This figure is static and reflects the dollar amount spent for the prior day between the hours of 12:00 AM and 11:59 PM.

From the Home screen, you can access Cost, Menu and Monitor screens, which provide additional details about your energy consumption. You can also change the alerts and settings for MySmart Display.

4



Cost Display

From your Home screen, press the Cost button to display a listing of energy cost information.

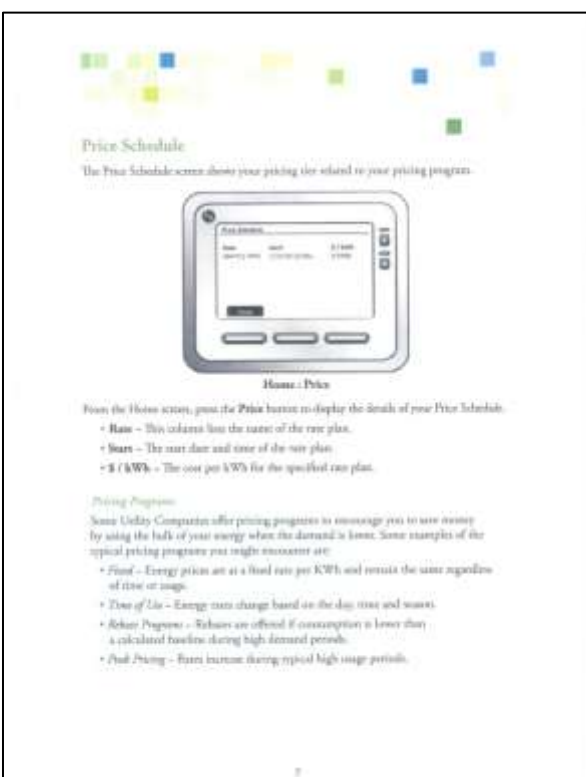


Home - Cost

The first page of the Cost screen shows you:

- **Bill Start Date** – The beginning date of your billing cycle.
- **Bill End Date** – The end date of your billing cycle.
- **As of Date** – The date through which your cost and usage amounts are estimated. (Usually today's date.)
- **Days Remaining** – The number of days remaining in your billing cycle.
- **Cost to Date** – Your estimated energy cost as of today.
- **Consumption to Date** – Your estimated energy usage as of today.
- **Estimated Bill** – Your projected energy bill amount, including customer charges and taxes.

5



Enabling an Alert

You can set an alert to notify you if your daily household usage exceeds a certain kilowatt amount. (For example, 5 kW. You can set your kW amount on the MySmart screen.) When the household usage exceeds your set amount, (5 kW) the alert is activated. A message displays on the MySmart Display and, depending on your alert configuration, an audible beep sounds until it is acknowledged.

The following steps are used to set any of the four types of alerts available through MySmart Display:

1. From Home, select the Menu button.
2. From Menu, verify the Settings option is highlighted and press the Select button.
3. From the Menu: Settings screen, verify the Alerts option is highlighted and press the Select button.
4. Use the $\uparrow$ button to scroll to the type of setting you want to configure (Household Usage for the example.) Press the Select button.



Home : Menu : Settings : Alerts : Household Usage

5. Use the buttons on the upper right side of the display to set a value, in this case 5kW. The $\uparrow$ button increases the value, while the $\downarrow$ button decreases the value amount.
6. After entering a value, use the $\rightarrow$ button to move to the Settings Enable field. With the Enable field highlighted, press the Y button on the right side of the display. This changes the Settings Enable field to Yes.

10

7. The Audio alert field displays. Use this option to have your MySmart Display sound an audible alarm when the alert value is met. Press the $\rightarrow$ button to highlight the audio alert setting. Press the Y button on the right side of the display to change the setting to Yes.

8. Press the Save button to commit your changes. MySmart Display prompts you to confirm your change. Using the buttons on the upper right hand side, press the Y button to accept, or the N button to cancel your changes.

With the alert configured in the above example, when the household usage exceeds 5 kW:

- A message is displayed on the MySmart Display.
- An audible beep sounds until it is acknowledged.

Use these same steps to enable any of the other alert types.

Acknowledging Alerts

After you have set an alert with enabled audio, MySmart Display shows a message and emits an audible beep until you acknowledge the alert. The message tells you which alert type has been exceeded and shows:

- The alert value that was set.
- The current usage amount that has set off the alert.

Press the OK button on the right hand side to acknowledge the alert.

NOTE: If you did not enable the audio alert, the message will still appear on your screen and stay there until you press the OK button.

11

Time Zone

You can configure MySmart Display to reflect the time zone and daylight saving time (DST) setting for your geographic area.



Home : Menu : Settings : Time Zone

You can select from multiple time zones as well as enable or disable the Day Light Saving time (DST) setting.

NOTE: The default MySmart Display setting is Auto Detect. Auto Detect automatically determines your time zone and Daylight Saving Time settings from your meter. In some instances, this information is not received and requires you to manually set your Time Zone and Daylight Saving Time status.

To configure your time zone:

1. From Home, select the Menu button.
2. From the Menu, select the highlighted Settings option by pressing the Select button.
3. From the Menu: Settings screen, press the $\uparrow$ button to highlight the Time Zone option, followed by the Select button.

12



Home : Menu : Settings : Time Zone

4. The Time Zone field is highlighted. Use the $\uparrow$ or $\downarrow$ buttons on the upper right hand side to scroll through and find your time zone area.

5. Press the $\rightarrow$ button to move to the Daylight Saving Time field. Again use the $\uparrow$ or $\downarrow$ buttons on the upper right hand side to toggle the Daylight Saving Time setting between Disable and Enable.

6. Press the Save button to commit your changes. MySmart Display prompts you to confirm your change. Using the buttons on the upper right hand side, press the Y button to accept, or the N button to cancel your changes.

Viewing Messages

MySmart Display shows messages sent to you by KCP&L. Messages are classified as critical, high, normal or low. When you receive a message from KCP&L:

- It appears on your MySmart Display.
- The light on the right side of your MySmart Display flashes orange if the message is critical.
- The message remains displayed on your MySmart Display until you acknowledge it.

13



You can also configure MySmart Display to use audio alerts, which cause your MySmart Display to beep when a critical message is received. (See the next section for instructions on this configuration.)

If a second critical message is received while a critical message is displayed, MySmart Display displays it on the Home screen after the first message is acknowledged.

Viewing Your Message Log

MySmart Display saves you last five messages in a log for your review. To access your messages from the Home screen:

1. Press **Menu**.
2. Press the **Left** button to navigate to Message Log and press the **Select** button. The Message Log opens.
3. Use the **Up** and **Down** buttons to browse your stored messages.
4. Press the **Menu** button followed by the **Home** button to return to the Home screen.

Configuring Incoming Messages Notifications

You can set your MySmart Display alert to sound when any message is received, or only when critical messages are received. You can also disable the audio alert entirely for all messages. Configure your audible alerts through the Settings menu.



Home : Menu : Settings : Messages

14



1. From Home, press the **Menu** button.
2. Press the **Menu** screen, press the **Select** button to display the Settings menu (already highlighted).
3. Use the **Up** button to scroll to Message and press the **Select** button.
4. Use the **Up** and **Down** buttons on the right of your display to scroll through these options:
 - Beep for critical messages only – MySmart Display sounds a beep when it receives a message flagged as critical by the sender.
 - Beep for all messages – MySmart Display sounds a beep when it receives any message.
 - Off – MySmart Display does not beep when messages are received.
5. Press the **Save** button to commit your changes.
 - MySmart Display prompts you to confirm your change. Using the buttons on the upper right hand side, press the **Y** button to accept, or the **N** button to cancel your change.
 - The display returns to the Alerts menu.
 - Press **Menu** to return Home.

Viewing Events

MySmart Display shows events that are sent to you by ECP&L, such as a power outage or peak price increase. Events are classified as critical or normal. When you receive an event from ECP&L:

- It appears on your MySmart Display.
- The light on the right side of your MySmart Display flashes orange if the event is critical.
- While active, the event remains displayed on your MySmart Display until you acknowledge it.

You can also configure MySmart Display to use audio alerts, which cause your MySmart Display to beep when an event is received. (See the next section for instructions on this configuration.)

If a second critical event is received while a critical event is displayed, MySmart Display displays it on the Home screen after the first event is acknowledged.

15



Viewing Your Event Log

MySmart Display saves your last twenty events in a log for your review. To access your events from the Home screen:

1. Press **Menu**.
2. Press the **Left** button to navigate to Event Notices and press the **Select** button. The most recent Event Notice opens.
3. Use the **Up** and **Down** buttons to browse your stored events.
4. Press the **Menu** button followed by the **Home** button to return to the Home screen.

Configuring Event Notice Alerts

You can set your MySmart Display to alert you when any event is received, or only when critical events are received. You can also disable the audio alert entirely for all events. Configure your audible alerts through the Settings menu.



Home : Menu : Settings : Events

To configure your Events alerts:

1. From Home, press the **Menu** button.
2. From the Menu screen, press the **Select** button to display the Settings menu (already highlighted).
3. Use the **Up** button to scroll to Events and press the **Select** button.
4. Use the **Up** and **Down** buttons on the right of your display to scroll through these options:
 - Beep for critical events only – MySmart Display sounds a beep when it receives an event flagged as critical by the sender.

16



5. Press the **Save** button to commit your changes.
 - MySmart Display prompts you to confirm your change. Using the buttons on the upper right hand side, press the **Y** button to accept, or the **N** button to cancel your change.
 - The display returns to the Alerts menu.
 - Press **Menu** to return Home.

Configuring the Backlight

Backlight is the screen light that appears when you push any MySmart Display button. You can set the backlight to:

- Always on
- Always off
- Flash once only when a button is pressed on MySmart Display
- Pulse when a pre-determined event triggers an alert.



Menu : Settings : Backlight

To configure the backlight:

1. From Home, press the **Menu** button.
2. Press the **Select** button to screen Settings.
3. Use the **Up** button to navigate to and highlight Backlight.
4. Press the **Select** button to display Backlight settings.

17



5. The Backlight settings screen opens. Use the $\uparrow$ and $\downarrow$ buttons on the right of your display to navigate through the options.

- Backlight on by button press – MySmart Display turns on the backlight when you press any of its buttons.

- When this option is selected, a field displays to specify how long the light stays on. Press the $\rightarrow$ button to highlight the seconds field.

- Use the $\leftarrow$ and $\rightarrow$ buttons on the upper right to select the number of seconds for the backlight to remain on after a button is pressed. Values include: 2, 5, 10, 20, and 60.

- Backlight always off – The backlight stays off, even if you press one of MySmart Display's buttons.

- Backlight always on – The backlight stays on until the setting is changed.



Home • Menu • Settings • Backlight

NOTE: You can only set one Backlight Alert Threshold value for a Backlight Alert.

You can set the backlight on your MySmart Display to provide a visible reminder of a selected Backlight Alert value. When set, your MySmart Display will glow with a colored color that calls your attention to the state of your alert.

- Green – You are within range of your alert value.

- Yellow – You are approaching your alert value.

- Red – You have exceeded your alert value.

18



To set a Backlight Alert:

1. Backlight Alert—Use the $\uparrow$ and $\downarrow$ buttons on the right side of the MySmart Display to select an event, such as Household Usage. Then, press the $\rightarrow$ button to highlight the Pulse option. Press the $\uparrow$ and $\downarrow$ buttons on the right side to turn the Pulse alert on (lit) or off (dnt).

- Pulse – This setting is only available in conjunction with the Backlight Alert setting. When set, this option phases the color intensity to steadily notify you of the status of your Backlight Alert. When the Pulse setting is off, the colors remain static in green, yellow and red.

NOTE: With the Backlight Alert on, if you are within a range of 0 – 99% of your defined alert value, the backlight color is green. From 60% to just short value, the backlight color is yellow. When the alert value is exceeded, the backlight color is red. The backlight colors reflect the alert values set on the Alerts Menu (Alerts) Settings: Alerts.

2. Press the Save button to commit your changes. MySmart Display prompts you to confirm your change. Using the buttons on the upper right hand side, press the Y button to accept, or the N button to cancel your changes.

3. If you want to discard your changes and leave the settings as they are, press the Cancel button. You are asked to confirm your actions. Using the buttons on the upper right hand side, press the Y button to accept, or the N button to cancel your changes.

19



Setting Contrast

You may want to adjust the screen contrast to make it easier to read your MySmart Display screen. Contrast represents the degree of difference between the text and the background.



Home • Menu • Settings • Contrast

MySmart Display's contrast is configured from the Settings menu.

1. From the Home screen, press the Menu button.

2. Verify that Settings is highlighted. Press Select.

3. Press the $\uparrow$ button to scroll through the list of settings options until Contrast is highlighted. Press the Select button.

20



Home • Menu • Settings • Contrast

4. Use the buttons on the right side of your MySmart Display to move the slider bar.

- Press the $\leftarrow$ button to darken the screen and text.

- Press the $\rightarrow$ button to lighten the screen.

Experiment with the settings to determine what works best in your home's lighting. The sample text on the screen helps you determine how different text sizes and weights will look at each contrast setting.

5. Press the Save button to commit your changes. MySmart Display prompts you to confirm your change. Using the buttons on the upper right hand side, press the Y button to accept, or the N button to cancel your changes.

21

Monitor Display

MySmart Display's monitor screen provides status information as shown on the Home screen, but highlights your instantaneous electricity usage in kWh. This figure is updated on the monitor screen with each meter read every 10 minutes. The Monitor screen also shows the current price of the electricity you are using.

Note that some meters update this data infrequently, therefore, these values may reflect relatively stale.



Home Monitor

A line of dashes appears to the left of your present household usage. As MySmart Display prepares to receive updated usage information from your meter, the number of dash increases until the screen is refreshed with current information.

This line of dashes also appears upon initial power up of your MySmart Display with no related data. After your MySmart Display receives a full read from the meter, the related data is displayed here. (A full meter read could take in excess of 15 minutes depending upon when your MySmart Display was powered up. There may be a time delay between your initial power up and your data display.)

Troubleshooting

SYMPTOM	SOLUTION
MySmart Display is too dark and unreadable.	If your screen appears hard to read upon initial plug in and prior to registration, use the following steps to adjust the screen contrast: - Press the bottom left button repeatedly so increasingly lighter your display. - Press the bottom right button repeatedly so increasingly darker your display. After registration you can easily adjust and save screen settings by using the MySmart Display menu options. (Menu: Settings: Contrast)
MySmart Display won't activate.	Activation should take less than one minute. If it takes longer than five minutes to activate MySmart Display, then try moving MySmart Display closer to the electric meter. In some cases it may not be possible to activate MySmart Display due to the distance between MySmart Display and your electric meter. Our customer care representative will provide further assistance in this situation.
MySmart Display is activated, but doesn't display data.	If MySmart Display is directly behind the electric meter box (for example, if the box is on an outside wall), data may not display. Move MySmart Display so that it is not behind the electric meter box. If the distance between MySmart Display and the electric meter is not great, data may not display. Move MySmart Display closer to the electric meter.
MySmart Display does not display electricity usage.	MySmart Display will not display electricity usage until it receives data information from the electric meter. MySmart Display is designed to receive usage statistics every 10 minutes from the electric meter. If this information is not displayed within 24 hours of plugging in your MySmart Display, contact your customer care organization.

Contacts

If you encounter any problems or need more information, contact:

- By phone: 1-800-535-7087 or e-mail: smartgrid@kcp&l.com

Compliance Data

The MySmart Display product is UL Listed to UL standard #8950.

To comply with national safety standard building codes:

- Do not attach this unit directly to any part of building structure or frame.
- This unit may be attached to drywall or wallboard or non-permanent parts of the structure.
- This unit should be mounted such that it is easily removable with a screwdriver or nail driver.
- This unit should be installed near an existing electrical outlet. If no outlet is provided near the installation location of the unit, a licensed electrician should be retained to install an outlet according to NEC requirements.

The MySmart Display product:

- Must be used with the power supply that came with the unit.
- Is not for use around water or wet environments.
- Is intended for indoor use only.
- Has no user serviceable parts. Refer service to qualified service persons.
- Is intended to work over a temperature operating range of 10 degrees C to 40 degrees C.
- Must be used as directed in this guide.

The power supply cord should not be attached to the building surface and may not be run through walls, ceilings, floors, or similar openings in the building structure.

- The power cord from the outlet to the unit should be secured to reduce exposure to physical damage.
- The power adapter shipped with the unit is the only one recommended for the safe use of this product. If a replacement is needed the supplier of the equipment must be consulted to get an authorized power adapter.

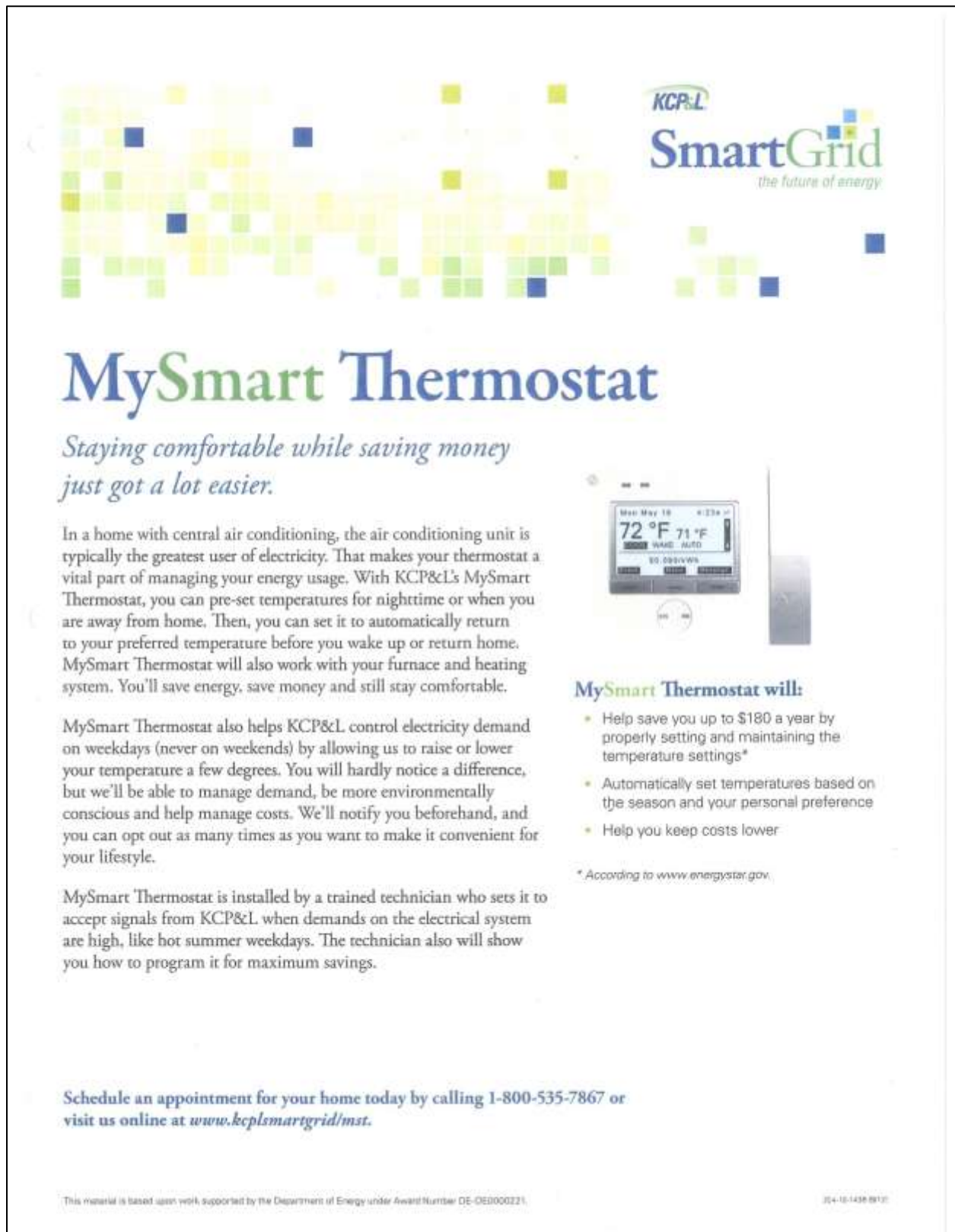
Important Consumer Information

This product contains a Federal Communications Commission (FCC) and Industry Canada (IC) licensed radio station. The license numbers are:

- FCC: TTB-APEKLT and IC: 5065A-APEKLT

This device also complies with:

- Part 15 of the Federal Communications Commission (FCC) for unintentional emissions
 - Section 4.0 of RSS-100 of the Industry Canada Statement.
- (NOTE: The word "IC" before the certification / registration number only signifies that the Industry Canada technical specifications were met.)

P.6.1.17 MySmart Thermostat Flyer


The flyer features a header with the KCP&L logo and the SmartGrid logo with the tagline "the future of energy". The background is a light green grid with some squares highlighted in blue and yellow. The main title "MySmart Thermostat" is in a large, bold, blue font. Below it is a subtitle in a smaller, italicized blue font. The body text is in a standard blue font, with a bulleted list of benefits. A photograph of the thermostat is shown on the right side. The footer contains a call to action and a small disclaimer.

MySmart Thermostat

Staying comfortable while saving money just got a lot easier.

In a home with central air conditioning, the air conditioning unit is typically the greatest user of electricity. That makes your thermostat a vital part of managing your energy usage. With KCP&L's MySmart Thermostat, you can pre-set temperatures for nighttime or when you are away from home. Then, you can set it to automatically return to your preferred temperature before you wake up or return home. MySmart Thermostat will also work with your furnace and heating system. You'll save energy, save money and still stay comfortable.

MySmart Thermostat also helps KCP&L control electricity demand on weekdays (never on weekends) by allowing us to raise or lower your temperature a few degrees. You will hardly notice a difference, but we'll be able to manage demand, be more environmentally conscious and help manage costs. We'll notify you beforehand, and you can opt out as many times as you want to make it convenient for your lifestyle.

MySmart Thermostat is installed by a trained technician who sets it to accept signals from KCP&L when demands on the electrical system are high, like hot summer weekdays. The technician also will show you how to program it for maximum savings.



MySmart Thermostat will:

- Help save you up to \$180 a year by properly setting and maintaining the temperature settings*
- Automatically set temperatures based on the season and your personal preference
- Help you keep costs lower

* According to www.energystar.gov.

Schedule an appointment for your home today by calling 1-800-535-7867 or visit us online at www.kcplsmartgrid/mst.

This material is based upon work supported by the Department of Energy under Award Number DE-DE0000221.

2014-10-1438 0012

P.6.1.18 MySmart Thermostat FAQs**MySmart Thermostat FAQs****What is the MySmart Thermostat?**

MySmart Thermostat is one of KCP&L's free SmartGrid products available to customers who live in the SmartGrid Demonstration Area. It is a programmable thermostat that works with your heating and cooling systems, allowing you to program your thermostat to raise or lower temperatures on a set schedule. It is one of the most effective ways to save on your monthly electric bill.

It also helps KCP&L reduce electric load (when certain events cause demand on our system to be high) by raising or lowering the temperature in your home a few degrees for up to 4 hours. You can opt-out of these events any time, but most customers don't find them to be problematic.

Why does KCP&L offer this program?

The SmartGrid Demonstration project provides customers more choices so they can take control of their energy use and cost through new technology, tools and programs. MySmart Thermostat helps customers save energy, save money and still stay comfortable, while helping KCP&L manage its electricity demand.

Who is eligible to enroll in the MySmart Thermostat program?

Residential and small business customers in the SmartGrid Demonstration Area who have a Smart Meter are eligible to apply for the MySmart Thermostat program. To qualify, your air conditioning unit must meet the following criteria:

- Customer must have central air conditioning (window units are not eligible).
- Equipment must be in good mechanical condition.
- System must be pre-qualified by a KCP&L authorized technician.

Note: Existing thermostats will be left with the customer. If the customer elects to discontinue the program, our technician will replace the MySmart Thermostat with the original thermostat, at no charge to the customer.

Can I participate in the program if I have a window unit?

No, this technology works only on central air-conditioning systems.

Can I apply for the MySmart Thermostat if I have a heat pump?

MySmart Thermostat works with most heat pumps. We will schedule an appointment to have a professional technician pre-qualify your equipment free of charge.

If I don't own the house or business property, can I still enroll?

Yes, all we need is authorization from the owner.

MySmart Thermostat FAQs

What is a demand response event?

Electricity usage in the Kansas City area is typically highest in the afternoon and early evening, as well as during the summertime when air conditioners run day and night. Occasionally, this increased demand can overwhelm our electrical grid, leading to service issues, such as power outages.

When demand on the grid is particularly high, KCP&L can issue a demand response event, signaling MySmart products in your home to reduce electricity consumption. A demand response event will affect your MySmart Thermostat one of two ways by:

1. Adjusting the temperature to immediately raise or lower it a few degrees at the beginning of a demand response event; or
2. Raising or lowering the temperature one degree per hour for up to 4 hours.

KCP&L can also issue a demand response event which signals the MySmart Plugs and MySmart Switch to turn off the connected appliance throughout the duration of that event. Once the demand response event has ended, your MySmart Thermostat and appliances will return to their regular settings.

Demand response events can only be called on non-holiday weekdays. You can opt-out of these events any time, but most customers don't find them to be problematic.

How do I opt out of a demand-response event?

You can opt out of a demand response event at any time by following the menu options provided in MySmart Thermostat. See page 24 of *Using the MySmart Thermostat* user guide for additional information.

Can I change my thermostat during a demand response event?

To adjust your thermostat during a demand response event, you must first opt out of the event by following the menu options provided in MySmart Thermostat.

Can I save money using the MySmart Thermostat program?

Programmable thermostats are one of the most effective ways to save money on electricity, but they only work if you use them. Customers who don't make any changes to how they use electricity probably won't see any savings. Those who are conscientious about programming their thermostat to set temperatures back during times when they are away from home or are asleep will likely notice a difference on their bills.

MySmart Thermostat FAQs

What are the "recommended settings" for programming the thermostat?

Day of Week	Sunday - Saturday		
Program	Time	Heat	Cool
Wake	6:00 AM	70° F (21.0° C)	75° F (24.0° C)
Away	8:00 AM	62° F (16.5° C)	85° F (29.3° C)
Home	6:00 PM	70° F (21.0° C)	75° F (24.0° C)
Sleep	10:00 PM	62° F (16.5° C)	78° F (25.5° C)

Can I control my thermostat remotely, through the internet?

MySmart Thermostat can only be programmed at the thermostat. KCP&L offers other products and tools that allow you to control your thermostat and other equipment through the internet. To learn more, call the SmartGrid Support team at (800) 535-7687.

How will I know when KCP&L is sending a signal to my thermostat?

An event notification will be sent to your MySmart Thermostat. Event notifications may also be viewed in the MySmart Portal.

If I am unhappy with the MySmart Thermostat, can I opt out of the program?

Yes. If you are not satisfied for any reason, please call our toll-free number at (800) 535-7687 to speak with a representative. We can arrange to send someone to your home or business to replace MySmart Thermostat with your original thermostat, at no cost to you.

Is there someone to talk to when I have questions or problems?

The SmartGrid Support Team has been trained to answer your SmartGrid questions. They are available Monday through Friday from 8 a.m. – 7 p.m. at (800) 535-7687 or SmartGridInfo@kcpl.com.

P.6.1.19 MySmart Thermostat Quick Start Guide

Thermostat System Mode (Heat, Cool, Off)

To change your thermostat's mode:

1. On the Home screen with the backlight on, press the **STD** button.
2. Use the Up and Down arrows to select the mode you want (Heat, Cool, or Off).
3. With the mode selected, press **Save** to save the new setting.
4. Next, use the Up and Down arrows to set the temperature you want.

NOTE: The temperature you set will revert to the normal schedule at its regularly scheduled time.

Customizing the Thermostat Program Schedules

Your thermostat is preconfigured with a preset (default) weekly program schedule and is ready for use. You can customize the schedule to fit your own needs. The following table shows the preset programs that run on the thermostat. Preset programs help you save money and ensure optimal energy usage.

Day of Week	Sunday - Saturday		
Program	Time	Heat	Cool
Wake	6:00 AM	70° F (21.0° C)	75° F (24.0° C)
Away	8:00 AM	62° F (16.5° C)	65° F (18.5° C)
Home	6:00 PM	70° F (21.0° C)	75° F (24.0° C)
Sleep	10:00 PM	62° F (16.5° C)	70° F (21.0° C)

To configure your thermostat, use the following steps:

1. While the thermostat backlight is on, press **Menu**. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to **Program Schedule** then press **Select**. The **Program Schedule** appears.

Program	Time	Heat	Cool
Wake	6:00a	70	75
Away	6:00a	70	75
Home	6:00p	70	75
Sleep	10:00p	70	75

3. Use the Up and Down arrows to navigate through the days of the week.
4. On any day, press **Next** to go to the time display.
5. Use the Up and Down arrows to change the scheduled time to begin. The time is changed in 15-minute increments. **NOTE:** If you select a time that overlaps with another programmed time, the thermostat automatically shows the overlapping segment to avoid the overlap.
6. Press **Next** to go to the Heat setting.
7. Use the Up and Down arrows to raise or lower the temperature.
8. Repeat steps 6 and 7 to set the Cool temperature.
9. Continue to press **Next** to move to the next schedule segment (Wake, Away, Home, and Sleep).
10. When you have completed your settings, press **Save** to save your changes. When you press **Save**, the thermostat displays an option to copy the updates to other days of the week.
11. To return to the Home screen, press **Menu** then press **Home**.

KCP&L Events Sent to Your Thermostat

Your thermostat can receive event notices from KCP&L, such as demand response events. These events can reduce heating temperatures or increase air conditioning temperatures, moving the value to a more comfortable setting for a short period of time. When an event is issued, the event notice can be viewed on your McQuint Thermostat or McQuint Portal. For specific information about an event please see your McQuint Thermostat User Guide.

Thermostat Troubleshooting

If you encounter any issues while using your thermostat, use the following troubleshooting tips:

Symptom	Potential Issue	Corrective Action
Display is blank	Power to HVAC System is off. Cable Connections to the thermostat are not tight.	Call customer support or a qualified technician at (800) 335-7067.
Buttons do not work	The keypad on the thermostat has been locked.	Look for a padlock icon on the screen. Use the screen Locking or Unlocking the Keypad.
Thermostat seems hot or heating (even though it is scheduled)	Time is not set correctly.	Check the time and date on the thermostat.
Home is not hot on any day	The set point is not set to the correct temperature.	See the Setting a Program Schedule on the Thermostat. See Setting a Temporary Temperature Override on the Thermostat.
Heater changes temperature at the wrong time	Time is not set correctly. The Program Schedule is not set correctly.	Check the time and date on the thermostat. See the Customizing the Thermostat Program Schedules section.
Thermostat does not have the correct time	Thermostat is not paired to McQuint Home. Home was networked.	Usually the thermostat will sync with the McQuint Home home any network in a short amount of time.
Thermostat does not turn off or on	Temperature is incorrectly set. Schedule settings are wrong. Power to the HVAC system is off.	Check the temperature settings. Ensure the program settings are off. Remove the HVAC system power.

To learn more about setting and using the McQuint Thermostat, please see the McQuint Thermostat User Guide. To learn more about all of the SmartGrid products and programs, contact the SmartGrid support team at (800) 335-7067.

P.6.1.20 MySmart Thermostat User's Guide

Using the MySmart Thermostat

Welcome! Congratulations on receiving a MySmart Thermostat and participating in KCP&L's SmartGrid program. This guide explains how to use your new thermostat.

Introduction

The MySmart Thermostat is a smart, programmable thermostat. It works with your electric meter to help you manage the energy usage in your home. This thermostat must be installed by a qualified technician in compatible heating, ventilating, and air conditioning (HVAC) units, allowing you to adjust your home's temperature to optimize comfort and energy efficiency.



You can use MySmart Thermostat's preconfigured rules or define your own rules to adjust your energy consumption as costs and demand fluctuate. There are many useful options within the MySmart Thermostat's screen and menus. Read this documentation to learn how to use and customize your MySmart Thermostat.

NOTE: Under no circumstances should anyone other than a qualified technician install, service, or remove your KCP&L Thermostat.

ALSO, KCP&L recommends that you regularly schedule HVAC maintenance to keep your system operating at peak performance.

Overview of Thermostat Features

The MySmart Thermostat offers the following features:

- Four programmable daily temperature schedules for heating and cooling
- Temporary and permanent override of programmed temperatures
- Programmable vacation temperature schedules
- LEDs indicating various modes
- Participation in KCP&L programs for managing energy use during peak energy demand periods
- Viewing KCP&L messages, events, and pricing programs

Thermostat Controls and Display

The following figure shows the thermostat controls and display:



Thermostat Buttons

To wake up the thermostat and turn on the backlight, click any of the thermostat buttons. The thermostat stays awake with the backlight on for 20 seconds after the last key press. The thermostat controls work only while the backlight is on. If the backlight goes off prior to any changes being saved, the changes will be lost.

Button/Setting	Description
Up	Increase temperature/date/time Scrolls through and highlights Menu options
Down	Decrease temperature/date/time Scrolls through and highlights Menu options
Home	Displays the main Set Point thermostat screen
Menu	Displays the main menu
Select	Selects highlights program Confirms messages
SYS	Activates the OFF/HEAT/COOL mode
FAN	Activates the FAN setting (AUTO or ON)
Reset	Resets the thermostat but keeps your settings

Thermostat Icons

Icon	Description
	Increases temperature/date/time Scrolls through and highlights Menu options
	Decreases temperature/date/time Scrolls through and highlights menu options
	Displays the main Set Point thermostat screen
	Displays the main menu
	Selects highlight program
	Confirms messages
S2	Activates the OFF/HEAT/COOL mode
S3	Activates the FAN setting (AUTO or ON)

About Thermostat Controls

- **SYS:** Starts Mode Selection, HEAT, COOL, OFF (then use the Up and Down arrows to select a mode).
- **FAN:** Toggles FAN Auto to FAN ON (then use the Up and Down arrows to select Auto or on).
- **Up and Down Arrows:** The silver buttons used to navigate through menus and set the temperature.
- **Soft Keys:** The three silver buttons below the display. Use the soft keys to select the action displayed above the buttons.
- **Reset:** Your settings are saved during a thermostat reset.



About Thermostat Display

The thermostat includes summary information on the main (Home) screen about your default or customized settings, including:

- Current System (SYS) mode
- Daily schedule that is currently running
- Fan setting
- Day, Date, and Time – synchronized with your energy provider
- Messages and Events

The thermostat displays information depending on the current mode.

- **Mode:** The HVAC mode in which the thermostat is operating.
 - **HEAT:** Sets the thermostat into heat mode.
 - **COOL:** Sets the thermostat into cooling mode.
 - **OFF:** Turns off the heating ventilating and air conditioning (HVAC) system.
 - **Timer (Emergency Heat):** Sets the thermostat into emergency heat mode. Used only for heat pump systems equipped with emergency heating subsystems.
 - **Wait:** Wait period immediately after the thermostat has been reset or power cycled. After five minutes the device returns to normal operation.
- **Program Mode:** The program indicator displays the daily schedule that is currently running on the thermostat. Each daily schedule comes preset but can be customized for start time and temperature setting.
 - Wake
 - Away
 - Home
 - Sleep

- **Temperature Mode**
 - **Vacation (Vac):** Temporarily overrides daily schedules until the date and time you specify.
 - **Custom:** Temporarily overrides daily schedules. The thermostat will return to the programmed values when the next daily schedule begins or if the thermostat is reset.
 - **Hold:** Permanently overrides the daily schedules until you change it.

Thermostat Indicator Lights (LEDs)

- **LEDs Off:** Thermostat is operating normally (if the LEDs are off and the display is blank, power to the thermostat is off).
- **Green and Red LED Flashing:** Thermostat is powering on.
- **Amber LED Solid:** An event is active.
- **Green LED flashing:** Thermostat is scanning for a network to join.
- **Red LED Flashing (Heat Pump Only):** Consult your Heat Pump System documentation or contact an HVAC technician.

Temperature Indicators

- **Current:** The current temperature where the thermostat is located.
- **Set Point:** The desired temperature the thermostat has been set to maintain.

Thermostat Temperature Range

The thermostat supports the following temperature range:

- Fahrenheit: Between 45° F and 90° F
- Celsius: Between 7° C and 32° C

Thermostat System Mode (Heat, Cool, Off)

To change your thermostat's mode:

1. At the Home screen with the backlight on, press the SYS button.
2. Use the Up and Down arrows to select the mode you want (Heat, Cool, or Off).
3. With the mode selected, press Save to save the new setting.
4. Use the Up and Down arrows to set the temperature you want. Custom appears on the thermostat display.

NOTE: The temperature you set will revert to the normal schedule at its regularly scheduled time.

Thermostat Fan Settings

The thermostat has two fan settings:

- **ON:** Fan is always on.
- **AUTO:** Fan automatically starts when the system (either heating or cooling) turns on.

To change the Fan setting:

1. At the Home screen with the thermostat backlight on, press the FAN button.
2. Use the Up and Down arrows to select On or Auto.
3. Press Save to save the new setting.



Locking or Unlocking the Thermostat Keypad

You can protect your thermostat settings from further changes after you have programmed your options by locking the keypad. When your thermostat keypad is locked, the lock icon appears on the Home screen and none of the thermostat buttons work.

- To lock your keypad, press the Up and Down arrows simultaneously. The lock icon appears on your display.
- To unlock your keypad, press the Up and Down arrows simultaneously until the lock icon disappears from your display.

Thermostat Default Settings

A default setting means the behavior of the thermostat if you do not make any modifications or customizations to the preconfigured values and programs. Here are the default settings:

Button/Setting	Description
Program	Temporary and Vacation mode are not activated. It depends on the time of day. For example, at midnight, the default temperature is 62 degrees Fahrenheit. The value is taken from the default program schedule, as shown in the section "Customizing the Thermostat Program Schedules and Defaults." It appears later in this guide.
Set Point	01/01/00 12:00 AM, Sunday (When thermostat is first powered on)
Units	Fahrenheit
System	Heat
Fan	Auto

Programming the Thermostat Schedule

Your thermostat provides a seven-day programmable schedule of time and temperature for both heating and cooling. This allows you to set different temperatures at different times for those weekend days when the majority of your time is spent at home, and week days when your household members are at work and school.

Customizing the Thermostat Program Schedules

Your thermostat is preconfigured with a preset (default) weekly program schedule and is ready for use. You can customize the schedule to fit your own needs. The following table shows the preset programs that run on the thermostat. Preset programs help you save money and ensure optimal energy usage.

Day of Week	Sunday - Saturday			
	Program	Time	Heat	Cool
Wake	6:00 AM	70° F (21.0° C)	75° F (24.0° C)	
	8:00 AM	62° F (16.5° C)	85° F (29.5° C)	
	6:00 PM	70° F (21.0° C)	75° F (24.0° C)	
	10:00 PM	62° F (16.5° C)	78° F (25.5° C)	

Configuring a Thermostat Schedule

To configure your thermostat, use the following steps:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Program Schedule; then press Select. The Program Schedule appears.

Action	Heat	Cool
Wake	6:00a 70 75	
Away	8:00a 70 75	
Home	6:00p 70 75	
Sleep	10:00p 70 75	

3. Use the Up and Down arrows to navigate through the days of the week.
4. On any day, press Next to go to the time display.
5. Use the Up and Down arrows to change the scheduled time to begin. The time is changed in 15-minute increments.

NOTE: If you select a time that overlaps with another programmed time, the thermostat automatically alters the overlapping segment to avoid the overlap.

6. Press Next to go to the Heat setting.
7. Use the Up and Down arrows to raise or lower the temperature.
8. Repeat steps 6 and 7 to set the Cool temperature.
9. Continue to press Next to move to the next schedule segment. (Wake, Away, Home, and Sleep).
10. When you have completed your settings, press Save to save your changes. When you press Save, the thermostat displays an option to copy the updates to other days of the week.
11. To return to the Home screen, press Menu and then press Home.

Resetting the Factory Presets (Default)

To return your thermostat to its original factory preset configuration, use the following steps:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Program Schedule; then press Select.
3. At the Program Schedule screen, press the Reset button. A confirmation screen appears.

CAUTION: If you press Yes you will lose any programs that you have saved.

4. To reset, press Yes. To keep your programs, press Cancel.
5. To return to the Home screen, press Menu and then press Home.



Configuring Temperature Mode

Temperature Mode is used to schedule overrides such as a vacation. When the thermostat is in Temperature Mode, the mode is displayed on the Home screen. You can override any daily schedule using the following options:

- Vacation
- Custom
- Hold

Setting Vacation Mode

Vacation Mode lets you set a temperature that temporarily overrides the thermostat's daily schedule. The temperature you set remains in effect until the date and time that you set.

To program your thermostat for vacations:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Temperature Mode and then press Select.
3. In Temperature Mode, use the Up and Down arrows to go to Vacation.
4. In Vacation Mode, use the Next button to move between the temperature, and date and time.
5. Use the Up and Down arrows to change the temperature, and date and time.
6. To save your changes, press Save. Your settings are implemented immediately, and the temperature you set will remain until you change it.
7. To return to the Home screen, press Menu and then press Home. Vac is displayed on the Home screen.

To cancel the vacation setting:

1. With the backlight on use the Up and Down arrows to change the temperature. Custom appears on the Home screen.
2. Your thermostat's settings will return to their normal programmed values when the next program normally begins.



Setting the Custom Temperature on the Thermostat

You can temporarily change the programmed temperature at any time by simply using the Up and Down arrows.

To temporarily change the set temperature:

- From the Home screen with the backlight on, use the Up and Down arrows to change the temperature.
- Hold the Up and Down arrow for 2 seconds or longer to change temperatures at four degrees per second.
- After you set the temperature, Custom appears on the Home screen.
- The thermostat will return to the programmed values when the next daily schedule begins or if the thermostat is reset.

Setting a Hold Temperature on the Thermostat

To set a permanent temperature Hold:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Temperature Mode; then press Select.
3. In Temperature Mode, use the Up and Down arrows to go to Hold.
4. In Hold mode, use the Next button to go to temperature.
5. Use the Up and Down arrows to change the temperature.
6. To save your changes, press Save. Your settings are implemented immediately, and the temperature you set will remain until you change it.
7. To return to the Home screen, press Menu, then press Home. Hold is displayed on the Home screen.

To cancel the Hold setting:

- With the backlight on use the Up and Down arrows to change the temperature. Custom appears on the Home screen and your thermostat's settings return to their normal programmed values when the next program normally begins.

Setting Thermostat Preferences

The thermostat preferences include the following options:

- Units: Lets you set Fahrenheit or Celsius.
- Span: Change in temperature before the thermostat cycles the HVAC.
- Fan: The amount of time the fan remains on past when cooling mode shuts off.
- Offset: Lets you change the temperature shown on the thermostat to match another thermostat.
- Filter: Lets you set a timer for replacing your HVAC filter.
- Default: Lets you reset to the original factory preference settings.

Changing Thermostat Temperature Units

You can select Fahrenheit (F) and Celsius (C) degrees for display on the thermostat.

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Preferences and press Select.
3. With the unit selected, use the Up and Down arrows to change the temperature units to Fahrenheit or Celsius.
4. Press Save. Your changes are saved.
5. To return to the Home screen, press Home.

Changing Thermostat Temperature Span

Temperature span refers to the temperature change that the thermostat measures before cycling the HVAC.

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Preferences and press Select.
3. Press Next to go to the Span option.
4. Use the Up and Down arrows to change the span setting. The default value is 1° F (0.5° C).
 - If your system is cycling too often, you can change the span to 2° F (1° C).
 - If your system is not cycling often enough, change the span to 0.5° F (0.25° C).
5. Press Save. Your changes are saved.
6. To return to the Home screen, press Home.

Changing Thermostat Fan Setting

The fan setting determines the amount of time that the fan remains on past when cooling mode shuts off.

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Preferences and press Select.
3. Press Next to go to the Fan option.
4. Use the Up and Down arrows to select the number of seconds your fan will remain running. The default is 60 seconds; you can change this to 0, 30, or 90 seconds.
5. Press Save. Your changes are saved.
6. To return to the Home screen, press Home.

Setting Thermostat Temperature Offset

You may find that your new thermostat displays a temperature that is different by a few degrees from your prior thermostat. It's common for thermostats to report slightly different temperatures. For example, the new thermostat might display 72° F but you feel it should be 70° F. The thermostat provides an "offset" feature that lets you increase or decrease the temperature value to better align with your prior or other thermostats.



To set the temperature offset:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Preferences and press Select.
3. Press Next to go to the Offset option.
4. Use the Up and Down arrows to increase or decrease the offset value. The default temperature offset is 0.
5. Press Save. Your changes are saved.
6. To return to the Home screen, press Home.

NOTE: The thermostat converts a Fahrenheit value to Celsius, so a two-degree offset may result in a slightly different value for the temperature.

Setting a Reminder to Replace HVAC's Air Filter

On your thermostat, you can set a timer for when it is time to replace your HVAC's air filter. You can set the timer for between 0-999 hours; the default is 500 hours. A filter icon appears on the thermostat display as a reminder when it is time to replace the air filter.

To set the filter reminder:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Preferences and press Select.
3. Press Next to go to Filter. Two numbers appear. The first shows the number of hours since the filter was installed. The second is the filter timer setting in hours.
4. To clear the number of hours since the filter was installed, press Reset.
5. To set the filter replacement timer, use the Up and Down arrows to set the number of hours you want to use.
6. Press Save. Your changes are saved.
7. To return to the Home screen, press Home.

Resetting the Presets to Factory Defaults

To reset the thermostat preferences to the factory defaults:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Preferences and press Select.
3. Press Next to go to Default.

WARNING: If you press Reset you will lose your custom preferences and schedule settings.

4. Press Reset. The default settings are returned.
5. To return to the Home screen, press Home.



KCP&L Messages

The thermostat can display messages sent from KCP&L. These messages can be used to alert you of important notices such as an impending price change or load reduction event.

View Active Messages

When you have messages from KCP&L, the number of messages appears above the Message button on your Home screen. To view your messages, go to MySmart Portal (www.KCPL.com/MySmartPortal) or use the following steps:

1. At the Home screen while the thermostat backlight is on, press Message. Your messages appear.
2. Use the Up and Down arrows to scroll through your messages.
3. To return to the Home screen, press Home.

KCP&L Events Sent to your Thermostat

Your thermostat can receive event notices from KCP&L, such as "load control" events. These events can reduce heating temperatures or increase air conditioning temperatures, moving the value to a more eco-friendly setting for a short period of time. When an event is issued, the event notice can be viewed on your MySmart Thermostat or MySmart Portal. The display contains such information as:

- Event: The current state of the event (Active, Pending, Rejected, Accepted).
- Level: The level of criticality of the event from the energy provider.
- Start Time: The time the event began.
- Duration: The length of time the event is active.
- Remaining: The amount of time remaining for the event.

View Active or Pending Events

To view your messages, go to your MySmart Portal or use the following steps:

1. At the Home screen while the thermostat backlight is on, press Events. Your event details appear.
2. Use the Up and Down arrows to scroll through your events.
3. To return to the Home screen, press Home.

Rejecting an Event on the Thermostat

Unless an event issued by KCP&L is mandatory, you can elect not to participate in the event by rejecting it (Opting-Out). To reject an event, use the following steps:

1. At the Home screen while the thermostat backlight is on, press Events. Your event details appear.
2. Use the Up and Down arrows to select an event.
3. Press the Opt-Out button. A message appears asking you to confirm your action.
4. Press Yes to continue, or No to cancel. The Event appears with your event status updated in show Opt-Out.
5. To change the Event again, press the Opt-In button. This option is available to you as long as the Event is active.
6. To return to the Home screen, press Home.

Checking Energy Prices on the Thermostat

Some energy providers offer pricing programs to encourage you to save money by using the bulk of your energy when the demand is lower. Some examples of the typical pricing programs you might encounter are:

- **Fixed:** Energy prices are at a fixed rate per kWh and remain the same regardless of time or usage.
- **Time of Use:** Energy rates change based on the day, time and season.



Viewing Energy Prices

The current energy price is displayed on the Home screen. To access the price schedule, go to your MySmart Portal or use the following steps:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down arrows to go to Prices and press Select. The pricing information appears.
3. To return to the Home screen, press Home.

Checking the Thermostat Version

Firmware is software that has been loaded onto a hardware device to control its operation. If you need to check the firmware version of your thermostat, use the following steps:

1. While the thermostat backlight is on, press Menu. The thermostat displays a list of options.
2. Use the Up and Down buttons to go to About This Device, and press Select. The version is displayed.

Thermostat Troubleshooting

If you encounter any issues while using your thermostat, use the following troubleshooting tips.

Symptoms	Potential Issue	Corrective Action
Display is blank	Power to HVAC System is off. Cable Connections to the thermostat are not tight.	Contact KCP&L Smartgrid Support at (800) 535-7687.
Buttons do not work	The keypad on the thermostat has been locked.	Look for the padlock icon on the screen. See the "Locking or Unlocking the Keypad" section.
Thermostat starts AC or heating furnace before it is scheduled House is too hot or too cool	Time is not correctly set. The set point is not set to the correct temperature.	Check the time and date on the thermostat. See the "Setting a Program Schedule on the Thermostat" or "Setting a Temporary Temperature Override on the Thermostat" sections.
House changes temperature at the wrong time	Time is not set correctly. The Program Schedule is not set correctly.	Check the time and date on the thermostat. See the "Customizing the Thermostat Program Schedule" section.
Furnace does not turn off or on	Temperature is incorrectly set. Vacation settings are active. Power to the HVAC system is off.	Check the temp. settings. Ensure the vacation settings are off. Ensure the HVAC system has power.

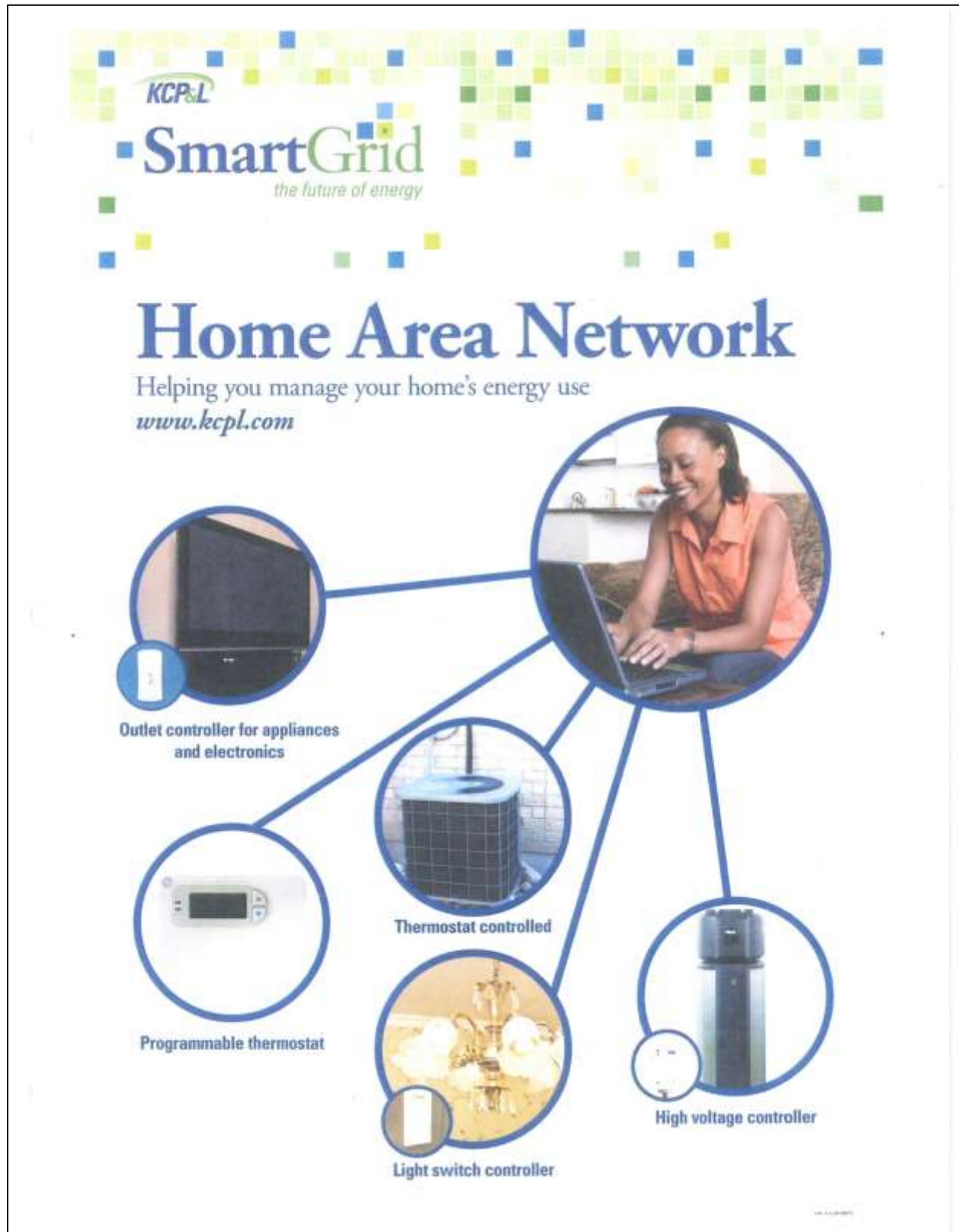
Important Consumer Information

This product contains a Federal Communication Commission (FCC) licensed radio emitter. The FCC license number is D12CT-EM2606. This device also complies with Part 15 of the Federal Communication Commission (FCC) for unintentional emissions.

Contact Us

You can find additional information at www.kcpandl.com, or by contacting the SmartGrid Support Team Monday through Friday from 8:00 am to 7:00 pm at smartgridinfo@kcp.com or (800) 535-7687.



P.6.1.21 MySmart Home Flyer

P.6.1.22 MySmart Home FAQs**My Smart Home FAQs****What is the MySmart Home Program?**

MySmart Home is an Internet-based Home Area Network (HAN) that allows you to remotely manage appliances and electronics. MySmart Home is made up of a group of devices – including a MySmart Hub, MySmart Thermostat, MySmart Plugs, and MySmart Switch – that are managed via the MySmart Portal to monitor and control energy usage in your home. This group of devices work together to create a complete home area network.

- MySmart Hub – a communication device that sends and receives energy-related information to and from KCP&L over a secure Internet connection.
- MySmart Thermostat – free programmable thermostat that can be automatically set based on the season, time-of-day and your personal schedule.
- MySmart Plug (2) – outlets that can be plugged into a standard wall outlet, allowing you to control appliances, such as a T.V., computer, or lamp, from any computer with an Internet connection.
- MySmart Switch (optional) – a switch that allows you to control larger appliances (like electric water heaters or pool pumps) from any computer with an Internet connection.
- MySmart Portal - online tool that helps customers understand the impact of their electricity use and encourages them to make decisions that conserve energy and help the environment.

MySmart Home will:

- Allow you to connect your home's appliance and electronics while remotely monitoring and controlling your MySmart Thermostat and other appliances from any computer with Internet access
- Deliver the most detailed account of electricity usage in your home including how much electricity your connected appliances are using by the hour.
- Reduce demand on the electric grid during peak hours by participating in demand response events, improving reliability.

Why does KCP&L offer this program?

The SmartGrid Demonstration project provides customers more choices so they can take control of their energy use and cost through new technology, tools and programs. MySmart Home helps customers save energy, save money and still stay comfortable, while helping KCP&L manage its electricity demand.

Who is eligible to enroll in the MySmart Home program?

Residential and small business customers in the SmartGrid Demonstration Area who have a Smart Meter are eligible to apply for the MySmart Thermostat program. To qualify, your air conditioning unit must meet the following criteria:

- Customer must have central air conditioning (window units are not eligible).
- Equipment must be in good mechanical condition.
- System must be pre-qualified by a KCP&L authorized technician.

My Smart Home FAQs

Note: Existing thermostats will be left with the customer. If the customer elects to discontinue the program, our technician will replace the MySmart Thermostat with the original thermostat, at no charge to the customer.

Can I participate in the program if I have a window unit?

No, this technology works only on central air-conditioning systems.

Can I apply for the MySmart Home if I have a heat pump?

MySmart Thermostat works with most heat pumps. We will schedule an appointment to have a professional technician pre-qualify your equipment free of charge.

If I don't own the house or business property, can I still enroll?

Yes, all we need is authorization from the owner.

What is a demand response event?

Electricity usage in the Kansas City area is typically highest in the afternoon and early evening, as well as during the summertime when air conditioners run day and night. Occasionally, this increased demand can overwhelm our electrical grid, leading to service issues, such as power outages.

When demand on the grid is particularly high, KCP&L can issue a demand response event, signaling MySmart products in your home to reduce electricity consumption. A demand response event will affect your MySmart Thermostat one of two ways by:

1. Adjusting the temperature to immediately raise or lower it a few degrees at the beginning of a demand response event; or
2. Raising or lowering the temperature one degree per hour for up to 4 hours.

KCP&L can also issue a demand response event which signals the MySmart Plugs and MySmart Switch to turn off the connected appliance throughout the duration of that event. Once the demand response event has ended, your MySmart Thermostat and appliances will return to their regular settings.

Demand response events can only be called on non-holiday weekdays. You can opt-out of these events any time, but most customers don't find them to be problematic.

How do I opt out of a demand-response event?

You can opt out of a demand response event at any time by following the menu options provided in MySmart Thermostat. See page 24 of Using the MySmart Thermostat user guide for additional information.

My Smart Home FAQs

Can I change my thermostat during a demand response event?

To adjust your thermostat during a demand response event, you must first opt out of the event by following the menu options provided in MySmart Thermostat.

Can I save money using the MySmart Thermostat program?

Programmable thermostats are one of the most effective ways to save money on electricity, but they only work if you use them. Customers who don't make any changes to how they use electricity probably won't see any savings. Those who are conscientious about programming their thermostat to set temperatures back during times when they are away from home or are asleep will likely notice a difference on their bills.

What are the "recommended settings" for programming the thermostat?

Program Sunday - Saturday			
Program	Time	Heat	Cool
Wake	6:00 AM	70° F (21.0° C)	75° F (24.0° C)
Away	8:00 AM	62° F (16.5° C)	85° F (29.5° C)
Home	6:00 PM	70° F (21.0° C)	75° F (24.0° C)
Sleep	10:00 PM	62° F (16.5° C)	75° F (25.5° C)

Can I control my thermostat remotely, through the internet?

MySmart Thermostat can only be programmed at the thermostat. KCP&L offers other products and tools that allow you to control your thermostat and other equipment through the internet. To learn more, call the SmartGrid Support team at (800) 535-7687.

How will I know when KCP&L is sending a signal to my thermostat?

An event notification will be sent to your thermostat. Event notifications may also be viewed in the MySmart Portal.

If I am unhappy with the MySmart Thermostat, can I opt out of the program?

Yes. If you are not satisfied for any reason, please call our toll-free number at (800) 535-7687 to speak with a representative. We can arrange to send someone to your home or business to replace MySmart Thermostat with your original thermostat, at no cost to you.

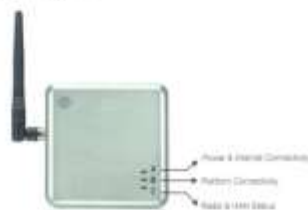
Is there someone to talk to when I have questions or problems?

The SmartGrid Support Team has been trained to answer your SmartGrid questions. They are available Monday through Friday from 8 a.m. – 7 p.m. at (800) 535-7687 or SmartGridInfo@kcpl.com.

P.6.1.23 MySmart Home Quick-Start Guide



The MySmart Hub is also responsible for the two-way exchange of information between your MySmart Meter, MySmart Home and the KCP&L computer servers. The communication between your home and KCP&L's system occurs over your Internet connection.



To learn more about your MySmart Hub, please see the MySmart Home User Guide.

Using MySmart Thermostat

MySmart Thermostat is a free programmable thermostat that can be automatically set based on the season, time-of-day and your schedule.

The MySmart Thermostat will:

- Help you control your energy use by pre-setting your heating and cooling schedule using four programmable daily temperature schedules.
- Automatically set temperatures based on the season and your personal habits and preferences, including programmable vacation schedules.
- Allow you to partner with KCP&L to reduce demand on the electric grid by participating in demand response events.
- Give you the ability to view KCP&L messages, events and pricing programs.
- Allow you to control the thermostat temperature settings from the MySmart Portal.
- Set up price rules that adjust your thermostat settings based on the current electricity price.

Thermostat Troubleshooting

If you encounter any issues while using your thermostat, use the following troubleshooting tips.

Symptom	Potential Issue	Corrective Action
Display is blank.	Power to HVAC System is off. Cable Connections to the thermostat are not tight.	Call customer support or a qualified technician at (800) 535-7685.
Buttons do not work.	The keypad on the thermostat has been locked.	Look for a padlock icon on the screen. See the section Locking or Unlocking the Keypad.
Thermostat starts AC or heating furnace before it is scheduled. Heating is not hot or too cool.	Time is not set correctly. The set point is not set to the correct temperature.	Check the time and date on the thermostat. See the Setting a Program Schedule on the Thermostat. See Setting a Temporary Temperature Override on the Thermostat.
Heating changes temperature at the wrong time.	Time is not set correctly. The Program Schedule is not set correctly.	Check the time and date on the thermostat. See the Customizing the Thermostat Program Schedule section.
Thermostat does not have the correct time.	Thermostat is not linked to MySmart Home home area network.	Usually the thermostat will rejoin with the MySmart Home home area network in a short amount of time.
Furnace does not turn off as set.	Temperature is incorrectly set. Vacation settings are active. Power to the HVAC system is off.	Check the temperature settings. Ensure the vacation settings are off. Ensure the HVAC system has power.

MySmart Plug

MySmart Plugs are outlets that can be plugged into a standard wall outlet, allowing you to control appliances (such as a TV, computer, or fan) from any computer with an Internet connection.

You can perform these actions with the MySmart Plug:

- Turn ON or OFF the attached appliance from a remote location, via MySmart Portal.
- Set up price rules that turn ON or OFF a MySmart Plug, based on the current electricity price.
- Participate in demand response events directly to the MySmart Plug by your energy provider.



To learn more about setting and controlling your MySmart Plug, please see the MySmart Home User Guide for specific instructions.

MySmart Switch

The MySmart Switch is a device that is installed on larger appliances (such as an electric water heater or outdoor pool pump) and allows you to control those appliances from any computer with an Internet connection.

You can perform these actions with the MySmart Switch:

- Turn ON or OFF the attached appliance from a remote location, via MySmart Portal.
- Set up price rules that turn ON or OFF a MySmart Switch, based on the current electricity price.
- Participate in demand response events sent directly to the MySmart Switch by your energy provider.



To learn more about setting and controlling your MySmart Switch, please see the MySmart Home User Guide.

To learn more about all of the SmartGrid products and programs contact the SmartGrid support team at (800) 535-7667 or SmartGridInfo@kcpkl.com.

P.6.1.24 MySmart TOU Rate FAQs

Time of Use Rates FAQs

What are Time of Use rates?

KCP&L's Time of Use rate pilot program allows customers to better manage their electricity costs while providing KCP&L information about customer behavior. The program designates "off peak" hours (when rates are discounted from standard) and "peak" hours (when rates are above standard). Time of Use rates are designed to encourage customers to think about *when* they use electricity rather than just *how much* electricity they use, ultimately shifting grid load from peak to off-peak periods.

Why is KCP&L offering Time of Use rates?

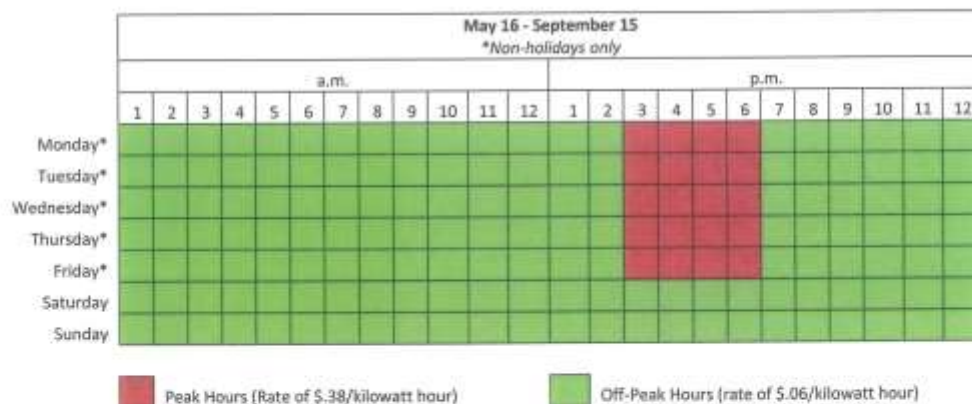
The Time of Use rate program is a part of KCP&L's SmartGrid Demonstration program, which provides customers more choices in taking control of their energy use and cost through new technology, tools, and programs. Time of Use programs empower customers to better manage energy costs by shifting electricity consumption to off-peak times, when deeply discounted rates are offered. They also help KCP&L to motivate customer behavior changes that shift the usage of electricity (load) from peak to off-peak periods, enabling more efficient and environmentally responsible production of energy.

Who is eligible for Time of Use rates?

Time of Use rates are available to any KCP&L customer who lives within in the Smart Grid Demonstration Area, is currently on a standard residential rate program and has a MySmart Meter.

What is KCP&L's Time-of-Use schedule?

Time of Use rates are only active during summer months (May 16 – September 15). During that time peak hours apply on non-holiday* weekdays from 3 to 7 pm. All other days and times during the summer months are designated as off-peak hours.



*Time of Use Rate peak hours do not apply on Memorial Day, Independence Day or Labor Day (see KCP&L corporate calendar for exact dates).

What is the difference in cost between peak and off-peak rates?

In off-peak hours, rates are discounted to about \$.06/kWh. In peak hours, rates are raised to about \$.38/kWh.

Time of Use Rates FAQs

Do I need any additional equipment to participate?

Although you must have a MySmart Meter to enroll in Time of Use rates, no additional equipment is required to participate. The SmartGrid Demonstration project does offer a number of free products that may help you to make the most of Time of Use rates, including MySmart Portal, MySmart Display, MySmart Thermostat and MySmart Home. Visit www.KCPLSmartGrid.com to learn more about these products and which might be helpful to you.

Do Time of Use rates limit my ability to use electricity during peak hours?

Enrollment in Time of Use rates does not affect your ability to use electricity, but it is important to keep in mind that usage during peak hours will contribute to a higher electricity bill.

If I enroll, how long is the commitment?

As a pilot program, KCP&L's Time of Use rates are scheduled to be available through December 2014. KCP&L reserves the right to modify or terminate the program at any time, subject to approval by the Missouri Public Service Commission. You can opt out of the program at any time by calling the SmartGrid Support Team at (800) 535-7687; however you will not be allowed to rejoin the program. Customers who opt out of the program are immediately placed on the standard bill rate for that billing period.

How can I determine if Time of Use rates are a good option for me?

Before enrolling in KCP&L's Time of Use rates program, take a moment to think about your household's schedule and patterns of energy usage:

- When are you most likely to be at home?
- Do you have any flexibility in your schedule (i.e., could you do laundry before work, rather than after)?
- Can you make other changes to reduce the amount of energy you consume (i.e., turn your thermostat up by a few degrees during peak hours)?

If you are prepared to make a few small changes in your behavior, Time of Use rates may be a good option for you.

What kind of savings might I expect from TOU rates?

Your savings depend on how and when you use electricity. Customers who enroll in Time of Use rates, but don't make any changes to how and when they use electricity probably won't see any savings. Those who are conscientious about decreasing household energy use during peak hours will likely notice a difference on their bills throughout the summer months.

What can I do maximize savings with Time of Use rates?

Here are a few helpful tips to help you shift your energy usage and save money using Time of Use rates:

- ✓ Run appliances such as dishwashers, washing machines and dryers outside of peak hours.
- ✓ If you have a programmable thermostat, set it to automatically raise the temperature by a few degrees during on-peak hours or when you're not in your home (you may be eligible for a free programmable MySmart Thermostat or a MySmart Home home area network — visit www.KCPLSmartGrid.com to learn more). If you don't have a programmable thermostat, post a reminder to raise your thermostat by a few degrees during peak hours.
- ✓ Use automatic timers to run other appliances only during off-peak hours.

Time of Use Rates FAQs

You will find lots of useful information about shifting energy usage and making the most of Time of Use rates by accessing MySmart Portal at www.KCPL.com/MySmartPortal. MySmart Portal is a free online tool that allows you to better monitor and manage your energy usage.

What if I find that my monthly bill increases with Time of Use rates?

This difference in price through Time of Use rates is designed to encourage KCP&L customers to change their habits by using electricity during off-peak hours. If you notice that your bill has increased, you may opt out of the program and request to be rebilled at standard rates for your most recent billing period, as long as you meet the following requirements.

- ✓ You have requested to opt out of the Time of Use rates program
- ✓ Your previous bill was higher than it would have been on the standard rate
- ✓ You have communicated your concern over higher bill to KCP&L

When can I sign up for Time of Use rates?

You can enroll at any time. Rates won't apply until the first day of your next billing cycle. However, the peak and off peak pricing is only active during the summer months (May 16 – September 15).

How can I sign up?

You can enroll by calling the KCP&L SmartGrid Support team at (800) 535-7687.

How will the recent rate increase requests affect Time of Use rates?

Time of Use rates (for both summer and non-summer months) have been approved by the Missouri Public Utility Commission through December 31, 2014 and cannot be changed before then without the Commission's approval. As such, the recent rate increase will not impact Time of Use rates.

P.6.1.25 MySmart TOU Rate Program Details

General Description:			
KCP&L's Time of Use rate pilot program allows customers to better manage their electricity costs while providing KCP&L information about customer behavior. The program designates "off peak" hours (when rates are discounted from standard) and "peak" hours (when rates are above standard). This difference in rates is designed to encourage customers to think about when they use electricity rather than just how much electricity they use, ultimately shifting grid load from peak to off-peak periods.			
Program Details:			
In the KCP&L SmartGrid Demonstration Area, customers can opt-in to a Time of Use rate program, which is active in the summer season (May 16 – Sept. 15) when peak hours will be defined as 3 – 7 p.m. on non-holiday weekdays.			
Benefits to SmartGrid Customers:	Benefits to KCP&L:	Benefits to Utility Industry:	
Time of Use rates empower customers to better manage energy costs by shifting electricity consumption to off-peak times, when deeply discounted rates are offered.	The Time of Use pilot program is designed to evaluate the effectiveness of Time of Use rates in motivating customers to change behavior and shift load demands.	The significant difference between KCP&L's peak and off-peak rates is designed to demonstrate opportunities to motivate customer behavior change.	
Time of Use rates help KCP&L's SmartGrid customers maximize the savings potential of other tools like MySmart Thermostat, MySmart Display and MySmart Home.	KCP&L's Time of Use rate pilot will provide valuable data about the impact of Time of Use rates in shifting load both with and without other smart grid tools.	The unique demographics of the SmartGrid Demonstration Area provide valuable data about the introduction and adoption of Time of Use rates in the urban core.	
Time of Use rates educate customers to think about when they use electricity, rather than just considering how much they use, which will make them better informed consumers of energy.	Time of Use rates will educate customers about why energy is more expensive to generate and deliver during certain times of the day.	KCP&L's pilot will provide valuable data about the impact of Time of Use rates both with and without other smart grid tools.	
Customers may be able to lower their electricity bills with the optional Time of Use rate that is based on the time of day they use energy.	Time of Use rates will motivate customer behavior change that shifts load from peak to off-peak periods, enabling more efficient and environmentally responsible production of energy.		
The Time of Use rate pilot is part of KCP&L's SmartGrid program, which provides customers more choices in taking control of their energy use and cost through new technology, tools and programs.			

This page intentionally blank

P.6.2 SmartGrid Demonstration House

P.6.2.1 SmartGrid Demonstration House Fact Sheet



SmartGrid Demonstration House

As part of KCP&L's SmartGrid project, KCP&L is the lead sponsor of the Metropolitan Energy Center's Project Living Proof (PLP), an initiative that will allow KCP&L customers to experience the future of energy. PLP consists of a demonstration house, located at 917 Emanuel Cleaver II Blvd., where visitors can see first-hand the new MySmart tools and products available to customers in the SmartGrid project area.

Demonstration House Overview

In 2006, the Metropolitan Energy Center (www.kcenergy.org), with assistance from KCP&L, came up with the idea for Project Living Proof, a demonstration house to promote the development of sustainable communities by showcasing weatherization, landscaping, efficient appliances and other energy-efficient features. KCP&L has again invested in this project and the demonstration house will enable customers to see, touch and feel the new SmartGrid products and tools.

Demonstration House Highlights

Energy Efficiency Programs. KCP&L will showcase its full suite of energy efficiency programs to benefit customers.

MySmart Portal. Each customer with a smart meter will have access to a customized website to view usage information and receive additional updates on energy saving options.

MySmart Display. This hand-held energy management tool provides consumers with access to current electricity usage and bill information.

Weatherization. The demo house, built in 1911, contains exposed demonstrations of proper air sealing, insulation, window tightening and replacement.

Smart Meter. The smart meter unlocks the benefits of the SmartGrid by enabling two-way communication between the utility and the customer. This provides real-time energy usage information for consumer products such as the MySmart Portal, MySmart Display and MySmart Network. In the future, it also will allow customers to receive price signals and participate in "time of use" and other rate plans options.

Rooftop Solar. The Solar Photovoltaic (PV) system is able to produce 2.76 kW of solar power on a sunny day. In the future, there will be an interconnection with KCP&L's SmartGrid solution that provides a view of the output from the panel.

Battery Storage. The battery backup can store up to 8 kW of energy from the Solar PV system, which can be discharged to offset energy use during peak demand. Stored energy and energy from the Solar PV system can also be sold back to the grid.

Electric Vehicle Charging Station. The 110v Coulomb Technologies charging station complements the overall theme of the SmartGrid experience. KCP&L is working to install up to 10 charging stations in the project area and another 10 throughout the metropolitan area.

This material is based upon work supported by the Department of Energy under Award Number DE-CE0000221.

815-951-9900 (x6110)





SmartGrid Demonstration House

As part of KCP&L's SmartGrid project, KCP&L is the lead sponsor of the Metropolitan Energy Center's Project Living Proof (PLP), an initiative that will allow KCP&L customers to experience the future of energy. PLP consists of a demonstration house, located at 917 Emanuel Cleaver II Blvd., where visitors can see first hand the new MySmart tools and products available to customers in the SmartGrid project area.

Demonstration House Overview

In 2006, the Metropolitan Energy Center (www.kcenergy.org), with assistance from KCP&L, advanced the idea for Project Living Proof, a demonstration house to promote the development of sustainable communities by showcasing weatherization, landscaping, efficient appliances and other energy-efficient features. KCP&L has again invested in this project and the demonstration house will enable customers to see, touch and feel the new SmartGrid products and tools.

Demonstration House Highlights

MySmart Portal. Each customer with a smart meter will have access to a customized website to view usage information and receive additional updates on energy saving options.

MySmart Display. This portable energy management tool provides consumers with access to current electricity usage and bill information.

MySmart Thermostat. The programmable thermostat can help customers save energy and helps KCP&L control peak demands.

Energy Efficiency Programs. KCP&L will showcase its full suite of energy efficiency programs to benefit customers.

Weatherization. The demo house, built in 1911, contains exposed demonstrations of proper air sealing, insulation, window tightening and replacement.

SmartMeter. The smart meter unlocks the benefits of the SmartGrid by enabling two-way communication between the utility and the customer. This provides real-time energy usage information for consumer products such as the MySmart Portal, MySmart Display and MySmart Network. In the future, it also will allow customers to receive price signals and participate in "time of use" and other rate plans options.

Rooftop Solar. The Solar Photovoltaic (PV) system is able to produce 3.15 kWh of solar power on a sunny day. In the future, this system will connect to KCP&L's SmartGrid enabling KCP&L to view and manage output from the panel.

Battery Storage. The battery backup can store up to 8 kWh of energy from the Solar PV system, which can be discharged to offset energy use during peak demand. Stored energy and energy from the Solar PV system can also be sold back to the grid.

Electric Vehicle Charging Station. The 110v Coulomb Technologies charging station complements the overall theme of the SmartGrid experience. KCP&L will install up to 10 charging stations in the project area and another 10 throughout the metropolitan area.

This material is based upon work supported by the
Department of Energy under Award Number DE-080000221.

2011.11.03 04:01



P.6.2.2 Demo Home Open House Invitation



You're invited to an Open House

Please join KCP&L and other community partners to tour the Project Living Proof Home, see **SmartGrid** and other energy demonstrations, and learn about utility assistance and weatherization resources.

Saturday, April 30
11 a.m. to 2 p.m.

917 Emanuel Cleaver II Boulevard • Kansas City, Missouri

Free food, giveaways, face painting, balloon artists and other family activities

Rain or Shine

Please park in the Discovery Center parking lot at 4700 Troost.
NOTE: The Troost bridge at Volker Boulevard is closed.

Logos: KCP&L SmartGrid, MOE Missouri Gas Energy, green impact zone of missouri, EWK EnergyWorks KC, Metropolitan Energy Center.



KCP&L SmartGrid
the future of energy

KCP&L is the lead sponsor of the Metropolitan Energy Center's Project Living Proof Home, an initiative that will allow KCP&L customers to experience the future of energy. Project Living Proof is a demonstration house, located at 917 Emanuel Cleaver II Blvd., where visitors can see first-hand the new **SmartGrid** tools and other energy products available to customers in the **SmartGrid** project area.

Highlights include:

- **MySmart** Portal
- **MySmart** Display
- **MySmart** Thermostat
- Weatherization and Energy Efficiency
- Smart Meter
- Rooftop Solar
- Battery Storage
- Electric Vehicle Charging Station
- High-Efficiency appliances
- Alternative heating and cooling equipment
- Sustainable Landscaping *and more*

This material is being disseminated with approval by the Department of Energy under license to KCP&L.

**PRESORTED
 FIRST CLASS
 US POSTAGE
 PAID
 KCP&L**

204.11.9890 04.11

P.6.2.3 Home Area Network Poster

P.6.2.4 Project Living Proof MEC Flyer

PROJECT LIVING PROOF
 Metropolitan Energy Center

PROJECT DESCRIPTION:

The 3,000 square-foot house at Project Living Proof (PLP) is outfitted with a variety of green options for insulation and air-sealing; air- and ground-source heat pumps; a high-efficiency gas furnace; an instant water heater; solar panels that generate electricity, heat air or heat water; AC- and DC-powered lighting; hyper-efficient appliances; interior finishes and paints that don't pollute the air; salvaged wood; vintage furniture; and displays that show real-time utility costs.

The 7,000 square foot site features a water-pervious driveway with provisions for electric vehicle charging and natural gas fueling; raised vegetable beds; a native shade garden; a truly low-maintenance lawn; a boardwalk and deck made from recycled plastics; a variety of rainwater harvesting and infiltration strategies; and plans for more to come.

PROJECT GOALS:

- Restore a modest, historic home and garden in a manner that is healthy and energy-efficient, in a setting that is accessible to the public.
- Demonstrate green-building products and services ranging from the experimental to the readily available.
- Showcase options, test assumptions and articulate lessons of sustainable and regenerative design.

COMMUNITY BENEFITS AND LESSONS LEARNED:

Since October 2010, Project Living Proof has hosted more than 1,000 local, national and international visitors. The house is estimated to be 67 percent more energy efficient post improvement. The early installation of the solar photovoltaic (PV) array made the project a net generator during construction, producing nearly 5,500 kilowatt hours (kWh) in its first year, and the array is among components being piloted by KCP&L for consideration with a smart grid.

By infiltrating or collecting more than 95 percent of the rain that falls on the site, PLP reduces irrigation and prevents rainwater runoff into the combined sewer — requiring less energy for pumping and treating water. The landscape design is a pilot for the SITES Initiative — a landscape-based rating system. The Rockhill Homes Association and Kansas City Landmarks Commission credit the house for its sensitivity to historic restoration. The live-in caretaker regularly hosts social events, educational sessions and meetings.

FUNDING SOURCES AND PARTNERSHIPS:

PLP is supported by the Metropolitan Energy Center. KCP&L is the lead sponsor and Missouri Gas Energy provides anchor funding. Major contributors include: Albert Tamm Lumber Co.; American Fire Sprinkler; Anthony Plumbing, Heating, and Cooling; BNIM; Black & Veatch; Brookside Building Performance; Central Fiber; cfm Distributors; Construction and Abatement Services; Cromwell Environmental; Cultivate Kansas City; Decent Energy; Demilic USA; ECS Geothermal; E&K of Kansas City; EPA Region 7; Elmwood Reclaimed Timber; Environmental Works, Inc.; Ewing Marion Kauffman Foundation; Green Light, Green Works of KC; Ground Source Systems; The Hayes Company; Heartland Utilities for Energy Efficiency; Henderson Engineers, Inc.; Hendrickson Tree Service; Hermes Nursery; Illuminations Sales; James van Eman Architects; JE Dunn Construction; KC Habitat for Humanity ReStore; Kaw River Restoration Nurseries; Kohler; Loma Vista Nursery; Mark One Electric Company; MARC Solid Waste Management District; Missouri Organic; Patti Banks Associates; PPG Industries; Rothers Design-Build; SFE Enterprises; Solar Solutions of Kansas City; Trex; Water Furnace; United Heating, Cooling, and Plumbing; Urban Mining Homewares; University of Kansas School of Architecture; University of Missouri – Kansas City; and York.

CONTACT:
 D. Jensen Adams, Metropolitan Energy Center
 816-531-7283 | jensen@kcenergy.org





P.6.2.5 Project Living Proof Article

This article could not be included in the report due to copyright restrictions. It can be viewed at the following website:

http://www.metroenergy.org/pdfs/PLP.KC-STAR-Ross_2010.09.pdf

P.6.2.6 One-of-a-kind House Offers Ideas for a Green Life

This article could not be included in the report due to copyright restrictions. It can be viewed at the following website:

<http://jvearchitects.com/wp-content/uploads/2011/04/KCStar-PLP-SpecialSection.pdf>

P.6.3 SmartGrid Innovation Park

P.6.3.1 Grand Opening Invitation

KCP&L

SmartGrid

You're invited to a Community Unveiling of the Future of Energy

event highlights

Smarter Generation

- Solar Energy—a renewable energy source

Smarter Distribution

- Energy storage—a sophisticated, lithium ion battery storage system
- Substation upgrades—improves reliability and efficiency and enables integration of renewables

Smarter Consumption

- Customer products and services
- Electric vehicle charging station, the device and related circuitry that safely charges an electrical vehicle's battery

Please join KCP&L, Congressman Emanuel Cleaver II and other community leaders to unveil SmartGrid Innovation Park. You will learn more about how KCP&L is enhancing the electrical grid in KC's urban core with new technologies helping customers get smarter about energy.

date Friday, October 12, 2012
time 10 a.m.
location 4724 Tracy Ave, Kansas City, MO 64110

Site tours and refreshments.
 RSVP is appreciated: Rita.Boyd@kcp-l.com (rain or shine)

This material is based on research supported by the Department of Energy under Award Number DE-EE0003211

P.6.3.2 SmartGrid Innovation Park Booklet



KCP&L SmartGrid Innovation Park!

You are invited to explore the park and learn more about how KCP&L SmartGrid is enhancing the electric grid in our community with new technologies to help customers *Get Smarter* about energy consumption and delivery.



What is a SmartGrid?

The electric grid is the connection of power plants, substations and power lines that bring electricity to your home. The grid was originally engineered to be a one-way system delivering energy from the power plant to customers. However, today, as customer and utility needs have evolved, advanced technology is being introduced on the grid to make it "smarter".

A smart grid is a set of advanced technologies—a type of computer and communications network—integrated with the electric grid. This allows energy companies to have two-way communication with customers, equipment and sensors on the grid. It's a bit like adding internet style communications and modern computer technologies into the long-established electric delivery grid.

It is also "smart" because it helps customers gain useful knowledge about how electricity is used, which can lead to numerous benefits, including saving energy and money, while reducing environmental impacts. KCP&L SmartGrid helps the company gather information from the two-way communication network open to it to meet your needs quicker and more efficiently.



Transforming our community

With the help of a grant from the United States Department of Energy, KCP&L is investing more than \$50 million in the SmartGrid Demonstration Project through 2015. The SmartGrid Demonstration Area includes several neighborhoods in and around Kansas City's Green Impact Zone. This is a total of 14,000 customers who live and own businesses in the SmartGrid Demonstration Area.

It's In the Customer's Hands

KCP&L customers who live and own businesses in the SmartGrid Demonstration Area have the opportunity to take advantage of several products and programs to help monitor and manage their electricity usage. For more information visit www.kcp&lsmartgrid.com



SmartGrid project map

Green Impact Zone
The Green Impact Zone is a cooperative effort to focus federal stimulus funds on projects in a targeted area of Kansas City, MO.



MySmart Portal
KCP&L's MySmart Portal is an online tool that allows SmartGrid customers to see electricity usage, estimate monthly bills, set and track energy savings goals, and compare usage to other homes in their neighborhood.



MySmart Display
KCP&L's MySmart Display is a portable electronic device for SmartGrid customers that displays electricity usage and cost in real time directly from the electric smart meter at their homes, without the need for internet access.



MySmart Thermostat
KCP&L's MySmart Thermostat works with heating and cooling systems. SmartGrid customers can pre-set temperatures for different times of day, saving energy and money while still staying comfortable.



MySmart Home
KCP&L's MySmart Home is an internet-based in-home network that allows SmartGrid customers to remotely manage appliances and electronics from anywhere, on any computer with internet access. Customers can set preferences and let MySmart Home manage energy use automatically.



Time of Use Rates
During the summer months, KCP&L's Time of Use Rate Program designates 20 "off-peak" hours when rates are discounted and four "peak" hours when rates are raised on each non-holiday weekday.

This report and other data were supported by the Department of Energy under Award Number: DE-CE0000201. 09/14/10 08:00

In addition to the grant from the US Department of Energy, KCP&L has public and private partnerships on this project. For more information on these partners please visit www.kcp&lsmartgrid.com.









Is that really a battery?

The big metal structure you see in the KCP&L SmartGrid Innovation Park may look like a shipping container, but it's really a sophisticated, lithium ion battery storage system for KCP&L's SmartGrid.

Because customers use energy on demand, it's more expensive to make and deliver all of the energy people want and need at times when energy demand is at its highest and the power plants and delivery system are working at maximum capacity. It's like a highway during rush-hour.

This battery allows KCP&L to make extra electricity at a lower cost during low energy demand times and store it for use during high energy demand times. In addition, it also reduces stress on the electric grid during high demand times, making it more efficient to deliver. It's like a highway with less traffic.



Smarter Solar Energy

SmartGrid is even making SOLAR energy smarter! Solar energy is called a renewable energy resource because it comes from a natural supply—the Sun. Historically, solar energy has been used in different ways. Now, as a part of the SmartGrid project, KCP&L plans to generate up to 180 kW of solar power by installing solar panels at different locations within the demonstration area.



How is Energy Made from the Sun?

Solar panels convert sunlight into electricity

Sunlight shines onto the solar panels

These and other solar panels throughout the SmartGrid Demonstration Area are connected directly to the electric grid and combined with other sources of energy. Once the solar energy is connected to the network, it can also help KCP&L system operators study the information they collect about renewable energy resources.



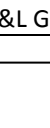
And, there are more benefits!

- It can help restore power to customers quickly when an outage occurs.
- Having the battery storage system right in the city means it's close to the customers who will use its stored energy, so the energy has less distance to travel, making it more efficient.

If 1 megawatt-hour can serve 400 homes for one hour, how many homes can 180kW of solar-generated power serve for the same hour?
(Hint: 1 megawatt-hour = 1,000 kilowatt-hours)

If you answered 72 homes, you're correct!!

For more information about solar energy in the SmartGrid Demonstration area, visit the solar section of our website at www.kcpandl.com



Lithium Ion Pouch Cell
100 Wh

Module
(4 Lithium Ion Pouch Cells)
2.7 kWh

Rack
(14 Modules)
37.8 kWh

Distributed Energy Storage System (DESS)
(20 Racks) 756 kWh

This battery is rated at 1 megawatt-hour and has the ability to serve 400 typical homes for about one hour.



Can an electric meter be SMART?

Electric companies began using meters many years ago to measure how much energy a home used. Over the years, just like household appliances, cars and computers have changed, so have electric meters.



Electromechanical Meter



Automated Meter



Smart Meter

The earliest meters were electromechanical and required KCP&L meter readers to visit each house to calculate how much energy that house had consumed. They would then report it to the electric company so the resident could receive a bill. It was a lengthy, manual process.

KCP&L was one of the first in the industry in the 1990's, to launch a large-scale automated meter reading system. With a type of one-way radio on each meter, the meters could automatically send daily reports of energy usage, improving the service for KCP&L customers.

With SmartGrid, KCP&L is again one of the first companies in the country to begin using smart meters. These meters have TWO-way radio communication and digital displays.

The meters communicate electricity usage information directly to the SmartGrid network every 15 minutes. This helps KCP&L respond to power outages faster than with older meters, and provide real-time information to customers about energy usage.

Smart Meters also have the ability to communicate with equipment inside a customer's home. This enables products like KCP&L's MySmart Display and MySmart Thermostat.

Automating for Operational Efficiency

Before automated distribution, KCP&L employees would have to physically look for the cause of an outage on a particular circuit. This could take time for the employees to find the problem even before making a repair.

Now, the SmartGrid distribution system has automated sensors and switches that quickly sense the problem on the circuit and send messages to other switches and KCP&L's SmartGrid control systems. This communication identifies the problem quicker and even isolates the problem to minimize the number of customers affected. This system can even automatically restore service when certain outages occur. This saves time and money and helps KCP&L employees get to the areas where they are needed most.

In addition to managing outages and overloads, the distribution system monitors itself and automatically tells KCP&L how it is operating, similar to the check engine light on your car. This enables KCP&L to do proactive maintenance on the system to keep it running in tip-top shape.

Current restoration process



- 1 A fault occurs on a power circuit, causing a power outage.
- 2 Customer calls or substation main breakers alert KCP&L that there is a power outage at some point on the circuit. The exact location is unknown.
- 3 KCP&L sends an employee out to patrol the circuit to locate the fault.
- 4 Once the fault is located, the employee can call the appropriate personnel to repair the damage.
- 5 Repairs are made to restore power to all customers on the circuit.

SmartGrid restoration process



- 1 A fault occurs on a power circuit, causing a power outage.
- 2 Switches and sensors located at certain points on the circuit send signals to each other to determine the exact location of the fault.
- 3 The switches isolate the damaged part of the circuit, while restoring other customers to power. Customers who are restored will experience a momentary, or short, outage.
- 4 Sensors also alert KCP&L to the part of the circuit that is damaged.
- 5 KCP&L sends appropriate personnel directly to the problem to make repairs, restoring power to affected customers.

V2.0 05/22/2015



KCP&L
energizing life

P-232



In all, every aspect of the KCP&L SmartGrid—from the communication network and distribution system, to the products and services—is designed to work together to be even more efficient. It will help keep KCP&L and YOU knowledgeable, comfortable and in control when it comes to your energy consumption! Now that's **SMARTER!**

Visit www.KCP&LSmartGrid.com or call KCP&L at (800) 535-7687 for additional tips and information, to receive products, or to enroll in FREE programs!

P.6.3.3 EVCS Signs



KCP&L, numerous industry partners and the United States Department of Energy have invested more than \$50 million in industry-leading smart grid technology in a number of Kansas City neighborhoods.

KCP&L SmartGrid
the future of energy

KCP&L SmartGrid Innovation Park

Usage instructions

- Obtain a ChargePass Card or RFID credit card.
- Tap card in front of reader symbol.
- Open door, remove connector and plug into vehicle.
- Upon your return, tap card to stop charging.
- Replace cards.
- Enjoy your day.

Need help?

- To obtain a ChargePass Card or report a damaged charging station, contact LilyPad EV at (913) 399-3872.

Get plugged in

This station:

- Has Level II (240-volt) charging capacity and can charge two vehicles at once.
- Is J1772 compliant; it is able to be used with most original equipment manufactured vehicles.
- Depending upon the current charge of your vehicle, it may take 4–10 hours to reach a full charge. However, the vehicle does not require a full charge to operate.

How charging stations work

This charging station is open and available to the public 24/7. However, in your home, smart grid technology can have a significant impact on when electric vehicles charge, benefitting both you and your community. New technology can send automated signals through the smart grid to alert a charging station whether energy use is low or high. During times of highest use, the automated signals stop the station from charging a vehicle. Controlling the charging station's power input improves the grid's reliability and the cost to deliver power to customers. To learn more about SmartGrid please visit our kiosk at KCP&L Smart Grid Innovation Park or Project Living Proof, a smart grid demonstration home located at 917 Emanuel Cleaver Blvd.

Electric vehicles benefit customers in multiple ways:

- Lower operational costs that are equivalent to or less than \$1 per gallon of gas.
- Lower maintenance costs than gas-powered vehicles because they have fewer moving parts.
- Customers can receive up to \$7,500 in federal tax credits for purchase of a vehicle.

Please visit kcplsmartgrid.com or call (800) 535-7687 for more information.

The energy provided at this charging station is made possible by Burns & McDonnell.
This document is based upon work supported by the Department of Energy under Award Number DE-EE0000000.



KCP&L, numerous industry partners and the United States Department of Energy have invested more than \$50 million in industry-leading smart grid technology in a number of Kansas City neighborhoods.

Project Living Proof

Usage instructions



Obtain a ChargePass Card or RFID credit card.



Tap card in front of reader symbol.



Open door/ remove connector and plug into vehicle.



Upon your return, tap card to stop charging.



Replace cords.



Enjoy your day.

Need help?

- To obtain a ChargePass Card or report a damaged charging station, contact LilyPad EV at (913) 399-3872.

Get plugged in

This station:

- Has Level II (240-volt) charging capacity and can charge two vehicles at once.
- Is J1772 compliant; it is able to be used with most original equipment manufactured vehicles.
- Depending upon the current charge of your vehicle, it may take 4–10 hours to reach a full charge. However, the vehicle does not require a full charge to operate.



KCP&L's SmartGrid Demonstration Project is located in midtown Kansas City. The project area includes 14,000 residential and business customers in several neighborhoods including Kansas City's Green Impact Zone.

How charging stations work

This charging station is open and available to the public 24/7. However, in your home, smart grid technology can have a significant impact on when electric vehicles charge, benefitting both you and your community. New technology can send automated signals through the smart grid to alert a charging station whether energy use is low or high. During times of highest use, the automated signals stop the station from charging a vehicle. Controlling the charging station's power input improves the grid's reliability and the cost to deliver power to customers.

Electric vehicles benefit customers in multiple ways:

- Lower operational costs that are equivalent to or less than \$1 per gallon of gas
- Lower maintenance costs than gas-powered vehicles because they have fewer moving parts
- Customers can receive up to \$7,500 in federal tax credits for purchase of a vehicle

Please visit kcplsmartgrid.com or call (800) 535-7687 for more information.

The SmartGrid Demonstration Project is a joint effort of the Department of Energy and Environment, KCP&L, and the City of Kansas City.

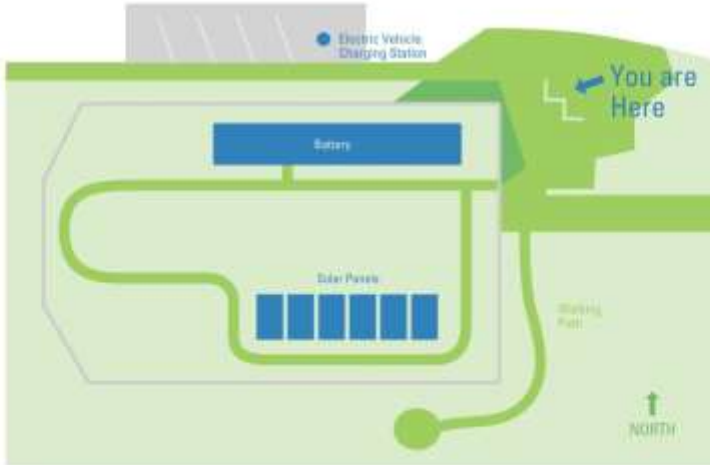
P.6.3.4 Kiosk Pictures





KCP&L SmartGrid Innovation Park!

You are invited to explore the park and learn more about how KCP&L SmartGrid is enhancing the electric grid in our community with new technologies to help customers *Get Smarter* about energy consumption and delivery.



What is a Smart Grid?

The electric grid is the connection of power plants, substations and power lines that bring electricity to your home. The grid was originally engineered to be a one-way system delivering energy from the power plant to customers. However, today, as customer and utility needs have evolved, advanced technology is being introduced on the grid to make it "smarter."

A smart grid is a set of advanced technologies—a type of computer and communications network—integrated with the electric grid. This allows energy companies to have two-way communication with customers, equipment and sensors on the grid. It's a bit like adding internet style communications and modern computer technologies into the long-established electric delivery grid.

It is also "smart" because it helps customers gain useful knowledge about how electricity is used, which can lead to numerous benefits, including saving energy and money, while reducing environmental impacts. KCP&L SmartGrid helps the company gather information from the two-way communication and act upon it to meet your needs quicker and more efficiently.







Transforming Our Community

With the help of a grant from the United States Department of Energy, KCP&L is investing more than \$50 million in the SmartGrid Demonstration Project through 2015. The SmartGrid Demonstration Area includes several neighborhoods in and around Kansas City's Green Impact Zone. This is a total of 14,000 customers who live and own businesses in the SmartGrid Demonstration Area.

SmartGrid project map



Green Impact Zone

The Green Impact Zone is a cooperative effort to focus federal stimulus funds on projects in a targeted area of Kansas City, MO.

This material is based upon work supported by the Department of Energy under Award Number DE-EE0002027. 2011-01-01 (2012)

In addition to the grant from the US Department of Energy, KCP&L has public and private partnerships on this project. For more information on these partners please visit www.kcplsmartgrid.com.



EPRI
Electric Power Research Institute



MRIGlobal



INTERGRAPH



SIEMENS



OATI



NREL
National Renewable Energy Laboratory



Landis+Gyr



TENORAIL



Exergonix



Structure



KCP&L
energizing life





It's In the Customer's Hands

KCP&L customers who live and own businesses in the SmartGrid Demonstration Area have the opportunity to take advantage of several products and programs to help monitor and manage their electricity usage. For more information visit www.kcplsmartgrid.com.



MySmart Portal

KCP&L's MySmart Portal is an online tool that allows SmartGrid customers to see electricity usage, estimate monthly bills, set and track energy savings goals, and compare usage to other homes in their neighborhood.



MySmart Display

KCP&L's MySmart Display is a portable electronic device for SmartGrid customers that displays electricity usage and cost in real time directly from the electric smart meter at their homes, without the need for internet access.



MySmart Thermostat

KCP&L's MySmart Thermostat works with heating and cooling systems. SmartGrid customers can pre-set temperatures for different times of day, saving energy and money while still staying comfortable.



MySmart Home

KCP&L's MySmart Home is an internet-based in-home network that allows SmartGrid customers to remotely manage appliances and electronics from anywhere, on any computer with internet access. Customers can set preferences and let MySmart Home manage energy use automatically.



Time of Use Rates

During the summer months, KCP&L's Time of Use Rate Program designates 20 "off-peak" hours when rates are discounted and four "peak" hours when rates are raised on each non-holiday weekday.






Is that really a battery?

The big metal structure you see in the KCP&L SmartGrid Innovation Park may look like a shipping container, but it's really a sophisticated, lithium ion battery storage system for KCP&L's SmartGrid.

Because customers use energy on demand, it's more expensive to make and deliver all of the energy people want and need at times when energy demand is at its highest and the power plants and delivery system are working at maximum capacity. It's like a highway during rush-hour.

This battery allows KCP&L to make extra electricity at a lower cost during low energy demand times and store it for use during high energy demand times. In addition, it also reduces stress on the electric grid during high demand times, making it more efficient to deliver. It's like a highway with less traffic.



**Lithium Ion
Pouch Cell**
193 W



Module
(14 Lithium Ion
Pouch Cells)
2.7 kW



Rack
(14 Modules)
37.5 kW



**Distributed Energy
Storage System (DESS)**
(28 Racks)
1 MW

This battery is rated at 1 megawatt-hour and has the ability to serve 400 typical homes for about one hour.

And, there are more benefits!

- It can help restore power to customers quickly when an outage occurs.
- Having the battery storage system right in the city means it's close to the customers who will use its stored energy, so the energy has less distance to travel, making it more efficient.



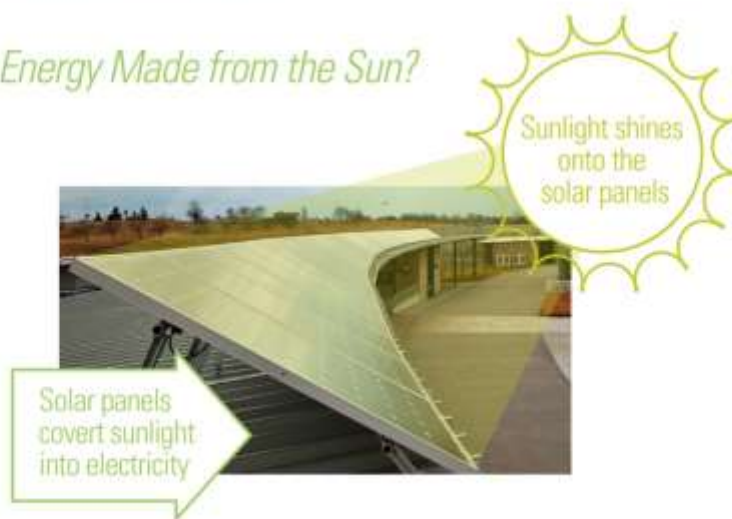




Smarter Solar Energy

SmartGrid is even making SOLAR energy smarter! Solar energy is called a renewable energy resource because it comes from a natural supply—the Sun. Historically, solar energy has been used in different ways. Now, as a part of the SmartGrid project, KCP&L plans to generate up to 180kW of solar power by installing solar panels at different locations within the demonstration area.

How is Energy Made from the Sun?



These and other solar panels throughout the SmartGrid Demonstration Area are connected directly to the electric grid and combined with other sources of energy. Once the solar energy is connected to the network, it can also help KCP&L system operators study the information they collect about renewable energy resources.

If 1 megawatt-hour can serve 400 homes for one hour, how many homes can 180kW of solar-generated power serve for the same hour? (Hint: 1 megawatt-hour = 1,000 kilowatt-hours)

If you answered 72 homes, you're correct!!

For more information about solar energy in the SmartGrid Demonstration area, visit the solar section of our website at www.kcplsmartgrid.com.







Can an electric meter be SMART?

Electric companies began using meters many years ago to measure how much energy a home used. Over the years, just like household appliances, cars and computers have changed, so have electric meters.



Electromechanical
Meter



Automated Meter



Smart Meter

The earliest meters were electromechanical and required KCP&L meter readers to visit each house to calculate how much energy that house had consumed. They would then report it to the electric company so the resident could receive a bill. It was a lengthy, manual process.

KCP&L was one of the first in the industry in the 1990's, to launch a large-scale automated meter reading system. With a type of one-way radio on each meter, the meters could automatically send daily reports of energy usage, improving the service for KCP&L customers.

With SmartGrid, KCP&L is again one of the first companies in the country to begin using smart meters. These meters have TWO-way radio communication and digital displays. The meters communicate electricity usage information directly to the SmartGrid network every 15 minutes. This helps KCP&L respond to power outages faster than with older meters, and provide real-time information to customers about energy usage.

Smart Meters also have the ability to communicate with equipment inside a customer's home. This enables products like KCP&L's MySmart Display and MySmart Thermostat.



Automating For Operational Efficiency

Before automated distribution, KCP&L employees would have to physically look for the cause of an outage on a particular circuit. This could take time for the employees to find the problem even before making a repair.

Now, the SmartGrid distribution system has automated sensors and switches that quickly sense the problem on the circuit and send messages to other switches and KCP&L's SmartGrid control systems. This communication identifies the problem quicker and even isolates the problem to minimize the number of customers affected. This system can even automatically restore service when certain outages occur. This saves time and money and helps KCP&L employees get to the areas where they are needed most.

In addition to managing outages and overloads, the distribution system monitors itself and automatically tells KCP&L how it is operating, similar to the check engine light on your car. This enables KCP&L to do proactive maintenance on the system to keep it running in tip-top shape.

Current restoration process



- 1 A fault occurs on a power circuit, causing a power outage.
- 2 Customer calls or substation main breakers alert KCP&L that there is a power outage at some point on the circuit. The exact location is unknown.
- 3 KCP&L sends an employee out to patrol the circuit to locate the fault.
- 4 Once the fault is located, the employee can call the appropriate personnel to repair the damage.
- 5 Repairs are made to restore power to all customers on the circuit.

SmartGrid restoration process



- 1 A fault occurs on a power circuit, causing a power outage.
- 2 Switches and sensors located at certain points on the circuit send signals to each other to determine the exact location of the fault.
- 3 The switches isolate the damaged part of the circuit, while restoring other customers to power. Customers who are restored will experience a momentary, or short, outage.
- 4 Sensors also alert KCP&L to the part of the circuit that is damaged.
- 5 KCP&L sends appropriate personnel directly to the problem to make repairs, restoring power to affected customers.



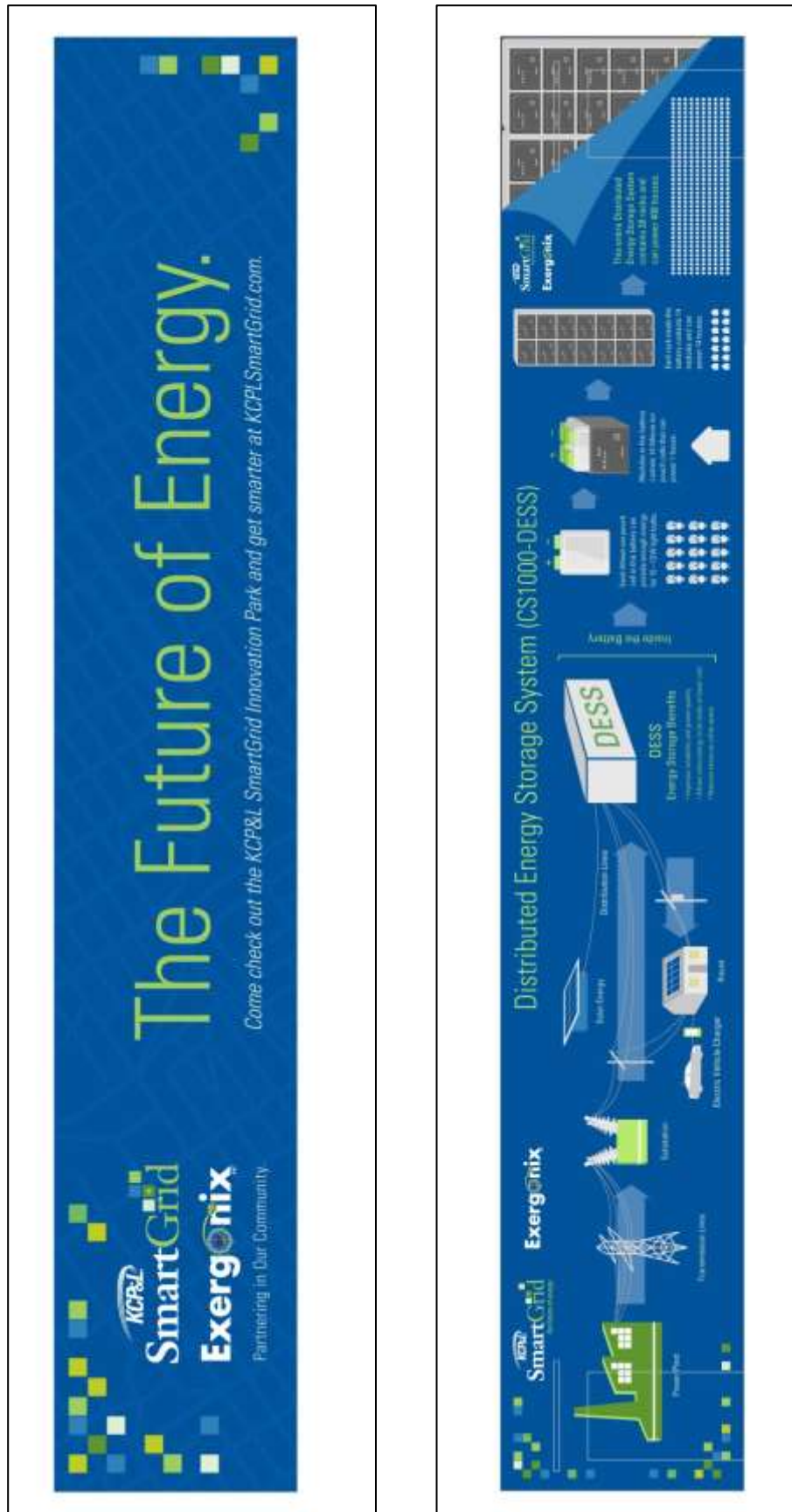


In all, every aspect of the KCP&L SmartGrid – from the communication network and distribution system, to the products and services – is designed to work together to be even more efficient. It will help keep KCP&L and YOU knowledgeable, comfortable and in control when it comes to your energy consumption! Now that's SMARTER!

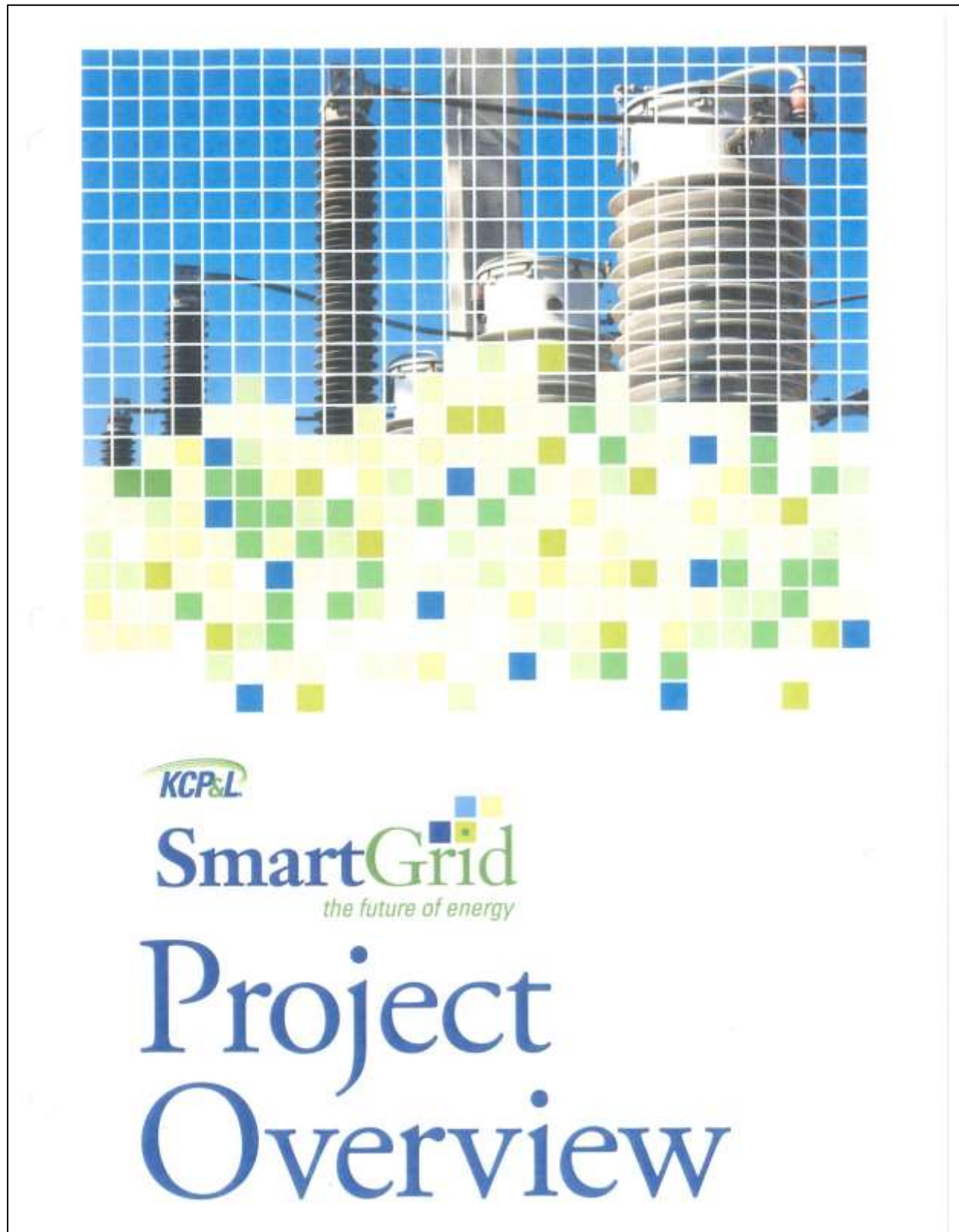
Visit www.KCPLSmartGrid.com or call KCP&L at (800) 535-7687 for additional tips and information, to receive products, or to enroll in FREE programs!



P.6.3.5 SmartGrid Innovation Park Battery Wrap



P.6.3.6 SmartGrid Project Overview



SmartGrid Project Overview

With the support of a Department of Energy American Recovery and Reinvestment Act (AARA) grant, KCP&L is installing a fully-integrated smart grid system in Kansas City's Midtown urban core. The five-year project includes distribution network automation and management, demand response management and advanced renewable and sustainable energy resources (large-scale utility-scale battery storage; electric vehicle recharging stations; roof-top solar panels) to supply energy and offset peak demand.

The SmartGrid project will provide area customers with:

- More information about their electricity use,
- Greater control over how they use electricity,
- New opportunities for cost savings, and
- Improved service reliability.

The project supports the area's targeted urban revitalization efforts. It will help meet the growing needs of approximately 14,000 residential and commercial customers that include The University of Missouri–Kansas City; the Country Club Plaza stores, offices and hotels; Stowers Medical Research Center; Saint Luke's Hospital and American Century Investments.

KCP&L's SmartGrid project will study the technology and customer preferences and plan for possible future smart grid deployment to customers across our service territory.

Smart Distribution

As part of the project, KCP&L will be making a number of upgrades to its Midtown Substation, including installation of:

- A substation controller to provide local monitoring and control
- A Distribution Management System (DMS) to provide centralized oversight and management of the distribution grid.
- An advanced Distribution Automation (ADA) 'first responder' functionality that will facilitate communication between the DMS and selected substation feeders.



SmartSubstation: Important benefits of the upgraded substation include:

- Improved real-time operating data on critical substation equipment
- Reduced relay operation and maintenance costs
- Improved reliability by enabling distribution automation



First Responder Applications: Within the SmartSubstation, a DCADA (Distributed Control and Data Acquisition) system will be integrated to manage the real-time communication with line devices and implement a number of 'first responder' functions.

- Circuit restoration
- Integrated Volt/Var Management
- Asset overload protection
- Dynamic feeder and transformer ratings

Grid Management Systems Integration: The project's new interfacing systems include:

- Automated Metering Infrastructure (AMI)
- Distributed Energy Resource Management Systems (DERM)
- Distribution Management System (DMS)
- Meter Data Management Systems (MDMS)
- Customer Information System (Legacy) (CIS)
- Geographic Information System (Legacy) (GIS)



The SmartSubstation Upgrades

This fifty-year old substation's upgrades include:

- DMS by Siemens/Intergraph
- SICAM Power Automation Solution by Siemens
- DCADA controller by Siemens
- Local area network
- Protective relays by Schweitzer
- Transformer tap changer controls
- Transformer temperature and dissolved gas monitors



The substation's SCADA system used RTU's and older protocols. These were replaced by a Distribution Management System (DMS), located at the dispatch center, and the SICAM and DCADA, located at the substation. Both locations can use the electrical model of the system for volt, var, and load management. These intelligent field devices extend operations control beyond the substation into its distribution system.

The electromechanical relays that protected the substation's transformers, buses and distribution feeders were also replaced. New microprocessor-based relays connect to the substation network using IEC 61850 communication protocol, which supplies the control systems with operating data and enable supervisory control and peer-to-peer relay communication. The hard-wiring of currents, potentials and breaker trip/close schemes will be maintained on the new relays.

Transformer monitors provide better operating data on these critical substation assets. Real-time transformer temperature readings and real-time dissolved gas analysis are also provided, and service reliability has been improved by distribution automation that provides more control through distribution system state estimation and power flow; fault location, isolation and service restoration and Volt/VAR control.



204-11-1596 (04/11)

P.6.3.7 Midtown Substation Upgrade



The substation's SCADA system used RTU's and older protocols. These were replaced by a Distribution Management System (DMS), located at the dispatch center, and the SICAM and DCADA, located at the substation. Both locations can use the electrical model of the system for volt, var and load management. These intelligent field devices extend operations control beyond the substation into its distribution system.

The electromechanical relays that protected the substation's transformers, buses and distribution feeders were also replaced. New microprocessor-based relays connect to the substation network using IEC 61850 communication protocol, which supplies the control systems with operating data and enable supervisory control and peer-to-peer relay communication. The hard-wiring of currents, potentials and breaker trip/close schemes will be maintained on the new relays.

Transformer monitors provide better operating data on these critical substation assets. Real-time transformer temperature readings and dissolved gas analysis are also provided. Service reliability has been improved by distribution automation that provides more control through distribution system state estimation and power flow, fault location, isolation and service restoration; and Volt/VAR control.







the future of energy

Midtown Substation Upgrade

Midtown Substation Data

- **Build:** 1960
- **Customers served:**

Total area served:		SmartGrid area served:	
Residential	23,000	Residential	13,274
Commercial	3,500	Commercial	1,444
- **Transformers:** Three 50 MVA transformers; one 41.7 MVA transformer
- **Circuits:** Twenty-seven 600-amp 13.2 kV feeders
- **Load Growth:** 5yr AVG growth rate: 2%
2010 Peak Demand = 143 MVA



204-11-1536 (06/11)

Project Overview

With the support of a Department of Energy American Recovery and Reinvestment Act (ARRA) grant, KCP&L is installing a fully-integrated smart grid system in Kansas City's Midtown urban core. The five-year project includes distribution network automation and management, demand response management and advanced renewable and sustainable energy resources (large-scale, utility-scale battery storage; electric vehicle recharging stations; roof-top solar panels) to supply energy and offset peak demand.

KCP&L's SmartGrid project will study the technology and customer preferences and plan for possible future smart grid deployment to customers across our service territory.

Smart Distribution

As part of the project, KCP&L will be making a number of upgrades to its Midtown Substation, including installation of:

- A substation controller to provide local monitoring and control
- A Distribution Management System (DMS) to provide centralized oversight and management of the distribution grid.
- An Advanced Distribution Automation (ADA) 'first responder' functionality that will facilitate communication between the DMS and selected substation feeders.

SmartSubstation: Important benefits of the upgraded substation include:

- Improved real-time operating data on critical substation equipment
- Reduced relay operation and maintenance costs
- Improved reliability by enabling distribution automation

First Responder Applications: Within the SmartSubstation, a DCADA (Distributed Control and Data Acquisition) system will be integrated to manage the real-time communication with line devices and implement a number of 'first responder' functions:

- Circuit restoration
- Integrated Volt/Var Management
- Asset overload protection
- Dynamic feeder and transformer ratings

Grid Management Systems

Integration: The project's new interfacing systems include:

- Automated Metering Infrastructure (AMI)
- Distributed Energy Resource Management Systems (DERM)
- Distribution Management System (DMS)
- Meter Data Management Systems (MDMS)
- Customer Information System (Legacy) (CIS)
- Geographic Information System (Legacy) (GIS)

Battery Storage: KCP&L will also install an Exerгонix 1MW-capable Superior Lithium battery storage system at the Midtown Substation.

The SmartSubstation Upgrades

Upgrades to this 50-year old substation include:

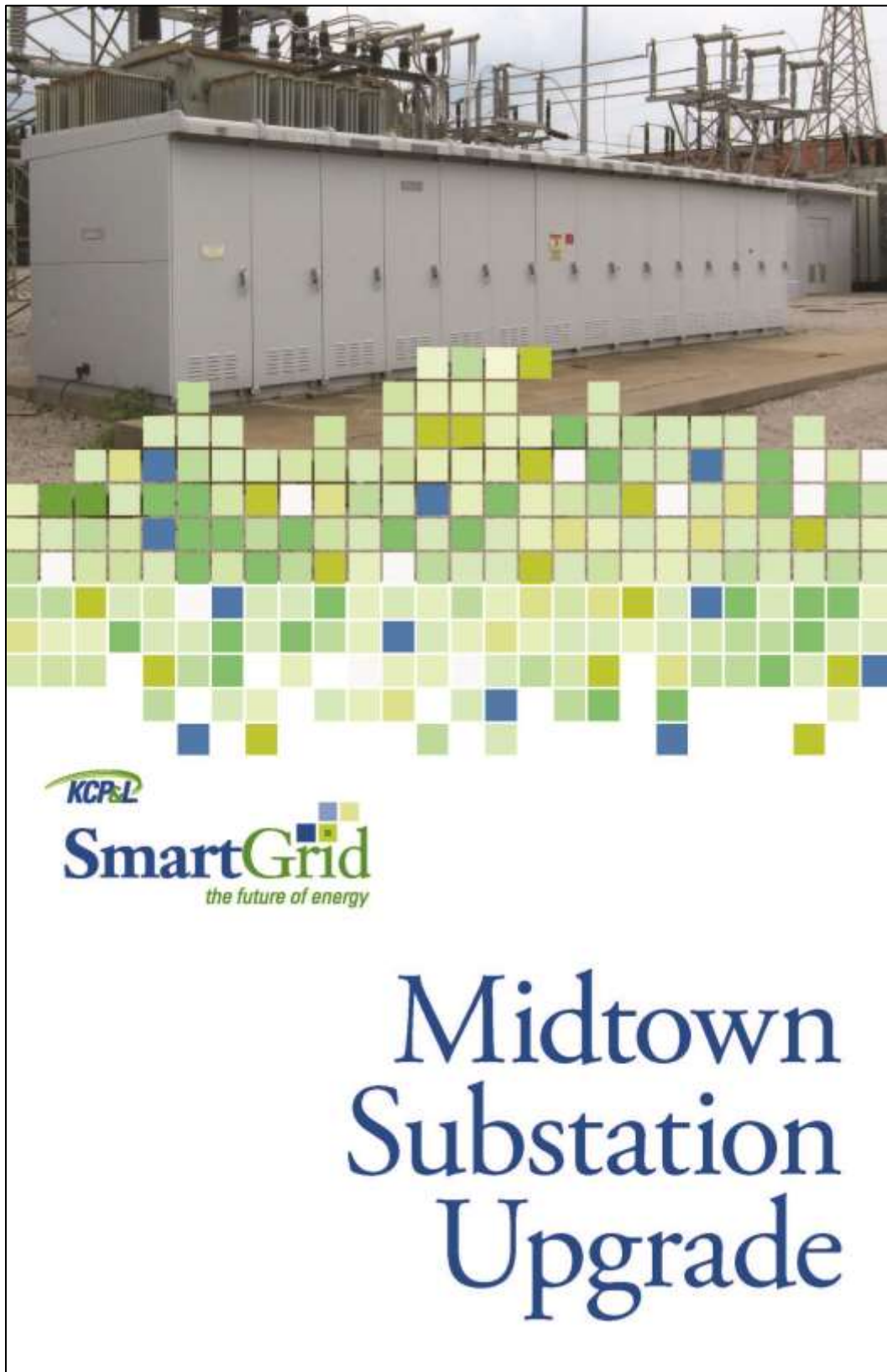
- DMS by Siemens/Intergraph
- SICAM Power Automation Solution by Siemens
- DCADA controller by Siemens
- Local area network
- Protective relays by Schweitzer
- Transformer tap changer controls
- Transformer temperature and dissolved gas monitors



Older electro-mechanical substation relays replaced with new digital IEC-61850 compatible relays by SEL



P.6.3.8 Substation Brochure



Project Overview

With the support of a Department of Energy American Recovery and Reinvestment Act (ARRA) grant, KCP&L is installing a fully-integrated smart grid system in Kansas City's Midtown urban core. The five-year project includes distribution network automation and management, demand response management and advanced renewable and sustainable energy resources (large-scale, utility-scale battery storage; electric vehicle recharging stations; roof-top solar panels) to supply energy and offset peak demand.

The SmartGrid project will provide area customers with:

- More information about their electricity use,
- Greater control over how they use electricity,
- New opportunities for cost savings, and
- Improved service reliability.

The project supports the area's targeted urban revitalization efforts. It will help meet the growing needs of approximately 14,000 residential and commercial customers that include The University of Missouri-Kansas City; the Country Club Plaza stores, offices and hotels; Stowers Medical Research Center; Saint Luke's Hospital and American Century Investments.

KCP&L's SmartGrid project will study the technology and customer preferences and plan for possible future smart grid deployment to customers across our service territory.

Smart Distribution

As part of the project, KCP&L will be making a number of upgrades to its Midtown Substation, including installation of:

- A substation controller to provide local monitoring and control
- A Distribution Management System (DMS) to provide centralized oversight and management of the distribution grid.
- An Advanced Distribution Automation (ADA) 'first responder' functionality that will facilitate communication between the DMS and selected substation feeders.

SmartSubstation: Important benefits of the upgraded substation include:

- Improved real-time operating data on critical substation equipment
- Reduced relay operation and maintenance costs
- Improved reliability by enabling distribution automation

First Responder Applications: Within the SmartSubstation, a DCADA (Distributed Control and Data Acquisition) system will be integrated to manage the real-time communication with line devices and implement a number of 'first responder' functions:

- Circuit restoration
- Integrated Volt/Var Management
- Asset overload protection
- Dynamic feeder and transformer ratings

Grid Management Systems

Integration: The project's new interfacing systems include:

- Automated Metering Infrastructure (AMI)
- Distributed Energy Resource Management Systems (DERM)
- Distribution Management System (DMS)
- Meter Data Management Systems (MDMS)
- Customer Information System (Legacy) (CIS)
- Geographic Information System (Legacy) (GIS)

Battery Storage: KCP&L will also install an Exergonix 1MW-capable Superior Lithium battery storage system at the Midtown Substation.

The SmartSubstation Upgrades

Upgrades to this 50-year old substation include:

- DMS by Siemens/Intergraph
- SICAM Power Automation Solution by Siemens
- DCADA controller by Siemens
- Local area network
- Protective relays by Schweitzer
- Transformer tap changer controls
- Transformer temperature and dissolved gas monitors



Older electro-mechanical substation relays replaced with new digital IEC-61850 compatible relays by SEL



The substation's SCADA system used RTU's and older protocols. These were replaced by a Distribution Management System (DMS), located at the dispatch center, and the SICAM and DCADA, located at the substation. Both locations can use the electrical model of the system for volt, var and load management. These intelligent field devices extend operations control beyond the substation into its distribution system.

The electromechanical relays that protected the substation's transformers, buses and distribution feeders were also replaced. New microprocessor-based relays connect to the substation network using IEC 61850 communication protocol, which supplies the control systems with operating data and enable supervisory control and peer-to-peer relay communication. The hard-wiring of currents, potentials and breaker trip/close schemes will be maintained on the new relays.

Transformer monitors provide better operating data on these critical substation assets. Real-time transformer temperature readings and dissolved gas analysis are also provided. Service reliability has been improved by distribution automation that provides more control through distribution system state estimation and power flow; fault location, isolation and service restoration; and Volt/VAR control.

Midtown Substation Data

■ **Build:** 1960

■ **Customers served:**

Total area served: 26,500		SmartGrid area served: 14,718	
Residential	23,000	Residential	13,274
Commercial	3,500	Commercial	1,444

■ **Transformers:** Three 50 MVA transformers; one 41.7 MVA transformer

■ **Circuits:** Twenty-seven 600-amp 13.2 kV feeders

■ **Load Growth:** 5yr AVG growth rate: 2%
2010 Peak Demand = 143 MVA



204-11-1596 (06/11)

Appendix Q EPRI SmartEnd-Use Analysis Results



Residential Time-of-Use Impact Study

Prepared for

Kansas City Power and Light

Prepared by

EPRI

Christensen Associates Energy Consulting, LLC

1. Introduction

In 2012, Kansas City Power and Light (KCP&L) implemented a residential time-of-use (TOU) pilot program as part of its Smart Grid Investment Grant (SGIG) research. The rate was offered to customers in the Green Zone, a geographic area that was the focus of the SGIG. All Green Zone customers were eligible to and able to join TOU because smart meters capable of recording hourly usage were installed prior to 2012.

The TOU rate was constructed to have a rather large difference between peak and off-peak prices compared to other residential TOU rates KCP&L had implemented (and what was used in most other TOU rate pilots), with a peak price of 37.84 cents/kWh and an off-peak price of 6.31 cents/kWh (a six to one price ratio).¹ However, the peak period was somewhat short in duration, lasting from 3 p.m. to 7 p.m. on non-holiday weekdays from May 16th through September 15th (the TOU summer season). TOU prices were not applicable during the rest of the year, so this study only examines the impacts on usage in the summer season.

KCP&L's records indicate that 116 customers signed up for the TOU pricing pilot between 2012 and August 2013. Usage data for these customers before and during the subscription period allowed the examination of load response for 99 of these customers. The TOU impact study examined TOU customer usage for May through September for 2012, 2013, and 2014 using the methods described below.

EPRI was engaged by KCP&L to support this project, including designing the TOU program and conducting a TOU load impact analysis, which is the subject of this report.²

2. Methodology

Recruitment of customers from the Green Zone was undertaken in a variety of ways, including door hangers, advertisements, and interactions at public and KCP&L organized events (White Glove engagement strategies). Because no control group was established and recruitment did

¹ See: EPRI, 2012. Understanding Electric Utility Customers -- Summary Report: What We Know and What We Need to Know ([1025856](#))

² EPRI engaged Christensen Associates Energy Consulting, LLC to support the TOU load impact study. KCP&L staff provided the data and other support to the study.



not follow randomization protocols (participation was self-selecting), quantifying impacts required establishing a synthetic control group.³

In order to estimate load impacts associated with the TOU rates, the analysis employs a: 1) before vs. after, and 2) treatment vs. control group measurement approach called *difference-in-differences*. It calculates the difference in loads between treatment and control customers in the pre-treatment and post-treatment periods, and then calculates the difference in those values as an estimate of the treatment effect.

Residential customers from an area surrounding the Green Zone were selected to serve as a pool of customers from which a comparable control group was selected, and arrangements were made to collect daily total or interval data for those accounts. In addition, the availability of hourly interval data for a time period prior to the implementation of TOU pricing allowed a comparison of customer usage prior to and following the application of the TOU rates.⁴

An overview of the impact evaluation approach is as follows:

- The study team obtained interval load data for TOU customers and a pool of potential control-group customers for the summers of 2012 through 2014.
- Using propensity score matching, the study team selected sets of comparable control-group customers from the control group pool. The matches were based on load profiles during the time period before the treatment customers (those enrolled on the TOU rate) faced the TOU rates.
- The study team developed difference-in-differences regression models to estimate TOU load impacts for each year. The load impacts were estimated using fixed-effects panel regressions.

Two factors complicated the analysis, including the following:

- Customers joined the TOU rate at different times and for some customers there is very little interval load data available prior to their initiation of TOU service. This may have limited the ability of propensity score matching to find a good match from the control group pool;⁵ and
- A substantial amount of load data are missing for both TOU and control-group pool customers, with the pattern of missing data varying across customers and over time.

³ A Randomized Controlled Trial (RCT), which provides the best estimate of treatment effects, requires that participants be recruited and then randomly assigned to treatment (enrolled in the TOU program) or control groups (denied TOU program participation for the duration of the pilot). A key aspect of the KCP&L project was to test the effectiveness of White Glove customer engagement practices to recruit customers to the TOU and other SGIG customer pilots. As a result, an RCT was not appropriate.

⁴ Customers were selected based on census data on housing stock and income to correspond to those in the Green Zone.

⁵ The objective of propensity score matching is to use usage data for both the TOU and control customers for a period prior to the commencement of TOU service to match them under equivalent service conditions (i.e., when both groups of customers are served under the standard rate). The first TOU customers started service in June 2012, so data used for their matching (constructing a control group) has to be from a period prior to that date.



The first complicating factor was addressed by dividing the TOU customers into three cohorts, as follows:

1. Cohort A. Customers who joined the TOU rate in June 2012. May 2012 load data were available for use in matching these customers to control-group pool customers.
2. Cohort B. Customers who joined the TOU rate in July 2012. Propensity score matching was based on load data from May and June 2012 for both TOU and control group pool customers.
3. Cohort C. Customers who joined the TOU rate in August 2012 or later. Propensity score matching was based on load data from May through July 2012 for both TOU and control group pool customers.

The second complicating factor was addressed through the use of fixed-effects panel regression models, instead of employing conventional analysis of variance methods to quantify the impacts. If all TOU and control-group customers had usage data for the same dates, TOU load response could be estimated by simply comparing the loads of the two groups. Because this is not the case, the estimation of TOU load impacts needs to account for factors that affect electricity usage, including weather effects and systematic usage differences across days of the week and months of the year. This helps ensure that the estimated TOU impacts account for differences in conditions during the days for which data were available for each customer.

Separate propensity score matching models and fixed-effects regression models were developed for each cohort.

Each TOU customer was matched to a control-group customer using propensity score matching. This was accomplished by first estimating a regression model to predict participation in the pilot program (the dependent variable is equal to one for TOU customers and zero for control-group pool customers) as a function of a variety of usage-based variables that reflect usage patterns on high, medium, and low-temperature days. Each TOU customer was matched to the control-group customer that had the closest predicted participation probability (called the propensity score). This created a control group of customers that was used as a reference for measuring impacts of TOU rate participation. The load data for TOU customers and their matched control-group customers were then used in fixed-effects panel regression models to estimate TOU impacts as specified below.

$$Q_{t,e} = a + b_{POST} \times Post_{t,e} + b_{POST_TREAT} \times (Post_{t,e} \times Treat_{t,e}) + b_{THI_PK} \times THI_PK_{t,e} \\ + b_{THI_PRE} \times THI_PRE_{t,e} + \sum_i (b_{DTYPE} \times DTYPE_{i,t}) + \sum_i (b_i^{MONTH} \times MONTH_{i,t}) + u_e + e_{t,e}$$

**Table 1: Descriptions of Terms included in the Regression Equation**

Variable Name / Term	Variable / Term Description
$Q_{t,c}$	usage-based variable on date t for customer c
a and the b parameters	the estimated parameters
$Post_{t,c}$	a dummy variable indicating the dates on which TOU prices were in effect for customer c ⁶
$Treat_{t,c}$	a dummy variable for treatment (TOU) customers
$Post_{t,c} \times Treat_{t,c}$	an interaction between the $Post$ and $Treat$ variables that estimates the difference-in-differences TOU load response
$THI_PK_{t,c}$	Temperature-humidity index during the peak hours on date t for customer c ⁷
$THI_PRE_{t,c}$	Temperature-humidity index during the hours preceding the peak period on date t for customer c
$DTYPE_{it}$	a series of dummy variables for each day of the week
$MONTH_{it}$	a series of dummy variables for each month of the year
u_c	the customer fixed effect
$\varepsilon_{t,c}$	the error term

The coefficient on the " $Post_{t,c} \times Treat_{t,c}$ " interaction variable is the difference-in-differences estimate of the TOU effect. Separate versions of this coefficient were estimated for each year in which the customer faced TOU rates, allowing for estimation of yearly TOU load impacts.

This model was estimated using three different dependent variables (the various "usage-based variables" in Table 1):

1. Average peak-period usage (kWh per hour);
2. Average off-peak period usage (kWh per hour); and
3. The daily ratio of average peak-period usage to average off-peak period usage.

The expectation is that TOU pricing will tend to reduce peak-period usage (1), increase off-peak period usage (as customers shift usage from peak hours or respond to a lower off-peak price by using more in those low-cost hours) (2), and decrease the peak to off-peak usage ratio (3).

3. Matching Results

Figures 1 through 3 represent average load profiles from the pre-treatment period for each cohort before and after propensity score matching.⁸ The pre-matched control group pool consists of 1,150 customers for which there is sufficiently clean data during the pre- and post-treatment periods to be included in the analysis.

⁶ The $Post$ variable is equal to one for days on which TOU prices apply to usage of treatment customers. The variable is applied to both the TOU customer and its matched control-group customer. It is intended to account for factors other than TOU pricing that may affect treatment and control-group customer usage levels.

⁷ $THI = T - 0.55 \times (1 - HUM) \times (T - 58)$ if $T > 58$ or $THI = T$ if $T < 58$, where T = ambient dry-bulb temperature in degrees Fahrenheit and HUM = relative humidity (where 10 percent is expressed as "0.10").

⁸ The Cohort A consists of 24 customers who transitioned to TOU rates in June 2012, and the pre-treatment period includes May 12 – May 31, 2012. Cohort B consists of 14 customers who transitioned to TOU rates in July 2012, and the pre-treatment period includes May 12 – June 30, 2012. Cohort C consists of 61 customers who transitioned to TOU rates after July 2012, and the pre-treatment period includes May 12 – August 6, 2012.

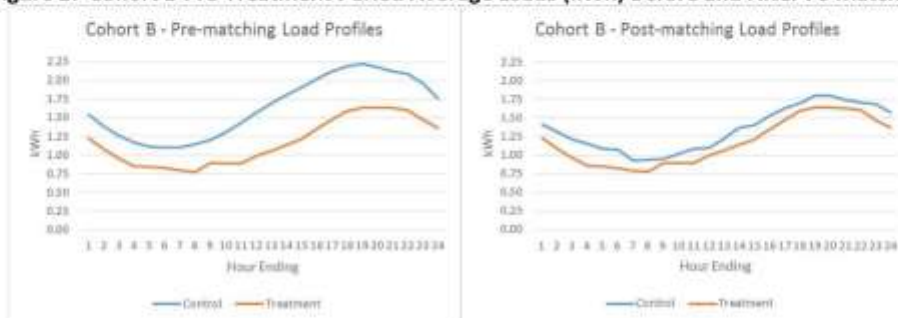


The control customers were matched to treatment customers in each cohort based on overall size (measured by total kWh usage during the relevant pre-treatment period) and a series of variables representing usage patterns on days with low, medium, and high temperatures.⁹ The matching algorithm allows each control customer to be matched to more than one treatment customer. As a result, 78 control customers were matched to the 99 treatment customers included in the analysis.¹⁰

Figure 1: Cohort A Pre-Treatment Period Average Loads (kWh) Before and After PS Matching



Figure 2: Cohort B Pre-Treatment Period Average Loads (kWh) Before and After PS Matching

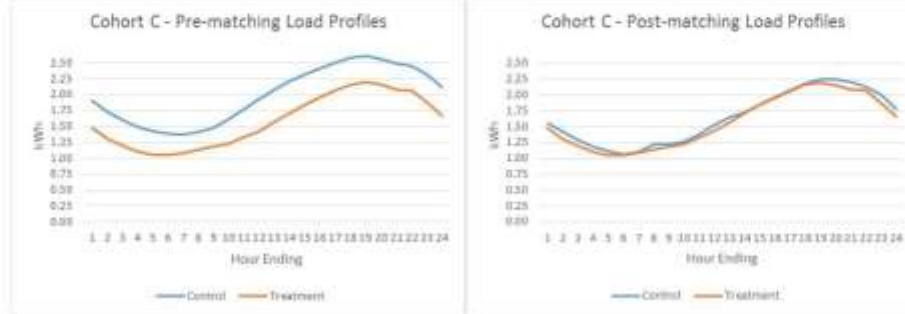


⁹ Low, medium, and high temperature days are those during which the average temperature was below 70 degrees Fahrenheit, between 70 and 80 degrees, and above 80 degrees, respectively. Separate sets of variables were used for weekdays and weekends.

¹⁰ 61 control customers are matched only once, 13 control customers are matched to two separate treatment customers, and four control customers are matched to three treatment customers.



Figure 3: Cohort C Pre-Treatment Period Average Loads (kWh) Before and After PS Matching



Figures 4 through 6 show average load profiles for each cohort's treatment and matched control customers during pre- and post-TOU periods (summers of 2012, 2013, and 2014). For reference, the first graph in each figure shows average usage during the pre-TOU period in 2012, and the next three graphs compare average hourly usage for 2012, 2013, and 2014. In each case the pre-TOU treatment and matched control load profiles exhibit similar usage patterns.¹¹ The remaining three graphs show average hourly usage during each summer after TOU implementation.

In the post-TOU graphs, it is often the case that treatment and matched control load profiles are not fully aligned (i.e., the treatment load profile is systematically higher or lower than that of the control load profile). This may be a reflection of unbalanced data (e.g., control-group customers tending to have more available data on hot days), a lack of late summer data available for use in propensity scoring matching, or both.¹² Despite the misalignment, there is distinct "notching" (i.e., usage reduction) in treatment load profiles during the TOU peak period and no such usage reduction is evident for control customers. This serves as an informal confirmation of the expectation that loads are reduced in the peak period in response to TOU rates.

Figure 4 shows some good examples of peak-hour load reductions for TOU customers. For example, in the summer 2013 load profile (the lower-left-hand panel in Figure 4) TOU customer usage decreases by 0.35 kWh in the first hour of the peak period and increases by 0.48 kWh in the hour after the peak period ends. This provides an informal indication of the magnitude of the TOU demand response in a case where the response appears to be relatively large (compared to other years and cohorts).

¹¹ These are the same as the post-matching graphs in Figures 1 through 3.

¹² As discussed in Section 2, the unbalanced panels are due to missing observations for customers during different periods throughout the dataset.



Figure 4: Cohort A Treatment and Matched Control Load Profiles, Summers 2012, 2013, and 2014

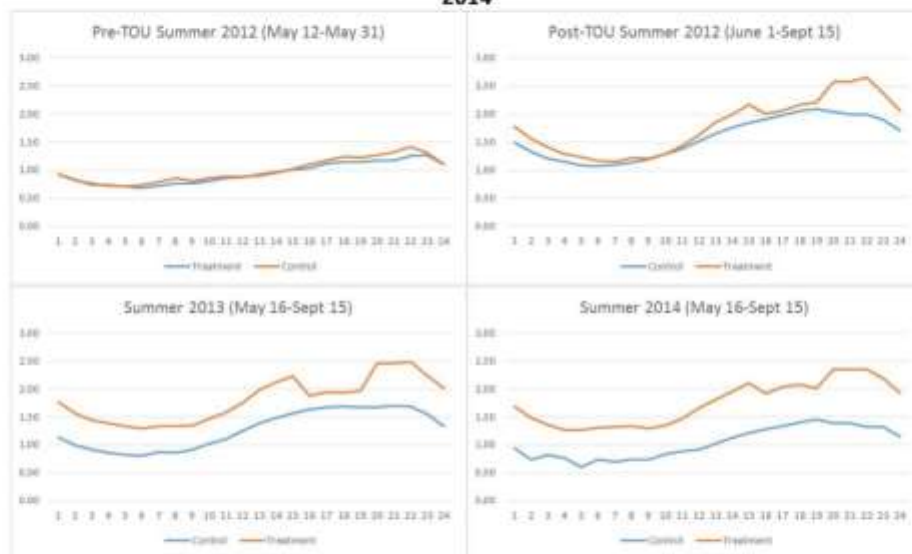


Figure 5: Cohort B Treatment and Matched Control Load Profiles, Summers 2012, 2013, and 2014

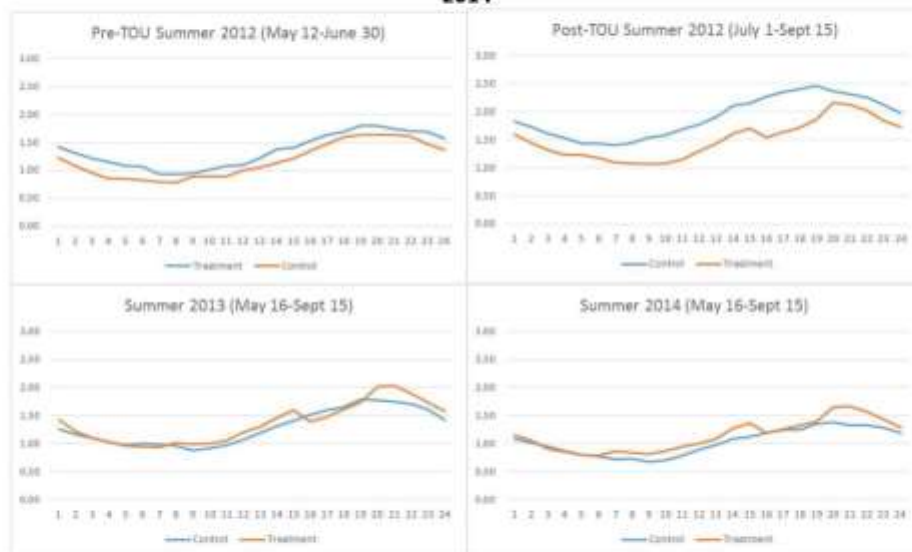
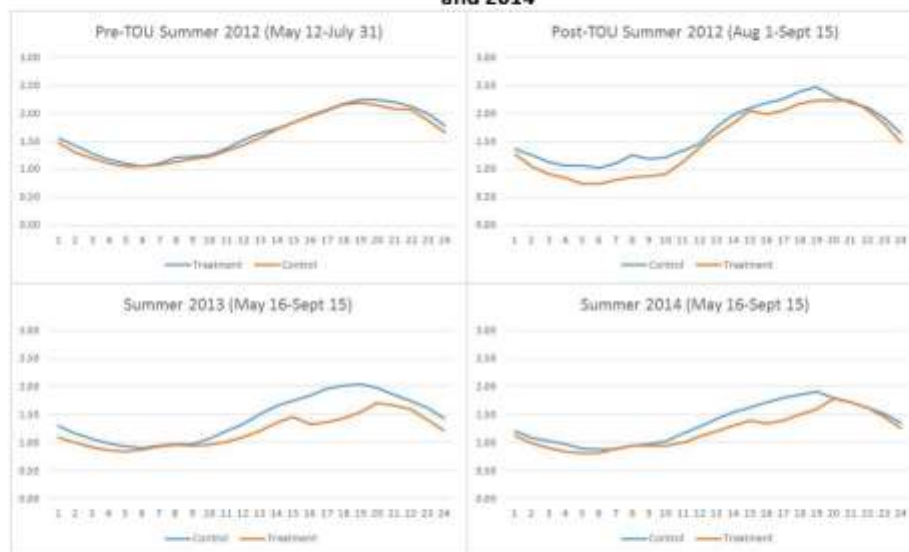




Figure 6: Cohort C Treatment and Matched Control Load Profiles, Summers of 2012, 2013, and 2014



4. Estimated TOU Load Impacts

As described in Section 2, separate models were estimated for each cohort (defined by the month the customer joined the TOU rate) and using three dependent variables: peak to off-peak usage ratio; average peak-period usage; and average off-peak period usage. For each model, separate TOU impact coefficients were estimated for each year (2012, 2013, and 2014).¹³

Table 1 shows the estimated TOU impact estimates for each cohort and dependent variable. The rightmost column converts the estimated change in the peak to off-peak usage ratio into an elasticity of substitution (EOS).¹⁴ The EOS is a measure of the effect of TOU pricing on TOU customers' peak to off-peak usage ratio.

The estimated changes in the peak to off-peak usage ratio (shown in column 3 of Table 1) are nearly uniformly negative and statistically significant. This is consistent with expectations for TOU price response, with TOU rates inducing a higher share of usage in the relatively low-cost off-peak hours. The exception, the 2012 estimate for Cohort C, is not surprising because it is

¹³ Note that the 2012 TOU demand response estimates for cohorts B and C do not represent the application of TOU rates for the entire summer. In particular, only seven customers in cohort C were exposed to TOU prices during 2012, and those customers only faced TOU prices beginning in August 2012.

¹⁴ An additional set of models was estimated using the natural log of the peak to off-peak usage ratio as the dependent variable. The TOU demand response estimates from this model served as the numerator in the implied elasticity of substitution calculations. The denominator is the natural log of the inverse price ratio, or $\ln(0.0631/0.3784)$.



based on relatively few customers who were placed on TOU rates in August 2012. The implied EOS for the other cohort/years ranges from 0.088 to 0.240. By comparison, other similarly constructed TOU pilots (i.e., in which no enabling control technology was provided) reported EOS estimates of 0.02 to 0.10.¹⁵

Table 2: Estimates of TOU Demand Response by Cohort and Model

(1) Cohort	(2) Year	(3) Peak to Off-peak Ratio	(4) Peak (kWh per hour)	(5) Off-Peak (kWh per hour)	(6) Implied Elasticity of Substitution
A: Joined TOU in June 2012 (n=24)	2012	-0.210++	-0.008	0.164	0.123
	2013	-0.287++	0.119	0.529++	0.189
	2014	-0.240++	0.410++	0.652++	0.088
B: Joined TOU in July 2012 (n=12)	2012	-0.207++	-0.307+	0.032	0.165
	2013	-0.372++	-0.087	0.218+	0.240
	2014	-0.352++	0.048	0.211+	0.230
C: Joined TOU in August 2012 or later (n=54)	2012	-0.139	-0.128	-0.092	0.030
	2013	-0.350++	-0.503++	-0.118++	0.181
	2014	-0.324++	-0.291++	-0.007	0.183

++ p-value < 0.01, + p-value < 0.05

While the estimated change in the peak to off-peak usage ratio is consistent across cohorts and years, this is not the case for the estimated changes in peak and off-peak average usage (shown in columns 4 and 5 of Table 2, respectively). One would expect TOU rates to induce reductions in peak-period usage and increases in off-peak period usage. However, the estimates rarely reflect this pattern. For example, the 2013 estimates for Cohort A show a statistically significant usage increase in the off-peak period, but no statistically significant change in peak-period usage. In contrast, the 2013 estimates for Cohort C show somewhat large and statistically significant load reductions during peak hours (0.503 kWh per hour) and smaller, but still statistically significant load decreases during off-peak hours (0.118 kWh per hour). The erratic nature of the hourly load change estimates suggests caution in applying them as nominal impact values.

Figures 4 through 6 in Section 3 illustrate some of the mismatches between treatment and control-group loads during the TOU pricing years. It could be that the matching process failed to account for factors that systematically influenced usage levels in post-match (TOU) periods, thus creating disparities in usage levels across time periods. Despite this, the estimates of the effect of TOU rates on the peak to off-peak usage ratio reflect the “notches” observed in the TOU load profiles in Figures 4 through 6.

In order to test whether potential mismatches between the treatment and control groups affected the estimated load impacts, an additional set of models was developed using only TOU customer data. In these models (within-subjects analysis), the TOU load impact estimates are solely based on a comparison of treatment customer loads before and after the adoption of

¹⁵ EPRI 2013 op cit.



TOU rates, controlling for weather conditions. One potential shortcoming of this approach is that it does not account for other factors that can affect TOU customer loads across years, such as the adoption of efficient lighting or other conservation measures.

Because these models do not include control-group data, interval load data from 2011 is added to the analysis, significantly increasing the amount of pre-treatment data. (Hourly load data for 2011 are available for TOU customers, but not control-group customers.)

Table 3 presents the estimated TOU load impacts during peak and off-peak periods by cohort and year. Column 5 shows the difference between the peak and off-peak load impact, which may provide a more easily interpreted measure of the overall effect of TOU pricing on customer load profiles. The peak period was four hours, so the estimated total usage reduction is four times the nominal value.

Table 3: Estimates of TOU Demand Response Excluding Control Customers

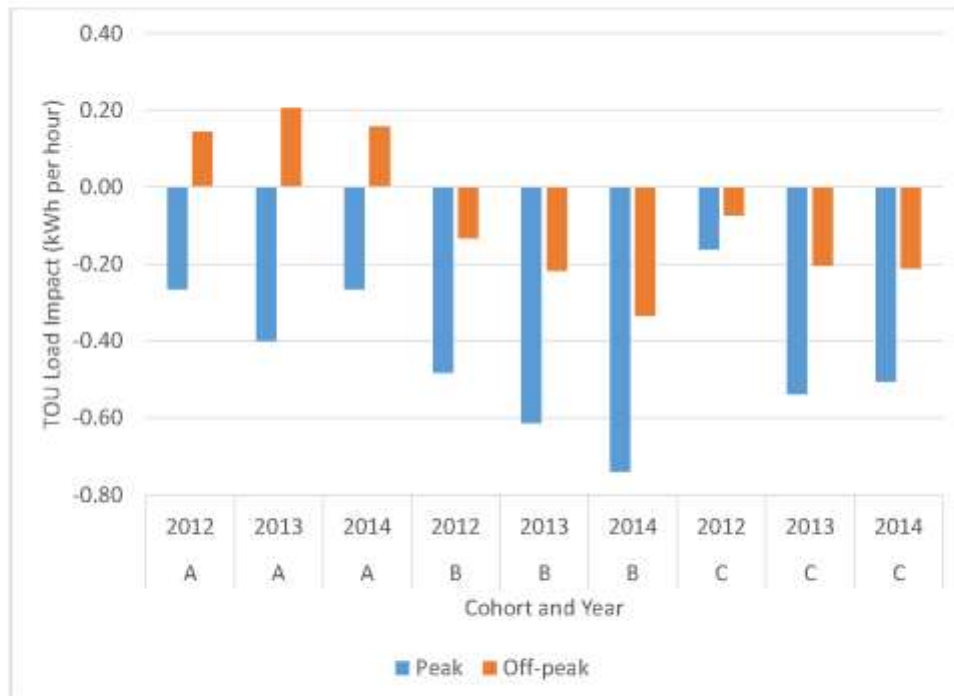
(1) Cohort	(2) Year	(3) Peak (kWh per hour)	(4) Off-Peak (kWh per hour)	(5) Peak – Off-Peak Load Impact (kWh per hour)
A: Joined TOU in June 2012 (n=24)	2012	-0.265++	0.144+	-0.41
	2013	-0.400++	0.205+	-0.61
	2014	-0.265++	0.158+	-0.42
B: Joined TOU in July 2012 (n=12)	2012	-0.483++	-0.133	-0.35
	2013	-0.612++	-0.218++	-0.39
	2014	-0.739++	-0.335++	-0.40
C: Joined TOU in August 2012 or later (n=54)	2012	-0.162	-0.073	-0.09
	2013	-0.537++	-0.204++	-0.33
	2014	-0.506++	-0.212++	-0.29

++ p-value < 0.01, + p-value < 0.05

Figure 7 graphs the peak and off-peak load impacts by cohort and year. Notice that cohort A exhibits the pattern of response that one might expect, with decreases in peak-period usage and increases in off-peak period usage. In contrast, Cohorts B and C show reduced usage in all hours, but reduced usage more in peak hours. On average, the estimated difference between peak and off-peak average usage is reduced by approximately 0.4 kWh per hour in response to TOU pricing.



Figure 7: Estimated TOU Load Impacts by Pricing Period, Cohort, and Year



5. Summary

This study estimated customer demand response to TOU rates using a variety of methods. A simple examination of TOU customer load profiles indicates that peak-period load reduction is in the range of 0.35 to 0.48 kWh per hour represent the high end of what one might expect to estimate using more formal methods.

Formal analytical methods, which use a matched control group and/or a time-series of data including usage before and after the implementation of TOU pricing, consistently estimate reductions in peak to off-peak usage ratios in response to TOU pricing. The effect of TOU prices on the customers' usage pattern can be quantified as an elasticity of substitution (EOS), which represents the percentage change in the peak to off-peak usage ratio in response to the percentage change in the off-peak to peak price ratio. EOS estimates from this study range from 0.088 to 0.240. These relatively high values may be explained by the high ratio of peak to off-peak prices (six to one) and relatively short peak period (four hours), which may make it easier for customers to shift usage to off-peak hours.



Because of difficulties in controlling for other factors that can affect customer usage levels, there is some variation in the estimated effect of TOU pricing on the level of usage during peak and off-peak pricing periods across analysis methods, customer cohorts, and years. However, the estimates are more consistent with respect to the *relative* usage changes in peak and off-peak pricing periods. Specifically, peak-period usage decreases by 0.4 kWh per hour more than off-peak period usage, on average. For example, if off-peak usage remains the same following TOU rate adoption, the estimates indicate that peak-period usage would decline (on average per customer) by approximately 0.4 kWh per hour (1.6 kWh over the four-hour peak period). In contrast, if off-peak usage declines by 0.2 kWh per hour following TOU adoption, peak-period usage would decline by approximately 0.6 kWh per hour.

The results indicate a clear change in customer usage profiles in response to TOU pricing. The results are less clear with respect to changes in overall usage levels (i.e., whether off-peak period usage increases, decreases, or remains the same following TOU rate adoption). Still, the study provides evidence that customers exhibited significant response to TOU prices.

Appendix R Navigant SmartEnd-Use Program Process Evaluation



SmartGrid Demonstration Project

2014 Process Evaluation Report

Prepared for:
Kansas City Power & Light



Navigant Consulting, Inc.
1375 Walnut Street
Suite 200
Boulder, CO 80302

303.728.2500
www.navigant.com

Reference No.: 153326
December 1, 2014





Table of Contents

Executive Summary	iii
Background.....	iii
Evaluation Overview.....	iii
Key Findings.....	iv
Overall iv	
MySmart Portal	iv
MySmart Display	iv
MySmart Thermostat and Home Area Network	v
Time-of-Use Rates	v
1 Introduction	1
1.1 Background	1
1.1.1 Program Description	1
1.1.2 Program Marketing	8
1.1.3 Summary of Participation.....	10
1.2 Evaluation Objectives and Methodology.....	10
1.2.1 MySmart Portal	11
1.2.2 MySmart Display	12
1.2.3 MySmart Thermostat and HAN	14
1.2.4 Time-of-Use Rates.....	15
2 MySmart Portal.....	17
2.1 Program Experience.....	18
2.2 Energy Use in the Home	26
2.3 Satisfaction	29
2.4 Program Improvements	31
2.5 Demographics.....	31
3 My Smart Display	33
3.1 Program Experience.....	34
3.2 Motivations and Concerns.....	40
3.3 Energy Use in the Home	47
3.4 Satisfaction	51
3.5 Demographics.....	54
4 MySmart Thermostat and Home Area Network.....	56
4.1 Program Experience.....	57
4.2 Events.....	60
4.3 Satisfaction	62



5	Time-of-Use Rates.....	65
5.1	Program Experience.....	66
5.2	Energy Use in the Home	70
5.3	Satisfaction	72
6	Lessons Learned: Technology and Program Operations.....	75
6.1	Overall Program Goals.....	75
6.2	Technology-Specific Findings	75
6.2.1	MySmart Portal	75
6.2.2	MySmart Display	76
6.2.3	MySmart Thermostat/MySmart Home	76
6.2.4	TOU	77
6.3	Customer Engagement	78
7	Summary.....	79
7.1	Overall	79
7.2	MySmart Portal	79
7.3	MySmart Display	79
7.4	MySmart Thermostat and Home Area Network.....	80
7.5	Time-of-Use Rates	80
Appendix A	Web Analytics Memo	A-1
A.1	Section 1: Summary.....	A-2
A.2	Section 2: Analysis Overview	A-3
A.3	Section 3: Detailed Analysis.....	A-5
Appendix B	Survey Instruments	B-1
B.1	MySmart Portal Participant Online Survey	B-1
B.2	Time of Use Rate Participant Phone Survey	B-10
B.3	MySmart Display Phone Survey	B-17



Executive Summary

Navigant Consulting, Inc. (Navigant) was selected by Kansas City Power & Light (KCP&L), through a competitive bidding process, to conduct a process evaluation of the customer offerings through their SmartGrid Demonstration Project (SGDP).

Background

KCP&L's SGDP is an end-to-end SmartGrid platform that includes advanced renewable generation, storage resources, leading-edge substation and distribution automation and control, energy management interfaces, and innovative customer programs and rate structures. The SGDP is focused on the geographic area served by the KCP&L Midtown Substation and lies within Kansas City's urban core. The KCP&L project is unique in that the area served by the SGDP is within an economic development region with a large number of customers living below the poverty level and/or in arrears on their utility bills.

The customer offerings are the subject of this process evaluation and include the following:

- **MySmart Portal:** An energy management web portal that displays energy usage and utility bill cost information in hourly, daily, and monthly configurations.
- **MySmart Display:** An in-home monitor that displays current energy usage and utility bill cost information.
- **MySmart Thermostat:** An advanced metering infrastructure (AMI)-enabled programmable thermostat.
- **Home Area Network (HAN):** A home energy network consisting of AMI-enabled programmable thermostat and load control devices.
- **Time-of-Use (TOU) Rates:** A rate structure that supports summer peak load shedding through higher costs on weekdays from 3:00 to 7:00 p.m. from May 16 to September 15.

Evaluation Overview

Over the course of a number of years (2012-2014), Navigant conducted a process evaluation of each of the SGDP's components, including the MySmart Portal, the MySmart Display, MySmart Thermostat, Home Area Network, and Time-of-Use Rates. The evaluation team used online and phone surveys to explore participant experience and satisfaction with each component, conducted an analysis of the MySmart Portal's web analytics to understand participant usage patterns, and interviewed project stakeholders to identify lessons learned about the program operations and technologies deployed throughout the program.



Key Findings

Overall

- Participant awareness of the overall SGDP varied by program component. For example, MySmart Portal participants did not seem to connect the portal with the SGDP, while MySmart Thermostat and TOU participants reported high levels of awareness of the SGDP.
- Participant motivations for signing up for their respective program components were consistently driven by a desire to understand and control their energy use, in many cases to save money. Less motivating was a desire to help the environment or assist KCP&L in managing its business risks, such as power outages or having to build new generation.
- Participants reported high levels of satisfaction with the SGDP program components, as well as high levels of satisfaction with KCP&L. When asked, most participants felt that the program improved or maintained their level of satisfaction with KCP&L as a utility.

MySmart Portal

- Overall, MySmart Portal participants did not seem to associate the online portal with the SGDP program as a whole.
- The primary reason that survey respondents used the web portal was to understand and control their energy use, as opposed to finding ways to save money.
- Only a few respondents had negative comments about the MySmart Portal, and most reported high levels of satisfaction both with the portal and with KCP&L as a company overall.
- KCP&L struggled to maintain customer engagement with the MySmart Portal over time, with 36 percent of respondents reporting that the frequency at which they visited the site had decreased since they first joined.
- MySmart Portal users tend to be under 30 years of age with a college degree. These users rent small, single-family homes or apartments and live alone or with one other person.

MySmart Display

- MySmart Display survey respondents felt that the display was an effective tool for participants to use to gain control of their energy use and save money on their utility bill.
- The primary reasons that survey respondents stopped using their display was because the device broke, never worked in the first place, or was too complicated to use.
- Very few participants had concerns about the MySmart Display program when they first enrolled. Most were motivated to participate to have better control over their electric usage (65 percent) and save money on their utility bill (24 percent).
- The MySmart Display program has been effective at encouraging positive energy use behaviors.
- Participants believe the display is accurate, easy to use, and has the right mix of features.



- » The vast majority (92 percent) of participants were satisfied with their display, leading to an increase in satisfaction with KCP&L for some.
- » MySmart Display participants tend to be older and have higher levels of education than the average resident in the SGDP territory: The demographic makeup of the participants suggests that a program such as the MySmart Display program is likely to have applicability across the broader service territory.

MySmart Thermostat and Home Area Network

- » Tstat/ HAN participants were very familiar with the SGDP, though not as familiar as TOU participants. This is in contrast to MySmart Portal participants.
- » As with TOU participants, Tstat/HAN participants learned about the opportunity to participate in the program primarily by information received through the mail.
- » The main reason participants signed up for the Tstat/HAN component was to save money on their energy bills.
- » Overall, participants expressed satisfaction with the MySmart Thermostat and felt that the device was easy to use and saved them money on their monthly bill, though this sentiment was not unanimous.
- » Half of the survey respondents reported that their satisfaction with KCP&L increased since they first signed up for Tstat/HAN program.
- » Only 10 of the 32 survey respondents who participated in a demand response event (according to the program tracking database) could recall the event taking place.
- » For the seven respondents who at one point opted out of participating in an event (according to the program tracking database), most reported not knowing why or how they opted out.

Time-of-Use Rates

- » TOU survey respondents were very familiar with the overall SGDP.
- » The main way that respondents learned about the opportunity to participate in the TOU billing structure was by receiving information through the mail.
- » Overall, respondents expressed satisfaction with the program and felt that the TOU plan was easy to understand and that KCP&L provided them with sufficient information about the program.
- » The majority of respondents (68 percent) strongly agreed that their energy bill decreased after participating in the program.
- » When asked if their household regularly altered electricity usage in response to higher peak rates, 49 percent of respondents strongly agreed that they regularly altered electricity during peak periods.



1 Introduction

1.1 Background

Navigant Consulting, Inc. (Navigant) was selected by Kansas City Power & Light (KCP&L), through a competitive bidding process, to conduct a process evaluation of the customer offerings within the SmartGrid Demonstration Project (SGDP) territory.

1.1.1 Program Description

KCP&L's SGDP includes advanced renewable generation, storage resources, leading-edge substation and distribution automation and control, energy management interfaces, and innovative customer programs and rate structures. The SGDP is focused on the geographic area served by the KCP&L Midtown Substation, impacting about 15,000 commercial and residential customers across ten circuits and five square miles (Blue Zone or BIZ). The area generally reaches from Main Street to Swope Parkway and 36th to 52nd Street in Kansas City's urban core. The Green Impact Zone (Green Zone or GIZ) lies within the Blue Zone, covering a smaller 150-block area reaching from Troost to Prospect and 39th Street to 51st Street. To support these programs and services, advanced metering infrastructure (AMI) utility meters were installed for all customers within the SGDP territory between October 18, 2010, and March 18, 2011.

The SGDP is unique in that the area served by the project is within an economic development region. The area largely consists of low-income households with lower levels of education, lower home ownership, and higher than average levels of unemployment. In addition, a large number of these customers are living below the poverty level and/or are in arrears on their utility bills. Therefore, the benefits of choice, control, and convenience that the smart grid technologies provided are not likely to resonate with the typical household.

The project introduces new technologies in the substation and the distribution network, as well as advanced renewable resources such as large-scale energy storage to supply electricity and offset peak electrical demand. Finally, end users are provided transparent actual and predictive usage information, digital tools, and innovative programs to allow them to optimize energy consumption.

As part of the end-user experience, KCP&L has identified and/or developed a suite of programs and services to offer to customers within the demonstration area. These include the following:

- **MySmart Portal:** An energy management web portal that displays energy usage and utility bill cost information in hourly, daily, and monthly configurations
- **MySmart Display:** An in-home monitor that displays current energy usage and utility bill cost information
- **MySmart Thermostat:** An AMI-enabled programmable thermostat

NAVIGANT

- » **Home Area Network (HAN):** A home energy network consisting of AMI-enabled programmable thermostat and load control devices
- » **Time-of-Use (TOU) Rates:** A rate structure that supports summer peak load shedding through higher costs on weekdays from 3:00 to 7:00 p.m. from May 16 to September 15.

These project components are described in the subsections below.

1.1.1.1 MySmart Portal

Participants use a customer-supplied home computer and Internet connection to log in to a web portal that provides them with energy information and engages them in energy usage decisions. KCP&L released two versions of the MySmart Portal over the course of several years, the first version being active from October 2010 through October 2012 and the second version of the site being active from November 2012 forward. Figure 1 illustrates one of the web portal screens, which can display customer energy consumption, estimate the amount the customer has spent on electricity to date in the month, and also tell the customer whether they are on track to meet or exceed a monthly customer goal.

Figure 1. MySmart Portal Dashboard



Source: KCP&L



1.1.1.2 MySmart Display

The in-home display (IHD), or MySmart Display (see Figure 2), receives direct information from the smart meter and presents data to the customer to aid them in monitoring real-time energy usage. Through the MySmart Display, the customer can get some of the information offered by the web portal, such as estimated energy bill for month-to-date, without having to log into the portal.

Figure 2. MySmart Display

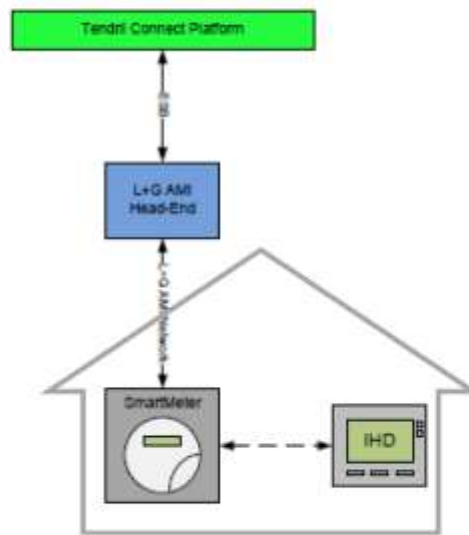


Source: KCP&L



Figure 3 below shows the MySmart Display's in-home topology. The IHD connects directly and wirelessly to the smart meter, which uses its back-haul network to connect to the utility back office and in-turn to the Tendril Connect Platform for energy monitoring and message to the participant.

Figure 3. MySmart Display Topology



Source: KCP&L



1.1.1.3 MySmart Thermostat

The MySmart Thermostat (see Figure 4) allows customers to pre-set temperatures for nighttime or when they are away from home, and to set it to automatically return to their preferred temperature before they wake up or return home. The MySmart Thermostat can also be integrated with the HAN.

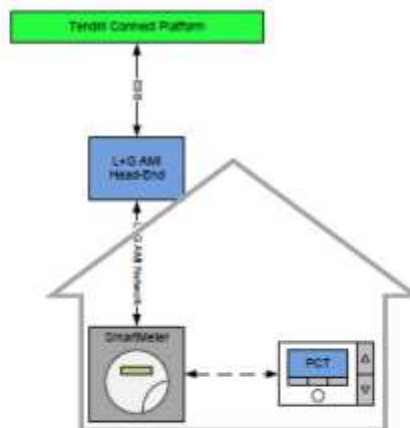
Figure 4. MySmart Thermostat



Source: KCP&L

Figure 5 below shows the in-home topology for thermostat connectivity. The thermostat connects directly, wirelessly, to the smart meter, which uses its back-haul network to connect to the utility back office and in-turn to the Tendril Connect Platform for energy monitoring, demand response messages, messages to the participant.

Figure 5. MySmart Thermostat Topology



Source: KCP&L

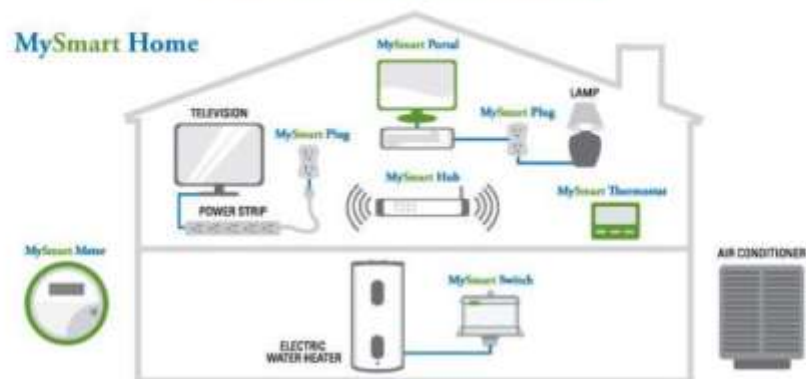


1.1.1.4 Home Area Network

MySmart Home is a collection of in-home energy devices networked together using a HAN. These devices are in turn connected to the Tendril Connect Platform and back-office services via home gateway and customer-supplied broadband Internet connection. Figure 6 provides an illustration of a full MySmart Home customer deployment, including the following:

- MySmart plugs and switches to monitor and control power flow to various in-home devices
- MySmart Thermostat to control central heating, ventilating, and air conditioning (HVAC)
- MySmart Hub to provide HAN to Internet connectivity
- Home computer to access MySmart Portal

Figure 6. Home Area Network Components



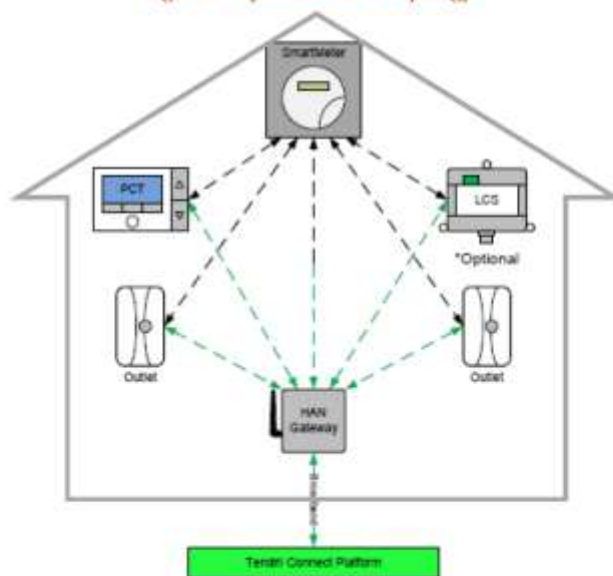
Source: KCP&L

MySmart Home participants do not have to use all devices shown in Figure 6 but will have at least MySmart Thermostat and access to MySmart Portal. This HAN configuration networks together the various devices described above as well as HAN-enabled plugs and switches that can control power to various customer devices. However, one difference is that these devices primarily use the customer-supplied broadband connection to interface with the Tendril Connect Platform and back-office applications, rather than using the Smart Meter back-haul network.



The connectivity among devices in MySmart Home is illustrated in Figure 7. Devices connect via HAN to both the HAN Gateway—for connection to the Internet and the Tendril Connect Platform—and to the home's smart meter to obtain some of the metering information and get other signals via the smart meter back-haul network.

Figure 7. MySmart Home Topology



Source: KCP&L



1.1.1.5 Time-of-Use Rates

KCP&L developed TOU residential billing rates as an option for residents in the SGDP territory. These rates can be used by participants in any of the technology options mentioned earlier. The program designates "off-peak" hours (when rates are discounted from standard) and "peak" hours (when rates are above standard). The TOU rates were designed to encourage customers to think about when they use electricity rather than just how much electricity they use, ultimately shifting electricity usage (grid load) from peak to off-peak periods. Figure 8 shows the TOU rate schedule.

Figure 8. Time-of-Use Rate Schedule



*Time of Use Rate peak hours do not apply on Memorial Day, Independence Day or Labor Day.

Source: KCP&L

1.1.2 Program Marketing

KCP&L executed a four-pronged approach to generate SGDP technology awareness, engage customers in product training, increase product adoption, and change customer energy management behavior. These approaches were as follows:

- **Neighborhood Association Outreach** was conducted to increase awareness and understanding of smart grid benefits and trigger interest in products and services.
- **SmartGrid Energy Resource Fairs** were held to provide basic and in-depth product training, distribute MySmart Displays to customers, and offer additional product sign-up opportunities.
- **Community Outreach Events** were held in partnership with other organizations on a community-wide basis to generate excitement and awareness around smart grid technology, energy efficiency, and weatherization products.
- **Demonstration House** provides interactive, hands-on opportunities for customers to learn more about the smart grid technology and a portfolio of energy-efficient products.



Awareness was also generated through advertisements in neighborhood newspapers and outdoor advertising within the SGDP zone. Media channels were leveraged through press conferences (held in September 2009 and December 2009) and reporter briefings. Lastly, two articles on the demonstration house were published in the *Kansas City Star* and *Greenability Magazine*.

In addition to building awareness and generating interest, KCP&L conducted specific marketing activities for each of the SGDP products, as described in Table 1.

Table 1. KCP&L SGDP Marketing Tactics by Product Type

Product	Segment	Tactics
MySmart Portal	Mass Marketing	» Introduction letter and Welcome kit » Outreach events » Direct mail
	Targeted Marketing	» AccountLink customers (687) via email and online tools » Optimizer online users
MySmart Display	Mass Marketing	» Intro letter and Welcome kit » Outreach events » Direct mail
	Targeted Marketing	» Customers who are behind in paying or have requested weatherization assistance - direct mail and telemarketing
MySmart Thermostat	Mass Marketing	» Intro letter and Welcome kit » Outreach events » Direct mail
	Targeted Marketing	» Customers who have central AC

Source: Navigant analysis of KCP&L materials

KCP&L also developed a website (www.kcp&lsmartgrid.com) with information on each of the products and TOU rate and communications targeting KCP&L employees. These included source and e-News Update articles and KCP&L Leadership video for all employees and a personal e-mail and luncheon for employees living in the project area.



1.1.3 Summary of Participation

Using the MySmart Portal as a proxy to understand overall participation in the SGDP, Navigant reviewed Google Analytic and program tracking data from both versions of the MySmart Portal. Figure 9 shows that the first portal version's page views fluctuated quite significantly from October 2010 through October 2012, hitting peaks in September 2011 and again in September 2012. Page views for the second version remained minimal for the first few months, gradually increased from February 2013 through June 2013, and then gradually declined from July 2013 through April 2014. Page view spikes occurred in September and December 2011, and August 2012 for the first website, and in July 2013 for the second website.

Figure 9. Number of Page Views



Note: Green indicates data from the first version of the portal, and blue indicates data from the second version.

Source: Navigant analysis of Google Analytic data

1.2 Evaluation Objectives and Methodology

Over the course of a number of years (2012-2014), Navigant conducted a process evaluation of each of the SGDP's components, including the MySmart Portal, the MySmart Display, MySmart Thermostat, Home Area Network, and Time-of-Use Rates. The evaluation team used online and phone surveys to explore participant experience and satisfaction with each component, conducted an analysis of the MySmart Portal's web analytics to understand participant usage patterns, and interviewed project stakeholders to identify lessons learned about the program operations and technologies deployed throughout the program.



1.2.1 MySmart Portal

Navigant originally received a list of 420 customers who had signed up for KCP&L's MySmart Portal. Of that group, 342 had associated email addresses and after removing duplicate entries, the evaluation team developed a list of 332 unique customers to contact for the MySmart Portal participant survey. This included customers who signed up for the portal between October 2010 and March 2014. Navigant developed an online survey for this population and Navigant's in house survey expert administered the survey between July 8 and August 15, 2014. To incentivize participation, the evaluation team implemented a lottery-style incentive, randomly selecting one respondent to receive a \$100 Visa gift card. Ultimately, the survey yielded 49 complete results, with an additional 22 entries from respondents who started a survey, but did not complete all questions. The final survey disposition is provided in Table 2.

Table 2. 2014 MySmart Portal Participant Online Survey Disposition Report

Disposition of Web Survey Activity 07/08/14 – 08/15/14	Count
A. Total Email Addresses	342
B. Total Unique and Functional Email Addresses	332
C. Complete	49
D. Partial-Complete	22
E. Bounced Emails	8
F. Started Survey	72
G. Viewed Survey	49



1.2.2 MySmart Display

Navigant conducted the MySmart Display surveys via telephone in 2012 by a professional survey house, Bellomy Research. No survey incentive was offered. There were 625 MySmart Display participants enrolled in the MySmart Display program through July of 2012. The earliest participants, who received their displays through door-to-door outreach during the SGDP deployment, were targeted by KCP&L through another outreach effort and were removed from the survey sample frame. There were 195 of these participants from November 2010 through February 2011. The remaining 430 participants, who received their display devices from March of 2011 up until July 30, 2012, made up the population for the survey. Navigant mailed a postcard six days in advance of the start of surveying (see Figure 10).

Figure 10. 2012 MySmart Display Survey Advance Postcard



Source: Navigant with support from KCP&L communications

The MySmart Display phone surveys were conducted beginning on September 24, 2012, and ending October 3, 2012. Call attempts were made to each telephone number in the sample frame. The final survey disposition is provided in Table 3.



Table 3. 2012 MySmart Display Telephone Survey Disposition Report

Disposition of Call Attempts 9/25 to 10/3	Count
A. Total Numbers	430
B. Total Numbers Available For Dialing	418
ALL DIALINGS	
C. Complete	72
D. Quit	0
E. Saved Callback (mid survey)	34
F. No answer	144
G. Busy	23
H. Disconnect/Wrong #/Blocked #/No such person	70
I. Business/Government	7
J. Deaf/Language Barrier	1
K. Answering machine	771
L. Initial refusal	1
L2 Respondent Refused	40
M. Callback for correct person	108
N. Changed number	0
O. Total Dialings (SUM(C..N))	1364
SCREENED (DISQUALIFIED)	
S1A Not familiar with MySmart Display	10
S2 Does not have display	2
S2A Doesn't know what happened to display	18
S3A TERM POINT	63
Z. Total screened out (SUM(TC's))	93
a. Total numbers tried (B-d)	418
b. Total numbers eliminated (C+D+H++J+L+L2+Z)	284
c. Total numbers remaining (B-b)	134
d. Virgin numbers remaining (Out of Queued)	0
e. Total contacted (C+D+E++J+L+L2+M+Z)	356
f. Total screened (C+Z)	165
Cooperation Rate (per contact) (f/(f+L+L2))	80%

Source: Navigant analysis of call center disposition data



1.2.3 MySmart Thermostat and HAN

For the MySmart Thermostat and HAN phone participant survey, Navigant received a sample file of 94 customers who received a thermostat through the SGDP. The sample file included information on the type of thermostat (AMI or HAN), as well as whether the homeowner opted out of each demand response event called by KCP&L. Navigant contracted with Bellomy Research to implement the phone survey between October 28 and November 10, 2014. To incentivize participation, each survey respondent was given a \$25 Visa gift card in exchange for a complete survey. The final survey disposition is provided in Table 4.

Table 4. 2014 MySmart Tstat/HAN Survey Disposition

Disposition of Call Attempts 10/28 to 11/09	Count
A. Total Numbers	91
B. Total Numbers Available For Dialing	87
ALL DIALINGS	
C. Complete	34
D. Quit	0
E. Saved Callback (mid survey)	9
F. No answer	31
G. Busy	2
H. Disconnect/Wrong #/Blocked #/No such person	15
I. Business/Government	0
J. Deaf/Language Barrier	2
K. Answering machine	73
L. Initial refusal	0
L2 Respondent Refused	10
M. Callback for correct person	13
N. Changed number	1
X. Left Message to call 800#	68
O. Total Dialings (SUM(C..N))	263
SCREENED (DISQUALIFIED)	
SCR2 Most knowledgeable person about electric utility	3
M2A1 No other adult who recalled MySmart Thermostat	2
Z. Total screened out (SUM(TC's))	5



Disposition of Call Attempts: 10/28 to 11/08	Count
a. Total numbers tried (B-d)	87
b. Total numbers eliminated (C+D+H+I+J+L+L2+Z)	66
c. Total numbers remaining (B-b)	21
d. Virgin numbers remaining (Out of Queued)	0
e. Total contacted (C+D+E+I+J+L+L2+M+Z)	73
f. Total screened (C+Z)	39

Source: Navigant analysis of call center disposition data

1.2.4 Time-of-Use Rates

For the TOU phone participant survey, Navigant received a sample file of 115 customers who participate in the billing structure. Of those, the evaluation team had to eliminate three due to incomplete contact information, leaving 112 customers available to be contacted. Navigant contracted with Bellomy Research to implement the phone survey between September and October 2014. To incentivize participation, each survey respondent was given a \$20 Visa gift card in exchange for a complete survey. Ultimately, the survey yielded 47 complete results. The final survey disposition is provided in Table 5.

Table 5. 2014 TOU Telephone Survey Disposition Report

Disposition of Call Attempts 9/24/14 to 10/12/14	Count
A. Total Numbers	112
B. Total Numbers Available For Dialing	110
ALL DIALINGS	
C. Complete	47
D. Quit	0
E. Saved Callback (mid survey)	19
F. No answer	61
G. Busy	1
H. Disconnect/Wrong #/Blocked #/No such person	10
I. Business/Government	0
J. Deaf/Language Barrier	1
K. Answering machine	146
L. Initial refusal	7
L2 Respondent Refused	6
M. Callback for correct person	18
N. Changed number	0
X. Left Message to call 800#	48
O. TOTAL DIALINGS (SUM(C..N))	376



Disposition of Call Attempts 9/24/14 to 10/12/14	Count
SCREENED (DISQUALIFIED)	
SCR2. Most knowledgeable person about electric utility	8
SCR3. Appropriate person to discuss rate plan/energy use	1
RS2A1. No other adult who signed up for the TOU program	2
SCR4. Most knowledgeable person about electric utility	1
Z. Total screened out (SUM(TC's))	12
a. Total numbers tried (B-d)	110
b. Total numbers eliminated (C+D+H+I+J+L+L2+Z)	83
c. Total numbers remaining (B-b)	27
d. Virgin numbers remaining (Out of Queued)	0
e. Total contacted (C+D+E+I+J+L+L2+M+Z)	110
f. Total screened (C+Z)	59

Source: Navigant analysis of call center disposition data



2 MySmart Portal

Participants use a customer-supplied home computer and Internet connection to log in to the MySmart Portal, which provides them with energy information and engages them in energy usage decisions.

This section presents the findings from the MySmart Portal participant online survey, conducted in the spring of 2014. The evaluation team contacted customers who had signed up for the portal via email, asking them to complete a brief online survey about their experience with the portal. To incentivize participation, Navigant devised a lottery prize system and selected one respondent to receive a \$100 Visa gift card. Overall, 71 respondents began the survey and answered some questions; however, only 49 respondents completed the entire survey. Questions from respondents who dropped out part way through the survey are included in the analysis, and Navigant denotes the total number of respondents for each question throughout the analysis in both text and graphics.

The evaluation team found that, in general, MySmart Portal survey respondents do not appear to relate the portal to the overall SGDP program, and indeed many are entirely unfamiliar with the SGDP program or do not recognize the name. Most respondents reported learning about the portal via the KCP&L website (48%, n = 80) or through an email from KCP&L (33%, n = 80). Overall, respondents reported using the web portal more for purposes of understanding and controlling their energy use, as opposed to finding ways to save money. Respondents expressed this trend through their selections of the pages they visit most often, the ones they find most useful, and a direct question about why they originally signed up for the portal.

Overall, satisfaction with the MySmart Portal and KCP&L is high; however, the evaluation team found that the site may not be successful in holding people's attention over the long term. Almost half of respondents (42%, n = 59) reported that they had not looked at the MySmart Portal in the last month from the date they took the survey, and only 22 percent reported visiting the site more than once in the same time frame. Thirty-six percent of respondents stated that the frequency at which they visit the site has decreased since they first joined the MySmart Portal (n = 59).

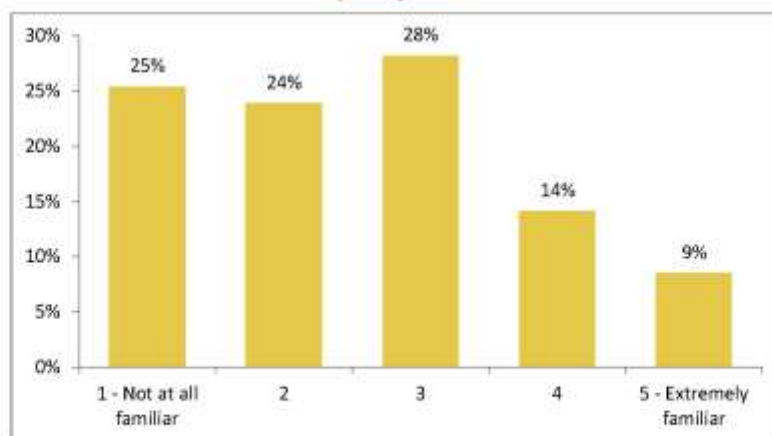
To complement findings from the MySmart Portal participant online survey, Navigant analyzed website data from two versions of KCP&L's MySmart Portal. A full summary of results is located in Appendix A.



2.1 Program Experience

Survey respondents reported low levels of familiarity with the overall SGDP, though most could recall creating an account on the MySmart Portal website. When asked to rate their familiarity with the overall SGDP on a scale from one to five, the majority (78%, n = 71) rated their familiarity at a three or lower, as shown by Figure 11. Only 9 percent of respondents indicated that they are “extremely familiar” with the program (n = 71). This implies that web portal users do not clearly relate the MySmart Portal with the overall SGDP, and in many cases (25% of respondents) may not even be aware of what the SGDP is.

Figure 11. How would you rate your familiarity with KCP&L's SmartGrid program (MySmart Portal participants)?



Note: n = 71

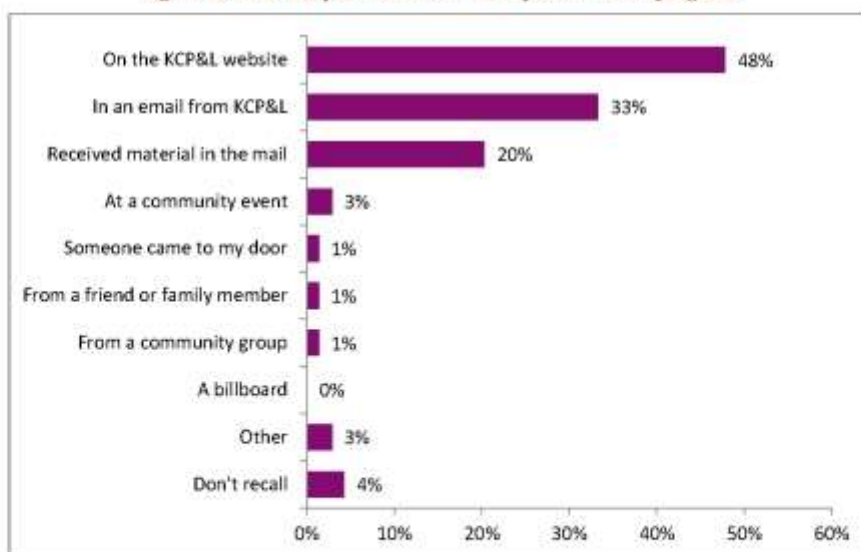
Source: Navigant analysis of survey response data

Eighty-nine percent of survey respondents (n = 71) recalled creating a MySmart Portal account without prompting. For the seven respondents who could not immediately recall whether they had created an account, five recalled creating the account after the survey prompted them with a short description of the portal. The evaluation team terminated the remaining two surveys after determining that the respondent had no recollection of creating the account.



Respondents reported learning about the program via three primary channels: the KCP&L website, an email from KCP&L, and direct mail materials. Almost half of the respondents reported hearing about the MySmart Portal via the KCP&L website (48%, n = 69). Not one respondent reported learning about the program by seeing a billboard, despite billboard marketing efforts July through December 2012. Figure 12 shows all responses to this question.

Figure 12. How did you hear about the MySmart Portal program?



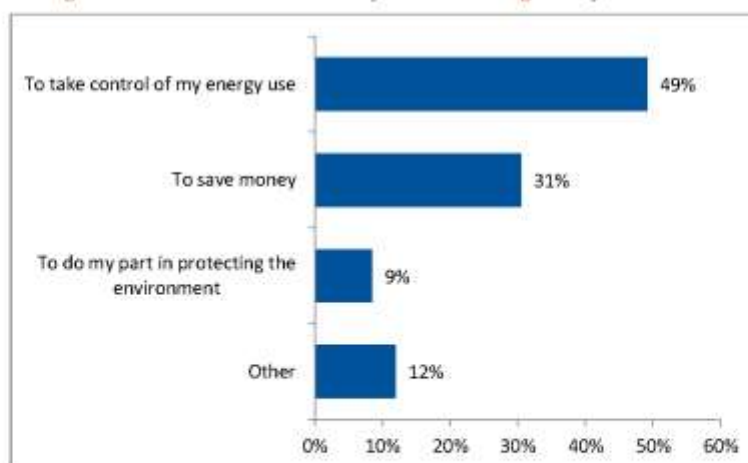
Note: n = 80; multiple responses accepted. "Other" includes a respondent who read about similar programs on the Internet and looked into local offerings, as well as a respondent who indicated that they simply assumed that a web portal existed.

Source: Navigant analysis of survey response data



Respondents reported that they primarily view the portal as a way to track and understand their home energy use, and secondarily as a tool to help them save money. When asked to select the main reason they started using the MySmart Portal from a list of options, Figure 13 shows that almost 50 percent (n = 59¹) of respondents indicated that it was because they wanted to take control of their energy use. Approximately one third selected saving money, while only 9 percent indicated that protecting the environment was the main reason they began using the portal. This is in line with the extent to which respondents agreed to various reasons they had for signing up for the portal (see Figure 14).

Figure 13. What is the main reason you started using the MySmart Portal?



Note: n = 59. "Other" includes wanting an easy method to pay bills, wanting to view bills before they arrive through the mail, wanting to be more aware of energy use, and enjoying having access to data in general.

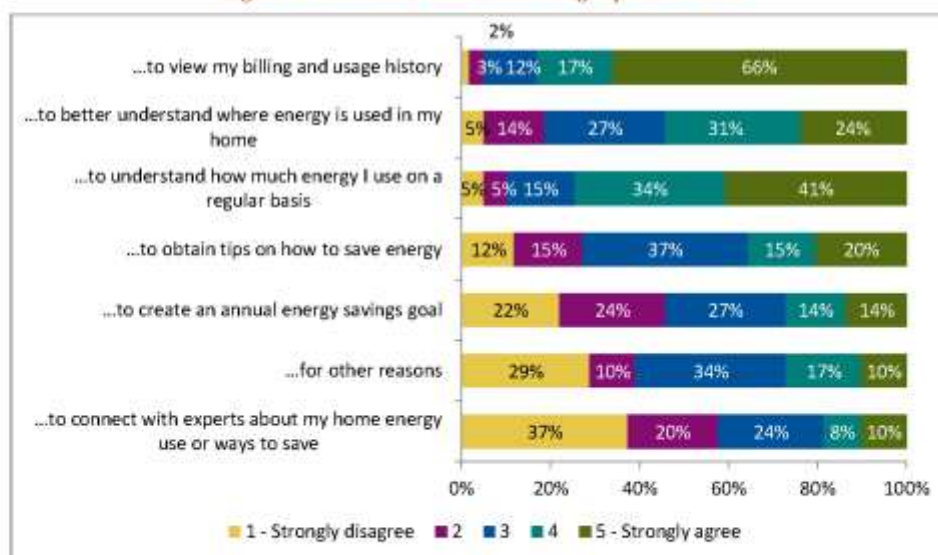
Source: Navigant analysis of survey response data

¹ As a reminder to the reader, the number of respondents changes throughout the presentation of results due to some respondents exiting the survey before answering all questions.



Navigant also asked respondents to share other reasons they had for starting to use the MySmart Portal, rather than one of the options in the list. Five respondents mentioned that they wanted to specifically track what appliances use energy at specific times, while other respondents simply reiterated taking control of energy use and saving money.

Figure 14. Additional reasons for Using MySmart Portal



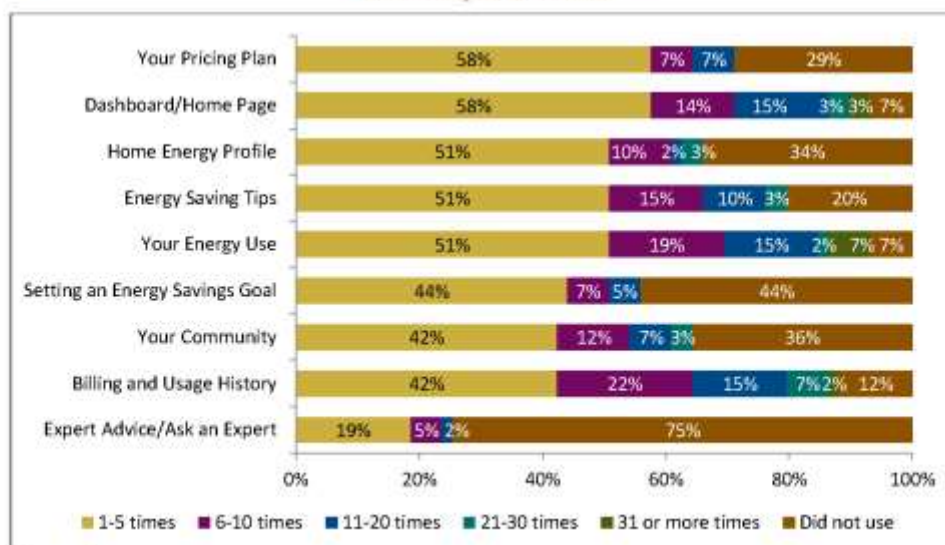
Note: n = 59

Source: Navigant analysis of survey response data



The survey responses also highlight the participants' prioritization of taking control of their energy use. When asked to rate how frequently they visited specific pages within the last 12 months, respondents reported visiting the "Your Energy Use", "Dashboard", and "Billing and Usage History" pages most frequently. By comparison, 75 percent of respondents reported that they have never visited "Ask an Expert", 44 percent said they have never visited the "Set an Energy Savings Goal" page, and 20 percent reported never visiting the "Energy-Saving Tips" section (n = 59). Figure 15 provides a full look at these respondent answers.

Figure 15. Please rate how frequently you used each of the following sections in the MySmart Portal within the past 12 months.



Note: n = 59

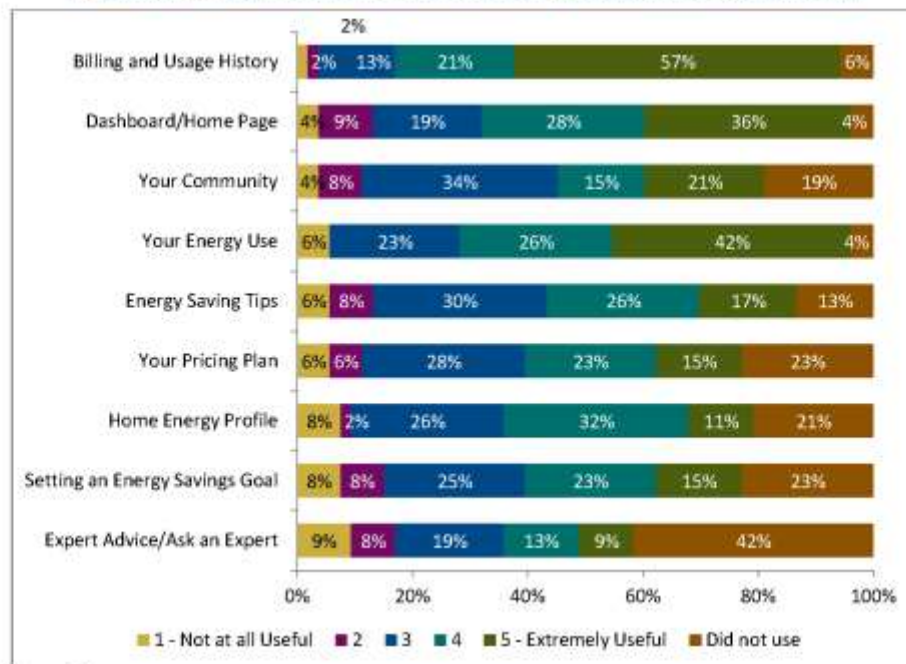
Source: Navigant analysis of survey response data

With the exception of the Dashboard, which functions as the home page, all of the site's pages require users to navigate the web portal by clicking through to one or more pages. The pages most frequently visited by respondents are those that correspond with tracking personal energy use, which is in line with respondents' reported reasoning for starting to use the web portal. These findings are also in agreement with insights gleaned from the web portal analytics analysis, which found that Dashboard, My Energy Use, and Billing and Usage History, are the three most frequently visited interactive/informative pages.



Respondents reported the most useful pages to be Billing and Usage History, followed by Your Energy Use and Dashboard. This is in line with the abovementioned support that shows that customers primarily use the site to view their contextualized billing data, and find energy-saving tips and advice from experts to be less useful. This corresponds to the pages that respondents report visiting most frequently, as well as their primary reason for signing up for the portal. Figure 16 provides a breakdown of respondent ratings on the usefulness of each of the MySmart Portal pages.

Figure 16. How would you rate each of the following sections in the MySmart Portal?



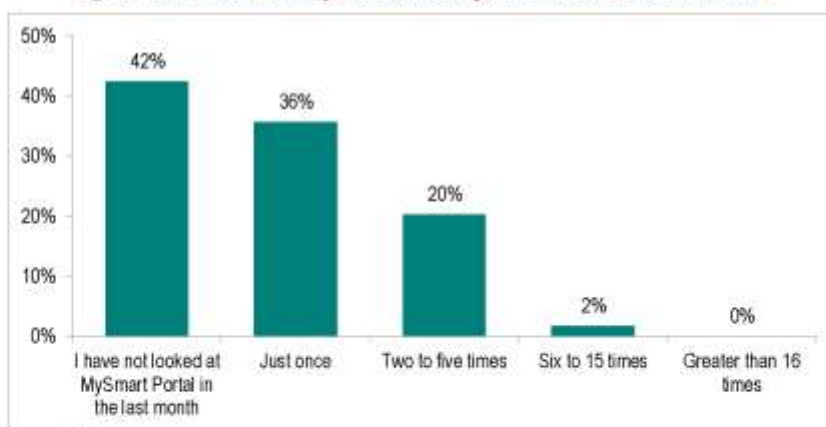
Note: n = 59

Source: Navigant analysis of survey response data



The MySmart Portal appears to struggle with maintaining user interest over the long term. Survey respondents include customers who had signed up for the portal as early as October 2012, up until March 2014. Most survey respondents reported that they have not looked at the MySmart Portal within the last month of taking the survey (42%, n = 59). Thirty-six percent mentioned visiting the portal no more than one time, as shown by Figure 17, and only one person visited the page more than five times within the past month.

Figure 17. How often have you looked at MySmart Portal in the last month?



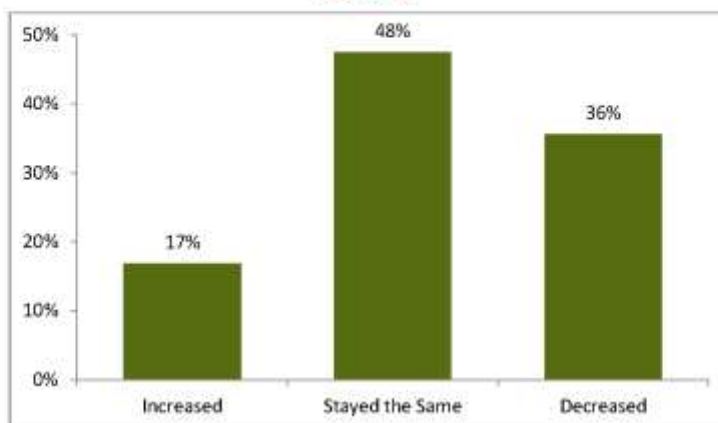
Note: n = 59

Source: Navigant analysis of survey response data



In addition, 36 percent of respondents reported that the frequency at which they visit MySmart Portal has decreased since they first created an account ($n = 59$). Only 17 percent indicated that the frequency of their visits has increased, while 48 percent reported that the frequency has stayed the same (see Figure 18). For those who reported a decrease in the frequency at which they visit, respondents provided a variety of reasons. Two people mentioned that they moved, while six mentioned that they either forgot about it or did not find it that useful. Two respondents indicated that the tool was not useful or does not give them the information they are looking for, and one commented that the upload time of the data takes too long. Respondents who reported an increase in the frequency at which they visit the site also provided a variety of responses, including that they use online tools more frequently in general, wanting to track how a change in the home impacts daily usage (e.g., when a roommate goes out of town), the site has become easier to use over time,² investigating recent spikes in billing, and using the remote control tools for the MySmart Thermostat.

Figure 18. How has the frequency at which you visited the MySmart Portal changed since you first signed up?



Note: $n = 59$

Source: Navigant analysis of survey response data

These findings help to shed more light on patterns seen in the web analytics memo (Appendix A). The evaluation team observed that site traffic (page views and number of sessions) began decreasing towards the end of the observation period – April 2014, and suggested that without further context this could simply be part of seasonal spikes in portal traffic. The above findings provide more context on these patterns, and suggest that a decrease in traffic may be more attributable to a certain subset of users losing interest in the site.

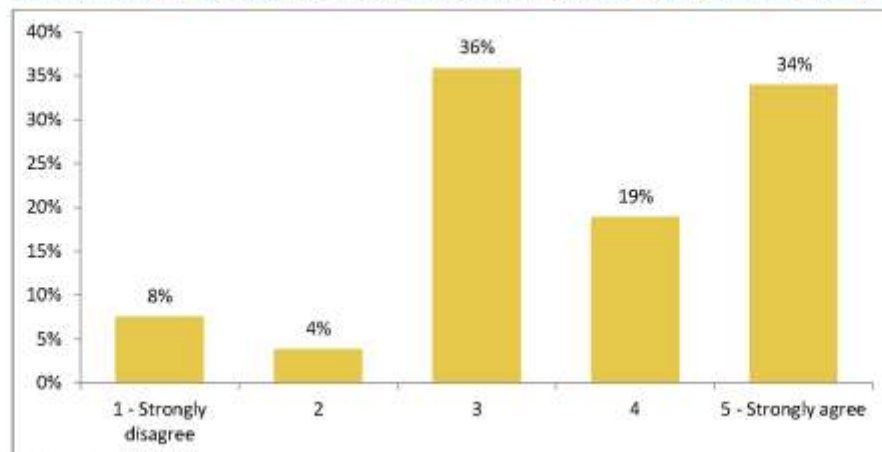
² It is possible that this respondent is comparing the current web portal to the previous version, and indicating that the current version is more user friendly. The evaluation team is not able to confirm this.



2.2 Energy Use in the Home

Based on the survey responses, KCP&L and the MySmart Portal appear to have had a moderate amount of influence on participants' knowledge of saving energy and taking action to save energy in their homes. When asked to rate the extent to which they agree with the statement "After using the MySmart Portal, I better understand the types of actions I need to take to reduce my electricity usage and save money," respondents gave mixed responses. As shown by Figure 19, 36 percent (n = 59) rated their agreement with the statement at a three, implying that they neither agree nor disagree with the statement. Thirty-four percent rated their agreement at a five, indicating that they strongly agree with the statement.

Figure 19. To what extent do you agree with the statement: "After using the MySmart Portal, I better understand the types of actions I need to take to reduce my electricity usage and save money?"



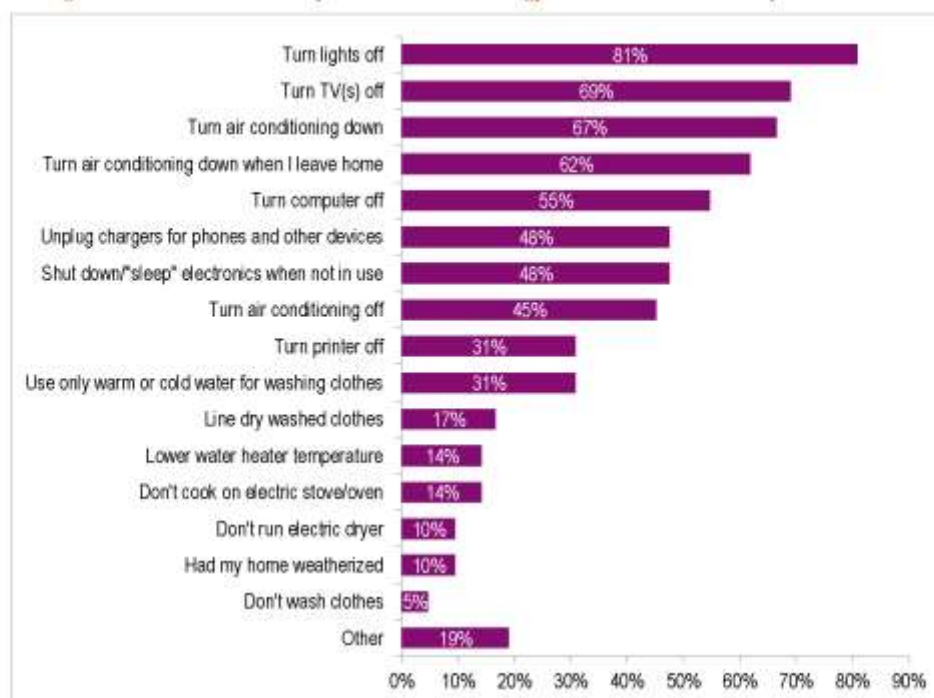
Note: n = 59

Source: Navigant analysis of survey response data



Seventy-nine percent of respondents reported taking steps to save energy in their home in the past year ($n = 59$). Of the 42 respondents who reported taking action, over half indicated that this included turning off lights and televisions, turning the air conditioning down, and turning computers off when not in use. Other common responses include using the shut-down or "sleep" options for electronics when not in use, unplugging phone or electronics chargers, and turning air conditioning off. Not running an electric dryer and having their home weatherized is not as common. Figure 20 presents a summary of responses to this question.

Figure 20. What actions have you taken to save energy in the home within the past 12 months?



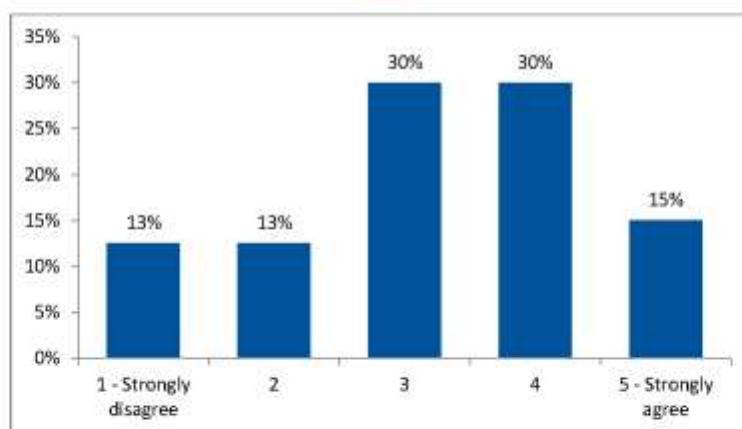
Note: $n = 42$

Source: Navigant analysis of survey response data



As shown in Figure 21, respondents attribute their decision to take the above-mentioned energy-saving actions to a moderate amount of influence from the program. Only 15 percent strongly agree that the program influenced them to take action, while 30 percent said they are undecided (n = 42).

Figure 21. How influential was the MySmart Portal in your decision to make these changes in your home?



Note: n = 42

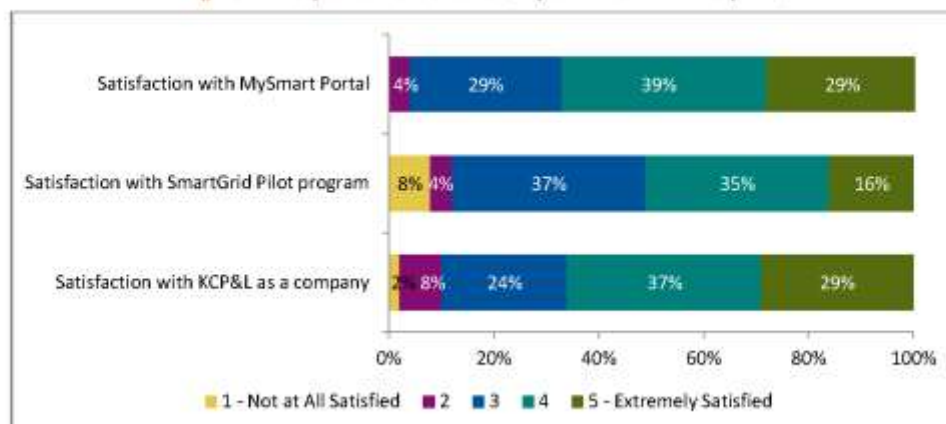
Source: Navigant analysis of survey response data



2.3 Satisfaction

Overall, participants are satisfied with the MySmart Portal, the SGDP, and KCP&L as a company. Navigant asked respondents to rate their satisfaction on a scale from one to five, where five is extremely satisfied. Figure 22 shows that for each satisfaction category, the majority of respondents rated their satisfaction at a four or higher. Respondents are overall less satisfied with the SGDP than with KCP&L or the MySmart Portal, with only 16 percent (n = 49) rating their satisfaction at a five. This is in comparison to the 29 percent (n = 49) of respondents who rated their satisfaction at a five for the other two categories. KCP&L should consider the satisfaction ratings for the SGDP within the context that many respondents reported being not at all familiar, or only slightly familiar with the program as a whole. Explanations given in response to satisfaction ratings imply that respondents may have misinterpreted the question.

Figure 22. Respondent Satisfaction (MySmart Portal Participants)



Note: n = 49

Source: Navigant analysis of survey response data

When asked to provide a reason for their rating, comments from the 16 participants who reported dissatisfaction (rating of 3 or below) with the MySmart Portal included four mentions that the site could be easier to use, and one respondent who did not trust the portal since they have to leave the KCP&L web page to access the site. Another respondent mentioned that they believed that the site does not help users to save money. Five of these respondents indicated that there was no particular reason for their dissatisfaction. Echoing feedback given about the web portal, dissatisfied respondents stated that they feel the site is difficult to navigate and that efficiency suggestions are not very practical or impactful. Two respondents indicated that they would like to see the site's content offered through a mobile application. One respondent mentioned that they prefer the "old way" of monitoring their usage and compare past invoices for usage.³ As stated by one respondent, "It needs a little work. Could be much easier to navigate than it currently is. Perhaps creating a smart grid app would increase participation."

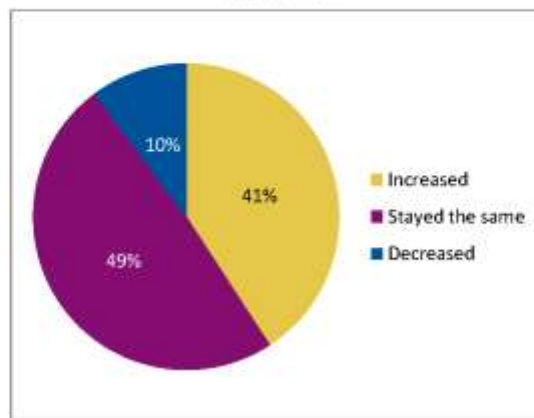
³ Navigant does not have enough information to ascertain what is meant by "the old way".



Of the 25 respondents who expressed satisfaction (rating at four or above) with the SGDP, respondents mentioned the convenience of being able to check in on their energy use and learn how to save energy. As one respondent put it (satisfaction rating of five), "I love it, it really got me thinking of what I'm using daily, and what's using energy that I'm not using."

The MySmart Portal appears to have had a moderate impact on customer satisfaction with KCP&L. Figure 23 shows that 41 percent of respondents stated that, since signing up for the MySmart Portal, their satisfaction with KCP&L has increased, while 49 percent indicated that their satisfaction has stayed the same (n = 49). Ten percent of respondents indicated that their satisfaction has decreased. The evaluation team did not ask respondents to elaborate on why their satisfaction has decreased since signing up for the MySmart Portal. The majority, 57 percent, of respondents have not recommended the portal to friends or family members, though 15 respondents indicated that they had made this recommendation.

Figure 23. Since you first signed up for the MySmart Portal, would you say your satisfaction with KCP&L has...



Note: n = 49

Source: Navigant analysis of survey response data

When asked to explain the reasons for their satisfaction rating with KCP&L as a company overall, respondents provided a number of responses. For the 17 respondents that rated their satisfaction at a three or below, implying some level of dissatisfaction, reasons given include power outages, that KCP&L is not customer-oriented, and that billing can be confusing and inconsistent. One customer mentioned that it feels like KCP&L "has us over a barrel" in that its services continually get more expensive and there is no alternative. One respondent mentioned that they recently moved outside of the area covered for the MySmart Portal, and she feels as though there are not many services or attention given to people living in apartments in terms of lowering their energy use. For the 32 respondents who rated their



satisfaction at a four or higher, respondents mentioned that they appreciate KCP&L's efforts to help them save energy and money, and that overall the company seems fair and easy to deal with, especially when transferring service to new residences. One respondent sums this up by stating: "Every time I have called I have been on hold for a short time but then put on the line with a knowledgeable and helpful employee every time. I have confidence that when I call, the problem will most likely be resolved quickly and that I'll be answered by a great employee. Keep up the good work!"

2.4 Program Improvements

Respondents provided a variety of suggestions for how to improve the MySmart Portal. Fifty-nine percent of respondents did not have anything to share in regard to how they would like to see the program improve (n = 49). For those who did comment, two respondents mentioned that they would like to see tips for saving broken out by residence type, such as tips for an apartment versus tips for a house. Four respondents mentioned that it would be nice to be able to get real-time data of where their energy is going, with two respondents specifying that they would like to get live "alerts" for when their energy use is particularly high or when they are approaching a goal that they had determined through the web portal. Other suggestions made by individuals include not outsourcing the website, applying the smart portal features on paper bills, increasing the upload/download speeds, offering a tutorial for using the web portal, and simplifying it to coincide more closely with the HAN devices, namely the MySmart Thermostat.

2.5 Demographics

The majority of participants who took the online survey regarding their experience with the MySmart Portal fit a specific demographic: they are under 30 years of age with a college degree, and they rent small, single-family homes or apartments and live alone or with one other person. It is possible that this is due to the tendency of this demographic group to be more amenable to giving feedback via online surveys; however, it is also possible that this accurately reflects the demographics of those customers who are most likely to sign up for an online portal to monitor their energy use. A combination of both explanations is most likely.

The following provides a summary of the most common demographic trends.

- Sixty-nine percent of respondents reported that they rent their home (n = 49).
- Forty-five percent of respondents reported that they live in an apartment/condo building, while 41 percent indicated that they live in a single-family home (n = 49).
- Most respondents (73%, n = 49) reported living in a home that is 2,000 square feet or under. Forty-nine percent indicated that their home is between 501-1,000 square feet (n = 49).
- Only 14 percent of respondents reported living in a household with over two full-time residents. Forty-one percent of respondents indicated that two people reside in their home at least six months of the year, while 37 percent indicated that only one person resides in their home full-time (n = 49).
- Respondents reported a range of incomes, with the majority reporting that their 2013 household annual income was below \$50,000 (n = 49).

The logo for NAVIGANT, featuring the word "NAVIGANT" in a gold, sans-serif font. The letter "V" is stylized with a blue and green graphic element.

- » Fifty-five percent of respondents reported that a college degree is the highest education level they have completed (n = 49).
- » Almost half of respondents indicated their age as between 22 and 29. Twenty-two percent selected an age between 30 and 39 (n = 49).



3 My Smart Display

The MySmart Display receives direct information from the smart meter and presents data to the customer to aid them in monitoring real-time energy usage. Through the MySmart Display, the customer can get some of the information offered by the web portal, such as estimated energy bill for month-to-date, without having to log into the portal.

This section presents the findings from the survey of MySmart Display participants. This section presents the findings from the MySmart Display participant phone survey, conducted in 2012. Because the program did not change significantly between when this survey was conducted and this report, KCP&L decided not to duplicate this survey in 2014 and feels the initial findings presented here represent an accurate picture of participant views.

Overall, the MySmart Display appears to have been an effective tool for participants to use to gain control of their energy use and save money on their utility bill. The primary reason that survey respondents stopped using their display was because the device broke, never worked in the first place, or was too complicated for them to use. Very few participants had concerns about the MySmart Display program when they first enrolled. Most were motivated to participate to have better control over their electric usage (65 percent) and save money on their utility bill (24 percent).

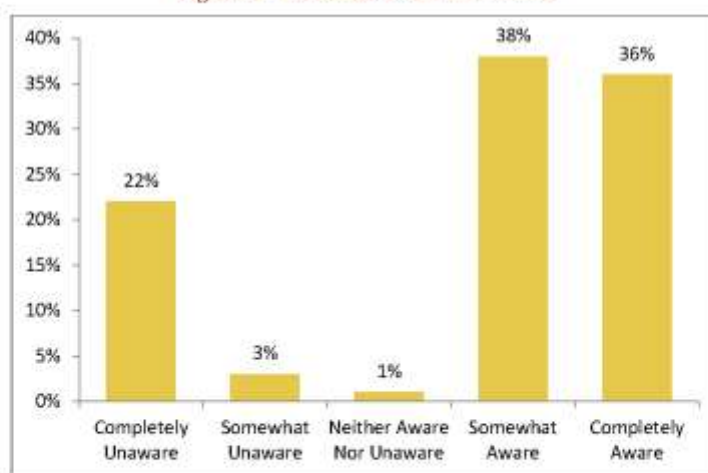
The MySmart Display program has been effective at encouraging positive energy use behaviors that translate to actual utility bill savings. Participants believe the display is accurate, easy to use, and has the right mix of features. The vast majority (92 percent) of participants are satisfied with their display, leading to an increase in satisfaction with KCP&L for some. Participants tend to be older and have higher levels of education than the average resident in the SGDP territory. The demographic makeup of the participants suggests that the MySmart Display program will have applicability across the broader service territory.



3.1 Program Experience

The 2012 survey asked MySmart Display participants about their awareness of the overall SGDP in their local community. Overall, there was a high level of awareness, with almost 75 percent of respondents reporting that they were somewhat or completely aware, and only 22 percent of respondents reporting that they were completely unaware of the project. Figure 24 shows this distribution.

Figure 24. Awareness of KCP&L's SGDP



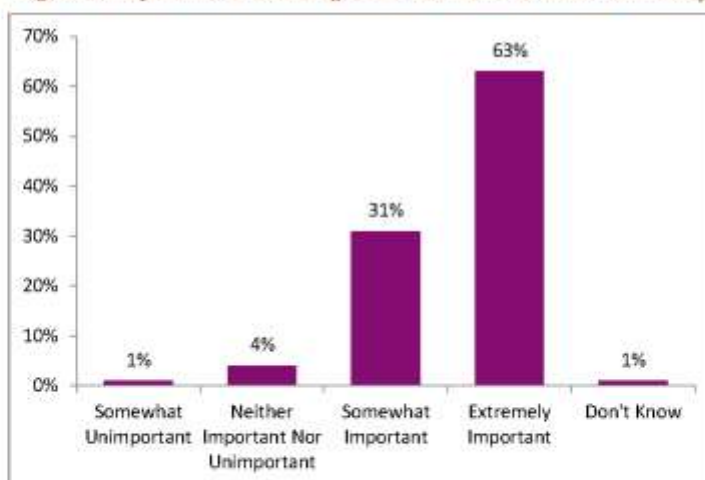
Note: n = 72

Source: Navigant analysis of survey response data



Overwhelmingly, participants reported that it was important to them that KCP&L continue to provide the smart grid benefits in the community. These benefits included hiring project leads and installers that live and work within the local community, as well as the dedicated smart grid office that allows customers to pick up smart grid products and get additional information from a live person. Figure 25 shows that more than 60 percent of respondents ranked these benefits as extremely important.

Figure 25. Importance of Providing Smart Grid Benefits in the Community



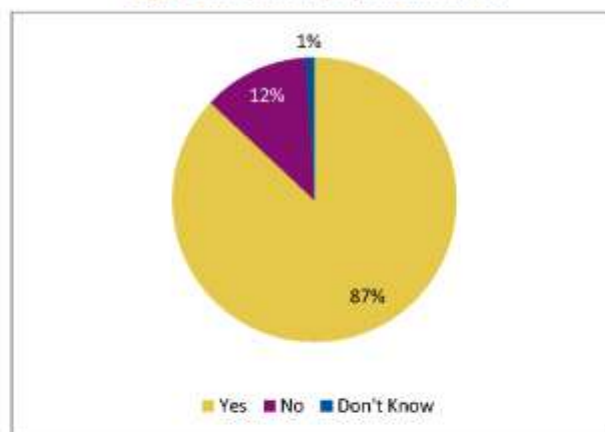
Note: n = 72

Source: Navigant analysis of survey response data



One of the key objectives of the survey was to determine whether participants still had their MySmart Displays installed in their home. When asked this question in the survey, over 85 percent of respondents surveyed still had their display, as shown in Figure 26.

Figure 26. Is your display still installed?



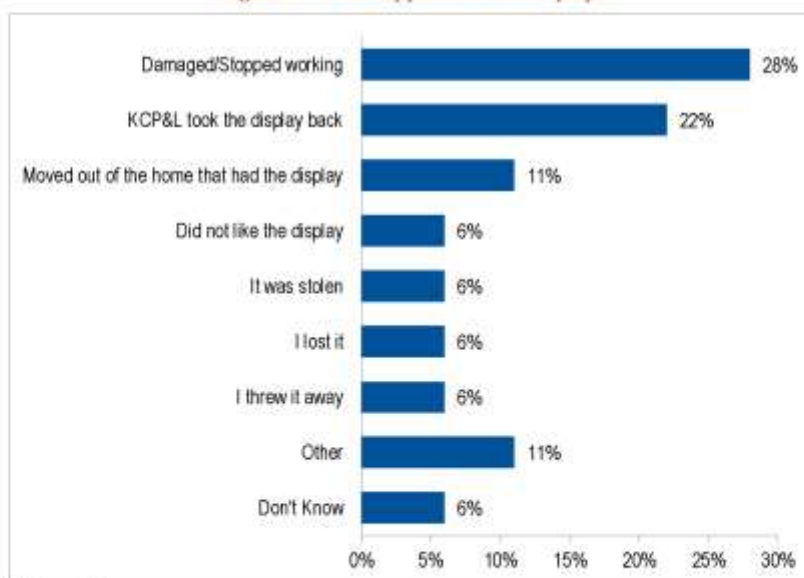
Note: n = 155

Source: Navigant analysis of survey response data



For those that no longer had their MySmart Display (18 respondents), the most common reported reasons were that the displays stopped working (28 percent of respondents), or that KCP&L took the display from the homes (22 percent of respondents). Only 11 percent of respondents reported that they moved out of the home with the display. These results are presented in Figure 27.

Figure 27. What happened to the display?



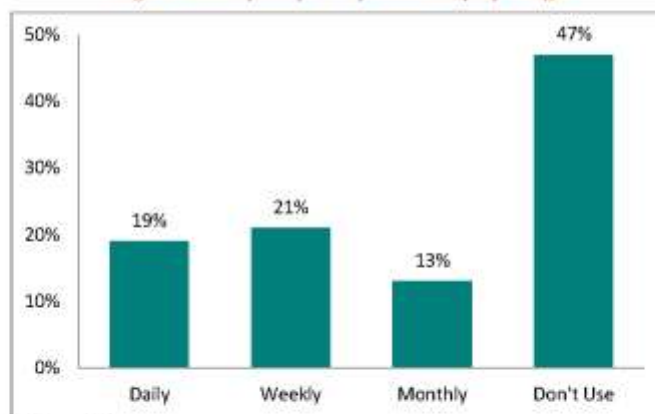
Note: n = 18

Source: Navigant analysis of survey response data



For those participants that did still have their MySmart Display, almost half reported that they did not use the display at all. However, for those that did use the display, most said they use it weekly or daily. Approximately 40 percent reported using their display on a daily or weekly basis. Figure 28 shows the frequency of use of the MySmart Displays.

Figure 28. Frequency of MySmart Display Usage



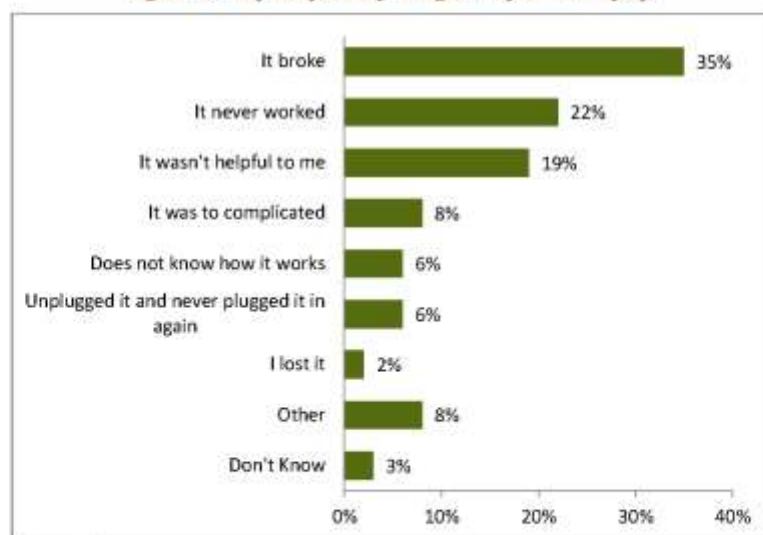
Note: n = 135

Source: Navigant analysis of survey response data



Proper operation is the primary driver of display usage. Thirty-five percent of respondents who no longer used their displays when surveyed reported that they no longer worked, and 22 percent reported that their displays never worked. Though the customers reported that their displays were unable to operate properly, these customers did not return their display to KCP&L, but instead kept them in their homes, unused. Figure 29 shows all reported reasons why participants no longer use their displays.

Figure 29. Why did you stop using the MySmart Display?



Note: n = 63

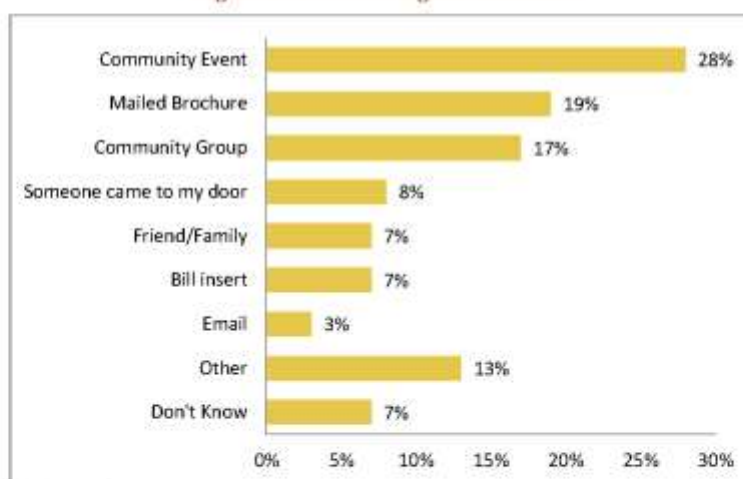
Source: Navigant analysis of survey response data



3.2 Motivations and Concerns

Surveyed participants reported that community events were their primary sources of awareness about the MySmart Display program, along with mailed brochures and community groups. These results are shown in Figure 30.

Figure 30. Source of Program Awareness



Note: n = 72

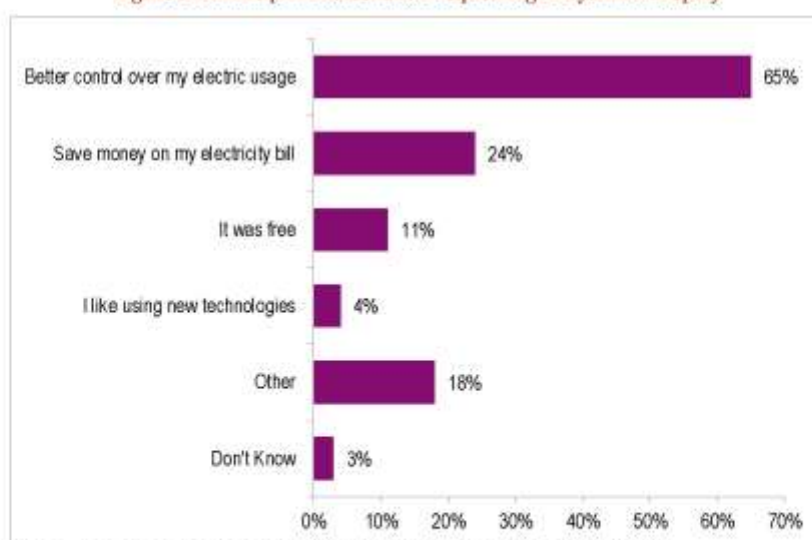
Source: Navigant analysis of survey response data

Survey respondents were asked to specify which community group they attended where they became aware of the program, and the primary community group mentioned was the Green Zone/Green Impact Zone program. Other reported sources of awareness included phone calls from KCP&L and radio/TV ads.



Participants who still had the MySmart Display in their homes when surveyed in 2012, and had looked at the information provided on the display at least one time (72 participants), demonstrated a significant interest in wanting to manage their electricity usage and bills. When asked why they requested a MySmart Display for their home, the majority of participants (65 percent) reported that they wanted better control over their electricity usage. Figure 31 shows the participants reported reasons for requesting the displays.

Figure 31. Participant Reasons for Requesting a MySmart Display



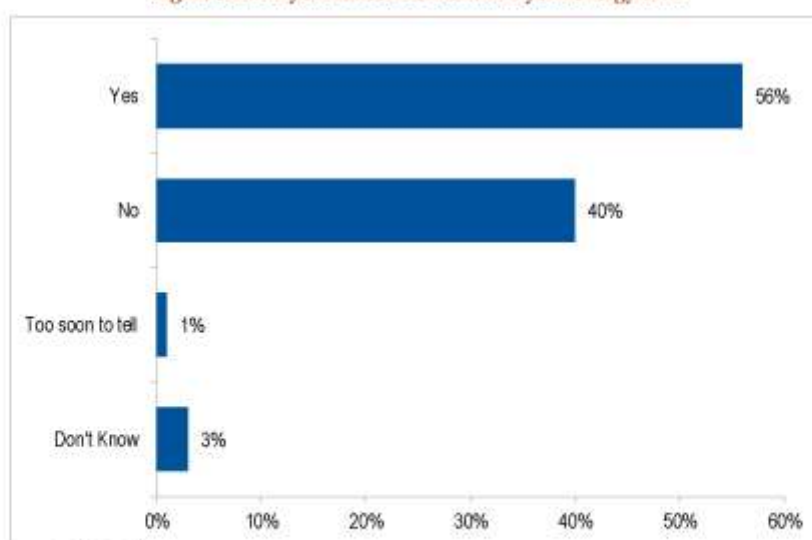
Note: n = 72; The 'other' response included 'wanted to track electric usage/estimate bill.'

Source: Navigant analysis of survey response data



Nearly 70 percent of MySmart Display survey respondents reported that they expected to save money by using their MySmart Display. On average, these participants expected to save 30 dollars per month through use of the display and managing their electricity usage. Figure 32 shows the percent of participants who actually noticed a reduction in their energy bill after using the MySmart Display. For the participants who noticed a decrease in their energy bill, they reported an average 40 dollar reduction, which is higher than the expected savings.

Figure 32. Did you notice a reduction in your energy bill?



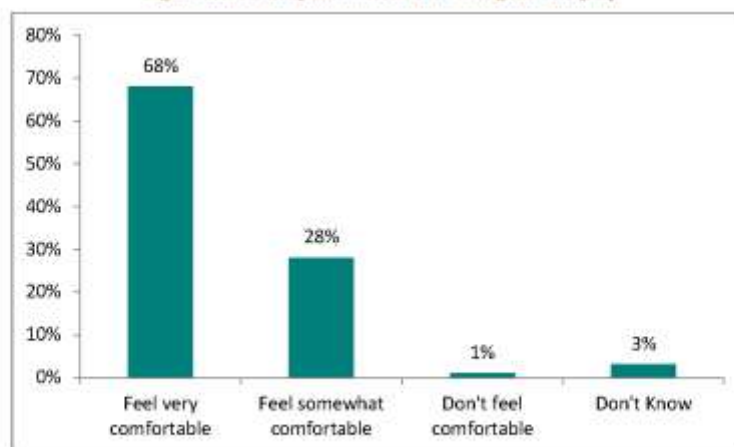
Note: n = 72

Source: Navigant analysis of survey response data



As a result of using their MySmart Displays, 53 percent of participants said they feel like they have more control over their energy use after participating in the program. Approximately one third of participants (33 percent) said they have about the same amount of control over their energy use, and only 13 percent reported that they feel like they have less control. Participants also reported a high level of comfort with using their displays. Nearly 70 percent of participants reported feeling very comfortable using their display, and more than 90 percent reported that they feel at least somewhat comfortable with their displays. This suggests that KCP&L has been successful in explaining to participants how to use their displays, although there is still opportunity for follow-up messaging, to help those 30 percent of participants move from somewhat comfortable to very comfortable with their displays. Figure 33 shows these results.

Figure 33. Participant Comfort in Using the Display



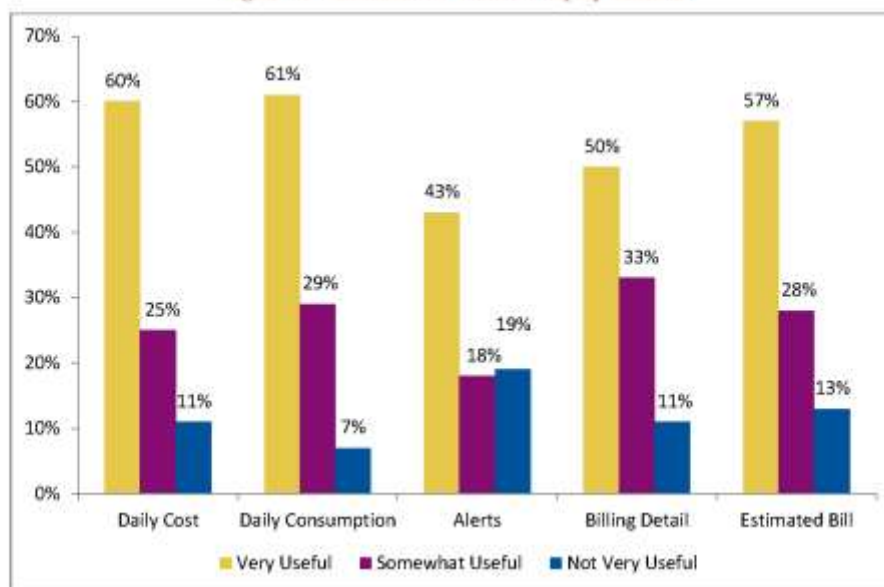
Note: n = 72

Source: Navigant analysis of survey response data



Participants were asked to rate the usefulness of the various features of the MySmart Display. These features included: daily cost and consumption, alerts, billing detail, and bill estimates. Overall, participants reported that most features were at least somewhat useful, with many features considered very useful. Figure 34 shows these results. Display alerts were ranked the lowest in usefulness, with almost 20 percent of respondents reporting that these are not very useful. Note that though the display can be used for multiple types of alerts, KCP&L had not run any demand response events at the time of this survey. Additionally, nearly 20 percent of respondents did not know enough about the alerts to give a ranking of their usefulness, which suggests that this feature could be examined for improvement.

Figure 34. Usefulness of Various Display Features



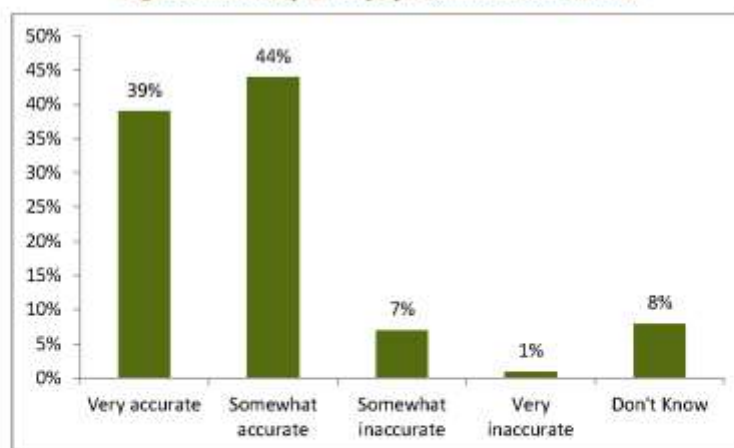
Note: n = 72. The remainder of responses are "don't know."

Source: Navigant analysis of survey response data



As shown in Figure 34, 85 percent of respondents reported that the estimated bill amount was a somewhat or very useful feature of the MySmart Display. When asked about the accuracy of the estimated bill (how closely the estimate compared with the actual bill), almost 40 percent of participants reported that the bill estimate is very accurate. The bill estimate appeared to be successful for most participants, with only 1 percent reporting that it was very inaccurate. These results are shown in Figure 35.

Figure 35. Accuracy of Display's Estimated Bill Amount



Note: n = 72

Source: Navigant analysis of survey response data



Participants expressed that when they first signed up to receive the display, the majority (83 percent) did not have any concerns about participating in the program. The very few participants who had any initial concerns reported that they worried their energy bill might increase, that the display would take too much time to learn or operate, or that there would be no benefit to participating in the program. Table 6 shows these results. The high percentage of participants without any initial concerns suggests that there are few barriers to acceptance of the program.

Table 6. Initial Program Concerns

	Number	Percent
I don't/didn't have any concerns	60	83%
It will/would requires too much time to operate	2	3%
My utility bill will/would go up	2	3%
I will/would not realize any benefits from participating	2	3%
Other, specify	6	8%
Total	72	

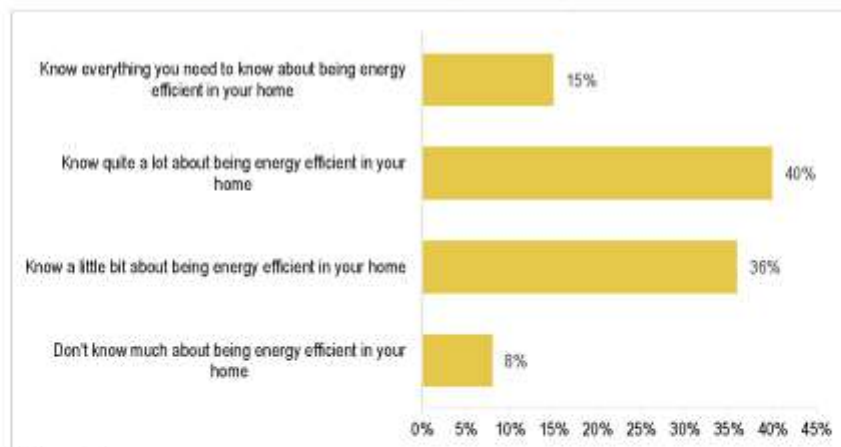
Source: Navigant analysis of survey response data



3.3 Energy Use in the Home

Most participants report at least some familiarity with energy efficiency in their homes. More than 50 percent of respondents said that they know quite a lot, if not everything, about being energy efficient in their home. Figure 36 shows these results. This suggests that understanding the importance of energy efficiency may be a key driver of program participation.

Figure 36. Knowledge of Energy Efficiency in the Home



Note: n = 72

Source: Navigant analysis of survey response data



Program participants were asked if they took any additional energy-saving actions after they started using the MySmart Display. The vast majority of participants (89 percent) reported taking some additional action. Most participants (53 percent) reported that they turned off their lights to save energy, followed by unplugging chargers for phones and other devices (19 percent). These results are shown in Table 7.

Table 7. Additional Energy-Saving Actions

	Number	Percent
Turn lights off	38	53%
Unplug chargers for phones and other devices	14	19%
Had my home weatherized	10	14%
Turn TVs off	10	14%
Installed CFL bulbs	8	11%
Turn air conditioning down	7	10%
Turn computer off	4	6%
Turn air conditioning off	4	6%
Don't run electric dryer	4	6%
Installed new windows	3	4%
Turn air conditioning down when I leave home	3	4%
Installed programmable thermostat	2	3%
Upgraded to energy-efficient windows	2	3%
Other	4	6%
None	8	11%
Don't know	1	1%
Total	72	

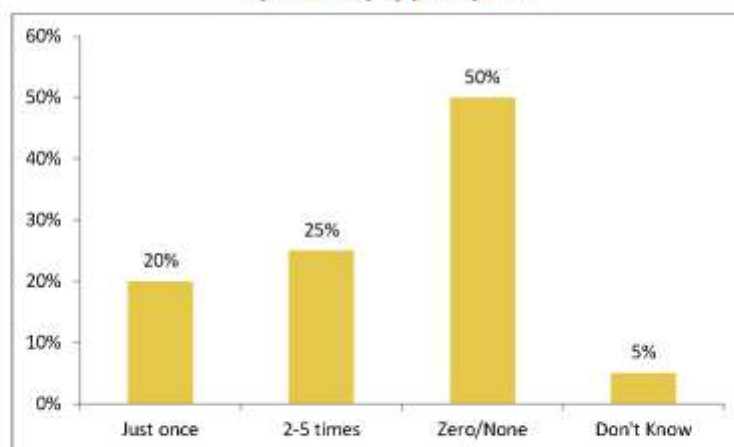
Note: Other responses include: using fireplace for heat, encouraging household members to be energy conscious, used fewer bulbs in light fixtures, and shut down or used sleep electronics when not in use.

Source: Navigant analysis of survey response data



None of the participants surveyed reported that they were on KCP&L's TOU rate plan at the time of the survey. Nearly 30 percent of respondents reported that they had access to the online MySmart portal. Of those respondents, fewer than half reported that they logged into the portal at least one time in the month before the survey. Figure 37 shows these results.

**Figure 37. How many times did you look at the MySmart Portal in the last month?
(MySmart Display participants)**



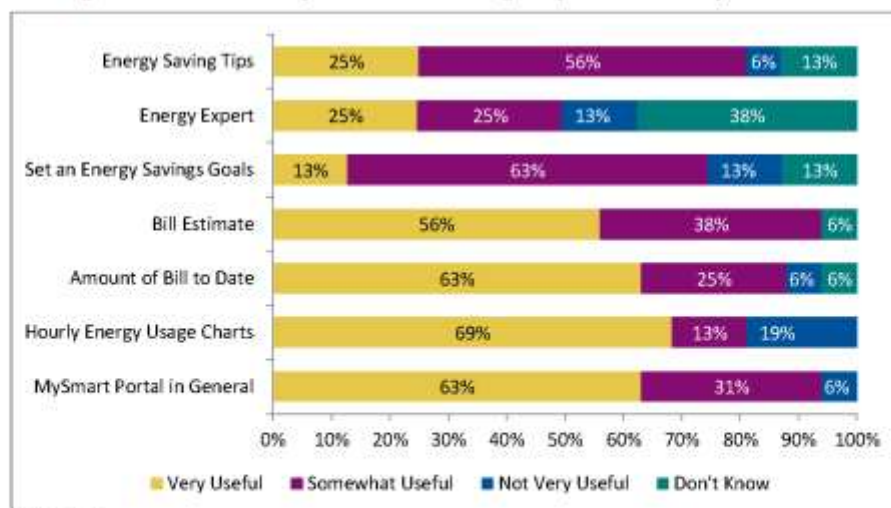
Note: n = 20

Source: Navigant analysis of survey response data



Of the 20 respondents who reported having access to the MySmart Portal, four reported having used it to pay or manage their bill, and 12 reported using it to look at their energy usage. As with the various features of the display, participants were again asked to rate the usefulness of each feature of the MySmart Portal. While reporting a high usefulness rating for the portal in general, one feature in particular seemed more difficult to understand: the energy expert feature. Thirty-eight percent of respondents were unfamiliar with this feature. Figure 38 shows the usefulness rating of each of the six features, and the MySmart Portal overall.

Figure 38. How useful do you find the following components of the MySmart Portal?



Note: n = 16

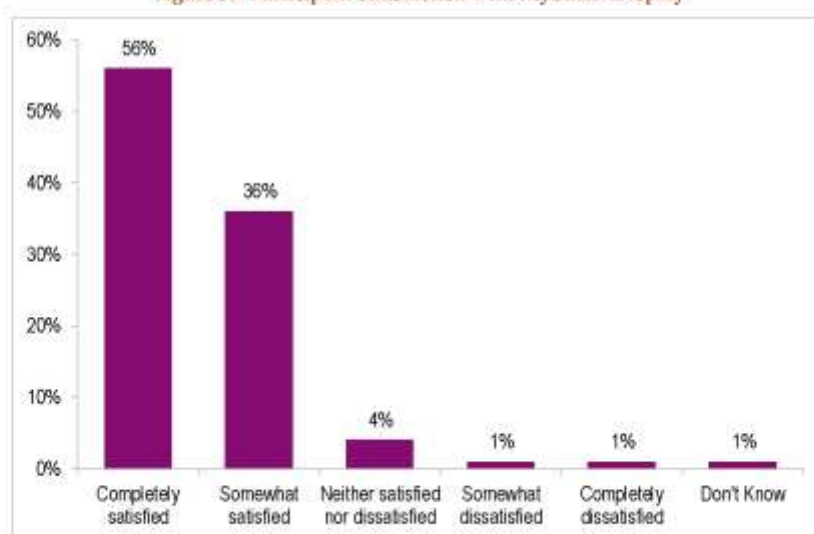
Source: Navigant analysis of survey response data



3.4 Satisfaction

The participants in the program were very satisfied with their MySmart Displays. More than 50 percent of participants reported that they were completely satisfied with the displays, with an additional 36 percent reporting that they were somewhat satisfied. Only 2 percent of respondents reported that they were dissatisfied at all. The distribution of participant satisfaction is shown in Figure 39.

Figure 39. Participant Satisfaction with MySmart Display



Note: n = 72

Source: Navigant analysis of survey response data



Of those MySmart Display participants who also used the MySmart Portal, satisfaction ratings were similarly high. More than 50 percent of these respondents reported being completely satisfied with the MySmart Portal, and almost 40 percent were somewhat satisfied. None of the respondents who use the portal reported any dissatisfaction with the portal. Table 8 shows the satisfaction ratings of the MySmart Portal.

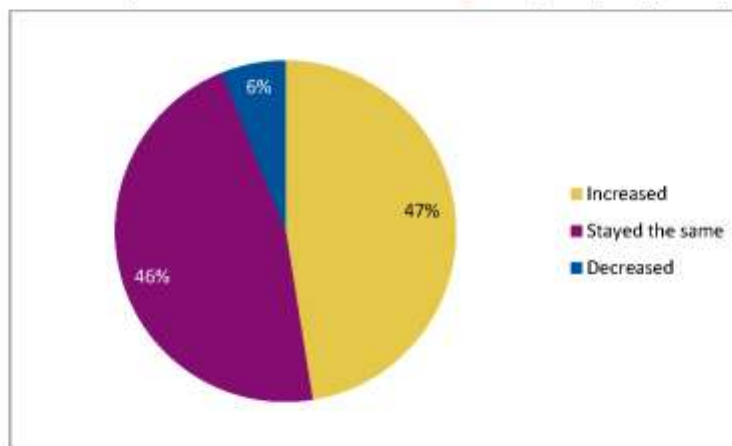
Table 8. Satisfaction with MySmart Portal

	Number	Percent
Neither satisfied nor dissatisfied	1	6%
Somewhat satisfied	6	38%
Completely satisfied	9	56%
Total	16	

Source: Navigant analysis of survey response data

As a result of participating in the program, participant satisfaction with KCP&L primarily increased. Forty-seven percent of participants reported that they are more satisfied with KCP&L after using the MySmart Display, while 46 percent reported that they are as satisfied with KCP&L as they were before using the display. Figure 40 shows these results.

Figure 40. How did your satisfaction with KCP&L change after participating in the program?



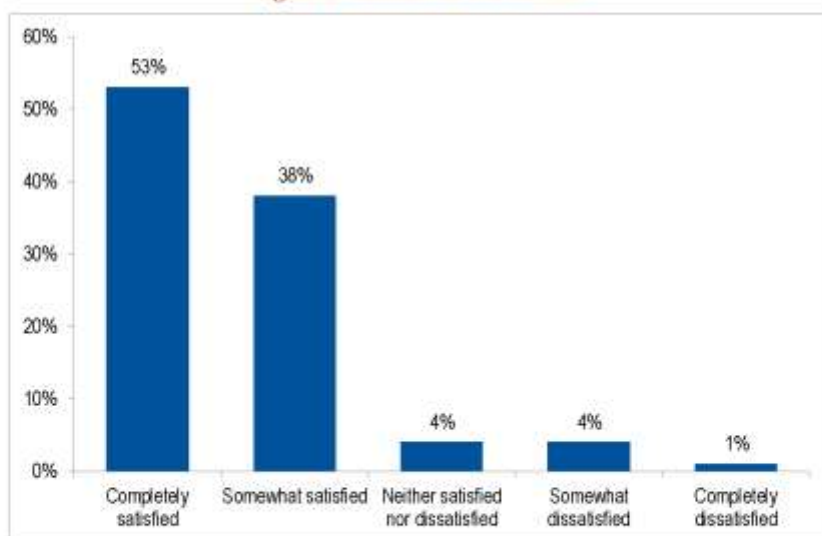
Note: n = 72

Source: Navigant analysis of survey response data



Based on their experience with the program at the time of the survey in 2012, the MySmart Display participants were asked to rate their satisfaction with KCP&L overall. As shown in Figure 41, more than 90 percent of participants reported being at least somewhat satisfied with the utility, and more than 50 percent reported being completely satisfied.

Figure 41. Satisfaction with KCP&L



Note: n = 72

Source: Navigant analysis of survey response data



3.5 Demographics

Table 9 provides key MySmart Display survey respondent demographics for the 72 participants who completed the survey. Where possible, the survey respondent demographics are compared to those of the SGDP territory and the GIZ. The surveyed population are generally older than the average population in the SGDP territory and the GIZ. Nearly 80 percent of the survey population are above 40 years old, while only 37-38 percent of the actual population is in that age bracket.

Table 9. Survey Participant Demographics

	Survey Participant		SGDP	GIZ
	Number	Percent	Percent	Percent
Gender				
Male	36	50%	-	-
Female	36	50%	-	-
Age				
< 30 Years Old	8	11%	37%	43%*
30-39	6	8%	25%	20%
40-64	36	50%	24%	22%
65 or Older	21	29%	14%	15%
Refused	1	1%		
Highest Level of Education				
Elementary (Grades 1-8)	1	1%	-	-
Some High School (Grades 9-12)	5	7%	-	-
High School Graduate	19	26%	24%	34%
Some College/Trade/Vocational School	16	22%	-	-
College Graduate	18	25%	-	-
Postgraduate	12	17%	-	-

Note: n = 72

Source: Navigant analysis of survey response data



Table 10 provides key household demographics for the surveyed participants. Survey respondents are primarily homeowners, which does not reflect the actual population in the GIZ. While only 21 percent of survey respondents are renters, this demographic makes up more than 50 percent of the GIZ.

Table 10. Survey Participant Household Information

	Survey Participant		SGDP	GIZ
	Number	Percent	Percent	Number
Homeownership				
Own	55	76%	-	46%
Rent	15	21%	-	54%
Household Type				
Single-family home	61	85%	-	-
Single-family attached (townhouse)	1	1%	-	-
Multi-family home (apartment/duplex/condo)	9	13%	-	-
Refused	1	1%	-	-

Note: n = 72

Source: Navigant analysis of survey response data



4 MySmart Thermostat and Home Area Network

The MySmart Thermostat (Tstat) allows customers to pre-set temperatures for nighttime or when they are away from home, and to set it to automatically return to their preferred temperature before they wake up or return home. The MySmart Thermostat can also be integrated with the HAN, a collection of in-home energy devices networked together.

This section presents the findings from a phone survey of Tstat and HAN participants, which was conducted in fall 2014. For this survey, the evaluation team contacted 94 customers who had received at least one of several demand response event alerts through the MySmart Thermostat. Navigant offered each participant a \$25 Visa gift card in exchange for a completed survey. In total, 34 respondents completed the survey. All of these respondents had a MySmart Thermostat installed in their home, and seven also had HAN devices.

The evaluation team found that, overall, the Tstat/HAN survey respondents were very familiar with the SGDP, though not as familiar as the respondents from the TOU survey. Tstat/HAN survey respondents reported that they learned about the opportunity to participate in the program primarily by receiving information through the mail (65%, n = 34), and said that their primary motivator to participate was to save money on their energy bills. Overall, Tstat/HAN survey respondents expressed satisfaction with the MySmart Thermostat and felt that the device was easy to use and saved them money on their monthly bill, though not everyone shared these sentiments. Half of the survey respondents reported that their satisfaction with KCP&L increased since they first signed up for the Tstat/HAN program.

When asked if they could recall any of the 8.5 demand response events, only 10 of the 32 respondents who participated in an event could recall one taking place.⁴ Of those ten, the most common actions taken during a demand response event include postponing running the dishwasher, turning off additional lights, and postponing running the clothes washer. For the seven respondents who at one point opted out of participating in an event, most reported not knowing why or how they opted out.

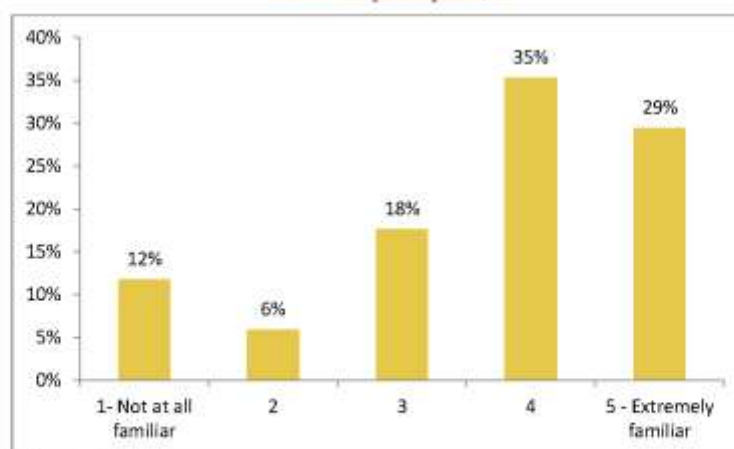
⁴ The "half" demand event was conducted only with HAN participants.



4.1 Program Experience

The majority of Tstat/HAN survey respondents reported that they were familiar with the overall SGDP, with 65 percent rating their familiarity with the pilot program at a four or higher, on a scale from one to five, with five being “extremely familiar” (n = 34). While overall familiarity with the SGDP among these survey respondents was relatively high, 18 percent of respondents rated their familiarity at a two or below, indicating minor or no familiarity with the program. Figure 42 provides a summary of all responses to this question.

Figure 42. How would you rate your familiarity with KCP&L’s SmartGrid program (MySmart Tstat/HAN participants)?



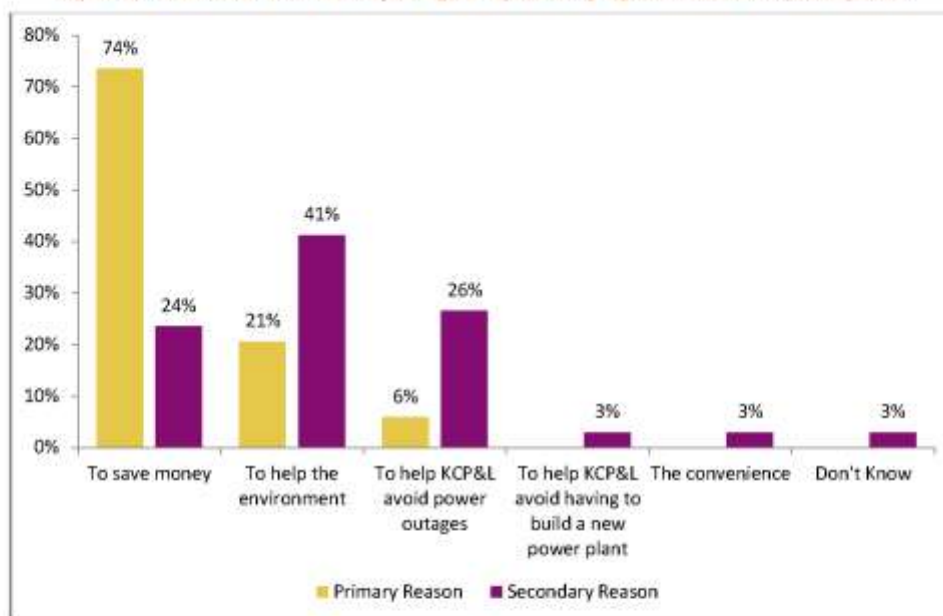
Note: n = 34

Source: Navigant analysis of survey response data



The Tstat/HAN survey respondents ranked saving money as their main motivation to sign up for the program; a desire to assist KCP&L avoid power outages or avoid having to build new power generation were minor motivation. The evaluation team asked respondents to indicate their primary reason for signing up for the program out of a list of four options: to save money, to help the environment, to help KCP&L avoid power outages, or to help KCP&L avoid having to build a new power plant. Seventy-four percent of respondents reported that saving money was their primary reason for signing up for the program; 21 percent said their primary reason was to help save the environment (n = 34). When asked to share their secondary reason for signing up for the program, 41 percent mentioned helping to save the environment, while 26 percent mentioned helping KCP&L avoid power outages (n = 34). Only one respondent said that helping KCP&L avoid building new power plants was a motivation. One respondent indicated that they signed up because of the convenience of the program. Figure 43 shows a summary of all responses for both primary and secondary reasons for signing up for the program.

Figure 43. What is the main reason you signed up for the program (Tstat/HAN participants)?



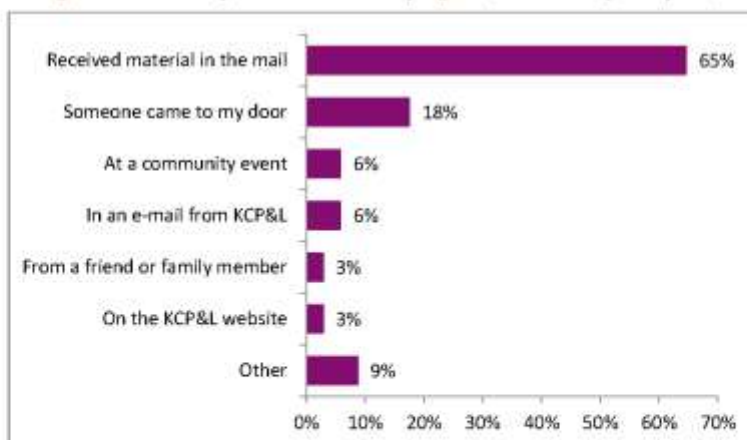
Note: n = 34

Source: Navigant analysis of survey response data



Respondents reported that receiving material in the mail was the primary method of learning about the opportunity to participate in the Tstat/HAN component of the SGDP program. Through interviews with key program staff, the evaluation team learned that going door to door was a primary strategy in recruiting customers to the program; however, only 18 percent of Tstat/HAN survey respondents reported learning about the program by that method. The majority (65%, n = 34) stated that they learned about the opportunity through material received in the mail. Figure 44 shows the responses to this question.

Figure 44. How did you learn about the program (Tstat/HAN participants)?



Note: n = 34 and multiple responses accepted; The respondent who replied "other" provided no elaboration on how they learned about the program.

Source: Navigant analysis of survey response data

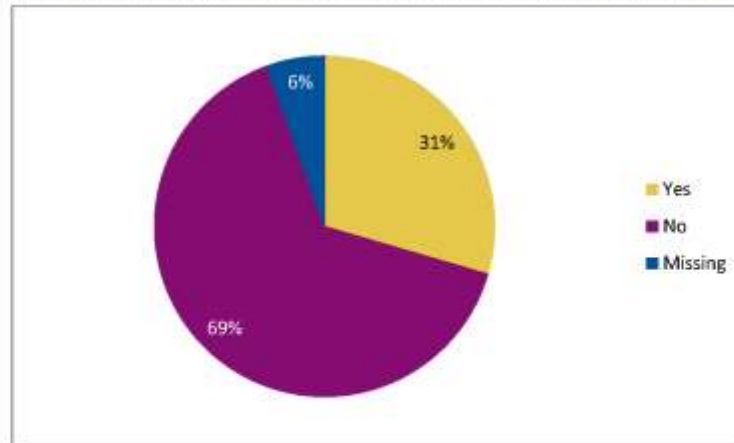
As with the other SGDP components, Tstat/HAN participants also had access to the MySmart Portal. The evaluation team asked Tstat/HAN survey respondents whether they had ever visited the portal and the majority, 59 percent, indicated that they had never visited. This indicates that most participants did not connect the Tstat/HAN components to the broader program and therefore were unable to take advantage of the SGDP system as a whole.



4.2 Events

KCP&L called a total of 8.5 demand response events during the SGDP.³ Each of these events was communicated to participants via their MySmart Thermostats. According to the program tracking database, as provided by KCP&L, all but two Tstat/HAN survey respondents participated in at least one event. Despite this, only 31 percent of respondents could recall one or more events ($n = 32$; see Figure 45). This indicates that the majority of program participants were not engaging with the program as intended, meaning they were not aware of or responding to the event alerts they received via the Tstat.

Figure 45. At certain times throughout this past summer and early fall, you received demand response event alerts through your MySmart Thermostat. Do you recall any of these events?



Note: $n = 32$

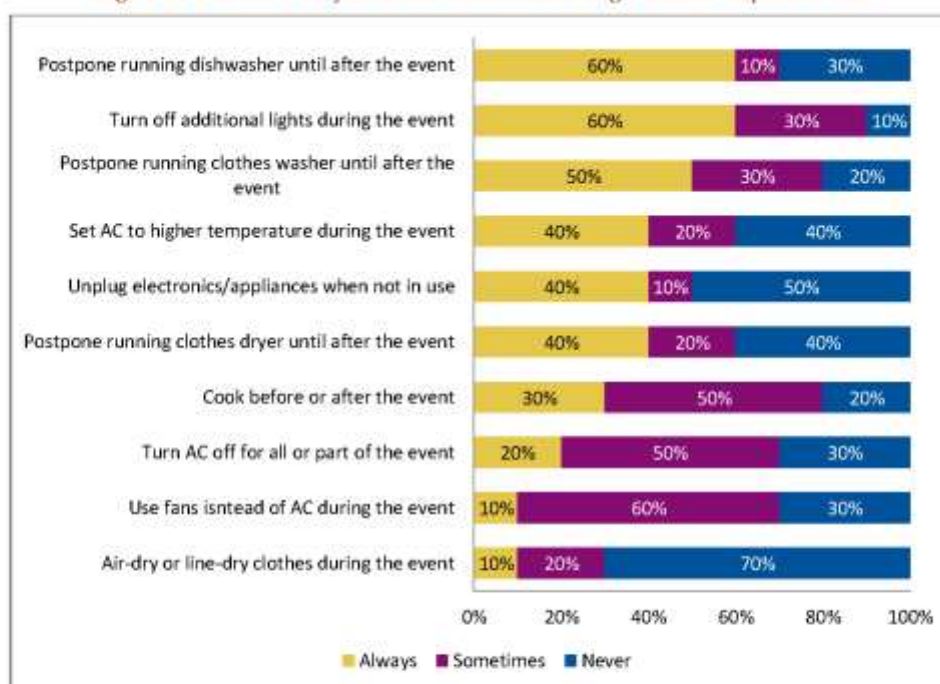
Source: Navigant analysis of survey response data

³ The "half" demand event was conducted only with HAN participants.



Of the ten respondents who could recall a demand response event, the most commonly reported energy-saving actions taken during an event include: postponing running the dishwasher until after the event, turning off additional lights during the event, and postponing running the clothes washer until after the event. The least commonly reported actions included: air-drying or line-drying clothing, using fans instead of air conditioning, and turning of air conditioning for all or part of the event. Figure 46 provides a summary of all responses given, with respondents reporting whether they always, sometimes, or never engaged in a particular action during an event. The evaluation team also asked survey respondents if they took any other actions beyond those already mentioned, and six indicated that they did not do anything else during demand response events. Three respondents indicated that they made general adjustments to their air conditioning systems, while one respondent indicated that they attempted to unplug their computer any time an event was called.

Figure 46. How often did you take certain actions during a demand response event?



Note: N = 10

Source: Navigant analysis of survey response data.

Of the seven respondents who at one point opted out of a demand response event (according to the program tracking database), the majority could not recall why they opted out or reported that there was no reason for it (57%, n = 7). Two respondents specifically referenced their hectic job schedule as a reason for opting out, though they did not elaborate on how this directly related to their choice to opt out of the

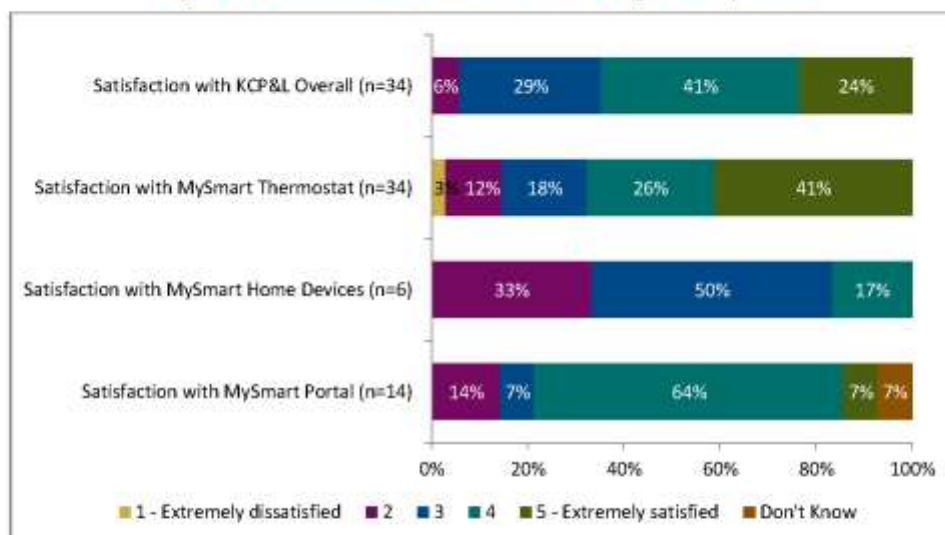


event. One participant reported that, due to allergies, there are certain times when conditioned air is needed and therefore they had to opt out during the event. Four of these seven respondents could not recall how they opted out of the event, while two indicated that they did so using the MySmart Thermostat and one reported that they called KCP&L directly.

4.3 Satisfaction

Overall, respondents reported high levels of satisfaction with KCP&L as a company and with the Tstat/HAN components of the SGDP. Sixty-five percent of respondents rated their satisfaction with KCP&L at a four or higher and 67 percent of respondents rated their satisfaction with the MySmart Thermostat at a four or higher. Only one respondent indicated that they were “extremely dissatisfied” with the MySmart Thermostat. The evaluation team also asked respondents to rate their satisfaction with the MySmart HAN devices and with the MySmart Portal, though Navigant asked only respondents who indicated familiarity with these program features to provide a rating. Figure 47 shows that these respondents were also satisfied with these program features.

Figure 47. Satisfaction with KCP&L and SGDP Program Components



Source: Navigant analysis of survey response data

The evaluation team asked respondents to provide the reasons behind the satisfaction rating they gave for each category. For those who expressed satisfaction with KCP&L, interpreted as a rating of a 4 or higher, ten respondents indicated that they feel that KCP&L is a good company overall and they are generally satisfied. As stated by one respondent who rated their satisfaction at a 4, “The programs they offer are good for the environment, and I’m happy with their investment in the community.” Three of these respondents mentioned that KCP&L has good customer service, while another three indicated that they are pleased with KCP&L’s efforts to save them money.



Respondents provided many different reasons in regards to dissatisfaction with KCP&L overall, regardless of the rating they provided. Six respondents indicated that they feel as though their bill is too high, with another respondent indicating a desire for a more competitive market so that there would be options for energy services. Two respondents indicated that they would like to see more training offered in regards to using the MySmart Thermostat, and one respondent felt that the SGDP could have been advertised more in general. Other individual comments included a report of poor customer service, a distrust of the accuracy of the neighbor-to-neighbor comparison conducted by KCP&L, a dislike that KCP&L controls the MySmart Thermostat, a desire for more conservation-oriented programs, and a customer who recently experienced a number of KCP&L trucks in their backyard without explanation.

Regarding the MySmart Thermostat, the majority of respondents (71%, n = 34) had positive comments to share in regard to their satisfaction with the device. Nine respondents mentioned that they liked having the option of programming the thermostat, and that overall the device was easy to understand and use. Eight respondents mentioned the money they saved on their monthly bill, while another seven respondents simply made general statements of satisfaction. As summarized by one respondent who rated the device at a five, "It was so easy to use, and the installation was really fast and efficient." Although many respondents found the MySmart Thermostat easy to use, five respondents also stated that they did not think the device was user friendly, while three respondents expressed dissatisfaction with their inability to control the thermostat. Two individual complaints include one respondent who felt that they did not see any money savings from the MySmart Thermostat, and one respondent who did not feel that they had been properly trained to use it.

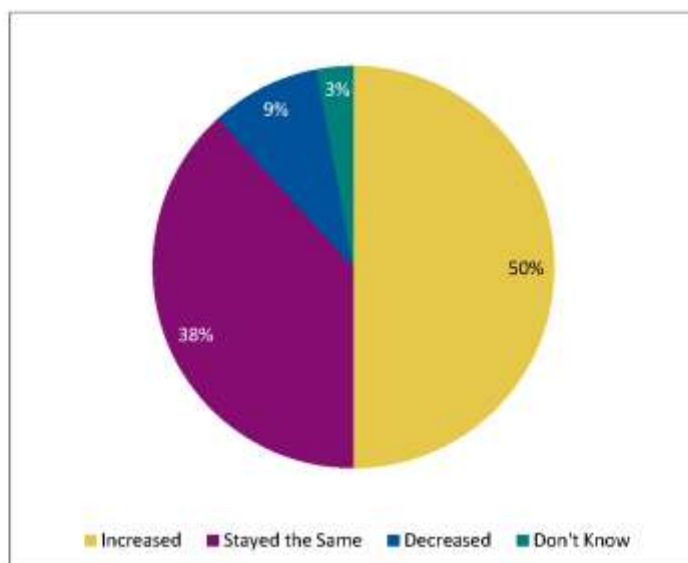
For the MySmart HAN devices, only six respondents (of seven) could recall the installation of these devices in their home, even though the program database noted them as having HAN devices. Two of these six respondents indicated that they never used the devices, and one respondent indicated that it was a good tool, but they would have liked to see more information on how to use the network. One respondent who rated their satisfaction at a two expressed frustration that they could not manually control the devices, and that they had to go through the portal to operate them. Another respondent mentioned that they experienced difficulty getting the devices to operate properly and they had to call KCP&L several times to troubleshoot the devices. The final respondent cited frequent system outages as their reason for rating their satisfaction with the HAN component at a three.

Of the 14 survey respondents who reported using the MySmart Portal, 8 shared a positive comment about their experience with the website. In general, these eight respondents felt that the portal was informative and easy to use. Two of the eight specifically mentioned the benefit of checking their household temperature online, and enjoying the graphics on the portal, respectively. Two respondents expressed dissatisfaction with the "system outages", with one respondent claiming that the MySmart Portal worked only 20 percent of the time. Another respondent indicated that the site is slow to load, and a different respondent indicated that they often forgot it was available.



To conclude the participant survey, the evaluation team asked respondents whether their satisfaction with KCP&L had increased, decreased, or stayed the same since they first began participating in the program. As shown in Figure 48, 50 percent of respondents indicated that their satisfaction had increased, while 38 percent felt that their satisfaction with KCP&L had remained the same since they first signed up (n = 34). Only nine percent felt that their dissatisfaction decreased, indicating that, overall, the program has been successful in fostering and maintaining customer satisfaction with KCP&L as a utility.

Figure 48. Since you first signed up for the SDGP program, would you say your satisfaction with KCP&L has...



Note: n = 34

Source: Navigant analysis of survey response data



5 Time-of-Use Rates

KCP&L developed TOU residential billing rates as an option for residents in the SGDP territory. These rates can be used by participants in any of the technology options mentioned earlier. The program designates "off-peak" hours (when rates are discounted from standard) and "peak" hours (when rates are above standard). The TOU rates were designed to encourage customers to think about when they use electricity rather than just how much electricity they use, ultimately shifting electricity usage (grid load) from peak to off-peak periods.

This section presents the findings from the TOU Rate participant phone survey guide, conducted in fall 2014. The evaluation team contacted customers who had signed up for the special billing structure and asked them to complete a brief phone survey, implemented by Bellomy Research. To incentivize participation, Navigant offered each participant a \$20 Visa gift card in exchange for a completed survey. In total, 47 respondents completed the survey.

The evaluation team found that, overall, respondents are very familiar with the SGDP, particularly in comparison to respondents to the MySmart Portal participant survey. Respondents learned about the opportunity to participate primarily by receiving information through the mail (62%, n = 47). Overall, respondents expressed satisfaction with the program and felt that the TOU plan is easy to understand and that KCP&L provided them with sufficient information about the program. Sixty-eight percent of respondents strongly agree that their energy bill decreased after participating in the program, and 62 percent would recommend the program to family and friends (n = 47).

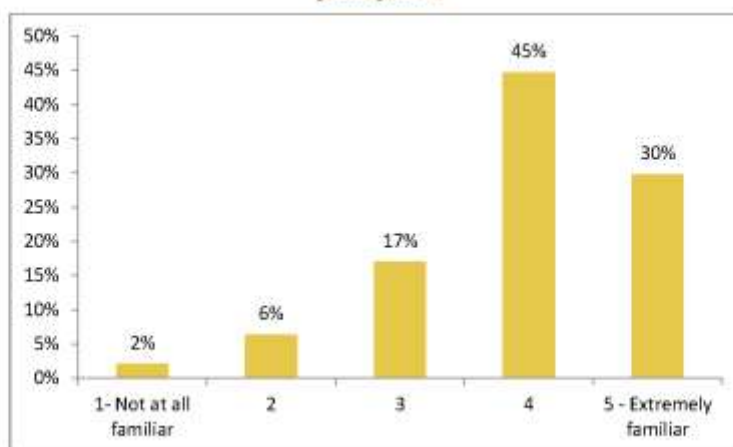
When asked if their household regularly alters electricity usage in response to higher peak rates, 49 percent of respondents strongly agree that they regularly alter electricity during peak periods. The most common actions taken include setting the air conditioner to a higher temperature, postponing running the dishwasher, and unplugging electronics and appliances when not in use. The actions that people are least likely to engage in include using fans instead of air conditioning during peak hours, turning off additional lights during peak hours, and turning air conditioning off for all or part of the peak hours (see Figure 53).



5.1 Program Experience

Overall, respondents are familiar with the SGDP and associate it with the TOU program. The evaluation team asked respondents to rate their familiarity with the SGDP on a scale from one to five, where five is extremely familiar. Nearly half (45%, n = 47) of respondents ranked their familiarity with the program at a four, while 30 percent indicated that they were extremely familiar (n = 47, ranking of 5). Only one respondent indicated that they were “not at all familiar” with the SGDP, as shown by Figure 49. Respondents are much more familiar with the SGDP than respondents from the MySmart Portal participant survey, where 25 percent indicated that they were “not at all familiar”. Association with the SGDP is much higher for the TOU program than with the web portal.

Figure 49. How would you rate your familiarity with KCP&L's SmartGrid program (TOU participants)?



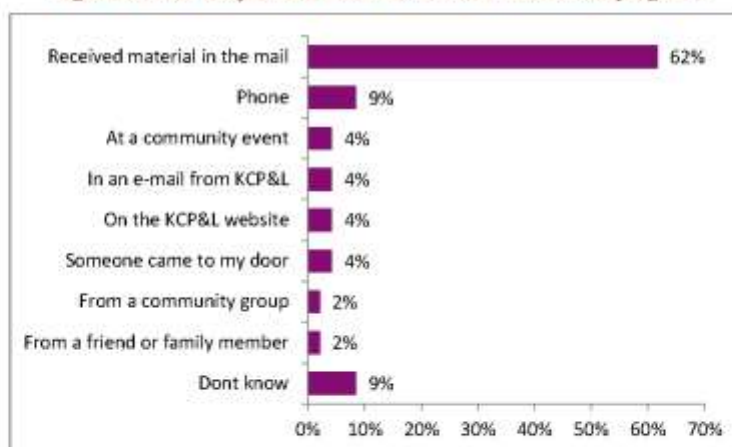
Note: n = 47

Source: Navigant analysis of survey response data



The majority of respondents learned about the opportunity to participate in the TOU program through material they received in the mail. Sixty-two percent of respondents indicated that they learned of the TOU program by receiving material in the mail, followed by 9 percent of respondents who learned of the opportunity over the phone (n = 47). Figure 50 provides a breakdown of other methods of learning about the program.

Figure 50. How did you hear about the KCP&L Time-of-Use program?



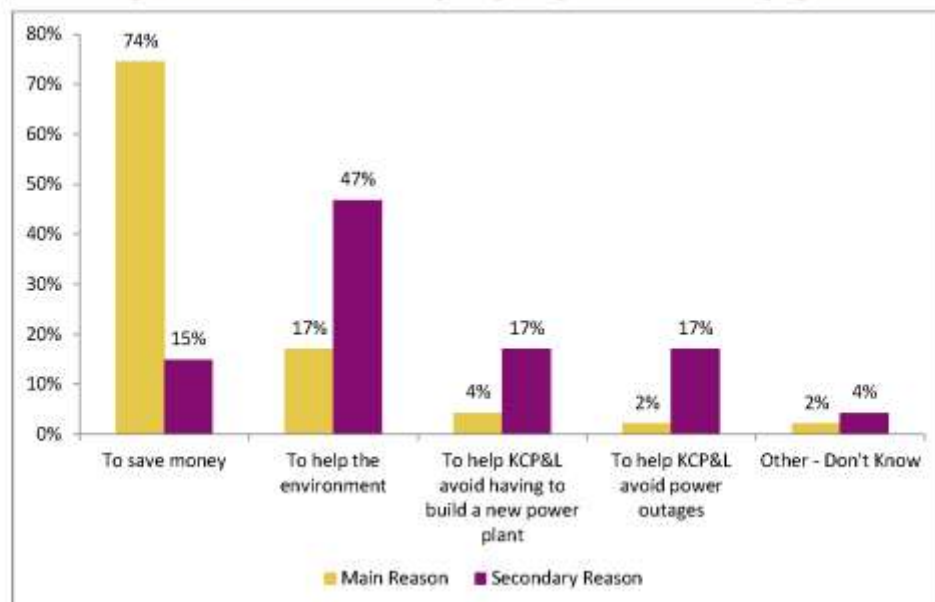
Note: n = 47

Source: Navigant analysis of survey response data



The main reason respondents had for signing up for the TOU program is to save money, followed secondarily by a desire to help the environment. The evaluation team asked respondents to choose the main reason they signed up for the program, out of a list of four options as shown in Figure 51. Seventy-four percent of respondents indicated that their primary reason for signing up was to save money, followed by 17 percent whose primary reason was to help save the environment (n = 47). Helping KCP&L to avoid building new power plants or to avoid power outages were less frequently chosen options. Figure 52 shows both the primary and secondary reasons respondents had for signing up for the program.

Figure 51. What is the main reason you signed up for the Time-of-Use program?



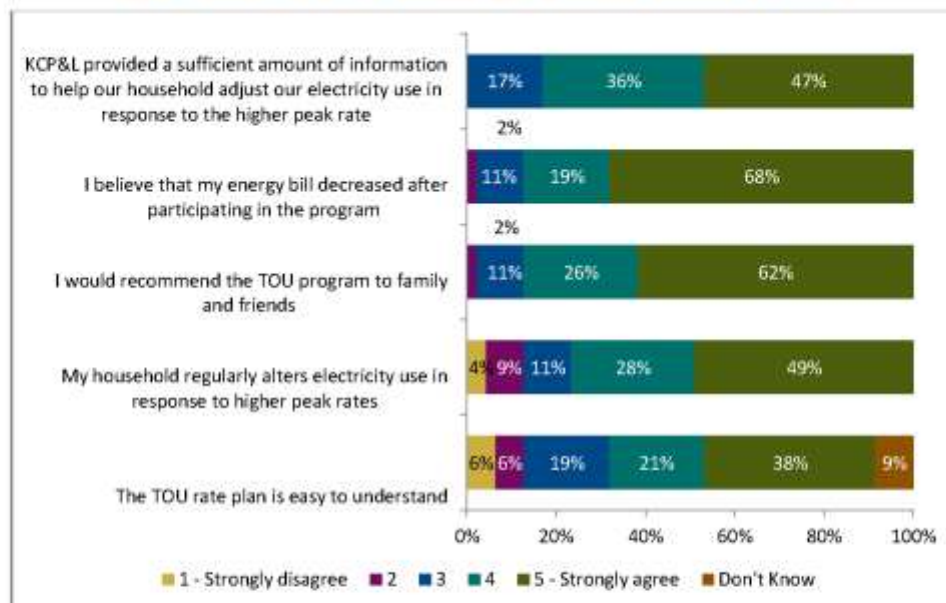
Note: n = 47

Source: Navigant analysis of survey response data



Overall, respondents agree that the TOU plan is easy to understand and that KCP&L provided sufficient information on the program. Navigant asked respondents to rate the degree to which they agreed with a series of statements, on a scale from one to five where five is “strongly agree”. Figure 52 provides a summary of responses for each statement. Eighty-seven percent of respondents rate their agreement at a four or higher for the statement “The TOU rate plan is easy to understand”, similarly followed by 83 percent of respondents who rate their agreement at a four or higher for the statement “KCP&L provided a sufficient amount of information to help our household adjust our electricity use in response to the higher peak rate.” Respondents tended to agree slightly less with the statement “I believe that my energy bill decreased after participating in the program”, with 12 percent ranking their agreement at a two or lower, and 9 percent who indicated that they did not know whether their energy bill decreased (n = 47). Sixty-eight percent of respondents indicated that they strongly agreed that they would recommend the TOU program to family and friends.

Figure 52. Please tell me how much you agree or disagree with each statement...



Note: n = 47

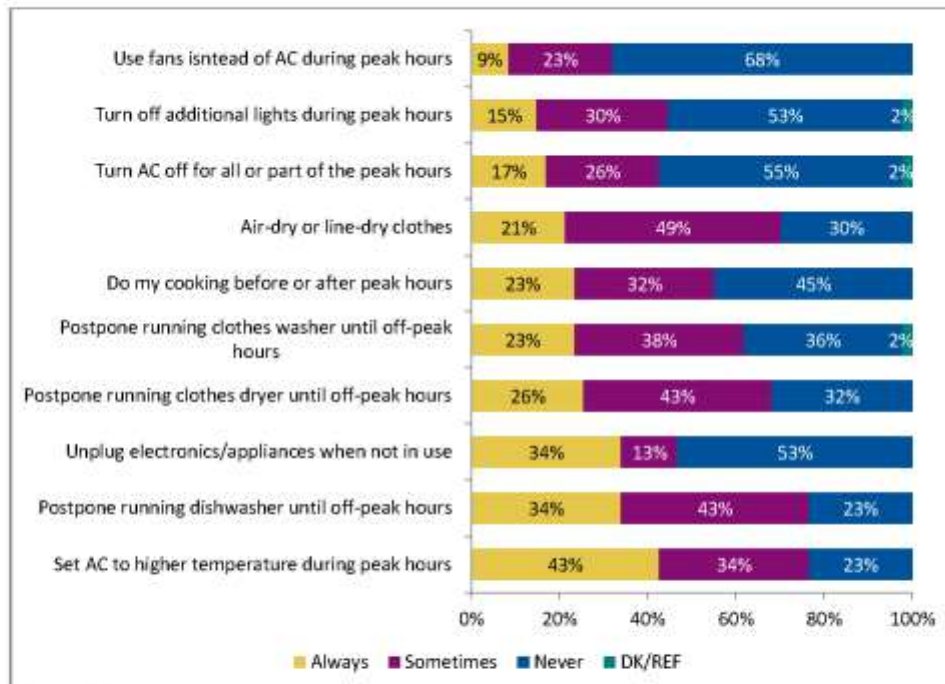
Source: Navigant analysis of survey response data



5.2 Energy Use in the Home

Survey respondents reported engaging in a number of energy-saving actions during peak rate periods, because of the peak rate. The evaluation team read respondents a randomized series of actions they might have taken during peak rate periods to save energy, and asked respondents to indicate whether they “always”, “sometimes”, or “never” engaged in these actions because of the peak rate. The most common action taken on a consistent basis by program respondents was using fans instead of the air conditioner during peak hours, followed by turning air conditioning off during peak hours, unplugging electronics when not in use, and turning off additional lights during peak hours (percentages shown in Figure 53). Forty-three percent of respondents indicated that they never set their air conditioner to a higher temperature during peak hours, and 34 percent indicated that they never postpone running the dishwasher until after peak hours (n = 47).

Figure 53. Please tell me whether you always, sometimes, or never do each of the following because of the peak rate.



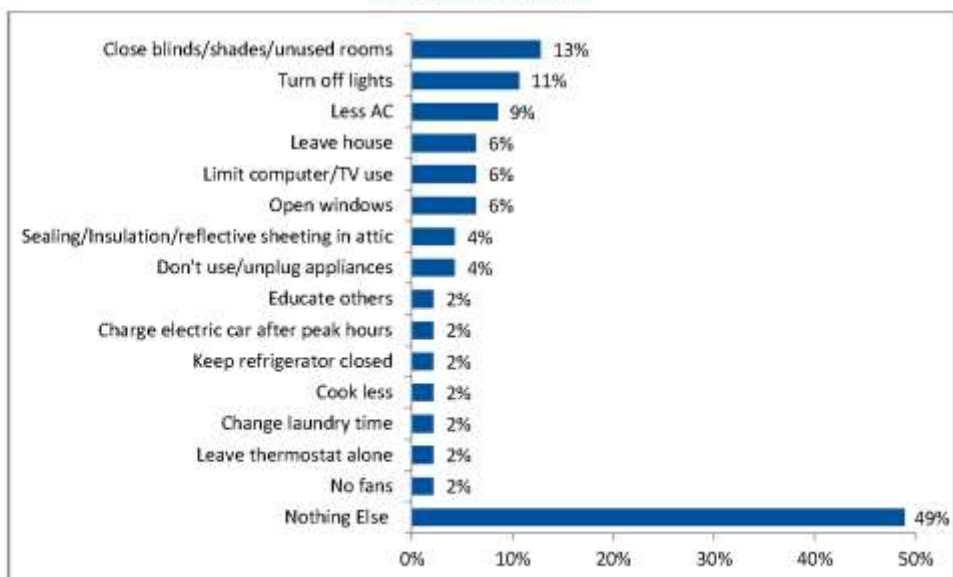
Note: n = 47

Source: Navigant analysis of survey response data



When asked if they engage in any additional energy savings activities during peak hours, half (49%, n = 47) stated that they did not engage in other actions beyond those included in the list. Six respondents indicated that they close blinds or shades, while five respondents indicated that they turn off all lights in their home during peak hours, though one respondent qualifies this by saying they only turn off all of the lights if they leave their home altogether. Figure 54 provides a summary of all responses given.

Figure 54. What other things do you do to adjust your energy use because of the peak rate that I did not mention in the list?



Note: n = 47

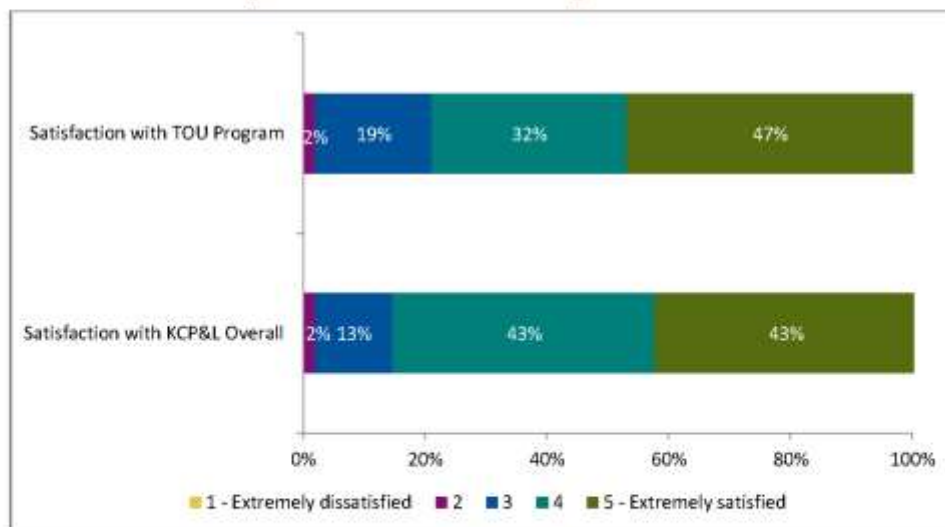
Source: Navigant analysis of survey response data



5.3 Satisfaction

Respondents are generally very satisfied with both the TOU program and KCP&L overall. Figure 55 shows that 47 percent of respondents rated their satisfaction with the TOU program as extremely satisfied and 43 percent rated their satisfaction with KCP&L overall as extremely satisfied.

Figure 55. Satisfaction with TOU Program and KCP&L



Note: n = 47

Source: Navigant analysis of survey response data

Of the respondents who rated their satisfaction at a three or lower, indicating some level dissatisfaction with KCP&L as a company overall, three mentioned that the cost of energy is too high. Others comments include that utilities governed by state commissions are not competitive enough, KCP&L provides poor customer service, and the customer wants more information on alternative forms of energy such as solar and wind generation. One respondent mentioned an experience where KCP&L hired subcontractors to trim trees near a power line, and that the job was not completed properly and that more foliage was removed than was necessary.

Among the 40 respondents who expressed satisfaction with KCP&L as a company overall (rating of four or higher), 47 percent mentioned KCP&L's good customer service as the reason behind their rating. Six of these respondents mentioned that KCP&L is a fair company in terms of the prices they charge, and seven respondents indicated that they view KCP&L as an environmentally conscious company, referencing the programs offered by KCP&L to save energy and assist home and businesses owners in reducing their consumption.

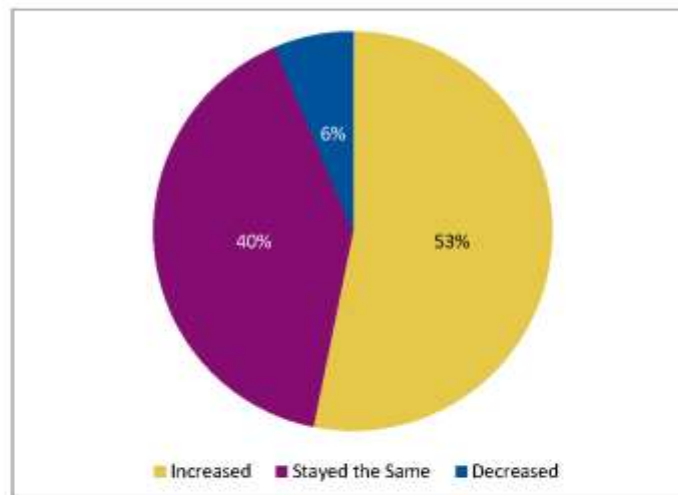


In general, eight respondents mentioned that the peak rate time period was unreasonable. When asked to expand on this, these respondents indicated that during summer months it is not possible to leave the air conditioner off so late in the evening. In addition, seven respondents suggested that it would be helpful to receive a reminder from KCP&L when the peak times begin, for example, through a text message. Several respondents commented that they often forgot that the peak times were starting and therefore they forgot to take steps to reduce energy use in their homes. One respondent who was dissatisfied with the TOU program indicated that KCP&L “did not understand their own program,” and that the system given to participants to control their window air conditioner did not work. This individual also mentioned that they had to spend “many hours” and make “many phone calls” to get assistance with implementing the program.

For those who expressed satisfaction with the TOU program when asked to explain their satisfaction rating, 47 percent (n = 47) mentioned that they were satisfied with the amount of money the program saved them, with six respondents additionally mentioning that they feel the program is good at raising individual awareness of energy use. Twenty-six percent of respondents commented that they felt the TOU program was beneficial overall.

Fifty-three percent of respondents indicated that their satisfaction with KCP&L has increased since first signing up for the program, as shown by Figure 56. Only three respondents indicated that their satisfaction decreased since participating in the TOU program.

Figure 56. Since you first signed up for the TOU program, would you say your satisfaction with KCP&L has...



Note: n = 47

Source: Navigant analysis of survey response data



The evaluation team asked survey respondents to share any thoughts for how to improve the TOU program. Fifty-three percent of respondents indicated that they could not think of any improvements (n = 47). Nine respondents suggested that the program should have provided more information on the program for participating customers, or engaged in more marketing efforts to draw in more customers who were not yet participating. Four respondents suggested that the program be implemented year round as a benefit to the customer and to KCP&L. Other suggestions included providing reminders about program hours during the peak times (n = 3), and providing a bill/pricing comparison against other non-participation households during peak times to provide more context around how participating in the program benefits the customer (n = 3). Individual respondents also suggested offering a better incentive (i.e., lowering the off-peak rate even further), changing peak hour times, and providing a programmable thermostat. The program does offer a programmable thermostat as part of the SGDP, suggesting that more marketing to explain the details of how the SGDP functions would help more customers take advantage of all opportunities through the program.



6 Lessons Learned: Technology and Program Operations

As part of the evaluation, Navigant interviewed five key program staff⁶ to discuss their experiences with the SGDP overall, to assess the reliability, performance, and customer experience with the technology used in the pilot programs. The evaluation team conducted these interviews in-house between October 31, 2014, and November 14, 2014.

6.1 Overall Program Goals

Project interviews were aligned with the overall SGDP goals—testing the prescribed smart grid technologies in a pilot setting with a small subset of KCP&L’s customers. While the technology component was at the forefront of the project’s goals, KCP&L staff generally agreed that customer experience and satisfaction remained a top priority throughout all stages of the project.

6.2 Technology-Specific Findings

Lessons learned are organized by the technology group below, with elaboration on key findings where appropriate.

6.2.1 MySmart Portal

In launching the MySmart Portal, KCP&L staff set the goal of obtaining 2,660 registrations.⁷ Ultimately, the portal fell short of this goal by approximately 300 enrollments; however, KCP&L staff expressed that the portal component was successful; as the approach was new to the company, projecting customer response was difficult.

Interviews revealed that the project stakeholders considered the graphic information provided by the portal as the most successful aspect of the SGDP. The Account Link website, which offered similar options for KCP&L customers to access information about their energy use, did not include the same interactive and graphics as were found on the MySmart Portal. Additionally, staff felt that the ability for customers to see their energy use in such small intervals was very successful in allowing customers to more fully understand how their behaviors correlate to their energy bill. KCP&L staff shared an anecdote about a specific instance where a Customer Service agent was able to use the portal to help a customer understand and lower her energy consumption by tracking her morning routine as it related to her interval-use data.

KCP&L staff view ongoing customer engagement with the portal as a less successful aspect of the program. As the web use analysis and customer surveys showed, customer interest and interaction with the MySmart Portal dropped over time, and staff expressed the opinion that KCP&L could have been more proactive in continuously marketing the portal to current users to encourage ongoing interaction. Program staff noted that some customers were initially dissatisfied with the MySmart Portal, as it was lacking a number of features they had become accustomed to through the AccountLink portal, such as

⁶ One person interviewed was an outside contractor working in-house with KCP&L staff.

⁷ The staff member who supplied this number acknowledges that it is an estimation.



being able to view data in a tabular format, downloading usage data, and having weather overlaid in the system. As customers became more accustomed to the MySmart Portal, KCP&L staff noted a reduction in complaints on this issue.

Customers failed to engage with the social aspects of the MySmart Portal in the way that KCP&L staff anticipated. As shown in the participant survey (see Figure 14), customers proved more interested in using the portal to view their billing and usage data and less interested in setting goals, earning points, or interacting with “energy experts.” KCP&L added most of these social features to the second version of the MySmart Portal, in an effort to provide customers with more ways to engage with their energy use and save money through the program; however, customers used these features infrequently. Additionally, KCP&L launched the second version of the MySmart Portal before it was fully functional, and staff indicated that if they could do it differently, they would have extended the launch to ensure a smooth and functional roll-out of the updated portal.

6.2.2 MySmart Display

In general, KCP&L staff viewed the MySmart Display as a useful piece of technology that they initially deployed in a manner that, unfortunately, detracted from its intended purpose. Staff distributed this technology to customers when they signed up to participate in the SGDP, and most often this occurred before a subcontractor could install their meter. As such, participants couldn’t use the device for a period of time after receiving it, leading to dissatisfaction and, in some cases, customers failing to use the technology altogether. KCP&L staff mentioned that this was the least successful component of the MySmart Display component, and if they were to implement the program again, they would wait to distribute the displays until the system was prepared and subcontractors were available to quickly commission the displays, install them properly, and do some simple customer education before leaving.

Interviewees felt that one of the most successful features of the display was the implementation of a customer estimated bill, giving customers a very good idea of whether they were on track to meet their monthly energy budget. This feature was implemented in the back office to include taxes and estimated fees so as to give an accurate picture of the upcoming bill. This estimation technique was more sophisticated than the simple estimation that has been used by other utilities in pilots, and two interviewees felt that this was a success and definitely appreciated by some program participants.

In addition to timing issues, the MySmart Display screens had some reliability problems. For example, a number of them blacked out and others had firmware problems, causing them to malfunction. This inconvenienced the customer and proved difficult for KCP&L and project stakeholders to trouble-shoot.

6.2.3 MySmart Thermostat/MySmart Home

From a technological point of view, KCP&L contractors viewed the AMI-controlled thermostats very favorably. The demand response messaging sent through the thermostat worked reliably and KCP&L had an increased ability to trouble-shoot issues as they arose. Having said that, as the participant surveys showed, participants reported low levels of awareness when asked whether they recalled receiving an event alert. KCP&L also felt that the thermostats worked as a main attractor for the overall SGDP, which is both positive and negative. While it was good that the device attracted people to the program, the desire for a free thermostat seemed to have attracted some customers that were less



interested in saving energy. Some of these customers were less engaged, and many were not willing to take the time to understand the various aspects of the system.

One technically focused interviewee felt that one of the least successful components of the MySmart Thermostat was the compatibility issues encountered upon installation of the device. This individual felt that, in some cases, the electrical subcontractors hired to install the thermostats were not sufficiently qualified or trained. Additionally, some customer HVAC systems did not meet requirements for device installation, leaving the customer with a choice between not participating or having an additional technology and wiring installed to make the thermostat compatible with the HVAC. Customer Service agents also noted that many times the MySmart Thermostat would work as intended with air conditioning, but as the seasons changed and heat came on the thermostats failed, as it was not compatible with the heating part of the HVAC system.

KCP&L staff and contractors noted that the MySmart Home devices often did not always function as intended, due primarily to networking difficulties and reliable communications with the customer's broadband service. Burns & McDonnell tested the technology in the laboratory, which had more ideal communications conditions, i.e., reliable broadband and wireless connectivity. Unfortunately, these conditions did not always represent the situation encountered in real homes. Staff felt that these connection issues may have also led to lower participation rates in demand response events. In addition, the broadband connectivity was harder to troubleshoot and diagnose problems than the AMI connectivity, making this configuration challenging. Some of this was due to customers unplugging their broadband routers and broadband service changes, which was out of the utility's control.

Staff noted that the provision process for these devices had to be well choreographed and it proved difficult at times to ensure that each step happened in order. Customer service indicated that contractors sent to customer homes to install load control devices often encountered problems setting up the devices, leading to extended time spent in customer homes beyond the quote originally given for an installation appointment. Overall, staff indicated that there was not enough training and practice with the process for installing the in-home technologies.

6.2.4 TOU

Despite a limited number of participants, staff viewed the TOU program as one of the most successful aspects of the SGDP due to high rates of customer satisfaction and the opinion that the rate structure is working in favor of customers.

Staff mentioned that one major issue that arose with the TOU program was in the omission of pricing data when installing smart meters at customer homes. To calculate estimated billing, the MySmart Display would pull usage time price from the smart meter, so KCP&L had to push this information to the meter daily during peak hours. This effectively remedied the problem, but required extra work.

Additionally, program staff indicated that, if possible, they would change the language used on the tariff filed for the TOU program. The language specifies a certain rate to be used during the summer months, and KCP&L hard-coded a set billing rate for outside of this tariff. With the progression of the pilot program, KCP&L staff estimates that this has left approximately 100 customers with a rate that is two



years old, and will remain so for the remainder of the year to avoid customer dissatisfaction. Staff indicated that they would have preferred language indicating that customers would revert to their normal rate outside of the summer months.

6.3 Customer Engagement

KCP&L staff reiterated throughout the interviews that they kept customer experience at the forefront throughout the SGDP. Customer Service staff noted that they used the so-called “white glove” treatment for customers throughout the project, setting up a dedicated, direct customer service line with specially trained staff. This service is considered by staff to be a valuable resource for customers who had questions about their bill or difficulty with any of the technological components of the SGDP.

Overall, KCP&L staff perceived participant customers to be generally satisfied with the program, which is in line with survey results. A common complaint received by staff came from customers dissatisfied with the MySmart Portal, who had been accustomed to the previous AccountLink version. Additionally, customers would often call in to report that their MySmart Display was not showing the correct billing rate for the time of day. Customer Service staff noted that, overall, complaints became less frequent as the SGDP matured.

In marketing the SGDP, KCP&L staff used a grass-roots approach, tailoring marketing messages to the targeted population. Email proved to be very effective in encouraging customers to sign up for the MySmart Portal, and while the survey results implied that direct mail was the best channel for marketing the program, staff considered door-to-door promotion of the SGDP as an effective way to sign people up for the program as a whole. Staff noted that the nature of a small target group, focused on a narrow segment of the service territory, posed limitations on the type of marketing that staff was able to engage in. It was not possible to use billboards or radio ads to promote the program as these would have reached customers outside of the designated territory.



7 Summary

In summary, Navigant presents the following key findings from this evaluation.

7.1 Overall

- Participant awareness of the overall SGDP varied by program component. For example, MySmart Portal participants did not seem to connect the portal with the SGDP, while MySmart Thermostat and TOU participants reported high levels of awareness of the SGDP.
- Participant motivations for signing up for their respective program components were consistently driven by a desire to understand and control their energy use, in many cases to save money. Less motivating was a desire to help the environment or assist KCP&L in managing its business risks, such as power outages or having to build new generation.
- Participants reported high levels of satisfaction with the SGDP program components, as well as high levels of satisfaction with KCP&L. When asked, most participants felt that the program improved or maintained their level of satisfaction with KCP&L as a utility.

7.2 MySmart Portal

- Overall, MySmart Portal participants did not seem to associate the online portal with the SGDP program as a whole.
- The primary reason that survey respondents used the web portal was to understand and control their energy use, as opposed to finding ways to save money.
- Only a few respondents had negative comments about the MySmart Portal, and most reported high levels of satisfaction both with the portal and with KCP&L as a company overall.
- KCP&L struggled to maintain customer engagement with the MySmart Portal over time, with 36 percent of respondents reporting that the frequency at which they visited the site had decreased since they first joined.
- MySmart Portal users tend to be under 30 years of age with a college degree. These users rent small, single-family homes or apartments and live alone or with one other person.

7.3 MySmart Display

- MySmart Display survey respondents felt that the display was an effective tool for participants to use to gain control of their energy use and save money on their utility bill.
- The primary reasons that survey respondents stopped using their display were because the device broke, never worked in the first place, or was too complicated for them to use.
- Very few participants had concerns about the MySmart Display program when they first enrolled. Most were motivated to participate to have better control over their electric usage (65 percent) and save money on their utility bill (24 percent).



- The MySmart Display program has been effective at encouraging positive energy use behaviors.
- Participants believe the display is accurate, easy to use, and has the right mix of features.
- The vast majority (92 percent) of participants were satisfied with their display, leading to an increase in satisfaction with KCP&L for some.
- MySmart Display participants tend to be older and have higher levels of education than the average resident in the SGDP territory: The demographic makeup of the participants suggests that a program such as the MySmart Display program is likely to have applicability across the broader service territory.

7.4 MySmart Thermostat and Home Area Network

- Tstat/HAN participants were very familiar with the SGDP, though not as familiar as TOU participants. This is in contrast to MySmart Portal participants.
- As with TOU participants, Tstat/HAN participants learned about the opportunity to participate in the program primarily by information received through the mail.
- The main reason participants signed up for the Tstat/HAN component was to save money on their energy bills.
- Overall, participants expressed satisfaction with the MySmart Thermostat and felt that the device was easy to use and saved them money on their monthly bill, though this sentiment was not unanimous.
- Half of the survey respondents reported that their satisfaction with KCP&L increased since they first signed up for the Tstat/HAN program.
- Only 10 of the 32 survey respondents who participated in a demand response event (according to the program tracking database) could recall the event taking place.
- For the seven respondents who at one point opted out of participating in event (according to the program tracking database), most reported not knowing why or how they opted out.

7.5 Time-of-Use Rates

- TOU survey respondents were very familiar with the overall SGDP.
- The main way that respondents learned about the opportunity to participate in the TOU billing structure was by receiving information through the mail.
- Overall, respondents expressed satisfaction with the program and felt that the TOU plan was easy to understand and that KCP&L provided them with sufficient information about the program.
- The majority of respondents (68 percent) strongly agreed that their energy bill decreased after participating in the program.
- When asked if their household regularly altered electricity usage in response to higher peak rates, 49 percent of respondents strongly agreed that they regularly altered electricity use during peak periods.



Appendix A Web Analytics Memo

This section presents the web analytics memo referred to throughout this report, and the survey instruments used for this evaluation.

To: Gail Allen, Brian Field (KCP&L)

From: Erik Gilbert, Jenny Hampton, Amy Meyer (Navigant)

CC Phil Gooch (KCP&L)
Dan Violette (Navigant)

Date: August 4, 2014

Re: MySmart Portal Process Evaluation: Preliminary Findings

This memo outlines the results of Navigant's initial analysis of the MySmart Portal's Google Analytics and available program tracking data. In the final report, Navigant will present additional process evaluation findings based on analysis of data collected through the online participant survey and discussions with program staff.

Navigant presents this information via three sections: Section 1: Summary provides a high level description of conclusions drawn from the analysis. Section 2: Analysis Overview describes the methodology Navigant used to conduct this analysis and summarizes the overall portal statistics, and the Section 3: Detailed Analysis section presents the statistics at a more detailed level. The memo also includes an appendix with supporting information.

KCP&L may have some feedback and/or comments on this analysis. If this is the case, we can schedule a call to discuss, or receive your feedback via track changes comments on this document. We expect to address any comments in the final version of this material, which will be included in the final report.



A.1 Section 1: Summary

After reviewing Google Analytics available for the MySmart Portal, Navigant presents two overall conclusions:

1. In general, participating customers registered with and visited the MySmart Portal more frequently in the summer and winter months. These usage patterns are likely a result of customers looking for ways to save money on their energy bills during the cooling and heating seasons.
2. Registered users engaged more regularly with the second version of the site than with the first version of the site. This leads us to tentatively conclude that the second version of the portal is more engaging to users.

This memo presents details about these conclusions in the following sections.



A.2 Section 2: Analysis Overview

KCP&L released two versions of the MySmart Portal over the course of several years, the first version being active from October 2010 through October 2012 and the second version of the site being active from November 2012 to date.⁶ Figure A-1 provides a screenshot of the page that users typically see upon accessing the second, and current, version of the MySmart Portal.

Figure A-1. Screen Shot of Version Two MySmart Portal Dashboard



Source: portal version two

⁶ The first version of the site was available at <https://portal.smartgridkcp.com>. The second, and current, version of the site is available at <https://kcp.tendril-energize.com>.



Navigant reviewed Google Analytics and program tracking data from both versions of the MySmart Portal. The graphics in this report use color coding to indicate the difference between the two sites; green indicates data from the first version of the portal, and blue indicates data from the second version. Table A-1 summarizes the portal analytics metrics included in our analysis and their definitions. Table A-2 and Table A-3 summarize the MySmart Portal activity for each of these metrics.

Table A-1. Analytic Metrics Definitions

Metric	Definition
Page Views	The number of pages viewed, including repeated views of a single page.
User	Users that have had at least one session within the selected date range, including both new and returning users.
Session	The period a user is actively engaged with the site. For the purposes of this analysis, Navigant assumes that the length of individual sessions is determined by when a user's computer exits the site completely or when their session or computer goes inactive.
Average Time on Page	The average amount of time a visitor spent viewing a specified page or set of pages.
Average Pages/Session	The average number of pages viewed during a session, including repeated views of a single page.
Average Session Duration	Average time of a session.
Bounce Rate	The percentage of single-page visits (i.e., visits in which the person left the site from the entrance page without interacting with the page).

Sources: Google Analytics and program tracking data

Table A-2. Statistics Overview – Portal Version One

Date Range	October 2010 Through October 2012
Total Overall Page Views	50,148
Total Users	Data not available
Total Sessions	12,605
Average Time on Page	2:00 min
Average Pages/Session	3.98
Average Session Duration	6:05 min
Bounce Rate*	7%

*The bounce rate is not a good metric for comparison between web portal versions as it is calculated based on interaction with the entrance page. The entrance page for portal version one is the login page, while for portal version two it is the dashboard.

Sources: Navigant analysis of Google Analytics and program tracking data



Table A-3. Statistics Overview – Portal Version Two

Date Range	November 2012 Through April 2014
Total Page Views	21,571
Total Users	408
Total Sessions	5,981
Average Time on Page	1:29 min
Average Pages/Session	3.61
Average Session Duration	3:53 min
Bounce Rate*	40%

**The bounce rate is not a good metric for comparison between web portal versions as it is calculated based on interaction with the entrance page. The entrance page for portal version one is the login page, while for portal version two it is the dashboard.*

Sources: Navigant analysis of Google Analytics and program tracking data

A.3 Section 3: Detailed Analysis

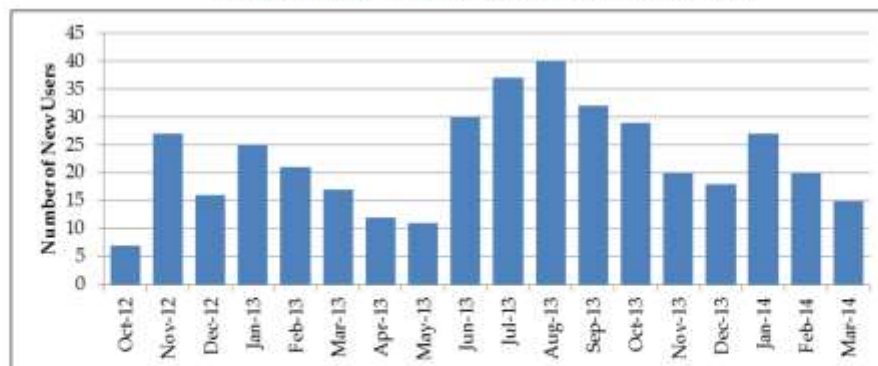
This section presents web analytic statistics at a detailed level. The section is organized into several subsections: the Registration Patterns subsection discusses the data related to user registration for the second version of the site; the Patterns by Page Type subsection reviews usage trends related to several different types of pages on each version of the portal; the Page views subsection presents the number of pages viewed, including repeated views of a single page; and the Sessions subsection discusses trends related to the time period users actively engaged with the site during each visit.



Registration Patterns

As shown in Figure A-2, new user registration on the second version of the site gradually increased in the summer of 2013 (June through August), and then declined until a slight spike in January 2014.⁹ These spikes are consistent with trends from the other metrics.¹⁰ It is likely that the user increases in the summer of 2013 and January of 2014 correlate with rising energy bills due to seasonal weather. It's possible that these increases in user registration correspond with KCP&L promotional efforts. However, while details about marketing tactics for 2012 were available, this information was not available for the other years. The spike seen in November 2012 correlates with the launch of the second version of the web portal.

Figure A-2. New User Registration – Portal Version Two



Source: Navigant analysis of program tracking data

⁹ Navigant only reviewed new user registration data for the second version of the portal, as data for the first version was not available.

¹⁰ Portal version two data shows this general trend for the pageviews, number of sessions, number of sessions involving once-per-month visitors, and average number of pages visited metrics. These metrics are discussed and shown in detail further on in the memo.



Patterns by Page Type

Navigant categorized each individual page on the two versions of the portal into one of several categories to better review user patterns on individual page types.¹¹ Categories included administrative pages, educational tools (interactive/information), and the login page. Figure A-1, seen earlier, in an example of a typical “tool” page; Figure A-3 offers an example of an “administrative” page.

Figure A-3. Example of Administrative Page



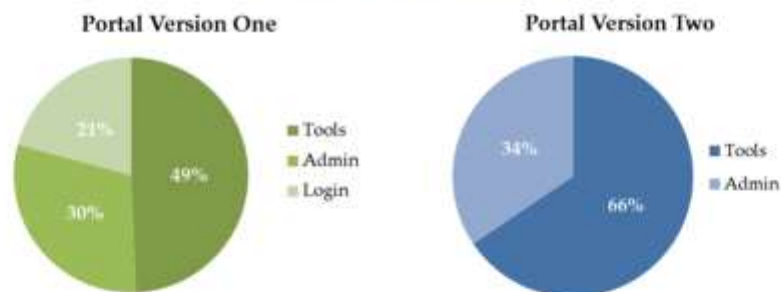
Source: Portal version two

¹¹ Note, the Navigant team did not have access to version one of the portal; we made page type assignments for version one solely based on URL titles rather than visiting the actual pages.



As seen in Figure A-4, for the first version of the web portal, users split their time evenly between administrative/login pages and tool pages. In the second version of the portal, users spent a majority (66%) of their time on tool pages, showing an increase in the use of interactive pages compared to the first version of the site. Note that version one of the portal included a separate login page, which accounts for 21% of overall traffic.

Figure A-4. Page Type Breakdown



Note: unlike the rest of the analysis, for this graphic portal version one data covers October 2010 through December 2012 and portal version two data covers November 2012 through April 2014. Portal version two analytic data did not include login page visits.

Source: Navigant analysis of Google Analytic data

For context, Navigant compared this page type breakdown data to similar data from an evaluation of a home energy report web portal program and found that users of the MySmart Portal spent more time viewing “tool” pages (66% of page views) than users of the home energy report program (47% of page views).



Pageviews

Figure A-5 shows that the first portal version's page views fluctuated quite significantly from October 2010 through October 2012, hitting peaks in September 2011 and again in September 2012. Page views for the second version remained minimal for the first few months, gradually increased from February 2013 through June 2013, and then gradually declined from July 2013 through April 2014. Page view spikes occurred in September and December 2011, and August 2012 for the first website, and in July 2013 for the second website. Because these patterns align with the registration patterns highlighted in Figure A-2, we can assume that the spikes in page views are due to new users visiting the site upon registration.

Figure A-5. Number of Page Views

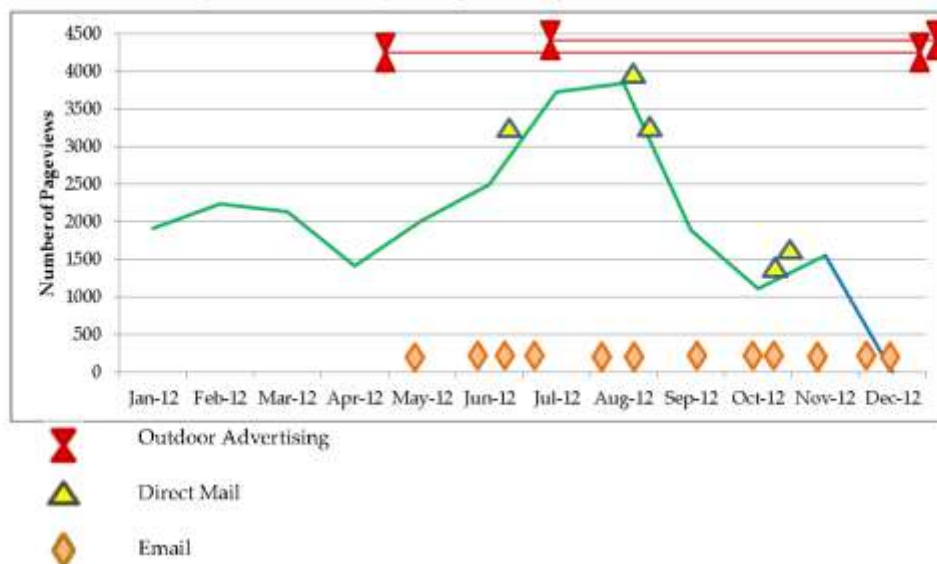


Source: Navigant analysis of Google Analytic data



As mentioned earlier, KCP&L provided Navigant with details about marketing tactics for 2012. Figure A-6 presents an overlay of this marketing data and the number of page views on each version of the site in 2012. A review of this data reveals little correlation between marketing efforts and page views; however, because of the lack of data outside of 2012, we cannot conclude whether KCP&L marketing efforts were effective. Marketing efforts from May 2012 through December 2012 time included materials aimed at transitioning users from portal version one to portal version two, and increasing overall customer awareness of the portal. Table A-4 in the appendix provides detail on the marketing tactics summarized in Figure A-6.

Figure A-6. Marketing Activity from May 2012 to December 2012



Source: Navigant analysis of Google Analytics and program tracking data



Sessions

Similar to the trends shown in the previous graphics, the number of sessions on the second version of the site steadily increased after from January 2013, reaching a peak in August 2013 and then decreasing slightly with small peaks through April 2014. This is consistent with the conclusion that web portal traffic increases in the summer and, to a lesser extent, winter months. Figure A-7 demonstrates this trend.

Figure A-7. Number of Sessions

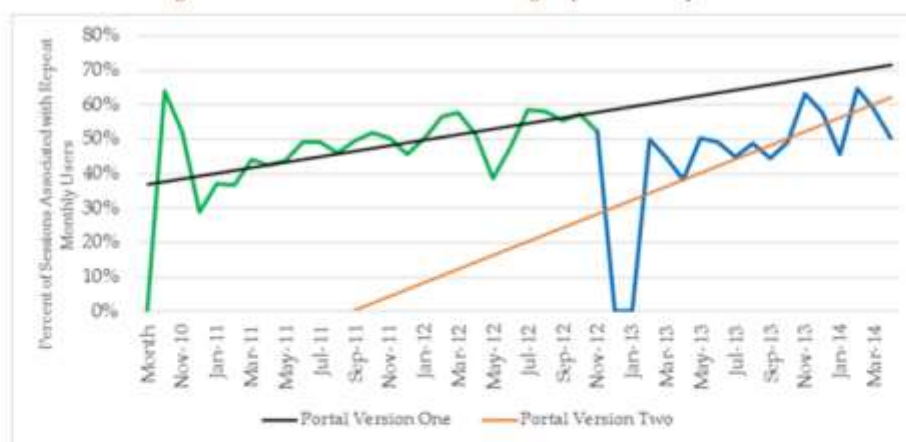


Source: Navigant analysis of Google Analytic data



Figure A-8 shows that for the first version of the web portal, an average of 49 percent of sessions came from people who engaged in multiple sessions each month. For the second version of the website, an average of 57 percent of sessions were associated with multiple-session-per-month users, a slight increase compared to the first version. To further highlight this, the trend lines for each portal show that, while the share of users engaging with the portal more than once a month increased over time for both versions of the portal, the share was slightly higher for the second version. This implies that the second version of the site is more engaging to users.

Figure A-8. Percent of Sessions Involving Repeat Monthly Visitors

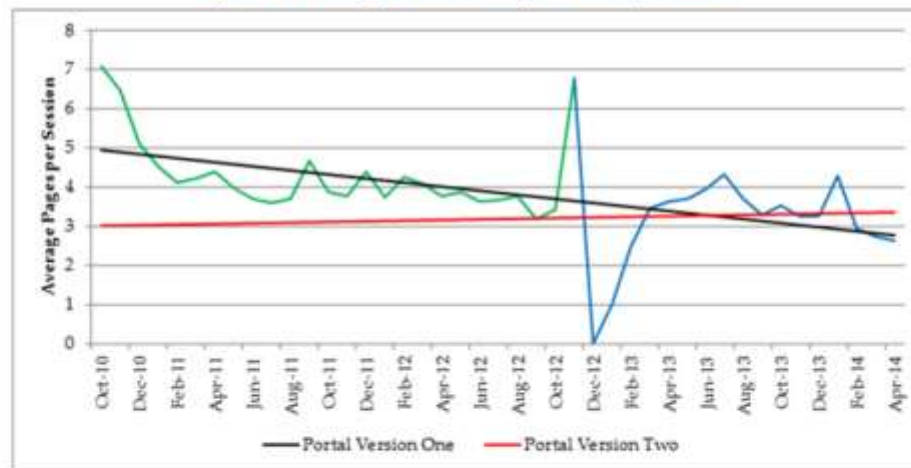


Source: Navigant analysis of Google Analytics data



When looking at the average number of pages per session, we see a general decrease for portal version one and a slight increase for portal version two, as shown in Figure A-9. This implies that users found the second version of the site more engaging. Pages per session spiked in November 2012, likely due to the launch of the new version of the portal.

Figure A-9. Average Number of Pages Visited per Session



Source: Navigant analysis of Google Analytics data



Figure A-10 illustrates, overall, users spent less time per session on the second version of the web portal compared to the first (6:06 minutes versus 3:46 minutes). This finding is not meant to contradict Navigant's earlier conclusion that users of the second web portal engaged with the site more; spending less time per session likely indicates that users are able to more quickly locate the content they are seeking on the second version of the site, or that users are learning to navigate the portal more quickly over time.

Figure A-10. Average Session Duration



Source: Navigant analysis of Google Analytics data



Table A-4 gives a more detailed look at the marketing activities KCP&L conducted in 2012. Note that many of these marketing efforts focused on other components of the SGDP, such as time of use rates or MySmart Thermostat.

Table A-4. 2012 Marketing Activities

Activity	Details	Month
Email	Get Smarter about Energy	May
	Time of Use	June
	MySmart Thermostat and MySmart Home	June
	Time of Use	July
	Cross Promotional	August
	Optimizer Upgrade	August
	Smart Grid Facts/Did you Know	September
	Famatina Portal Launch	October
	New Happenings - Demo House	October
	New MySmart Home Features	November
	MySmart Portal with AccountLink	December
	Happy Holidays from Smart Grid	December
Direct Mail	TOU Rates Letter	June
	Webkey Teaser Postcard	August
	Webkey Mailer	August
	Interloop Mailer	October
	Door Hangers	October
Outdoor Advertising	Billboards	July through December
	Bus ads	April through December

Source: KCP&L document "Smart Grid Tactic Measurement 11.16.12"



Figure A-II shows that 99% of sessions originated from the United States. For those initiated from outside of the US, most sessions involved accessing pages that require a login. We can speculate that some customers viewed their home energy usage while out of the country while on vacation or traveling for business.

Figure A-II. Geographical Distribution of Portal Users – Portal Version Two



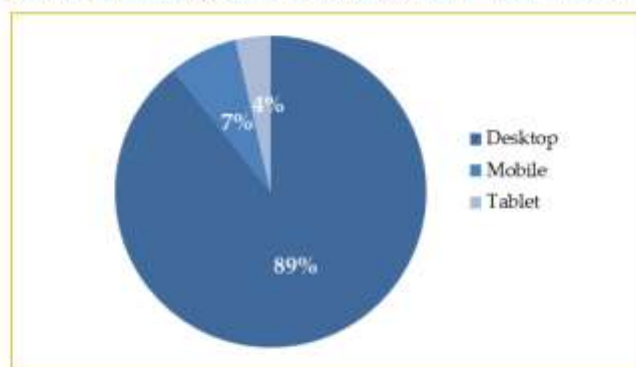
Note: The scale refers to number of sessions, with darker colors indicating a higher concentration. The size of each circle additionally corresponds to this metric (number of sessions).

Source: Google Analytics



The vast majority (89%) of users visited the second version of the MySmart Portal on their desktop/laptop computers, as shown in Figure A-12.¹² A few users used their mobile phones or tablets to access the portal.

Figure A-12. Technology Used to Access Web Portal – Portal Version Two



Source: Navigant analysis of Google Analytic data

¹² This data was not available for the first version of the site.



Appendix B Survey Instruments

This section includes the final copies of survey instruments used in this evaluation. The surveys included are the MySmart Portal Participant Online Survey, the Time of Use Rate Participant Phone Survey, the MySmart Thermostat and MySmart Home Participant Phone Survey, and the MySmart Display Phone Survey.

B.1 MySmart Portal Participant Online Survey

This survey was administered to Portal users not enrolled in the Time of Use program at the time of the survey (August 2014). The survey will be administered via a Web interface with the invitation sent via e-mail.

Survey Email Invitation

[SUBJECT LINE]: The KCP&L MySmart Portal Program Needs Your Feedback

Dear [INSERT CUSTOM VARIABLE 1],

Thank you for your participation in KCP&L's MySmart Portal Program. Our records show that you created an account in [INSERT CUSTOM VARIABLE 2], and we hope you will take a few minutes to complete a short survey to share your experience using the web portal. Your feedback will help us ensure that KCP&L is effectively meeting your needs.

The survey will take no more than 10 minutes to complete. The survey administrator will keep your responses confidential; analysis of results will not identify individual respondents. If you have any questions, please contact Amy Meyer at 303.728.2475 or amy.meyer@navigant.com.

Thank you in advance for your participation. We hope to receive your feedback by August 4th.

To begin, please click here [INSERT LINK].

Sincerely,

The KCP&L Team

Survey Start Page

Thank you for taking time to tell us about your experience with the KCP&L MySmart Portal program.

Your feedback is important and will help us ensure that KCP&L is effectively meeting your needs.

The survey will take approximately 10 minutes to complete. For your convenience, you can save and resume the survey at any time. The survey administrator will keep your responses confidential; analysis of results will not identify individual respondents.

If you have any questions, please contact Amy Meyer at 303.728.2475 or amy.meyer@navigant.com.

[START LINK]

Reminder Email

[SUBJECT LINE]: Reminder: The KCP&L MySmart Portal Program Needs Your Feedback

Dear [INSERT FIRST NAME],

Please don't forget to complete this short survey about the KCP&L MySmart Portal Program. Your feedback is extremely important and will help ensure that KCP&L is effectively meeting your needs.



The survey will take no more than 10 minutes to complete. The survey administrator will keep your responses confidential; analysis of results will not identify individual respondents. If you have any questions, please contact Amy Meyer at 303.728.2475 or amy.meyer@navigant.com.

Thank you in advance for your participation.

To begin, please click here [INSERT LINK].

Sincerely,

The KCP&L Team

Program Experience

1. On a scale from 1 to 5, where 1 is not at all familiar and 5 is extremely familiar, how would you rate your familiarity with KCP&L's SmartGrid Pilot program?

2. Our records indicate that you created an account on the KCP&L MySmart Portal in [INSERT ACCOUNT CREATION YEAR]. Do you recall creating the account?

Yes

No [ASK 2a]

Don't Know [ASK 2a]

2a. To refresh your memory, the portal allows you to view your home energy bills online, and features helpful tools including energy saving tips, neighborhood usage comparison, and savings goal tracking. With this description in mind, do you recall creating the account?

Yes

No [TERMINATE]

Don't Know [TERMINATE]

3. How did you hear about the MySmart Portal program? Check all that apply.

In an e-mail from KCP&L

On the KCP&L website

Received material in the mail

From a community group

From a friend or family member

Someone came to my door



- At a community event
- A billboard
- Don't recall
- Other [PROVIDE SPACE TO SPECIFY]

4. What is the main reason you started using the MySmart Portal? (Select only one.)

- To save money
- To take control of my energy use
- To do my part in protecting the environment
- Other [PROVIDE SPACE TO SPECIFY]

5. Please rate how frequently you used each of the following sections in the MySmart Portal within the past 12 months. [CREATE A MATRIX OFFERING THE FOLLOWING OPTIONS: "Did Not Use", 1-5 times, 6-10 times, 11-20 times, 21-30 times, 31 or more times]

Dashboard / Home Page - provides an overview of your energy use for the current month, provides tips for how you can meet your energy savings goal, and demonstrates how you compare to similar homes
Your Energy Use - provides energy usage charts on a daily, weekly, monthly, and yearly basis, and includes chart showing where energy is being spent in your home
Energy Saving Tips - provides tips for saving energy, including the estimated savings per year
Your Pricing Plan - shows the current pricing plan for energy services provided by KCP&L
Expert Advice / Ask An Expert - enables you to ask a question of an expert regarding your home energy use
Setting an energy savings goal - allows you to create an annual energy savings goal
Home Energy Profile - allows you to provide information about your household for more accurate estimates of potential savings
Billing and Usage History - provides overview of your household usage and energy bill over time
Your Community - provides summary of what actions other households are taking, includes basic comparisons

6. On a scale from 1 to 5, where 1 is strongly disagree and 5 is strongly agree, please tell to what extent you agree with the following statements:

I used MySmart Portal...



... to understand how much energy I use on a regular basis (daily, weekly, monthly, or yearly)
... to better understand where energy is used in my home
... to obtain tips on how to save energy
... to connect with experts about my home energy use or ways to save
... to create an annual energy savings goal
... to view my billing and usage history
... for other reasons [PROVIDE SPACE TO SPECIFY]

7. Are there any other reasons that you chose to start using MySmart Portal?
[OPEN ENDED]

8. How often have you looked at MySmart Portal in the last month?

I have not looked at MySmart Portal in the last month

Just once

Two to five times

Six to 15 times

Greater than 16 times

9. Has the frequency at which you visited the MySmart Portal increased, decreased, or stayed the same since you first signed up for MySmart Portal in [INSERT ACCOUNT CREATION YEAR]?

Increased

Stayed the same

Decreased

10. Please tell us why the frequency of your visits has [INSERT RESPONSE FROM Q9].
[OPEN ENDED]

11. On a scale from 1 to 5, where 1 is not at all useful and 5 is extremely useful, how would you rate the usefulness of MySmart Portal overall?

11a. Please provide the reason you gave the MySmart Portal this rating.

[OPEN ENDED]



12. On a scale from 1 to 5, where 1 is not at all useful and 5 is extremely useful, how would you rate each of the following sections in the MySmart Portal? [CREATE A MATRIX OFFERING SELECTIONS 1-5 AND INCLUDE A "DID NOT USE" OPTION]

Dashboard / Home Page - provides an overview of your energy use for the current month, provides tips for how you can meet your energy savings goal, and demonstrates how you compare to similar homes
Your Energy Use - provides energy usage charts on a daily, weekly, monthly, and yearly basis, and includes chart showing where energy is being spent in your home
Energy Saving Tips - provides tips for saving energy, including the estimated savings per year
Your Pricing Plan - shows the current pricing plan for energy services provided by KCP&L
Expert Advice / Ask An Expert - enables you to ask a question of an expert regarding your home energy use
Setting an energy savings goal - allows you to create an annual energy savings goal
Home Energy Profile - allows you to provide information about your household for more accurate estimates of potential savings
Billing and Usage History - provides overview of your household usage and energy bill over time
Your Community - provides summary of what actions other households are taking, includes basic comparisons

Energy Use in the Home

13. On a scale from 1 to 5, where 1 is completely disagree and 5 is completely agree, to what extent do you agree with the statement: "After using the MySmart Portal, I better understand the types of actions I need to take to reduce my electricity usage and save money."
14. Have you taken any steps to save energy in your home in the past year?
- Yes
No
Don't Know

[IF RESPONDENT ANSWERED "YES" TO Q14, ASK Q14a]

14a. What actions have you taken? Check all that apply.

Turn air conditioning down
Turn air conditioning down when I leave home



Turn air conditioning off
Turn Lights off
Turn TV(s) off
Turn Computer off
Turn printer off
Unplug chargers for phones and other devices
Use the shut down or "sleep" options for electronics when not in use
Don't run electric dryer
Don't wash clothes
Line dry washed clothes
Lower water heater temperature
Use only warm or cold water for washing clothes
Don't cook on electric stove/oven
Had my home weatherized
Other (provide space to specify)
Don't Know

[IF RESPONDENT ANSWERED "YES" TO Q14, ASK Q14b]

14b. On a scale of 1 to 5, with 1 being not at all influential and 5 being extremely influential, how influential was the MySmart Portal in your decision to make these changes in your home?

Satisfaction

15. On a scale from 1 to 5, where 1 is completely dissatisfied and 5 is completely satisfied, how satisfied are you with KCP&L as a company overall?

15a. Please provide the reason why you gave this rating.
[OPEN END]

16. On a scale from 1 to 5, where 1 is completely dissatisfied and 5 is completely satisfied, how satisfied are you with KCP&L's SmartGrid Pilot program?

16a. Please provide the reason why you gave this rating.
[OPEN END]



17. On a scale from 1 to 5, where 1 is completely dissatisfied and 5 is completely satisfied, how satisfied are you with MySmart Portal?

17a. Please provide the reason why you gave this rating.
[OPEN END]

18. Have you recommended the MySmart Portal to a friend or family member?

Yes
No
Don't Know

19. Since you first signed up for the MySmart Portal, would you say your satisfaction with KCP&L has:

Increased
Stayed the same
Decreased

20. Do you have any suggestions on ways that KCP&L could improve the MySmart Portal?

[OPEN ENDED]

21. Do you have any other comments to share about MySmart Portal based on your experience so far?

[OPEN ENDED]

Demographics

We are almost done- we just need to ask you a few final questions for classification purposes.

22. Do you own or rent your home?

Own
Rent
Don't know
Prefer not to answer

23. Which of the following best describes your home? Is it...

Single-family



Twin, duplex or two-family unit

Apartment/condo in a 2-4 unit building

Apartment/condo in a >4 unit building

Townhouse or row house (adjacent walls to another house)

Mobile home, house trailer

Or something else (Specify)

Don't know

Prefer not to answer

24. What is the approximate square footage of your house?

<500 sq ft

501 – 1000 sq ft

1001 – 2000 sq ft

2001– 3000 sq ft

>3000 sq ft

OTHER [Specify]

Don't know

Prefer not to answer

25. How many people, including yourself, live in your home full-time at least six months of the year?

1

2

3

4

5

6

7

Over 7

Don't know

Prefer not to answer



26. Please select the option that best represents your total 2013 household income (before taxes).

- Less than \$30,000
- \$30,000 but under \$50,000
- \$50,000 but under \$75,000
- \$75,000 but under \$100,000
- \$100,000 but under \$150,000
- \$150,000 but under \$200,000
- Above \$200,000
- Don't Know
- Prefer not to answer

27. What is the highest education level you have completed?

- Some high school
- High school graduate
- Some college/vocational school
- College degree
- Graduate or professional degree
- Other [SPECIFY OTHER]
- Prefer not to answer

28. What is your gender?



Male
Female
Prefer not to answer

29. Please select your age range.

Under 21 years old
22 – 29 years old
30 – 39 years old
40 – 49 years old
50 – 64 years old
65 years old or older
Prefer not to answer

Those are all the questions we have for you today. Thank you for your time. KCP&L appreciates your participation.

B.2 Time of Use Rate Participant Phone Survey

This survey was administered to customers enrolled in September 2014. The survey was administered via phone.

Screener

INBOUND 800 LINE SCRIPT:

Hello, my name is (YOUR NAME) from Bellomy Research, calling on behalf of KCP&L, your energy provider. KCP&L is gathering information and opinions about the Time of Use program. If you qualify and complete the survey, we will mail you a \$20 check. Would you please call us at 1-800-348-7998 Monday-Saturday from 9am to 5pm (EST)? PLEASE REFER TO ID# [INSERT UNIQUE ID FROM SAMPLE] when you call. Thank you!

1. Left voicemail

SCR1. Hello, my name is (YOUR NAME) calling from Bellomy Research on behalf of KCP&L, your energy provider. May I please speak with [INSERT FIRST NAME FROM SAMPLE]? (IF NOT AVAILABLE, ASK:

May I please speak to one of the people in your household that is most knowledgeable about your electric utility?)

(IF NO ONE AVAILABLE OR NOT A CONVENIENT TIME, SCHEDULE A CALL BACK.)



(IF RESPONDENT ASKS HOW LONG, SAY: "APPROXIMATELY 10 MINUTES.")

SCR2. We are working with KCP&L and contacting customers who are participating in the Time of Use program.

Please be assured that your responses will be kept strictly confidential and will be used for market research purposes only.

As a token of our appreciation, if you qualify and complete the entire survey, you will receive a \$20 incentive check for your participation. At the end of the survey, we will need to collect your current mailing address so that we can mail your incentive check.

Are you one of the persons in this household that is most knowledgeable about your electric utility and information related to this rate plan and household energy use?

- 1. Yes [SKIP TO SCR5]
- 2. No [ASK SCR3]
- 98. Don't Know [ASK SCR3]
- 99. REFUSED [TERMINATE]

SCR3. May I please speak with the person in your household that would be able to discuss information related to this rate plan and household energy use? **(IF NOT AVAILABLE, ASK WHEN IS THE BEST TIME TO CALL THE NEW CONTACT BACK AND SCHEDULE A CALLBACK. REMEMBER TO RECORD THE CORRECT NAME OF THE PERSON TO ASK FOR.)**

- 1. Yes, available
- 2. No, no other adult [TERMINATE]
- 98. Don't Know [TERMINATE]
- 99. REFUSED [TERMINATE]

SCR4. Hello, my name is (YOUR NAME) and I'm calling from Bellomy Research on behalf of KCP&L, your energy provider. We are working with KCP&L and contacting customers who are participating in the Time of Use program. *Please be assured that your responses will be kept strictly confidential and will be used for market research purposes only.*

As a token of our appreciation, if you qualify and complete the entire survey, you will receive a \$20 incentive check for your participation. At the end of the survey, we will need to collect your current mailing address so that we can mail your incentive check.

Are you one of the persons in this household that is most knowledgeable about your electric utility and information related to this rate plan and household energy use?

- 1. Yes



- 2. No [TERMINATE]
- 98. Don't Know [TERMINATE]
- 99. REFUSED [TERMINATE]

SCR5. We are conducting a short survey that will help KCP&L to evaluate the Time of Use program.

Your feedback about the TOU Program is very important to KCP&L. Your answers will not be reported individually. Instead we will report the responses of the whole group of customers who participate in this study.

(READ IF NECESSARY: The questions that I have should take approximately 10 minutes to complete.)

(INTERVIEWER: IF THIS IS NOT A CONVENIENT TIME, ASK WHEN IS THE BEST TIME TO CALL AND SCHEDULE A CALLBACK. REMEMBER TO RECORD THE CORRECT NAME OF THE PERSON TO ASK FOR.)

- 1. Continue
- 2. Refused to continue [TERMINATE]

Rate Structure

RS1. On a scale from 1 to 5, where 1 is "not at all familiar" and 5 is "extremely familiar", how would you rate your familiarity with KCP&L's Smart Grid Pilot program?

Not at all familiar				Extremely familiar	Don't know	Refused
1	2	3	4	5	98	99

RS2. Our records indicate that your household participates in the KCP&L Time of Use program where you pay a "peak" rate for your electricity during certain times of the week from May 16th through September 15th. Do you recall participating in this billing structure?

- 1. Yes [SKIP TO RS3]
- 2. No [ASK RS2a]
- 98. Don't know [ASK RS2a]
- 99. Refused [ASK RS2a]

[IF RS2 = 2, 98, OR 99 CONTINUE. OTHERWISE SKIP TO RS3.]

RS2a. To refresh your memory, a peak rate of \$.38/kilowatt hour, compared to the off-peak rate of \$.06/kilowatt hour, is active from 3pm-7pm Monday through Friday from May 16th through September 15th. Do you recall participating in this billing structure?

- 1. Yes [SKIP TO RS3]
- 2. No [ASK RS2a1]
- 98. Don't know [ASK RS2a1]



99. Refused [TERMINATE]

RS2a1. Is there another adult in your household that I can speak with who may have signed up for the Time of Use program?" (IF NOT AVAILABLE, ASK WHEN IS THE BEST TIME TO CALL THE NEW CONTACT BACK AND SCHEDULE A CALLBACK. REMEMBER TO RECORD THE CORRECT NAME OF THE PERSON TO ASK FOR.)

1. Yes, available
2. No, no other adult [TERMINATE]
98. Don't Know [TERMINATE]
99. REFUSED [TERMINATE]

RS2a2. Hello, my name is (YOUR NAME) and I'm calling from Bellomy Research on behalf of KCP&L, your energy provider. We are working with KCP&L and contacting customers who are participating in the Time of Use program. Are you one of the persons in this household that is most knowledgeable about your electric utility and information related to the Time of Use rate plan?

1. Yes
2. No [TERMINATE]
98. Don't Know [TERMINATE]
99. REFUSED [TERMINATE]

[IF RS2a2 = 1, GO BACK TO RS1 AND START OVER.]

RS3. How did you hear about the KCP&L Time of Use program? (DO NOT READ LIST. RECORD UP TO EIGHT RESPONSES.)

1. In an e-mail from KCP&L
2. On the KCP&L website
3. Received material in the mail
4. From a community group
5. From a friend or family member
6. Someone came to my door
7. At a community event
8. A billboard
97. Other (Please Specify)
98. Don't know
99. Refused

RS4. What is the main reason you signed up for the Time of Use program? Was it...(READ LIST. RECORD ONE RESPONSE)?

1. To save money
2. To help the environment



- 3. To help KCP&L avoid power outages
- 4. To help KCP&L avoid having to build a new power plant
- 97. Other (Please Specify)
- 98. (DO NOT READ) Don't know
- 99. (DO NOT READ) Refused

RS4a. What is the second most important reason you signed up for the Time of Use program?
Was it...(READ LIST. RECORD ONE RESPONSE)?

[EXCLUDE ANSWER FROM RS4. ALWAYS DISPLAY "Other Specify"]

- 1. To save money
- 2. To help the environment
- 3. To help KCP&L avoid power outages
- 4. To help KCP&L avoid having to build a new power plant
- 97. Other (Please Specify)
- 98. (DO NOT READ) Don't know
- 99. (DO NOT READ) Refused

RS5. I am going to read you a short series of statements. Please tell me how much you agree or disagree with each statement on a scale from 1 to 5, where 1 means you "strongly disagree" and 5 means you "strongly agree". (READ FIRST STATEMENT, THEN ASK:) On a scale from 1 to 5, how much do you agree with that statement? (REPEAT SCALE AS NECESSARY.)

Strongly disagree				Strongly agree	Don't know	Refused
1	2	3	4	5	98	99

[RANDOMIZE ORDER]

- RS5a. The Time of Use rate plan is easy to understand.
- RS5b. My household regularly alters electricity use in response to the higher peak rate.
- RS5c. I would recommend the Time of Use program to family and friends.
- RS5d. I believe that my energy bill decreased after participating in the program.
- RS5e. KCP&L provided a sufficient amount of information to help our household adjust our electricity use in response to the higher peak rate.

Energy Use

EU1. I am going to read you a list of things you might be doing to adjust your energy use during the peak rate hours of Monday through Friday from 3pm-7pm. Please tell me whether you always, sometimes, or never do each of the following because of the peak rate. The first statement is...(READ STATEMENT). Do you always, sometimes or never do that?

**[SCALE]**

1. Always
2. Sometimes
3. Never
98. (DO NOT READ) Don't know
99. (DO NOT READ) Refused

[RANDOMIZE ORDER]

1. Turn off additional lights during peak hours
2. Postpone running dishwasher until off-peak hours
3. Postpone running clothes washer until off-peak hours
4. Postpone running clothes dryer until off-peak hours
5. Air-dry or line-dry clothes
6. Unplug electronics/appliances when not in use
7. Turn air conditioning off for all or part of the peak hours
8. Use fans instead of air conditioning during peak hours
9. Set air conditioner to higher temperature during peak hours
10. Cook before or after peak hours

EU2. What other things do you do to adjust your energy use because of the peak rate that I did not mention in the list? (RECORD VERBATIM. PROBE AS NECESSARY.)

_____ **[OPEN END]**

Satisfaction

S1. On a scale from 1 to 5, where 1 is "not at all satisfied" and 5 is "extremely satisfied", how would you rate your satisfaction with KCP&L as a company overall?

Not at all satisfied				Extremely satisfied	Don't know	Refused
1	2	3	4	5	98	99

S1a. Please tell me the reason you gave this rating. (RECORD VERBATIM. PROBE AS NECESSARY.)

_____ **[OPEN END]**



S2. On a scale from 1 to 5, where 1 is "not at all satisfied" and 5 and is "extremely satisfied", how would you rate your satisfaction with the Time of Use program?

Not at all satisfied				Extremely satisfied	Don't know	Refused
1	2	3	4	5	98	99

S2a. Please tell me the reason you gave this rating. (RECORD VERBATIM. PROBE AS NECESSARY.)

_____ [OPEN END]

S3. Since you first signed up for the Time of Use program, would you say your satisfaction with KCP&L has...(READ LIST)?

- 1. Increased
- 2. Stayed the same
- 3. Decreased
- 98. (DO NOT READ) Don't know
- 99. (DO NOT READ) Refused

S4. Do you have any suggestions on ways that KCP&L could improve future Time of Use program offerings? (RECORD VERBATIM. PROBE AS NECESSARY.)

_____ [OPEN END]

S5. We are almost done. You have qualified to receive a \$20 check for your participation. The check will arrive via postal mail within approximately four weeks. So that we can mail your check, please tell me your first and last name and your current mailing address.

(INTERVIEWER: PLEASE VERIFY THAT FIRST AND LAST NAME ARE SPELLED CORRECTLY. THEN ENTER CURRENT MAILING ADDRESS. REMEMBER TO ASK FOR BEST "TIME OF DAY" FOR PHONE CONTACT AND RECORD ACCORDINGLY.)

First Name: _____

Last Name: _____

Address: _____

City: _____

State: _____

Zip Code: _____

Preferred telephone number: _____

Preferred time of day for phone contact: [NOT REQUIRED]



Email address: [NOT REQUIRED]

[PROGRAMMER: ALLOW CHECKBOX FOR "REFUSED".]

[CLOSE]

This ends the questions about the TOU program. KCP&L thanks you for completing the survey for us and providing your observations and insights about this program. Thank you for your time.

B.3 MySmart Display Phone Survey

This survey was administered to MySmart Display enrolled in September 2012. The survey was administered via phone.

[IF CONTACT NAME IS BLANK, INSERT "the head of household"]

Hello, this is [YOUR NAME] from Bellomy Research, we are conducting a short survey on behalf of KCP&L and would like to get your opinion on a few things. May I speak with [CONTACT NAME]?
(IF NOT AVAILABLE, SAY: May I speak with the person within the [LAST NAME] household that is most knowledgeable about your energy bill?) [IF NO ONE AVAILABLE FROM HOUSEHOLD, SCHEDULE A CALL BACK.]

(INTERVIEWER NOTE: IF RESPONDENT WOULD LIKE TO TALK WITH SOMEONE FROM KCP&L ABOUT THIS SURVEY, THEY CAN CONTACT: Phil Gooch, Market Research Manager, KCP&L, email: phil.gooch@kcp.com, phone: 816-701-0525.)

II. According to our records, KCP&L is your energy service provider, is this still correct?

Yes, KCP&L.....1 [CONTINUE]
No, another utility.....2 [CONTINUE AND TERMINATE AT 3A]
Don't know.....98 [CONTINUE AND TERMINATE AT 3A]
Refused.....99 [CONTINUE AND TERMINATE AT 3A]

I'd like to ask you some questions about the MySmart Display you received from KCP&L. (If needed, the display is a small white device that shows you information about your energy usage.)

SCREENER

S1. Do you recall receiving a MySmart Display sometime around [join month, year]?

Yes.....1 [SKIP TO S2]
No.....2 [CONTINUE TO S1A]

S1a. Is there anyone available who might be familiar with the MySmart Display?

Yes.....1 [REPEAT S1 WITH NEW RESPONDENT]



No.....2
Refused.....3

[IF S1A = 2 OR 3, THANK AND TERMINATE]

S2. Do you still have the display?

Yes.....1 [CONTINUE TO S3]
No.....2 [ASK S2a AND TERMINATE]
Don't know98 [THANK AND TERMINATE]
Refused.....99 [THANK AND TERMINATE]

[IF S2=2, CONTINUE. IF S2=1, SKIP TO S3. OTHERWISE, THANK AND TERMINATE]

S2a. Do you know what happened to the display? (DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES)

I threw it away.....1
I lost it.....2
It was stolen.....3
I gave it to a friend/relative.....4
Other (specify).....5
Don't know98[SINGLE
SELECTION] Refused.....99[SINGLE
SELECTION]

[IF S2=2, THANK AND TERMINATE]

S3. How often do you look at the information provided on the MySmart Display? (READ LIST)

Daily.....1 [CONTINUE]
Weekly.....2 [CONTINUE]
Monthly.....3 [CONTINUE]
(DO NOT READ) Don't Use.....4 [ASK S3a AND
TERMINATE]
(DO NOT READ) Other, please specify.....5 [CONTINUE]
(DO NOT READ) Don't know98 [THANK AND
TERMINATE]
(DO NOT READ) Refused.....99 [THANK AND
TERMINATE]

[IF S3=4, CONTINUE TO S3a. IF S3=1-3 OR 5, SKIP TO Q1. OTHERWISE, THANK AND TERMINATE]

S3a. Why did you stop using the display? (DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.)



It never worked	1
It was too complicated.....	2
It wasn't helpful to me	3
It broke.....	4
I lost it	5
It was stolen	6
I gave it to a friend/relative.....	7
Other (specify).....	8
Don't know	98[SINGLE

SELECTION]

Refused.....	99[SINGLE
--------------	-----------

SELECTION]

[IF S3=4, THANK AND TERMINATE. IF I1 ≠1, THANK AND TERMINATE.]

SURVEY QUESTIONS

1. How did you hear about the MySmart Display program? (DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES)

Someone came to my door.....	1
Community Event.....	2
Mailed brochure	3
Community Group (specify)	4
Friend, Family	5
Email	6
On bill message	7
Bill insert	8
Bill message or bill insert (couldn't distinguish)	9
Other (specify).....	10
Don't know	98[SINGLE

SELECTION]

2. Why did you decide to request or receive a MySmart Display? (DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES)

Save money on my electricity bill	1
Better control over my electric usage	2