

Approved: January 26, 2011
Date

MINUTES OF THE SENATE UTILITIES COMMITTEE

The meeting was called to order by Chairman Pat Apple at 1:30 p.m. on January 13, 2011, in Room 548-S of the Capitol.

All members were present except:

Sen. Jay Emler – excused

Sen. Ty Masterson - excused

Committee staff present:

Matt Sterling, Office of the Revisor of Statutes

Cindy Lash, Kansas Legislative Research Department

Ann McMorris, Committee Assistant

Conferees appearing before the Committee:

Scott Jones, Kansas City Power & Light

Others attending: See attached list.

Kansas Utility Energy Efficiency Programs

Scott Jones, Kansas City Power & Light, submitted information on Kansas electric utilities energy efficiency program savings. He provided an executive summary of the value of energy efficiency and demand reponse programs to the customers and the community. He reviewed the chart on total estimated energy saved annually from these programs. He discussed the programs provided by the various electric providers. (Attachment 1)

Questions from the committee on job creation, fossil fuel reliance, 2% projected savings.

The meeting was adjourned at 2:05 p.m.

Respectfully submitted,

Ann McMorris

Committee Assistant

Attachments - 1

**SENATE UTILITIES
COMMITTEE GUEST LIST
JANUARY 13, 2011**

NAME	REPRESENTING
Wes Ashton	Black Hills Energy
Joe Durb	KCBPU
Paul Snider	KCP&L
Scott Jones	KCP&L
PHIL WAGES	KEPCO
LON STANTON	Northern Natural Gas Co
Paje Routhier	Hein Law Firm
Whitey Jansen	Empire
Nelson Krueger	USC
George Seelout	at & t
Shari Albrecht	KDHE
BRET BITNER	KCC
MICHAEL DEUPREE	↓
MELISSA DOEBLIN	↓
Mark Schreiber	Westar
Randy Degenhardt	"
Kenn Groninger	"
TODAY	KCC

Kimberly Dady
-JUDITH GARD

KMU
CAP ADVANTAGE

Tim Grogan
David Sprunge
ANDY FRY

AT&T
Curb
KCC

Kansas Electric Utilities Energy Efficiency Program Savings

Presented to

Senate Utilities Committee

January 13, 2011

Submitted on behalf of:
Empire District Electric Company
Kansas City Power & Light
Kansas Electric Cooperatives
Kansas Electric Power Cooperative
Kansas Municipal Utilities
Midwest Energy
Sunflower Electric Power Corporation
Westar Energy

Executive Summary

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- Kansas electric utilities have been advancing a suite of energy efficiency programs across the state for a number of years. IOU's, cooperatives and municipals all have customers engaged in various programs throughout the state.
- These programs have provided a significant value to both our customers and our communities by:
 - Deferring the need for more costly generation
 - Positively impacting our environment and reducing emissions
 - Helping our customers to reduce their energy costs
 - Economic investment and job creation in both the local and national economy
 - Reducing our reliance of fossil fuels which leads to increased energy independence
- As a result of these efforts, we believe that our combined programs have:
 - Developed the equivalent of several virtual peaking plants (**over 350 MW's of resource capacity**)
 - **Saved nearly 12 million kWh of electricity per year**
 - A typical residential customer in Kansas uses approximately 14,000 kWh per year

Energy Efficiency and Demand Response Programs

Kansans enjoy relatively low cost of electricity that can make it challenging to design viable energy efficiency and demand response programs compared to areas of the country with higher electricity costs since programs are designed as least-cost options for customers. Many programs across the state are still in pilot phase as performance results are being measured and verified for regulators.

- **Affordability Programs**

- Programs are designed to assist low income customers who have limited, if any, resources to invest in energy efficiency.
- Typically targets both the retrofit and new construction markets.

- **Energy Efficiency Programs**

- Consist of informational and direct impact energy efficiency programs designed to reduce energy usage.
- Typically targeted to all customer classes, and targeted to both the retrofit and new construction markets.

- **Demand Response Programs**

- Targeted to reduce peak demand rather than energy usage.
- Programs typically targeted to residential and small commercial customers while other programs are targeted to large commercial and industrial customers.

Energy Efficiency Programs

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Energy Efficiency Programs Around the State	
Residential	Commercial and Industrial
<p>Educational Programs</p> <ul style="list-style-type: none">Website Energy AnalyzersCommunity EducationEnergy AuditsReal Estate Classes <p>Central A/C & Water Heater Programs</p> <ul style="list-style-type: none">Cool Homes <p>Loan Programs</p> <ul style="list-style-type: none">How\$mart ProgramEfficiency Kansas <p>Energy Efficiency Rebate Programs</p> <ul style="list-style-type: none">Energy Star New Homes <p>Special Projects</p> <ul style="list-style-type: none">Take Charge ChallengeThe Colwich Switch <p>Affordability Programs</p> <ul style="list-style-type: none">Low Income Weatherization	<p>Educational Programs</p> <ul style="list-style-type: none">Website Energy AnalyzersCommunity EducationEnergy AuditsBuilding Operator Certification <p>Energy Efficiency Rebate Programs</p> <ul style="list-style-type: none">Energy Savings-RetrofitEnergy Savings-New Construction <p>Special Projects</p> <ul style="list-style-type: none">Take Charge Challenge

Demand Response Programs

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Demand Response Programs Around the State	
Residential	Commercial and Industrial
Educational Programs Community Education Thermostat Programs Energy Optimizer WattSaver Thermostat Program	Educational Programs Community Education Thermostat Programs Energy Optimizer Curtailment Programs MPower Interruptible Program Irrigation Pump Curtailment C/I Interruptible Rate

Energy Efficiency and Demand Response Programs

Total estimated energy saved from Kansas electric utility programs annually.

	Demand Savings (MW)	Energy Savings (kWh/yr)
Westar	239	84,000
KCP&L	70	10,606,028 ^a
Midwest Energy	3	930,000
KEPCo	40	79,000
Empire District	0.01 ^b	12,233 ^b
Coops/Munis	undefined	undefined
Approximate State Energy Savings	352 MW	11,711,261 kWh/yr

Notes: a) KCP&L energy savings based on five year average 2006-2010

b) Empire District programs approved July 2010 with limited data to date

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KCP&L

KCP&L's Programs have been successful

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- KCP&L proposed development and implementation of demand side management (DSM) pilot programs as part of its **Comprehensive Energy Plan (CEP)** back in 2004.
- Designed to provide participation options to all KCP&L customers – residential (including low income), commercial and industrial.
- First KS utility to implement a DSM program portfolio.
- First pilot program approved in 2005. Four more in 2006. Six in 2007. And one in 2008.
- In KCPL's entire service territory these programs have:
 - Reduced carbon dioxide emissions the **equivalent of removing 20,448 cars from the road**
 - Developed the **equivalent of two virtual peaking plants** (nearly 192MW's of resource capacity)
- Third-party evaluations have been conducted on entire portfolio – positive outcomes on all but one program which KCP&L plans to discontinue.

KCP&L's Current DSM Portfolio

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Kansas City Power & Light Company Demand-Side-Management Program Portfolio		
PROGRAM TYPE	Class of Customer Served	
	Residential	Commercial and Industrial
Demand Response	Energy Optimizer	Energy Optimizer MPower
Energy Efficiency	ENERGY STAR® New Homes Cool Homes Home Energy Analyzer	Energy Audit Energy Savings-Retrofit Energy Savings-New Construction Business Energy Analyzer Building Operator Certification
Affordability	Low Income Weatherization	

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Westar

Westar Energy EfficiencyWorks

■ Community Education

- **Classroom instruction program** incorporates core curricula standards and includes home assessments to educate students and parents about usage.
 - August to December 2009 – 1,891 students reached
 - January to December 2010 – 6,873 students reached
- **Speakers' Bureau** provides community groups, first-time homebuyers and customers with tips for no-cost, low-cost ways to save energy.
 - August to December 2009 – 61 presentations, 2,105 people reached
 - January to December 2010 – 108 presentations, 3,963 people reached
- **Trade show and community booth events** reach consumers interested in energy efficiency and environmental awareness initiatives.
 - August to December 2009 – 32 events, 10,000 people reached
 - January to December 2010 – 65 events, 34,471 people reached

Westar Energy EfficiencyWorks

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- **Community Education (continued)**

- **Do-It-Yourself energy audit classes** provide homeowners with practical, easy-to-implement ideas to reduce energy consumption.
 - January to December 2010 – 5 classes, 114 customers educated
- **Separate statewide certification programs for realtors and building operators** equip professionals with information to assess and enhance energy efficiency features for homes and businesses.
 - August to December 2009 – 5 real estate classes, 86 professionals certified
 - January to June 2010 – 10 real estate classes, 128 professionals certified
 - November 2009 to December 2010 – 4 multi-session building operator classes, 78 professionals certified
- **Website** energy efficiency calculators, Facebook postings and direct mail campaigns are additional venues used to reach consumers with key messages.
 - Oct. 07 to Dec. 10 -- 443,391 visits and 8,203 downloads

Westar Energy EfficiencyWorks

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- **Demand Side Management / Interruptible Programs**

- **Westar** offers and promotes a variety of Interruptible and Demand Side Management programs to commercial and industrial customers.
 - In 2010 we requested that these customers curtail energy usage to predetermined levels 4 times.
 - Curtailments occurred on peaking days during this past summer.
 - Average length of the request to reduce energy usage was 6 hours.
 - Currently 85 commercial and industrial customers participate in this program. Westar controls approximately 225 megawatts in our service territory.

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Westar Energy EfficiencyWorks

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■ Special Projects

- **WattSaver Thermostat Program** provides customers with a free programmable thermostat that enables them to use the Internet to customize settings and curtail usage when asleep or away, potentially lowering energy costs up to 20 percent. In exchange, the program allows Westar to reduce peak demand during the hottest weekdays from June to September, thereby delaying investment costs associated with building new peak power plants.
 - September 2009 to December 2010 – 16,600 customers installed
 - kW Savings Per Customer –0.86 (WattSaver Internal M&V)
- **The Colwich Switch**, a year-long challenge to reduce a community's electrical consumption, enabled about 420 residents to save an average of 200 kWh during the campaign. Their consumption dropped 4.7 percent compared with only 0.1 percent in a comparable town selected for statistical validation.
- Westar Energy will support five communities in the 2011 **Take Charge Challenge** as they compete for a \$100,000 energy efficiency award. Participating communities are Fort Scott, Lawrence, Manhattan, Parsons and Pittsburg.

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Empire District Electric Company

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Empire District's Kansas Energy Efficiency Programs

- **Residential**

- **Central A/C program** provides \$50 rebate for 12 point inspection and tune-up. Customer is eligible for rebates on up to three units per location, and is eligible once every three years. Additionally, if programmable thermostat is purchased from and installed by the same contractor that performed the tune-up, customer is eligible for a \$25 rebate.
- **Central A/C program** also provides rebates for the installation of central a/c units. This can be replacement or new construction and is eligible to both homeowners and landlords. Rebates are \$400 for units with a Seasonal Energy Efficiency Ratio (SEER) rating of 15, \$450 for units with a SEER of 16, and \$500 for units with a SEER of 17 or higher. If a programmable thermostat is purchased from and installed by the same contractor as installed the unit, the customer is eligible for \$25 rebate for the programmable thermostat.
- The **Low-Income Weatherization program** is scheduled to be implemented later in 2011. This program will be funded to the community action agency and will follow the requirements of the federal Low-Income Weatherization Assistance Program.
- Empire also promotes the **Efficiency Kansas Loan Program** on its web site.

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Empire District's Kansas Energy Efficiency Programs

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- **Non-Residential**

- **Commercial & Industrial Rebate program** provides both prescriptive and custom programs to the non-residential customer segment. The prescriptive program provides specific rebates covering specific lighting, small motors, and HVAC units. The custom program is designed for energy efficiency measures outside those provided in the prescriptive program. The maximum annual rebate is \$5,000.
- **Building Operator Certification program** provides training and certification opportunities for facility managers. Empire provides a refund of half the tuition cost upon completion and certification of the program. This program is administered in conjunction with Westar and Midwest Energy Efficiency Alliance.
- **Interruptible program** is a voluntary demand response program available to customers with the ability to reduce load by a minimum of 200 kW upon request by Empire. Customers may select to participate on a one-year, three-year, or five-year basis.

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Electric Cooperatives

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Electric Cooperative Energy Efficiency Programs

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- There are **29 Kansas distribution electric cooperatives** and varying degrees of utility sponsored energy efficiency programs. Common programs include load management systems to control load during specific periods of time, and time of use and other types of rates that would serve to reduce overall usage as well as customer bills. The level of participation, the level of savings by the consumer, varies from cooperative to cooperative and there is no common accepted methodology to quantify savings from these activities.
- Cooperatives also promote and sometimes facilitate the installation of **high efficiency water heaters, heating systems and appliances** which also serve to reduce electric usage from what would have otherwise been used. Some cooperatives have estimates of the energy savings associated with these programs but there is no central repository of this information.
- The **Efficiency Kansas program** was modeled after Midwest Energy's How\$mart® program, which is a much more comprehensive, whole house, energy efficiency program. At this point four cooperatives are in the early stages of participating in Efficiency Kansas as a utility partner, while others are facilitating participation by their members through local banks.

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Midwest Energy

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Midwest Energy's How\$mart® Program

Midwest Energy's How\$mart® program provides money for energy efficiency improvements such as insulation, air sealing and new heating and cooling systems. It is a "whole house" approach that identifies the best energy saving opportunities in both the thermal shell and heating/cooling systems. Participating customers repay the funds through energy savings on their monthly utility bills. (The Efficiency Kansas loan program is based on the How\$mart concept, which Midwest Energy adapted from New Hampshire utilities.)

- **How\$mart® program features include:**

- No up-front capital is required for qualifying investments. (Customers have the option of "buying-down" the cost of non-economic improvements when the projected savings will not cover the entire cost.)
- Monthly How\$mart® surcharge covers the cost of qualifying improvements. The surcharge is always less than the projected savings.
- The How\$mart® surcharge is tied to the location. If customers move or sell the property, the next customer pays the surcharge. (Full disclosure to subsequent customers is required.)

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Midwest Energy's How\$mart Program

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- **How\$mart® program results (Through December 2010; 42 months since pilot program roll-out)**
 - 532 completed projects.
 - Midwest Energy's investment is \$2,910,000 (\$5,479 per project; this excludes program operating costs).
 - Customers have added \$774,000 (\$1,455 per project) to cover non-economic improvements.
 - Projected savings are 930,000 kWh/year and 139,000 therms/year, enough for 93 and 174 homes, respectively. (In other words, when we improve 6 homes, we save enough electricity for one more; improving 3 homes saves enough gas/LP for one more.)
 - Program variations allow for geothermal heating/cooling and commercial lighting upgrades, all included above.
 - 98 of the 532 total projects have used Efficiency Kansas funds totaling \$618,000.
 - The lower interest rate with Efficiency Kansas means that energy savings will justify a larger investment. The savings-justified investment is about \$1,000 more when we can take advantage of Efficiency Kansas funds.

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Midwest Energy's How\$mart Program

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- **How\$mart® has received national recognition:**
 - 2009 "Environmental Innovations in Business" from Environmental Defense Fund
 - 2010 "Ace Award for Outstanding Conservation & Stewardship" from Apogee Interactive
- **Load Management - Midwest Energy introduced 2 peak load curtailment programs in 2010. Customers are given a bill credit for allowing loads to be interrupted up 4 hours per day for up to 20 days per year.**
 - Irrigation Pump Curtailment – Pilot program with 45 pumps resulted in a net load reduction of 1.5 MW.
 - C/I Interruptible Rate – One customer subscribed to load reduction of approximately 1.5 MW.
 - Midwest Energy plans to increase total participation in 2011 to at least 7 MW.

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KEPCo

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KEPCo Energy Efficiency Programs

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KEPCo is a not-for-profit generation and transmission electric utility serving the energy requirements of its nineteen rural electric cooperative members. The efficiency programs offered by KEPCo enable its members to provide various programs and services designed to reduce peak demand and kWh usage.

- **Demand Side Management** – KEPCo implemented its DSM program in 1990. KEPCo, through cooperation and coordination with its nineteen member cooperatives, sheds approximately 8% to 10% of its peak demand each year, resulting in a savings of \$2M to \$4M annually. The amount of savings varies depending upon the peak demand for the year.
- **Energy Efficiency Rebate Program** – KEPCo implemented its Energy Efficiency Rebate Program in the early 1980's. KEPCo provides rebates for electric water heaters with a minimum efficiency of 0.93 (50 gallons or less) and 0.91 (greater than 50 gallons). KEPCo also provides rebates for air source heat pumps and ground source heat pumps that meet minimum Energy Star requirements. For the past ten years, KEPCo has averaged 716 water heater rebates and 408 heat pump rebates annually, resulting in a combined average reduction of 396kW of demand and 79,000 kWh of energy annually.

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KEPCo Energy Efficiency Programs

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- **Together We Save** – togetherwesave.com is the utility industry's first national energy efficiency campaign and is the most far-reaching energy efficiency web site in the country. Through the web site, Touchstone Energy co-ops have access to a fully integrated, high-quality communications portfolio that challenges members to take small steps to save energy and money. The campaign resources motivate changes in behavior with real dollar savings calculations.

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Electric Municipals

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Electric Municipal Energy Efficiency Programs

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- Energy efficiency continues to gain ground among municipal utilities in Kansas. The 119 municipal electric systems continue to explore and implement programs to promote energy efficiency both within their own operations and by working with their resident customers.

Some of the program examples include:

- Industrial energy efficiency assistance;
 - Load management programs;
 - Conferences and workshops for local residents, commercial, and industrial customers;
 - Rebates and financing programs for commercial and residential customers; and
 - Energy audits.
- Municipals are also taking advantage of other organized programs through the State Energy Office (**Efficiency Kansas, Energy Manager Grants, Facility Conservation Improvement Program, and others**) as well as participating in programs like the **Take Charge Challenge** which challenges communities and their residents to reduce energy use through a variety of programs and incentives.
 - With **119 individual municipal electric systems in Kansas**, it is difficult to determine the actual collective results from these energy efficiency efforts and programs. With a wide variety of locally determined initiatives and goals, reporting results are often based upon the varying levels of local participation and local objectives and may not be consistent with other program reporting.

QUESTIONS