Approved: March 24, 2009
Date

MINUTES OF THE HOUSE ENERGY AND UTILITIES COMMITTEE

The meeting was called to order by Chairman Carl Holmes at 9:00 a.m. on February 26, 2009, in Room 783 of the Docking State Office Building.

All members were present except:
Representative Annie Kuether- excused
Representative Cindy Neighbor- excused

Committee staff present:
Melissa Doeblin, Office of the Revisor of Statutes
Sean Ostrow, Office of the Revisor of Statutes
Mary Torrence, Office of the Revisor of Statutes
Mary Galligan, Kansas Legislative Research Department
Cindy Lash, Kansas Legislative Research Department
Renae Hansen, Committee Assistant

Conferees appearing before the committee:
Ernie Lehman, General Manager, Midwest Energy
Mark Schreiber, Westar
Les Evans, KEPCo
Scott Jones, KCP&L
Gregory Flege, BPU
Whitney Damron, The Empire

Others attending:
Twenty-four including the attached list.

Wind Generation and Energy Efficiency in Kansas

Ernie Lehman, General Manager, Midwest Energy, (Attachments 1 & 2), spoke to the committee about their involvement in wind and noted they will have no problem having 20% of their energy supplied by wind. Additionally, Mr. Lehman shared with the committee how Midwest Energy is helping their customers with energy efficiency.

Questions were asked by Representative Tom Sloan.

Mark Schreiber, Westar, (Attachment 3), presented information to the committee on the wind and energy efficiency that are part of Westar's energy mix. He noted that one of their key strategies for the near future is to aggressively pursue energy efficiency and demand-side management programs.

Questions were asked by Representatives: Tom Sloan, Margaret Long, Vern Swanson, Forrest Knox, Carl Holmes, and Joe Seiwert.

Les Evans, KEPCo, (Attachment 4), gave a presentation on wind and energy efficiency and its' integration in their members' energy strategy plan. He also offered some basic information on where their power supply is purchased from, and the break down in the source of energy. He noted that their goal is to minimize their peak demand, as that minimizes the amount of peak costs.

Scott Jones, KCP&L, (Attachment 5), presented information to the committee on KCP&L's wind and energy efficiency commitment. He began by talking about KCP&L's comprehensive energy plan. Of note are the $1.1 million dollars in energy savings for Kansans with the implementation of energy efficiency programs used within KCP& L's Kansas footprint.

Gregory Flege, BPU, (Attachment 6), offered information to the committee on the projected loads needed for their demand footprint, and production anticipated for the next ten years, with break outs noted for renewable resources. Additionally, he noted ways BPU is implementing energy savings programs in their personal office spaces as well as helping residential and commercial/industrial consumer customers.

Minutes of the House Energy And Utilities Committee at 9:00 a.m. on February 26, 2009, in Room 783 of the Docking State Office Building.

Whitney Damron, The Empire, (Attachment 7), spoke to the committee on Empire's wind energy mix and energy efficiency programs enacted by the company.

Questions were asked by Representatives: Tom Sloan, Carl Holmes, and Vince Wetta.

The Chairman noted the plan for the committee the next two weeks, with information about the tours that are planned for the next two Fridays.

The next meeting is scheduled for February 27, 2009.

The meeting was adjourned at 10:47 a.m.

HOUSE ENERGY AND UTILITIES COMMITTEE
GUEST LIST

DATE: February 26, 2009

NAME	REPRESENTING
LES EVANS	KERC.
GREG FLEE	KCBPU
Darrell J. Calhoun	BPU
PHIL WAGGS	KCPCo
LARRY BERG	MIDWEST
Mark Hartnett	CEP
Scott Jones	KCPL
Whitney Damron	Empire
Tom KREBS	KASB
Joe Dulle	KCBPU
Dennis Kriesel	Kansas Association of Counties
Jason Dorland	Pinegar + Smith
Matt Casey	GIA
Earnie Lehman	Midwest Energy
Kimberly Svaty	KMU
Mark Schreiber	Westar
Paul Johnson	Ks. Cath Conf
Mari Tucker	Ks Dept of Commerce
[illegible]	KMHA

HOUSE ENERGY AND UTILITIES COMMITTEE
GUEST LIST

DATE: February 26, 2009

NAME	REPRESENTING
Stacey Harden	CURB
Tom Day	KCC
Wes Ashton	Black Hills Energy
Tom Thompson	Sierra Club
Dave Holthaus	KEC

Midwest Energy, Inc.

1330 Canterbury Road
P.O. Box 898
Hays, Kansas 67601-0898
(785) 625-1400
1-800-222-3121
Fax (785) 625-1494
www.mwenergy.com

Earnest A. Lehman, President and General Manager

Report Submitted by Earnie Lehman to the
House Energy and Utilities Committee Concerning
Midwest Energy's Renewable Energy and Energy Efficiency Activities

February 26, 2009

Mr. Chairman and members of the Committee, thank you for the opportunity to appear before you today. I am Earnie Lehman, President and General Manager of Midwest Energy, Inc., a customer-owned gas and electric utility serving 90,000 customers in 41 counties of central and western Kansas. We occupy a unique niche among Kansas utilities. We are the largest retail electric cooperative, the smallest natural gas utility, the only combination utility and, I'm pleased to say, a utility in the vanguard of promoting renewable energy and energy efficiency.

I was one of six utility CEO's who met with the Governor early in 2007 to announce our voluntary commitment to expand the amount of wind energy available to our customers. We committed to having nameplate wind energy capacity equal to 10% of our 2010 retail peak demand and 20% of our 2020 peak demand. This commitment paralleled a policy endorsed by our customer-elected Board of Directors that Midwest Energy should incorporate wind energy into its power supply up to the point where it would increase costs to customers. With rising costs for power supply due to the expiration of existing contracts, multi-year delays in securing long-term baseload generation resources and likely increasing dependence on natural gas for generation, we believe it will be economical to buy increasing amounts of wind energy in the years ahead, even though we will still need additional generating capacity to operate when the wind isn't blowing.

Midwest Energy currently utilizes 49 MW of wind energy from the Smoky Hill Wind Farm. This may not sound like much, but when compared to our approximate 300 MW retail peak load, it's over 16%, the top percentage among Kansas electric utilities. We are blessed to serve an area with abundant wind resources, yet cursed with transmission that wasn't designed to export wind energy, like most of Kansas and the nation. Since we can use locally-produced wind energy, Midwest Energy anticipates meeting its 20% commitment well before 2020, as we met our 10% commitment two years early.

There is a retail aspect to wind energy that is not lost on this committee. It's hard for customers to make informed choices about whether and how much wind energy may be suitable to serve them. That's why Midwest Energy is holding 16 community meetings in all corners of our electric service territory. We're getting good reviews from these meetings as being an unbiased source of information. Since our customers own us, we can ask for no higher praise. Even though we currently have a number of small wind generators hooked to our system, we have not attempted to count them, or the installations to come, against the 20% commitment we've made to the Governor and to the State of Kansas. Wind energy has a bright future in the large though sparsely populated regions of Kansas that we serve.

Now let's turn to energy efficiency. For many years, our customers have heard us speak of "Making Energy Work for You". We put these words into action with our trained and certified team of energy advisors and an increasing range of programs designed to conserve energy and use energy more efficiently. We've been doing this for as long as Midwest Energy has existed, even after other, larger utilities stopped offering such services in the 1980's and 1990's.

Our "traditional" services, all offered by Midwest Energy employees, include the following:

Blower door tests – to measure air infiltration.

HOUSE ENERGY AND UTILITIES
DATE: 2/26/2009
ATTACHMENT 1-1

Home energy ratings – state-certified ratings and estimates of home energy use.

HVAC sizing based on estimated heat losses and gains within the structure.

Building infrared scanning to measure heat losses.

Process infrared scanning to detect equipment problems.

Commercial energy audits.

Duct leakage tests.

Combustion analysis to measure furnace efficiency.

Customers are often reluctant to make energy efficiency investments. This is particularly true for low-income households and tenant-occupied properties. That's why, beginning in late 2007 and with the help of legislation endorsed by this committee, we initiated the How$mart[sm] program, through which residential and small business customers can benefit from no upfront cost improvements to their home or commercial building, paying for such improvements by forgoing part of the energy savings on future monthly gas or electric bills.

We're pleased the Kansas Housing Resources Corporation supports our program by allowing us to blend zero cost funds with Midwest Energy funds resulting in an approximate 4% cost of capital for funding How$mart[sm] projects. We don't seek an incentive return on our energy efficiency investments. We'd rather reduce the required return so as many customers as possible can take advantage of this program.

We begin the process by performing a comprehensive Conservation Audit. So far about 50% of Conservation Audits have resulted in a HowSmart[sm] project. We have 124 completed projects with an investment of $613,000. Would you believe that for every five homes where we've completed a How$mart[sm] project, we've saved enough energy to meet all the energy needs of an existing home? It's true.

On average, the customer is paying $39.90 per month and receiving $49.13 in savings. An additional 250 Conservation Audits have been completed and await a customer decision to proceed. The pace of activity has expanded dramatically as we've trained employees and mailed letters to customers in several communities. These efforts to expand the percentage of customers taking advantage of How$mart[sm] will continue.

In 2009 we intend to roll out two new programs, How$mart Light[sm] for commercial lighting and How$mart GT[sm] for geothermal loops for residential customers. We'll be filing the necessary tariffs with the KCC in the near future. Later we want to tackle commercial motors. It is difficult for me to predict all that we can accomplish in the next seven years, but I can assure you energy efficiency will remain a core competency and an area of ever greater focus by Midwest Energy.

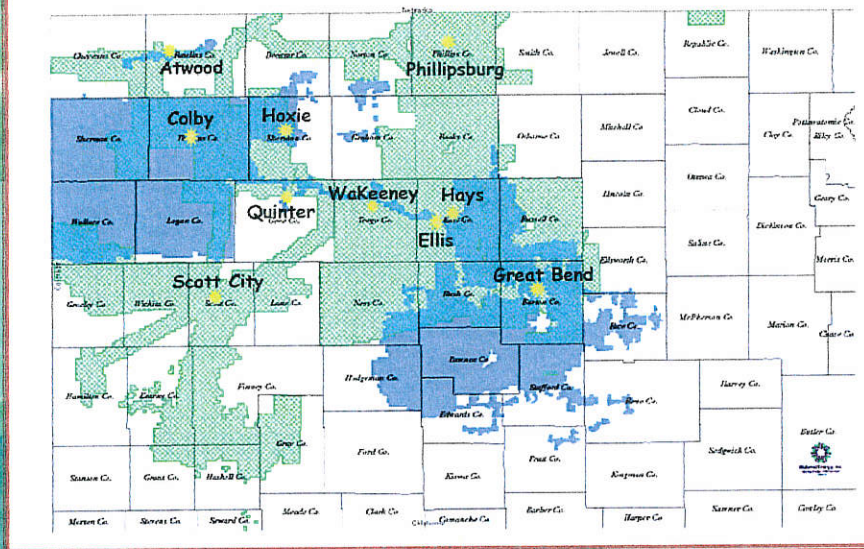
Finally, I'd like to share with you our plans to work with the Climate and Energy Project. Two of the communities we serve, Kinsley and Quinter, are among six Kansas communities that will engage in a friendly but intense year-long competition termed the Take Charge Challenge. We're working with teams of local residents to promote widespread adoption of energy saving and energy efficiency measures in the community. The town that reduces its energy use by the largest percentage will win the Take Charge Challenge - and receive a wind turbine for its school, or solar panels for its civic buildings.

Traditionally Midwest Energy, like other utilities, has worked to minimize rates to customers. That's still important. But as traditional sources of electricity supply are lost to us, and as concern about the environment and now even the economy has grown, we're committed to minimizing bills. We thank this committee, the legislature and the administration for their support of our efforts.

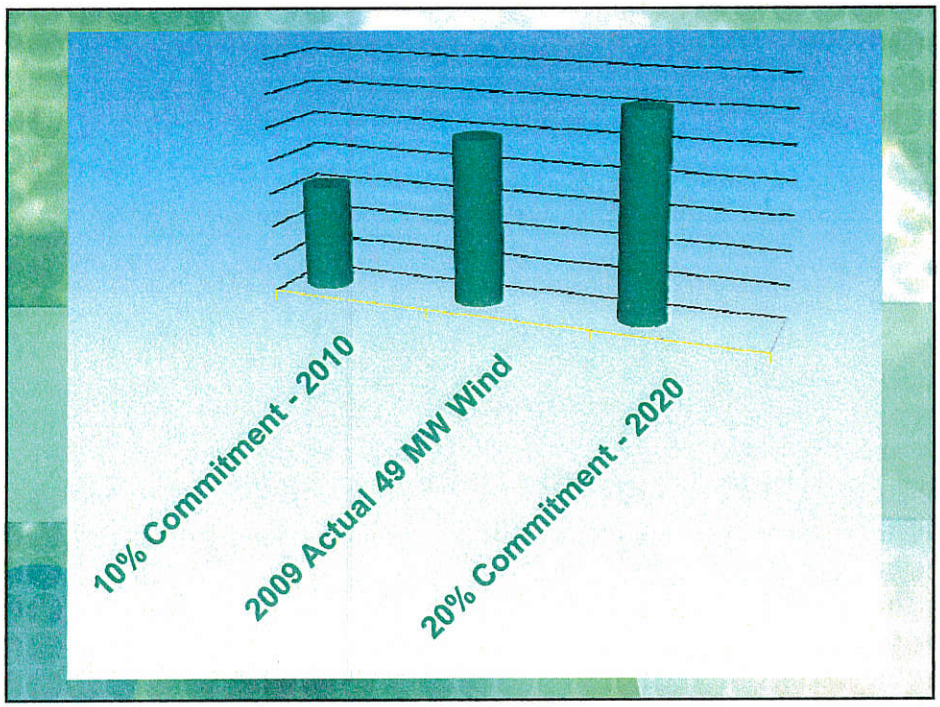
MIDWEST ENERGY, INC.

"Making Energy Work For You"

Midwest Energy Service Territory



HOUSE ENERGY AND UTILITIES
DATE: 2/26/2009
ATTACHMENT 2-1



Community Meetings

Larned
December 16th

Colby
February 9th

Hays (2)
February 17th

WaKeeney
February 26th

Hoxie
March 9th

Lyons
March 23rd

Hanston
April 6th

LaCrosse
April 20th

Oakley
February 16th

Goodland
February 23rd

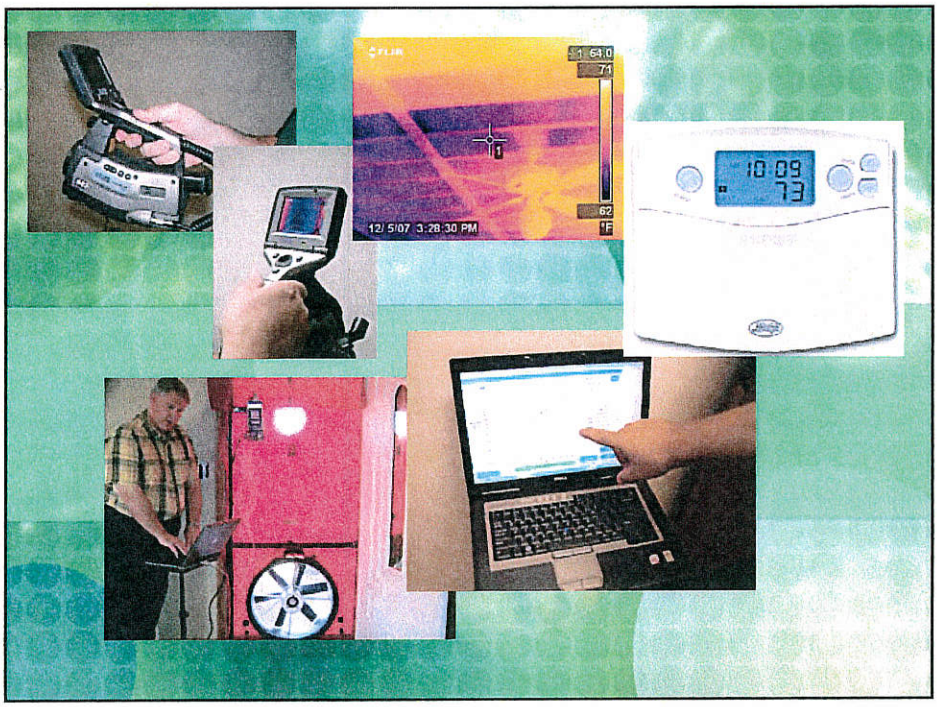
Atwood
March 3rd

Quinter
March 16th

Great Bend
March 30th

Russell
April 13th

Kinsley
April 28th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MIDWEST ENERGY, INC.
"Making Energy Work For You"

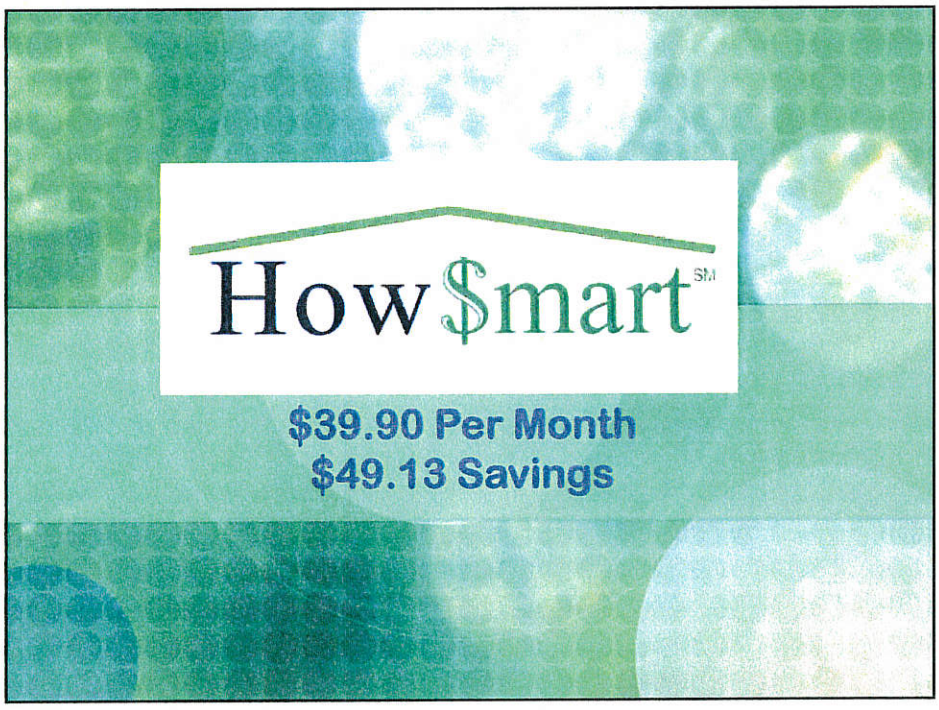
How$mart℠

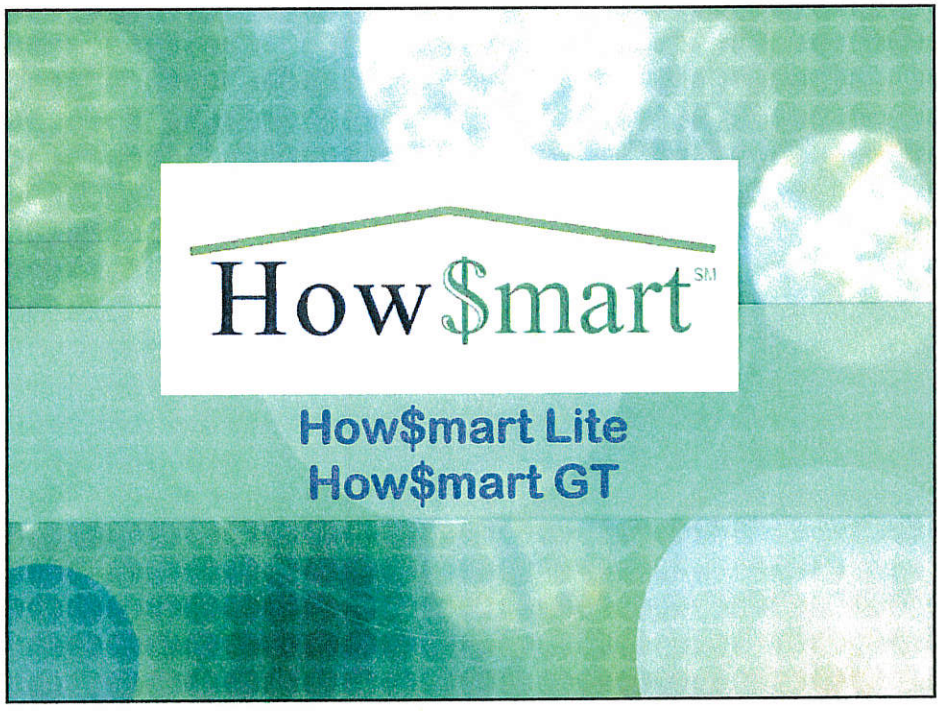
- Residential & Small Business
- No Upfront Costs
- Paid Through Savings ON Utility Bills

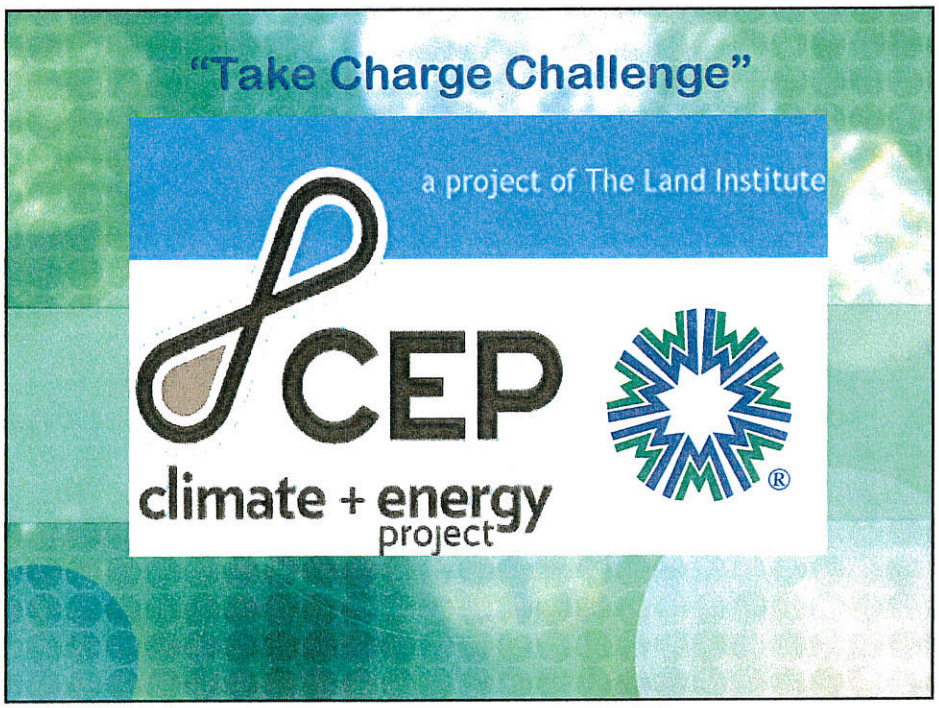
How$mart

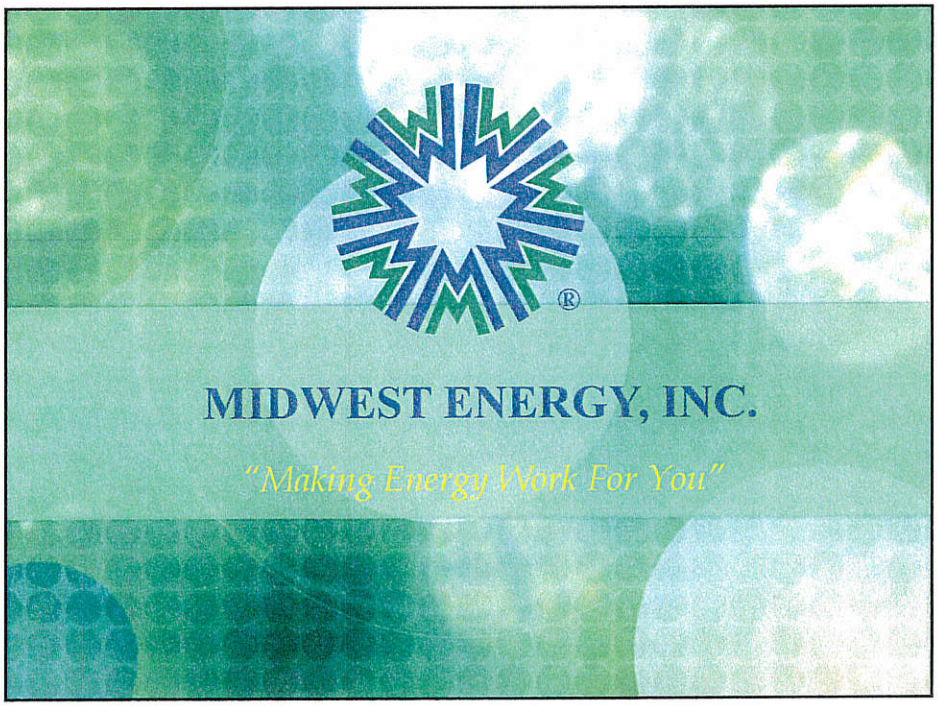


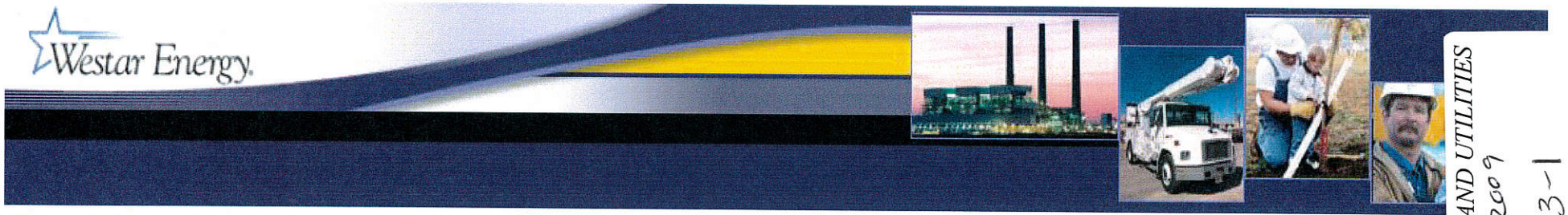




How$mart℠
$39.90 Per Month
$49.13 Savings


How$mart℠
How$mart Lite
How$mart GT


"Take Charge Challenge"
a project of The Land Institute
CEP
climate + energy
project


MIDWEST ENERGY, INC.
"Making Energy Work For You"



Wind Energy/Energy Efficiency Update

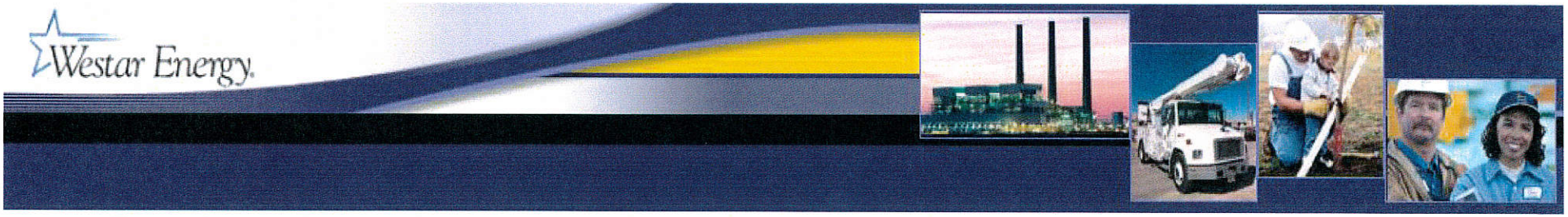
For House Energy and Utilities Committee

By Mark Schreiber
Westar Energy

February 26, 2009

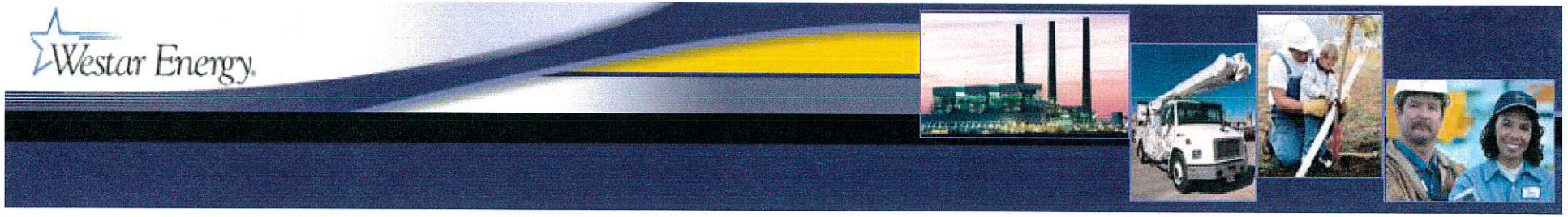
Strategy

- Aggressively pursue energy efficiency and demand-side management programs
- Adding wind and gas peaking resources for the near term
  - Delay the need for baseload coal as long as possible
  - Allows more time for new technologies to become commercially viable
- Review feasibility of siting new coal, efficient natural gas and nuclear units in Kansas



Wind Energy

- Currently, 295 MWs are installed
  - Meridian Way (south of Concordia) – 100% purchased power agreement (PPA) with Horizon Wind Energy (96 MWs)
  - Central Plains (east of Leoti) – 100% owned by Westar Energy (99 MWs)
  - Flat Ridge (east of Medicine Lodge) – 50% owned by Westar Energy and 50% PPA with BP Alternative Energy (100 MWs)

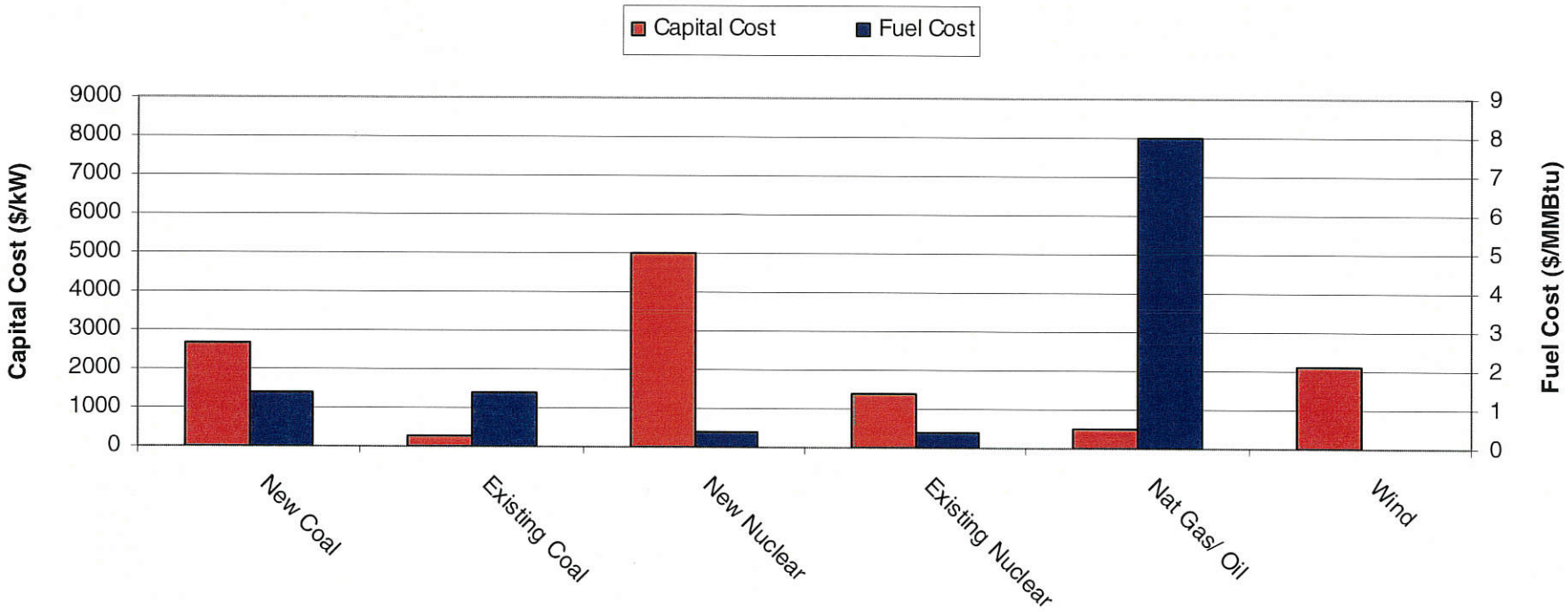


Wind Energy (cont.)

- February 12 issued an RFP for up to 500 MW of Renewables (likely wind) in operation by late 2013, with 200 MW operational by late 2010.
- Decision to build will depend on what makes sense for our customers and investors.
- If we added another 500 MW of wind to the existing 295 MW, we would have approx. 16% renewables on our system, based on 2008 retail peak load.

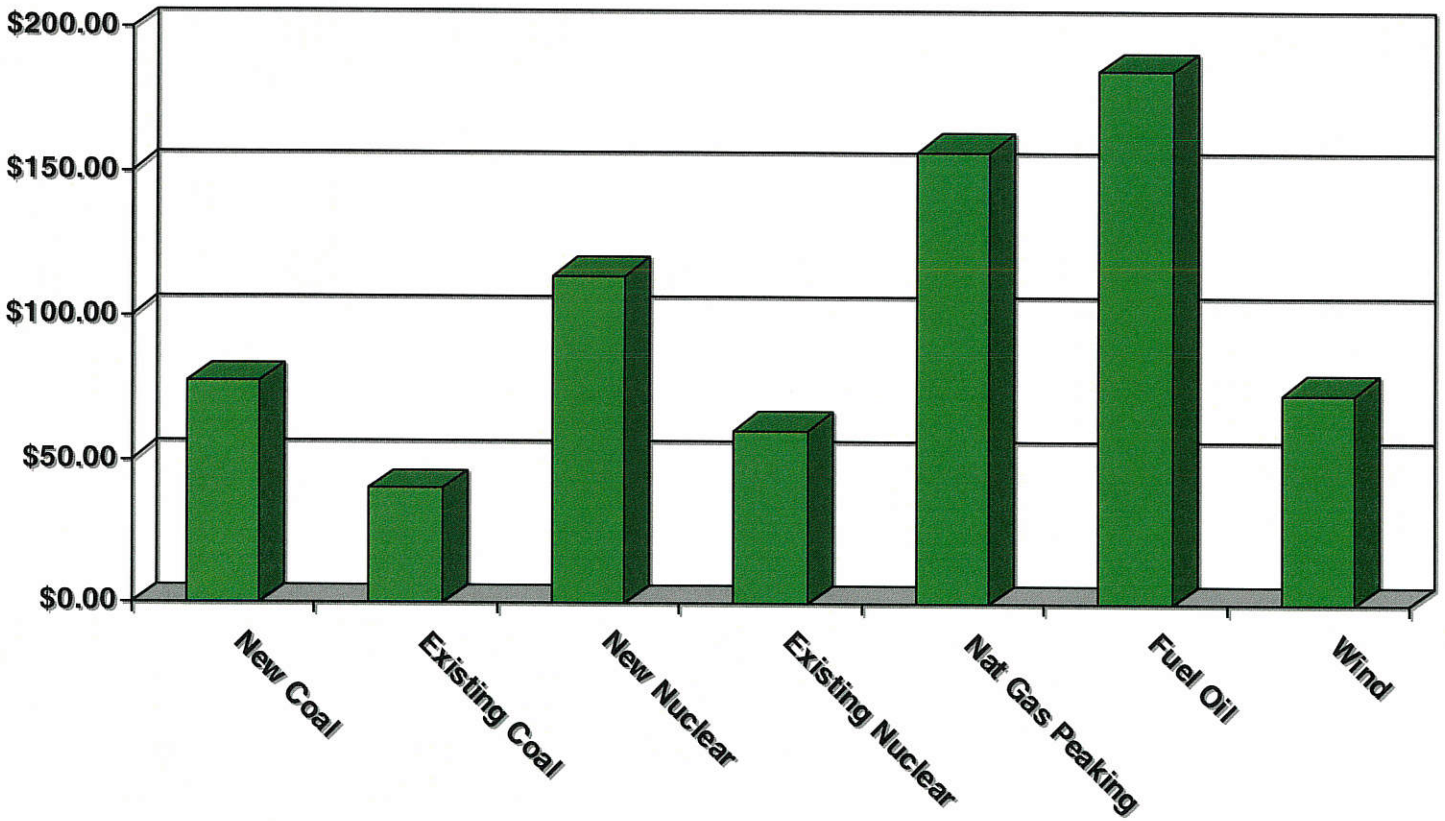
Westar Energy

Capital Cost vs. Fuel Cost



Westar Energy.

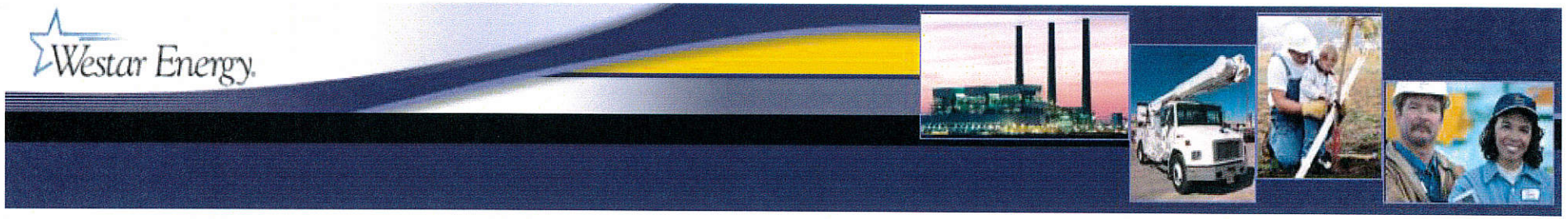
Total Production Cost By Type of Generation



Westar Energy

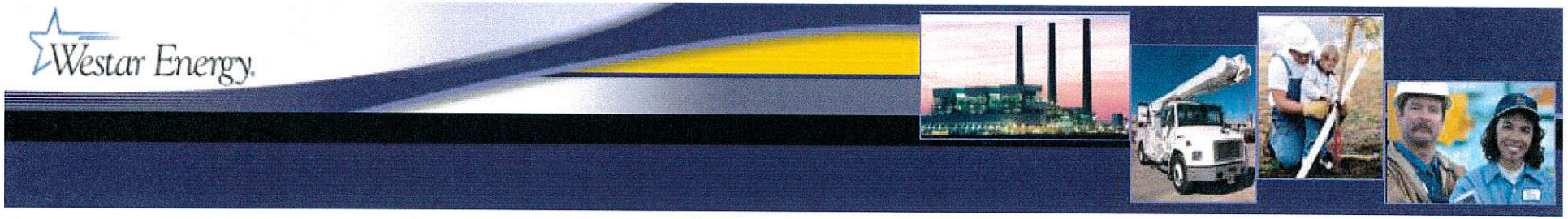
Cost of New Wind Generation

- More expensive than cost of <u>existing</u> Westar generation
  - ~$45/MwH for wind vs. ~$35/MwH for existing Westar generation
- Less expensive than cost of <u>new</u> generation -
  - ~$45/MwH for wind vs. ~$60 - $150/MwH for new generation
- Wind is intermittent but our needs for electricity are not!



Energy Efficiency/DSM

- The key to success for energy efficiency is changing customers' energy use behavior.
- Westar Energy is focused not only on current customers, but also our youth.
- We offer:
  - Energy Efficiency for Schools program
  - Speakers Bureau for community groups, trade shows
  - Website for online info and energy calculators



Energy Efficiency/DSM (cont.)

- WattSaver (programmable thermostat). Filed tariff with KCC in mid-February. Aggressive goal is 90,000 installed in seven years.
- Building Operator Certification (BOC) program. Technical training for facility managers.
- Heat pump program for replacement and new build markets.
- Builder program promoting energy efficient construction methods.
- Colwich Switch
- Low income weatherization program. 750 homes this fall.

Westar Energy.

Energy Efficiency/DSM (cont.)

- Interruptible program that has provided as much as 200 MW avoided capacity.
- Advanced Metering Infrastructure (AMI)
  - Planning continues in 2009
  - Supports time of use rates, real-time pricing and other DSM programs
  - Enhances service restoration
  - Gives customers information to make energy decisions
  - Supports net metering

KEPCo Overview

Wind, Energy Efficiency/Conservation & Demand Side Management

Kansas House Utilities Committee
February 26, 2009

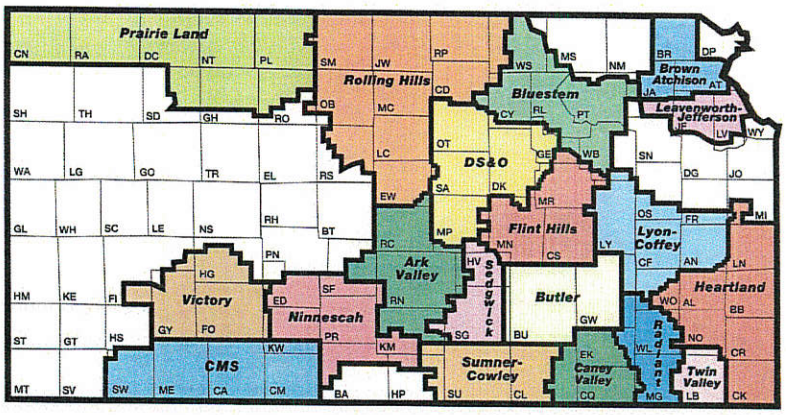
Les Evans
Vice President, Power Supply
KEPCo

Overview

- KEPCo Background
- KEPCo Power Supply
- Wind in KEPCo Power Supply
- Energy Efficiency / Conservation
- Demand Side Management
- Questions

HOUSE ENERGY AND UTILITIES
DATE: 2/26/2009
ATTACHMENT 4-1

Member Service Area



KEPCo is comprised of 19 Member Coops
Serving approximately 115,000 Customer Meters

KEPCo Power Supply

- Strategic Power Supply Goals
  - Avoid exposure to the Market
  - Reduce volatility
    - Long-term stable power supply strategy
  - Own generation when prudent
  - Long term PPA's
    - Existing generation at Cost Based Rates
    - Spread reliability risk over many shafts
  - Cost effective incorporation of renewables
    - Access through terms in PPA's
    - National Renewable Cooperative Organization
      - Based on Cooperative Principles (non-profit / Member owned)
      - Participation based on individual Coop needs / requirements
  - Diversified and balanced Power Supply
    - Current portfolio minimizes greenhouse gas emissions
      - (30% nuclear, 20% hydro)
    - Incorporates Demand Side technology in Power Supply Planning process
      - Member Load Management Programs

KEPCo Power Supply

RESOURCE	OWNERSHIP	FUEL	TYPE	MW	TERM
Wolf Creek	6%	N	B	70	2045*
Sharpe	100%	O	P	20	2032
SWPA	PPA	H	I	100	2016
WAPA	PPA	H	B	14	2024
Westar	PPA	C/N/G/O	B/I/P	188	2045
Sunflower	PPA	C/G/O/W	B/I/P	50	2018
KCPL	PPA	C/N/G/O	B/I/P	16	2012
Total				458	

* With 20 year license extension currently being reviewed by NRC

N = Nuclear
C = Coal
G = Gas
O = Oil
H = Hydro
W = Wind

B = Base
I = Intermediate
P = Peaking

Wind in KEPCo Power Supply

- KEPCo's new 38 year formula based rate agreement with Westar will provide access to wind
  - Cost effective
    - Economies of scale for construction
    - Economies of scale for on-going operation
  - Westar provides integration (dealing with the intermittence)
    - Scheduling / balancing
    - Integration with KEPCo's other resources
- Additional sources
  - National Renewable Cooperative Organization
  - Purchase Power Agreement (PPA)
  - Ownership (KEPCo can't use Production Tax Credit)

Wind in KEPCo Power Supply

- KEPCo will receive pro-rata share of wind from Westar through formula based rate agreement
  - KEPCo's purchase represents ≈ 4% to 5% of Westar retail peak
  - With Westar @ 295MW wind – KEPCo share ≈ 12MW
  - With Westar @ 800MW wind – KEPCo share ≈ 33MW
- KEPCo 2008 Peak Demand = 407MW
  - KEPCo 12MW wind = 3% peak load
  - KEPCo 33 MW wind = 8% peak load

KEPCo Renewable Mix

- KEPCo's combined renewable (wind + hydro) as a % of peak load:
  - Wind: 8% (33 MW)
  - Hydro: 28% (114 MW)
  - Total: 36% (147 MW)
- KEPCo's total energy mix currently **50%** non greenhouse gas emitting AND will be approaching **60%** with addition of wind
  - Nuclear: 30%
  - Hydro: 20%
  - Wind: 6%

    56%

KEPCo Energy Efficiency / Conservation

- KEPCo is Wholesale Power Supplier to 19 local distribution coops (REC's)
  - REC has relationship with individual retail customer
  - KEPCo can provide centralized programs where it makes sense
- KEPCo is planning Energy Efficiency / Conservation retreat in 2009 for Board of Trustees

KEPCo Energy Efficiency / Conservation

- Both KEPCo and Member Coops offer Energy Efficiency / Conservation incentives
- Current program structured to incent Customer to install devices with high efficiency ratings
- KEPCo offers incentives for:
  - Heat pumps – nearly 300 annually (1/3 ground source)
  - Water heaters – nearly 700 annually
- Since inception in 1980's KEPCo has provided:
  - Over 6,000 heat pump rebates
  - Over 14,500 water heater rebates

KEPCo Demand Side Management

- Load Management Program – since early 1990's
- Each KEPCo Member incented through rate structure to reduce demand during peak hours
- Members
  - Rate incentives
  - Public Service Announcements
  - Automated load control
- Many Member Coops have incorporated Automated Metering Technology
- KEPCo estimates that peak demand is reduced by 8% to 9% through Load Management

Questions?

Les Evans
Vice President Power Supply
(785) 271-4839
levans@kepco.org

Wind Generation and Energy Efficiency

Presented to

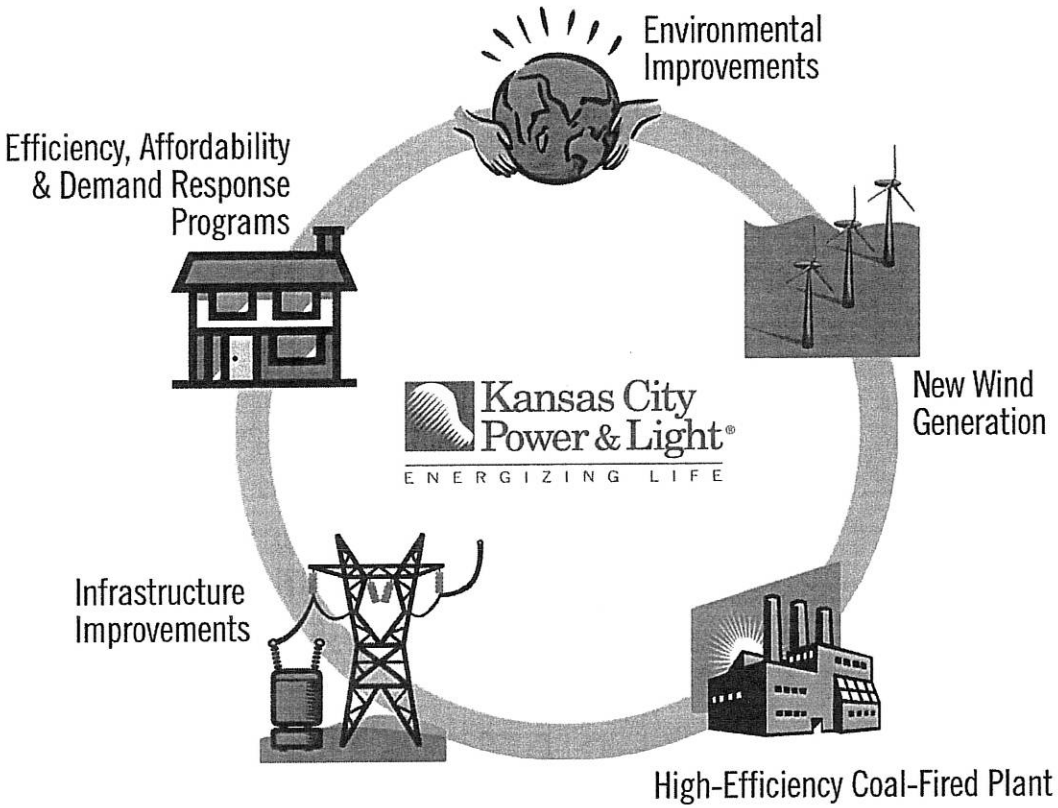
House Energy and Utilities Committee

February 26, 2009

Scott Jones – KCP&L
Manager, Kansas Government Affairs

KCP&L
energizing life.

Comprehensive Energy Plan ("CEP")



The Benefits:

- Collaborative process that included all constituents
- Affordable energy to fuel long-term growth
- Environmental improvements to keep our area's air clean
- Jobs plus affordable energy to support economic growth

S-2

KCP&L energizing life.

Wind and Energy Efficiency Commitments

- Spearville – 100.5 MW
  - In service 2007
- Sierra Club commitment:
  - 100 MW wind by 12/31/10
  - 300 MW wind by 12/31/12
  - 100 MW EE by 12/31/10
  - 200 MW EE by 12/31/12
- State and Federal requirements will also drive KCP&L investments

KCP&L energizing life.

Spearville Statistics

- Total Installed Capacity - 100.5 MW
- Installed Cost - $161.9 Million
- Total Acres - > 5000
- Number of Turbines – 67
- Manufacturer – General Electric
- Rated Capacity – 1.5 MW Each
- Tower– 80 m (262 ft) to Hub
- Rotor Diameter – 77 m (256 ft)
- Blade Length – 37 m (121 ft)
- Total Height – 119 m (391 ft) [Power & Light Building is 481 ft tall]
- Rated Wind Speed – 12 m/sec (26 mph)
- Rotor Speed – 10.1 - 20.4 rpm
- Avg. Tip Speed at Full Output – 138 mph

KCP&L energizing life.

S-4

KCP&L's Energy Efficiency Pilot Programs

KCP&L
energizing life.

Energy Efficiency and Demand Response Programs

- **Affordability Programs**
  - Programs are designed to assist low income customers who have limited, if any, resources to invest in energy efficiency.
  - Targets both the retrofit and new construction markets.
  - Total 5 year budget is $3.2M with 1,950 estimated participants triggering 661 kW savings and 2.6M kWh savings over this 5 year period.
- **Energy Efficiency Programs**
  - Consist of informational and direct impact energy efficiency programs designed to reduce energy usage.
  - Targeted to all customer classes, and targeted to both the retrofit and new construction markets.
  - Total 5 year budget is $27M with 155,280 estimated participants triggering 30,165 kW savings and 74.8M kWh savings over this 5 year period.
- **Demand Response Programs**
  - Targeted to reduce peak demand rather than energy usage.
  - The Energy Optimizer program is targeted to residential and small commercial customers while the MPower program is targeted to large commercial and industrial customers.
  - Total 5 year budget is $27.3M with 30,483 estimated participants triggering 170,320 kW savings and 6.8M kWh savings over this 5 year period.

KCP&L energizing life.

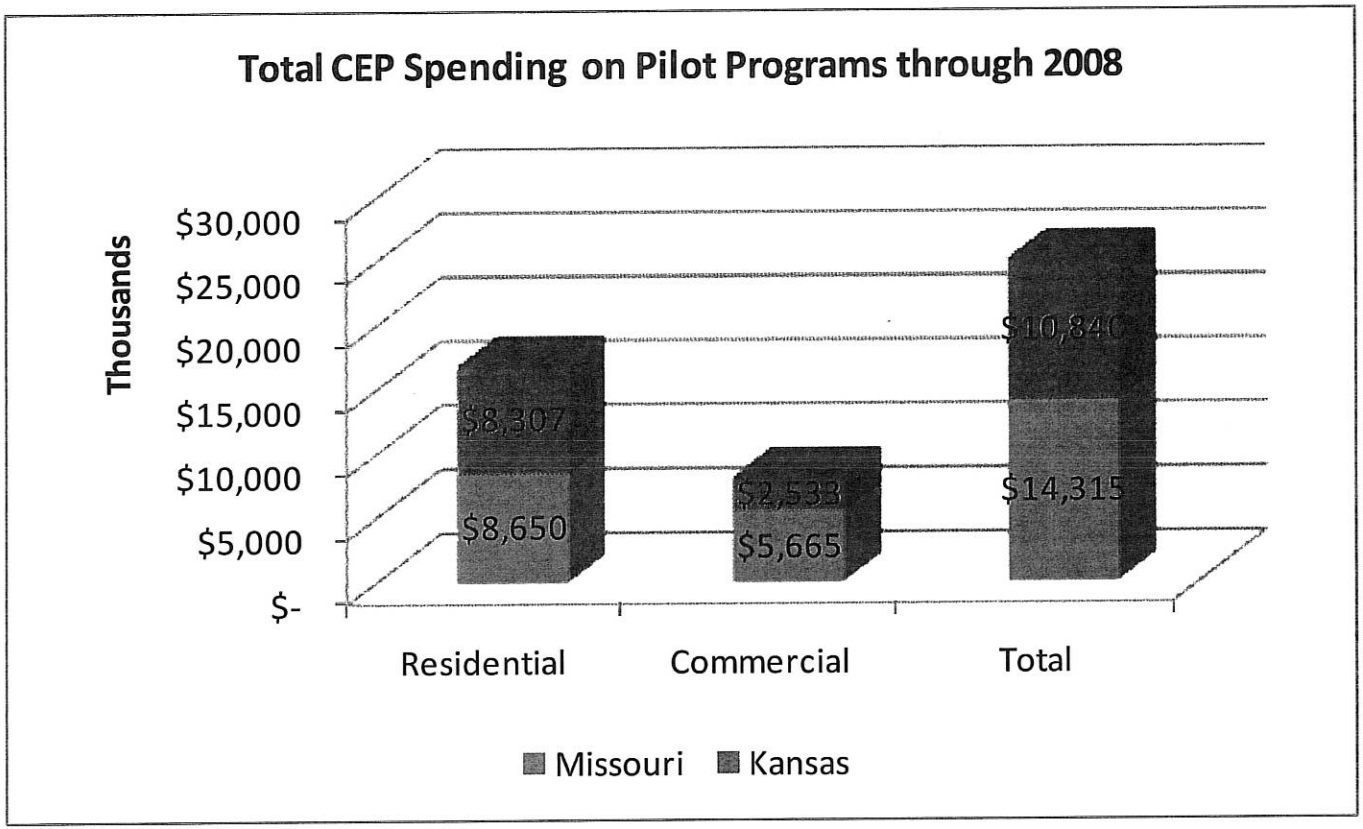
5-4

Energy Efficiency and Demand Response Pilot Programs

- **Affordable New Homes**
  - Energy efficient affordable new housing for the low-income community
- **Low Income Weatherization**
  - Works directly with local Community Action Program agencies
- **Home Performance with Energy Star®**
  - Home energy audits using ENERGY STAR brands to encourage improvements
- **Cool Homes**
  - Rebates for replacement of SEER 6 to 8 equipment with SEER 14 or higher
- **Energy Star New Homes®**
  - New homes constructed at least 15% more efficient than 2004 Intl. Residential Code
- **Home/Business Energy Analyzer**
  - On-line energy analyzer with ways to save energy and estimated paybacks
- **Commercial & Industrial Rebates**
  - Rebates for new or retrofit energy savings equipment
- **Building Operator Certification**
  - Train facility operators in efficient building operations and management
- **Energy Optimizer**
  - Programmable thermostat with ability to reduce A/C loads during peak summer days
- **MPower**
  - Large customers curtail usage during summer months when high electric demand occurs

KCP&L's Program Investments

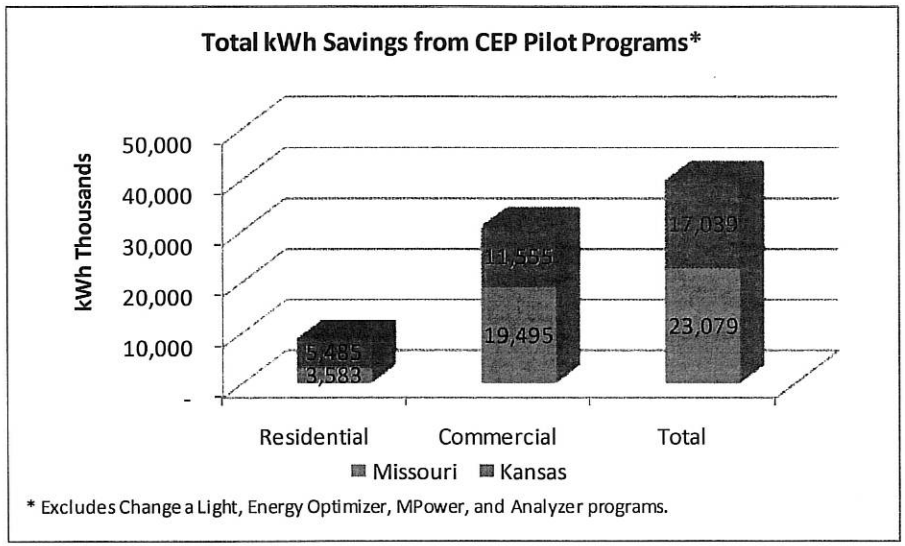
- To date, our programs have generated over $25 million of investments in energy efficiency within Missouri and Kansas.
- Of this, nearly $11 million was spent in the Kansas territory.

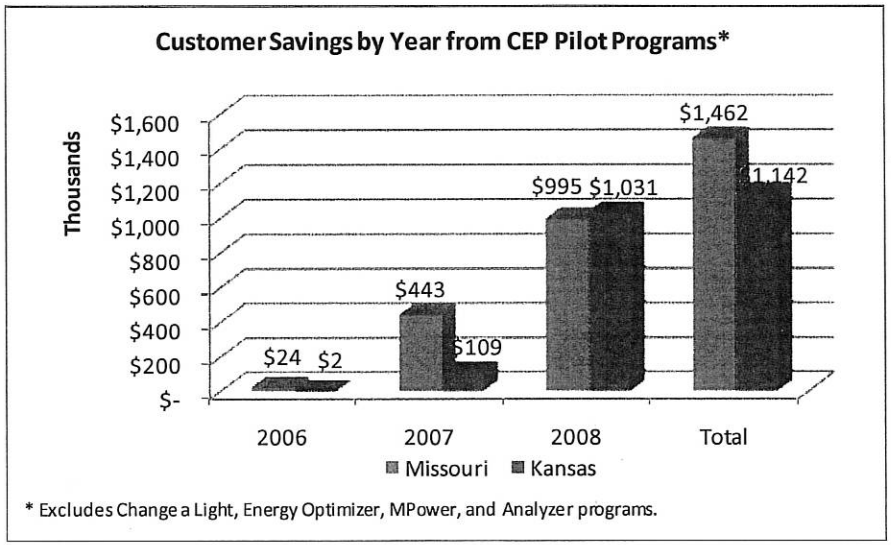


KCP&L energizing life.

8-5

Lower Energy Bills, Greater Customer Control, and Greater Customer Satisfaction





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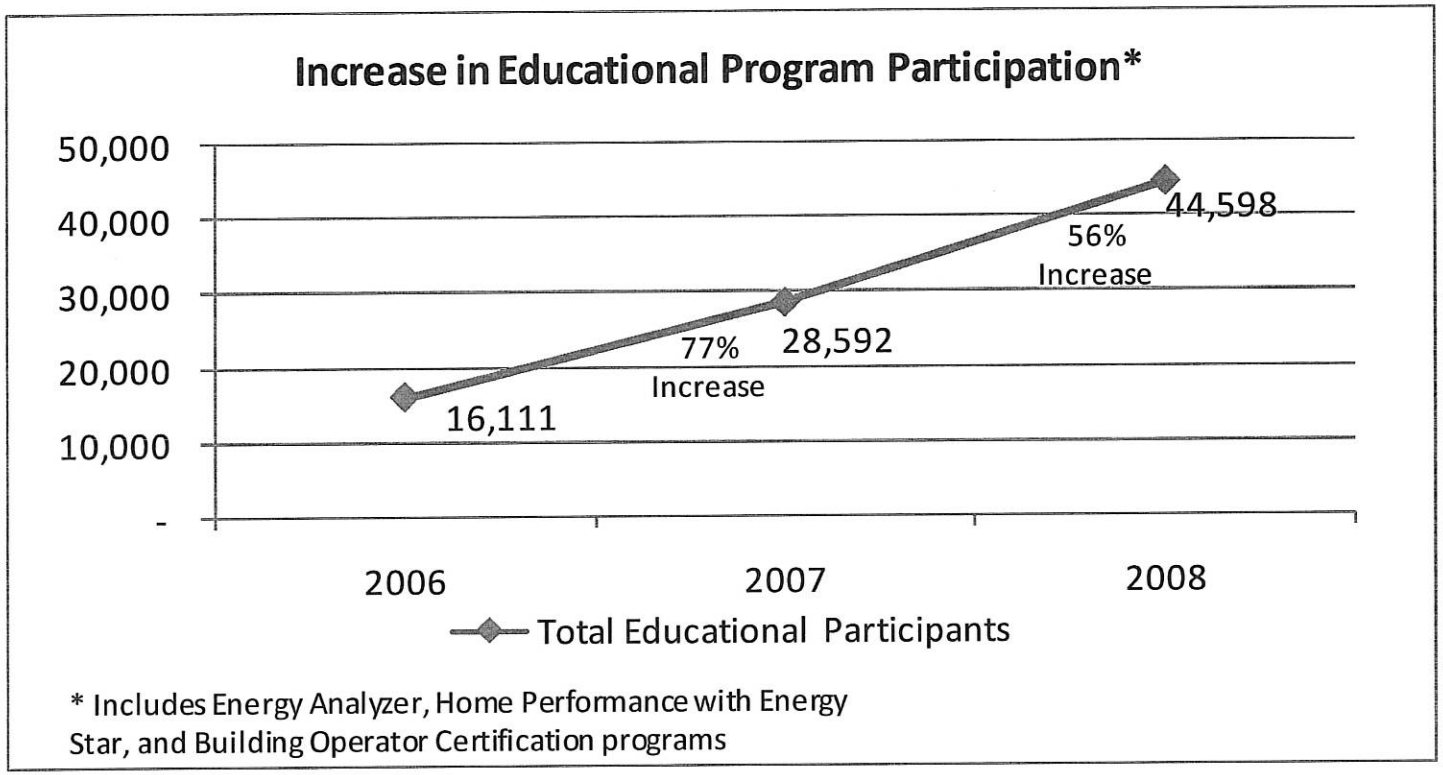
Greater Customer Control

Our programs are providing customers with a greater ability to take control of their usage through increased educational awareness of their energy usage.



* Includes Energy Analyzer, Home Performance with Energy Star, and Building Operator Certification programs

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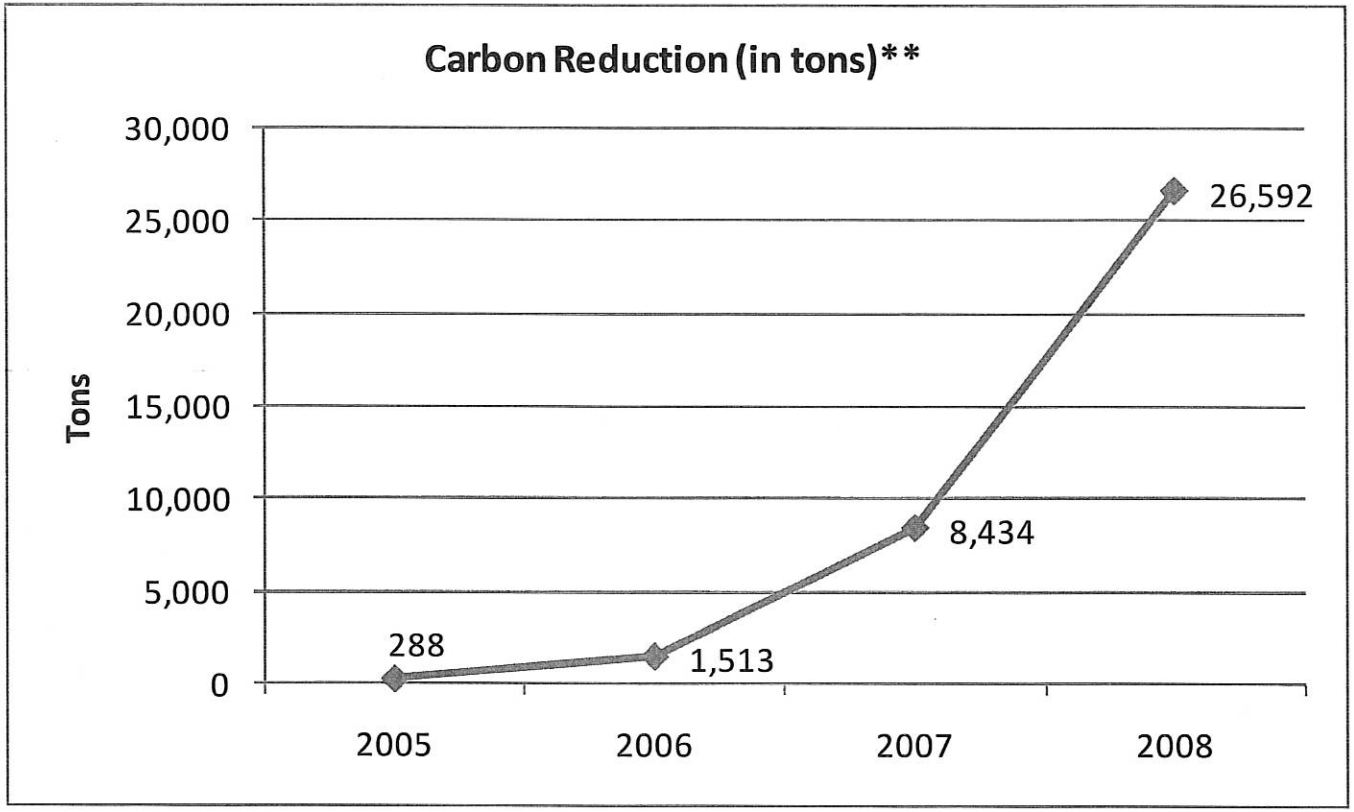
01-5

Carbon Reduction from KCP&L's DSM Pilot Programs

Our Energy Efficiency programs have generated carbon savings equivalent to taking over 4,200 mid-sized cars off the roads each year *



** A mid-sized 30 mpg car driving 12,000 miles/year will create about 6.3 tons of CO2/year*

*** Illustrates the tons of carbon reduced through DSM programs assuming 0.8 tons/MWh*

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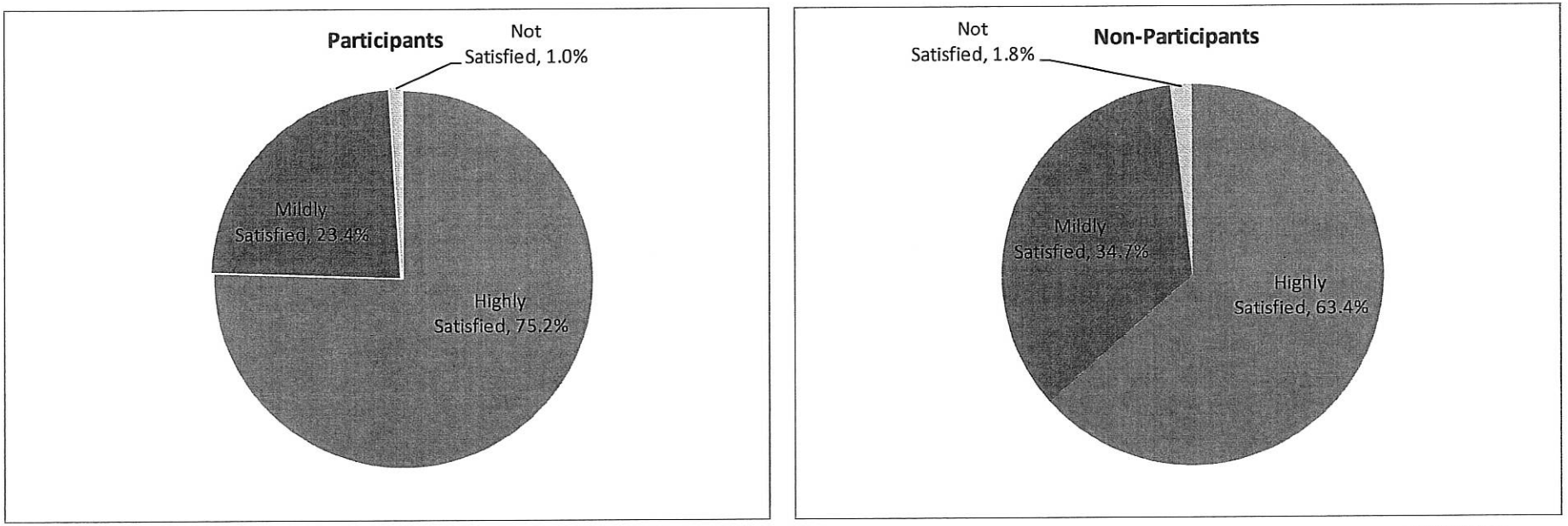
Participant Increase in Customer Satisfaction

- **According to a recent JD Powers survey:**
  - KCP&L customer satisfaction is 14% greater among customers who are aware of KCP&L's plans to offer additional energy efficiency programs compared to customers unaware of such plans.
  - KCP&L customer satisfaction is 33% greater among customers with familiarity to KCP&L's energy efficiency programs compared to customers unfamiliar to the programs.

Level of Satisfaction with KCP&L by Participation



Source: Stax web survey, July 2008.

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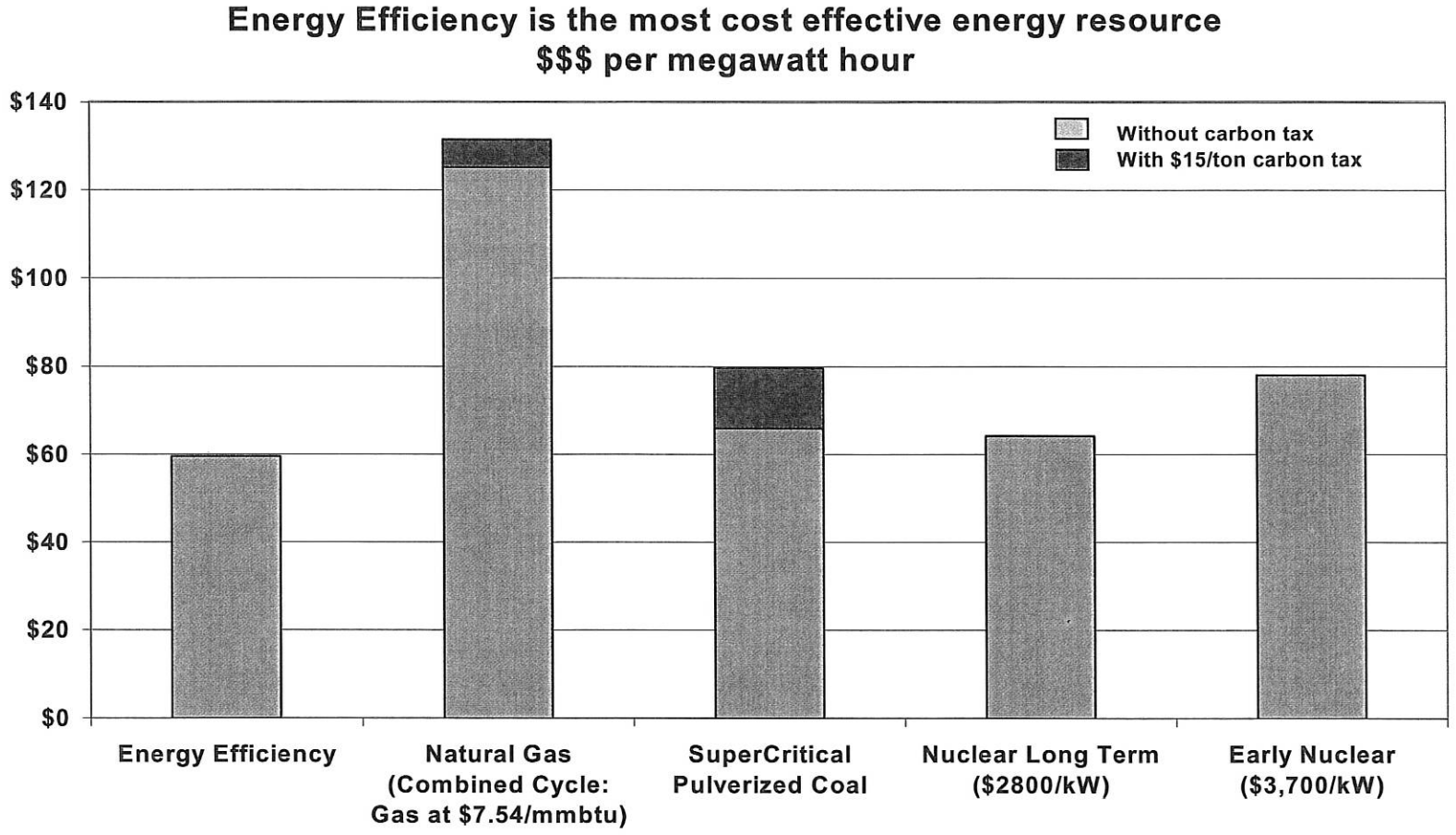
Energy Efficiency Costs Less than other Supply Options



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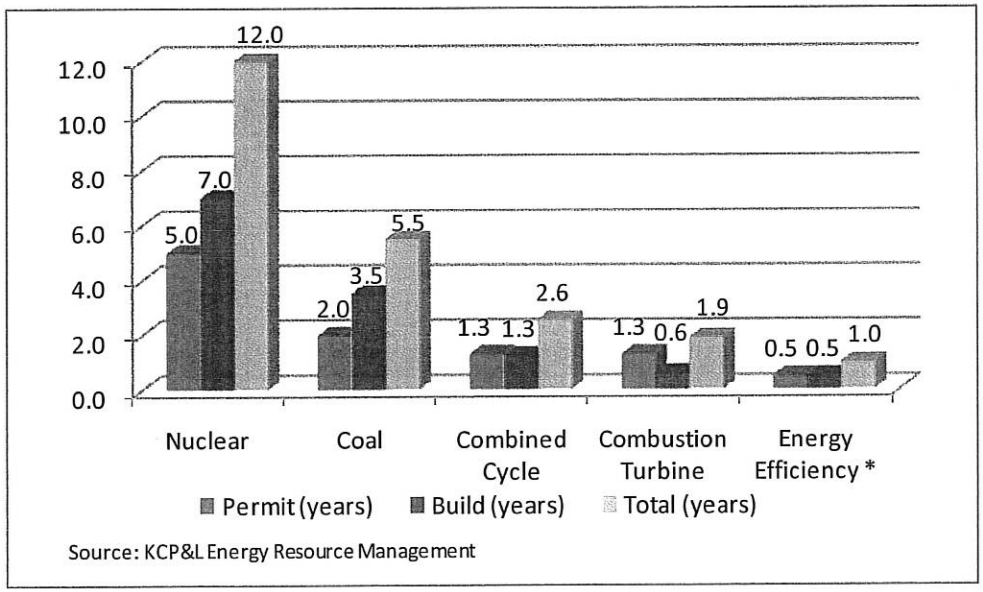
Modular and Quick to Deploy

- **For greater leveraging of programs, a program can be targeted to specific areas that have overloaded transmission or distribution circuits**
  - In some cases, energy efficiency/demand response programs have the opportunity to reduce a circuit load by 10 percent.
  - Leveraging a targeted transmission and/or distribution area, will assist in the delaying of facility upgrade investment.
  - This delay provides a 1-3 percent of the upgrade expense/per year benefit.

Typical permitting and construction period (years)



Source: KCP&L Energy Resource Management

* Permitting for energy efficiency is the time from concept to tariff approval. Build for energy efficiency if the time from tariff approval to full launch.

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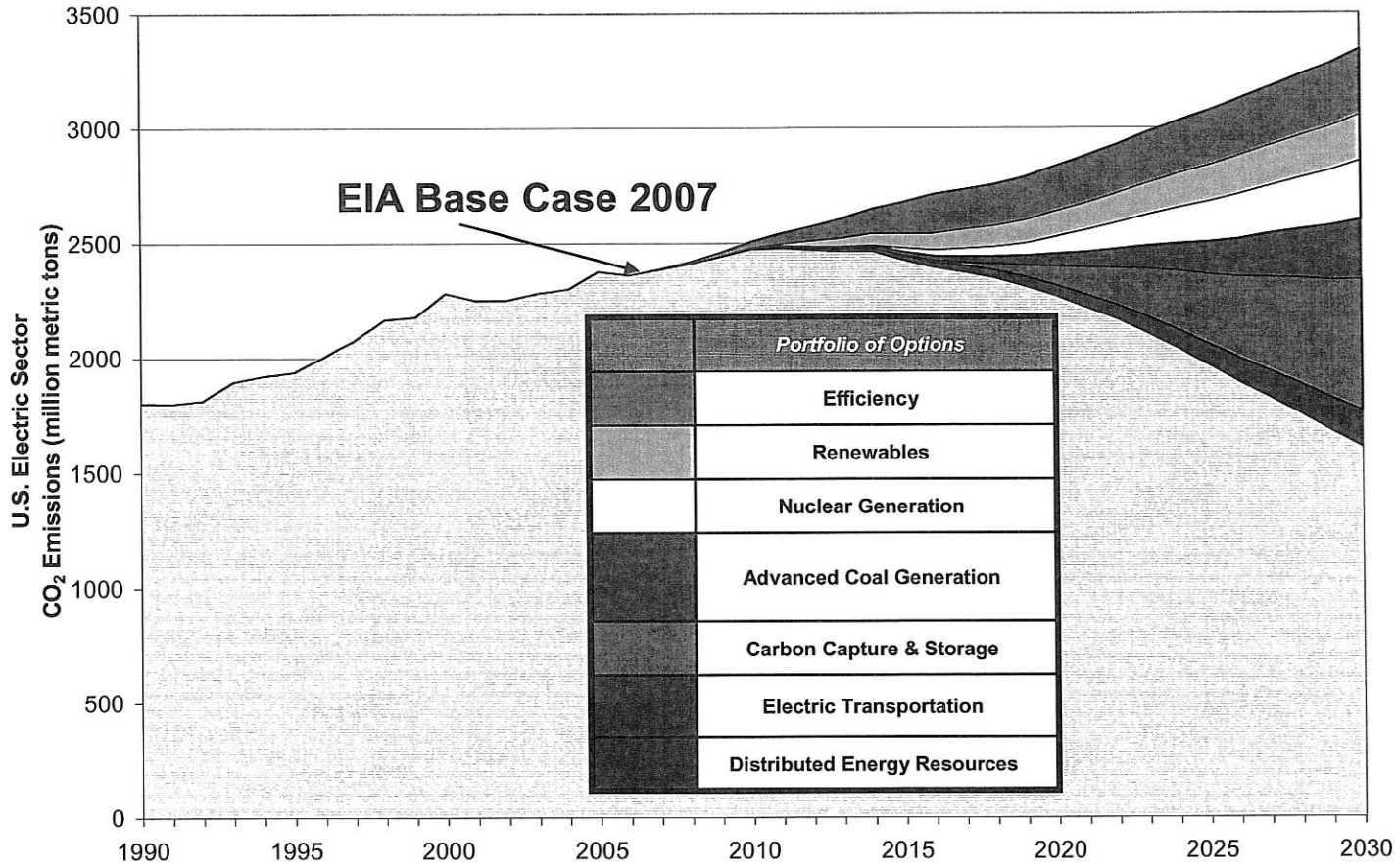
S1-5

We believe that energy efficiency should serve as a solution to meet future energy requirements.

Energy efficiency is the key technology to achieve 1990 Co_2 levels by 2030.



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KCP&L's Smart Grid Overview

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L1-5

Smart Grid – *broadly defined by KCP&L*

- Dynamic electric system communications network, providing real-time, high-speed, two-way communication throughout the distribution grid

- Conversion of substations and circuits to "smart distribution" capable of remote monitoring, near real-time data and optimized performance

- At the customer's choice, installation of programmable in-home control devices and the necessary systems to fully automate home energy use

- Infrastructure that easily supports dispatched distributed resource technologies

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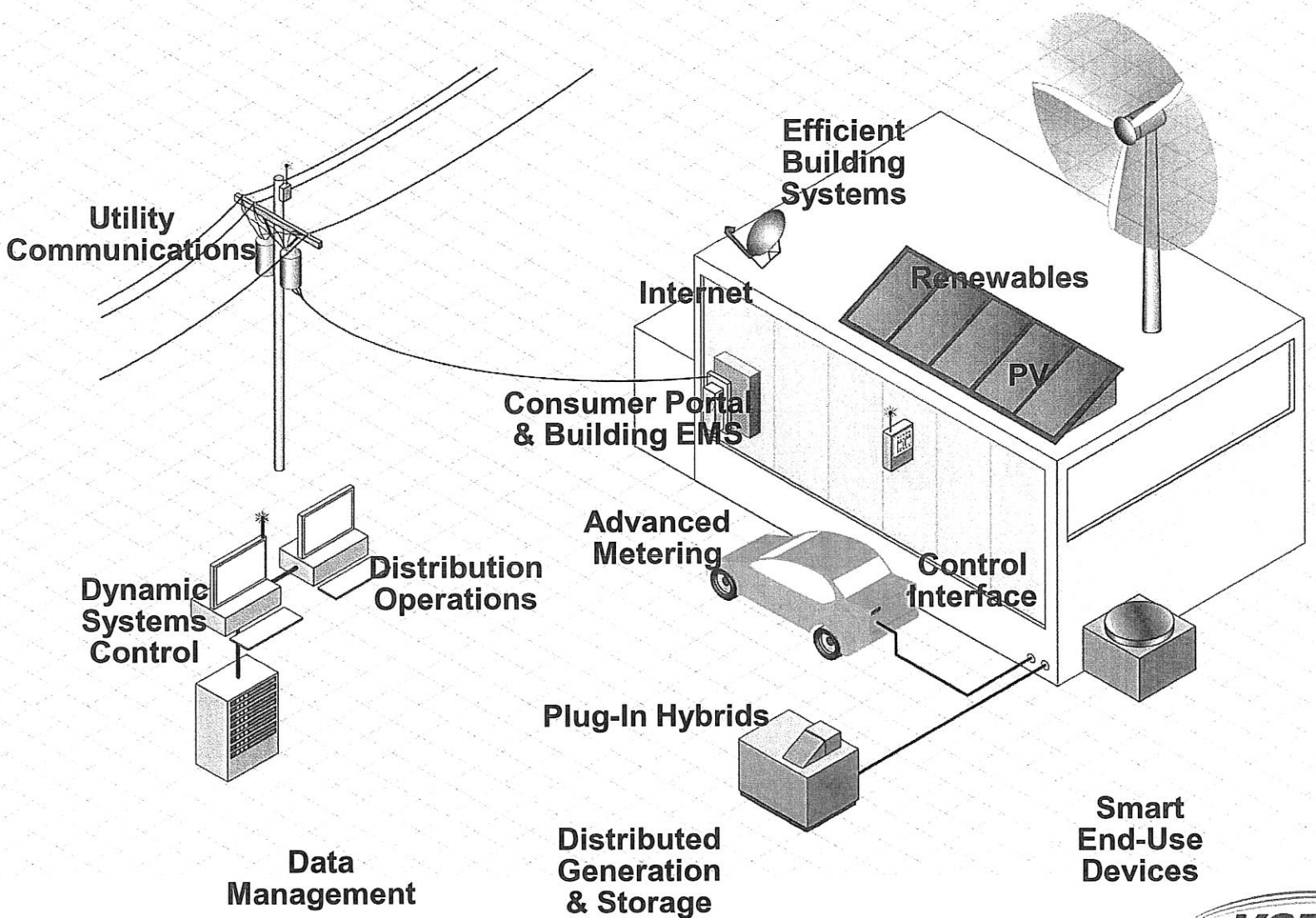
Vision of the Customer



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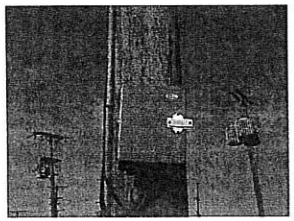
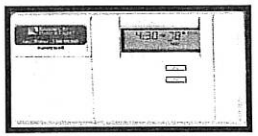
81-5

Our Smart Grid History

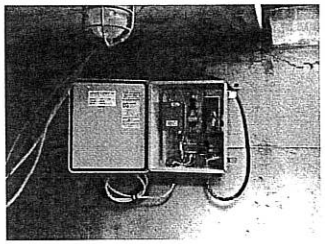
- CellNet Fixed Network System
  - **Early Adopter**
  - Enabled AMR
  - Enabled Power Outage Notification
  - Enabled Distribution Automation

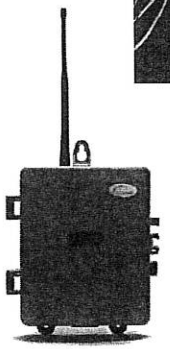
- Capacitor Automation
- Underground Network Automation
- Reclosing Relay Automation
- Switch Automation
- Dynamic Voltage Control
- Rural Substation Monitoring
- Faulted Circuit Indicators
- Energy Optimizer

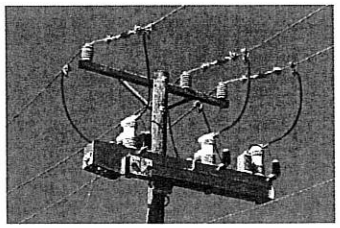




Energy Optimizer







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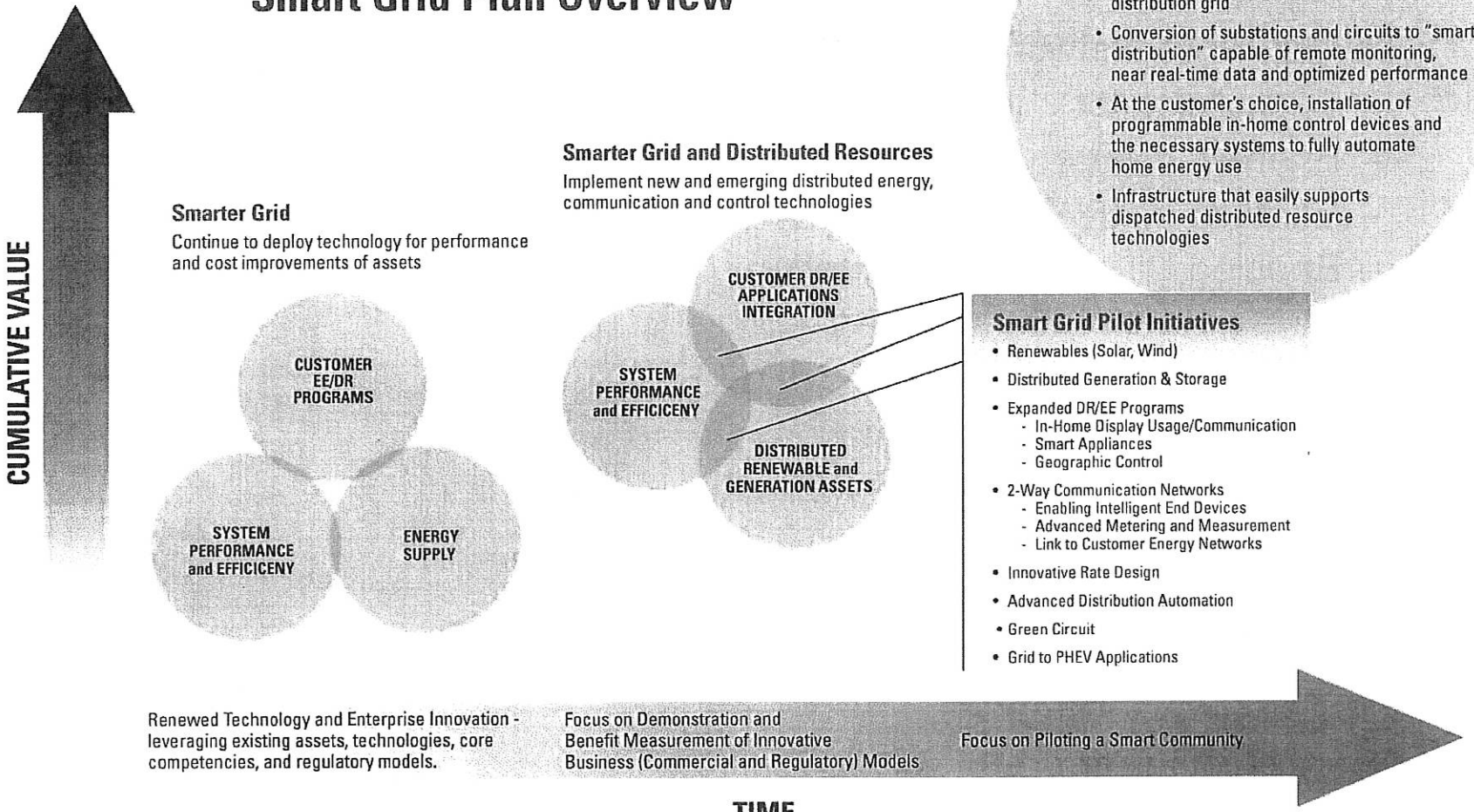
Our Current Approach

Smart Grid Plan Overview



TIME Rate = Innovation Competency + Customer Adoption + Legislation/Regulatory Policies + Emerging Technologies + System Performance + New Industry Players

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S-21

Thank You

Scott Jones – KCP&L

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Kansas City Board of Public Utilities

Renewable Energy
Energy Efficiency & Demand Response

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Demand-Side Management Coordinator
Board of Public Utilities
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913.573.6822

Kansas City Board of Public Utilities

- KCBPU Statistics
  - KCBPU is the largest municipal utility in Kansas
  - Providing electric service since 1912
  - Service territory 127 Square Miles
  - System peak 529 MW

	Qty. Customer	Energy (GWh)
Residential	57,267	570
Commercial	6,799	896
Industrial	94	760
Other	225	502
Total	64,385	2,728

2007 Consolidated Annual Financial Report

HOUSE ENERGY AND UTILITIES
DATE: 2/26/2009
ATTACHMENT 6-1

Kansas City Board of Public Utilities

- The BPU continually updates its load forecast and evaluates the resource and energy mix in light of volatile fuel costs and escalating construction costs.
- This work is done in the dynamic environment of uncertain future environmental regulations.
- All planning documents are considered living and changeable until specific trigger events require a decision to be finalized.

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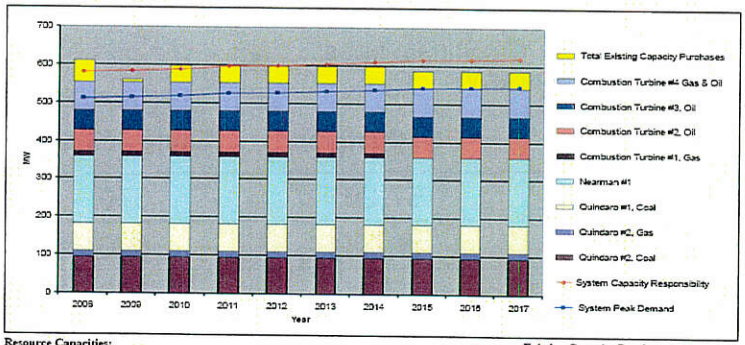
Ten Year Power Supply Study

October 2008 Revision



Resource Capacities:
CT 4 - 75 MW
CT 3 - 51 MW
CT 2 - 56 MW
CT 1 - 12 MW

Nearman Unit 1 (BPU share) - 177 MW
Quindaro Unit 2 - 111 MW 16 MW gas, 95 MW coal)
Quindaro Unit 1 - 72 MW

Existing Capacity Purchases:
Summer 2008 Empire Capacity Purchase – 50 MW
SWPA – 38 MW (beginning in 2010)
WAPA – 4 MW
Smoky Hills Wind – 2 MW

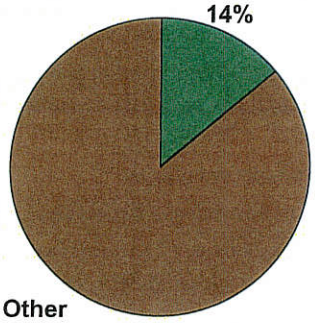
Figure 3-2
Forecast Balance of Loads and Resources - Quindaro Unit 1 Retiring after 2017

Kansas City Board of Public Utilities

BPU Renewable Capacity & Energy

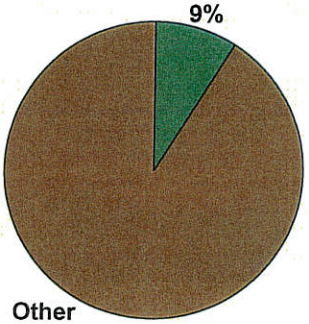
Existing Resources as % of 3-Yr Average

Capacity 511 MW



SPA Firm Transmission

Energy 2600 GWh

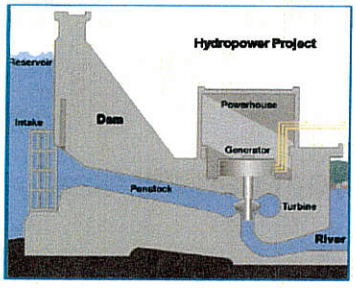


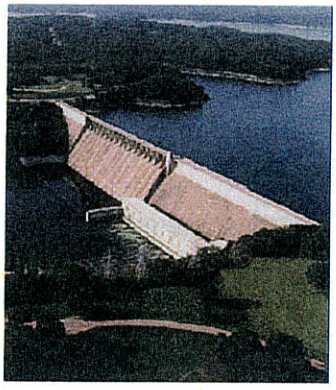
Expected Wind Factor

* Renewable includes large-scale hydro resources

Kansas City Board of Public Utilities

SWPA Hydro Contract Extension
39 MW





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Smoky Hills Wind Farm
25MW to BPU

- **Project Benefits**
  - Long-term contract
  - Fixed price
  - No up front capital costs for BPU
  - Reduces future air emission, water use/discharge and solid waste disposal
  - Hedge against high market purchase prices due to high gas prices of the units on the margin
  - Saves ratepayers money
  - Location advantage - better wind resource
  - Financing (private) - Production Tax Credits & accelerated depreciation

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BPU Studies of Potential Renewable Energy Resources

- Purchase additional wind generation
  - 25 - 35 MW
- Purchase energy output from Landfill Gas generators
  - 1.5MW growing to 4.5 MW

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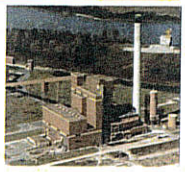
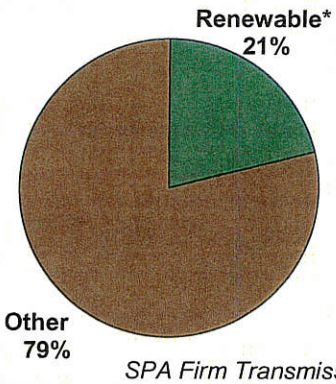
BPU Renewable Capacity & Energy

Potential Resources as % of 3-Yr Average



Capacity 511 MW



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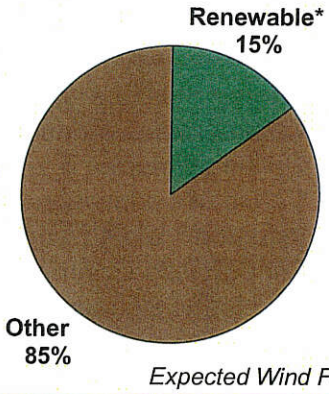

Expected Wind Factor

* Renewable includes large-scale hydro resources

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BPU Additional Renewable Energy Resource Considerations

- Operational constraints
  - Load following characteristics
  - Existing unit turn down ratio & minimum loads
  - Volatile locational market prices
- Transmission constraints
- Renewable energy price
- Impacts of potential Consolidated Balancing Authority
- Regulatory uncertainty
  - Production Tax Credits (PTC)
  - State or National Renewable Portfolio Standard (RPS)

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Energy Efficiency Initiatives

- Residential & commercial heat pump rebates
- Residential central A/C replacement rebates
- Water heater rebates
- CFL giveaway
- Energy Star Change-A-Light Pledge
- Commercial & Industrial energy audit assistance
- Online consumer education and awareness
- Consumer education workshops and materials
- Industrial training workshops on energy efficiency
- Annual Build Green sustainability conference
- LED traffic signals
- High efficiency street lights

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Energy Efficiency Programs

2009 Budgeted

- CFL Targeted Giveaway *$23,000*
  - Deliver free replacement CFLs to targeted residents in underserved markets
- CFL Retail – Coupon/Rebate *$152,000*
  - Encourage purchase and installation of CFLs in most-used fixtures through reduced price at selected points-of-purchase
- Commercial Lighting Rebates *$125,000*
  - Provide cash incentives/rebates to encourage commercial and industrial consumers to upgrade to high efficiency lighting
- Total *$300,000*

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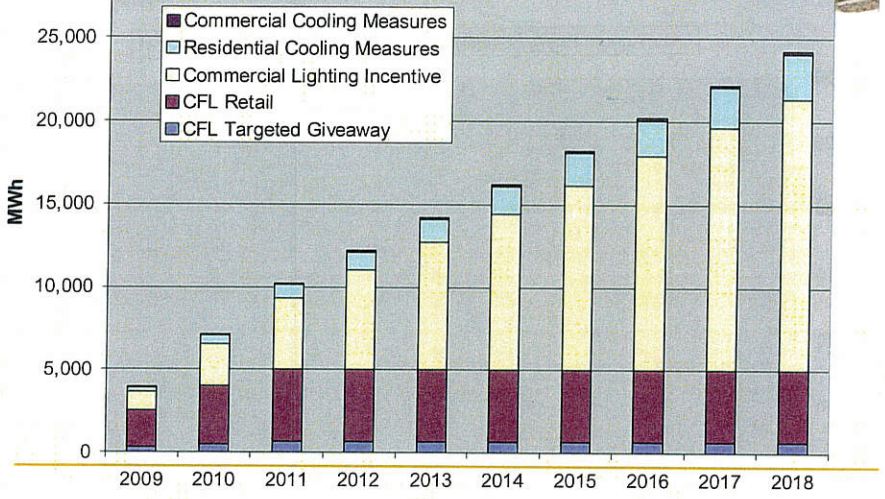
Cumulative Energy Savings



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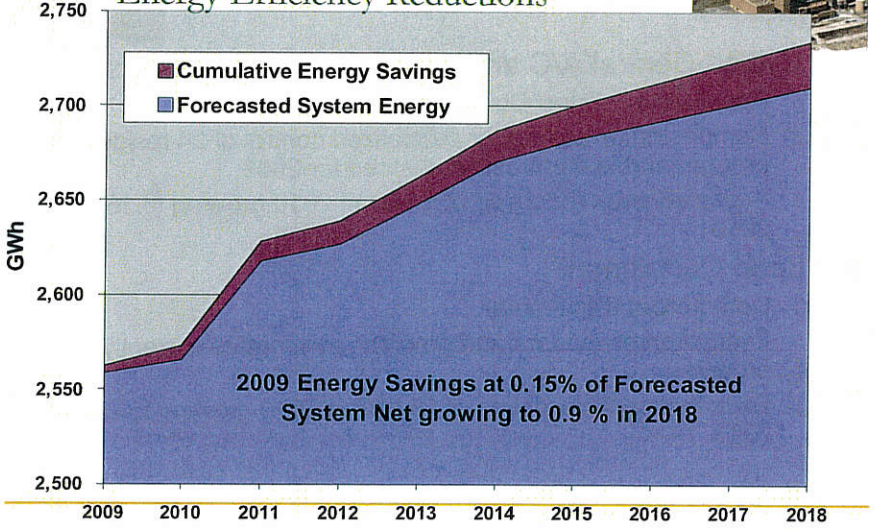
Forecasted System Net Energy to Energy Efficiency Reductions



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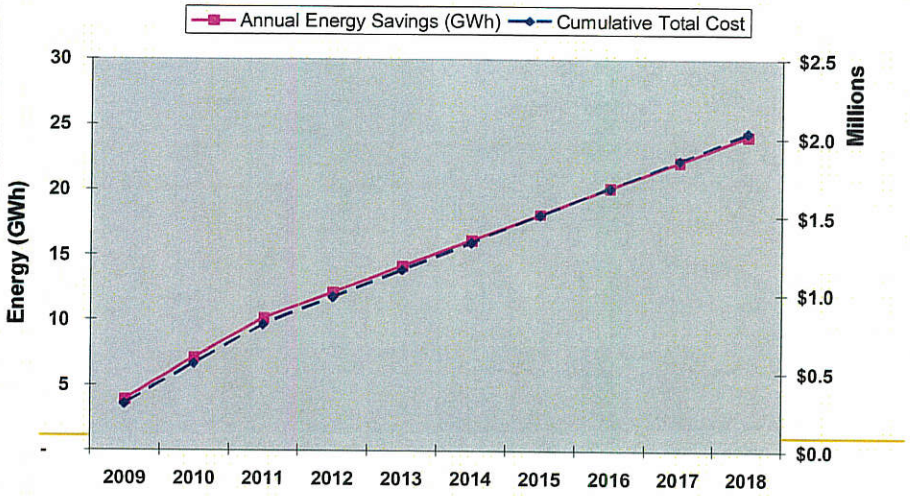
Energy Efficiency Programs

10-Year Projection



Kansas City Board of Public Utilities

Potential Demand Response Programs

- Cycled Central A/C and/or Set Back Thermostats
  - Residential & Small Commercial
  - Demonstration project for centralized control of 24 residential programmable thermostats planned for 2009
  - Expected peak reduction of 3 MW in 2010 growing to 15 MW by 2013
- Load Curtailment
  - Commercial & Industrial
  - Evaluation of vendors and program parameters currently in progress
  - Expected peak reduction of 15 MW in 2010 growing to 25 MW by 2013

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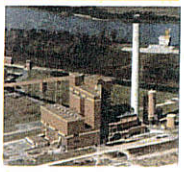

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Kansas City Board of Public Utilities

Questions

HOUSE ENERGY AND UTILITIES
DATE: 2, 26, 2009
ATTACHMENT 7-1

Kansas House Energy & Utilities Committee

February 26, 2009

EMPIRE

SERVICES YOU COUNT ON

Tim Wilson, Planning and Operations Analyst

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E-Mail: wbdamron@aol.com

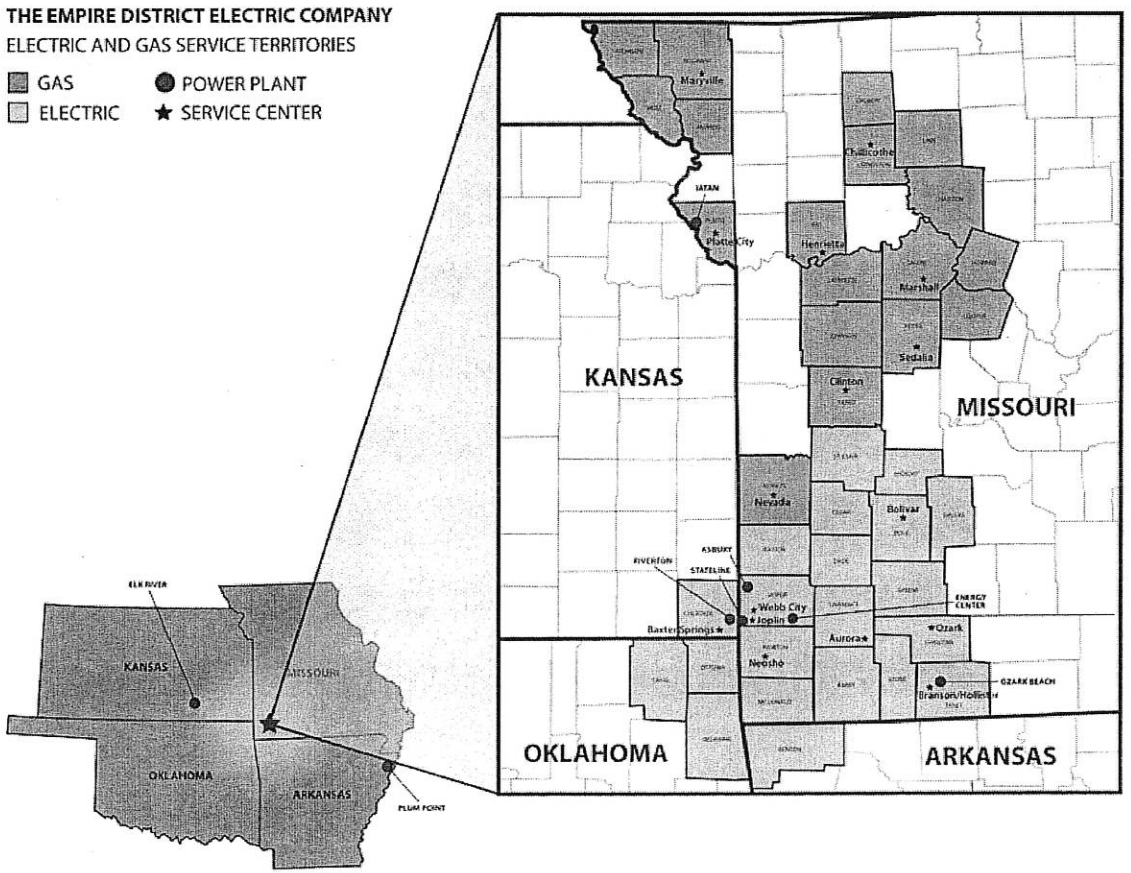
Kansas House Energy & Utilities Committee

- General Information on Empire District Electric Co.
- Empire's Wind Purchase Power Agreements (PPA's)
  - Location
  - Capacity Factor History
  - Empire's Generation Mix (Current and Future)
  - Empire's 7-Year Plan
- Kansas Energy Efficiency Programs
- Questions

Empire District Electric Company

- Based in Joplin, Missouri, The Empire District Electric Company (NYSE: EDE) is an investor-owned, regulated utility providing electricity, natural gas (through its wholly owned subsidiary The Empire District Gas Company), and water service, with approximately 215,000 customers in Missouri, Kansas, Oklahoma and Arkansas. Certain subsidiaries of the Company also provide fiber optic and Internet services.

Empire's Service Territory

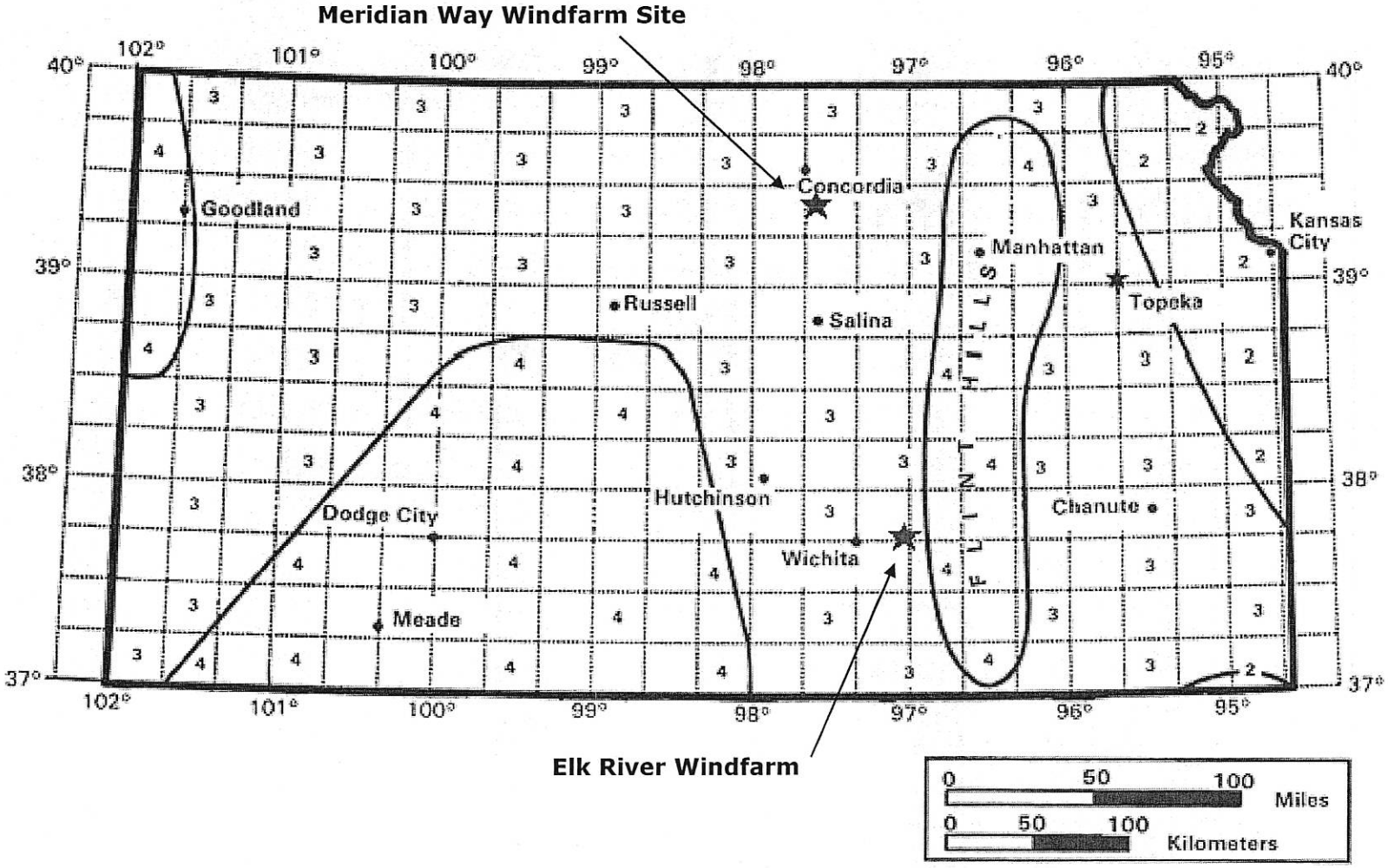


EMPIRE
SERVICES YOU COUNT ON

Empire's Wind PPA's

- PPA with Elk River Windfarm, LLC
  - 20 Year PPA
  - Online December 15, 2005
  - 150 MW Windfarm (1.5 MW turbines)
  - Near Beaumont, KS
- PPA with Cloud County Wind Farm, LLC (Meridian Way Wind Farm)
  - 20 Year PPA
  - Online December 23, 2008
  - 105 MW Windfarm (3.0 MW turbines)
  - Near Concordia, KS

Elk River and Meridian Way Relative Locations



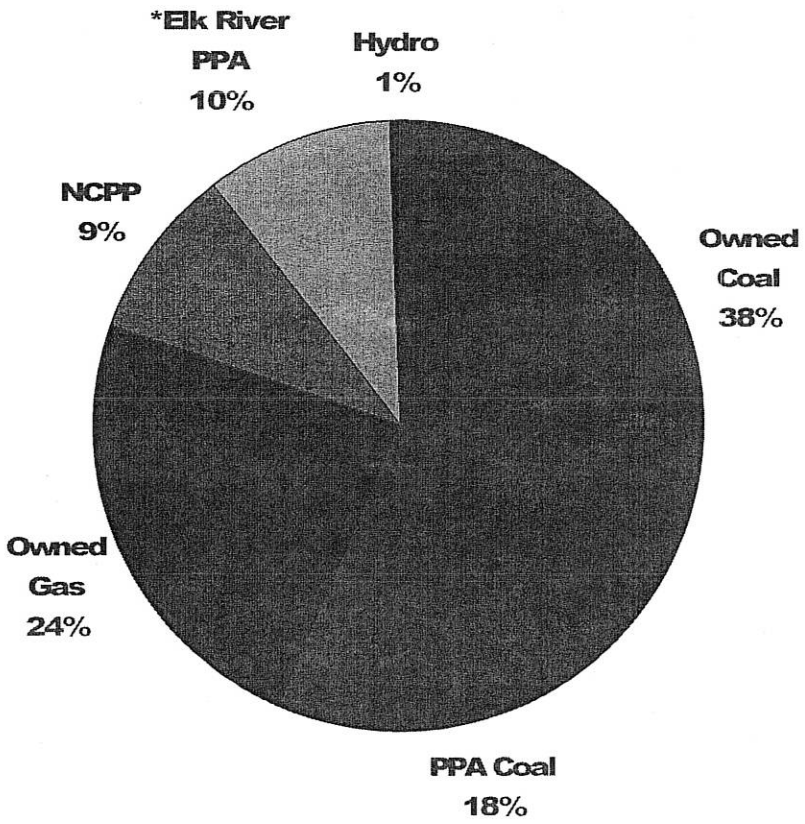
Capacity Factor History

- Elk River Windfarm
  - ►2006 = 40.1%
  - ►2007 = 37.8%
  - ►2008 = 44.5%
- Meridian Way
  - ►Cumulative to date (not indicative of future actual capacity factor's) = 41.9%
  - ►Empire expects annual CF of ~36%-38%

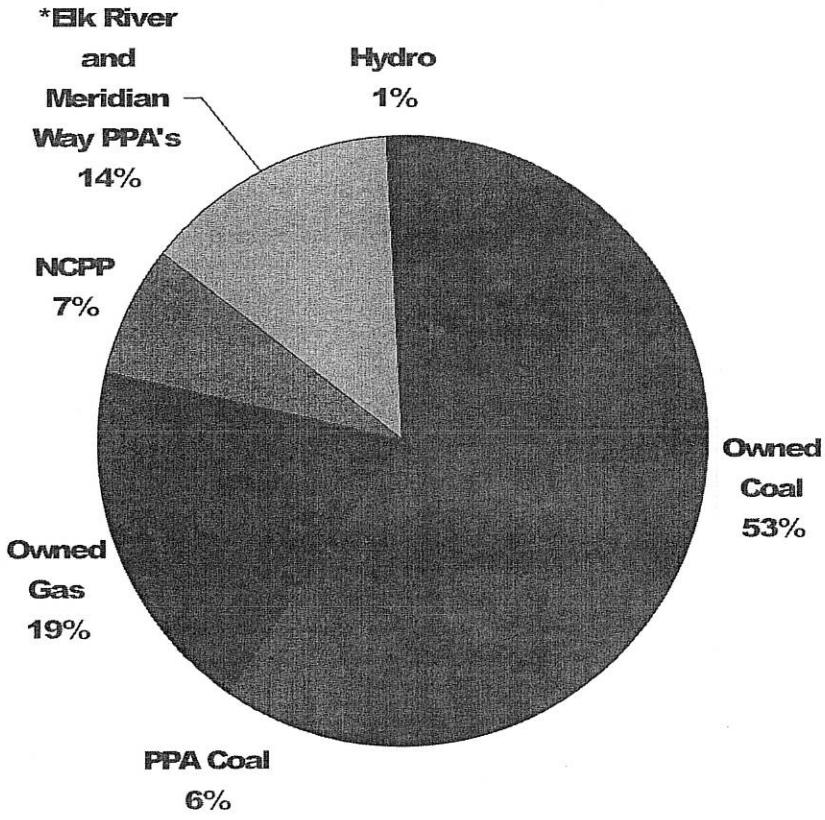
EMPIRE
SERVICES YOU COUNT ON

Empire's Generation Mix

2008 Actual



2012 Estimated



*Empire Intends to Sell Most Renewable Attributes via REC's

Empire's 7-Year Plan

- No Current Plans For Additional Wind Generation Over the Next 7 Years
  - ►Elk River and Meridian Way PPA's will produce roughly 15%-16% of NSI in 2009
  - ►Sometimes difficult to regulate around large amounts of intermittent resources
- Empire Continually Evaluates its Future Generation Options, Including Additional Wind Resources

7-Year Plan for Energy Efficiency

Energy Efficiency Programs Considered

- ▶ High Efficiency A/C Program & A/C Tune-up
- ▶ Change a Light—Compact Fluorescent Lights
- ▶ Commercial & Industrial Program
- ▶ Building Operator Certification
- ▶ Home Performance with ENERGY STAR

- Demand Response
  - ▶ Interruptible for Commercial & Industrial
- Calculators & Libraries
- All Programs Still Being Analyzed

EMPIRE
SERVICES YOU COUNT ON

Questions?

Tim Wilson, Planning and Operations Analyst

EMPIRE
SERVICES YOU COUNT ON