Approved: April 1, 2011
Date

MINUTES OF THE HOUSE ENERGY AND UTILITIES COMMITTEE

The meeting was called to order by Vice Chair Forrest Knox at 9:00 A.M. on March 3, 2011, in Room 785 of the Docking State Office Building.

All members were present except:
Representative Carl Holmes-excused
Representative Nile Dillmore-excused
Representative Reynaldo Mesa-excused
Representative Greg Smith-excused

Committee staff present:
Matt Sterling, Office of the Revisor of Statutes
Cindy Lash, Kansas Legislative Research Department
Corey Carnahan, Kansas Legislative Research Department
Renae Hansen, Committee Assistant

Conferees appearing before the Committee:
Heather Starnes, SPP
Tom Sloan, 45th District
Phil Wages, KEPCo

Others attending:
Twenty one including the attached list.

Informational Hearing:

Heather Starnes, Southwest Power Pool (SPP), (Attachment 1), presented a power point to the committee about the SPP. Ms. Starnes noted that the major services of SPP are: facilitation of transmission, reliability coordination, tariff administration, market operation, standards settings, compliance enforcement, and transmission planning. She commented that SPP is working on implementing a system whereby they would be the single balancing mechanism for the load and supply for the entire regional footprint. She talked about the transmission aspect of their planning prices. She spent time focusing on their integrated transmission planning process. The goal of that mission is to design a transmission backbone to connect load to the most reasonable generation alternatives which includes 4, 10, and 20 year plans with a 40 year financial/economic analysis attached to it. She unveiled the SPP footprint 20 year cost effective plan (slide 54). She noted the balanced portfolio plan was developed so that the benefit to cost ratio was greater than one, primarily because the members are very conservative and want to always keep the cost of energy as low as possible for the consumers they serve. She talked about who pays for the transmission and how that allocation is determined. She completed her presentation by noting their three SPP strategies: build a robust transmission system, develop efficient market processes, and create member value.

Questions were asked and comments made by Representatives: Vern Swanson, Tom Sloan, Stan Frownfelter, and Annie Kuether.

The informational hearing was closed.

Hearing on:

HCR 5012- Establishing policy goals for energy development, consumption and costs

Proponents:

Representative Tom Sloan, (Attachment 2), spoke to the committee in favor of **HCR 5012**. He noted the ways in which this resolution would help Kansas move forward progressively to develop energy, reduce consumption, and contain costs.

Opponent:

Phil Wages, KEPCO, Westar, KEP&L, Sunflower Electric Power, Kansas Municipal Utilities, Empire

The minutes of the House Energy and Utilities Committee at 9:00 A.M. on March 3, 2011, in Room 785 of the Docking State Office Building.

District Electric, Kansas Electric Cooperatives and Midwest Energy, (Attachment 3) offered testimony in opposition to **HCR 5012**. He also presented a power-point presentation that was given to the Senate Utilities committee on January 13, 2011, (Attachment 4). Additionally he offered the committee a chart (Attachment 5) on the Environmental Regulatory Time Line for Units that moves forward to 2017.

Written Opposition:

Dave Springe, CURB, (Attachment 6), offered written testimony in opposition to **HCR 5012**.

Questions were asked and comments made by Representative Forrest Knox.

The hearing on **HCR 5012** was closed.

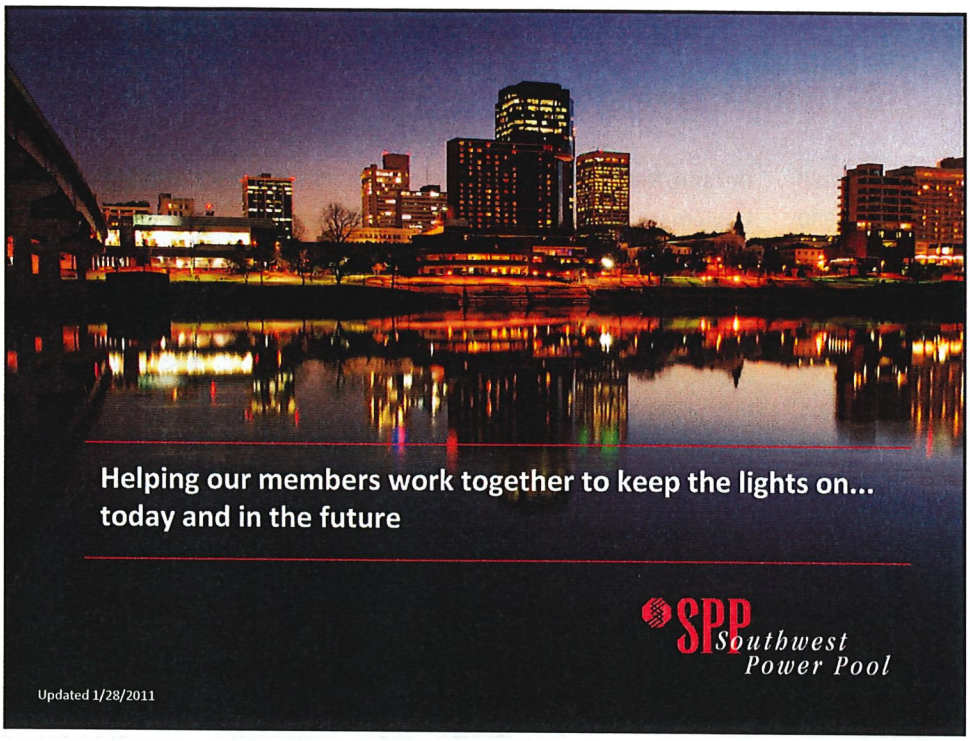
The next meeting is scheduled for March 4, 2011.

The meeting was adjourned at 10:31 A.M.

HOUSE ENERGY AND UTILITIES COMMITTEE
GUEST LIST

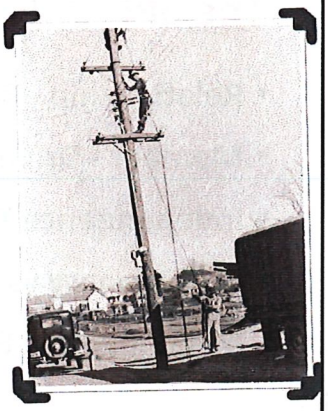
DATE: March 3, 2011

NAME	REPRESENTING
Colin Curtis	Sandstone Group
Terri Pemberton	Cafer Law
Lon Stanton	Northern Natural Gas Co.
Kimberly Svaty	GSPA
Phil Wages	KEPCo
Dave Holthaus	KEC
Wm Ashton	Black Hills Energy
Dave Holthaus	KEC
Harry Berg	Midwest Energy
Chris Cardinal	Sierra Club
Melissa Ward	Hein Law Firm
Scott Jones	KCPL
Mick Urban	ONEOK
Zac Kohl	Federico Consulting
Tom Day	KCC
Doug Smith	Pinegar, Smith & Associates
Matt Casey	GBA



Our Beginning

- Founded 1941 with 11 members
  - Utilities pooled electricity to power Arkansas aluminum plant needed for critical defense
- Maintained after WWII to continue benefits of regional coordination



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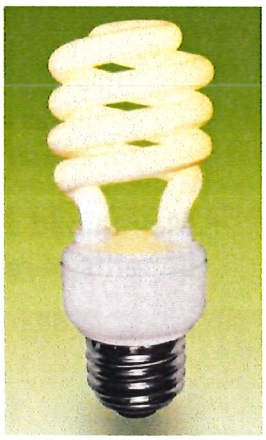
HOUSE ENERGY AND UTILITIES
DATE: 3/3/2011
ATTACHMENT 1-1

SPP Milestones

1968	Became NERC Regional Council
1980	Implemented telecommunications network
1991	Implemented operating reserve sharing
1994	Incorporated as non-profit
1997	Implemented reliability coordination
1998	Implemented tariff administration
2001	Implemented regional scheduling
2004	Became FERC-approved Regional Transmission Organization
2006	Implemented contract services
2007	Launched EIS market, became NERC Regional Entity
2009	Integrated Nebraska utilities
2010	FERC approved Highway/Byway cost allocation methodology and Integrated Transmission Planning Process

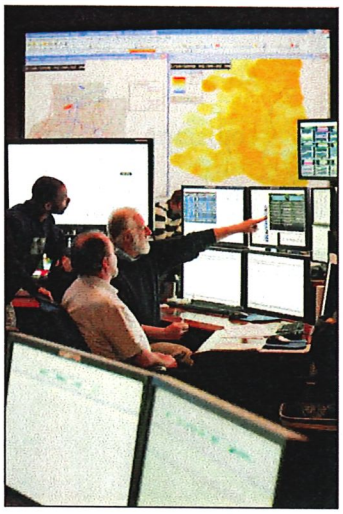
The SPP Difference

- Relationship - Based
- Member - Driven
- Independence Through Diversity
- Evolutionary vs. Revolutionary
- Reliability and Economics Inseparable

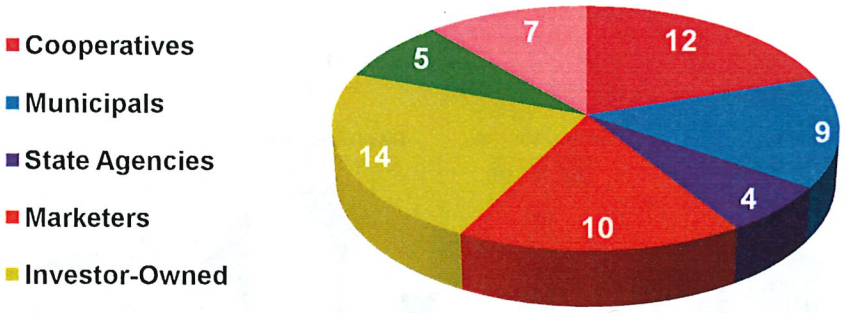


SPP at a Glance

- Located in Little Rock
- ~475 employees
- $139 million operating budget (2011)
- 24 x 7 operation
- Full redundancy and backup site



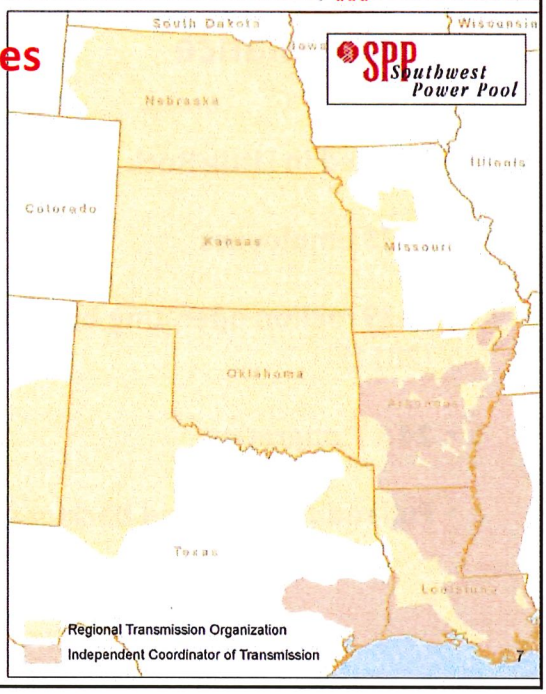
61 SPP Members



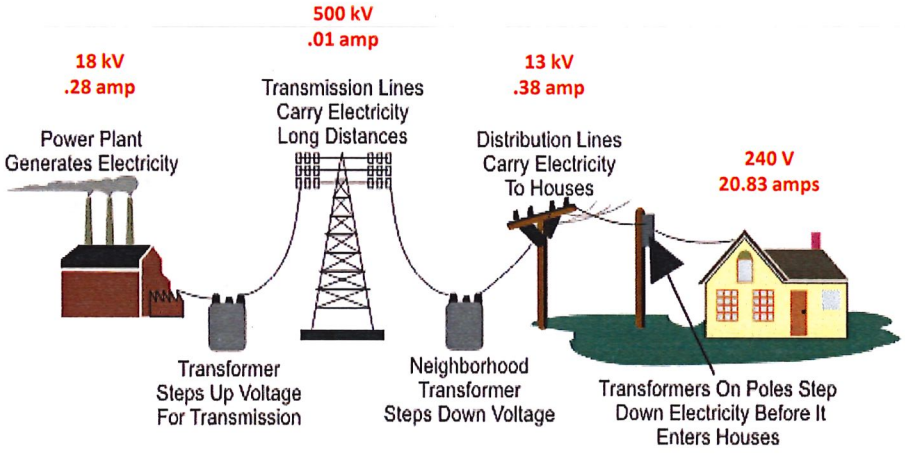
Members in 9 states

- Arkansas
- Kansas
- Louisiana
- Mississippi
- Missouri
- Nebraska
- New Mexico
- Oklahoma
- Texas

Provide services to Entergy on contract basis (ICT)



Delivering 5 kilowatts electricity



http://www.eia.doe.gov/basics/electricity_basics.html

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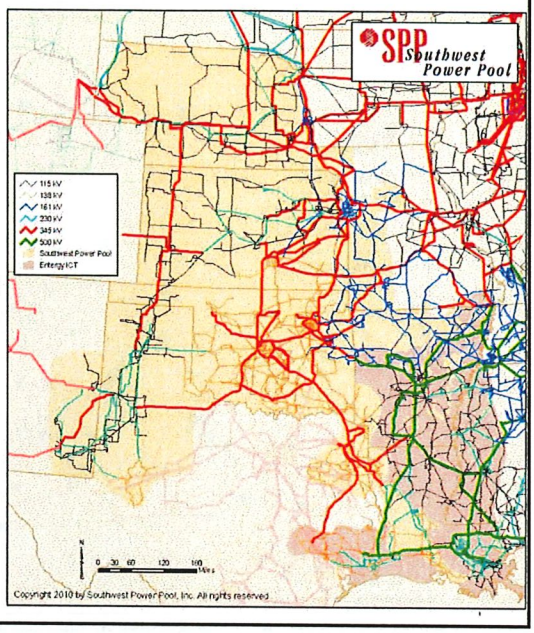
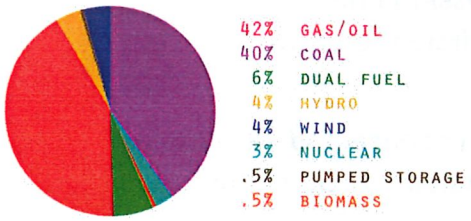
Operating Region 2010

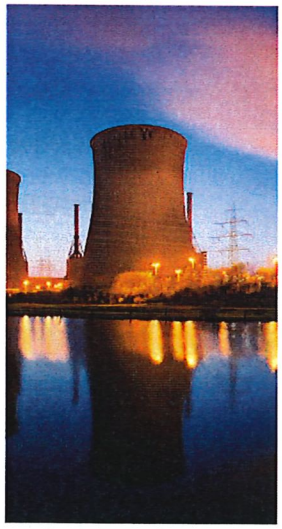
- 370,000 square miles service territory
- 859 generating plants
- 6,101 substations
- 48,930 miles transmission:
  - 69 kV – 12,722 miles
  - 115 kV – 10,143 miles
  - 138 kV – 10,009 miles
  - 161 kV – 5,097 miles
  - 230 kV – 3,787 miles
  - 345 kV – 7,079 miles
  - 500 kV – 93 miles



Operating Region 2010

- 53,012 MW peak demand
- 223,080 GWh energy consumption
- 1,500 MW wholesale demand response
- 419 MW retail demand response
- 66,175 megawatts generating capacity:





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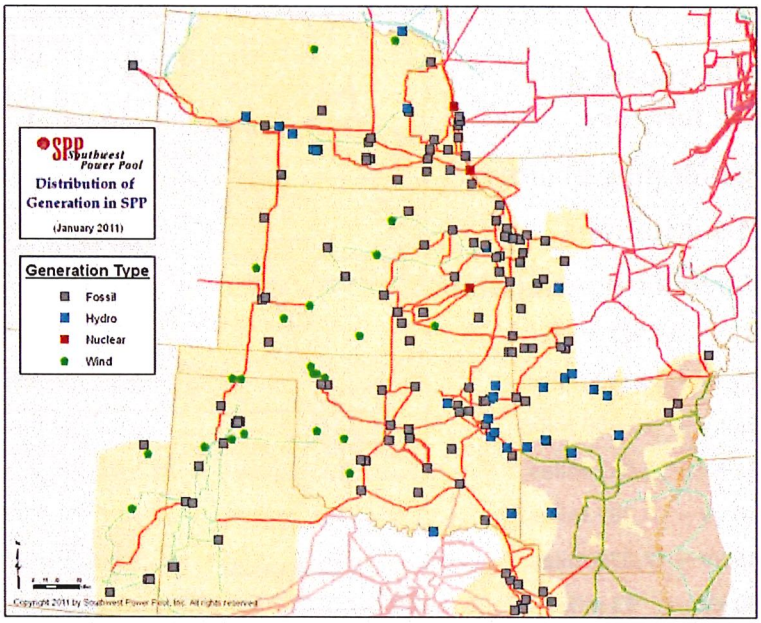
Generating Resources



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Did You Know?

- SPP's members serve over 6.2 million households.
- In 2010, SPP members completed 78 transmission projects totaling $468 million.

- SPP's transmission owners collect ~$800 million annually to recoup costs of transmission, and have over $4.7 billion in net transmission investment.
- 48,930 miles of transmission lines in SPP's footprint would circle the earth - almost twice!

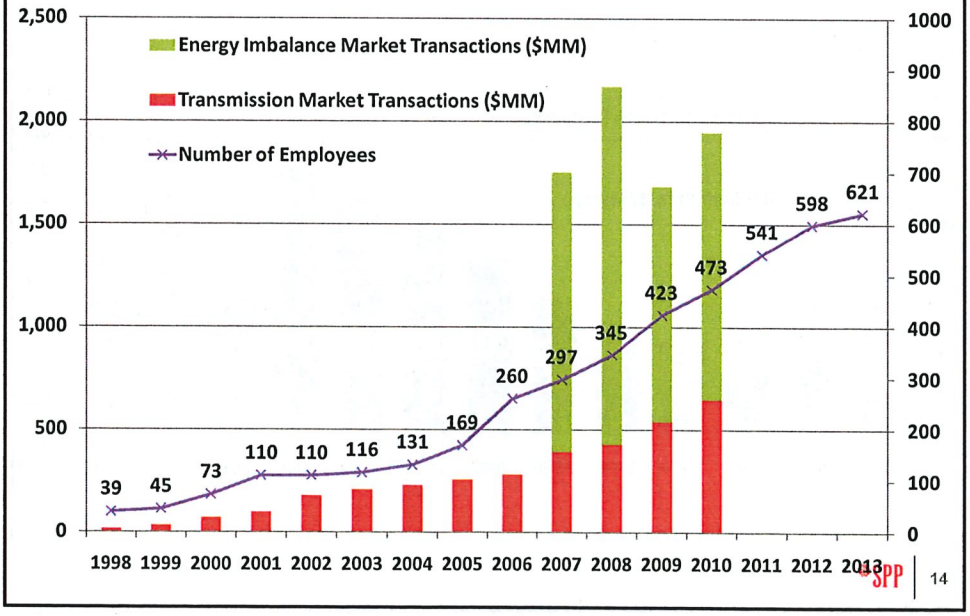
- SPP's 2010 transmission service and wholesale market transactions totaled ~$1.98 billion.

SPP | 12

IT Facts

- ~65,000 data points updated every 10-30 seconds
- Operations model solves 20,000 x 20,000 matrix every 2 minutes
- 614 servers
- 496 Terabytes of data storage
- Fully redundant networks with 100% availability
- Operate two data centers

Growth in Responsibilities



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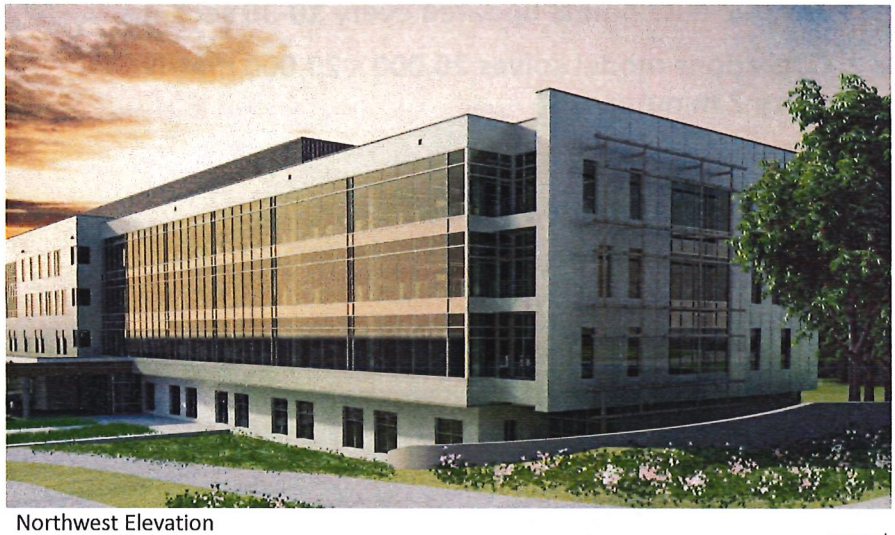
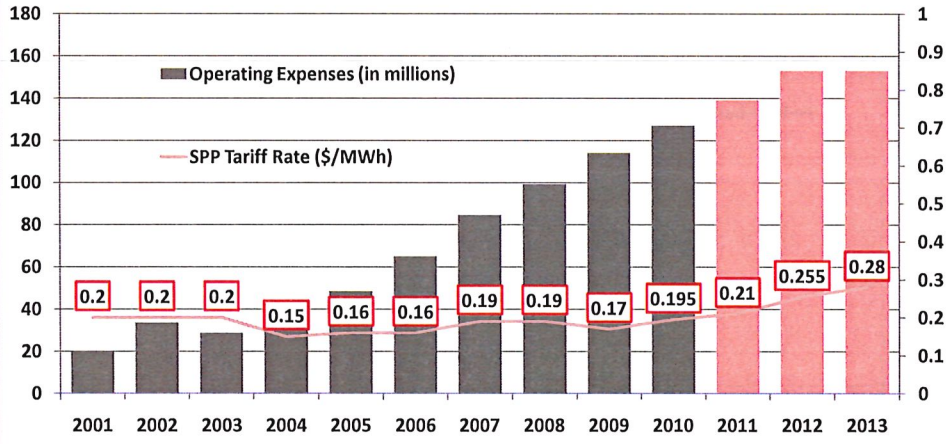
SPP's New Facility Now Under Construction



Northwest Elevation

SPP Expenses: 2001-2013



Regulatory Environment

- Incorporated in Arkansas as 501(c)(6) non-profit corporation
- FERC - Federal Energy Regulatory Commission
  - Regulated public utility
  - Regional Transmission Organization
- NERC - North American Electric Reliability Corporation
  - Founding member
  - Regional Entity

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

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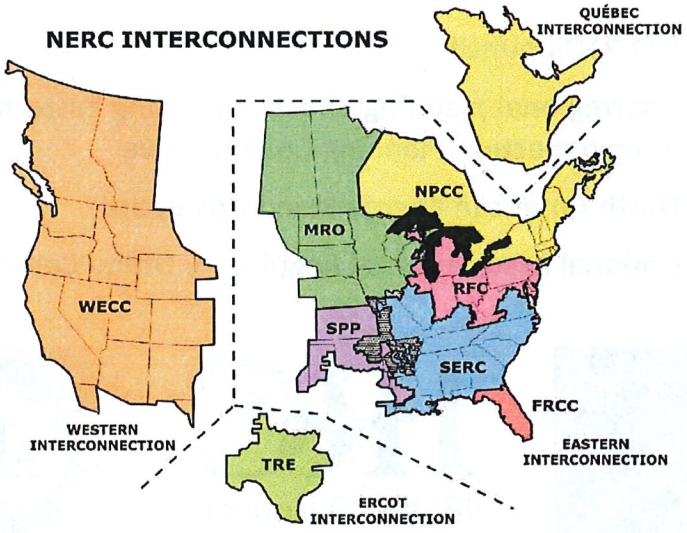
3 Electric Interconnections / 8 NERC Regions



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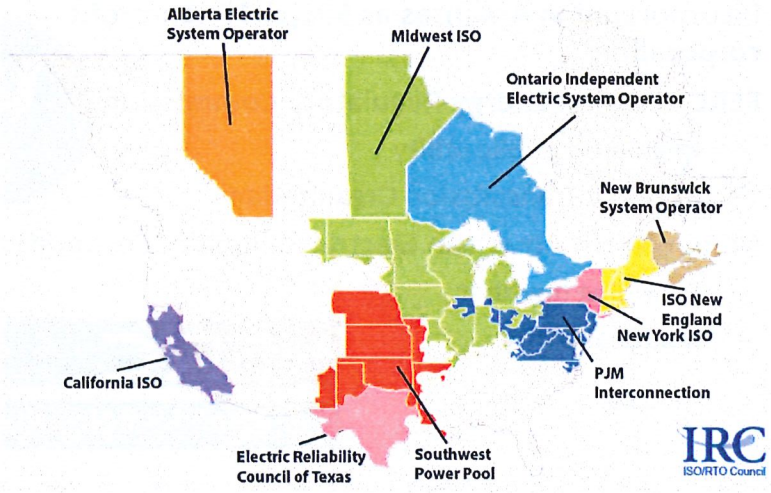
Independent System Operator (ISO) / Regional Transmission Organization (RTO) Map



Interregional Coordination

- ISO-RTO Council
- Interregional planning efforts, including Eastern Interconnection Planning Collaborative
- North American Energy Standards Board
- National Association of Regulatory Utility Commissioners

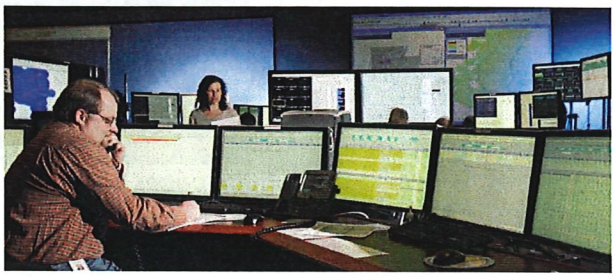
NAESB

IRC ISO/RTO Council

NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS DEDICATED TO PUBLIC SERVICE 1889

Our Major Services

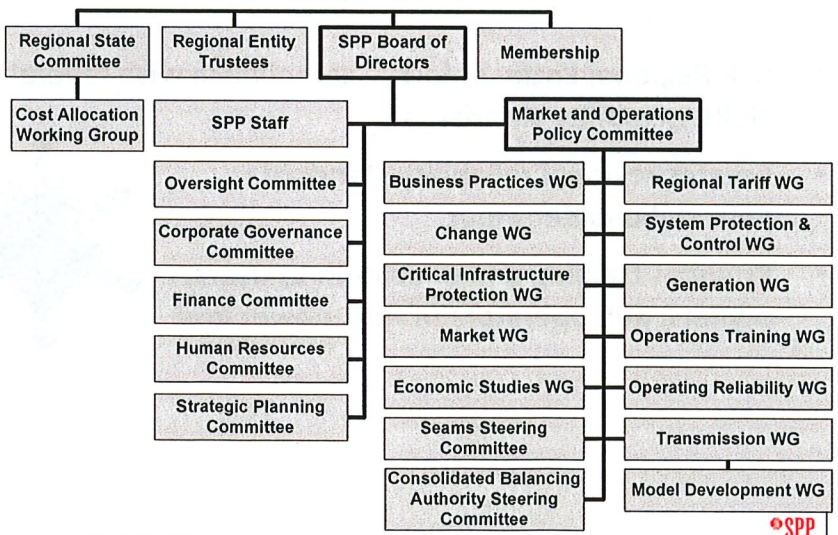
- Facilitation
- Reliability Coordination
- Tariff Administration
- Market Operation
- Standards Setting
- Compliance Enforcement
- Transmission Planning



Regional
Independent
Cost-effective
Focus on reliability

Facilitation: Helping our members work together

Group Organizational Chart

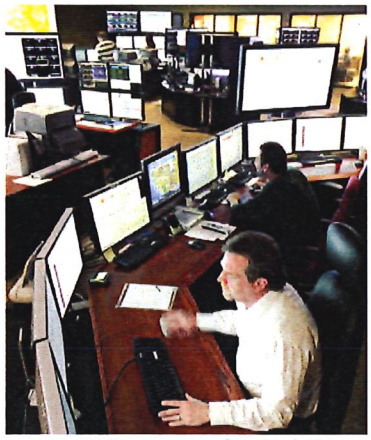


Last Updated: 8/31/2010

Reliability Coordination

- Monitor grid 24 x 365
- Anticipate problems
- Take preemptive action
- Coordinate regional response
- Independent

As "air traffic controllers," our operators comply with...



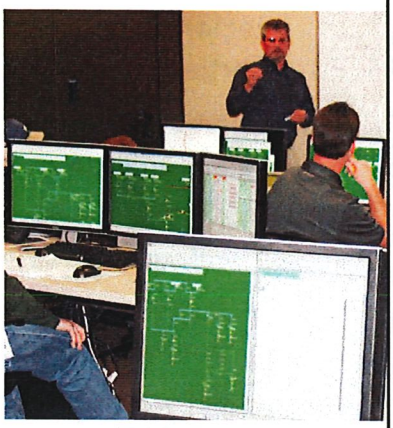
...over 1,300 pages of reliability standards and criteria

Compliance Enforcement and Standards Setting

- SPP Regional Entity enforces compliance with federal NERC reliability standards
- Creates regional reliability standards with stakeholder input
- Provides training and education to users, owners, and operators of bulk power grid

Training

- 2010 Training program awarded over 21,000 continuing education hours to 410 operators from 25 member companies
- SPP offers:
  - Regional/sub-regional restoration drills
  - System operations conferences
  - Regional emergency operations sessions
  - Train-the-Trainer classes



MARKETS

What kind of markets does SPP have now?

- **Transmission Service**: Participants buy and sell use of regional transmission lines that are owned by different parties
- **Energy Imbalance Service (EIS)**: Participants buy and sell wholesale electricity in real-time
  - Market uses least expensive energy from regional resources to serve demand (load) first
  - Sometimes it's less expensive for a participant to purchase power from another provider than to generate
  - SPP monitors resource/load balance to ensure system reliability

Transmission Service

- Provides "one-stop shopping" for use of regional transmission lines
- Consistent rates, terms, conditions for all users
- Independent
- Process ~9,200 transactions/month
- 2010 transmission service transactions = $698 million

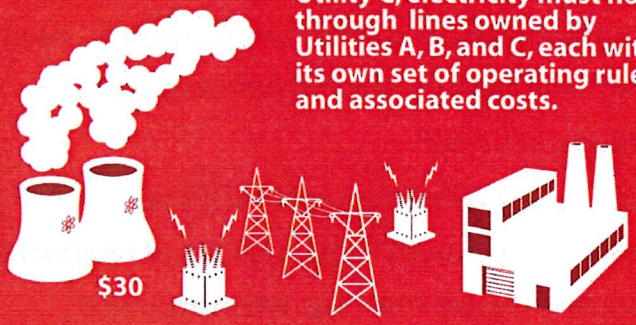
As "Sales agents," we administer …

…2,100+ page transmission tariff on behalf of members and customers

Transmission Service

Without SPP

To get from a generator in Utility A to a customer in Utility C, electricity must flow through lines owned by Utilities A, B, and C, each with its own set of operating rules and associated costs.



$15 transmission service + $30 energy = $45

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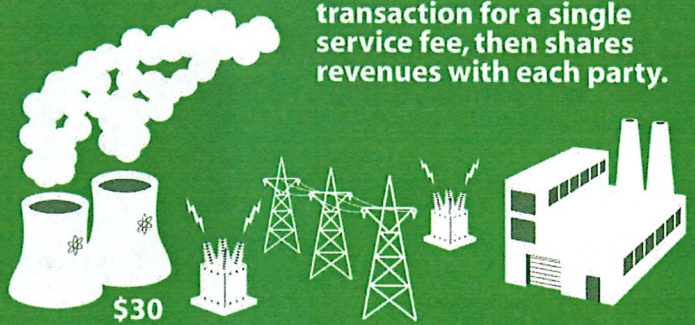
Transmission Service

With SPP

SPP moves electricity across Utilities A, B, and C in one transaction for a single service fee, then shares revenues with each party.



$5 transmission service + $30 energy = $35

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How transmission service works

- Reserving transmission service
  - Like buying e-ticket to reserve seat on plane
  - Customer specifies priority, time, source/sink, capacity
  - Tariff administrator approves if capacity exists
- NERC Tag is issued
  - Like receiving boarding pass for plane
  - Won't be approved if improper use of reservation
- Schedule is created from Tag. When approved:
  - Like sitting on the plane
  - Generators ramp to provide energy for transaction
  - May be curtailed if transmission system overloaded

Market Operation

- Monitors supply/demand balance
- Ensures economic dispatch of generation while maintaining reliability
- Provides settlement data
- 32 participants
- 405 generation resources
- 2010 wholesale market transactions = $1.28 billion

SPP's energy market is like the "NYSE"...

...and follows over 200 pages of market protocols

Benefits of current real-time energy market

A utility has three ways to serve its customers: generate its own power, buy power from another provider, or buy from the SPP market. The EIS market allows participants to compare real-time prices from many sources to make the most cost-effective decisions. Sometimes a participant can buy power for less than it would cost to generate its own energy.

Why develop new markets?

- SPP conducts complex cost-benefit studies before beginning new market development
  - Under Regional State Committee oversight
  - 2005 Charles River Associates analysis of EIS market:
    - Estimated benefit of $86 million for first year
    - Actual benefit of $103 million for first year
- Integrated Marketplace will bring estimated average additional net benefits of $100 million
  - According to 2009 Ventyx analysis

What type of new markets is SPP implementing?

- Integrated Marketplace will:
  - Provide participants with greater access to reserve energy
  - Improve regional balancing of supply and demand
  - Facilitate integration of renewable resources
- Includes:
  - **Day Ahead**: SPP determines what generating units should run the next day for maximum cost-effectiveness
  - **Operating Reserves**: Market to buy and sell reserve energy that
    - Meets emergency needs
    - Regulates instantaneous load and generation changes
    - Maintains electricity quality (keeping voltage up, etc.)

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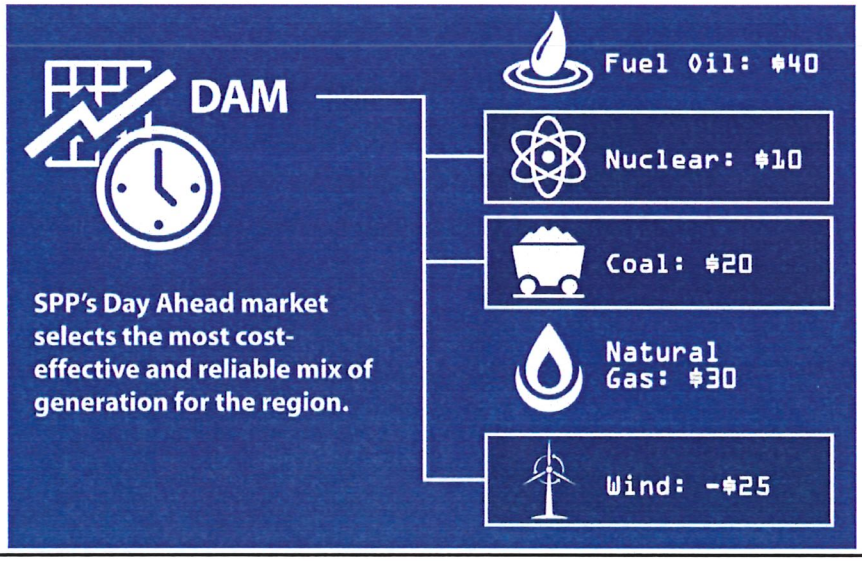
Day Ahead market makes regional generation choices



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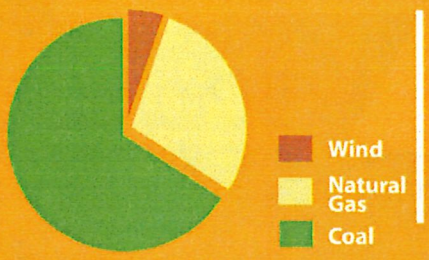
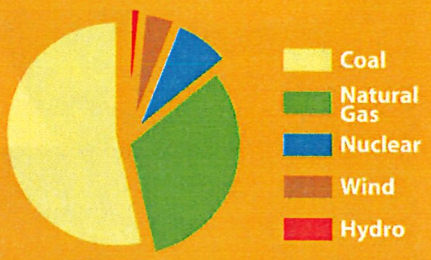
Day Ahead market offers regional diversity

The centralized market could provide access to a more diverse fuel mix than might be available to an individual utility.



Fuel Mix: Utility A



Fuel Mix: Day Ahead Market

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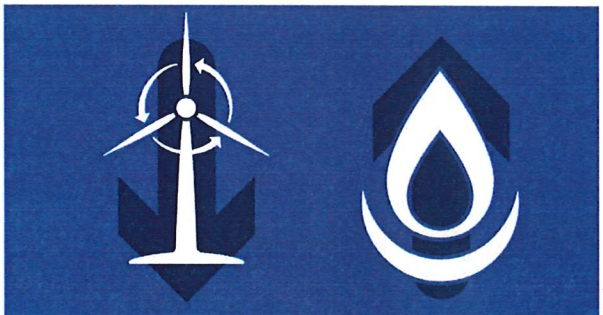
Benefits of Operating Reserves market

- Greater access to reserve electricity
- Improve regional balancing of supply and demand
- Facilitate integration of renewable resources



If the wind gusts and turbines trip, another type of reserve generation, such as gas, needs to immediately replace that supply. The Operating Reserves market offers reserve energy for sale.

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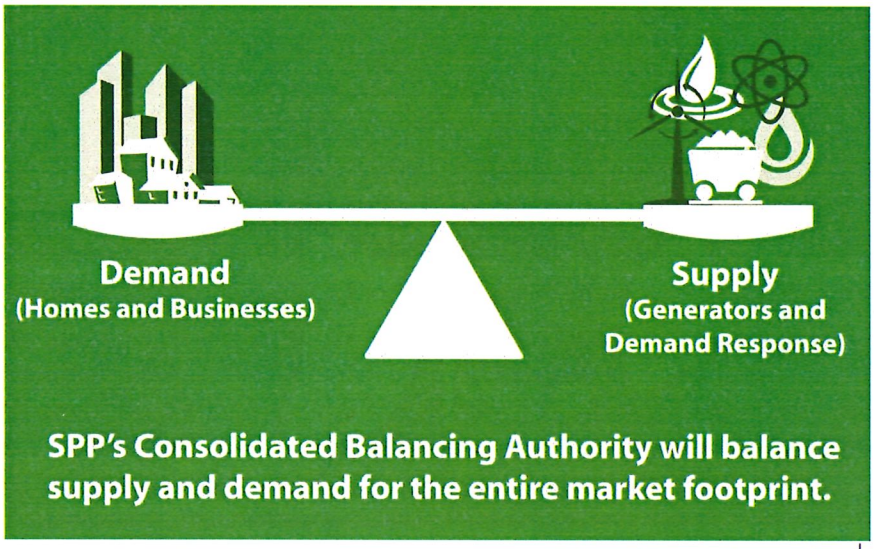
SPP will balance load/supply for region



SPP's Consolidated Balancing Authority will balance supply and demand for the entire market footprint.

TRANSMISSION PLANNING

Generation = 60% Retail Electricity Rates

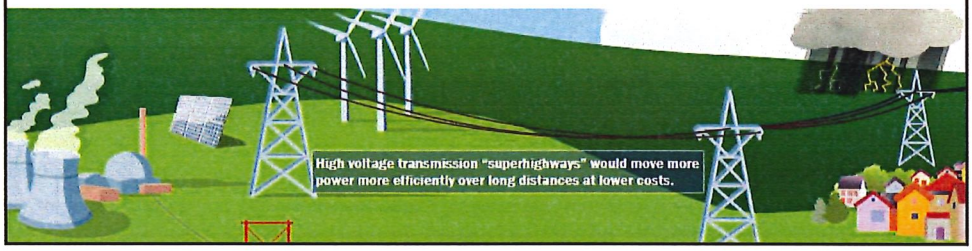
Without transmission, we can't deliver this capital-intensive generation to where it's needed across region

Transmission = 10% Retail Electricity Rates

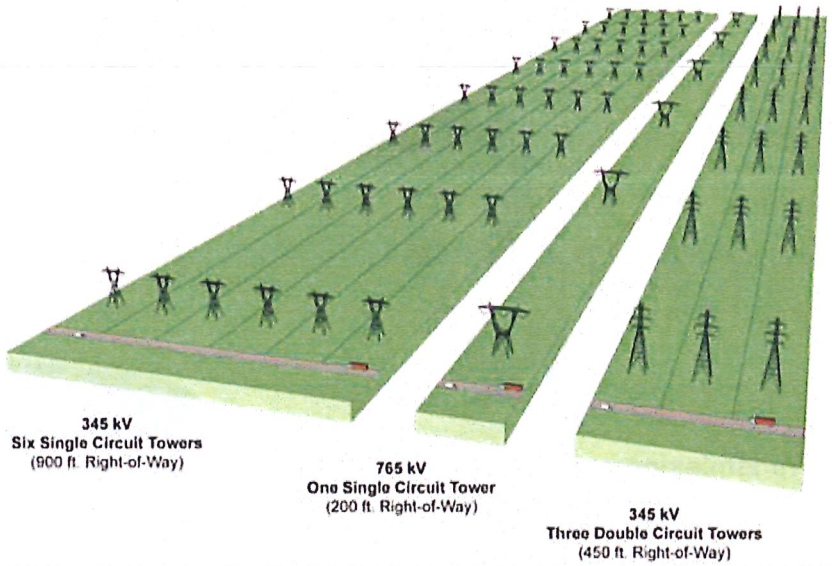
Transmission enables optimal use of our region's diverse generating resources, including coal, natural gas, hydroelectric, nuclear, and wind energy

New vision of transmission

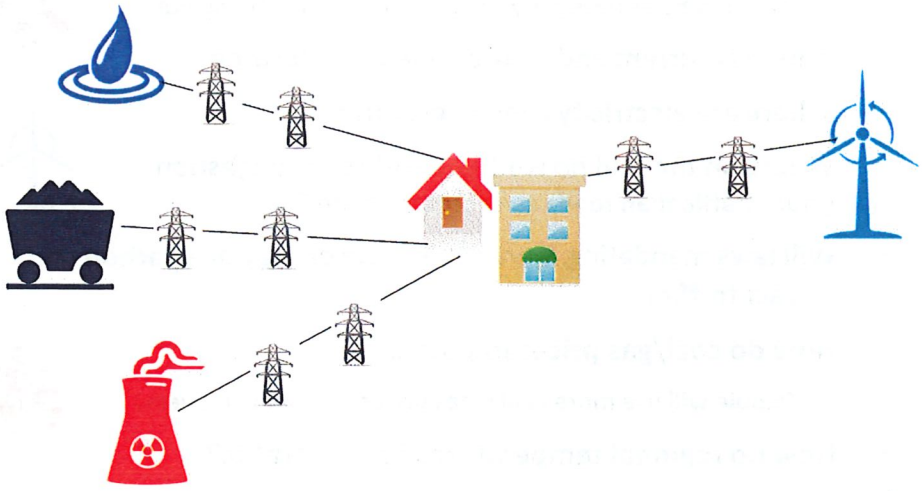
- In the past, built least-cost transmission to meet local needs
- Today, proactively building "superhighways" to benefit region:
  - Facilitate adding new generation to grid, including renewables
  - Improve electric reliability, operational efficiencies, and access to lower-cost and diverse generation resources
  - Enable wholesale energy markets to be more competitive
  - Contribute to economic success beyond electric industry
  - Reduce land use impacts



Larger transmission reduces Right of Way



"Manufacturing", "transportation", and "delivery" must occur instantaneously



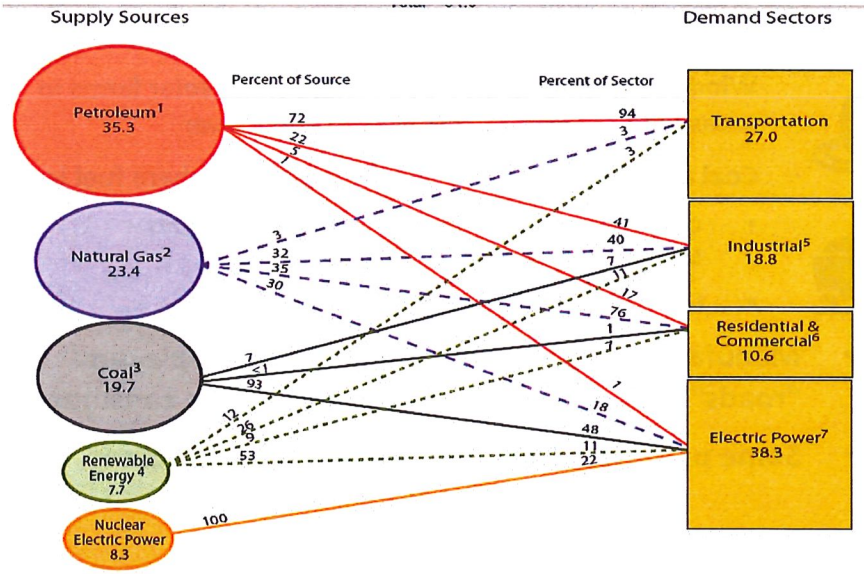
Other ways electric industry is unique

- Location of "manufacturing" plants is limited
  - Wind farms must be in areas of high wind, solar farms in areas with strong sun, hydro plants on a river
  - Coal and natural gas can only be extracted where fuel is
    - Coal mine may be far from coal-fired power plants – Expensive to transport coal long distances
    - Location of coal and gas plants have limitations
- Manufacturing plants may be far from people, and "roads" may not exist to deliver product to consumers
- Some products are only available at certain times

Transmission planners consider:

- What parts of grid need strengthening to "keep the lights on"?
  - Redundancies necessary to account for a line being out
- Where is current and future generation located?
- Where are electricity consumers located?
- Where on the grid do we frequently see congestion (more traffic than roads can accommodate)?
- Will laws mandating more renewable energy or a carbon tax impact traffic?
- How do coal/gas prices impact traffic?
  - People will use more coal if gas prices rise, and vice versa
- How do regional temperatures impact traffic?
  - If temperature differs across region, one area may need more energy

U.S. Energy Consumption

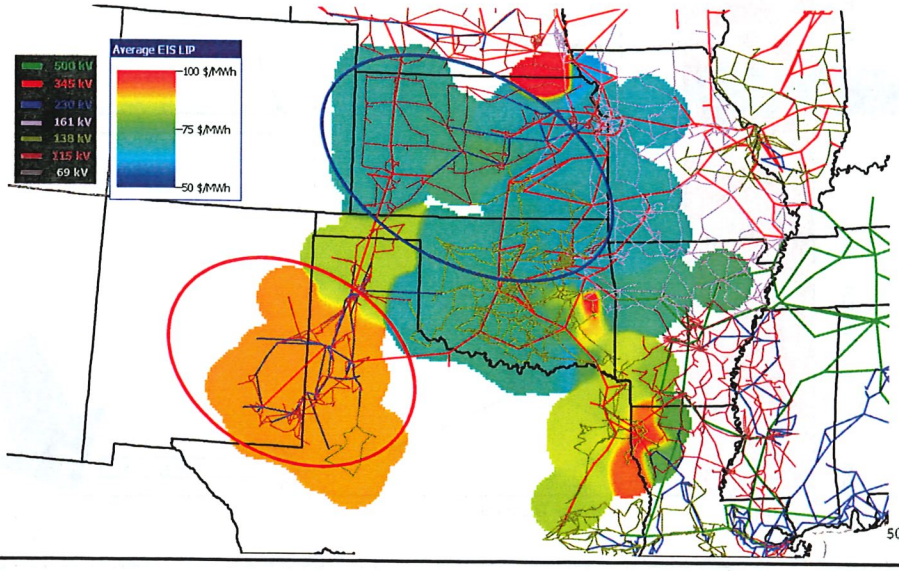


What is congestion?

- Congestion or "bottlenecks" happen when you can't get energy to customers along a certain path
  - Desired electricity flows exceed physical capability
- Congestion caused by:
  - Lack of transmission, often due to load growth
  - Line and generator maintenance outages
  - Unplanned outages such as storms or trees on lines
  - Too much generation pushed to grid in a particular location
  - Preferred energy source located far from customers
- Results in inability to use least-cost electricity to meet demand

SPP | 49

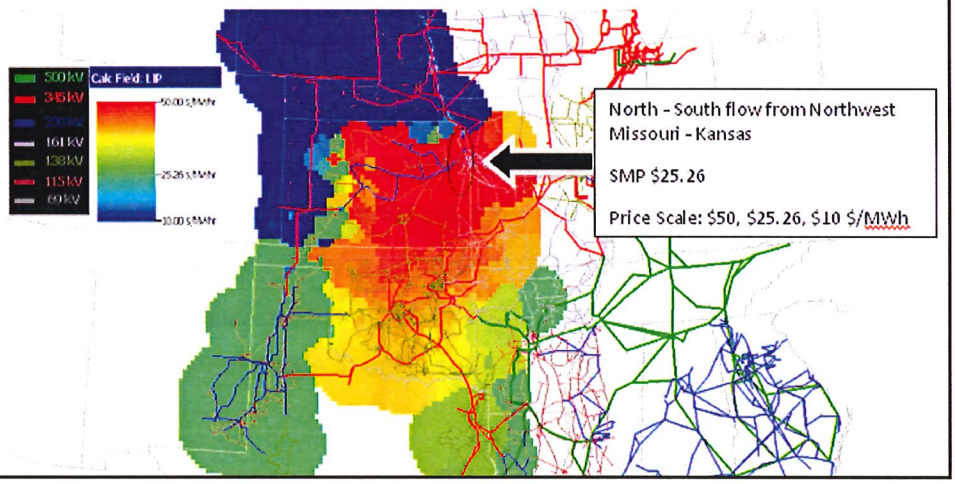
Congestion prevents access to lower-cost generation



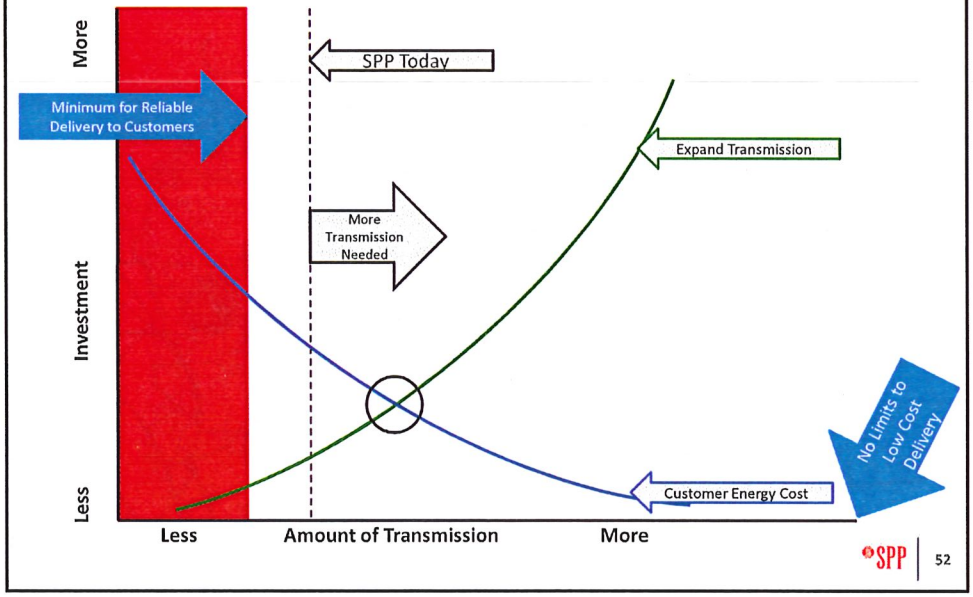
Congestion's Impact on Wholesale Market Prices

January 26, 2010 Interval Ending 12:15 PM

LAKALAIATSTR: Lake Road – Alabama 161kV (MPS) ftlo Iatan – Stranger Creek 345kV (KCPL)



Finding Balance



SPP | 52

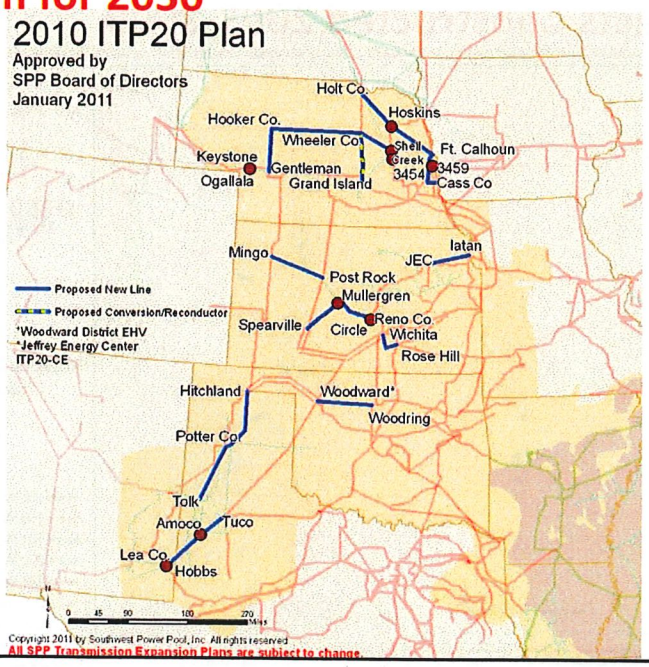
Integrated Transmission Planning

- **Goal:** Design transmission backbone to connect load to most reasonable generation alternatives
  - Strengthen ties to Eastern, possibly Western Interconnections
  - Promote transmission investment to meet reliability, economic, and public policy needs
- **Horizons:** 20, 10, and 4 year
- **Focus:** Regional, integrated with local
- **Resulting in**: Comprehensive list of needed projects for SPP region over next 20 years
  - With 40 year financial/economic analysis
- **Underlying Value**: Reliability and Economics are inseparable

ITP

SPP | 53

2010 Plan for 2030



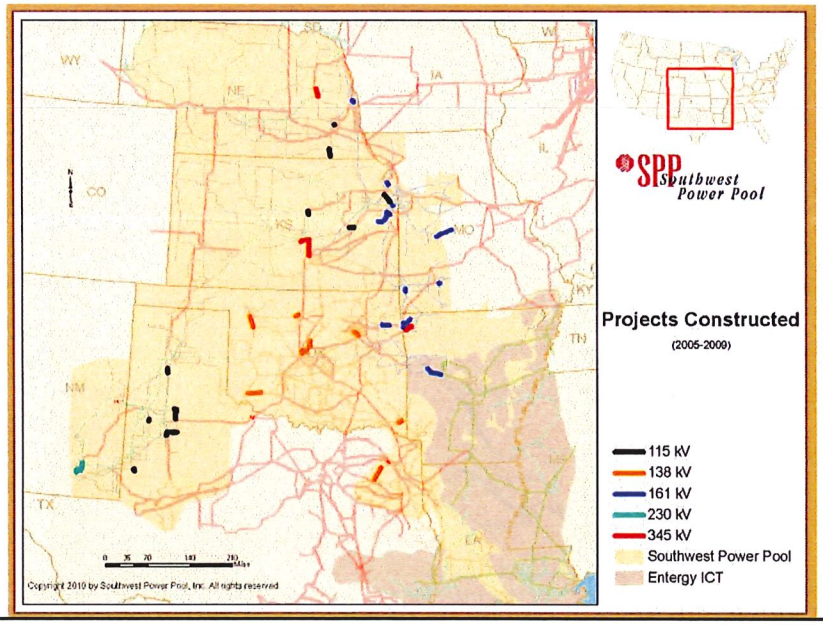
SPP | 54

Other Transmission Planning

- Generation Interconnection Studies
  - Determines what transmission is needed to connect new generation to grid
  - Doesn't include transmission service
- Aggregate Studies
  - Determines what transmission is needed meet requests for transmission service
  - Shares costs of studies and new transmission

SPP | 55

Projects Constructed 2005-2009



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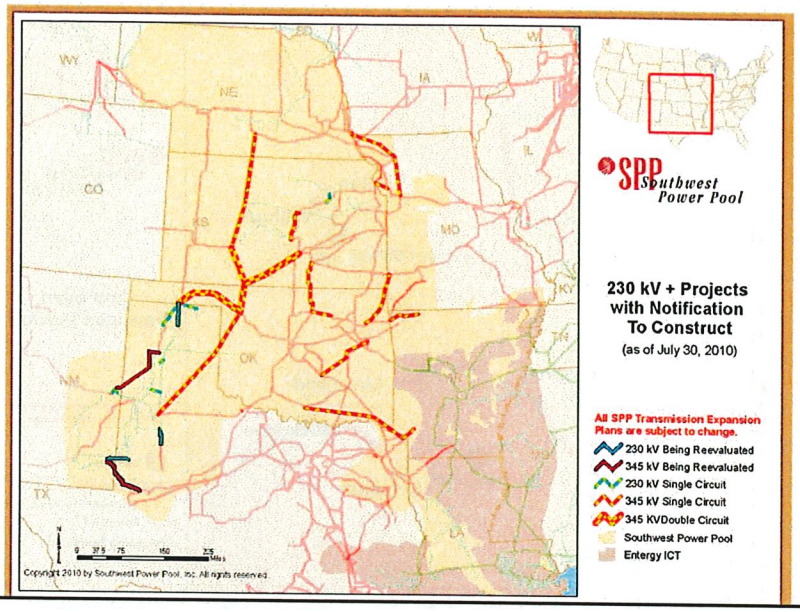
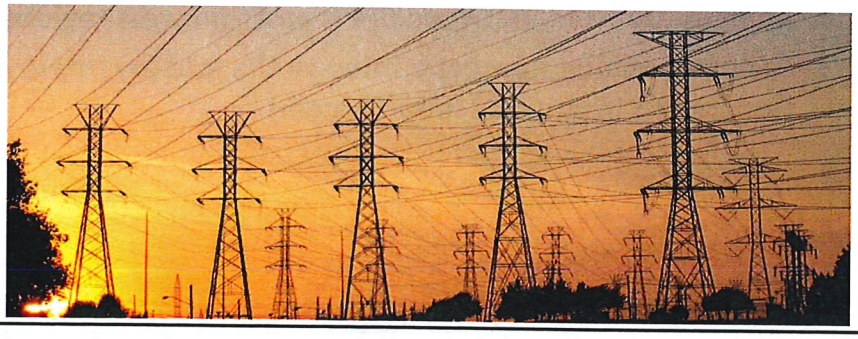
Projects with Notifications to Construct



57

Balanced Portfolio

- Economic transmission upgrades (cost) to lower generation production costs (benefit)
- Balance costs and benefits in each zone
- Transmission expansion costs shared regionally



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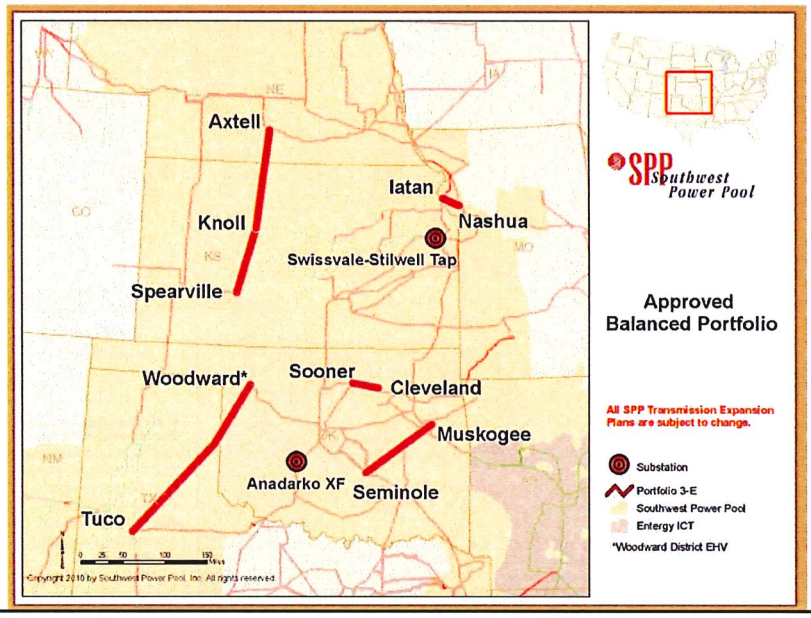
Balanced Portfolio



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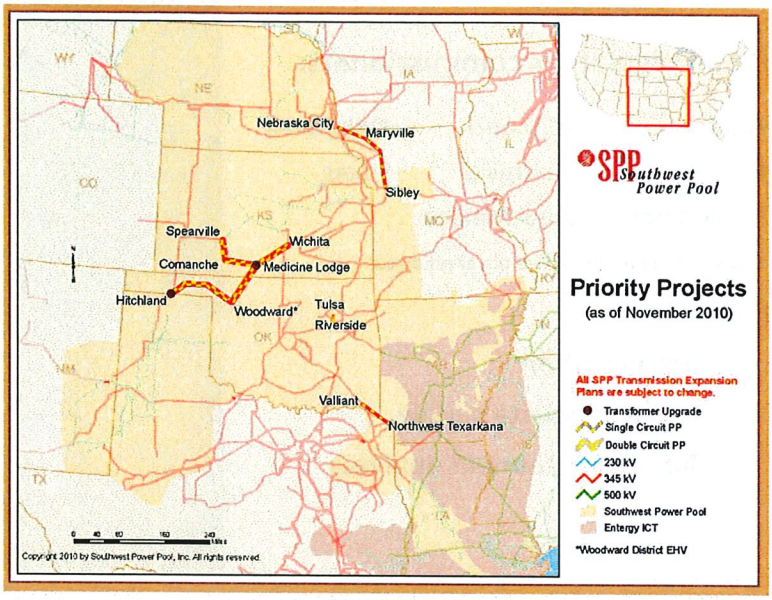
Priority Projects

- Benefit/cost ratio = 1.58
- Previously identified in SPP planning studies
- Relieve grid congestion
- Improve SPP members' ability to deliver power to customers (by improving Aggregate Study process)
- Improve transfers between SPP's east and west regions
- Facilitate adding new generation to the grid (by improving Generation Interconnection process)

SPP | 60

Priority Projects



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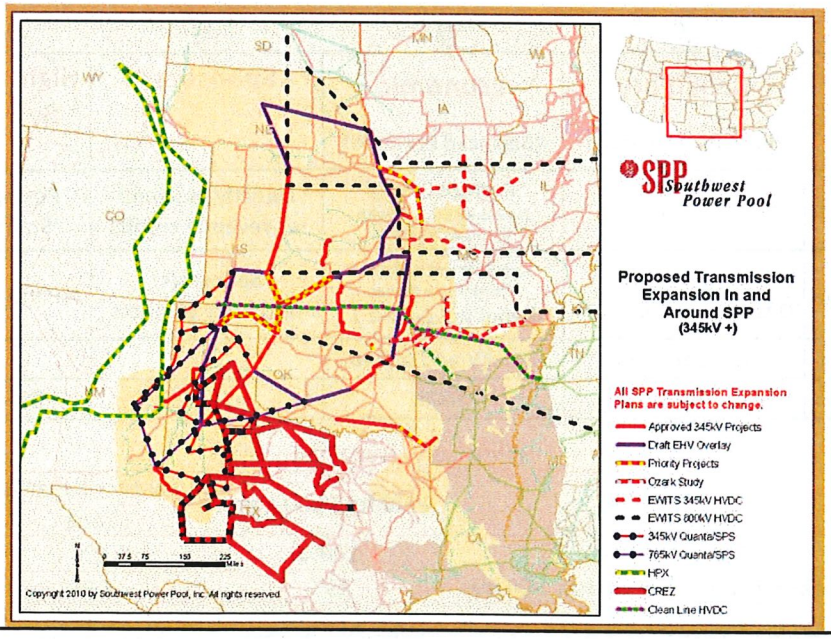
Regional Plans



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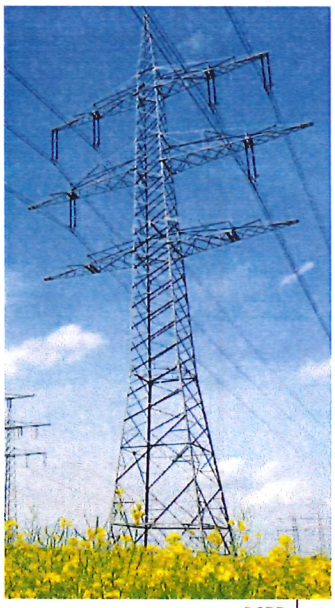
Regional State Committee

- Retail regulatory commissioners:

Arkansas	Missouri	Oklahoma
Kansas	Nebraska	Texas
Mississippi	New Mexico	

Louisiana maintains active observer status

- Functions
  - Cost allocation
  - Ensure adequate supply
  - Market cost/benefit analyses



Who pays for transmission?

Type	Reliability "Base Plan Funding"	Economic "Balanced Portfolio"	Sponsored	Highway/ Byway
Funded	33% / 67%	"Postage Stamp" for 345 kV projects with balancing transfers	Directly assigned w/ revenue credits	Postage Stamp
Reason	Criteria or Designated Resource	Aggregate and Individual Transmission Owner Benefits / Cost ≥ 1	Sponsor(s) nominate projects	ITP projects
Voltage	Transmission	345 kV and above		
Effective	2005	2008	2009	2010

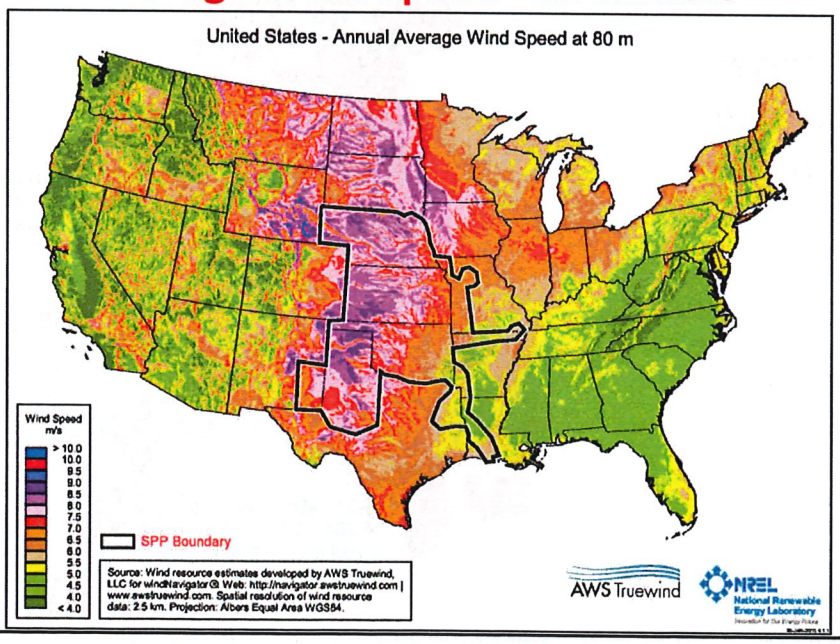
Highway/Byway

Voltage	Paid for by Region	Paid for by Local Zone
300 kV and above	100%	0%
above 100 kV and below 300 kV	33%	67%
100 kV and below	0%	100%

Wind Energy Development

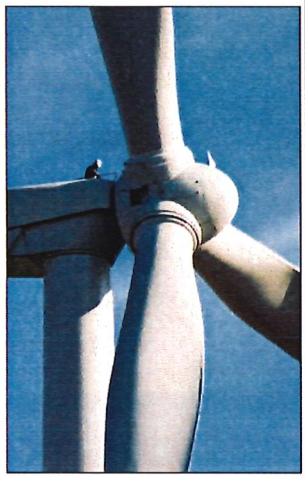
- Wind "Saudi Arabia": Kansas, Oklahoma, Texas Panhandle, New Mexico, Nebraska
  - 60,000-90,000 MW potential
  - More wind energy than SPP uses during peak demand
- ~3,900 MW capacity of in-service wind
- ~28,000 MW wind in-service and being developed
  - Includes wind in Generation Interconnection queue and with executed Interconnection Agreements

Annual Average Wind Speed - 80 meters



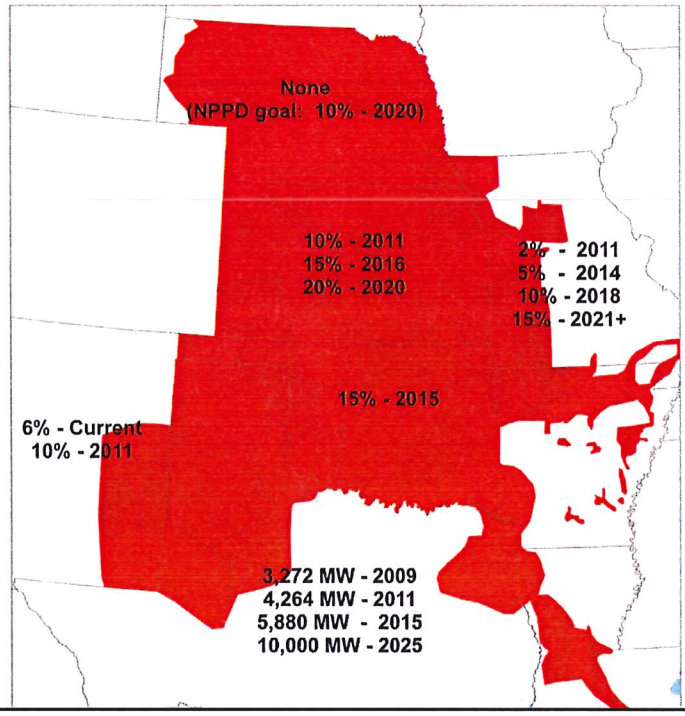
Challenges with developing wind energy

- Intermittent
  - Must be supplemented with constant generating sources
- Wind in remote areas
  - Expensive new transmission needed
- "Not in my backyard" siting issues
- Seams agreements
- Renewable Energy Standards

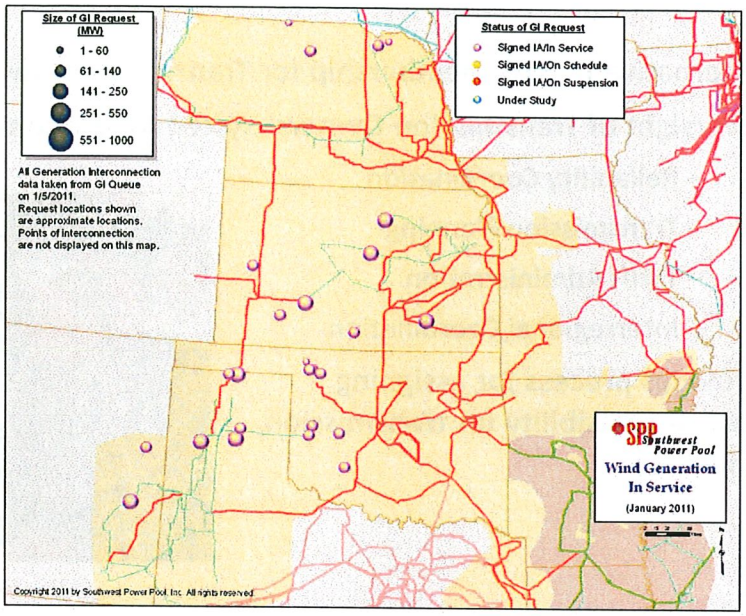


SPP | 67

Renewable Portfolio Standards

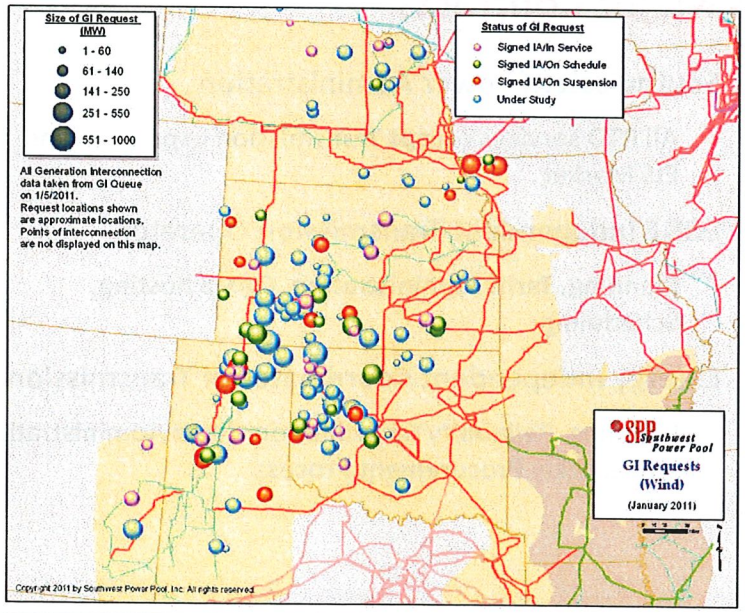


Wind In Service



SPP | 69

Generation Interconnection Requests



SPP | 70

Contract Services

- Alternative to RTO membership for Transmission Owners
- Oversight of Transmission Owners' system operations:
  - Reliability Coordination
  - Transmission Planning
  - Tariff Administration
  - Interregional Coordination
- Provides process for assigning cost responsibility for transmission upgrades

SPP | 71

SPP's Major Contracts

- Southwestern Power Administration
  - All RTO services except Transmission Expansion and EIS Market
- LG&E Independent Transmission Operator
  - Planning, Tariff Administration, OASIS hosting, Scheduling
- Entergy Independent Coordinator of Transmission
  - Planning, Reliability Coordination, Tariff Administration, and Weekly Procurement Process

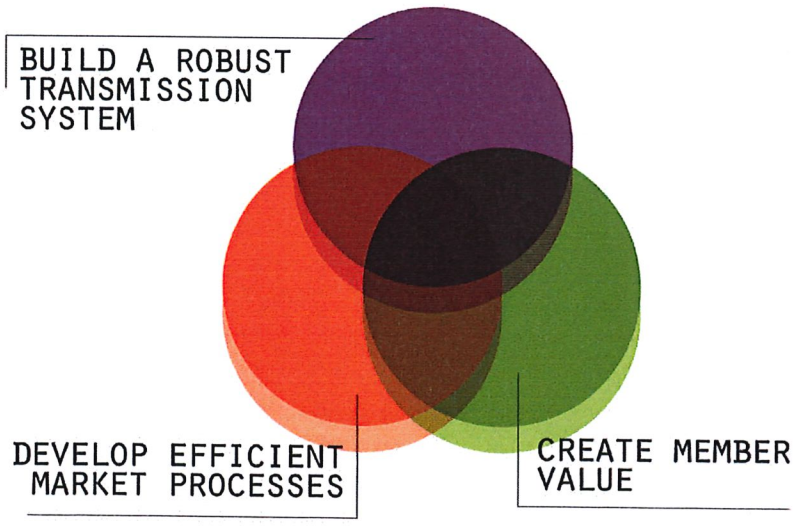
SPP | 72

How does SPP impact you?

- SPP cost = 37¢ of $100 residential utility bill

- Cost to typical residential customer for $1 billion incremental transmission is ~$1.34 per month
- 2005 independent analysis by Charles River Associates:
  - $500,000 cost-benefit study
  - On behalf of state regulatory commissions
  - 270% ROI for SPP services over the next 10 years

SPP Strategically



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STATE OF KANSAS

TOPEKA

HOUSE OF
REPRESENTATIVES

COMMITTEE ASSIGNMENTS
CHAIRMAN: VISION 2020

MEMBER: ENERGY AND UTILITIES
AGRICULTURE AND NATURAL RESOURCES BUDGET
LOCAL GOVERNMENT
JOINT COMMITTEE ON ENERGY AND ENVIRONMENT

Testimony: HCR 5012 – 10-Year State Energy Plan March 3, 2011

Mr. Chairman, Members of the Committee: HCR 5005 represents an opportunity for Kansas to assume a larger leadership role in this nation's energy debate. Since the first oil crisis in the 1970s, the public and elected officials have called for a National Energy Plan. Presidents Carter, Reagan, both G. and G.W. Bush, Clinton, and Obama have called for development of plans and investment in energy research.

For forty years, calls for action have been made; for forty years, little of substance has been accomplished at the federal level. Little more has been done by most states and those that have taken action generally do so in piece-meal fashion.

Only four states do not have fiscal crises – all four are large energy exporters. In his State-of-the-State Address, Governor Brownback called for Kansas to increase energy exports from renewable sources and fossil fuels. However, simply increasing energy exports is not enough – we must use our energy more wisely, stimulate investment and research into new technologies, provide guidance to our state's citizens, and create employment opportunities for our children and grandchildren.

HCR 5012 calls for the Kansas Corporation Commission to convene appropriate stakeholders to identify logical policy paths and objectives for energy development, consumption and cost containment and to identify appropriate technologies, research and employment opportunities to ensure Kansans have abundant, reliable, affordable, and responsible energy. To achieve those objectives, the Commission shall:

a) Examine ways to increase the use of renewable resources – including methane gas and cellulosic ethanol;
b) Examine energy storage to address transmission line constraint relief, generation reliability, electric distribution system reliability, and to firm renewable energy generation;
c) Consider conservation and efficiency measures to reduce anticipated rates of growth for demand in electricity without causing a degradation in the quality of life of Kansans;
d) Examine ways to increase the export of energy and lower the cost of electricity to high cost areas;
e) Increase energy research in Kansas;
f) Increase deployment of "smart grid" technologies on distribution and transmission line segments, as well as "smart meters;"
g) Develop strategies by which fossil-fuel generation units can reduce greenhouse gas releases;
h) Increase workforce development in the energy sector.

HOUSE ENERGY AND UTILITIES

DATE: 3/3/2011

ATTACHMENT 2-1

Conclusion: If the objectives specified in HCR 5012 are not the best ones for our state, then I encourage you to suggest alternatives and/or additions. A 10-Year Plan is subject to modification as goals are achieved, new targets are identified, and the global energy market changes. Many of us campaigned on the basis of jobs creation, responsible energy policies, increasing energy exports, and supporting research and innovation. HCR 5012 offers the people of Kansas and us the opportunity to gauge our success over time and establish Kansas as the premier energy policy state.

Thank you for your attention, I look forward to your questions.

HOUSE ENERGY AND UTILITIES COMMITTEE
H.C.R. 5012

Testimony on behalf of Kansas Electric Power Cooperative, Inc., Westar Energy, Kansas City Power & Light, Sunflower Electric Power Corporation, Kansas Municipal Utilities, Empire District Electric, Kansas Electric Cooperatives, and Midwest Energy

Mr. Chairman and members of the Committee:

I am Phil Wages, Director of Member Services, Government Affairs and Business Development for Kansas Electric Power Cooperative, Inc.

The electric utility industry of Kansas opposes HCR 5012. Opposition is presented because the electric industry is currently offering programs that address several of the topics discussed within HCR 5012. Therefore, a resolution is not needed to direct the KCC to examine issues currently being addressed and successfully managed.

First, the resolution asks for an examination of methods to reduce an anticipated growth in demand through Demand Side Management (DSM) programs. Every electric utility in Kansas employs programs designed to reduce peak demand. Each utility is slightly different in the programs offered or methods used. In addition, each utility offers energy efficiency programs (EE) designed to reduce energy consumption and to promote conservation.

Earlier this year, the Senate Utilities Committee asked the electric utilities to prepare a presentation about DSM and EE programs for each utility. The committee asked for details about the programs offered, MW shed, and kWh saved individually and in aggregate for the industry. A copy of the presentation has been given to you for your review.

Second, the resolution asks utilities to increase "smart grid compliance" and increase the deployment of smart meters. Smart meters, and the utilization of a "smart grid", are in their infancy. Smart grid technology today is where the Internet was twenty years ago. The technology is available, but how will industry use it, how will customers react to it, how will the technology look five years from now, and what will it evolve into remain important questions. Answers to these questions will become clearer with time and use of the technology. The use of smart grid and associated devices may differ from one

HOUSE ENERGY AND UTILITIES
DATE: 3/3/2011
ATTACHMENT 2-1

utility to the next. The industry recognizes and appreciates that smart grid technology holds many functions that may enhance the performance of the utility and the grid as a whole. As such, each utility is currently formulating strategies and plans for implementation and utilization. These plans will remain fluid and dynamic as utilities learn how best to utilize the technology.

Third, the resolution requests the development of strategies to reduce GHG emissions. The EPA has recently issued a maze of new regulations that utilities are mandated to meet. These mandates have been coined the EPA "train wreck", given the time in which utilities must meet the regulations. The cost to utilities, and ultimately, the consumer, will be substantial. Utilities will be forced to determine whether to retrofit an existing facility or retire the unit. EPA, and potentially KDHE, will be the regulator(s) as to how and when utilities reduce GHG's. Inserting the KCC into this regulatory structure is unnecessary.

Lastly, substantial capital investments in experimental technology, such as energy storage devices, should not be suggested by resolution or mandated by legislation. If and when energy storage devices are proven to provide a measurable benefit or value to a specific utility and its customers, and if the KCC will allow cost recovery for the investment, the decision to invest in a device should continue to remain with the utility.

In closing, I respectfully ask the committee to not pass H.C.R. 5012. Mr. Chairman, this concludes my testimony and I stand for questions.

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

- 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

Energy Efficiency Programs Around the State	
Residential	**Commercial and Industrial**
Educational Programs Website Energy Analyzers Community Education Energy Audits Real Estate Classes Central A/C & Water Heater Programs Cool Homes Loan Programs How$mart Program Efficiency Kansas Energy Efficiency Rebate Programs Energy Star New Homes Special Projects Take Charge Challenge The Colwich Switch Affordability Programs Low Income Weatherization	Educational Programs Website Energy Analyzers Community Education Energy Audits Building Operator Certification Energy Efficiency Rebate Programs Energy Savings-Retrofit Energy Savings-New Construction Special Projects Take Charge Challenge

Demand Response Programs

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

L-4

KCP&L

8-4

KCP&L's Programs have been successful

- 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

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	

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

- **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

- **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.

Westar Energy EfficiencyWorks

- **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.

Empire District Electric Company

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.

Empire District's Kansas Energy Efficiency Programs

- **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 if $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.

Electric Cooperatives

Electric Cooperative Energy Efficiency Programs

- 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.

Midwest Energy

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.)

Midwest Energy's How$mart Program

- **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

- **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

KEPCo Energy Efficiency Programs

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.

KEPCo Energy Efficiency Programs

- **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.

Electric Municipals

Electric Municipal Energy Efficiency Programs

- 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.

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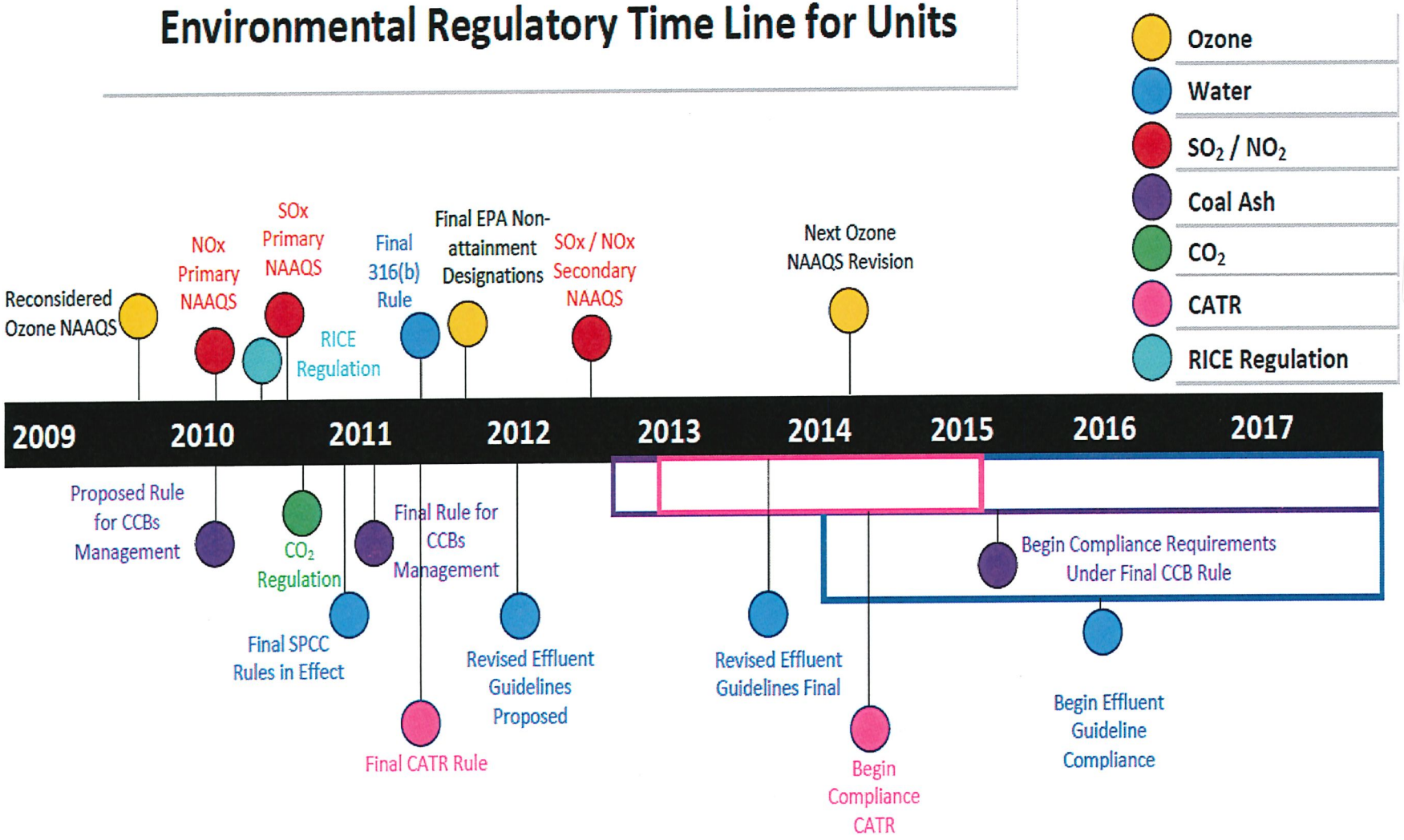
QUESTIONS

Environmental Regulatory Time Line for Units



HOUSE ENERGY AND UTILITIES
DATE: 2/3/2011
ATTACHMENT 5

Citizens' Utility Ratepayer Board

State of Kansas
Sam Brownback, Governor

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HOUSE UTILITIES COMMITTEE
H.C.R. 5012

Testimony on Behalf of the Citizens' Utility Ratepayer Board
By David Springe, Consumer Counsel
March 2, 2011

Chairman Holmes and members of the committee:

Thank you for this opportunity to offer testimony on H.C.R. 5012. The Citizens' Utility Ratepayer Board is opposed to this resolution as currently drafted. The resolution generally requires the state corporation commission to convene forums and study energy development, consumption and cost containment. In terms of intent, studying energy issues is not objectionable. However, certain language in the resolution seems to require more than just study. If this resolution passes, the state corporation commission will certainly endeavor to accomplish the tasks set forth within. There is a vast difference between studying energy issues and requiring implementation. Without the language changes set forth below, CURB cannot support this resolution.

However, with the following suggested language changes, CURB is neutral on the Resolution.

- Page 1, Lines 32-33. Delete "and implement".
  - Energy storage is an interesting and worthwhile area to study or investigate. However, requiring implementation makes this resolution unacceptable.

- Page 2, Lines 1-2. Delete "without causing a degradation in the quality of life for Kansans"
  - What is or is not degradation in the quality of life for Kansans is undefined. For example, implementing conservation and efficiency may reduce the long term cost of energy for all utility ratepayers, but may cause an increase in short term utility rates. This short term increase in utility rates will lead some customers to pay higher bills, arguably degrading their quality of life. For purposes of this resolution, this language is unnecessary.

- Page 2, Lines 4. Delete "beyond state borders"
  - This language is redundant as all exports are by definition are beyond state borders.

HOUSE ENERGY AND UTILITIES

DATE: 3/3/2011

ATTACHMENT 6-1

- Comment: Page 2, Line 4-5
  - As stated, a more robust transmission system may result in "lower cost electricity to high cost service areas". Conversely, a robust transmission system may result in higher cost electricity in service areas that are currently low cost. Your support of this language is relative to which side of the cost line you are on and may also be relative to whether you are the one paying for the cost of the robust transmission system. A robust transmission system may lower overall costs in a region, but it may not mean lower costs for every person or utility in that region.

- Page 2, Line 18-20. Delete all lines.
  - Lines 18-20 deal with smart grid and smart meter technology. These technologies are currently being deployed in Kansas to various degrees by electric utilities. CURB presumes that by definition the deployment of these technologies will increase. Therefore the language in these lines is unnecessary. If the Committee wants smart grid and smart meters included, CURB suggests a study of the full costs (and benefits) of implementing these technologies. For example, back office billing, accounting and IT costs will increase substantially to accommodate and utilize smart meter technology. These back office costs are often left out of cost/benefit calculations. There has been no study of these issues in Kansas to date.

- Page 2, Lines 21-23. Replace "Develop" with "Examine". Delete "existing coal-fired generation units, including both".
  - This changes the intent from developing strategies to reduce the greenhouse gas emissions of individual generation units, which is not really possible; to examining how utilities can reduce their greenhouse gas emission on a system wide basis, which is possible through the addition of renewable energy and the addition of energy efficiency and conservation measures.

If the above changes are made, then CURB welcomes the opportunity to discuss Kansas energy policy, including how different energy policy initiatives will affect Kansas consumers. However, CURB opposes this resolution without the above changes.