1500 SW Arrowhead Road
Topeka, KS 66604-4027

Kansas
Corporation Commission

Phone: 785-271-3100
Fax: 785-271-3354
http://kcc.ks.gov/

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

Comments of Mark Sievers, Chairman

Kansas Corporation Commission
Before the
House Committee on Energy & Environment
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Thank you for the opportunity to talk with you about legislation dealing with renewable portfolio standards.[1]

I'm Mark Sievers. I am deeply honored to be the current chairman of the Commission. The other Commissioners include Thomas Wright and Shari Feist Albrecht. I've been in the job since May of 2011. The other two members of senior management include our Executive Director, Patti Petersen-Klein and our General Counsel, Dana Bradbury. Patti manages the operations of the agency and Dana manages the legal filings and provides legal advice to the Commission.

I view the renewable portfolio standard to be a legislative policy decision, and thus, am officially neutral on the substantive provisions of the bill pending before you. I view my role as providing the legislature with information to help it put the issues before you in context.

Building a power plant of any kind is an exercise in long range planning for investments that will last for decades. When government changes mandated renewable portfolio ratios every few years that complicates such planning. It places industry in the role of guessing what government will do 2, 5 or 10 years from now. It also presents four policy issues that I ask you to consider.

ENVIRONMENTAL REGULATIONS AND FUEL COSTS

The first policy issues to consider are the environmental mandates from the EPA and fuel cost trends and whether renewable portfolio standards have been overtaken by developments in these areas. Said differently, I don't not know the degree to which the current investments in renewable resources were driven by government mandates and deadlines rather than simply by the economics of coal and wind.

It should be no surprise that the EPA is focused on generation from fossil fuels. In Kansas, investor owned utilities have committed about $2 billion in capital spending to comply with environmental mandates. This is in a state where the total electric power expenditures are about $3.5 billion annually,[2] so this compliance investment is no small matter.

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[1] This statement represents my views, and not the Commission as a whole.
[2] 2010 FERC Form 1's & Annual Reports filed with the KCC.

Even though Kansas' compliance with the cross-state air pollution rules has been put off for now, it is reasonable to expect that new rules may be developed in this area. EPA environmental rules are being developed that deal with CO_2 emissions, cooling water and the treatment of fly ash. A reasonable forecast is that EPA rules will significantly increase not decrease the cost of generation from fossil fuel sources.

A rule of thumb is that about 60% of electric utility rates are driven by fuel costs and about 10% by transmission costs. About 62% of electric power consumed in Kansas is generated with coal.[3]

In Kansas, according to the Energy Information Administration (EIA), in the last 5 years, the cost of coal per ton used by electric generators has increased by about 47% over the last 5 years.[4] In Kansas, over the last 5 years, the average monthly residential electric bill has increased by about 36% to about $105/month compared to an increase of about 15% or $110/month for the nation as a whole.[5] Those electric price changes may be simply attributable to increased environment compliance costs and increases in the cost of coal.

According to the EIA, the capital costs of a new coal plant are about $2,600/kilowatt whereas the capital costs of wind energy are about $2,300/kilowatt. The EIA also reports that the operating costs of new coal plant are $34/kilowatt whereas wind energy operating costs are reported to be about $28/kilowatt.[6]

Lazard's levelized cost of energy comparisons are well respected analyses of various energy generation costs. Their most recent figures report that the levelized cost of wind energy is between $48 and $95/MWh; they report that the unsubsidized levelized cost of coal is between $62 and $141/Mwh.[7]

If either of these analyses are accurate, wind energy is cost competitive with coal-fired generation.

Renewable resources – such as wind, solar and hydro power – have virtually no fuel costs and no emissions. Thus, renewable resources provide an economic hedge against EPA mandates and fuel cost increases and are increasingly cost competitive with fossil fuel generation. A utility facing the evolution of EPA requirements, the recent history of coal prices and the decline in renewable costs has powerful, natural economic incentives to include renewable resources in its generation mix irrespective of government mandates and deadlines.

ECONOMIC DEVELOPMENT

The second policy issue to consider is economic development. The policy question is whether mandates and deadlines best promote economic development or whether government should be

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3 Energy Information Administration, Electric Power Monthly, Tables 1.6B and 1.7B (Feb. 2013).

4 Energy Information Administration, Electric Power Monthly, Table 4.10B (Feb. 2007 v Feb. 2013).

5 Energy Information Administration, Electric Power Monthly, Table 5.3 Residential average monthly bill by Census Division and State (2007 v 2011).

6 Energy Information Administration, Generating Technologies Cost, Assumptions to the Annual Energy Outlook 2012, Electric Energy Module, Table 8.2. Cost and performance characteristics of new central station electricity generating technologies (2012).

7 Lazard, Levelized Cost of Energy Analysis, Version 6.0 (2012).

focused on promoting innovation through the market. If your public policy objective is to promote economic development, expand the deployment of renewable resources or reduce rates, the best option may not be to tinker with government mandates and deadlines, but to promote competition by knocking down institutions that inhibit the deployment of competitive distributed generation.

Kansas is the wind state. The development of wind energy in Kansas generates investment in Kansas and jobs. The investments come in the form of manufacturers like Siemens who locate in Kansas, wind farms that invest in Kansas and transmission facilities that carry Kansas wind energy to market.

There are 18-20 large commercial wind farms in Kansas.

At a high level, about 61% of the wind power generated in Kansas is exported to other states.[8] For example, much of the wind energy generated by the wind farms west of Salina is sold to the TVA in Tennessee or consumed by utility customers in Missouri and Arkansas. I tell my colleagues from other commissions – "I love it when your legislature increases your RPS goals because that means more money for Kansas."

About $1.4 billion in transmission projects are underway in Kansas to support public utility transmission projects largely devoted to connecting wind facilities to the grid. In addition, private carriage transmission projects – like Clean Line and BP – are also investing heavily to build transmission facilities in Kansas to take advantage of Kansas' wind resources.

These investments in Kansas generate construction jobs, jobs for wind farm operations and jobs for transmission construction and jobs for the local businesses that serve construction crews and wind developers. They also enrich landowners who might lease property for the wind farms or transmission facilities and contribute to local property taxes. These investments are largely "new money" for Kansas that comes from sources outside of Kansas.

A recent study by Lawrence Berkeley National Labs attempts to quantify the economic development benefits from wind development.[9] It surveyed all the previous economic development literature and developed an econometric analysis of the impacts of wind development in a data set of about 1,000 counties with wind projects. At a high level, it found that each megawatt of installed wind generation capacity generated ½ a job and contributed about $11,000 to the local economy. Thus, if the typical new wind turbine has an installed capacity of 3 megawatts, according to the study's analysis, that represents 1½ jobs and $33,000 to the local economy for each wind turbine you see on the horizon.

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[8] The KCC tracks large commercial wind farms in Kansas and developed this figure from its filings.

[9] J. Brown, J. Pender, R. Wiser, E. Lantz, B. Hoen, (NREL & Lawrence Berkeley Nat'l Labs) *Ex post analysis of economic impacts from wind power development in U.S. counties Original Research Article*, 34 Energy Economics 1743 (Nov. 2012)

In Kansas, wind generation capacity in place or under construction totals more than 2.7 gigawatts, so that's about 1,356 jobs and $29.8 million contributed to the local economy according to the Lawrence Berkeley National Labs study.

Some firms are interested in Kansas because of its renewable resources potential. For example, Sprint, which employs more than 7,000 people at its Overland Park headquarters, was named the 3rd "greenest" corporation by Newsweek. In partnership with KCP&L, Sprint made a business decision to deploy a variety of renewable energy resources managed by KCP&L. Walmart has a similar program in partnership with Dominion Power to deploy and manage solar panels on its roof tops. Mars located its candy factory in Topeka in part to take advantage of Kansas' renewable resources potential.

Likewise, military bases in Kansas are under directives to become energy independent and "greener". In the current federal administration and budget realities, retaining military bases and jobs in Kansas may well turn on whether they have cheap, easy access to renewable resources dedicated to those military facilities.

Other states' experiences with renewable resources are also instructive. I would point to the City of Austin, which uses off-peak wind energy to power a centralized chilled water facility that is used to air condition downtown commercial and hi-rise residential buildings. Essentially, Austin is using chilled water to store wind energy. Because of the cheap downtown air conditioning, growth in Austin has focused in the downtown area and Austin has not had to build electric infrastructure to satisfy urban sprawl. It has not had an electric rate increase since the mid 1990s. Imagine that renewable model in Wichita or Kansas City, Kansas where occupation of downtown buildings is declining.

If Kansas can facilitate such private arrangements, or at least not stand in the way, it will attract investments and economic development to Kansas. Programs like these – which are basically renewable distributed energy programs – begin to introduce an element of competition to monopoly utility markets as utilities strive to meet the demands of their large commercial customers. They also developed in a marketplace environment, not as a reaction to government mandates and deadlines. In my view, the market is creatively bringing renewable resources into fuel mixes, not government.

IMPACT ON ELECTRIC COSTS, PRICES AND ECONOMIC DEVELOPMENT

The third policy consideration is the impact on electric costs and prices, and the impact changes in costs and prices have on economic development. The policy question is whether renewable mandates lead to higher prices that drive firms away from Kansas. Empirical data suggest that the answer for Kansas is "no."

The Commission does not regulate wind farms or set the price of wind generated electricity. However, wind finds its way into electric rates through the cost of wind and transmission in utilities' fuel mixes and in the rate base used to calculate utility rates.

On March 1, as required by 2012 amendments to K.S.A. 66-1260, the Commission Staff, through Dr. Robert Glass presented a report to your Committee that indicated that the aggregate impact of

the Kansas renewable energy standard is about 0.16¢ per kilowatt hour on an aggregate retail base price of 9.2¢ per kilowatt hour. On its face, that's less than 2% of the retail price of electricity.

As you consider Dr. Glass' report, however, I point out three important caveats to keep in mind:

1. Dr. Glass' figure is a statewide average which does not consider the impact on any specific utility. Every Kansas utility has a different fuel mix. Not all utilities are included in Dr. Glass' report, only the ones that are jurisdictional to the Commission.

2. Dr. Glass' figure does not reflect the impact on any specific customer class. The rates that any customer pays depend on the rate design and costs allocated to that customer's class.

3. Dr. Glass' raw price figures do not tell you how consumers' total monthly electric bills are affected. National elasticity studies indicate that every 10% increase in electric rates causes a 3% decrease in residential electric volumes in the short run and as much as 9% in the long run[10] as consumers naturally respond to higher prices by reducing their demand and/or adopting energy efficiency measures. For example, if a residential consumer pays 9.2¢/kWh and consumes 1,100 kWh per month, his total monthly bill will be $101. 20. If the price increases by 2% and a consumer responds by reducing the volume demanded by 1%, the total monthly bill will increase by only $.73/month or about 0.7%.

Changes in electric rates do affect employment and economic development when consumers and businesses choose between paying their electric bill, reducing usage, hiring staff or simply locating outside Kansas where rates are lower. The Kansas Policy Institute (KPI) developed an estimate of the relationship between electric rate changes and employment in Kansas in its analysis of the impact of renewable portfolio standards.[11] The KPI study concluded that a 10% increase in electric rates in Kansas will reduce employment by 0.22%. Thus, assuming the study is accurate; all else being equal, a 2% increase in electric rates will be associated with a decrease in employment of about 0.045%.

Electric rates affect Kansas' ability to attract and retain businesses, especially industrial customers. Industrial customers can locate their plants anywhere in the world. For example, the low electric rates in Iceland generated with geothermal resources are why electric intensive aluminum smelters locate there. In Kansas, our version of aluminum smelters is manufacturers, are chemical manufacturers that use large amounts of electricity to make their products.

Today, industrial electric rates in Kansas are significantly lower than the national average and surrounding states. According to the Energy Information Administration, the average monthly industrial customer's electric bill is about $2,500 in Kansas, compared with $9,600 in Missouri, $5,500 in Colorado and $11,000 in Iowa.[12] Thus, Kansas may be better positioned to absorb an

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[10] Electric Power Research Institute, *Price Elasticity of Demand for Electricity: A Primer and Synthesis*, pg 20 (Jan 2008)

[11] D. Tuerck, P. Bachman, M. Head (Kansas Policy Institute), *The Economic Impact of the Kansas Renewable Portfolio Standard* (2012)

[12] Energy Information Administration, Annual Electric Utility Report, Table 5C, Industrial average monthly bill by Census Division, and State 2011.

increase in industrial rates than could the states with whom it competes for commercial and industrial customers.

ROLE OF GOVERNMENT

The fourth policy consideration is political and deals with the proper role and scope of government oversight and regulation. Does this action to change the renewable portfolio standard implicitly endorse a larger involvement of government in the market?

The traditional public utility model grants a firm a monopoly where the government protects the regulated firm from competition. In order to protect the public from abuses of a government created monopoly, regulation is imposed to set prices, limit earnings and requires that regulators determine what investments are prudent. Thus, the traditional utility model puts regulators in the role of overseeing proposals by regulated entities, enforcing compliance with legislative mandates and subsidy programs or, in some cases, substituting the judgment of political appointees – like me – for that of the regulated firm. In such an environment, utilities do not set their prices or make investments to attract or retain customers or minimize costs, but rather, to comply with government requirements and regulation. In a very real sense, utility regulation puts government in the role of picking winners and losers.

Decisions in this regulated model are largely made in the hearing room and in legislative proceedings rather than in the market. Regulated firms grow their revenues and profits by convincing regulators that their investments are prudent and that their allowed rate of return and rate structure are "just and reasonable" or that they need public money – taxes and subsidies – for some element of their operations. The process employs scores of lawyers, lobbyists and expert witnesses and a blizzard of paper that, in my view, have nothing to do with innovation or providing better service to the public.[13]

As you debate this issue, I would ask that you consider whether the proposed changes increase or decrease the level of government involvement and oversight. By changing compliance deadlines for renewable portfolio mixes I suggest that you ask whether you are endorsing greater government involvement in marketplace decisions or less.

With that, I'd be delighted to answer any questions.

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[13] Canada, Australia and the UK limit rate case expenses and distortion by using some variant of price caps where government limits annual price changes and sets performance standards, but otherwise does not regulate profits, oversee the prudence of investments or allocate costs among customer classes as we routinely do here in the United States. For example, the Ontario Energy Board rate regulates 77 electric utilities using price caps who serve a population about the size of Illinois over an area that is about twice the size of Texas. Customers have a choice of energy providers in Ontario and enter into contracts for service. Regulated electric rates in Ontario are lower than in Kansas http://www.ontarioenergyboard.ca/OEB/Consumers/Electricity/Electricity+Prices