

MINUTES

JOINT COMMITTEE ON ENERGY AND ENVIRONMENTAL POLICY

December 5, 2008
Room 545-N—Statehouse

Members Present

Senator Carolyn McGinn, Chairperson
Representative Carl Holmes, Vice-Chairperson
Senator Janis Lee, Ranking Minority Member
Senator Mark Taddiken
Representative Mitch Holmes
Representative Forrest Knox
Representative Joshua Svaty

Staff

Melissa Doeblin, Office of the Revisor of Statutes
Cindy Lash, Kansas Legislative Research Department
Mary Galligan, Kansas Legislative Research Department
Raney Gilliland, Kansas Legislative Research Department
Renaë Hansen, Committee Assistant/Secretary

Chairperson Carolyn McGinn called the meeting to order at 9:40 a.m.

The Chairperson recognized Melissa Doeblin, Office of the Revisor of Statutes, who presented a packet containing information on other states' community wind statutes. She noted that Kansas does not have any laws specifically governing community wind projects, but that Kansas does have statutes that define renewable energy and that provide for creation of renewable energy cooperatives. She noted that as of last year about 21 states had enacted community wind legislation (Attachment 1).

Senator Lee described the flip financing model for ownership of community wind projects. She noted that in that model, large corporations would invest the initial capital to construct a community wind project and then after 20 years ownership of the wind generators would be transferred to the land owners.

Several members of the Committee asked for information about Renewable Portfolio Standards (RPS) nationwide.

Dan Nagengast, Kansas Rural Center, described for the Committee his observation that in areas where community projects exist, there is considerable economic prosperity. He noted that economies of scale push us towards huge wind turbines as opposed to the small ones used for community wind. Mr. Nagengast mentioned to the Committee several small wind projects in operation in Kansas. He noted that many of them are using re-manufactured windmills. He said that when a variety of wind turbine sizes are used in an area, one begins to see more local manufacturing facilities and local maintenance workers for the turbines (Attachments 2 and 3).

Senator Lee asked the staff how Kansas defines avoided cost for the purpose of the parallel generation statute. It was noted that Kansas defines avoided costs as the average cost of energy generated and energy purchased.

Representative Carl Holmes asked about the production tax credit and why most land owners are not taking full advantage of that. Mr. Nagengast responded that it has to do with passive income. Representative Knox commented that in general the investment versus income is not positive for small wind farms.

Senator Taddiken noted that we subsidized wind in order for it to work and questions if we should subsidize nuclear energy production because it is a clean energy. Mr. Nagengast responded that nuclear has nothing to do with local farming and small communities.

The Chairperson recognized Dr. Ruth Douglas Miller, Kansas State University, who described the K-State wind engineering program. The major application for the program is to integrate windmills into schools in six states, with funding coming from National Renewable Energy Lab (NREL). Dr. Miller described the benefits for the communities involved. She also discussed the benefits to education facilities including community schools and technical schools. She distributed a brochure on wind for schools (Attachments 4 and 5).

Senator Lee asked how many rural cities allow wind turbines inside the city limits. Dr. Miller noted that the one she heard about is Great Bend. Senator Lee asked whether communities were willing to make an exception for a school to have a turbine inside the city limits. Dr. Miller responded that this program is directed to rural schools that are located primarily outside city limits.

Senator Taddiken noted that some communities may not want wind generating capacity for the schools because they are the largest electric load in the area. Dr. Miller responded that there is no way their turbines would affect the load significantly as it amounts to about \$30 per month.

The Chairperson recognized Bruce Graham, Instructor in Wind Energy for Cloud County Community College, who described the College's program which focuses on training for construction and management of wind turbines. Enrollment in the program is growing exponentially. He noted that Cloud County Community College is adding a wind assessment and development training program. He elaborated on the current program and how they are able to get involved in some of the wind being installed in Kansas. Mr. Graham also distributed a supplemental information sheet (Attachments 6 and 7).

Senator McGinn asked why we do not have wind generation equipment manufacturing in the United States and, specifically, Kansas. Mr. Graham noted that some companies view Kansas as not very wind friendly. Also, Kansas has not actively recruited companies that manufacture the windmill parts.

The Chairperson recognized Kent Adams, Vice-President for Finance and Operations at Pratt Community College. Mr. Adams described the costs associated with adding wind-powered electric generation capacity for the college. He noted that the project was widely accepted in the community (Attachment 8).

Representative Carl Holmes asked what the bird kill numbers are with the windmills. Mr. Adams noted that they have been in operation for nine months and there have been no bird kills.

Representative Carl Holmes asked about the maintenance costs over the 20-year expected life of the turbines. Mr. Adams noted that it was about two cents per kW hour. He also commented that they currently have a five-year maintenance contract that costs approximately \$2,000 dollars per turbine per year.

Representative Carl Holmes asked if the College is putting electricity onto the grid. Mr. Adams responded that they are not. The College sized its wind generation capacity with three turbines specifically because they did not want to generate excess electricity to sell to the electric companies. The three windmills supply them about 20 percent of their energy needs.

The Committee recessed at 11:50 a.m. and reconvened at 1:20 p.m.

The Chairperson recognized Colin Hansen, Executive Director of Kansas Municipal Utilities who discussed some of the challenges and opportunities for public power and community wind in the municipal utilities' footprint. Mr. Hansen noted that he continues to believe that this is a great time for community wind. He described the logistics of adding a wind turbine to the generation capacity for the Sterling municipal electric utility. He believes that one city needs to step forward and be the first city to add wind to its energy portfolio, then others will follow (Attachment 9).

Representative Mitch Holmes asked if the declining population of some rural cities is detrimental to adding wind. Mr. Hansen noted that the numbers are a wash based on the fact that they are not rapidly declining in population. He stated that energy use per customer is usage of energy is increasing continually at about the same rate as customers that are leaving the areas.

Representative Carl Holmes asked if the peak winter load for the Sterling utility is day or night. Mr. Hansen responded that he is not entirely sure, but guessed that it was probably around midnight.

Representative Mitch Holmes asked about the size of windmill required for a small city that does not want to sell energy onto the grid. Mr. Hansen commented that he would get back to the Committee on the size that would meet that need.

Representative Carl Holmes asked if there were any cities that would allow a customer to put a windmill in the customer's back yard. Mr. Hansen noted that would be addressed by zoning ordinances that vary from city to city. He commented that the larger cities probably would not allow windmills. He also noted that the towers have to be located so that if it falls, it stays within the property.

Representative Svaty noted that the city of Holyrood has had a turbine up for years, and that residents of smaller communities may not face zoning issues. He also commented that we need to get numbers of how many wind turbines are out there in the smaller communities.

Dan Hartman, Executive Director of the Logan County Development Corporation, presented information about business and legal issues concerning wind energy. He noted that community wind projects tend to add five times more economic value to a community than large wind farms. He commented that in the industry, wind generation capacity is considered "community" if it is below 20 megawatts. Mr. Hartman noted that states with renewable portfolio standards tend to have a more aggressive wind energy development network. He said that farmers have found that wind projects are one thing that has been introduced in the last 60 years that will actually put money in the pockets of family farmers. Mr. Hartman commented that it is widely known that community wind can be added fairly successfully without having to add transmission lines (Attachments 10 and 11).

Representative Carl Holmes asked if there was anything in Kansas law that prohibited the flip model of financing community wind. Mr. Hartman commented that he could not think of anything that would prohibit the flip model.

Representative Carl Holmes inquired if Mr. Hartman was aware of any entities involved in the flip model financing in the state today. Mr. Hartman noted that the Wisconsin flip model has not been done anywhere else because there are some issues involved with its administration, but the Minnesota flip model is workable.

Representative Carl Holmes asked about the cost per kilowatt of a compressed air energy storage system, and commented that it is the cost of wind plus the cost of the storage. Mr. Hartman agreed to get that information back to the Committee. He also noted that the cost of wind power is apples and oranges when comparing wind energy to coal energy.

Senator Lee asked whether Mr. Hartman was advocating community wind or industrial-scale wind. Mr. Hartman responded that the two types of wind are parallel, but that industrial-scale wind is more difficult to incorporate into the existing grid because of the quantity of wind-generated electricity that may be pushed out to an unknown load.

Senator Lee asked if there were any studies that discuss the costs to consumers, especially the difference in cost depending on who develops the wind energy. Mr. Hartman noted that there is a study that does an in-depth analysis of the economics. He believes this is a legacy issue and it is something that will be left for our descendants and something for which people might be willing to pay.

The Chairperson recognized Les Evans, Vice-President for Power Supply of the Kansas Electric Power Cooperative, Inc. Mr. Evans presented an overview of the benefits and challenges of community wind. He stated that he believes that community wind is typically defined to be 20 megawatts or less of production capacity. He noted that community wind projects strengthen the local economy, produce clean energy, and build a new industry. Mr. Evans commented that cooperatives have an obligation to serve their members and their customers with energy that is reliable, economical, and safe. Those factors need to be considered when they are looking at supporting or not supporting wind generation in any form ([Attachment 12](#)).

Representative Carl Holmes asked whether, if Kansas had net metering, it would be possible to use time-of-day pricing on a small scale. Mr. Evans responded that the technology exists to use the time-of-day pricing, but the administrative burden would be cost prohibitive.

Representative Carl Holmes asked whether, if net metering for wind turbines existed, the state could force the municipalities to allow the turbines. Mr. Evans noted that they could, but countered with a question about who would have to carry liability insurance on the windmills.

Representative Svaty asked how many customers in any cooperative are utilizing parallel generation. Mr. Evans noted that they see more and more requests for it every day. The current outlook is for one or two a month coming on a system.

Representative Svaty commented that the point he is trying to make is that under the current system we have net metering, but we have not just called it that.

Representative Knox asked how reliability costs would be handled, as we move ahead and energy prices move higher and more people want to invest in their own energy production. Mr. Evans noted that they move a significant amount of the fixed cost over into the cost of the energy. He commented that if at the end of the day you want the reliability to go with your generation the

question to be asked is: What are you willing to pay to make sure you have reliability for your energy needs?

The Chairperson recognized Dr. Wally Tyner, Purdue University, who made his presentation via telephone. He told the Committee that historically, energy production and price moved in response to one set of economic drivers and agricultural production and price moved in response to another set of drivers. Dr. Tyner noted that currently these two markets are moving more congruently. He noted that many bio-fuel producing countries have moved away from government-subsidized production costs. The cost of production is now being paid at the pump by the consumer. Dr. Tyner talked about the costs of cellulosic alcohol production (Attachment 13).

Representative Knox asked why switchgrass would ever need to be replanted as it is a native grass. Dr. Tyner noted that research indicated yield begins to decline after ten to 12 years.

Senator Lee asked whether enough switchgrass could be produced to replace coal as an energy source. Dr. Tyner noted that you cannot replace coal completely, but that you can replace part of it. He noted that you can reduce greenhouse gas emissions by the portion that you reduce coal fired electric generation, and under a cap and trade system you get an economic benefit.

The Chairperson recognized Jason T. Chan from Waste Management, Inc. Mr. Chan described the process of collecting landfill gas to use to produce energy (Attachments 14 and 15).

Representative Svaty asked about the different methane levels. Mr. Chan responded that they look for 40 percent to 52 percent. He noted that the industrial and commercial waste in some areas generates a lower level of methane. He also noted that H₂S gas is created during the decomposition of waste and that has a lot of odor potential.

Senator Lee asked how they determine how the landfill gas will be used. Mr. Chan noted that the company studies the businesses in the area and identifies what their needs are, and how to get that product to the companies, cooperatives and municipal utilities. He noted that a majority of the production is landfill gas to electricity.

Senator Lee asked if there was a way to speed up the decomposition of the waste product. Mr. Chan responded that they compact the waste, adding liquids and wastewater treatment sludge to the mix, to increase the moisture content in the mass which creates the gases. Mr. Chan noted they are working towards a plan that will result in the liquid being out of a facility within five to seven years of closing. Currently that depletion rate is 20 to 40 years.

Senator Lee asked about how much waste was necessary in order to justify building a plant. Mr. Chan noted various amounts of waste could be used for various purposes. Some small landfills produced just enough gas to heat their own facilities.

Representative Mitch Holmes inquired about the expected life cycle of one of the plants. Mr. Chan noted that in Topeka they have planned land-fill capacity until 2050. They suggest that they could generate up to the year 2080.

Representative Svaty noted that Kansas allows mono-filing of tires and wondered if that gives off gas. Mr. Chan noted that when you consider using those as a source you are looking at long term for that gas to be used.

Representative Knox noted that it is interesting that Waste Management has done this without any government help. Mr. Chan commented that they are making money at their facilities and that it is profitable on both ends. He noted that it is the company's vision to utilize landfill gas as a renewable resource and to do the right thing for the long term.

Senator Lee noted that Johnson County has a property tax exemption for the equipment utilized for this methane gas capturing.

Representative Mitch Holmes commented that he has heard of a researcher planting trees over land fills to keep water from leaching down into the land fill. Mr. Chan noted this is a remediation technique, and they do it to the perimeter of the landfill to help treat the groundwater and make it more pure.

Vice-Chairperson Carl Holmes reminded the Committee about the roundtable discussion sponsored in part by the Kansas Corporation Commission on CO₂ capture and storage and nuclear energy on December 16. He noted that box lunches would be available for a nominal amount at the meeting. Additionally, he reminded the Committee that a meeting has been scheduled for January 13, 2009, from 9:00 a.m. to 11:00 a.m. in the auditorium at Memorial Hall.

It was noted that the Committee should have available information provided during the committee meeting this interim. Staff noted that the presentations have been posted on the Committee's webpage. A member suggested that the Committee report consist of a list of the information available so that any standing committees also could have the information.

The Vice-Chairperson noted that the Committee had not reached any conclusion, nor had it recommended any legislation, as yet. As a committee it needed to restate the charge of the legislation that formed the Committee. Staff was asked to include in the Committee report options for directions the Committee might take in the upcoming year. Additionally, the Committee noted that in making policy recommendations, the members need to be objective and listen to all arguments on the various issues.

One member requested that an upcoming agenda include a report on any current Kansas energy resources, and limiting factors to retrieving those resources.

Representative Carl Holmes commented that the Committee cannot just meet on January 13 and then not meet until May. He believes the Committee needs to consider Friday afternoon or late morning meetings during the Session when appropriate to respond to any policies introduced by the new federal administration.

The meeting was adjourned at 4:40 p.m.

Prepared by Renae Hansen
Edited by Mary Galligan

Approved by Committee on:

January 13, 2009
(Date)