

MINUTES

JOINT COMMITTEE ON ENERGY AND ENVIRONMENTAL POLICY

September 29-30, 2009

Room 783—Docking State Office Building

Members Present

Senator Carolyn McGinn, Chairperson
Representative Carl Holmes, Vice-chairperson
Senator Pat Apple
Senator Janis Lee
Senator Roger Reitz
Representative Forrest Knox
Representative Cindy Neighbor
Representative Tom Sloan
Representative Vince Wetta

Members Absent

Senator Mark Taddiken
Representative Mitch Holmes

Staff Present

Mary Galligan, Kansas Legislative Research Department
Raney Gilliland, Kansas Legislative Research Department
Melissa Doeblin, Office of the Revisor of Statutes
Sean Ostrow, Office of the Revisor of Statutes
Mike Corrigan, Office of the Revisor of Statutes
Renaë Hansen, Committee Assistant

Others in Attendance

See attached list.

Tuesday, September 29 Morning Session

Chairperson Senator Carolyn McGinn called the meeting to order at approximately 10:15 a.m. and reviewed the agenda for the day. She noted that the Committee had been provided with information from the National Conference of State Legislatures (NCSL) entitled, "The Water-Energy Nexus: Overview Legislative Summary" ([Attachment 1](#)).

Overview of Kansas Water Law

Chairperson McGinn recognized David Barfield, Chief Engineer, Division of Water Resources of the State Department of Agriculture, who described the Kansas water system ([Attachment 2](#)). He explained the differences between surface water and groundwater supply. He reviewed some of the Kansas water laws and the history of the law governing water appropriation. He noted that the law allows for the use and development of water resources.

Mr. Barfield talked about the remaining capacity in the Kansas water sources. He identified four rivers in the State that remain open to new water rights: the Missouri, the Kansas, the Big Blue, and the Spring Rivers. He explained how water law in Kansas has evolved. His presentation described some of the details of those changes. Finally, he explained how water is transferred from one area to another area in accordance with the Water Transfer Act.

The Water-Energy Nexus

The Chairperson recognized Peter Pfromm, Professor of Chemical Engineering, Center for Sustainable Energy at Kansas State University. Dr. Pfromm gave a brief overview of the energy conversion process. He explained how water is involved in this process. He noted how one could compare the energy balance used versus the mass balance. This is an unassailable tool to compare processes in a transparent and visual manner ([Attachment 3](#)).

The Chairperson recognized Nancy Jackson, Executive Director of the Climate and Energy Project. Ms. Jackson discussed projections of water availability in the future. Ms. Jackson noted that some estimates are that by the year 2030, 47 percent of the world's population will experience severe water shortages. Ms. Jackson commented that we are getting better at using less water to produce our energy sources. For example, increases in wind for energy in the future could reduce the amount of water used for energy production by 17percent. She noted that the Climate Energy Project is promoting a balanced look at the production of energy, using energy efficiency, wind, and other sources to make a common sense solution as a society ([Attachment 4](#)).

Availability of Water for a Wolf Creek Expansion

The Chairperson recognized Mark Schreiber, Director of Government Affairs, Westar Energy, who spoke briefly about the potential construction of a new nuclear power plant at Wolf Creek. He said that Westar plans to be a fast follower, rather than a leader, in the next wave of constructing nuclear power plants in the United States ([Attachment 5](#)).

The Chairperson recessed the meeting until 1:30 p.m.

Afternoon Session

The meeting reconvened at 1:35 p.m. The Chairperson recognized David Barfield, Chief Engineer of the Division of Water Resources of the Department of Agriculture. Mr. Barfield discussed the availability of water to support another nuclear power plant at Wolf Creek. He described water usage at the current Wolf Creek plant. He noted that if more water is needed it might be possible for Wolf Creek to buy water rights from Melvern Lake, the Marais Des Cygnes River, or the Kansas River ([Attachment 6](#)).

The Chairperson recognized Tracy Streeter, Director of the Kansas Water Office who discussed water resources that might be available if more water is needed for a second nuclear power plant. The Water Office is looking at the possibility of raising the lake pool level by 2 feet which would gain about 10,000 to 15,000 more acre feet (AF) of water. He noted that dredging the John Redmond lake to gain 52,000 AF of water would be a long-term project and that such a project could take 5-10 years just for the preparation work. Mr. Streeter noted that building a new lake also would be an option to gain more water to support a second nuclear reactor. He noted that transferring water from one place to another will not create more water. We will need to find more ways to store water for usage ([Attachment 7](#)).

Water Use and Conservation Efforts by the Energy Industry

Electric Utilities

The Chairperson recognized Mark Schreiber, Director of Government Affairs, Westar Energy, who described the uses of water by Westar Energy for energy generation, now and in the future. His presentation included examples of water conservation practices that Westar has implemented ([Attachment 8](#)).

The Chairperson recognized Paul Ling, Manager of Environmental Services, Kansas City Power and Light (KCPL), who described the utility's water usage in energy production. He noted that the company generates 90 percent of its energy from coal or nuclear fuel. KCPL uses water for: wet scrubbers, non-potable and sanitary processes, boiler condensate makeup, dust suppression, conveyance, large pumps, and boiler condensers. KCPL will need additional water in the future for wet scrubber replacement, and replacement of once-through cooling with closed-cycle cooling with cooling towers. He described examples of water conservation practices ([Attachment 9](#)).

The Chairperson recognized Jim Epp, Manager of Water Operations and Acting Chief Administrative Officer, Kansas City Board of Public Utilities, who described the Missouri River Risk Mitigation project, horizontal collector wells, and conservation practices used to meet the utility's need for water. He showed the Committee a large poster demonstrating an alluvial water well pump used by the utility. He commented that their well pumps about 40 million gallons a day and is virtually safe from spills into the river and droughts in the area because the well is 100 feet deep ([Attachment 10](#)).

The Chairperson recognized Kyle Nelson, Executive Vice President and Chief Operation Officer of Sunflower Electric Power Corporation, who described the factors that a power company considers when determining when and how to expand energy production. He also described water usage considerations Sunflower applies as it plans for providing more electricity to its customers ([Attachment 11](#)).

Refineries

The Chairperson recognized Jim Loving, Plant Manager for National Cooperative Refinery Association (NCRA), who described water use during oil refining processes. He enumerated ways in which NCRA works to conserve water used in production processes. He also described the methods NCRA is exploring to reduce water consumption ([Attachment 12](#)).

Renewable Generators

The Chairperson recognized Tom Robb, Manager of Institutional Relations, Abengoa Bioenergy, who presented testimony via telephone. He described what Abengoa does to conserve water, success of their efforts, and future plans for water conservation. He noted that significant water savings in bio-fuel production will come in the crops that are used to produce those bio-fuels. He commented as you move from corn to sorghum to switch grass as the fuel source, the amount of water-per-acre needed to grow the crops decreases dramatically.

The Chairperson recognized Greg Krissek, Director of Government Affairs, ICM, Inc., who presented information about water use in the fuel ethanol industry. He also provided an overview of the fuel grade ethanol industry and ethanol production process from a water use perspective. He noted that poor water quality leads to use of more water in the ethanol production process ([Attachment 13](#)).

The Chairperson recognized Steve McNinch, Board Chairman, Kansas Association of Ethanol Processors, who explained the amount of water used for ethanol production. Additionally, ethanol plants sell wet distillers grain to feedlots which allows the feedlots to use 10 percent less water for the animals. He noted that of the 4.6 million acre-feet of water Kansans use per year, Kansas ethanol plants use only 4,049 acre-feet, or .09 percent of the total ([Attachment 14](#)).

Agriculture

The Chairperson recognized Brad Harrelson, State Policy Director, Kansas Farm Bureau, who presented information regarding the need for increased agricultural output in the future. He noted that in the next 40 years the world will need to double its agricultural production to meet the increasing food and energy demands ([Attachment 15](#)).

The Chairperson recognized Vara Prasad, Kansas State University, who presented an overview of precipitation and water resources in Kansas. He noted specific projects that K-State is researching concerning water usage and crop production. Additionally, he offered a short paper on improving water use efficiency and drought tolerance of Kansas crops ([Attachment 16](#)).

Allan Fritz, Professor of Wheat Breeding, Kansas State University, spoke to the Committee on the systems approach to crop production improvement. He noted that part of the process is attributed to genetic improvement and the other part is attributed to improved management practices ([Attachment 17](#)).

The Chairperson adjourned the Committee at 5:02 p.m.. She reminded the Committee that the meeting would resume tomorrow at 9:00 a.m..

**Wednesday, September 30
Morning Session**

The Chairperson called the Committee to order at 9:00 a.m..

Update on Federal Stimulus Funding (ARRA) for Energy

The Chairperson recognized Thomas Wright, Chairman of the Kansas Corporation Commission (KCC), who described how the KCC is using the \$50 million they received from the Department of Energy as part of the American Recovery and Reinvestment Act of 2009 (ARRA). Mr. Wright noted that approximately \$38 million of the funds will be used to implement Efficiency Kansas, a revolving loan program that provides funds for purchase and installation of energy efficiency improvements in residences (Attachment 18).

Mr. Wright noted that banks and utilities have been recruited to participate in the program. Six banks with 66 locations statewide have agreed to make loans for the program. He noted that until more energy auditors are trained, there might be a shortage of energy auditors in certain parts of the state. Mr. Wright said he would provide the Committee a list of energy auditors. The KCC estimates that an energy audit will cost the consumer somewhere between \$350 and \$700. He noted that the energy efficiency website has more information.

Mr. Wright said he would provide a copy of the ARRA language that places conditions on the state regarding use of the energy efficiency funds. The KCC is documenting program activities to ensure accountability for use of the federal funds. In regard to the rate structure effort related to energy efficiency, Mr. Wright said the KCC will address the matter by developing a policy base that will be applied on a case-by-case basis.

The Chairperson recognized Stephen Weatherford, President, Kansas Housing Resources Corporation (KHRC), who described how ARRA funds are being expended for housing weatherization and appliance replacement. Kansas received approximately \$56 million in ARRA funds for weatherization over a three-year period. Those funds are in addition to the \$7.9 million received from the U.S. Department of Energy for the 2009 plan year. KHRC designated \$16 million of the ARRA funds for a multi-family housing weatherization program to be managed by KHRC staff. That program will focus on weatherizing Tax Credit properties, USDA Rural Development properties, and project-based Section 8 properties that had no direct HUD funds for energy-efficiency improvements. The \$40 million balance is expected to be used by the network of providers for single-family dwellings (Attachment 19).

Mr. Weatherford commented that an audit has to be done on the low income units and the typical route of efficiency improvements is: sealing the home, installing insulation, and making improvements to ensure that carbon monoxide is expelled from the house. Generally, there is not sufficient money to replace windows.

The Chairperson recognized Caleb Asher, Deputy Secretary, Kansas Department of Commerce, who discussed grant opportunities for increasing "green jobs" in the State. The Department's state workforce task force is working to establish a definition of "green jobs" and identify how that definition may vary for the five regions in Kansas. This study is headed up by Dr. Ed Berger at Hutchinson Community College.

He reported that the Department has been working to get people who lost jobs during the early stage of the recession back to work. They hope to incorporate the green training of new

workers via the technical schools. They also are attempting to get more contractors to include “green processes” in their construction work by offering \$1,200 scholarships to attend training classes. The Department hopes there will be greening of all jobs in the construction business, advanced manufacturing, and all other key industries in the State.

The Department has received approximately \$500,000 to support careers in energy and energy efficiency and renewable energy in the form of grants from the federal government. In addition, other funds are available through the Department of Labor. The Department of Commerce is trying to track those funds and make sure qualified businesses are applying for these monies. Additionally, they are partnering with United Way in Kansas City to provide training for green jobs in low income areas, and with the Department of Corrections to provide training to released prisoners who are reentering the workforce. The Department of Commerce applied for a grant to bring in national speakers for workshops to help build capacity for green skills in the workforce. A public-private partnership group is determining what components to put into that grant and how to monitor the outcomes if the grant is awarded to Kansas. Some of the partners include the State Work Force Board, the State Energy Office, the Departments of Commerce, Labor, and Corrections, the Board of Regents, the Technical Education Authority, utility companies, labor unions, nonprofit organizations, and economic development boards around the state.

They will be focusing on:

- Energy efficiency and renewables;
- Transmission and smart grid development;
- Natural gas efficiency;
- Wind energy production and manufacturing, including training for all aspects of building and manufacturing of the components; and
- The use of other renewable energy sources in production.

The Department of Commerce has asked the partnership group to narrow its focus to what it should be working on as a group. They are trying to determine how to disseminate information about green jobs via the construction industry, the manufacturing industry, and actual energy production companies.

Richard Gaito, Kansas Department of Administration, submitted written testimony pertaining to grant money available for to assist the State in the purchase of fuel efficient vehicles. The Department concluded that it would not be cost effective to participate in the federal program ([Attachment 20](#)).

Committee Discussion

Chairperson McGinn began a discussion on where the Committee would go from here. She noted the limit on the number of authorized meeting days, and she would try again to attain an extra day for committee work. If that extra day is approved, the Committee will discuss proposed CO₂ sequestration rules and regulations. The issue is whether the state should assume responsibility for sequestered CO₂.

Mary Galligan noted that at its next meeting, the Committee will explore its other charge from the LCC, which is to consider moving energy efficiency programs from regulated utilities to an independent administrator. As part of that effort, the Committee is to study a 2009 bill that would create a not-for-profit organization whose only purpose would be to achieve the reduction in the use of energy.

Additionally, Committee members noted that they are unsure about meeting the requirements set out by the federal government for the ARRA money Kansas is receiving for energy purposes and noted that further discussion of that matter may be required.

The Chairperson adjourned the meeting at 12:15 p.m..

The next meeting is scheduled for October 28 and 29, 2009.

Prepared by Renae Hansen
Edited by Mary Galligan

Approved by Committee on:

May 7, 2010
(Date)