Approved: March 17, 2008
Date

MINUTES OF THE HOUSE ENERGY AND UTILITIES COMMITTEE

The meeting was called to order by Chairman Carl Holmes at 9:00 A.M. on February 6, 2008 in Room 313-S of the Capitol Building.

All members were present except:
Dan Johnson- excused
Margaret Long- excused

Committee staff present:
Mary Galligan, Kansas Legislative Research
Carol Toland, Kansas Legislative Research
Mary Torrence, Revisor's Office
Melissa Doeblin, Revisor's Office
Renae Hansen, Committee Administrative Assistant

Conferees appearing before the committee:
Senator Chris Steinegar
Scott Heidner, American Council of
Engineering Companies
Gary George, Superintendent, Olathe Schools
heryl Semmel, United School Administrators of Kansas
KCC, Patrick Smith, Attorney
Dan Nagengast, Director of Kansas Rural Center
Johannes Feddema, PhD, KU Geography, IPCC contributor
Ezra Hausman, PhD, Synapse Energy Economics
Jessica Dexter, Environmental Law & Policy Center
Craig Volland, Sierra Club
Bob Eye, Attorney
Jim Mason, KNRC
Walt Chappel, Wichita

Others attending:
Approximately sixty five including the attached list.

Hearing on:

HB 2711- Electric generation, transmission and efficiency and air emissions.

The chairman had the Attorney Generals' opinion handed out (Attachment 1) to the committee members concerning 65-3012.

Further written proponents:

Leslie Kaufman, Kansas Cooperative Council, (Attachment 2), presented written testimony in support of **HB 2711.**

Eric Depperschmidt, President, Finney County Economic Development Corporation, (Attachment 3), presented written testimony in support of **HB 2711.**

Neutral:

Scott Heidner, American Council of Engineering Companies (Attachment 4), offered testimony that suggested changes for new sections 6 and 7 of **HB 2711.**

Gary George, Superintendent, Olathe Schools (Attachment 5), spoke to the committee on **HB 2711,** noting some issues they have with the legislation.

Unless specifically noted, the individual remarks recorded herein have not been transcribed verbatim. Individual remarks as reported herein have not been submitted to the individuals appearing before the committee for editing or corrections.

Cheryl Semmel, United School Administrators of Kansas (Attachment 6), spoke specifically to section 6 on the public school buildings of **HB 2711.** She highlighted some specific concerns to the committee.

Senator Chris Steinegar, (Attachment 7), passed out a poster on conserving light from 1917. His testimony, (Attachment 8), spoke to the committee on **SB 553** relative to **HB 2711.** His bill focused on having the best and cleanest burning coal in the world, noting that our society will continue to burn coal for a long time. He believes we can use clean technology, and not let people have ways to get around using the clean burning technology.

Questions were asked and comments made by Representative: Tom Hawk.

KCC, Patrick Smith, Attorney (Attachment 9), spoke to the committee on **HB 2711** noting that the bill would change the way the KCC regulates Kansas public utilities. As drafted the changes could undermine protective measures taken in specific prior orders of the commission approving agreements among interested utilities and parties.

Dan Nagengast, Director of Kansas Rural Center (Attachment 10), spoke to **HB 2711** noting that the bill does not speak to wind energy net metering. He commented that Colorado has a net metering law that is quite effective.

Written Neutral:

CURB (Attachment 11) presented written testimony speaking to the committee on **HB 2711.**

Waste Management (Attachment 12), offered the committee written testimony on **HB 2711.**

Questions were asked and comments made by Representatives: Vaughn Flora, Tom Hawk, and Josh Svaty.

Opponents:

Johannes Feddema, PhD, KU Geography, IPCC contributor (Attachment 13), spoke to the committee on **HB 2711** offering some information on climate change. He noted that we don't really know what is happening with the changes in the climate. He noted scientists can make some deductions.

Ezra Hausman, PhD, Synapse Energy Economics (Attachment 14), due to flight cancellations, presented written testimony only, in opposition to **HB 2711.**

Craig Volland, Sierra Club (Attachment 15), presented testimony in opposition to **HB 2711.**

Jim Mason, KNRC (Attachment 16), presented written testimony only to the committee on **HB 2711.**

Walt Chappel, Wichita, spoke to the committee on **HB 2711,** (Attachment 17) and his perception on global warming issues.

Susannah Fuchs, Director of Environmental Health, The American Lung Association presented written testimony (Attachment 18), in opposition to **HB 2711** noting how CO_2 and coal fire plant emission affect the breathing air quality for the citizens of the world.

Unless specifically noted, the individual remarks recorded herein have not been transcribed verbatim. Individual remarks as reported herein have not been submitted to the individuals appearing before the committee for editing or corrections.

MINUTES OF THE House Energy and Utilities Committee at 9:00 A.M. on February 6, 2008 in Room 313-S of the Capitol Building.

Questions were asked and comments made by Representatives: Vaughn Flora, Vern Swanson, Tom Hawk, and Forrest Knox.

Bob Eye, Attorney, spoke to the committee in opposition to **HB 2711.** He noted that the budgetary cost of the bill could be tremendous. He asked that the bill be used as a vehicle for renewable energy sources. He also noted his interpretation of 65-3012, noting that, in his opinion, section 1 gives the secretary of KDHE the authority to regulate air pollutants.

Questions and comments continued from Representatives: Peggy Mast, Josh Svaty, Tom Moxley, Carl Holmes, Tom Sloan, and Don Myers.

The next meeting is scheduled for February 7, 2008.

The meeting was adjourned at 11:00 a.m.

Unless specifically noted, the individual remarks recorded herein have not been transcribed verbatim. Individual remarks as reported herein have not been submitted to the individuals appearing before the committee for editing or corrections.

HOUSE ENERGY AND UTILITIES COMMITTEE
GUEST LIST

DATE: February 6, 2008

NAME	REPRESENTING
Scott Heidner	ACEC Kansas
Craig Volland	Sierra Club
Joe Dick	KCBPU
Dave Holthaus	KEC
Patrick Smith	KCC
Mark Schreiber	Westar
Lindsey Douglas	Hein Law Firm
Katie Firebaugh	Kearney & Associates
Mick Urban	Kansas Gas Service
Steve Johnson	ONEOK, Inc.
Dodie Wellshear	USA / Kansas
Doug Smith	Sunflower Electric Power
Tom Day	KCC
Larry Berg	MVE
Kimberly Svaty	ITCGP
Wayne Penrod	Sunflower
Dave Holthaus	KEC
Stuart Lowry	KEC

September 24, 2007

ATTORNEY GENERAL OPINION NO. 2007-31

Roderick L. Bremby, Secretary
Kansas Department of Health and Environment
Curtis State Office Building
1000 SW Jackson Street, Suite 540
Topeka, Kansas 66612-1238

Re: Public Health--Air Quality Control--Action to Protect Health or Environment; Authority to Deny, Modify or Stay Issuance of an Air Quality Permit

Synopsis: If the Secretary of the Kansas Department of Health and Environment makes a factual determination that a particular emission constitutes air pollution and that such emission presents a substantial endangerment to the health of persons or to the environment, then even in the absence of federal or state regulations setting limitations for a particular pollutant, K.S.A. 65-3012 authorizes the Secretary to take actions as necessary to protect the health of persons or the environment. Such actions may include denying an air quality permit application on the basis of the anticipated emissions of a particular pollutant or modifying a proposed permit to address such pollutant. However, whether K.S.A. 65-3012 would allow the secretary to stay issuance of a permit until such time - if ever - that state regulations are adopted addressing a particular pollutant, it is highly questionable whether such an action would survive a due process challenge or a challenge based upon such action being arbitrary, capricious, and unreasonable. Cited herein: K.S.A. 2006 Supp. 65-3002; K.S.A. 65-3008b; 65-3012; 65-3419; 77-621.

* * *

Dear Secretary Bremby:

As Secretary of the Kansas Department of Health and Environment (KDHE), you request an opinion whether, in the absence of federal or state regulations setting limitations for a specific pollutant, K.S.A. 65-3012 authorizes the secretary to deny or modify an air quality permit, or place a stay on issuance of an air quality permit until state or federal regulations are enacted that address the pollutant.

When an application for an air quality control permit has been made, the secretary may deny the application pursuant to K.S.A. 65-3008b for specified reasons. Likewise, the secretary is authorized to take certain actions pursuant to that statute after a permit has been granted.

Alternatively, K.S.A. 65-3012 provides:

> "(a) *Notwithstanding any other provision of this act*, the secretary may take such actions as may be necessary to protect the health of persons or the environment: (1) Upon receipt of information that the emission of air pollution presents a substantial endangerment to the health of persons or to the environment . . . .
>
> "(b) The action the secretary may take under subsection (a) *includes but is not limited to*: . . . . "

The statute then lists actions the secretary may take, which include but are not limited to, (1) issuing an order to an owner or operator *to prevent an act* or eliminate a practice with respect to a facility or site, including temporary cessation of operation, (2) commencing an action, or requesting the attorney general or county attorney to commence an action, to enjoin acts or practices, and (3) applying for a court order directing compliance with the order of the secretary.

We found no appellate court decisions interpreting this statute and, thus, are left with attempting to ascertain the intent of the legislature.[1] We do so by reviewing the statutory language of K.S.A. 65-3012 which is plain and unambiguous.[2]

Based upon the plain language of K.S.A. 65-3012, it appears that the statute contemplates preventive as well as remedial actions on the part of the secretary in order to protect persons and the environment in situations where the secretary receives information that emission of air pollution presents substantial endangerment to either. "Air pollution" is broadly defined as the "presence in the outdoor atmosphere of one or more *air contaminants* in such quantities and duration as is, or tends significantly to be, injurious to human health or welfare, animal or plant life, or property, or would unreasonably interfere with the enjoyment of life or property, or would contribute to the formation of regional haze."[3] An "air contaminant" is "dust, fumes, smoke, other particulate matter, vapor, gas, odorous substances, or any combination thereof, but not including water vapor or steam condensate."[4] Thus, as K.S.A. 65-3012 does not condition the secretary's action upon pollutant levels, the secretary is not obligated to wait until there are federal or state regulations establishing limitations on a particular pollutant before taking action to prevent air pollution provided he makes the findings required in subsection (a).

This conclusion is supported by the legislative history of K.S.A. 65-3012 which, until 1993, allowed the agency to take only remedial action in situations where the appropriate agency official found that "any person *is causing or contributing* to air pollution and that such pollution creates an emergency which requires immediate action to protect human health or safety."[5] In such situation, the agency official, with the concurrence of the governor, could order the offender to "reduce or discontinue immediately the emission of air contaminants."[6] After an order issued, the agency was required to hold a hearing within 24 hours and issue an order affirming, modifying, or setting aside the previous order.[7]

In 1993, this verbiage was replaced in its entirety by verbiage modeled after the hazardous waste statute.[8] That statute, K.S.A. 65-3419(e), allows the secretary, "upon receipt of information that the . . . disposal of any waste *may* present a substantial hazard to the health of persons or to the environment . . . may take such action as . . . necessary to protect the health of such persons or the environment."[9] Those actions include *preventing the act* or eliminating the practice constituting the hazard.[10]

KDHE Secretary Robert Harder's written testimony to the Senate Committee on Energy and Natural Resources indicated only that K.S.A. 65-3012 was being amended to "update" the secretary's emergency authority by replacing "outdated language."

ENERGY AND HOUSE UTILITIES

DATE: 2/6/2008

ATTACHMENT 1-1

(11)

While it is not clear whether the legislature intended to enhance the secretary's authority by giving him or her the ability to take preventive action in addition to remedial action, we are mindful that when the legislature revises a law, it is presumed that the legislature intended to make a change.(12) Therefore, we belive that the legislature bestowed upon the secretary the power to take preventive measures to address air pollution before it occurred.

In light of the plain language of K.S.A. 65-3012 and its legislative history, it is our opinion that *if* the secretary makes a factual determination that a particular emission constitutes air pollution and that such emission presents a substantial endangerment to the health of persons or to the environment, *then* even in the absence of federal or state regulations setting limitations for a particular pollutant, K.S.A. 65-3012(a)(1) authorizes the secretary to take actions as necessary to protect the health of persons or the environment. Such actions may include denying an air quality permit application on the basis of anticipated emissions of a particular pollutant or modifying a proposed permit to address such pollutant.(13)

However, regarding your query whether K.S.A. 65-3012 would allow the secretary to stay issuance of a permit until such time - if ever - that state regulations are adopted addressing a particular pollutant, we have serious reservations whether such an action would survive a due process challenge(14) or a challenge based upon such action being arbitrary, capricious, and unreasonable.(15) As our opinion is limited to the very narrow question of whether K.S.A. 65-3012 authorizes certain actions, we do not speculate concerning the legal challenges an indefinite stay may generate.

Sincerely,

Paul J. Morrison
Attorney General

Camille Nohe
Assistant Attorney General

PJM:MF:jm

FOOTNOTES

Click footnote number to return to corresponding location in the text.

1. *Hallmark Cards, Inc. v. Kansas Dept. of Commerce & Housing*, 32 Kan.App.2d 715, 721 (2004).

2. *Young v. Sedgwick County, Kan.*, 660 F.Supp. 918 (D. Kan. 1987).

3. K.S.A. 2006 Supp. 65-3002(c). Emphasis added.

4. K.S.A. 2006 Supp. 65-3002(a).

5. L. 1967, Ch. 347, §12. Emphasis added.

6. *Id.*

7. *Id.*

8. K.S.A. 65-3419(e). *Minutes*, Senate Committee on Energy & Natural Resources, January 21, 1993, Attachment 3.

9. Emphasis added.

10. K.S.A. 65-3419(e)(1). Emphasis added.

11. *Minutes*, Senate Committee on Energy & Natural Resources, January 21, 1993, Attachment 3.

12. *Dewey v. Kansas Dept. of Revenue*, 11 Kan.App.2d 72 (1986).

13. Any action to deny or modify a permit would trigger basic due process protections of notice and an opportunity to be heard. *Rydd v. State Board of Health*, 202 Kan. 712, 726 (1969) (hearing required on issues of adjudicative fact where important interests are at stake).

14. *Rydd v. State Board of Health*, 202 Kan. 712, 726 (1969) (hearing required on issues of adjudicative fact where important interests are at stake). *See Hallmark Cards, Inc. v. Kansas Dept. of Commerce and Housing*, 32 Kan.App.2d 715 (2004) (in absence of rules, due process requires agency to demonstrate internal and written standards of eligibility for statutory benefits that are objective, ascertainable and applied consistently and uniformly).

15. K.S.A. 77-621(a)(8).

Comments to: WebMaster, ksag [at] washburnlaw.edu.
Processed: September 26, 2007.
HTML markup © 2007, Washburn University School of Law.
URL: http://ksag.washburnlaw.edu/opinions/2007/2007-031.htm.

House Committee on Energy & Utilities

Feb. 6, 2008
Topeka, Kansas

HB 2711 - energy generation and conservation.

Kansas Cooperative Council
P.O. Box 1747
Hutchinson, Kansas
67504-1747

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Toll Free: 888-603-COOP (2667)
Email: council@kansasco-op.coop

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Chairman Holmes and members of the House Committee on Energy & Utilities, thank you for the opportunity to comment in support of provisions contained within HB 2711. I am Leslie Kaufman, Executive Director for the Kansas Cooperative Council. The Kansas Cooperative Council represents all forms of cooperative businesses across the state -- agricultural, utility, credit, financial and consumer cooperatives.

The Council appreciates the work of the Committee leadership and the Senate Utilities Committee leadership in crafting this bill. Our association was very troubled by the decision by KDHE Secretary Bremby denying the air quality permit for the expansion of the Holcomb generating plant. We were concerned about the refusal to grant the permit when the station would meet all federal and state requirements and do so with no standard in law or rule to substantiate such reasoning. This, in turn has far-reaching negative implications for regulatory certainty in Kansas.

In recognition of the importance of energy production and usage to the Kansas economy, the KCC supports a balanced energy policy that provides regulatory certainty and considers cost to the consumer, reliability of service, and environmental stewardship. The KCC also supports initiatives which promote the development, use and promotion of economically viable renewable energy sources. We do support Sections 30 through 33 of the bill. You have all received testimony from the *Alliance for Sound Energy Policy*. We intended for the Kansas Cooperative Council to be included in the association listing on their testimony, but a communication error prevented that. Our electric cooperative members are certainly better equipped to comment on the utility aspects of HB 2711, but the Council does want to note a concern we have in relation to the carbon offsets in the bill.

We do appreciate and applaud the bill's recognition of production agriculture's contributions to carbon sequestration. The Council supports initiatives that increase agriculture's ability to benefit from carbon sequestration and trading and the role cooperatives can play in that endeavor. We understand the bill directly treats cropland and pastureland evenly in terms of the multiplier used in calculating the carbon credit. We do have a concern, though, with the possibility for creating an indirect preference for idling land over continued cropping.

(over)

The Mission of the Kansas Cooperative Council is to promote, support and advance the interests and understanding of agricultural, utility, credit and consumer cooperatives and their members through legislation and regulatory efforts, education and public relations.

ENERGY AND HOUSE UTILITIES
DATE: 2/6/2008
ATTACHMENT 2-1

In practical terms, the state is providing an incentive for turning cropland to grass if that land can also be enrolled in a government program that pays producers to quit farming. Production agriculture is still a core component of the Kansas economy, especially in western Kansas. It is important that we address the policy issues generated by the decision to deny the Holcomb permit. But, in our efforts to correct that wrong, we should avoid creating an indirect government incentive that favors idling crop land over continued production. As such, we would respectfully request conditioning the offset for pastureland (page 9, line 26) in a manner that prohibits the credit if such land is enrolled in a federal or state program that prohibits continued agricultural production. One way this could be accomplished is with the following addition:

Page 9, New Section 12, (a)(6)

"(6) for non-release agricultural related projects, using minimum till or no-till practices, conversion of cultivated land to pasture ***provided such land is not enrolled in a federal or state program that prohibits continued agricultural production,*** forest sequestration projects, and erosion, windbreaks or community beautification projects, an offset credit equal to three times the actual carbon dioxide tonnage sequestered as a result of such projects in Kansas, and two times the actual carbon dioxide tonnage sequestered as a result of such projects within the service territory of the owner or operator."

If the above amendment would be accepted, I would note that under our reading of HB 2711, New Section 12(g), grassland enrolled in a state or federal program prohibiting continued agricultural production could still qualify for a one-to-one credit for the carbon sequestered.

Thank you for allowing us to comment on HB 2711. Please feel free to contact me if you have any questions regarding our testimony or position on the bill.

Leslie Kaufman, Executive Director
Kansas Cooperative Council
785-220-4068

Finney County
Economic Development Corporation

TESTIMONY
By
Eric Depperschmidt, President
Finney County Economic Development Corporation
Before the
Kansas Senate
Committee on Energy and Utilities
On
Tuesday, February 5, 2008

Chairman Holmes and members of the committee, good morning, I appreciate the opportunity to appear before you today to speak in support of House Bill 2711.

My name is Eric Depperschmidt and I serve as the President of Finney County Economic Development Corporation (FCEDC). FCEDC is a not-for-profit corporation operated as a partnership of Finney County, City of Garden City, City of Holcomb, and Garden City Community College.

I would like to state this bill has several progressive elements regarding the development of Kansas energy policy it will ensure that Kansas Department of Health and Environment regulatory process will be fair and impartial to all applicants while also promoting a level playing field by ensuring regulatory certainty and consistency. To do otherwise would only create doubt in public confidence hamper new economic growth in the State of Kansas.

Also it further recognizes a path to reduce and or mitigate carbon dioxide emissions and limitations while allowing Kansas to maintain its competitive position relative to other states by only allowing the state legislature to establish emission standards that are more restrictive than current established federal regulations.

House Bill 2711 ensures the uniform application of our state's rules and regulations while promoting environmental care and economic prosperity for the State of Kansas. Thank you for the opportunity to testify in support of this legislation and I will be happy to answer any questions that you may have.

ENERGY AND HOUSE UTILITIES
DATE: 2/6/2008
ATTACHMENT 3

ACEC
AMERICAN COUNCIL OF ENGINEERING COMPANIES
of Kansas

Affiliated with:
American Council of Engineering Companies
Kansas Society of Professional Engineers
National Society of Professional Engineers
Professional Engineers in Private Practice

TESTIMONY

TO: HOUSE UTILITES COMMITTEE

FROM: SCOTT HEIDNER
EXECUTIVE DIRECTOR
ACEC KANSAS

RE: HB 2711

DATE: FEBRUARY 6, 2008

Chairman Holmes, members of the committee, thank you for the opportunity to share our input on HB 2711. My name is Scott Heidner, and I am the Executive Director of the American Council of Engineering Companies of Kansas (ACEC Kansas). We are the association that represents private consulting engineering companies in Kansas. We have approximately seventy five member companies, employing several thousand Kansans.

Our testimony today applies only to new sections 6 and 7 of the bill. We appear today as neither a proponent or an opponent of the bill in its entirety, but to urge you to amend or delete new sections 6 and 7. We support the intent, but there are several ambiguities and problems.

In new section 6, the bill requires rules and regulations be adopted requiring certain energy standards for state construction projects, specifically that they be "designed, constructed, and certified" to meet certain energy efficiency levels. This is going to present serious problems for both the design professional and the owner of the facility, in this case the state. The problem is specifically with the word "certified".

Professional liability insurance policies will not cover contracts which require the design professional to "certify" the performance of the product. The same is true of words such as "warranty" or "guarantee". Engineers are rightly held to very high standards, but are not in a position to offer such assurances on the performance of the final product. They are not present at every step of construction and are generally not in control of how the final product is used.

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DATE: 2/6/2008
ATTACHMENT 4-1

Scott Heidner, Executive Director
825 S Kansas Avenue, Suite 500 • Topeka, KS 66612 • (785)357-1824 • Fax (785)233-2206 • www.acecks.org • sheidner@acecks.org

This problem is even more prevalent with the type of energy efficiency systems envisioned under this bill. These systems in many cases will require complex construction, and specific requirements on usage once constructed. The design professional is not in a position to ensure either of these things. When annual audits are conducted, and a building is found to be out of compliance, the designer will not have been in a position to ensure that the systems and instructions have been properly used.

The results of requiring such an assurance can be disastrous due to the fact that it is not insurable. A claim against a design professional, when not covered by their professional liability policy, can result in economic losses far beyond what most firms can pay. In such a case the owner, in this case the state, also is unable to recoup monies that are owed. It is truly a lose-lose situation.

We recognize that the bill asks the Secretary of Administration to enact rules and regulations which may further define some of these issues, but we strongly urge you to clarify this language in the bill so the direction will be clearer. Either removing the word "certify", or making it clear that the "certification" is in no way a requirement of the design professional, would make this language more effective.

We realize that this section is part of a larger public policy question, and we have no desire to be an impediment to your pursuit of broader policy questions. However, there are two options available which would solve this issue. The committee can address the language here, or you can delete this section of the bill. This language already exists in SB 452, so this policy question can still be studied by the legislature this session even if it is stripped from this bill.

With that, we would urge you to amend or strike this language, and would be happy to stand for any questions. Thank you.

Olathe
Unified School District 233

Olathe School District
Testimony provided by Dr. Gary George
House Bill 2711
February 6, 2008

We are present today as a neutral party with respect to House Bill 2711, but we do have some concerns with those sections of the bill that relate to construction of new schools.

At the outset, let me be clear that the Olathe School District is a "green" district. We recognize our social responsibility to provide energy efficient school buildings. We have had an energy management program in place for 15 years. During that time we have "cost avoided" over $13M in utility expenses. We have been recognized as a leader in this area. We are constructing our new elementary schools to meet the LEED certification requirements. In addition, six of our schools have received the Energy Star awards from the Environmental Protection Agency. We purchase computers that have the Energy Star certification. Our energy manager is involved in new construction planning. We are experimenting with "green" custodial chemicals. We have recycling bins at virtually all schools for both school and neighborhood use.

As indicated above, we are very supportive of energy conservation measures. However, we do have several concerns with the sections of HB2711 that deal with school district energy efficient construction and use.

1. The Olathe School District is growing rapidly and currently constructs more buildings at a faster rate than any other district in the state. The provisions of this bill are of critical importance to us. The tax payers of high growth school districts, such as Olathe, will bear a disproportionate share of the cost of compliance with this legislation. The lack of clarity on some issues, the impact on existing bond issues, the potential impact on sites already acquired, and the cost of compliance create significant concerns for us and our patrons.

2. The Secretary of Administration is to develop rules and regulations for new construction, but there is no timeline of when these rules and regulations will be completed or if any input from school districts will be permitted.

ENERGY AND HOUSE UTILITIES
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ATTACHMENT 5-1

3. There is no provision in the bill for the state to provide technical assistance for school districts.

4. The bill requires regulation of external water use. It is not clear how, or if, this will impact building sites our board of education has already acquired.

5. The Olathe School District passed a $138M bond issue on October 15, 2007. Cost projections for this bond issue were completed in the winter and spring of 2007. This bond issue will cover three to four years of construction. However, HB2711 calls for the new requirements to go into effect in July 2009. This will mean expensive change orders that will be borne by our taxpayers. There should be a provision in the bill that the new regulations apply only to construction funded by bond issues that occur in the future.

6. It is not clear how the new requirements would apply to renovation of existing buildings and additions to older buildings.

7. The method of determining "cost effective" measures is unknown.

8. Finally, the Olathe Board of Education has taken legislative positions on local control and unfunded mandates. This bill is in conflict with the Board's position on these issues.

In summary, we suggest that the school energy section of HB2711 be amended to address the concerns raised or be deleted from the bill.

Thank you for your attention.

USA Kansas
United School Administrators of Kansas
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Testimony on
H.B. 2711

House Committee on Energy and Utilities

February 6, 2008

Presented by:
Cheryl L. Semmel, Executive Director, United School Administrators of Kansas*

Thank you for the opportunity to appear before you this morning. I would like to make clear to members of this committee that I am not here in opposition to or as a proponent of **H.B. 2711.** I am here to speak to a specific section of the bill that would significantly impact school districts.

H.B. 2711, Section 6 mandates that "new public school buildings, where construction commences on or after July 1, 2009, be designed, constructed, and certified to achieve energy consumption levels that are at least 25 percent below the levels established under the American society of heating, refrigerating, and air-conditioning engineers (hereinafter "ASHRAE") standard or the 2006 international energy conservation code (hereinafter "IECC"), if such levels of energy consumption are life-cycle cost-effective for such buildings." This Section also requires that districts reduce water consumption by 25 percent.

We believe that the mandates in this legislation place an undue burden on school districts, especially insofar as they exceed the ASHRAE or IECC standards. **We respectfully request that this Section be removed from the proposed legislation.**

Many Kansas school districts have adopted energy management programs, implemented energy-saving strategies, and adopted environmentally-preferable practices. Districts have taken voluntary steps to ensure that public school buildings and facilities, especially those newly constructed, are designed to increase energy efficiency and reduce consumption to the maximum extent practicable given resources available. Several districts are building facilities to meet the Leadership in Energy and Environmental Design (LEED)[1] certification standards and purchase products that have the Energy Star designation.

Beyond this basic premise, there are other technical aspects of this Section that raise significant concerns for districts, including:

---

[1]Green Building Rating System developed by the U.S. Green Building Council

ENERGY AND HOUSE UTILITIES
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ATTACHMENT 6-1

1) The timeline for implementation

The provisions of this bill are applicable to any building or structure where the construction commences on or after July 1, 2009. The legislation stipulates that the Secretary of Administration will develop rules and regulations for compliance; however, the bill does not specify a timeline for promulgation of the rules or provide for public feedback during the process.

2) The undetermined and unfunded compliance costs for implementation

This year (FY 2008), twenty-five (25) districts have scheduled bond elections for construction of and renovations to school buildings and facilities. To-date, eleven (11) initiatives have passed and nine (9) are scheduled to be voted upon later this year. Last year (FY 2007), ten (10) districts successfully passed bond issues. In most cases, the bond initiatives include projects scheduled for construction with the next 3-5 years. Cost estimates for these projects do not include the mandates proposed in the bill and [in 2007] were approved, by taxpayers, with the expectation that these projects would be completed within a specified time period and at the projected cost. In fact, in future bond elections, increased costs may make it more difficult for districts to fund new construction. The alternative may be to continue operating less efficient facilities.

While school districts have been voluntarily implementing energy efficiency and cost savings programs, they are doing so within the constraints of limited budget authority and resources allocated for construction costs. Section 6 requires public school districts to meet the proposed standards "if such levels of energy consumption are life-cycle cost-effective for such buildings."

If districts are required to meet these additional compliance standards, we believe that this legislation should include language that holds the state responsible for any additional compliance costs.

3) The determination of life-cycle cost-effectiveness

This standard for implementation is ambiguous. We recognize that determining true cost-effectiveness requires a life-cycle perspective; however, it also requires that all costs and benefits of a given project be evaluated and compared over its economic life. The challenge and uncertainty lies in how best to determine the true costs and benefits of implementing standards.

It is reasonable to expect that the provisions of this bill will increase building design and construction costs. Architectural and engineering modifications during the design and building phases are major contributors to the overall cost of capital projects. The methodology employed for calculating the "life-cycle" cost effectiveness, unless specified, will produce varied determinations about how long it would take districts to realize any benefit.

Ultimately, additional costs, if not funded by the Legislature, will likely result in higher local mill levies and raise the cost of state aid for bond and interest.

The potential excess costs associated with the requirements of this bill – through increased construction costs, change orders, and additional land requirements (for run-off and reuse) – could negatively impact a district's ability to fulfill its obligation and commitment to constituents.

We strongly encourage the committee to consider the fiscal impact Section 6 would have on districts and, equally as important, the potential and unintended impact this may have on school districts and local taxpayers. Again, we respectfully request that this Section be removed from the proposed legislation.

This testimony was submitted
on behalf of
United School Administrators of Kansas (USA|Kansas)
Kansas Association of School Boards (KASB)
Kansas Families for Education (KFE)
Kansas National Education Association (KNEA)
Schools for Quality Education (SQE)
Schools for Fair Funding (SFF)
Blue Valley School District (USD 229)
Kansas City (KCK) School District (USD 500)
Olathe School District (USD 233)
Shawnee Mission School District (USD 512)
Topeka School District (USD 501)
Wichita School District (USD 259)

FY 2007 Bond Elections
(Passed)

USD	USD Name
239	No Ottawa Co
240	Twin Valley
308	Hutchinson
323	Rock Creek
375	Circle
416	Louisburg
266	Maize
372	Silver Lake
410	Hillsboro
505	Chetopa

FY 2008 Bond Elections
(Passed as of December 31, 2007 and Pending)

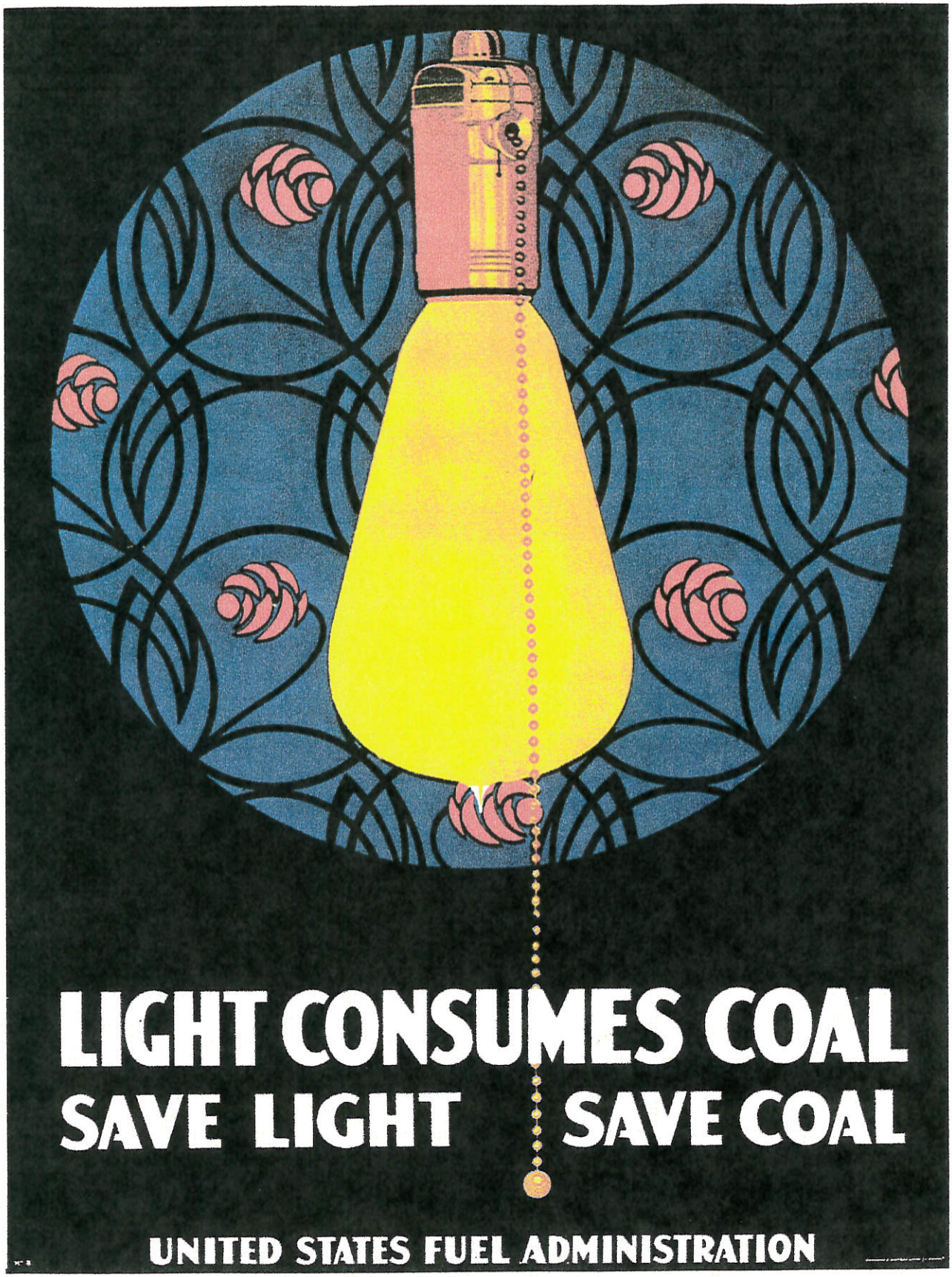
(Passed, as of December 31, 2007)

USD	USD Name
101	Erie
233	Olathe
458	Basehor-Linwood
265	Goddard
267	Renwick
437	Auburn-Washburn
442	Nemaha Valley
491	Eudora
373	Newton
203	Piper
335	North Jackson

(Pending)

USD	USD Name
406	Wathena
467	Leoti
281	Graham County
470	Arkansas City
495	Fort Larned
476	Copeland
250	Pittsburg
402	Augusta
487	Herington

Source:
Kansas State Department Education, Division of Fiscal and Administrative Services
February 4, 2008



Poster for U.S. Fuel Administration, 1917. Courtesy The Library of Congress.

ENERGY AND HOUSE UTILITIES
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STATE OF KANSAS

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SENATE CHAMBER

SB 553 Clean Coal Compromise

Assumptions:

- China, India, and MANY other countries will continue to burn coal for a long time.
- Kansas should become a major exporter of clean energy.
- Transition to wind power and other clean energies will take several decades.

SB 553 focuses on:

- developing the best and final generation of coal-fired power plants;
- building the Kansas power grid to enhance power exports; and
- developing methods to harvest and re-use CO2 and other pollutants.

Methodology:

- SB 553 is HB 2711 minus many sections.
  To use an analogy, it's the difference between a big SUV and a small hybrid car.
- Sections deleted:
  - all language which allows anything less than ultra super critical technology;
  - most language relating to OFF SETS except those for power grid construction and carbon mitigation;
  - language which puts new restrictions on secretary;
  - all language related to net metering; and
  - all language related to merchant power plants

ENERGY AND HOUSE UTILITIES
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2008 7rs2030

SENATE BILL NO. 553

By Committee on Ways and Means

AN ACT concerning the environment; relating to carbon dioxide emission offset.

Be it enacted by the Legislature of the State of Kansas:

Section 1. (a) Sections 1 through 3, and amendments thereto, shall be known and may be cited as the carbon dioxide emissions offset act and shall not be construed to be part of the Kansas air quality act.

(b) As used in the carbon dioxide emissions offset act:

(1) "Affected facility" means a fossil-fuel-fired steam electricity generating unit of more than 250 million British thermal units per hour heat input other than:

(A) A facility owned or operated by the federal government;

(B) a facility located on tribal lands; or

(C) any other facility exempt under section 111 of the federal clean air act.

(2) "Construct" or "construction" means physical on-site construction of an affected facility.

(3) "Owner or operator" means any person who owns, leases, operates, controls or supervises an affected facility subject to any standard or requirement of the Kansas air quality act, K.S.A. 65-3001 et seq., and amendments thereto, or any rules and regulations promulgated thereunder.

(4) "Potential-to-emit" means the maximum capacity of an affected facility to emit carbon dioxide under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit carbon dioxide, including any reduction equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be

treated as part of its design.

(5) "Qualified owner or owners" means:

(A) An individual who is a Kansas resident;

(B) any of the following entities, all members of which are individuals who was Kansas residents: A limited liability company which is organized under the Kansas revised limited liability company act (K.S.A. 17-7662 et seq., and amendments thereto), a corporation organized not-for-profit under the laws of this state or a cooperative organized under the cooperative marketing act (K.S.A. 17-1601 et seq., and amendments thereto), the electric cooperative act (K.S.A. 17-4601 et seq., and amendments thereto) or the renewable energy electric generation cooperative act (K.S.A. 17-4651 et seq., and amendments thereto);

(C) a Kansas political subdivision or local government including, but not limited to, a municipal electric utility, or a municipal power agency on behalf of and at the request of a member distribution utility, a county, a city, a school district, a public or private higher education institution or any other local or regional governmental organization such as a board, commission or association; or

(D) a tribal council.

(6) "Reconstruct" or "reconstruction" means any rebuilding of an emission source within an existing affected facility which generates electricity from fossil fuel that would result in an increase in carbon dioxide emissions from such facility.

(7) "Ultra-supercritical pulverized coal technology" means a steam generating facility operating at or above 4,500 pounds per square inch and at or above 1,200 degrees fahrenheit.

Sec. 2. (a) Any affected facility to be constructed or reconstructed on or after January 1,

2008, shall comply with the emission limitations provided for herein if the potential-to-emit from the proposed affected facility equals or exceeds 250,000 tons per year of carbon dioxide.

(b) Except as otherwise provided herein:

(1) On and after the date on which the initial performance test of an affected facility is completed or required to be completed, whichever occurs first, neither the owner nor the operator of such affected facility shall on an annual basis cause to be discharged into the atmosphere from such affected facility any gases containing carbon dioxide in excess of the following emission limits:

(A) For an affected facility using solid fuel, carbon dioxide in excess of 1,300 pounds per net megawatt hour;

(B) for an affected facility using liquid fuel, carbon dioxide in excess of 1,000 pounds per net megawatt hour; and

(C) for an affected facility using gaseous fuel, carbon dioxide in excess of 800 pounds per net megawatt hour.

Sec. 3. (a) For affected facilities not meeting the carbon dioxide emission limitations set forth in section 2, and amendments thereto, the owner or operator shall be deemed to be in compliance if the emissions in excess of such limitations are mitigated or offset by any of the following means or methods in the amount of the credit as provided below:

(1) For development of carbon reduction, storage or utilization projects, an offset credit shall be received for the reduced, avoided, displaced, captured, stored or sequestered carbon dioxide as follows:

(A) For capture of carbon dioxide emitted from an affected facility using chilled ammonia, amine capture and coal gasification, an offset credit equal to two times the actual carbon dioxide

tonnage captured; or

(B) for storage of carbon dioxide emitted from an affected facility using deep aquifer injection, depleted oil or natural gas field injection, enhanced oil or gas recovery, carbon capture sequestration or pipeline projects for the transportation of carbon dioxide to be used for enhanced oil or gas recovery or carbon storage, an offset credit equal to three times the actual carbon dioxide tonnage sequestered, stored or displaced.

(b) For transmission system improvements located inside or outside Kansas, including direct-current converters or ties, which enable or enhance the development in whole or in part of renewable resources electricity generating facilities located in Kansas, an offset credit shall be allowed as follows:

(1) The carbon dioxide offset credit from any project shall be based on the incremental available transfer capacity, expressed in mega-volt-amperes, which may be available for renewable energy transfers as a result of such project. Such determination of available transfer capacity must be demonstrated by an engineering study performed by, or in accordance with procedures developed by, the southwest power pool or other reliability, planning or regional transmission organization, if any, in the affected transmission grid or grids.

(2) Such carbon dioxide offset shall be determined by taking the additional transmission capacity, expressed in mega-volt-amperes, multiplied by a 0.9 power factor, multiplied by the rate of the affected facility's expected carbon dioxide release rate expressed in pounds per megawatt hour, multiplied by a 40% capacity factor, multiplied by 8,760 hours per year, to be recalculated on an annual basis. The owner or operator of the affected facility shall be entitled to an offset credit whether it owns or leases the transmission facility.

(c) An owner or operator of an affected facility shall receive an offset credit for the retirement of other electricity generating units located in Kansas which are permanently removed from service on or after July 1, 2008, and which combusted the same fuel as the affected facility. The owner or operator shall state, in a written format prescribed by the permitting authority, those units that have been permanently retired on a specific date and the fossil-fuel capability of such unit. Such offset credit is only applicable if fuel utilized by the affected facility is the same fuel as that utilized by the retired electricity generating unit.

(d) Before July 1, 2009, the secretary of the Kansas department of health and environment shall adopt such rules and regulations to implement this section and sections 1 and 2, and amendments thereto, including, but not limited to, monitoring, reporting and recordkeeping requirements, consistent herewith as deemed necessary to ensure conformance with the provisions of this section and section 2, and amendments thereto. The secretary shall consult with the state corporation commission in the promulgation of such rules and regulations. The secretary shall not defer nor delay the issuance of any construction permit pursuant to the Kansas air quality act, and amendments thereto, pending the establishment of such rules and regulations. The limitations under this act shall not be set forth in any construction or operating permit to be issued under the Kansas air quality act.

Sec. 4. This act shall take effect and be in force from and after its publication in the statute book.

KANSAS
CORPORATION COMMISSION

Kathleen Sebelius, Governor
Thomas E. Wright, Chairman
Michael C. Moffet, Commissioner
Joseph F. Harkins, Commissioner

February 6, 2008

EXECUTIVE SUMMARY: HB 2711

House Bill 2711, specifically Section 34, as drafted, would essentially allow any utility in Kansas to restructure and deregulate to the detriment of customers who have no representation at the decision-making level of their utility, which goes far beyond the intent of this bill. As drafted, this language would significantly alter the long standing regulatory governing public utilities in Kansas. Furthermore, the changes, as drafted could undermine protective measures taken in specific prior Orders of the Commission approving agreements among interested utilities and parties.

- If the Legislature determines HB 2711 should be enacted, Section 34 should be narrowly tailored to eliminate unintended consequences.

- If the proposed language contained in Section 34 remains unchanged, any public utility in Kansas could simply alter its corporate structure, become a limited liability company, and evade regulation by the Kansas Corporation Commission and customer representation traditionally provided in a cooperative.

- By accepting the recommended changes of the Kansas Corporation Commission the Legislature will maintain the intent of Section 34 without compromising the ability of the Kansas Corporation Commission to regulate entities remaining under its jurisdiction and control.

- If the Legislature enacts HB 2711, the Kansas Corporation Commission recommends the following changes to avoid unintended results that are contrary to the intent of the bill and negatively impact Kansas ratepayers:

Section 34(a) should read: "As used in this section, 'cooperative' means any **corporation organized under the electric cooperative act, K.S.A. 17-4601 et seq., and amendments thereto, or which becomes subject to the electric cooperative act in the manner therein provided**; or **any limited liability company or corporation providing electric service at wholesale in the state of Kansas, owned by four or more electric cooperatives that provide retail service in the state of Kansas.**"

Section 34(f) should read: "Nothing in this section shall be construed to affect the single certified service territory of a cooperative or the authority of the state corporation commission, as otherwise provided by law, over a cooperative with regard to service territory**; charges, fees or tariffs for transmission services;** sales of power for resale**, other than sales between a cooperative as defined in subsection (a), that does not provide retail electric service and an owner of such cooperative;** wire-stringing and transmission line siting, pursuant to K.S.A. 66-131, 66-183, 66-1,170 et seq., or 66-1,177 et seq., and amendments thereto.

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KANSAS
CORPORATION COMMISSION

Kathleen Sebelius, Governor
Thomas E. Wright, Chairman
Michael C. Moffet, Commissioner
Joseph F. Harkins, Commissioner

February 6, 2008

TESTIMONY BEFORE THE HOUSE ENERGY AND UTILITIES COMMITTEE

HB 2711

Chairperson Holmes and Distinguished Members of the Committee:

My name is Patrick T. Smith. I am Litigation Counsel for the Kansas Corporation Commission ("KCC" or "the Commission"). I am appearing today on behalf of the Kansas Corporation Commissioners and Staff.

My purpose in testifying before you today is to express the Commission's concerns regarding House Bill 2711, specifically Section 34 containing amendments to K.S.A. 66-104d that, as drafted, would significantly alter the long standing KCC regulatory framework governing public utilities in Kansas. Furthermore, the changes, as drafted could undermine protective measures taken in specific prior Orders of the Commission approving agreements among interested utilities and parties.

My testimony will explain the unintended consequences of the proposed language, and the effect on Kansas customers. I will also discuss changes to the language of Sec. 34 of HB 2711 that we believe could successfully mitigate the unintended consequences but still achieve the original intent of Sec. 34 should the bill move forward in the legislative process.

I. Sunflower Electric Power Company's Intent.

Commission Staff met with representatives of Sunflower Electric Power Company ("Sunflower") in mid-January to discuss what would become Sec. 34 of HB 2711. Sunflower expressed its intent to establish a means for certain companies, including Sunflower, MKEC, and their common owner cooperatives, to opt-out of KCC regulation in favor of self-regulation by the cooperative. As two entities essentially owned by the same 6 electric cooperatives, the intent was to allow Sunflower and MKEC to have unregulated exchange of power, resources and compensation with their mutual owner cooperatives.

However, the actual language of Sec. 34 of HB 2711, as currently proposed, is overbroad and has far-reaching, unintended consequences beyond the specific intended purpose expressed by Sunflower. For example, C-corp utilities such as Southern Pioneer could opt-out of regulation without providing any customer representation at the decision-making level thus leaving those customers unprotected and without say in the rate-making process.

II. Sec. 34 – Amendment to K.S.A. 66-104d

Sec. 34 has two subsections, (a) and (f), that are of particular concern to the KCC:

Subsection (a)

Subsection (a) amends K.S.A. 66-104d which is the statute authorizing cooperatives with fewer than 15,000 customers to opt-out of regulation by the KCC. The proposed amendment would open the definition of such cooperatives to "any member-owned corporation or limited liability company" providing electric service either at retail or wholesale. This would eliminate the 15,000 customer cap on cooperatives and open up the op-out authority to utilities with other corporate structures. Although the intent was to encompass Sunflower (a large member-owned company cooperative) and MKEC (an LLC), the proposed language goes well beyond this intent and could potentially allow any Kansas utility to restructure and opt-out of KCC regulation. Many regulated utilities could argue they are a "member owned company" or simply convert to an LLC and opt-out of KCC regulation.

The KCC has two specific concerns with this unintended consequence:

1) Utility customers would not have any representation in the decision-making process for their rates or utility operation.
2) The proposed amendments would leave large Kansas utilities open to purchase by private ownership and avoiding KCC or cooperative regulation at the expense of customer protections.

The KCC's only interest in this bill is to point out these unintended consequences and recommend to the legislature that if HB 2711 moves forward in the approval process, the definition of a "cooperative" that may opt-out of KCC regulation should be limited to the intended category of Kansas utilities: **Any corporation organized under the electric cooperative act, K.S.A. 17-4601 et seq., and amendments thereto, or which becomes subject to the electric cooperative act in the manner therein provided; or any limited liability company or corporation providing electric service at wholesale in the state of Kansas, owned by four or more electric cooperatives that provide retail electric service.**

This would limit the ability for a utility to opt-out of KCC regulation without proper customer representation at the decision-making level. (*i.e.* It would only allow a true cooperative, as defined by the electric cooperative act, to regulate itself.) This would also limit self-regulation to LLC's that are owned by multiple retail electric cooperatives (MKEC).

Subsection (f)

Subsection (f) amends K.S.A. 66-104d(f) which maintains the KCC's jurisdiction over a cooperative with regard to key issues such as service territories, transmission services, sales of wholesale power, and transmission siting. The proposed amendment to subsection (f) inserts an exception to KCC jurisdiction for sales of wholesale power "between a member-owned generation and transmission cooperative and a member of such cooperative." This language is

intended to allow entities such as Sunflower, MKEC, and their member-owners to transact business in a self-regulated manner as determined by the member cooperatives.

If the legislature decides to move forward with this bill, the Commission's concern is that the definition of "cooperative" in proposed subsection (a) would allow unregulated transactions involving electric distribution companies that do not have customer representation in the decision-making process regarding retail sales rates. In order to protect customers that are not represented in the cooperative, the KCC recommends an amendment to subsection (f) to tie the definition of a generation and transmission "cooperative" to the KCC's definition in subsection (a) and limit the self-regulated transactions to those between the generation and transmission cooperative and its member-owners (the Sunflower/MKEC scenario). Such language would read: **Nothing in this section shall be construed to affect . . . the authority of the state corporation commission, as otherwise provided by law, over a cooperative with regard to . . . sales of power for resale other than sales between a generation and transmission cooperative, as defined in subsection (a), that does not provide retail electric service and an owner of such cooperative.**

III. Conclusion

In sum, there are substantial unintended consequences related to the proposed changes in K.S.A. 66-104d, as drafted. If the legislature elects to move forward with this bill, the suggested changes herein would eliminate many of the unintended consequences identified by the Kansas Corporation Commission while maintaining the intent of the bill.

Thank you for the opportunity to appear before you today. I am happy to entertain any questions that you may have.

House Bill 2711

Current Proposed Language

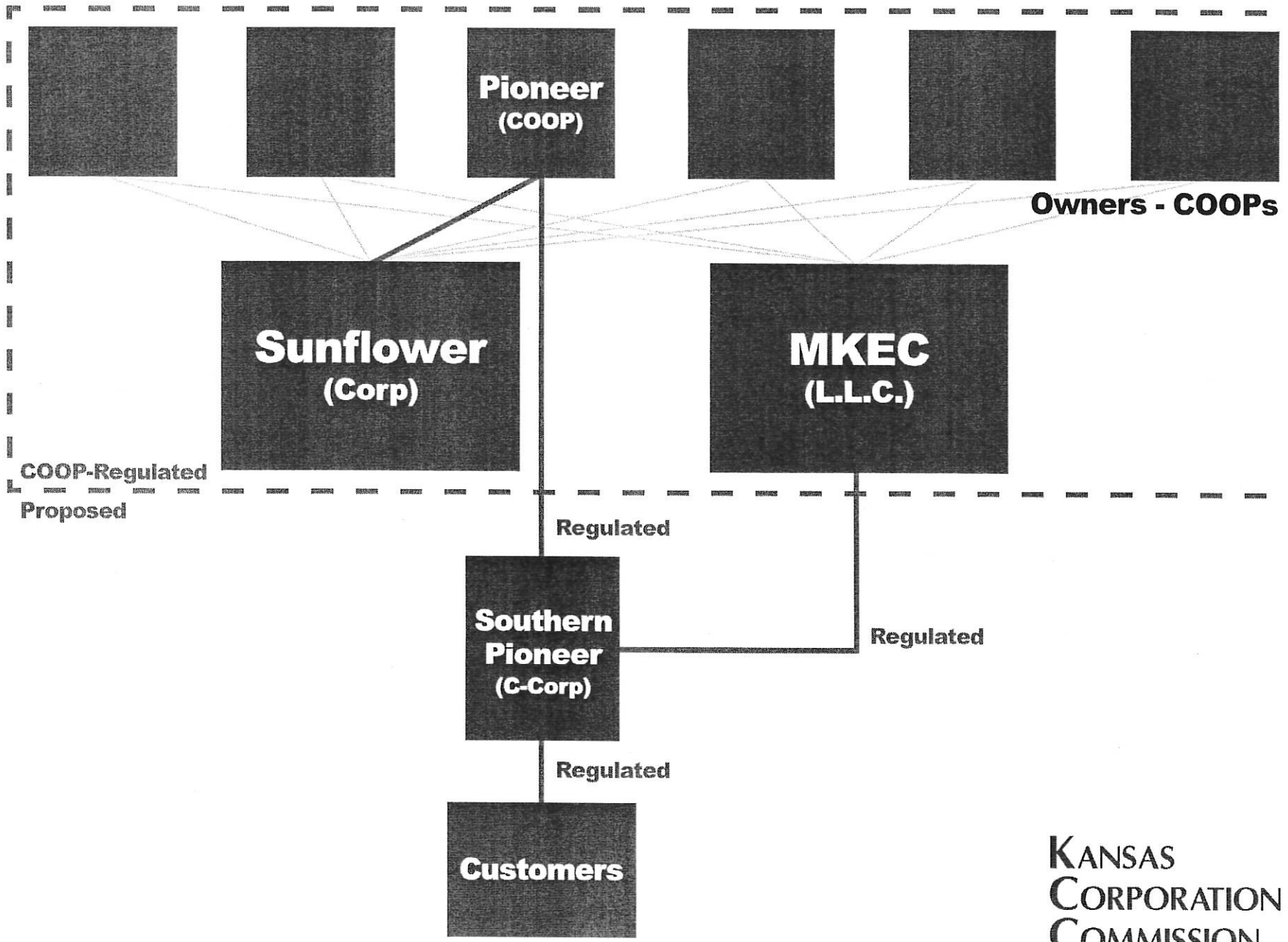
Sec. 34. K.S.A. 66-104d is hereby amended to read as follows: 66-104d. (a) As used in this section, "cooperative" means any ~~cooperative as defined by K.S.A. 17-4603, and amendments thereto, which has fewer than 15,000 customers and which provides power principally at retail~~ *member-owned corporation or limited liability company providing electric service either at retail or wholesale in the state of Kansas.*

(f) Nothing in this section shall be construed to affect the single certified service territory of a cooperative or the authority of the state corporation commission, as otherwise provided by law, over a cooperative with regard to service territory, charges, *fees or tariffs* for transmission services, sales of power for resale *other than sales between a member-owned generation and transmission cooperative and a member of such cooperative*, wire stringing and transmission line siting, pursuant to K.S.A. 66-131, 66-183, 66-1,170 et seq., or 66-1,177 et seq., and amendments thereto.

KCC's Proposed Language Amending HB 2711

Sec. 34. K.S.A. 66-104d is hereby amended to read as follows: 66-104d. (a) As used in this section, "cooperative" means any **corporation organized under the electric cooperative act, K.S.A. 17-4601 et seq., and amendments thereto, or which becomes subject to the electric cooperative act in the manner therein provided;** ~~*member-owned corporation*~~ *or* **any** *limited liability company* **or corporation** *providing electric service* ~~*either at retail or*~~ **at** *wholesale in the state of Kansas*, **owned by four or more electric cooperatives that provide retail electric service.**

(f) Nothing in this section shall be construed to affect the single certified service territory of a cooperative or the authority of the state corporation commission, as otherwise provided by law, over a cooperative with regard to service territory~~,~~; charges, *fees or tariffs* for transmission services~~,~~; sales of power for resale *other than sales between a* ~~*member-owned*~~ *generation and transmission cooperative*, **as defined in subsection (a), that does not provide retail electric service** *and* ~~*a member*~~ **an owner** *of such cooperative*~~,~~; wire stringing and transmission line siting, pursuant to K.S.A. 66-131, 66-183, 66-1,170 et seq., or 66-1,177 et seq., and amendments thereto.


Pioneer
(COOP)
Owners - COOPs
Sunflower
(Corp)
MKEC
(L.L.C.)
COOP-Regulated
Proposed
Regulated
Southern
Pioneer
(C-Corp)
Regulated
Regulated
Customers
KANSAS
CORPORATION
COMMISSION

KANSAS RURAL CENTER

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Web Site: www.kansasruralcenter.org

Thank you for this opportunity. I would like to address the issues of rural economic development alluded to in HB 2711.

Kansas notably has very few incentives for large scale wind energy or community wind. I would direct your attention to an excellent study before the Kansas Energy Council - Community Wind Incentives, , by Scott White, July 2007.
http://kec.kansas.gov/reports/Community_Wind_Incentives_July07.pdf

That report, through charts comparing Kansas with Minnesota, Iowa, and other states makes it abundantly clear that the issue of community owned wind has not been considered legislatively in Kansas in any comprehensive manner. Indeed, one could argue that where we have acted, it has been to the detriment of those seeking to make wind energy an economic locomotive for rural Kansas.

There seems to be an inclination in HB 2711 towards somehow incentivizing wind and community wind, especially as a carbon credit offered to coal development. But it also is very clear, that this bill will come nowhere near actually providing real incentives. I would like to discuss what is missing, if rural economic development based on renewable energy is indeed a goal of this legislation.

Net Metering - Kansas' existing statute regulating net metering has resulted in very little activity. Professional energy auditors actually inform schools and other entities that smaller scale renewable energy projects will result in economic loss. I do not understand how the provisions of HB 2711 change that or will result in any activity that would provide schools or others with income or lower their costs. Many other states have effective legislation that has made distributed generation and net metering a reality.

Renewable Portfolio Standards - Kansas has an understanding between the Governor's office and some of the utilities to purchase wind. However, there is nothing with the standing of legislation. Kansas has consistently refused to consider an RPS which has had the entirely predictable result of slowing wind and other renewable energy development. That is bad enough, but we are consistently told by the wind energy manufacturers that we are perceived as a state hostile to the development of our wind resources. Thanks to some enterprising citizens of Reno Co., we have a project on the ground in Hutchinson. This is great, because the AWEA map of manufacturing plants was starting to perfectly outline Kansas as a no-go zone, with plants popping up in Iowa, Minnesota, Arkansas, Oklahoma and Colorado. http://www.awea.org/pubs/documents/Outlook_2007.pdf These are generally excellent jobs, and are followed by operations and maintenance jobs. I don't find an RPS in this legislation which would encourage wind arrays and manufacturers.

Property Tax Incentives -This is the one area where Kansas has some policy, but it is a Property Tax Exemption, which means each county negotiates with wind developers for a Payment in Lieu of Taxes (PILT). This seems like an incentive to developers, for example, Gray Co. developers negotiated a PILT in 2002 of $300,000. But the county would have

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received approximately $4.5 million in property taxes had the turbines not been exempted. I would argue that many, many counties and citizens would be more accepting of wind arrays if county governments and schools were participating in these profitable wind ventures at a more profitable level, as in Minnesota with its Production Tax paid on energy sales. HB 2711 does not address this issue and leaves every county to negotiate on their own resulting in large disparities between counties, and little support from citizens.

Community-Based Energy Development (C-BED) - http://www.c-bed.org This is legislation designed to make community owned wind projects successful without excessively burdening utilities. C-BED is comprehensive legislation growing out of successes in Minnesota, home to over 235 Mw of community wind. Community-owned wind is estimated to have an economic impact factor of up to 10 times that of wind farms owned by outside investors. By that equation, Minnesota's community owned wind has the impact of 2,350 Mw of large array, investor-owned turbines. Nebraska enacted similar legislation this last session. HB 2711 considers nothing similar.

Because of our lack of policy on the issue, numerous rivers of federal funds flow past, or out of, our state towards wind energy projects elsewhere, where legislators have acted. Our lack of incentives or policies make projects unfeasible here and so we cannot tap those funds. Rurally owned energy projects in Kansas have not been able to access USDA Value Added dollars, or USDA §9006 grants for renewable energy projects. We have not accessed Renewable Energy Production Incentives (REPI) for schools and municipality projects. Clean Renewable Energy Bonds (CREBs) which could help financing are not being used to any extent here. Similarly, accelerated depreciation, and production tax credits have not been tapped here for community scale projects. Nor have we made available any large dollar state funding source that might ease financing. All of these are used by projects in other states which seriously promote community-owned and distributed renewable energy. HB 2711 as written will not facilitate Kansas projects as they seek these other financing sources and should be reconfigured in light of those goals

In sum no one should be surprised if we see little or no response from rural Kansas to the sections of this bill that ostensibly promote renewable energy development at the community level. I question whether an omnibus bill of this nature is the vehicle for this.

I would also like to address the issue of job creation near Holcomb. It is my understanding that the proposed coal plant portion of this bill will create approximately 110 jobs. I have no doubt these will be excellent jobs with good benefits, similar to those created by other coal-fired power plants. But I question the economic impact of those jobs beyond the immediate Holcomb area.

Using the power of Google, I found two references to job openings at newly created Walmarts: 325 and 525 jobs. Those jobs in no way matched the salary level or benefits of the Holcomb jobs, and they started in the $10/ hour range. But assuming the Holcomb jobs pay 3 or 4 times that of Walmart jobs, we are looking at a salary impact for all of Western Kansas comparable to that of a large Walmart, located in Holcomb. I would like to see the state pursue a much larger, wider spread economic development strategy for all of rural Kansas, with Kansans owning more of their energy resources. HB 2711 does not do that as written.

Again, thank you for this opportunity

Citizens' Utility Ratepayer Board

Board Members:
Gene Merry, Chair
Randy Brown, Vice-Chair
Carol I. Faucher, Member
Laura L. McClure, Member
A.W. Dirks, Member

State of Kansas
Kathleen Sebelius, Governor

David Springe, Consumer Counsel
1500 S.W. Arrowhead Road
Topeka, Kansas 66604-4027
Phone: (785) 271-3200
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http://curb.kansas.gov

HOUSE UTILITIES COMMITTEE
H.B. 2711

Testimony on Behalf of the Citizens' Utility Ratepayer Board
By David Springe, Consumer Counsel
February 6, 2008

Chairman Holmes and members of the committee:

Thank you for this opportunity to offer testimony on H.B. 2711. The Citizens' Utility Ratepayer Board is opposed to this bill for the following reasons:

CURB believes that the majority of customers do not simply want the lowest-cost power, regardless of source. CURB believes that most customers want reasonably-priced power from a balanced portfolio of resources, including increased levels of renewable resources and energy conservation. Consumers are becoming more concerned about issues related to carbon and the environment and are becoming more aware about the relationship between our consumption decisions and our resource needs.

It is clear that this bill is aimed at the Sunflower coal plant. However, the provisions of this bill equally impact every other utility in Kansas. The cost of building plants under this bill, along with the cost of remediation offsets and carbon taxes will eventually be included in consumer rates. Given the short time to review this bill, and the complexity of the carbon offset scheme created by this legislation, CURB is uncertain whether this bill will result in a proper balance among resource decisions, environmental concerns and consumer rate impacts. CURB believes that given the long life of any plant built today, further and more detailed consideration should be given to the details of the scheme created under this legislation. As such, CURB would support further study of the details proposed in this bill before moving this bill into law.

Section 34 of the bill eliminates the current cap on the size of an electric cooperative that can voluntarily opt-out of KCC regulation. Currently the larger electric cooperatives (above 15,000 customers) remain under KCC regulatory jurisdiction. Sunflower and KEPCO also remain under KCC regulatory jurisdiction. It is my understanding that the 15,000 customer level for the opt-out provision in the current law was created because of the cost impact of the regulatory process on small utility systems. There is no justification for a large electric cooperative to have this same opt-out provision to exempt itself from KCC oversight. CURB is concerned that customers that have historically had specific due process protections through the regulatory process, like the former Aquila electric customers, may lose those protections in the future.

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Sections 13-28 of the bill address net metering. The language in these sections is the exact language contained in HB 2682. I have attached my recent testimony on HB 2682 before the House Utilities Committee that discusses issues with the net metering proposal.

CURB does support the sections of the bill related to increasing energy efficiency in Kansas. The bill also creates an "energy efficiency grant program" to be financed with the proceeds of the $3 tax on carbon emissions. [New Section 12 (h), Page 11] However, it is uncertain whether any tax proceeds will ever be collected under this bill, meaning that funding for the new energy efficiency grant program will be non existent, or, at best, inconsistent.

CURB believes that, on behalf of consumers, the legislature should create and fund a third-party, non-utility, energy conservation program to provide energy conservation and energy-efficiency measures to Kansas consumers. Several successful models exist in other states for this type of program. For example, Energy Outreach Colorado combines low-income energy assistance with weatherization and energy-efficiency programs. Efficiency Vermont is an independent, bid based supplier of energy-efficiency programs for Vermont consumers. These non-utility programs are customer-funded and successfully offer meaningful assistance to all customers, regardless of utility territory. These programs have proven both successful and popular. It is time that Kansas create a similar independent program to promote energy conservation in Kansas. CURB believes that if this bill is moved into law, it should also contain a more certain energy conservation program than is currently contained in Section 12.

For the above reasons, CURB supports further study of the mechanism created in this bill.

Citizens' Utility Ratepayer Board

Board Members:
Gene Merry, Chair
Randy Brown, Vice-Chair
Carol I. Faucher, Member
Laura L. McClure, Member
A.W. Dirks, Member

State of Kansas
Kathleen Sebelius, Governor

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HOUSE UTILITIES COMMITTEE
H.B. 2682

Testimony on Behalf of the Citizens' Utility Ratepayer Board
By David Springe, Consumer Counsel
January 31, 2008

Chairman Holmes and members of the committee:

Thank you for this opportunity to offer testimony on H.B. 2682. The Citizens' Utility Ratepayer Board is opposed to this bill for the following reasons:

Current Kansas law, at K.S.A 66-1,184, regarding parallel generation services, represents the existing policy on payment to small generators for electricity placed on a utility grid. CURB supports the current law and the current economic framework for payments to small generators. Under the current law, customers that also operate small generators do not avoid paying the fixed costs necessary for the utility to remain ready, willing and able to supply power to the customer when needed. The current law does allow the payment of 150% of fuel cost, which is a 50% subsidy on fuel. This subsidy has to be made up by other customers. However, after numerous debates the legislature, as set forth in the current law, has determined that a mechanism that compensates a small generator for the utility's fixed costs, costs that are not being avoided, is the wrong economic policy.

Net metering (as opposed to parallel generation), as commonly used, involves netting the energy delivered by the utility and used by the customer against the energy generated by the customer and delivered to the utility. In simple instances, the customer meter spins backwards when energy is being delivered to the utility grid. Consider the example where a customer relies on and uses the utility system for a portion of the month and uses 1000 kilowatt-hours of energy. If the customer's generator runs for a portion of the month and puts 1000 kilowatt-hours of energy back on the utility system, netting the customer's usage against the customer's generation results in a utility bill for a net zero usage. The utility collects no revenue for any charge that is billed base on customer usage, but rather collects only the small monthly customer charge, which is not based on usage. The majority of a utility's fixed costs are recovered through charges based usage. The customer with the small generator in this example used the utility system for the month for free. Since the utility's fixed costs have not gone away, over time other customers are going to have to pay more in electric rates to offset the fact the utility is no longer receiving revenue from the small generator's use of the utility of the system.

To the extent that a proposed "net metering" law allows a person that has the financial means to afford a small wind turbine or photo-voltaic system to use the utility system but avoid

paying the fixed costs of that utility system, then CURB does not believe this is fair or equitable to those that do not have the means to afford this same technology.

H.B. 2682 at New Section 3 (a) [page 2, line 8], makes this new net metering law available on a first come first serve basis, subject to some overall limits on total availability. New Section 3 (b), [page 2, line 21], requires the utility offer a tariff or contract "*identical in electric energy rates, rate structure and monthly charges*" as a normal customer and specifically precludes charging an additional "*standby, capacity, interconnection or other fee or charge that would not otherwise be charged if the customer was not an eligible customer-generator*". Finally, New Section 5 (b) [page 3, line17] requires, in the situation where the electricity supplied by the utility is in excess of the electricity supplied by the customer-generator the utility must bill the customer for the "*net electricity supplied*". New Section 5 (c) [page 3, line] goes further to require that, where the customer-generator places more energy on the utility system than the customer uses, not only will the customer get a bill for only the small customer charge, but a credit to the customer's bill will be created "*in an amount at least equal to avoided fuel cost of the excess kilowatt-hours generated*", with this credit to be applied the following billing periods up to 12 months. Functionally, this means the utility now owes the customer.

When these sections are combined, a framework is created that allows a small customer-generator to avoid paying the fixed cost of utility service, other than a small monthly customer charge. These sections combined, if enacted, will clearly make small photovoltaic systems more economically attractive to those customers that can afford to purchase a system. These same sections also insure that some amount of the utility's fixed costs will be shifted to those customers that cannot afford this type of generation system.

The economic reality is that a person that uses the utility system creates the need for generation to be available, transmission to be available, distribution, transformers, meters and service personnel all to be available. Further, as long as the customer remains connected to the grid, the utility still has to plan for and incur costs in a manner to be able to serve that customer in the event the wind or photovoltaic generator ceases working at any time. A customer should not be able to avoid these fixed costs simply because the customer has the means to afford a small generation system.

For these reasons, CURB does not support HB 2682.

However, CURB does acknowledge that, while the economic principles outlined above are true, the level of allowed net metering in HB 2682 is capped. By definition there will be cost shifting and explicit subsidies created by this legislation. The legislature can decide that these subsidies serve a valid purpose. If the Committee does make the policy decision to create this type of subsidy for those that can afford photo-voltaic generation systems, CURB again asks that the Committee consider creating a customer funded third party non-utility entity that can focus on providing low income utility assistance and weatherization, energy conservation and energy efficiency measures to all Kansas customers.

TESTIMONY ON BEHALF OF WASTE MANAGEMENT

TO: HOUSE ENERGY AND UTILITIES COMMITTEE

FROM: STEVE KEARNEY

SUBJECT: HB 2711

DATE: 2/5/2008

Chairman Holmes and members of the Committee thank you for your work on this important matter. As many of you are aware, Waste Management is a leader not only in converting landfill gas to energy, but also in waste-to-energy initiatives. Waste Management is also the largest recycler in the nation, recycling nearly 8 million tons of material a year.

Waste Management currently supplies landfill gas to more than 100 beneficial-use gas projects in North America, providing the equivalent of more than 475 megawatts of energy—enough to power more than 400,000 homes as well as saving the equivalent of nearly seven million barrels of oil per year.

Additionally, Waste Management through its subsidiary Wheelabrator, uses trash to generate electricity at 17 waste-to-energy plants across the nation. Waste-to-energy reduces municipal solid waste by 90% and saves valuable space in landfills. Waste Management has a goal of doubling its waste based energy to be able to provide electricity to 2 million homes by 2020.

On behalf of Waste Management I am suggesting two friendly amendments to this measure that would incorporate these technologies into this measure.

1. On page 9, line 16, "biomass" is cited as one of the *renewable distributed generation sources* referred to in the bill. The term biomass is not defined elsewhere in the bill and Waste Management respectfully suggests that the definition be broadened to include landfill gas. We propose language be added after the word biomass on page 9, line 16, as follows:

   "which includes, without limitation, municipal solid waste, landfill gas, an anaerobic digester system, and an energy recovery facility used to capture the heat value of mixed municipal solid waste or refuse-derived fuel from mixed municipal solid waste as a primary fuel"

2. On page 9, lines 14 and 15 "waste-to-energy" is not included as a *renewable distributed generation source* and we respectfully suggest it be included in any definition of "renewable resources", including this one.

Thank you in advance for your consideration of these important amendments. I am available to answer any questions you may have.

ENERGY AND HOUSE UTILITIES
DATE: 2/6/2008
ATTACHMENT 12

Testimony before
House Energy & Utilities
6 February 2008

Thank you, Mr. Chairman, and members of the committee. I appreciate the opportunity to speak to you today. I do so not to support or oppose the bill in question but to provide relevant background information on the state of knowledge about global climate change and to illustrate some of the projected impacts of climate change on the State of Kansas.

I have studied the climate system for the last 25 years after graduating with a PhD degree in Climatology from the University of Delaware. I have published a number of papers in climate journals including *Climate Research, Climatic Change, Climate Dynamics, Science* and I was a contributing author to the Intergovernmental Panel on Climate Change (IPCC) report entitled *Climate Change 2007: The physical science basis*. I teach in the Geography Department of the University of Kansas.

The climate system and global climate change projections

I would like to begin by introducing the basic concepts of climate science and to show you that the climate science is based on understanding the energy balance of our plants. The main source of energy is from the sun, and comes to Earth in the form of electromagnetic radiation. In order to maintain a stable climate system (or temperature), the Earth must emit the same amount of energy it receives also in the form of electromagnetic radiation (figure 1). Within the Earth atmosphere system the transport of energy can be performed by a number of processes, including electromagnetic radiation, transport of energy by conduction in materials and by the transport of energy as part of convective processes in the atmosphere and oceans.

Figure 1: TheEarth energy balance(IPCC 2007)

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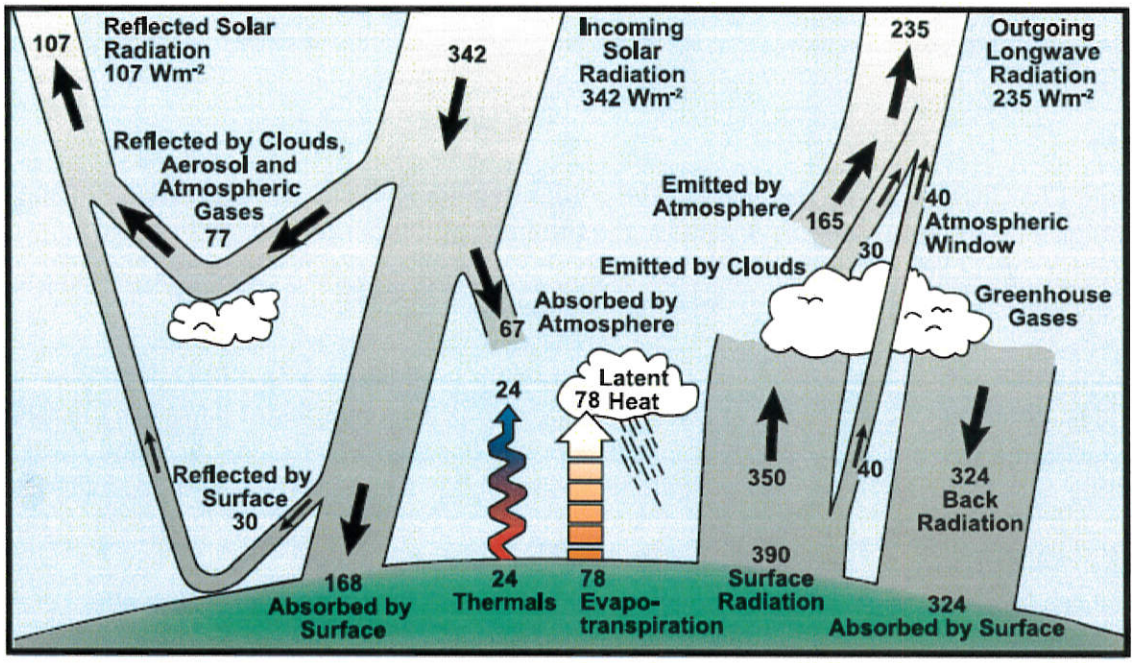

FAQ 1.1, Figure 1. *Estimate of the Earth's annual and global mean energy balance. Over the long term, the amount of incoming solar radiation absorbed by the Earth and atmosphere is balanced by the Earth and atmosphere releasing the same amount of outgoing longwave radiation. About half of the incoming solar radiation is absorbed by the Earth's surface. This energy is transferred to the atmosphere by warming the air in contact with the surface (thermals), by evapotranspiration and by longwave radiation that is absorbed by clouds and greenhouse gases. The atmosphere in turn radiates longwave energy back to Earth as well as out to space. Source: Kiehl and Trenberth (1997).*

Climate scientists typically use mathematical representations to replicate the different energy transport mechanisms on a global scale. Global climate models (GCMs) are a compilation of the different models used to represent all the different energy transport mechanisms on the planet. These models are driven by known inputs into the climate system, including solar radiation intensity, changes in the composition and state of the atmosphere, and atmosphere-surface boundary conditions. It is well understood that each of these boundary conditions can change the Earth's climate.

Over the last few decades Climate scientists have become concerned about the rate at which human emissions from fossil fuel burning has changed the composition of the Atmosphere. The composition of the atmosphere is a critical component of the climate system and regulates the rate at which electromagnetic radiation from the Sun passes through the atmosphere, and the rate at which electromagnetic radiation from the Earth's surface is absorbed by the atmosphere. The atmosphere in turn reradiates a greater portion of its energy back to the Earth, the so called greenhouse effect, and radiates a lesser amount of energy out to space. The amount of energy emitted to space from the atmosphere must balance the energy absorbed from solar radiation to maintain a stable climate system.

After water vapor carbon dioxide (CO2) is the second biggest greenhouse gas, although it makes up only a small portion of the atmosphere. The amount of CO2 in the atmosphere has changed significantly over the history of the Earth. Its concentration on geologic time scales is largely regulated by rock weathering and degassing associated with orography (mountain building and

the rate of volcanic activity). One the time scale of 100,000s of years, this control is largely associated with the extent and productivity of plants, both in part influence by climate. However, in the last 100 years the concentration of CO2 in the atmosphere has increased dramatically, going from about 270 part per million (ppm) at the beginning of the industrial revolution to about 380 ppm today (figure 2). Based on ice core and atmospheric sampling (IPCC, 2007), it is clear that the values today are more than 30%greater than any other time in the last 700,000 years. Almost all this increase can be attributed to emissions from human activities, including fossil fuel burning (mostly from coal), land use change and other activities.

Increases in CO2 in the atmosphere increases the rate at which surface radiation is absorbed by the atmosphere, increasing atmospheric temperatures and increasing counter radiation from the atmosphere back to the Earth surface. This in turn results in warmer surface temperatures. This process is well understood. However, the warming initiated by CO2 also results in the evaporation of additional water vapor, the most significant greenhouse gas. This is a positive feedback mechanism that amplifies the warming initiated by CO2 changes. Other feedbacks also exist in the climate system, including changes in cloud cover that can reflect solar radiation (acting as a negative feedback), the positive snow and ice feedback that amplifies warming so that warming initiated by CO2 changes will lead to a specific warming "fingerprint," or spatial pattern of temperature change, that leads to more warming in the polar regions and less in the tropics.

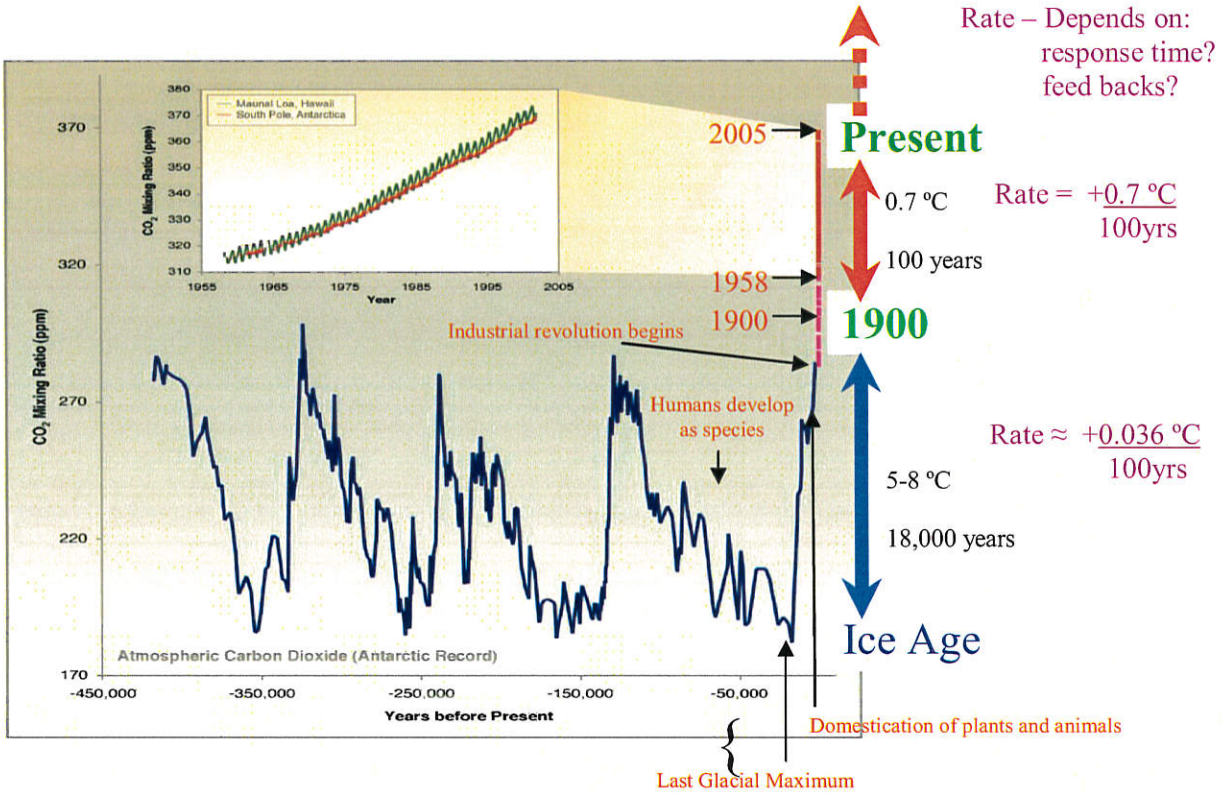

Figure 2: Atmospheric CO2 concentrations over the last 450,000 years

Global climate models have been shown to demonstrate the effects of CO2 on the 20th century climate remarkably well. The main factors affecting the 20th century climate are changes in solar radiation intensity, volcanic emissions of particulates (typically leading to a 3-5 year cooling), the impacts of CO2 and anthropogenically produced of sulfate aerosols which act to cool the climate much like volcanic emissions. If the models are run only with natural forcings (a forcing is a perturbation that leads to a climate response – in this case volcanoes and solar activity), then they show a steady climate trend, or a slight cooling towards the end of the century (figure 3). However, with CO2 and sulfate aerosols included in the forcings, the simulated global temperatures show a dramatic increase by the end of the century; as is also observed in the instrumental record and satellite data. It is important to note that without the human forcings the models cannot replicate the observed temperature trends. This and direct observations form the basis of the conclusion that human activities are having a direct impact on the climate of the Earth.

The IPCC has used results from 23 climate models from 16 climate modeling groups in 11 countries to attempt to simulate potential future climate outcomes into the future. The
Figure 3: GCM simulations of the 20th century climate using different forcings (source NCAR)

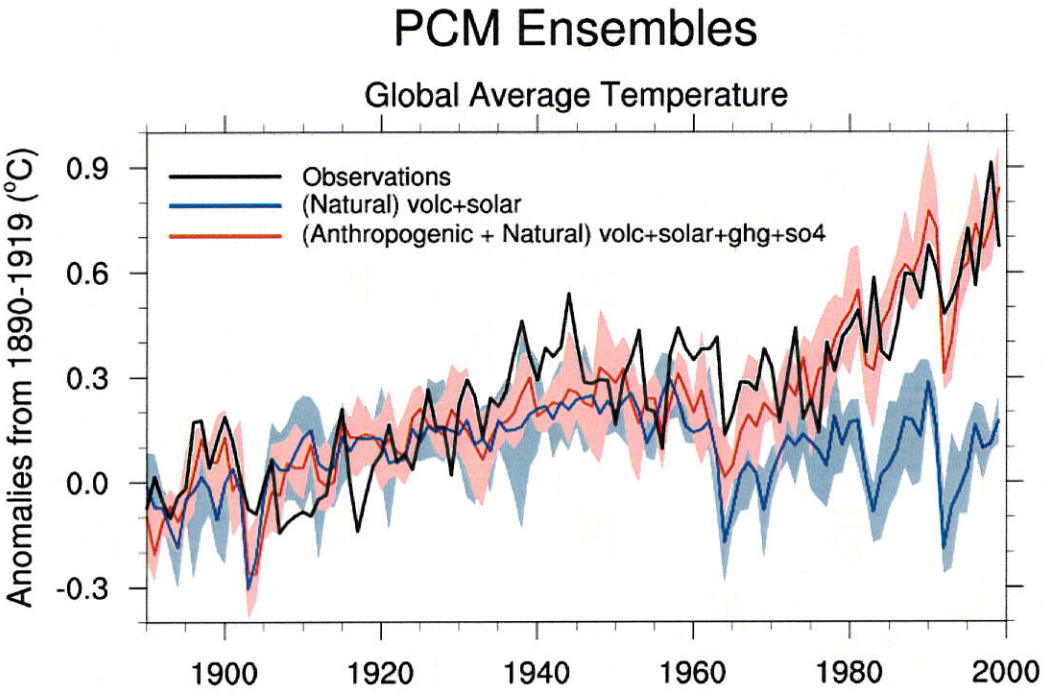

Figure 3: GCM simulations in the 20th Century using natural and human forcings

projections are based on estimated human greenhouse gas (CO2 and others) emissions in the future. Several scenarios were developed to simulate different development paths, and greenhouse gas concentrations associated with each scenario are shown in figure 4, with resulting temperature simulations shown in figure 5. As is illustrated in the bottom of figure 4 our current global emissions path is above any of the simulated scenario pathways. Based on these simulations global temperatures are projected to change from 2 to 4 °C in the future (figure 5; IPCC, 2007).

In addition to global average temperatures, GCMs also simulate other climate variables. One simulation is the extent of ice in the arctic. A series of projected ice extent simulations are shown for the National Center for Atmospheric Research (NCAR) Parallel Climate Model (PCM). This model projects that in the summer the arctic ocean will be largely ice free (upper left images in figure 6). However, rapid changes do not occur until well after 2030 in the model. Arctic ice is particularly important, because it currently reflects the majority of energy coming from the sun and thus cools the arctic region. Once the ice begins to melt it can set in motion a rapid feedback cycle (ice melts, more energy is absorbed, and leads to additional melting etc) resulting in a rapid melt of the ice cap. Recent observations of the arctic icecap suggest that in fact this may already be happening, raising concerns that our models may in fact be under-predicting the rate of climate change.

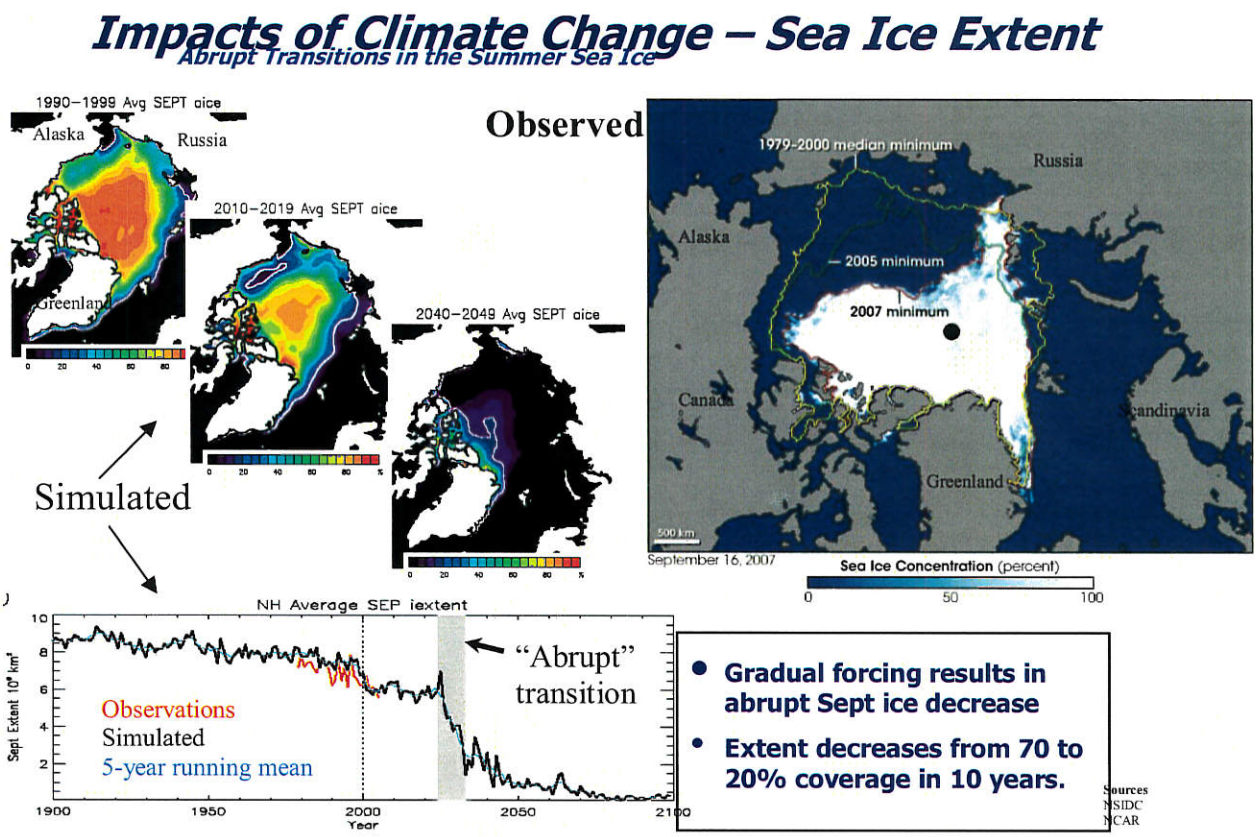

Figure 7: Future simulations of arctic sea ice and recent observations

Climate Impacts on Kansas

The climate of Kansas is highly variable, and particularly in the western part of the state is very dry. Because of this moisture and changes in rainfall in the future are the key to the impacts climate change will have on the environment and economy of the state. For this reason I will focus on how the moisture balance of the state is projected to change in the future. Because there are significant differences in the state and driving forces of climate in the eastern and western parts of the state I will evaluate the impacts for the eastern and western parts of the state.

Using the average climate projections form all the models used in the analysis by the IPCC, and analyzing only the results from the IPCC A1B future scenario (a middle of the road scenario in terms of total human emissions), temperatures in Kansas are projected increase by 3.5°C (6.3°F) annually. In addition precipitation is projected to increase by about 3 percent annually, however this is -3 percent in the summer, when many parts of Kansas receive most of their precipitation. To give a range of possible outcomes, water balance simulations were run for a 1.5°C warming with a 5% increase in precipitation and a 2°C warming with no change in precipitation for the year 2050. Similarly, and 3°C warming with a 5% increase in precipitation and a 4°C warming

with no change in precipitation was used to simulate climates for 2100. These simulations are intended to bracket the most likely outcome of climate change impacts on the water balance for 2050 and 2100.

Using a well tested water balance model (as is often used to estimate irrigation requirements), I analyzed the potential changes in moisture deficit and moisture surplus quantities for eastern and western Kansas using observed climate statistics as a starting point. In both locations (figures 8 and 9) the climate projection resulted in significant drying of the climate. Moisture deficit conditions, that directly affect vegetation and crop productivity, are projected to increase between 0.86 and 1.89 inches by the year 2050 and to 2.36 to 4.09 inches in Eastern Kansas. Such a change is equivalent to a loss of rainfall in the current climate at this location. In addition, surplus water, water that makes up runoff for streams and reservoirs and ground water recharge was project to change insignificantly to a loss of 2.28 inches per year by 2050 and to a loss of 1.93 to 4.49inches in 2100. This represents a significant loss of water resource in eastern Kansas. Much of this drying can be attributed to the increase in temperatures and the increased water demand in the future. However, in eastern Kansas some of the increased water demand can be mitigated by the use of surplus water to meet this demand.

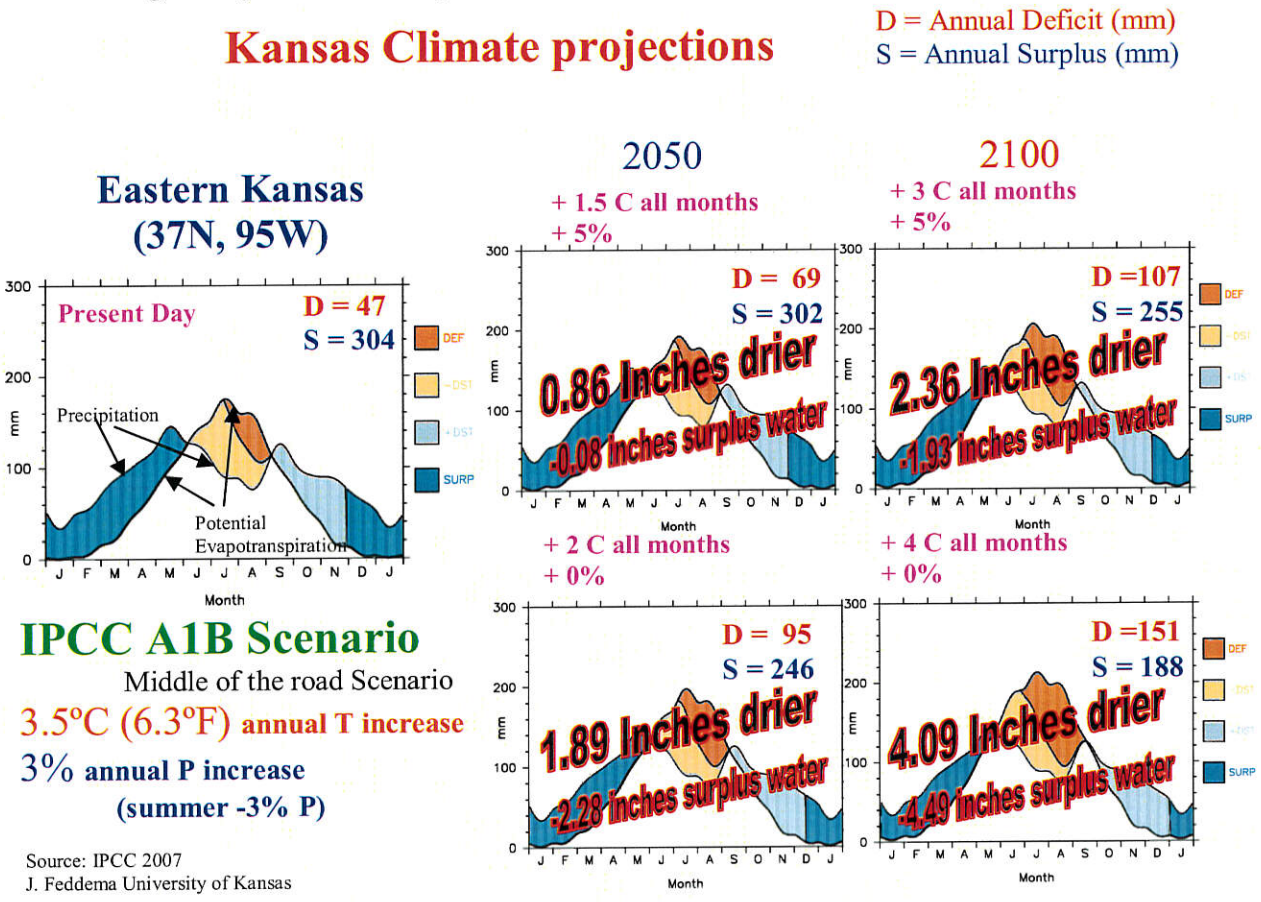

Figure 8: Projected water balance changes in eastern Kansas

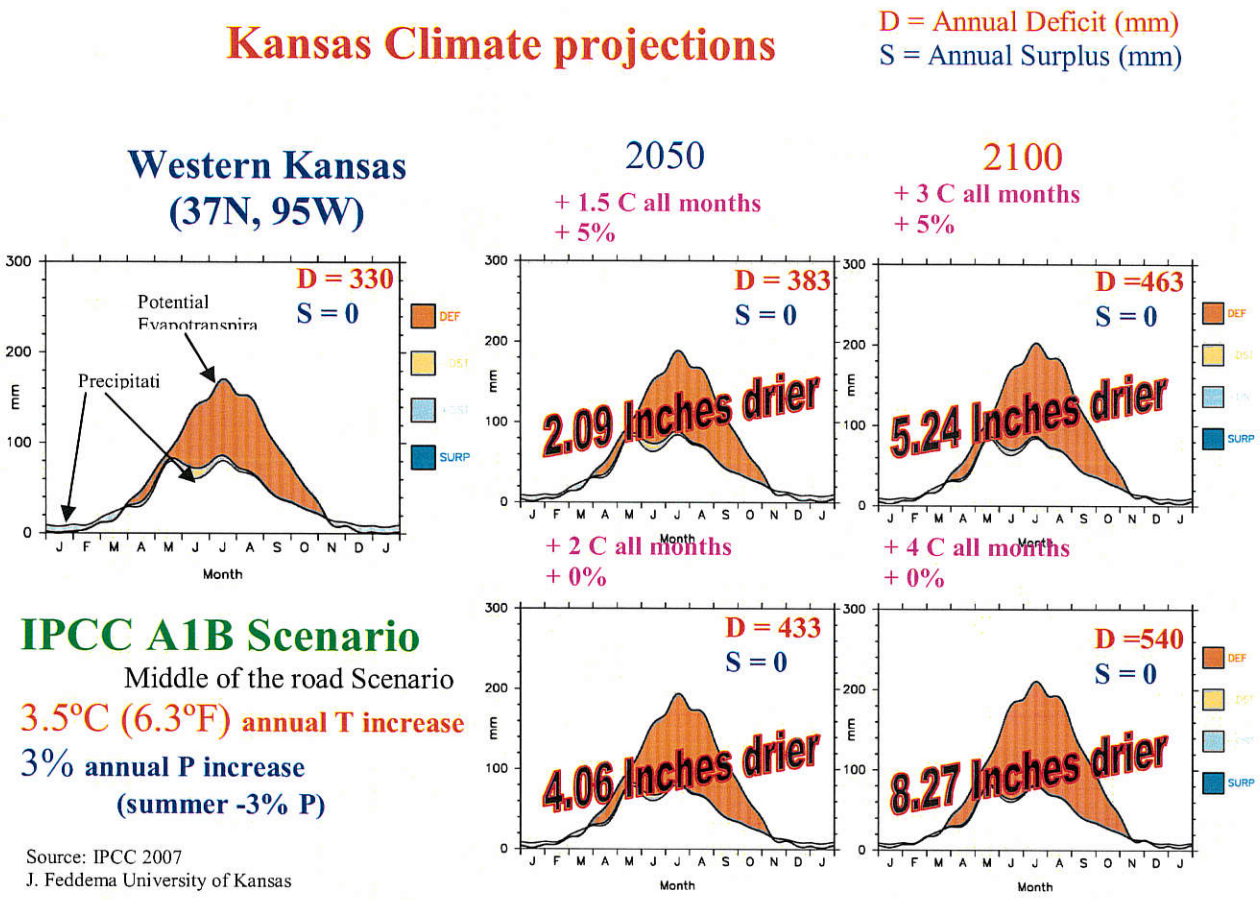

Figure 9: Projected water balance changes in eastern Kansas

In western Kansas the situation is significantly different. Because this is much dryer location to begin with, there is no surplus water to absorb some of the effects of increasing water demand. Hence the impact of global warming has a much greater and potentially more damaging effect on the natural environment and farm economy. Projected moisture deficits range from 2.09 inches to 4.06 inches by 2050, and from 5.24 to 8.27 inches by 2100. I believe these projections will have significant impacts on local communities in the future, although specific impacts will depend on the choices and adaptations made by the people of Kansas in the future.

In conclusion I find that the impacts of global warming are very likely to have a significant impact on the people and environment of Kansas, and that it is wise for us to plan accordingly,in terms of the consumption of our resources and possible measures to reduce the impact of climate change in the future.

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TESTIMONY

OF

EZRA D. HAUSMAN, PH.D.

BEFORE THE

KANSAS HOUSE OF REPRESENTATIVES

COMMITTEE ON ENERGY AND UTILITIES

FEBRUARY 6, 2008

Mr. Chairman and Members of the Committee, thank you for hearing my testimony today.

My name is Ezra Hausman. I am here both as a climate scientist and as an expert in electricity markets—I hold a doctorate in Atmospheric Chemistry from Harvard University, and I have worked in various areas of electricity market design and analysis since 1998. I have served as an analyst and expert witness in numerous regulatory proceedings involving electricity market structure, electricity price forecasting, and economic analysis of electricity infrastructure investments and environmental regulations. I have also facilitated and served as an expert analyst for state-level stakeholder processes aimed at finding low-cost solutions to mitigating greenhouse gas emissions.

It is often said, and I believe this committee has been told, that coal is the lowest-cost source of electricity. This is simply not true. The era of cheap electricity from coal is over. Those who tell you otherwise are generally those who do not bear the risk of high costs in the future, but hope to pass along these costs to ratepayers. There are two major reasons that coal can no longer be considered a low-cost source of energy, especially for any new coal plants.

The first reason is the sharply increasing cost of constructing coal plants. In case after case and state after state, we have seen costs of proposed coal plants rising by up to a factor of two or more during the permitting process, and even higher should the project go into construction. My colleague David Schlissel, who could not be here today, has provided a number of examples of

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this in his written testimony. The reasons for the cost increases include rising global demand for materials, labor, and expertise for all kinds of large, capital-intensive projects, especially in the developing world. These pressures are not going to let up any time soon.

The second factor which will profoundly impact the economics of coal within a very few years is the inevitable federal regulation of carbon dioxide emissions. A large and increasing number of carbon regulation proposals have come before Congress in the past few years, many of them carrying the name McCain as a principal sponsor. Both leading Democratic presidential candidates have also committed to pursuing carbon regulation should they be elected. There is simply no doubt, given the scientific certainty and enormous costs associated with global warming, that Congress will be forced to act on a timescale that will impact most if not all of the lifetime of new resources built today. Whatever the final form of the legislation, it will mean a cost for carbon emissions that is likely to be in the hundreds of millions of dollars per year for new, large coal-fired facilities.

My company, Synapse Energy Economics, has done a great deal of research to forecast what the likely costs of carbon emissions will be in the future and how they will impact the economics of various kinds of generation. But we are far from the only ones who anticipate this—in fact, if you take a look at any utility's SEC filings, or at the minutes of their board meetings at which they discuss risks, or even at their officers' public statements on the issue, the story is the same. Carbon regulation is coming, and coal-fired resources face an enormous risk of becoming uneconomic as a result.

It may be that in the future, when a low-cost approach to capturing and permanently storing carbon dioxide from coal plants is found, coal plants will once again make economic and environmental sense. This is not the case today. This is why companies whose shareholders bear the risk, such as independent generators in competitive markets, are not proposing to build new coal plants. Cooperatives and regulated utilities should be held to the same standard of prudence. They should protect their ratepayers by not making risky and uneconomic infrastructure investments with their money.

Excessive electricity costs to ratepayers is not the only reason that new coal plants using today's technology should not be built. It is now a well-established scientific fact that burning fossil fuels is leading to increases in atmospheric carbon dioxide to levels not seen for all of human history.

It is also a well-established scientific fact that the climate of the Earth is highly sensitive to changes in the amount of carbon dioxide in the atmosphere, because this gas acts to trap heat in the lower atmosphere that would otherwise escape to space.

There is simply no question that the changes we are making to the atmosphere today will significantly alter the climate of the planet and the lives of our children and our grandchildren. I am afraid there is also no doubt that the vast majority of these changes will be socially and economically damaging and disruptive.

However, while climate change is a fact, scientists also agree that we have an opportunity today to mitigate or avoid the most damaging impacts on future generations including loss of agricultural productivity in Kansas and the surrounding region. To do this we must sharply limit the amount of CO_2 we continue to pump into the atmosphere. We must act decisively. Business-as-usual is simply not an option in the face of a challenge which so clearly imperils the balance of life on Earth and the well-being of our children.

The good news for Kansas is that the road to limiting CO_2 emissions is also the road to lower electricity costs and better economic development for Kansans: first, make more efficient use of electricity in homes and businesses throughout the state. Second, generate electricity, dollars and jobs from the wind resources which may be unequaled in any other state in the union.

The sooner we face the reality that coal is no longer a low-cost resource in any sense of the word, the sooner we provide the necessary strong incentive for finding a better way. We all know about the ingenuity and creativity of the marketplace and the miracles produced by entrepreneurial energy when there is a problem which must be solved, and a few dollars to be earned.

The day we say "no more" to irresponsible depletion of our natural resources, to destruction of our natural environment, and to perverse economics which burden ratepayers with excessive costs, will be the day when market forces are truly unleashed on the problem. Not one day earlier. This is exactly the success story of every single environmental law and regulation which has led to the dramatic improvements in human health and environment, including regulations of NOx, SO_2 and mercury from power plants. This will be the success story for carbon for which future generations will thank us. I am asking you to start today, now, in Kansas, in this very room.

The legislation before this committee falls far short of this goal. Certain aspects of the bill are promising, such as a limit on carbon emissions for new power plants in New Section 11. As written, however, this bill will only increase costs to shareholders without actually preventing any CO_2 emissions from ending up in the atmosphere. This is because the bill will not actually require new coal-fired power plants to capture and permanently store their CO_2 emissions. I say this for a number of reasons:

- The emissions limits are too high. A good starting point would be to allow carbon emissions no higher than those of the lowest-emissions fossil-fired power plant readily available, which would be about 1,100 pounds per MWh produced.
- The offsets are far too generous. As written, this law could be satisfied by any of a large number of low-cost activities, but these alternatives would be unlikely to avoid any CO_2 emissions into the atmosphere.
- Even the carbon capture elements of this law would allow for "catch and release"—there is no requirement for permanent storage of the captured CO_2, which means that this aspect of the bill would be all cost and no benefit.
- The law does not force utilities to come up with a better way to generate electricity without emitting vast amounts of CO_2 into the atmosphere, and thus it will not spur innovation and economic development in Kansas as would a true technology-forcing bill.
- The law preemptively precludes a careful and reasoned consideration of the impacts of proposed generating projects by constraining the Secretary to overly restrictive legal interpretations and unrealistically foreshortened timeframes for consideration of permits.

The fact is, Kansas has a real choice to make today that will send a message to the world and will make a profound difference for the future. We can choose the easy but shortsighted path of turning a blind eye to the overwhelming scientific evidence, and saying that we "need" to build coal plants to serve our energy needs today, whatever the cost to ratepayers and to our children's future. Or we can take the responsible path, harnessing the state's abundant wind energy resources, challenging our engineers and entrepreneurs to come up with solutions that promise clean energy, economic prosperity, and a healthy planet for future generations. This is not just about a risk you can't afford to take; it is also an opportunity that Kansas can't afford to pass up.

The bill before you today does not meet the challenge of this second, more promising path. I urge you to reject it, to reject new coal plant plans that falsely promise low-cost electricity but do not include capture and permanent storage of carbon dioxide. Most of all, I urge you to rise to the historic challenge of protecting our planet for future generations. Thank you very much for your attention.

Sierra Club

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Kansas Chapter
www.kansas.sierraclub.org

SIERRA CLUB
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Testimony on House Bill 2711 by Craig Volland, Chair, Air Quality Committee of the Kansas Chapter, Sierra Club, Before the House Energy & Utilities Committee, Feb 6, 2008

A close examination of this bill shows that it is specifically designed to allow Sunflower to build their Holcomb project without significantly altering their current plans. It provides merely the grand illusion of actually addressing greenhouse gas emissions from the project. For example the Holcomb partners can obtain about 40% of the credits they need solely from existing wind farm projects in Kansas including one project built in 2001. They can take credit for any extra space on new transmission lines whether it is actually used for renewable energy or not. They get a ton of carbon credit for each dollar spent on research projects for a period ten years, whether they actually reduce or offset any emissions or not. That works out to only 10 cents per ton of carbon credits for expenditures they have already made on their algae reactor. They get three times the actual carbon avoided for conversion of cultivated land to pasture. This is convenient, since they must do this anyway on 30,000 acres whose water rights they obtained to run the coal plant. Why three times? Where did that come from? And so on.

The fact is, Holcomb would emit 11 million tons per year of carbon dioxide before this bill is passed, and it would emit 11 million tons per year after the bill is passed. That doesn't count the carbon emissions from burning diesel fuel to haul in 6.2 million tons of coal from Wyoming for 50 years and then haul back the empty coal cars.

The real question, and the White Elephant in the room nobody is talking about, is why Sunflower is still trying to build coal plants at all. Over 50 coal plant proposals in the US were abandoned or placed on hold in 2007 due primarily to soaring construction costs and the impending regulation of carbon by the US Congress. Westar put their coal plant proposal on hold last year and starting building wind farms. Just last week the US Department of Energy cancelled the FutureGen advanced coal-burning technology project because of massive cost increases.

In Monday's testimony, Sunflower CEO Earl Watkins stated that the Holcomb project would cost in the range of 5 cents/kwh. That's what a coal plant cost a year and a half ago, but not today. In recent KCC testimony Westar said that a new coal plant for start up in 2016 would cost from 7.5 to 8.0 cents/kwr.[1] Adjusting for plant size and a 2013 start date, Holcomb will likely cost about 6.7 cents/kwr.

That doesn't include the cost of impending carbon regulation by the US Congress which will trump anything the Kansas legislature comes up with. Experts estimate that this regulation will add about $25 per ton of CO2, or an increase of over 35% for coal plant like Holcomb.[2] The Wisconsin PSC estimated a cost of $22/ton in a decision last year.[3] So now we are up to 9.2 cents/kwhr. *That's wholesale cost.* Wall Street is so alarmed that just this week they announced they would make it harder to finance coal plants.[4]

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Midwest Energy President Ernie Lehman said that residential electricity rates are higher in western Kansas , averaging 10 cents/kwhr. His own company's rates, though, at 8.1 cents, are less than the 8.4 cents I pay in Kansas City, Kansas. But I think current retail rates are beside the point. What matters is what is going to happen to rates in the future. The Holcomb project, far from lowering electricity rates in western Kansas, will saddle the region with an increasingly expensive and obsolete coal burning technology for 50 to 75 years.

Something else Earl Watkins said made me realize, as a former financial analyst, what the central problem really is. Sunflower is unable to accrue equity and raise capital on their own. So we are at the end of a long struggle where Sunflower has been trying to leverage their meager physical assets to make a little money. Mr. Watkins recounted how the current Holcomb project began with a plan to sell the 660 MW Sand Sage project to Enron or other energy marketers. That fell through when the deregulation craze died. Next they came up with the current grandiose scheme, three times larger (2100 MW), so they could earn the down payment for the modest 200 MW they need for Kansas.

I'd hate to be in Earl Watkin's shoes. He's in charge of an entity that's neither fish nor fowl, neither a public entity with access to public funding nor an entrepreneurial, private corporation. Sunflower is, as recently described by the Rural Utility Service, a "financially troubled borrower" struggling under a dysfunctional business model. [5]

Instead of aiding and abetting the misconceived Holcomb project that threatens the future of our children and grandchildren, the legislature and the Governor should agree on an independent consultant to look into these financial questions and search for a long term solution for Sunflower's inability to raise capital and get beyond their chronic financial difficulties. Then the legislature and the Governor should agree on independent consultants to help prepare a comprehensive energy plan for the state, one that captures the possibilities of rapidly developing and environmentally sound energy strategies rather than one that saddles the state with technologies of the past.

Cragi Volland may be contacted at 913-334-0556 or hartwood2@mindspring.com.

References:

1. Michael Elenbass, Westar Energy, Direct Testimony, KCC Docket 08-WSEE-309-PRE, Oct 1, 2007.
2.. D. Schlissel & E. Hausmann, Synapse Energy Economics, Inc., "New Coal Plants vs the Future," Jan. 21, 2008. Mid-case estimate in 2020 = $25/ton CO2, approx. equivalent to 2.5 cents kwhr.
3.Wis. PSC ruling on Point Beach Nuclear plant ownership transfer. Ref.#82880. Sept. 25, 2007.
4. Jefrey Wall, "Wall Street Shows Skepticism Over Coal," WSJ. Feb. 4, 2008.
5. USDA Rural Utilities Service, "Defendant's Motion to Dismiss," Civil Action No. 07-1860 (EGS), US District Court for the District of Columbia, Jan. 31, 2008, Introduction, page 3.

Testimony on House Bill 2711 by Craig Volland, Chair, Air Quality Committee of the Kansas Chapter, Sierra Club, Before the House Energy & Utilities Committee, Feb 6, 2008

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Kansas Natural Resource Council

P. O. Box 2635
Topeka, KS 66601
www.knrc.ws

Chairman Holmes and members of the committee, thank you for the opportunity to speak with you today.

My name is James Mason. I live at 1145 Jackson in Wichita. I am Secretary of the Board of the Kansas Natural Resource Council, which since 1981 has been an advocate for clean water, progressive energy policy, protection of our environment, livable communities and sustainable economic development.

The bill we are discussing today would set an energy policy for the state of Kansas that points us in the wrong direction.

It is the overwhelming consensus of the scientific community worldwide that human induced changes to the global climate are having an immediate and very negative impact. The science is clear. If you add up all the fossil carbon - coal, oil and natural gas - that has been burned since the start of the Industrial Age, and adjust that figure by what has been removed by natural processes such as photosynthesis and absorption by the oceans, you get a match for the increase in CO2 we see in our atmosphere today. We know the physical properties of how CO2 behaves in the atmosphere. It reflects heat back to the earth, causing atmospheric temperature to go up. If we continue burning fossil fuels at a rate in excess of the ability of natural systems to take CO2 back out of the air, the increase in global temperature will have drastic and very harmful effects.

Low lying coastal areas where hundreds of millions of people live are at risk of inundation from rising sea levels, which would cause tremendous hardship as these people attempt to relocate elsewhere. This is not just a third world problem. Many of the most populous cities in the United States are also on the coast.

Here in Kansas the most direct effect will be to agriculture. We are about evenly split between USDA zones 5 and 6. If global climate change is not arrested and reversed, the climate zones in North America are predicted to shift northwards bringing us the climate of the Texas panhandle and ending our long reputation as the "wheat state".

Dozens of states in our nation recognize the necessity to address this issue and are implementing policy changes to reduce their carbon emissions. Nations all over the world are grappling with this problem as well. It is an enormous problem, but therein lays enormous opportunities - especially for our state.

The transition to a post-carbon world is the great challenge of this century. Coal, oil and natural gas are all running out. Every day there is less to use, and every day it gets more expensive. Whoever can provide the renewable, non-polluting energy we need to

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move beyond a fossil fuel-based economy, or the goods and services required to tap that energy, will not only be doing a great service to humanity and the Earth but will also thrive economically. Kansas has the potential to provide both renewable power AND those goods and services. We should seize this opportunity for the good of the planet as well as for our own self-interest. Building 1,400 MW of new coal-fired electric generating capacity is a big step in the wrong direction.

Another way to meet the challenge of reducing our carbon emissions while maintaining our standard of living is through energy efficiency improvements in our homes and businesses. This is the low-hanging fruit that we have only begun to harvest. There are features in the bill being debated that would improve efficiency of state buildings and operations, but for some reason the bill totally ignores the hundreds of thousands of homes and businesses across this state that could benefit from conservation retrofits. To that end, it is essential to develop an energy policy that enables utilities to aggressively implement demand management. Adequate financial tools are also necessary to assist ratepayers who cannot afford to make these investments on their own. If we get serious about energy conservation we can increase economic security for all Kansans and provide Main Street benefits for hardware stores, lumberyards and skilled craftsmen statewide. At the same time it will reduce our demand for energy, reduce our carbon footprint and also defer the need for new power plants. Yes, we can grow the economy by using less energy!

Adding insulation to walls and ceilings, replacing leaky, ill-fitting doors and windows with modern ones, replacing old clunker AC units with modern ultra-efficient ones - even something as simple as planting a shade tree on the west side of your house - all can knock down the demand for energy without reducing our quality of life in the least. In fact, these investments will actually improve our quality of life by making our homes and businesses more livable and holding down our monthly utility bills. Every study shows that making these investments is the cheapest and quickest way to meet short-term needs.

In the case of both renewable energy production and smart energy use, the economic benefits of implementing these choices will be felt all across the state. Western Kansas should rejoice, because they have an immense wind power resource which, if developed, will have economic benefits far beyond that of the proposed expansion of the Holcomb facility and which will not use a single drop of precious water from the aquifer.

The people of Kansas deserve a better energy policy than would result from this bill – a policy that seizes the opportunities presented by a post-carbon economy and enables smart use of the energy we consume. The people of Kansas deserve to have such a serious matter as state energy policy given full, thoughtful consideration by our legislature, not have it shoved out the door in haste. The people of Kansas have said in a recent poll that they approve of the decision to deny the Holcomb air permit by a margin of 2 to 1 and by a margin of 3 to 1 want to see our vast wind resource developed. The Kansas Natural Resource Council asks you, our legislators, to do the right thing and respect the will of the people. Please work with Governor Sebelius to put a progressive energy policy in place of this bill.

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Renae Hansen - Please Pull and Redraft HB2711

From: "Walt Chappell" <Chappells2u@cox.net>
To: "Carl Holmes" <holmes@house.state.ks.us>, "'Rob Olson'" <olson@house.state.ks.us>, "'Rocky Fund'" <fund@house.state.ks.us>, "'Dan Johnson'" <johnson@house.state.ks.us>, "'Forest Knox'" <knox@house.state.ks.us>, "'Bill Light'" <light@house.state.ks.us>, "'Peggy Mast'" <mast@house.state.ks.us>, "'Judy Morrison'" <morrisonj@house.state.ks.us>, "'Tom Moxley'" <moxley@house.state.ks.us>, "'Don Myers'" <myers@house.state.ks.us>, "'Richard Proehl'" <phelps@house.state.ks.us>, "'Tom Sloan'" <sloan@house.state.ks.us>, "'Vern Swanson'" <swanson@house.state.ks.us>, "'Annie Kuether'" <kuether@house.state.ks.us>, "'Oletha Faust-Goudeau'" <faust-goudeau@house.state.ks.us>, "'Vaughn Flora'" <flora@house.state.ks.us>, "'Tom Hawk'" <hawk@house.state.ks.us>, "'Margaret Long'" <longm@house.state.ks.us>, "'Terry McLachlan'" <mclachlan@house.state.ks.us>, "'Cindy Neighbor'" <neighbor@house.state.ks.us>, "'Josh Svaty'" <svaty@house.state.ks.us>
Date: 2/11/2008 5:43 PM
Subject: Please Pull and Redraft HB2711
CC: "'Renae Hansen'" <RenaeH@house.state.ks.us>
Attachments: Solar energy park proposed 12-9-06.doc; Big solar generator proposed by Xcel 11-27-07.doc; Solar thermal gains steam with Ausra deal 11-5-07.doc

Dear Chairman Holmes and House Energy Committee Members,

After reading HB2711 and listening to testimony on this bill, I strongly urge you to pull and rewrite it before any votes are taken in Committee. It is a blatant attempt to allow Sunflower Electric to burn more coal which will pollute the air with 11 million tons of CO2, consume 8 billion gallons of precious Ogallala water per year and contaminate the ground water in this aquifer from the tons of ash dumped onto the soil.

Both the Sunflower CEO and Board Chairman sit on the board of the Western Fuels Association, an out-of-state coal company. So at the same time these two men are supposed to be looking out for customers in Western Kansas they are also on the board of a company with the explicit goal of selling more Wyoming coal. See www.westernfuels.org/about/board.cfm.

Below are some of the many false assumptions in this bill.

1. It is NOT an economic stimulus for Western Kansas. Most of the money spent to construct this expansion will be paid to out-of-state manufacturers, workers and coal suppliers. So, the economic development impact for our State will be far less than suggested by the coal company and Sunflower lobbyists. Kansas will get the air and water pollution while the electricity and economic benefits are exported.

2. Furthermore, the minimal amount of CO2 which might be captured with algae is a "drop in the bucket". Algae does not grow at night or in cold Kansas winters. The few experimental algae projects to capture CO2 in warmer climates have failed. The vast majority of CO2 from the proposed Holcomb expansion will go up into the atmosphere.

3. Real jobs and long term economic growth will come from developing a strong renewable energy industry in Kansas. By manufacturing the wind turbines, propellers, and steel towers in our State, it is estimated that 3,000 new jobs will be created. This includes the people needed to install and maintain these wind farms. Also, hundreds of farmers in Western Kansas will financially benefit from leasing their land where the wind turbines and solar thermal arrays are installed.

4. Kansas has the potential of 7,000MW of wind generated electricity to use for our own economic growth as well as export to other states. Holcomb is designed for only 1,400 MW with just 200 MW to be used in Western Kansas.

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5. By combining utility scale solar thermal projects with wind farms in Western Kansas, there will be no need to build any new coal-fired electrical plants in our State. Please read the attached news articles for more information on solar thermal projects in California and Colorado.

6. As you rewrite this bill, please introduce a separate net metering bill which will actually encourage renewable energy investments by Kansas businesses, farmers, manufacturers, schools, governments and families. Net metering needs to include wind as well as photovoltaic and solar thermal generated electricity paid at the same rate as being charged by the utility to which they are connected. The 4% limit is also too restrictive and needs to be removed.

It is encouraging that the Legislature is attempting to pass comprehensive energy legislation, but this bill is so flawed that it needs to be withdrawn, split into separate bills and come back with non-polluting incentives to develop the vast renewable energy resources in our state before any further consideration is given to coal-fired plant expansion. Sound energy policy and protecting our planet from global warming is not a Republican or Democrat issue. We need to join together as Kansans to prepare for the future.

Weather patterns are changing all over the globe and rapidly melting glaciers are already causing major damage to fresh water supply and low lying coastal areas. Sticking our finger in the eye of Mother Nature never has and never will work.

This bill—as introduced—will contribute to the major environmental disaster which is already underway. The responsible act for each Kansas legislator is to JUST SAY NO!! to more coal fired pollution and build a strong renewable energy industry throughout our State.

Please slow down the legislative process to produce positive energy policy for generations to come.

Respectfully yours,

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17-2

Solar thermal gains steam with Ausra deal

By Chris Morrison 11.5.07

California energy utility PG&E has agreed to buy power from a 177-megawatt solar thermal plant to be built by Silicon Valley company Ausra.

Ausra, of Palo Alto, Calif., is applying for a regulatory permit to build on 640 acres of ranch land in California's San Luis Obispo county.

The idea behind solar thermal power is focusing mirrors on contained water, which then turns to steam that can drive turbines. We last reported on Ausra two months ago, when it raised $40 million from Khosla Ventures and Kleiner Perkins Caufield & Byers.

Ausra's execution of the deal, if it goes through will help the company catch up with competitor BrightSource, which just cleared the regulatory hurdle for a 400-megawatt plant in the Mojave Desert last week, according to Green Wombat.

Although PG&E has now committed to buying over a gigawatt of solar thermal energy in coming years, it remains to be seen which startup's designs are most effective.

Technology used by companies like BrightSource and Solel uses special curved mirrors to focus more light, and thus create more steam than Ausra's plants. However, the latter's approach, which uses mass-produced flat mirrors, is cheaper, the company says, potentially bringing the cost for solar thermal energy as low as coal-fired plants.

The technology for solar thermal itself has existed for decades. Photovoltaic cells, which directly capture sunlight, may possibly become cheap enough to be a viable replacement.

Big solar generator proposed by Xcel

The utility wants to develop a 200-megawatt solar-thermal plant by 2016 that could send power to 80,000 households.

By Steve Raabe
The Denver Post
Article Last Updated: 11/27/2007 05:57:33 PM MST

Xcel Energy is proposing to develop a utility-scale solar-power plant that would be among the first of its kind in the nation.

The 200-megawatt generator would create renewable power with no emissions, helping Xcel comply with state guidelines to increase alternative energy and decrease greenhouse gases.

The proposal, included in a resource plan filed by Xcel on Thursday with Colorado regulators, drew praise from backers of the technology known as solar thermal or concentrating solar power.

"Of course we're thrilled that they're moving toward a truly carbon- free technology," said Leslie Glustrom, a solar-thermal advocate and critic of Xcel's coal-fired generation. "We have a half-dozen developers champing at the bit to build these projects."

Xcel officials said the timing, location and cost of the plant aren't yet known.

Solar-thermal analysts have said a plant of the size proposed by Xcel could run about $600 million and cover 1,000 acres of land with solar collectors. It could supply power to about 80,000 households.

A possible location could be the San Luis Valley near Alamosa, rated as having Colorado's best solar exposure.

Unlike conventional solar photovoltaic panels that convert sunlight directly to electricity, concentrating solar power uses large mirrors to focus sunlight on vessels containing water or other fluids. The heated fluids produce steam to spin turbine generators, similar to the way coal-fired power plants use steam to make electricity.

Analysts say solar thermal is less expensive, and better suited for large-scale power production, than conventional solar-electric panels.

The technology also is considered more useful than intermittent wind power because the collected solar heat can be stored for several hours, allowing power to be generated after the sun goes down.

In an interview Thursday, Xcel chief executive Dick Kelly said the utility is confident in solar-thermal technology, even though costs are higher than power generated from coal or natural gas.

He said Xcel believes costs will go down as the technology becomes more prevalent. Xcel may seek other utility partners for the project.

Xcel officials said the resource plan proposes initially a smaller, 25-megawatt plant by 2011 that could employ both solar-thermal and photovoltaic collectors.

The larger plant of up to 200 megawatts would be developed later, before 2016.

A handful of solar-thermal developers said they have been eyeing the San Luis Valley for solar generating plants. Xcel and SunEdison already have a 8.2-megawatt photovoltaic facility there.

"What the industry seems to have discovered is that larger plants are more economical," said Mark Mehos, a solar-thermal researcher at the Golden-based National Renewable Energy Laboratory.

Mehos has described the technology as "very promising" in the movement to reduce fossil-fuel power generation.

Steve Raabe: 303-954-1948 or sraabe@denverpost.com

Solar energy park proposed

Gargi Chakrabarty, Rocky Mountain News

Tuesday, December 19, 2006

A New York startup with local roots will announce plans today to build the world's largest solar energy park in the San Luis Valley.

The $2 billion park, christened SolarDunes by developer SkyFuel, would have a total capacity of 1,000 megawatts - enough electricity for more than 300,000 homes and businesses along the power-hungry Front Range.

SkyFuel estimates the project's cost would include transmission or high-voltage power lines necessary to bring electricity from the valley in southern Colorado to metro Denver.

The startup plans to use an advanced but untested solar thermal technology.

The project is scheduled to begin construction in 2010 with an intial 100-megawatt phase. Eventually the project would create more than 300 jobs in the valley, says Michael Wisdom, executive director of the San Luis Valley Development Resource Group.

"The solar park will be one of those significant attractions to the state of Colorado itself," he said.

SkyFuel CEO and President Arnold Leitner has local connections.

He has a doctorate from the University of Colorado and was a senior consultant at Platts in Boulder before leaving to get an MBA from New York's Columbia University.

Leitner said he is proposing a mega-project here because the San Luis Valley has plenty of sun and the world needs more clean energy.

"Global warming is real, and we will not make inroads in solving the carbon emission issue with small, token solar projects," Leitner said.

Plenty of questions exist about the project. Critics say the technology has not been tested, SkyFuel does not have a prototype that scientists can verify, and it does not have any existing project.

The company plans to build the first prototype next year.

"NREL has not had a chance to assess the technology, so we don't have an opinion on it," said George Douglas, spokesman for the National Renewable Energy Laboratory in Golden, a leader in solar thermal research.

Solar thermal technology typically uses reflectors or mirrors to concentrate sunlight.

The energy is used to heat fluids, such as water, and the resulting steam turns turbines to generate electricity.

The SkyFuel project would use molten salt instead of fluids and a different mechanical process. It's not clear how SkyFuel would finance the project.

Leitner said several New York investment banks are interested in solar thermal technology, although he did not reveal them. He also said financing would depend on whether utilities would contract for the solar power or buy the entire project.

He has discussed the project with Kathy Worthington, Xcel Energy's community service manager for southern Colorado. Xcel spokesman Tom Henley said the utility didn't have any details about the project.

"Any type of power that somebody wants to provide us would have to come through the Least Cost Resource Plan," Henley said, referring to Xcel's plan that every four years determines how the utility can secure power for its customers from various sources - such as wind or solar - at the least cost.

Electricity generated using solar thermal is priced from 13 cents to 15 cents per kilowatt-hour.

That compares with 20 cents to 30 cents for solar photovoltaics and 4 cents to 6 cents for coal and natural gas.

Leitner said the price of solar thermal could become competitive with fossil fuel power in five years, assuming coal and natural gas will be required to pay $25 to $30 a ton in carbon costs under proposed federal pollution guidelines.

The San Luis Valley's Wisdom said he understands the financial and technological risks associated with the project.

"We have a lot of faith in the sun," Wisdom said, adding he'd carefully review the proposal.

"Everything else would have to prove itself."

By the numbers

1,000 megawatts: The total capacity for SolarDunes, a proposed solar energy park

300,000 The number of homes and businesses Solar Dunes plans to service

300 plus: Jobs the project would create in the San Luis Valley

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AMERICAN LUNG ASSOCIATION®
serving Kansas, Missouri, Nebraska, Oklahoma and Texas
CURES | CLEAN AIR | SMOKEFREE KIDS
Improving Life, One Breath at a Time

American Lung Association of the Central States
Regarding Additional Coal-Fired Power Plants for Holcomb, KS
And House Bill 2711 and Senate Bill 515
2-5-08

The mission of the American Lung Association is to protect lung health and prevent lung disease. We focus on clean air issues because they are essential to protecting lung health.

We stand in opposition to Senate Bill 2711 and House Bill 515 because they will compromise the health of the citizens of Kansas. With health in mind, we also are specifically still in opposition to the two new power plants being proposed for Holcomb, Kansas. New coal-fired power plants will only add to the serious challenge our nation is facing with over half of our population breathing unhealthy air. We do not need more challenges to our health and our air quality, locally, regionally, or nationally.

The American Lung Association has been actively engaged in Clean Air issues for over 40 years. Each year, we produce the State of the Air Report that grades air quality, county by county, throughout the United States. Unfortunately, the most recent report found that over half of the US population lives in counties that have unhealthful levels of either particle pollution or ozone at some time during the year. So, in other words, over half of our US population is breathing air that is harmful to their health. House Bill 2711 and Senate Bill 515 have the potential to greatly add to that problem. So would new coal-fired power plants.

When new sources of power are being considered for the region, we strongly urge decision makers to keep the health of our citizens foremost in the decision-making processes.

The American Lung Association believes that the goals of a sound energy policy and protection of respiratory health converge toward use of technologies that maximize energy efficiency and the use of clean energy sources.

In other words, we know that there are other, workable and cleaner energy choices in lieu of additional coal-fired power plants. Arguments for coal power generation that focus only on the "cheap" cost of coal ignore the true costs when the health of citizens is not factored in the equation.

Air pollution has many serious health impacts. From the lung health perspective, we are very concerned about two, particulate matter pollution and ozone

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pollution. This plant will produce significant particulate matter emissions and other emissions like Nitrogen Oxide, Sulfur Dioxide and Volatile Organic Compounds that mix to form ozone.

Particulate matter's health impacts are many and serious:

Short-term increases in particle pollution (over just hours or days) have been linked to:

- death from respiratory and cardiovascular causes, including strokes
- increased numbers of heart attacks, especially among the elderly and in people with heart conditions;
- inflammation of lung tissue in young, healthy adults;
- increased hospitalization for cardiovascular disease, including strokes;
- increased emergency room visits for patients suffering from acute respiratory ailments;
- increased hospitalization for asthma among children; and
- increased severity of asthma attacks in children.

Year-round exposure to particle pollution has been linked to:

- slowed lung function growth in children and teenagers;
- significant damage to the small airways of the lungs;
- increased risk of dying from lung cancer; and
- increased risk of death from cardiovascular disease.

Anyone may be affected by particle pollution, but several groups are most at risk:

- Children under 18
- Adults 65 and older
- Anyone with chronic lung diseases, such as asthma, chronic bronchitis, or emphysema
- Anyone with a cardiovascular disease, such as a coronary artery disease or who has suffered a stroke or heart attack
- Anyone with diabetes

How serious is the impact?

Here's one study that shows it's a life or death issue to many. EPA scientists did a study in 9 cities. These 9 cities were not meeting the current fine particulate matter standards but even if they were the EPA estimated that over **4,700 premature deaths would occur each year from fine particulate matter in just those nine cities** (Detroit, Los Angeles, Philadelphia, Pittsburgh, St. Louis, Boston, Phoenix, Seattle, and San Jose). The EPA has not calculated the total but extrapolating that data would mean the death toll is easily in the tens of thousands annually.

18-2

We are very concerned about the amount of fine particulate matter that will be produced by this plant and its impact on the health of citizens in this region including premature death.

In regard to ozone, many areas in the United States produce enough ground-level ozone during the summer months to cause health problems that impact everyone and most dramatically impact the young, senior citizens and those with lung disease. Emissions from the Holcomb plant include Nitrogen Oxide, Sulfur Dioxide and Volatile Organic Compounds that mix to form ozone particularly during the summer months. This concern about ozone is intensified with the summer months also being the peak load times of electric generation plants.

Ozone has many negative health impacts. The immediate problems are:

- shortness of breath
- chest pain when inhaling deeply
- wheezing and coughing
- increased susceptibility to respiratory infections

Exposure to ozone also increases:

- risk of premature death;
- pulmonary inflammation;
- the risk of asthma attacks;
- the need for people with lung diseases, such as asthma or chronic obstructive pulmonary disease (COPD), to receive medical treatment and be hospitalized.

Two studies published in 2005 explored ozone's ability to reduce the lung's ability to work efficiently, a term called "lung function." Each study looked at otherwise healthy groups who were exposed to ozone for long periods: outdoor postal workers in Taiwan and college freshmen who were lifelong residents of Los Angeles or the San Francisco Bay area. Both studies found that the long exposure to elevated ozone levels had decreased their lung function.

Short-term exposure to ozone also has been linked to aggravation of chronic obstructive pulmonary disease (COPD). Repeated inflammation due to exposure to ozone over a period of years can lead to a chronic "stiffening" of the lungs.

Ozone pollution also has grave and wide health impacts. Many groups are at risk; Children, senior citizens, people who work or exercise outdoors, people with preexisting respiratory disease (e.g., asthma or COPD) and "responders" who are otherwise healthy but have an enhanced reaction to ozone.

When you look at that list of who is impacted by particulate matter or ozone, it includes almost everyone! And the impacts need to be taken seriously. They are serious health issues.

18-3

The American Lung Association of the Central States respectfully requests that decision-makers keep the health of our region's citizens in mind as they make sound and informed decisions about how we get our energy. This includes decisions about the specific legislation being discussed, as well as the potential for two new power plants in Holcomb.

Submitted by Susannah Fuchs, Director of Environmental Health for The American Lung Association of the Central States.

Note: All citations refer to the American Lung Association State of the Air Report and can be provided.

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