

MINUTES OF THE HOUSE UTILITIES COMMITTEE

The meeting was called to order by Chairman Carl Holmes at 9:00 A.M. on February 15, 2006 in Room 231-N of the Capitol.

All members were present except:

Annie Kuether- excused
Vaughn Flora- excused

Committee staff present:

Mary Galligan, Kansas Legislative Research
Dennis Hodgins, Kansas Legislative Research
Renaë Hansen, Committee Secretary
Heather Klaasen, Research Intern

Conferees appearing before the committee:

Representative Jim Yonally
Joe Spease, executive director, Kansas Unbound
Mark Tallman, Kansas Association of School Boards
Phil Wages, KEPCO
Larry Patton, Rancher
Trudy Aron, American Institute of Architects
Gary Hibbs, Department of Administration
Diane Gjerstad, Wichita Public Schools
Eric King, Kansas Board of Regents
Michael Volker, Midwest Energy, Ft. Hayes, Kansas

Others attending:

See attached list.

Chairman Holmes began the meeting by sharing with the committee members the current bill action index and asking members which of the 12 bills we acquired yesterday members wanted to have hearings on, since there was limited time available before turn around. It was decided that we would have hearings on **HB 2926**, **HB 2932**, and **HB 2934**.

Hearing on:

HB 2842 **Introducing a wind energy stimulus package.**

Representative Jim Yonally spoke to the committee to introduce Mr. Joe Spease.

Proponents:

Joe Spease, executive director, Kansas Unbound, (Attachment 1), spoke to the committee about why he brought these bills before the State Legislature and what they might do for energy. This bill compiles a number of ideas on how to develop wind energy in the state of Kansas

Mark Tallman, Kansas Association of School Boards, (Attachment 2), spoke as a proponent for **HB 2842** as it sets aside a portion of its proceeds for education.

Opponents:

Phil Wages, KEPCO, (Attachment 3), spoke in opposition to **HB 2842** stating specific sections of the bill that would not be good policy.

Larry Patton, Rancher, (Attachment 4), spoke why there are certain areas that are good for wind energy and certain areas that, because of their endangered ecosystem status, do not make good sites for wind energy.

CONTINUATION SHEET

MINUTES OF THE House Utilities Committee at 9:00 A.M. on February 15, 2006 in Room 231-N of the Capitol.

Dave Springe, CURB, (Attachment 5), presented written testimony in opposition to **HB 2842**.

Closed hearing on **HB 2842**.

Hearing on:

HB 2843 **Public buildings, green buildings act.**

Proponents:

Joe Spease, executive director, Kansas Unbound, (Attachment 6), presented testimony in favor of **HB 2843**.

Trudy Aron, American Institute of Architects, (Attachment 7), offered testimony that stated how **HB 2843** would not impact adversely the costs of building projects, it would reduce the environmental impact of energy production, and would improve the social impact of communities with buildings built to these specifications.

Gary Hibbs, Department of Administration, (Attachment 8), spoke in support of **HB 2843** as it would help meet LEED standards that assess the environmental sustainability of building designs.

Wendy Harms, Kansas Ready Mixed Concrete Association, (Attachment 9), presented written testimony in favor of the ideas set forth in **HB 2843**.

Opponents:

Mark Tallman, Kansas Association of School Boards, (Attachment 10), spoke in opposition to **HB 2843**.

Diane Gjerstad, Wichita Public Schools, (Attachment 11), offered testimony that showed how the LEED site itself suggests these standards be a voluntary goal and their school system was in agreement with that suggestion.

Eric King, Kansas Board of Regents, (Attachment 12), presented testimony stating their opposition to **HB 2843's** mandated certification process which provides substantial documentation and costs.

Closed hearing on **HB 2843**.

Hearing on:

HB 2844 **Allowing small photovoltaic systems or small wind turbine to offset part or all of a customers current electricity requirements.**

Proponents:

Joe Spease, executive director, Kansas Unbound, (Attachment 13), spoke before the committee on **HB 2844** and how its implementation would help the Kansas economy through job creation, helping the environment, lowering electricity bills and gas bills for Kansas customers, without unfairly harming exiting electricity providers.

Opponents:

Michael Volker, Midwest Energy, Ft. Hayes, Kansas, (Attachment 14), presented his testimony stating Midwest Energies view was the same as those of Kansas Electric Cooperatives, KEPCO, and Westar. All of these companies oppose **HB 2844** for a number of reasons.

Dave Springe, CURB, (Attachment 15), offered written testimony in opposition to **HB 2844**.

CONTINUATION SHEET

MINUTES OF THE House Utilities Committee at 9:00 A.M. on February 15, 2006 in Room 231-N of the Capitol.

Neutral:

Bill Griffith, Sierra Club, (Attachment 16), presented testimony that stated their general favor to net metering but in opposition to this bill as it does not meet the Federal Energy Policy Act of 2005 which directs Public Utility Commissions to open a docket on net metering if it is not already enacted within their jurisdiction.

Questions and comments were offered by Representatives: Don Myers, Rob Olson, Josh Svaty, Oletha Faust-Goudeau, Carl Krehbiel, and Forrest Knox.

The next meeting is scheduled for February 16, 2006.

Meeting Adjourned.

HOUSE UTILITIES COMMITTEE GUEST LIST

DATE: February 15, 2006

NAME	REPRESENTING
Dave Holt	KEC
Joe Dick	KCBPU
Diane Gjerstad	Wichita Public School
Judy Aron	Am Inst of Architects
Joe Spease	Ks Unbound
John Peterson	Dillinger Rancher
Steve Miller	Sunflower Electric
Tom Day	KCC
Dennis Kiesel	KAC
David Payne	Curb
Jim Zarally	self
Mark Tallman	KASB
Matt Hickam	Kensinger + Assoc.
Gavin Young	DofA
STUART LOWRY	KEC
Kal McWorton	KSFMD
PATRIC WAGES	KEPCO
Jim Mazzg	Spirit AeroSystems
Mike Beam	Ks. LUSTK. Assn.
KEVIN GREGG	HOUSE MAJ. LEADER'S OFFICE

HOUSE UTILITIES COMMITTEE GUEST LIST

DATE: February 15, 2006

NAME	REPRESENTING
ERIC KING	KFOR
D. KEITH MEYERS	DEPT. OF ADMINISTRATION - DFM
GARY HILLES	DFM / Dept of Admin
GEORGE STEELE	DFM / Dept of Admin.
TERRY HOWREN	KFB

UTILITY COMMITTEE TESTIMONY
FEBRUARY 15, 2006
BILL NOS: 2842, 2843, 2844
Joe Spease, Executive Director of Kansas Unbound

HB 2842, Wind Energy Stimulus Package (WESP)

A considerable amount of consulting has gone into the creation of this bill. Kansas energy companies, CURB, farm organizations, businessmen, legislators, educators, scientists, environmental groups, have all been asked to share what they believe are the provisions that will help support the development of wind farms in Kansas. Here is what has been learned from these various groups.

- Electricity from new wind power is the cheapest electricity Kansas could have going forward. Electricity from new coal plants is much more expensive than electricity from new wind farms (new wind \$0.025-\$0.03 per kWh, vs. new coal \$0.035-\$0.05 per kWh) and fossil fuel costs will only go higher while wind costs stay the same. This doesn't include the \$7 trillion of environmental cleanup and higher healthcare costs directly attributed to fossil fuel companies, that they never have to show as part of their costs, that taxpayers and health insurance costs pay for eventually. Clean renewable energy sources like wind, hydrogen, and solar will help to eliminate the costs from fossil fuels as soon as we use more renewable than fossil fuel energy.
- HB 2842 guarantees that ratepayers will NOT have higher rates because of wind power. The guaranteed rate of 95% of the utility company's Avoided Fuel Cost for accepting wind power means that ratepayers will not see increases because of wind power costs.
- Public schools will benefit. With enough new wind power developed in Kansas, our public schools could reap a "windfall" of millions of dollars into the special "public education fund" created by HB 2842. This will bring greatly needed funds, mandated by the State Supreme Court, into our public schools.
- Farmers in western Kansas will benefit greatly from HB 2842. The going rate of approximately \$3,000 per wind turbine per year for leasing costs of the turbines on farmland will be an enormous help to our farmers.
- The Tall Grass Prairie is protected. HB 2842 stipulates that wind farms be developed in western Kansas only, leaving the precious environment in eastern Kansas unaffected.
- HB 2842 means no additional study of RPS is needed to measure economic effects of this bill. Lower rates to utilities can only be good for them, and cheaper electricity for consumers can only help. There is nothing else to study. The 23 other states that currently have RPS have already done the studying for us. It's pretty simple, pass this bill and billions of investment dollars will flow into Kansas. Don't pass it and those billions of dollars will go to other states and possibly leave Kansas forever.
- Wind and hydrogen. The President of the National Hydrogen Association has endorsed the idea of making hydrogen from water using wind in western Kansas. The President mentioned how hydrogen could reduce imports of oil in his recent State of the Union address. Ford, last week, announced plans to

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bring ICE hydrogen fuel injection systems on the market in two years. North Dakota is producing hydrogen from wind and water, distributing it via a pipeline to a refueling station for state vehicles they've converted to run on hydrogen. Kansas could produce enough hydrogen with this method to power every car and truck in the nation, with zero pollution, at a cost one-third that of gasoline. Our economy would be set for decades of growth. But it won't happen without passing the WESP first.

- HB 2842 means lower electricity rates to consumers, a cleaner environment, help to farmers, help to schools, the creation of thousands of jobs, more jobs possible than from any other sector of the economy, and when combined with producing hydrogen, eventually, would mean never having to import a drop of oil again.
- 2842 creates no hardship for utility companies. Unlike a RPS that 23 other states have, where utilities are forced to produce a certain percentage of power from renewable sources, this bill simply arranges for the low-cost distribution of electricity.
- If you support forcing Kansans to pay higher utility rates, forcing Kansans to pay the enormous cleanup and healthcare costs attributed to fossil fuel energy sources, if you don't care about bringing new revenue to farmers, or new revenue to schools, or doing what is needed to make Kansas the hydrogen-producing capital of the United States, then don't pass this bill. What would your constituents want? President Bush wants it. Kansas utilities have not announced plans to buy any more wind power after those that come on-line in 2007. That means it's up to you. Without guidance from the legislature, Kansas will be stuck with higher energy costs and no chance of capitalizing on hydrogen production. Our future is in your hands. You must pass HB 2842 to give Kansas and our nation a bright, clean, future.



Testimony on **HB 2842 and HB 2843**
before the
House Utilities Committee

by

Mark Tallman, Assistant Executive Director/Advocacy
Kansas Association of School Boards

February 15, 2006

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to appear before you today and offer comments on two bills: **HB 2842**, which concerns wind energy generation and aid to public education; and **HB 2843**, which would require that new state and school building construction projects comply with “green building” standards.

HB 2842

KASB appears in support of **HB 2842**. We believe school boards understand the need to shift to alternative energy sources, and Kansas seems particularly suited to foster the development of wind energy. We further appreciate the provisions of this bill that set aside a portion of wind energy purchases for public education.

We would caution, however, that depositing the proceeds of special revenue sources with the State Board of Education does not necessarily mean it will provide additional revenue to schools. If the Legislature does not provide additional spending authority to school districts, such as an increase in the base budget, the new revenue will simply be offset by reduction in state aid from the state general fund. We would suggest that these revenues either simply be placed in the general fund, or be used to support education initiatives that might not be funded without such revenues.

HB 2843

KASB appears in opposition to **HB 2843**. Our members have adopted a specific policy statement that requirements for school buildings should not exceed the standards of the international building code, especially if these standards do not apply to other public and private buildings.

However, we certainly do not object to the promotion of energy conservation standards, especially if these standards result in cost savings. We believe school districts would be interested in pursuing such savings voluntarily if the benefits of these initiatives are clear, and would encourage the state to provide information and incentives in this area. Perhaps that could be one use for the revenues proposed in **HB 2842**.

Thank you for your consideration.

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Kansas Electric Power Cooperative, Inc.

HOUSE UTILITIES COMMITTEE H.B. 2842

Testimony on behalf of Kansas Electric Power Cooperative, Inc.
(KEPCo)
February 15, 2006

Mr. Chairman and members of the committee:

I am Phil Wages, Director of Member Services and External Affairs for Kansas Electric Power Cooperative. KEPCo is a not-for-profit generation and transmission utility, providing electricity to nineteen member rural electric cooperatives serving the eastern two-thirds of the state.

Thank you for the opportunity to offer testimony on H.B. 2842.

In addition to KEPCo, I have been asked to represent the views of other utilities interested in this bill. These are: Kansas Electric Cooperatives, Westar Energy, Midwest Energy, Sunflower Electric Power Corporation, and Kansas City Power & Light.

KEPCo and these other utilities stand in opposition of this bill for a number of reasons.

I would first like to draw your attention to the definition of "Plant owner" in Section 1(a). Plant owner and plant operator can be the same entity but with many wind generation installations, they are not. To enter into a contractual agreement with a wind generation facility, it can only be done with the owner, or in the case of more than one owner, the owner that has contracting authority. Therefore, within the context of this bill, plant owner and plant operator need to be separately defined.

Section 2(a) has multiple problems. As written, Section 2(a) would require a utility to enter into an agreement with any and all wind generators and without limitation to the amount of energy the utility would have to purchase, whether it is economically sound to purchase the energy, or even whether the location of the utility in relation to the wind energy facility makes sense. Legislation should not determine the terms of a bi-lateral contract. The specifics of a

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power purchase contract should be based upon a willing seller and a willing buyer negotiating price, quantity and the term of the contract. Each utility's system requirements are unique. To treat the utility industry as a homogenous entity is not prudent.

The provision of Section 2(b) denying ratepayer recovery of transmission costs would likely conflict with SPP allocation tariffs to the extent that any improvement or modification would have regional benefit.

In Section 2(c), the language of the bill transfers the responsibility for wholesale resale of the wind energy to the original purchasing utility, even after the utility determined it had no market for such energy and declined to renew its purchase power contract.

In Section 2(d), the language states if the plant owner needs a market beyond its initial power purchase agreement term, the available energy shall be sold on an as-produced basis to the utilities. Once again, the utility does not have a contract with the wind producer, however, this language states that each utility obligated shall purchase energy on an "as produced basis" pro-rata to the utilities. From the language in this section, I was not able to determine how a utility was obligated to purchase energy absent a purchase power contract.

I would like to also point out that electricity is unique in that it must be generated in real time to match the demand of the system. Utilities should not be forced to accept unlimited energy generated on an "as produced" basis. This language is socializing the wind energy across a group of utilities, regardless of their particular energy circumstances, energy supply portfolio, or other existing wind energy contracts. Conceivably, a utility could be forced to purchase energy, at a pre-determined price, that the utility has no demand for.

In Section 2(e), the bill states that a premium of 1.8 cents per kWh shall be paid to the plant owner for any portion of wind that can be made firm by a large scale energy storage facility. There is no reason to believe that 1.8 cents will be either necessary to pay for such a storage facility or sufficient to pay the costs. Neither is there any reason to believe that the price is fair from the point of view of the purchaser who may or may not have a use for firm wind energy at that price. Could the owner make the wind energy firm simply by following the capacity accreditation procedures under an RTO's operating/planning criteria? These are concerns that require

answers before a complete evaluation of this provision can be offered.

Section 2(f) is nothing more than imposing a tax or franchise fee, the beneficiary of which is public education, and hiding it in consumer's electric bills. Education costs should be clearly identified and methods of collection clearly identified as well, not hidden as a utility cost. Education costs should be a universal taxpayer obligation.

Section 2(g) is incomplete at best. FERC would not have sole jurisdiction in this area. The jurisdictional responsibility as to matters of retail rate design and the inclusion of wind energy costs on retail electric bills would remain with the KCC.

In closing, we as Kansas electric utilities urge this committee to reject this legislation because it is not in the best interests of Kansas ratepayers.

Mr. Chairman, this concludes my testimony and I stand for questions.

I am the 5th generation of my family to have the privilege of managing and preserving native grassland in the Flint Hills, one of the most unique landscapes in Kansas and the last remaining significant Tallgrass Prairie ecosystem in the world. Please allow me to explain why so many people throughout our state have concerns about the development of large scale commercial wind energy complexes in the Flint Hills.

Most Kansans appreciate the unique, timeless beauty of the Flint Hills and understand the importance of preserving the region for future generations. In recent years we have also realized what scientists have known for decades: the **Tallgrass Prairie is one of the most endangered ecosystems in the world. Only 3-4% of it remains undisturbed and most of this is in the Flint Hills.** This happened because as Americans settled the fertile prairies in the center part of our country we converted our native grassland to farm land, cities, and industrial sites. The rocky ridges of the Flint Hills could not be farmed, so the nutritious warm weather grasses survived and became the basis for our ranching heritage in eastern Kansas.

Almost everyone is perceptive enough to realize that any large-scale industrial development will have a lasting negative effect on our endangered Tallgrass landscape. Even wind energy corporations acknowledge their giant turbines have a certain amount of negative ecological and visual impact, yet they continue to search for ways to justify their pursuit of profit at the expense of our environment and cultural heritage. **One way wind developers hope to force the construction of 400 ft. turbines in the Flint Hills is through a Renewable Portfolio Standard (RPS).** Passage of a renewable energy mandate would force our utility companies to sell higher priced "green" energy, which would force the construction of hundreds of wind turbines throughout Kansas. **A renewable mandate would be bad for the Flint Hills and bad for every Kansan who pays a utility bill.**

Reasonable people know appropriate land use practices vary across our state. Reasonable people also know the Flint Hills should remain a productive grazing area which attracts increasing numbers of tourists. Reasonable people know there is something wrong about industrializing the last 3-4% of an ecosystem with hundreds of wind turbines. Most Flint Hills area counties have comprehensive plans which contain a section about the importance of protecting certain sensitive areas from fragmentation and development, yet wind energy developers ignore these guidelines.

Objections to industrial wind development in the Flint Hills include:

*The Tallgrass Prairies should not be compromised by hundreds of large-scale wind turbines with miles of roads, trenches, and transmission lines that must accompany them. The spectacular views (both day and night) would be significantly altered. It's obvious that the construction of "wind farms" modifies the landscape considerably, resulting in a major transformation of its physical features, changes in the ecosystem, and visual pollution.

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Landowners resent non-resident developers trying to convince them that changing the visual image of the Flint Hills landscape is insignificant. Most of all they resent the prospect of the state or federal government imposing a Renewable Portfolio Standard on Kansans. **An RPS would virtually ensure more industrial wind development in the Flint Hills.**

*All landowners have rights, not just a few here and there who are willing to sacrifice their portion of native prairie for wind turbine lease money. All landowners should be able to protect the value of their property and preserve it for future generations. **The KCC has decided to grant utility status to industrial wind facilities, which means that neighboring landowners have become victims of eminent domain condemnations of their land.** It is disturbing that out-of-state and foreign developers can "take" property rights from Kansas landowners.

*Grazing areas will not be as productive because of the inevitable destruction of native grasses, increased frequency of weeds, and soil erosion which occurs any time the prairie is disturbed by heavy machinery. Prairie restoration is very costly and takes decades (some insist it takes centuries) to accomplish. Spring burning practices may have to be altered, which would certainly have a negative effect on grazing.

*Placement of wind farms in the Flint Hills will reduce the value of adjacent land due to the altered visual image. The pristine, virgin, timeless prairie image will be gone which will certainly change real estate values, as has happened in other parts of the country where the visual image is closely tied to land value.

*Tourism has grown dramatically in recent years and will be reduced if the landscape is altered. Visitors come to the Flint Hills to experience our endless sea of grass, not intrusive industrial development which dominates the horizon. In an effort to attract travelers to Kansas and the Flint Hills the state designated a portion of highway 177 as a SCENIC BYWAY. This stretch of highway was recently designated a national SCENIC BYWAY. Representatives of wind energy companies have approached landowners along this same stretch of road about signing leases.

*Wildlife populations would be affected as a result of wind farms. The Kansas Department of Wildlife & Parks, U.S. Fish & Wildlife Service, and The Nature Conservancy have concluded that industrial development in the Flint Hills will have a negative effect on wildlife.

*Landowners fear that "**fragmentation**" of the Flint Hills will occur rapidly once **the door is opened for industrialization.** We have seen maps of the Hills which clearly reveal the corporate vision for building wind energy conversion systems throughout the geographic region. Many believe wind factory development will lead to other forms of industrial sprawl.

We Americans have always been infatuated with technology that will accelerate what some see as our Manifest Destiny to conquer the land in the name of progress. As a culture, we have been too quick to abuse our natural environment in order to make money.

Most of us who call the Flint Hills our home have always believed the rocky hilltops would protect the grassland from the plow and other modern intrusions, thus preserving the Tallgrass Prairie. In our naiveté it never occurred to us that the existence of our world famous Flint Hills could be threatened by industrial development. We have the wind turbine technology to physically conquer the Flint Hills, but hopefully we're wise enough to resist that temptation. Let's use our technology to harness the wind in locations that have already undergone significant landscape alteration and areas where the majority of the land is being used for crop production.

It's amazing to most stewards of Flint Hills land that anyone who is concerned about preserving the environment could consider destroying a vanishing ecosystem that is now represented in our National Park system. How many of us would endorse the placement of wind towers in the Grand Canyon or Yellowstone or Yosemite? Rational thinking Kansans know in their hearts it's wrong to destroy a one of a kind landscape. Only 3-4% of our nation's original Tallgrass Prairie remains undisturbed and most of it is in the Flint Hills. Other acceptable sites are available for wind development. Placing hundreds of 400 ft. turbines in the Flint Hills shows no regard for the natural beauty or the environmental significance of Kansas.

Our elected officials at both the state and federal level have created an extremely friendly business climate for industrial wind energy development without considering the consequences. They have established generous tax exemptions and incentives that are not coupled with environmental responsibility. Now it is imperative that Kansas establish parameters designating which geographic areas within the state are suitable for industrial wind development. The state of Kansas should craft a responsible wind energy policy which sets limits for industrial development in unique native prairie environments such as the Flint Hills and Smoky Hills. We must take action to protect our scenic, endangered ecosystems from being sacrificed for the sake of short term corporate profit.

Larry R. Patton
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El Dorado, Kansas 67042
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Citizens' Utility Ratepayer Board

Board Members:

Gene Merry, Chair
A. W. Dirks, Vice-Chair
Carol I. Faucher, Member
Laura L. McClure, Member
Douglas R. Brown, Member



State of Kansas

Kathleen Sebelius, Governor

David Springe, Consumer Counsel
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HOUSE UTILITIES COMMITTEE

H.B. 2842

Testimony on Behalf of the Citizens' Utility Ratepayer Board

By David Springe, Consumer Counsel

February 15, 2006

Chairman Holmes and members of the committee:

Thank you for this opportunity to offer testimony on H.B. 2842. The Citizens' Utility Ratepayer Board is opposed to this bill for the following reasons:

While CURB is generally supportive of wind energy at reasonable and economical levels, CURB is concerned that, as drafted, this bill sets a mandate for "electric public utilities" to enter into five year agreements to purchase wind energy, without any restriction on the amount of wind produced or the number of agreements required. In that the electric public utility ratepayers will ultimately be responsible for the cost of these wind agreements, CURB urges the Committee to reject such open ended, inflexible requirements as are set forth in this bill.

CURB's main concern with this bill is the language in Section 2(a) that states "an electric public utility shall be required to enter into at least a five-year power purchase agreement with a wind energy facility." Perhaps this language can be read narrowly, requiring an agreement with only one facility ("a wind energy facility"), but if not, then this language may require a five year contract with every wind energy facility that seeks to do business with the utility. There are no apparent limits to this language. As such, CURB cannot support this language.

After the initial five year term of these agreements, Section 2(d) requires that all available energy "shall be sold on an as produced basis pro-rata to the utilities" at a price not to exceed 95% of the utilities respective avoided fuel cost from the prior calendar year. This linkage of prior year avoided fuel cost to current year expense for wind energy may produce a result that is uneconomic for a resource that may be un-needed by the utility, and its customers. This bill essentially forces several utilities to accept power they may not need, from perhaps unlimited suppliers. Ultimately the utilities customers will pay this cost. CURB does not support the type of absolute mandate dictated by this bill. This is the equivalent of a renewable portfolio standard which has never before been passed by the legislature.

While linking some wind purchases to a price not to exceed avoided fuel costs is a novel idea, and could perhaps serve as an interesting starting point for a discussion, CURB cannot support the framework set forth in this bill. As such, CURB respectfully requests the committee reject this bill.

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ATTACHMENT 5

HB 2843

LEED Building Design Standards

18 states have adopted standards similar to those contained in 2843. LEED standards for new state buildings and substantial remodels, will add about 1-2% to the initial cost of those buildings. That initial higher cost will be paid for several times over by the energy savings in those buildings. The cost savings to taxpayers will be enormous. Plus, people and students working in LEED buildings produce more, are sick less, and are generally happier than people in non-LEED buildings. This bill is in the best interest of all Kansans.

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February 15 2006



TO: Representative Holmes and Members of the House Utilities Committee

FROM: Trudy Aron, Executive Director

RE: Support for HB 2843

Mr. Chairman and Members of the Committee, I am Trudy Aron, Executive Director, of the American Institute of Architects in Kansas (AIA Kansas.) I am here to testify in strong support for HB 2843 that requires States buildings and public schools to be designed and constructed to a minimum LEED Silver Standard.

President
Jan Burgess, AIA
Derby
President Elect
Douglas R. Cook, AIA
Lenexa
Secretary
C. Stan Peterson, AIA
Topeka
Treasurer
Michael G. Mayo, AIA
Manhattan

AIA Kansas is a statewide association of architects and intern architects. Most of our 700 members work in over 120 private practice architectural firms designing a variety of project types for both public and private clients. The rest of our members work in industry, government and education where many manage the facilities of their employers and hire private practice firms to design new buildings and to renovate or remodel existing buildings.

Directors
Jenifer Cain, Assoc. AIA
Wichita
Mark Franzen, AIA
Overland Park
John Gaunt, FAIA
Lawrence
Chad P. Glenn, AIA
Wichita
Gary Grimes
Topeka
David S. Heit, AIA
Topeka
Josh Hermann, AIA
Wichita
Craig W. Lofton, AIA
Salina
Don I. Norton, P.E.
Wichita
Wendy Ornelas, FAIA
Manhattan
J. Michael Rice
Wichita
David Sachs, AIA
Manhattan
Andrew D. Steffes, AIA
McPherson
Daniel (Terry) Tevis, AIA
Lenexa
J. Michael Vieux, AIA
Leavenworth
Nadia Zhiri, AIA
Lawrence

AIA Kansas encourages planning policy and design strategies that support environmental responsibility and the development of healthy, livable communities.

- **Understand the economic impact of decisions.** When making decisions for environmental and social reasons it is imperative to make them for economically viable reasons. Any solution that cannot be supported by sound economic judgment is not sustainable. The true cost of a building should be based on its life-cycle cost or total cost of occupancy – not just its initial construction cost.

Will the adoption of this bill make buildings cost more? No, when based on the total cost of the project over its life (30, 40, or more years) these buildings will not cost more; and the energy savings alone will often offset any small additional initial costs.

- **Reduce negative environmental impact.** This is done by conserving site, water, material and energy resources. The external costs that all of society pays when resources become scarce, or the environment becomes polluted are significant and must be recognized. Reducing the negative environmental impact will improve the economic vitality as well as the air and water quality for all citizens of Kansas. Ecosystems and natural habitat should be preserved as should the existing fiber and natural character of our communities.

When we recycle construction waste, use more locally available materials, and design and install systems that save water, use daylighting instead of artificial light, and protect the air quality of the building occupants, we not only have more sustainable buildings, but ones that are healthier and better places to learn and work.

- **Improve the social impact that buildings have on their communities.** Designers should create inspiring buildings and public spaces that demonstrate environmental stewardship. Connecting to and enhancing existing community facilities and activities are critical in any new development plan. New facilities should enhance the existing neighborhood context. Conserving

Executive Director
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existing natural resources and amenities is critical. Whenever it is possible existing infrastructure should be utilized and improved. Community resources should be allocated effectively and efficiently to meet social, environmental and economic goals.

AIA Kansas encourages the State of Kansas and local units of government to apply these principles to the planning and design of new and existing public facilities. AIA Kansas continues to educate our members on the value of sustainable design as evidenced by and through its ongoing continuing education programs.

We encourage you pass HB 2843 favorably out of committee. Thank you. I'll be happy to answer any questions you may have.

Kansas Department of Administration

Duane Goossen, Secretary

1000 SW Jackson, Suite 500

Topeka, Kansas 66612-1268

House Utilities Committee

H.B. 2843

Gary L. Hibbs, Manager, Facilities Planning, Design and Construction

Division of Facilities Management

Department of Administration

February 15, 2006

Thank you for this opportunity to provide testimony in support of HB 2843. Facilities Management is the organization designated by the Secretary of Administration to adopt rules and regulations to carry out the provisions of the green buildings act for major facility projects for state agencies.

Because Facilities Management has had some exposure to the LEED (Leadership in Energy and Environmental Design) green building rating system with state agency projects, we offer both support for the potential benefits and caution against the potential pitfalls.

LEED is a recognized standard to assess the environmental sustainability of building designs. The rating system has quantified most of the "green credits". For example, 5% of the building materials must be from salvaged materials to earn a point for the salvaged materials credit.

The standard consists of a total of 69 points covering six topics, each with a statement of associated goals:

- **Site Development:** minimize storm water run-off, encourage car pooling and bicycling, increase urban density and green space
- **Water Efficiency:** eliminate site irrigation, reduce water consumption, minimize or treat wastewater
- **Energy Efficiency:** reduce building energy consumption, use renewable energy, eliminate ozone-depleting chemical, commission building systems
- **Material Selection:** minimize construction waste, re-use existing building façade, use recycled and salvaged materials, use renewable construction materials and design, and build more durable buildings
- **Indoor Environmental Quality:** incorporate daylighting, use low off-emitting materials, provide operable windows and occupant control of work space, improve delivery of ventilation air
- **Innovation in Design:** use a LEED Accredited Professional, greatly exceed the requirements of a credit, incorporate innovative environmental features not covered in other areas.

Designers can pick and choose the credits most appropriate to their project to achieve a rating. LEED has four performance ratings, including "Silver" as required by the proposed legislation:

26 - 32 points: Certified 33 - 38 points: **Silver** 39 - 51 points: Gold 52 points or more: Platinum

HOUSE UTILITIES

**House Utilities Committee
H.B. 2843**

The LEED system can be used in three ways to improve the “greenness” of a building design:

1. LEED can serve as a design guide for the design team. The LEED credit system is a systematic way of ensuring that the most important environmental issues are considered during the design of a building.
2. LEED reports are a valuable means of showing the state agency that the design has effectively addressed environmental issues.
3. A building can be certified by the U.S. Green Building Council (USGBC).

When evaluating the LEED program, available financial and economical information does not lead to a consensus on the savings of the LEED program. The lack of consensus is for both the possible increase in the initial costs of projects, design and construction, and the amount of savings attributable to the program. First cost is one consideration that may differ between projects. Some aspects of design have little or no first cost. Other items, such as sustainable systems that may cost more in design can be offset by the reduced cost of a smaller mechanical system.

Cost-effectiveness of a project can be assessed through the life-cycle cost method, a way of assessing total building cost over time. It consists of:

- Initial costs (design and construction)
- Operating costs (energy, water/sewage, waste, recycling, and other utilities)
- Maintenance, repair, and replacement costs
- Other environmental or social costs/benefits (impacts on transportation, solid waste, water energy, infrastructure, worker productivity, outdoor air emissions, etc.)

Considerations that should be considered when determining potential cost savings include several issues:

- Initial implementation cost will increase for design, both for the learning curve of becoming proficient with the program and the cost for designer to become LEED certified. It is unknown the specific early cost. However, these costs will eventually level out as experience increases.
- Design costs will increase due to the requirements of extra time to evaluate and incorporate additional design considerations for LEED. Estimates indicate design costs will increase the cost of construction approximately 0.5%.
- Commissioning and energy modeling are prerequisite for LEED certification. Estimates indicate those costs will increase the cost of construction approximately 1%.
- Documentation is also required for LEED certification. Estimates indicate documentation costs will increase the cost of construction approximately 0.75%.
- Initial implementation cost will increase for the learning curve of different construction processes. It is unknown the specific early cost. However, these costs will eventually level out as experience increases.
- The increase in the cost of construction required for LEED certification varies greatly in all project aspects, such as type of building, type of construction, size of project, and new or remodeling project. A lack of consensus of the impact of the LEED requirements makes estimating costs difficult. General mid-range estimates indicate “greening costs” will increase the cost of construction in a range of 3% to 8%.

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- The state administrative costs required for the LEED program, is estimated at \$100,000-plus annually and likely will be continual for the program.
- One of the administrative costs will include assessed value of buildings. Because state facilities are not assessed for tax purposes, remodeling projects that may be in question for applying the LEED certification will required a determination of a value comparable to the private sector assessed value.
- Existing remodeled buildings have less potential for cost savings than new buildings. Smaller projects have less potential for cost savings than larger projects. The building type will influence the potential savings.
- Energy savings can be reduced if other design issues have a higher priority for an agency. This is possible because LEED certification can be achieved from points of several categories.
- Additional savings available in the private sector may not be as great in the public sector due to the current required standards for longer-life buildings and energy conservation in state projects.
- Analysis of the current state energy conservation requirements and the current design philosophy of one local design firm indicate that much of the LEED Silver points can be accomplished within current of standards. This information suggests that only minimum benefit may be obtained with significant increase in costs for the increased analysis and certification.

The Department of Administration is aware that the savings generated by lower operating costs and lower maintenance costs can cover the above-identified additional costs. However, the level of savings on individual projects may be insufficient to cover the costs of the project. Generally, the information available does support that across the spectrum of the state projects designed and constructed under the LEED program savings could be greater than the costs.

In summary, we suggest that consideration should be given to the lack of current consensus information, both in support and in opposition to the program. Other suggestions are to consider adopting the LEED program for those projects that could provide significant payback, or to require use of the program without certification. These suggestions may provide optimum benefits to the state for all projects. The Department of Administration will be able to provide the necessary administrative support if the LEED program is adopted for use.

KRMCA

Kansas Ready Mixed
Concrete Association

Edward R. Moses
Managing Director

TESTIMONY

By the

Kansas Ready Mixed Concrete Association

Before the
House Utilities Committee

Regarding HB 2843

An act relating to public buildings, concerning the construction thereof; enacting the green building act.

February 15, 2006

Good morning Chair and members of the committee my name is Wendy Harms, Associate Director of the Kansas Ready Mixed Concrete Industry. The Kansas Ready Mixed Concrete Association (KRMCA) is an industry wide trade association comprised of over 175 members located or conducting operations in all 165 legislative districts in this state, providing basic building materials to all Kansans. Our industry appreciates the opportunity to provide written testimony in support of HB 2843.

HB 2843 is an act relating to public buildings; concerning the construction thereof; enacting the green buildings act which is commonly known in our industry as Leadership in Energy and Environmental Design (LEED) which is a point rating system devised by the United States Green Building Council (USGBC) to evaluate the environmental performance of a building. The system is credit based, allowing projects to earn points for environmentally friendly actions taken during construction and use of a building. Our industry works with others who are interested earning LEED credits points through the use of cement and concrete products. Of the 69 total points for certification, the use of cement and/or concrete can earn a total 21 points of certification. For example, cement can be used to solidify and stabilize contaminated soils and reduce leaching concentrations to below regulatory levels. Therefore you can use the ground again for something useful without the added expense of digging it up and moving the polluted materials elsewhere to deal with later. The ground that was once waste is now put to good use.

The LEED program is voluntary; however, obtaining LEED certification projects is a positive environmental image to the community. By meeting the green building practices

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in the LEED program can result in energy and cost savings over the life of the structure as well as better indoor air quality and plenty of daylight.

In closing, as you can see, concrete helps build green in several ways:

1. Optimize energy performance
2. Contains recycled materials
3. Creates sustainability
4. It is manufactured locally
5. Builds durable structures

Not only is green used in commercial buildings, it helps with paving and residential construction as well. Members of the concrete industry stand together in helping to promote a greener environment. We urge this committee to recommend this bill favorably for passage. If you have any questions or concerns, please feel free to contact me at 235-1188.



Wendy M. Harms
Associate Director

BUILDINGS

Building Green with Concrete: Points for Concrete in LEED 2.1

Using concrete can facilitate the process of obtaining LEED™ Green Building certification. Leadership in Energy and Environmental Design (LEED) is a point rating system devised by the United States Green Building Council (USGBC) to evaluate the environmental performance of a building. The system is credit-based, allowing projects to earn points for environmentally friendly actions taken during construction and use of a building.

LEED was launched in an effort by the USGBC to develop a “consensus-based, market-driven rating system to accelerate the development and implementation of green building practices.” The program is not rigidly structured, i.e., not every project must meet identical requirements to qualify.

The LEED rating system has five main credit categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality. Each category is divided into credits. Detailed information on the LEED program and project certification process is available on the USGBC website, www.usgbc.org. The program outlines the intent, requirements, technologies, and strategies for meeting each credit. Credits are broken down into individual points. Additional points can be earned for innovation and use of a LEED-accredited professional on the project team.

Five Ways Concrete Helps Builds Green

1. Concrete optimizes energy performance.
2. Concrete contains recycled materials.
3. Concrete creates sustainable sites.
4. Concrete is manufactured locally.
5. Concrete builds durable structures.



Clearview Elementary School, Hanover, PA is the state's first LEED registered educational building.

Points for Certification

A building requires at least 26 points for certification. Silver, gold, and platinum levels are also available.

Credit Category	Points Available
Sustainable Sites	14
Water Efficiency	5
Energy and Atmosphere	17
Materials and Resources	13
Indoor Environmental Quality	15
Total Core Points	64
Innovation and Design Process	5

LEED Certification Levels

Certified	26 - 32 Points
Silver	33 - 38 Points
Gold	39 - 51 Points
Platinum	52 - 69 Points

Concrete and LEED

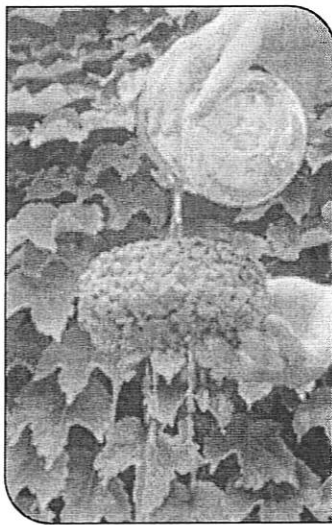
The following are suggestions for earning LEED points through the use of cement and concrete products. The paragraph headings below correspond to the credit categories and the credit numbers in the LEED rating system.

Brownfield Redevelopment (Sustainable Sites Credit 3).

Cement can be used to solidify and stabilize contaminated soils and reduce leaching concentrations to below regulatory levels. Documentation is required indicating the site was contaminated and the remediation performed. This credit is worth 1 point.

Stormwater Management: Rate and Quantity (Sustainable Sites Credit 6.1).

The intent of this credit is to limit disruption and pollution of natural water flows by managing stormwater runoff. Using pervious concrete pavements will reduce the rate and quantity of storm water runoff because they increase infiltration of stormwater. Pervious concrete contains coarse aggregate, little or no fine aggregate, and insufficient cement paste to fill the voids between the coarse aggregate. It results in concrete with a high volume of voids (20% to 35%) and a high permeability that allows water to flow through easily. Similar results can be achieved by using concrete pavers that have large voids where vegetation can grow. This credit is worth 1 point.



Sustainable Sites Credit 6.1. Water flows freely through a section of pervious pavement.

Landscape and Exterior Design to Reduce Heat Islands (Sustainable Sites Credit 7.1).

“...use light-colored/high-albedo materials (reflectance of at least 0.3) for 30% of the site’s non-roof impervious surfaces.” This requirement can be met by using concrete rather than asphalt for 30% of all sidewalks, parking lots, drives and other impervious surfaces.

Albedo, which in this context is synonymous with solar reflectance, is the ratio of the amount of solar radiation reflected from a material to the amount that shines on the material. Solar radiation includes the ultraviolet as well as the visible spectrum. Generally, light-colored surfaces have a high albedo, but this is not always the case. Surfaces with lower albedos absorb more solar radiation. The absorbed radiation is converted into heat and the surface gets hotter. Where paved surfaces are required, using materials with higher albedos will reduce the heat island effect—consequently saving energy by reducing the demand for air conditioning—and improve air quality.

Concrete generally has a reflectance of approximately 0.35, although it can vary. Measured values are reported in the range of 0.4 to 0.5. For “white” portland cement, values are reported in the range of 0.7 to 0.8. New asphalt generally has a reflectance of approximately 0.05, and asphalt five or more years old has a reflectance of approximately 0.10 to 0.15. This credit is worth 1 point.

Minimum Energy Performance (Energy and Atmosphere Prerequisite 2).

All buildings must “meet building energy efficiency and performance as required by the ASHRAE 90.1-1999 or the local energy code, whichever is the more stringent.” The ASHRAE standard is usually more stringent and applies for most states. The requirements of the ASHRAE standard are cost-effective and not particularly stringent for concrete. Insulating to meet or exceed the requirements of the standard is generally a wise business choice. Determining compliance for the envelope components is relatively straightforward using the tables in Appendix B of the ASHRAE standard. Minimum requirements are provided for mass and non-mass components such as walls and floors.

Components constructed of concrete generally are considered “mass.” This means the components have enough heat-storage capacity to moderate daily temperature swings. Buildings constructed of cast-in-place, tilt-up, precast concrete, insulating concrete forms (ICF), or masonry possess thermal mass which helps moderate indoor temperature extremes and reduces peak heating and cooling loads. In many climates, these buildings have lower energy consumption than non-massive buildings with walls of similar thermal resistance; and heating, ventilating, and air-conditioning can be met with smaller-capacity equipment. This item is required and is not worth any points.

Optimize Energy Performance (Energy Credit 1).

This credit is allowed if energy cost savings can be shown compared to a base building that meets the requirements of ASHRAE 90.1-1999. The method of determining energy cost savings must meet the requirements of Section 11 of the standard.

Many engineering consulting firms have the capability to model a building to determine energy savings as required using a computer-based program such as DOE2. When concrete is considered, it is important to use a program like DOE2 that calculates yearly energy use on an hourly basis. Such programs are needed to capture the beneficial thermal mass effects of concrete. Insulated concrete systems, used in conjunction with other energy savings measures, will most likely be eligible for points. The number of points awarded will depend on the building, climate, fuel costs, and minimum requirements of the standard. From 1 to 10 points are awarded for energy cost savings of 15% to 60% for new buildings and 5% to 50% for existing buildings.

Building Reuse (Materials Credit 1).

The purpose of this credit is to leave the main portion of the building structure and shell in place when renovating. The building shell includes the exterior skin and framing but excludes window assemblies, interior walls, floor coverings, and ceiling systems. This credit should be obtainable

when renovating buildings with a concrete skin, since concrete in buildings generally has a long life. This is worth 1 point if 75% of the existing building structure/shell is left in place and 2 points if 100% is left in place.

Construction Waste Management (Materials Credit 2). This credit is extended for diverting construction, demolition, and land clearing waste from landfill disposal. It is awarded based on diverting at least 50% by weight of the above listed materials. Since concrete is a relatively heavy construction material and is frequently crushed and recycled into aggregate for road bases or construction fill, this credit should be obtainable when concrete buildings are demolished. This credit is worth 1 point if 50% of the construction, demolition, and land clearing waste is recycled or salvaged and 2 points for 75%.

For concrete, either the credit for building reuse or the credit for construction wastemanagement can be applied for, but not both, because the concrete structure is either reused or recycled into another use.

Recycled Content (Materials Credit 4). The requirements of this credit state: "use materials with recycled content such that post-consumer recycled content constitutes at least 5% of the total value of the materials in the project OR combined post-consumer and one-half of the post-industrial recycled content constitutes at least 10%." The percentage is determined by multiplying the cost of an item by the percent of recycled materials—on a mass basis—that make up that item. Supplementary cementitious materials, such as fly ash, silica fume, and slag cement are considered post-industrial. Furthermore, using recycled concrete or slag as aggregate instead of extracted aggregates would qualify as post-consumer. Although most reinforcing bars are manufactured from recycled steel, in LEED, reinforcing is not considered part of concrete. Reinforcing material should be considered as a separate item. This credit is worth 1 point for the quantities quoted above and 2 points for an additional 5% post-consumer recycled content OR an additional 10% combined post-consumer and one-half post-industrial recycled content.

LEED v2.1 Project Checklist: Concrete Points

Using concrete in various applications can help a project team earn as many as 21 LEED points.

Credit Categories

Sustainable Sites	Possible Points
Credit 3 Brownfield Redevelopment	1
Credit 6.1 Stormwater Management, Rate & Quantity	1
Credit 7.1 Landscape and Exterior Design to Reduce Heat Islands, Non-Roof	1

Energy and Atmosphere

Prerequisite 2 Minimum Energy Performance	Required
Credit 1 Optimize Energy Performance, 15 to 60% savings for new construction 5% to 50% savings for existing construction	2-10

Materials and Resources

Credit 1.1 Building Reuse, Maintain 75% of Existing Shell	1
Credit 1.2 Building Reuse, Maintain 100% of Existing Shell	1
Credit 2.1 Construction Waste Management, Divert 50%	1
Credit 2.2 Construction Waste Management, Divert 75%	1
Credit 4.1 Recycled Content, Use 5% Post-Consumer or 10% Other	1
Credit 4.2 Recycled Content, Use 10% Post-Consumer or 20% Other	1
Credit 5.1 Local/Regional Materials, 20% Manufactured Locally	1
Credit 5.2 Local/Regional Materials, 50% Harvest Locally	1

Innovation and Design Process

Credit 1 Innovation in Design, Use of High Volume Supplementary Cementitious Materials	1
Credit 2 LEED Accredited Professional	1

Project Totals **21**

Points must be documented according to LEED procedures in order to be earned. The USGBC website, www.usgbc.org, contains a downloadable "letter template" that greatly simplifies the documentation requirements for LEED version 2.1.

Using concrete can increase the number of points awarded to a building in the LEED system. The potential available points that can be earned through the use of concrete range from 11 to 21.

Local/Regional Materials (Materials Credit 5). The requirements of this credit state: "Use a minimum of 20% of building materials that are manufactured regionally within a radius of 800 km (500 miles)." This means that a ready-mix or precast plant within 800 km (500 miles) of the building would qualify. Concrete will usually

qualify since ready-mix plants are generally within 80 km (50 miles) of a job site. The percentage of materials is calculated on a cost basis. This credit is worth 1 point.

An additional point is earned if 50% of the regionally manufactured materials are extracted, harvested, or recovered within 800 km (500 miles). Ready-mix and precast plants generally use aggregates that are extracted within 80 km (50 miles) of the plant. Cement and supplementary cementitious materials used for buildings are also primarily manufactured within 800 km (500 miles) of a job site. Reinforcing steel is also usually manufactured within 800 km (500 miles) of a job site, and is typically made from recycled materials from the same region.

Others Points

Concrete can also be used to get points indirectly. For example, the Pennsylvania Department of Environmental Protection building in Harrisburg, Pennsylvania is LEED Bronze certified and features a concrete floor with low-VOC sealant. This allowed the building to obtain the Low Emitting Materials credit under Indoor Environmental Quality.

One point is also given if a principal participant of the project team is a LEED Accredited Professional. The concrete industry has LEED-experienced professionals available to help maximize points for concrete.

In addition to the points discussed above, 4 points are available under Innovation Credits. These points can be applied for if an innovative green design strategy is used that does not fit into the point structure of the five LEED categories or if it goes significantly beyond a credit requirement. For example, the USGBC has issued a credit interpretation that allows for an innovation credit if 40% of the cement in concrete is replaced with slag cement or fly ash. However, using fly ash in this higher-than-usual dosage is not common, and special testing for compatibility and concrete properties is required for quality concrete.

Benefits of LEED Certification

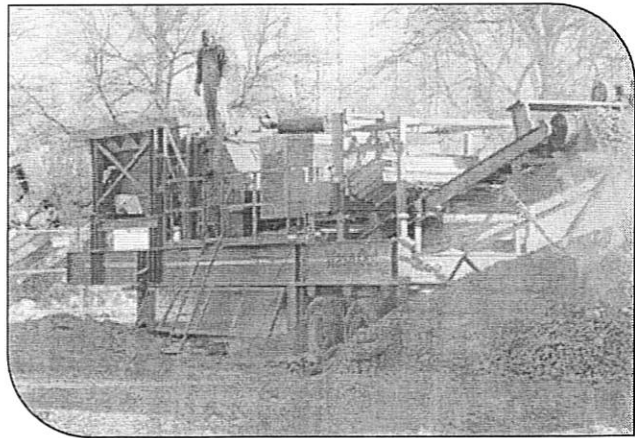
LEED certification is a voluntary program; however, obtaining a LEED certification projects a positive environmental image to the community. Additionally, meeting many of the green building practices can result in energy and cost savings over the life of the structure. Other advantages include better indoor air quality and plenty of daylight. Studies have shown that workers in these environments have increased labor productivity, job retention, and days worked. These benefits contribute directly to a company's profits because salaries—which are about ten times higher than rent, utilities, and maintenance combined—are the largest expense for most companies

occupying office space. Students in these environments have higher test scores and lower absenteeism.

The following cities and states either provide tax credits or grants for green buildings, or require green building certification for public buildings: Massachusetts, New York, Pennsylvania, Chicago, Los Angeles, Portland, San Diego, San Jose, and Seattle. Conditions vary and the list is growing, so please contact local jurisdictions for details.

The U.S. government is adopting green building programs similar to LEED through the General Services Administration, which owns or leases over 8300 buildings, and the U.S. Army, which has adopted LEED into its Sustainable Project Rating Tool (SPiRiT). Support for green buildings is increasing, so the above list should not be considered complete.

The LEED Green Building Rating System, Version 2.1, promotes environmentally conscious buildings for the improvement of outdoor and indoor building quality and the reduction of waste during the building process. Concrete can be used in conjunction with the LEED program to earn a LEED certification.



Material Credit 2. The picture shows machinery taking portions of concrete walls, columns, and floors and crushing them to be used as fill material.



Portland Cement Association
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www.cement.org

An organization of cement companies to improve and extend the uses of portland cement and concrete through market development, engineering, research, education, and public affairs work.
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KANSAS
ASSOCIATION



OF
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1420 SW Arrowhead Road • Topeka, Kansas 66604-4024
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Testimony on **HB 2842 and HB 2843**
before the
House Utilities Committee

by

Mark Tallman, Assistant Executive Director/Advocacy
Kansas Association of School Boards

February 15, 2006

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to appear before you today and offer comments on two bills: **HB 2842**, which concerns wind energy generation and aid to public education; and **HB 2843**, which would require that new state and school building construction projects comply with “green building” standards.

HB 2842

KASB appears in support of **HB 2842**. We believe school boards understand the need to shift to alternative energy sources, and Kansas seems particularly suited to foster the development of wind energy. We further appreciate the provisions of this bill that set aside a portion of wind energy purchases for public education.

We would caution, however, that depositing the proceeds of special revenue sources with the State Board of Education does not necessarily mean it will provide additional revenue to schools. If the Legislature does not provide additional spending authority to school districts, such as an increase in the base budget, the new revenue will simply be offset by reduction in state aid from the state general fund. We would suggest that these revenues either simply be placed in the general fund, or be used to support education initiatives that might not be funded without such revenues.

HB 2843

KASB appears in opposition to **HB 2843**. Our members have adopted a specific policy statement that requirements for school buildings should not exceed the standards of the international building code, especially if these standards do not apply to other public and private buildings.

However, we certainly do not object to the promotion of energy conservation standards, especially if these standards result in cost savings. We believe school districts would be interested in pursuing such savings voluntarily if the benefits of these initiatives are clear, and would encourage the state to provide information and incentives in this area. Perhaps that could be one use for the revenues proposed in **HB 2842**.

Thank you for your consideration.

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House Utilities Committee
Representative Holmes, Chair

H.B. 2843 – Green Buildings Act

Diane Gjerstad
Wichita Public Schools
February 15, 2006

Mr. Chairman, members of the Committee:

The Wichita Public Schools is in the final phase of a \$284.5m bond issue. By every measure the bond issue has been wildly successful. Construction of six new schools (four were replacements) and about 80 schools remodeled to varying degrees. I share this with the committee because while \$284m sounds huge, it was just over half the \$500m of needs identified by Community committee in 1999. In other words, stretching the dollars to maximize the taxpayer investment has been paramount to the Board of Education and the administration.

H.B. 2843 requires all new school construction or major remodeling projects to comply with the "Leadership in Energy and Environmental Design" a Green Building Rating system. Ironically their website refers to LEED as a "**voluntary**, consensus-based national standards for developing high performance, sustainable buildings." H.B. 2843 is not voluntary for schools.

Wichita opposes this bill. Information from the LEED website provides our rationale:

- LEED NC (new construction) standards for schools are not in place. The website reads: "LEED-NC for Schools **is being designed** for use by K-12 schools and school district to address issues such as student transportation, occupancy definition, and classroom acoustics."
- LEED certification process has been streamlined from a self described:
 - "complex spreadsheet of 69 tabs and submit thousands of pages of supporting documentation for various building components, such as heating systems, landscaping and interior finishes. The entire process from initial submittal of materials to achieving LEED certification – **could take years.**" Now the website advertises "submission time cut by 50% using Adobe software".
 - It would appear what once was a Herculean effort and has been "cut by 50%", is still an extraordinary set of criteria which must be met to satisfy certification.
- Approval is required prior to design and at completion by committees not located in Kansas.
- Extra fees -- \$1250 – \$1500 for design approval; plus construction review which would have cost Wichita at least \$18,000 (based on USD 259 added square footage of 1.8M sq ft).
- LEED certification is required (a minimum of 26 points) on the 'project checklist'. If a project is short the required 26 points, an appeal process would require additional information "in a three ring binder or on a compact disc to the attention of LEED Certification including a \$500 check payable to the U.S. Green Building Council".

Mr. Chairman, the LEED goals are certainly admirable but should remain, as the organization suggests, *voluntary*. This process would increase costs and lengthen the time for school construction projects, all for a marginal benefit. We oppose the bill.

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KANSAS BOARD OF REGENTS

1000 SW JACKSON • SUITE 520 • TOPEKA, KS 66612-1368

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Testimony before the House Utilities Committee

**Eric King, Director of Facilities
Kansas Board of Regents**

February 15, 2006

Good afternoon Chairman Holmes and Members of the Committee. Thank you for this opportunity to appear before your committee. I am here this afternoon to speak in opposition to House Bill 2843.

It is our understanding that any new public building over 5,000 square feet or renovation exceeding 50% of the assessed value will be required to obtain a LEED silver rating. While we support efforts to construct buildings as energy efficient as possible, and we also support “green” initiatives such as recycling, improving indoor air quality, etc., we specifically object to the mandated certification process which requires substantial documentation and incurred costs.

We are already required to design buildings to ASHRAE/IESNA 90.1-1999, the same level of energy efficiency required to achieve LEED certification. We are certainly open to implementing other “green” initiatives where budget and opportunity allows, but we don’t see the need to go through the time and expense of certification.

Thank you again for your time and consideration. I would be pleased to respond to your questions.

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HB 2844

Net metering.

A tremendous amount of work went into crafting this bill. Meetings with utility company representatives and other people associated with energy businesses, resulted in what they all believe has the best chance of helping the Kansas economy through job creation, helping the environment, lowering electricity bills and gas bills for Kansas consumers, without unfairly harming existing electricity providers. 38 states have net metering bills of some kind and this bill is more fair than any of them to our electricity providers.

- Federal Energy Tax Credit Act. This Act, supported by President Bush, lasts only two years. It went into effect January 1, 2006 and ends December 30, 2007. If the Kansas legislature doesn't pass net metering this session, you will have denied any chances for Kansans to take advantage of the tremendous savings offered by the Act. This Act offers a 30% tax credit, up to \$2,000, toward the purchase of any solar product or small wind turbine, for their home; for businesses the 30% credit has no cap. With the new lower prices and higher power output of solar and wind turbines, plus their expected lifetime of 40-50 years, these renewable energy products could bring free electricity and hot water to homes for decades.
- HB 2844 means the potential creation of jobs in almost every town in the state. Aircraft companies in Wichita, meat-packing plants out west could save hundreds of thousands of dollars using renewable energy sources. Any home could benefit from solar or wind products, and those products mean that jobs for electricians, carpenters, roofers, laborers, truckers, and others would be created in any town where the products are desired. This could easily create thousands of jobs all across the state.
- New solar technology and wind turbine technology make this more of a reality than ever before. Thin film solar and 1.8 kW small turbines will revolutionize the industry.
- In all the other states with net metering, net metering has simply meant new jobs, lower costs, and a cleaner environment. Over 90% of the people using renewable energy in net metering states only use it to reduce power, not to produce huge excess power amounts requiring rebates from their electricity providers.
- HB 2844 has a 1% cap on the amount of excess power produced by a home that could be eligible for a rebate, at the rebate amount of 150% of the Avoided Fuel Cost of the utility company. That is more fair than any other state's net metering that I'm aware of. The goal is to create jobs and lower electricity rates for those interested!, not to be unfair to the utility companies.

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- HB 2844 must be passed now. If it is not passed, the chance for Kansans to take advantage of the Federal Tax Credit will be gone. By not passing it, you are saying that Kansans must pay higher bills, that jobs are not important to our economy, and a cleaner environment doesn't matter. And this bill is completely fair to the utility companies. What would your constituents want? Is President Bush wrong to offer this support? Are you right in denying it to Kansans?

**HOUSE UTILITIES COMMITTEE
HB 2844**

Testimony on behalf of Midwest Energy, Inc.
By Michael Volker, Manager of Pricing and Market Research
February 15, 2006

Mr. Chairman and members of the committee:

I am Michael Volker, Manager of Pricing and Market Research for Midwest Energy. Midwest is a customer-owned utility, providing electric service 46,000 customers and gas service to 42,000 customers in the western half of the state. I am also Chairman of the Utilities Committee for the Kansas Energy Council and an Adjunct Professor of Economics and Finance at Fort Hays State University. Thank you for the opportunity to offer testimony on HB 2844. I would like to point out that I am representing Midwest Energy with this testimony, but my views are the same as those of the Kansas Electric Cooperatives, KEPco, and Westar.

Midwest Energy opposes this bill for a number of reasons. As a preliminary matter, I want to point out ambiguous language in the bill. The definition of "net metering" in Section 1(a)(5) states that "net metering means reimbursement to a customer with an on-site small photovoltaic system or small wind turbine by the electric public utility in an amount equal to the retail electric rate normally charged by the electric public utility".

Then, Section 1(f) (lines 23-30 on page 3) states, "The public utility may install an additional meter or metering equipment on the customer's premises capable of measuring any excess kwh produced by the small photovoltaic or small wind turbine delivered back to the electric public utility..." and, "The value of such excess generation shall be credited to customer's bill based on applicable tariffs approved by the commission." (Emphasis added.)

The legislature has already established buy-back rates for renewable generation equal to 150 percent of the utility's avoided costs. Based on the requirements of KSA 66-1,184,

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the Kansas Corporation Commission has approved parallel generation tariffs for electric utilities. Thus, existing tariffs may be considered applicable tariffs contemplated by the preceding language.

Lines 31-33 of the same section continue, “If the electric public utility does not install such a meter or metering equipment, the electric public utility shall permit the customer to net meter any excess power...” (Emphasis added.) As written, this implies that net metering is optional. We believe a plain reading of HB 2844 conflicts with the intent of the Legislature when it adopted the 150 percent buy-back rate in KSA 66-1,184.

Aside from the problems posed by the specific language of HB 2844, Midwest Energy opposes the concept of net metering as poor public policy. In a nutshell, it forces customers who do not have, or may not be able to afford, expensive renewable technologies, to subsidize those who have them. And that is on top of existing tax incentives and 150 percent buy-back rates renewable technologies already receive in Kansas.

In the simplest of terms, your electric rate pays for the entire cost of generating and delivering safe and reliable electric power. That power is there day or night at the flick of a switch. Built into the rate you pay is the cost of a fleet of generating plants, the cost of hundreds of miles of transmission and local distribution lines, the costs of supplying expensive on-peak energy and round-the-clock availability and more. Unfortunately, a net metered customer provides very few of those attributes but still expects to receive the full retail rate when generating excess power. If the utility pays that inflated rate, it becomes a cost of power and ends up on the bills of all other customers.

It has been said that net metering allows some renewable technologies, especially wind, to use the electric grid like a giant free battery. When wind speeds are high and wholesale market prices are low in the spring, net metered customers can inject energy into the grid. When power prices climb during the summer and wind speeds fall, net

metered customers rely on the utility to return power at average prices, not the peak price. Again, other customers subsidize this free battery arrangement.

I want to point out that Midwest Energy is not an opponent of renewable energy. We have previously contracted for energy from the Gray County Wind Farm, and we are currently evaluating proposals to expand our wind generation portfolio. A key consideration is to purchase only the amount of wind energy that would displace expensive natural gas fueled generation while still taking advantage of lower cost coal units. In other words, we want to ensure that our use of wind energy does not inflate rates paid by our customers.

An illustration of the impact of net metering can be complex, so for the sake of brevity I will not attempt that now. However, I have attached an exhibit to my testimony that illustrates how a net metered customer receives a subsidy at the expense of a regular customer. I particularly want to point out the last page of the exhibit that summarizes why net metering is bad public policy. I would be happy to answer questions about my testimony or that illustration.

Thank you.

Exhibit 1: Net Metering: Cost or Benefit to Rural Economy?

- **Definition of Net Metering**

- Meter Direction – forward when consuming power off the grid, backward when putting power on the grid.
 - Generalizations – Most net metering programs are tailored for small business or domestic generators. These generators are not detaching from the grid – but remain grid dependent. They still need the grid.
 - Net Metering should not be confused with Net Billing.
-

- **Cause of Objections to Net Metering**

A. How Costs are Caused (Example):

- 1) Cost of Power: \$0.04/kWh - these costs vary with level of consumption (“generation”, “energy”, etc.)
- 2) Delivery Cost: \$45 per month – these cost are fixed, they do not vary with the level of consumption. (“wires”, “grid”, G&A, etc.).

At 800 kWh, this implies \$77 per month to serve an average customer.

B. How Rates are Set:

- 1) Energy Charge: \$0.085/kWh – Cost recovery varies with volume of sales.
- 2) Customer Charge: \$9 per month

At 800 kWh, this implies \$77 per month revenue from the average customer.

There is a mismatch between how costs are caused and how revenues are recovered.

- **Simple Example of Net Metering: A Two Customer Utility**

A. Customer X – Consumes 800 kWh per month at a cost of \$77.00

B. Customer Y – Consumes 800 kWh per month, but since he self-generates 700 kWh himself, he causes less cost to the utility. His cost to the utility are:

$$\begin{aligned}
 & \$45.00 \text{ per month} = \text{Delivery ("wires") Cost} \\
 & + \underline{\$4.00 \text{ Energy Cost} = \$0.04/\text{kWh} \times 100 \text{ kWh.}} \\
 & \underline{\$49.00 \text{ Total Cost Caused.}}
 \end{aligned}$$

C. Total Utility Costs:

$$\begin{aligned}
 & \$77.00 \text{ Customer X} \\
 & + \underline{\$49.00 \text{ Customer Y}} \\
 & \underline{\$126.00}
 \end{aligned}$$

D. Customer Bills/Utility Revenue:

$$\begin{aligned}
 & \text{Customer X} = \$9 \text{ Cust. Charge} + (800 \times \$0.085) = \$77.00 \\
 & + \text{Customer Y} = \$9 \text{ Cust. Charge} + (100 \times \$0.085) = \underline{\$17.50} \\
 & \underline{\$94.50}
 \end{aligned}$$

E. Utility Revenue Shortfall:

$$\begin{aligned}
 & \text{Utility Revenue:} \quad \$94.50 \\
 & \text{Utility Costs:} \quad - \underline{\$126.00} \\
 & \quad \quad \quad - \underline{\$31.50}
 \end{aligned}$$

- Who will pay the revenue shortfall? All customers! Rates have to be raised.
- How does this happen? The utility makes the delivery system available, but by receiving the full retail rate, the net metered customer gets paid for using it!
- The net metered customer uses the grid like a free battery, injecting power day or night, but relying on the utility to often provide the most expensive power on peak.
- Neither the grid, nor its “on demand” capability are free.

- **Why Net Metering is Bad Public Policy:**

1. Net Metering Raises the Total Costs Paid By Utility Customers.
 - a. Cost of self generated energy is greater than utility's cost or Customer Y wouldn't need Net Metering subsidy to do it.
 - b. Cost of self generated energy for Customer Y plus Utility generation is greater total cost to Utility customers.
2. Net Metering is Regressive.
 - a. Wealthier individuals are more likely to install distributed generation (generally wind turbines).
 - b. Touted "benefits" of distributed generation ("green attributes") go *across* utility boundaries, yet they are paid for *within* the utility boundaries. In short economic benefits flow from low income areas to higher income areas.
 - c. Rural (Cooperative) areas have FAR greater potential for net metering applications than non-rural areas.
3. Net Metering fails as public policy in both economic evaluation criteria: efficiency (it raises total costs) and equity (it is regressive).

Citizens' Utility Ratepayer Board

Board Members:

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A.W. Dirks, Vice-Chair
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HOUSE UTILITIES COMMITTEE

H.B. 2844

Testimony on Behalf of the Citizens' Utility Ratepayer Board

By David Springe, Consumer Counsel

February 15, 2006

Chairman Holmes and members of the committee:

Thank you for this opportunity to offer testimony on H.B. 2844. The Citizens' Utility Ratepayer Board is opposed to this bill for the following reasons:

CURB would be supportive of net metering under certain conditions. First and foremost of these conditions is that the fixed costs of providing service to a customer that seeks to net meter are not shifted, through the net metering arrangement, back onto other customers. In principle, non-net metering customers should not subsidize net metering customers. This subsidy generally exists, with respect to net metering, when a utility is required to pay full "retail" rates back to the net metering customer, rather than just avoided variable costs rates.

This bill defines "net metering" as a "reimbursement" by the electric public utility in an amount equal to the "retail electric rate normally charged by the electric public utility". (Section 1(a)(5)) As such, CURB does not support net metering as defined in the bill as it directly creates the subsidy discussed above.

CURB is also concerned about the inconsistencies in the bill. While "net metering" is defined as a reimbursement at the electric utility's "retail rate", which CURB opposes, there are three other sections that deal with compensation generally that are all inconsistent and unclear. First, if the utility chooses to install a second meter at a net metering customer premises (the cost of which under the bill shall be born by the electric utility, and presumable the electric utility's non-net metering customers) Section 1(f) requires that the "value" of excess generation be "credited" to the customer's bill based on applicable tariffs approved by the commission. There is nothing in the bill that requires the commission to set the value to be credited in tariff at full retail rates. CURB would argue in any tariff proceeding that the commission should not set the value for reimbursement at full retail rates and doing so creates the unfair subsidy described above.

Second, where the utility does not install a second meter, but measures excess energy production by a single meter that can spin in either direction depend on whether the customer is drawing energy or generating excess energy, if excess energy is measured in any month, the bill requires only that excess energy be "credited" to the customer's following months bill and that these credits can be carried forward up to 12 months. The

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bill again does not set the “value” of the credit allowed. Further, the bill specifically states that “in no event shall the customer be paid for excess energy delivered to the public utility at the end of the 12-month period,” which would preclude the type of reimbursement as set forth in the definition of net metering for any excess generation. However, for every kilowatt hour generated that directly offsets a kilowatt hour consumed by the customer (before excess energy is generated) the customer is effectively credited at full retail rates, creating the subsidy that CURB opposes.

Last, Section 1(g) states that where the total number of kilowatt hours exceeds a 1% cap, the electric public utility may begin “reimbursing” net metering customers at 150% of avoided fuel costs. This appears to be in conflict of the language in Section 1(f) specifically precluding payment to net metering customers.

As drafted CURB believes this bill is unclear and creates unacceptable framework of uneconomic subsidies to support net metering customers. As such CURB cannot support what is contained in this bill, and respectfully requests the Committee reject this bill.

Testimony in Opposition to HB 2844

by

Bill Griffith

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Chairman of the Kansas Chapter of the Sierra Club

Before the House Utilities Committee

February 15th, 2006

Thank you, Mr. Chairman and members of the committee for the opportunity to testify against HB 2844. I realize that the Sierra Club is known as the strongest supporter of the concept of net metering in the state. The majority of states have enacted net metering policies and for Kansas not to do so is to the state's detriment.

However, the Federal Energy Policy Act of 2005 (section 1251), directs Public Utility Commissions to open a docket on net metering if it is not already enacted within their jurisdiction.

The Kansas Chapter will be officially requesting that the KCC open a docket on net metering in 2006. After the KCC has ruled on this issue the Club may come before this committee and have a full debate on the merits of net metering, if it deems this step necessary. Thank you.

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