

Approved:
Date March 7, 2001

MINUTES OF THE SENATE UTILITIES COMMITTEE.

The meeting was called to order by Chairman Senator Stan Clark at 9:30 a.m. on March 6, 2001 in Room 231-N of the Capitol.

All members were present except:

Committee staff present: Raney Gilliland, Legislative Research
 Tom Severn, Legislative Research
 Bruce Kinzie, Revisor of Statutes
 Lisa Montgomery, Revisor of Statutes
 Ann McMorris, Secretary

Conferees appearing before the committee:

Bill Roush, Solar Electric Systems of KC and Heartland Solar Industries Assn., Lenexa
Russell Rudy, Kansas Energy Star Program, Kansas City, MO.
Art Richards, Johns-Mansville, McPherson
Larry Holloway, Kansas Corporation Commission
William D. Carrison, President, RTI Consultants, Olathe

Others attending: See attached list.

Chairman opened the first day of hearing for proponents on:

SB 299 - Promotion of Energy efficiency, income tax credits

Neutral:

Larry Holloway, Chief of Energy Operations for the Kansas Corporation Commission testified this bill would appear to only charge ratepayers of KCC jurisdictional utilities, while all others could receive the benefit. While the Commission supports renewable energy, the committee should be aware that the provisions in this bill would place the burden of this subsidy only on specific electric customers, even though there may be benefits to all Kansans. (Attachment 1)

Questions from the committee: (1) How will the Florida Company that is putting wind generators near Montezuma sell their power? (A1) The power is sold to wholesalers and negotiations were made before the announcement of the project. (2) Any citing on this project? (A2) No, too small.

Proponents:

Bill Roush, Solar Electric Systems of KC and Heartland Solar Industries Assn., Lenexa, reviewed the various sections of **SB 299** which defines tax liability for energy efficiency improvements purchased and implemented after Jan. 1, 2001. He noted that 31 states have solar energy statutes. (Attachment 2)

Member asked for verification on the statement ..."Americans in the West are about to spend billions of taxpayer dollars to shield electric ratepayers from the true costs recently incurred by using fossil fuels. Our government spends tens of billions of dollars each and every year for a military presence to attempt to defend oil supplies in the Middle East. We spend billions more in environmental remediation and added in health costs from fossil fuel use." A list of the 31 states who have net metering statutes was requested. KCC will provide.

Russell Rudy, Kansas Energy Star Program, Kansas City, MO., explained the home energy rating program, how an energy rate is arrived at by certified home energy raters and the savings derived from making buildings energy efficient. (Attachment 3)

CONTINUATION SHEET

MINUTES OF THE SENATE UTILITIES COMMITTEE at 9:30 a.m. on March 6, 2001 in Room 231-N of the Capitol.

Art Richards, Johns-Mansville, McPherson spoke on the energy savings benefits of fiberglass insulation as produced by the McPherson plant. He supported **SB 299** as a wise investment in the energy future in Kansas (Attachment 4)

William D. Carrison, President, RTI Consultants, Olathe, provides the service of determining the energy efficiency of buildings. He felt this bill would provide the needed incentive for builders to build more energy efficient homes and commercial buildings.

Chairman opened for questions. Why should an incentive be offered to an owner to improve their own house? Are the various sections of the bill cumulative? Yes. Define net metering.

Chairman noted need for specific code and dates in the language of **SB 299** on page 4, line 11 and page 5, line 7.

Next meeting of the committee will be on March 7.

Adjournment.

Respectfully submitted,

Ann McMorris, Secretary

Attachments - 4

**BEFORE THE SENATE UTILITIES COMMITTEE
PRESENTATION OF THE
KANSAS CORPORATION COMMISSION
MARCH 6, 2001
SENATE BILL NO. 299**

Thank you, Chairman and members of the Committee. I am Larry Holloway, Chief of Energy Operations for the Kansas Corporation Commission. I appreciate the opportunity to be here today to testify for the Commission on Senate Bill 299.

The Commission does not take a position on SB 299. The Commission generally supports renewable energy. However, the Commission does want the legislature to realize that this bill would provide a subsidy for renewable energy, possible at the expense of some ratepayers. Many would argue that renewable energy could benefit all Kansans, however this bill would appear to only charge ratepayers of KCC jurisdictional utilities, while all others could receive the benefits.

This bill would require KCC jurisdictional electric utilities to provide net metering service to customers that install and operate renewable electric generation up to 100 kilowatts in capacity. This bill appears to exempt retail electric customers that are outside the jurisdiction of the KCC, for example, municipal electric utility customers within 3 miles of the city limits or customers of deregulated rural electric cooperatives. This bill clearly would apply to KCC jurisdictional retail electric customers until a statewide demand of 10,000 kilowatts is achieved or 10% of the state's actual peak electricity demand, whichever is less. Since 10% of the forecasted state demand for 2001 is over 77,000 kilowatts, it is probably safe to assume the actual limitation will be 10,000 kilowatts of capacity.

The question then becomes, how large of a subsidy will these jurisdictional ratepayers be paying to allow net metering of up to 10,000 kilowatts of electric capacity? Assuming that all

applicable renewable generation is installed and has a capacity factor of around 30%, a common number used for wind generation, for example, approximately 26,280,000 kilowatthours (kWh) of electricity would be generated each year. If it is assumed that all of the energy generated is used to offset customer's electric usage, then the customers will not have to pay any of that portion of their aggregate electric rates, which currently include distribution costs. The 1998 retail wheeling report to the legislature estimated Kansas distribution costs from 2 cents to 4 cents per kwh. Assuming this rate is 2 cents per kwh, the net metering customer will avoid paying 2 cents per kwh of distribution costs for each kwh generated. This avoided distribution payment will cause a revenue deficiency of approximately \$525,000 per year. Additionally, if, on average, the net metering customer produces excess generation during off peak hours and consumes electricity during periods of high demand, even if the net metering result is zero, the utility will experience additional unrecovered generation costs. While these costs may vary, if they are on average another 2 cents per kwh, the annual subsidy collected from the utilities' remaining customers could exceed \$1,000,000 per year.

While the Commission supports renewable energy, the committee should be aware that the provisions in this bill would place the burden of this subsidy only on specific electric customers, even though there may be benefits to all Kansans.

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**Testimony of Bill Roush, President, Heartland Solar Energy Industries Association,
Owner Solar Electric Systems of Kansas City, Inc., Lenexa, KS for the Kansas
Legislature 3/6/2001 in favor of SB299.**

Thank you for the opportunity to testify in favor of SB299 today. My name is Bill Roush and I am President of the Heartland Solar Energy Industries Association for Kansas, Missouri, Iowa and Nebraska, a chapter of the Solar Energy Industries Association.

SB299 is a piece of legislation that would be very beneficial for Kansans, both economically and environmentally. The bill makes it easier and in fact gives incentives for using the clean, home grown energy that Kansas receives everyday whether we use the resource or not.

Our industry is very interested in having Kansas move forward with a strong majority of the other states who have enacted standardized, safe, simple utility grid interconnection standards commonly known as net metering. A safe, simple net metering policy removes onerous burdens from potential renewable energy customers who are currently subject to requirements and expenses that are unneeded, such as dual meters. SB299 clears up these problems by calling for a single meter interconnection. There is no need to have it any other way.

Further, SB299 would implement conservation tax credit for those Kansans who employ resource saving improvements. We favor these as well because they can go a long way in moderating energy use and making homes solar-ready. We also favor the credit for employing the services of a certified home energy rating technician. Kansas needs to have well trained experts in the field who understand how energy is used in homes and businesses.

We particularly favor the tax credits for use of solar technologies in the residential and commercial sectors. The solar industry, both solar electric and solar hot water, have matured over the last three decades.

Companies in our industry have found their niche in areas where solar is the best and cheapest way to get the job done. Often these have been remote areas or areas of high fuel costs. As we see the areas of higher fuel prices grow, our industry is ready to expand. We think we can play an important role in moderating fossil fuel prices by balancing demand for fossil fuels with supply. We think we can be a meaningful part in meeting the energy needs of Kansans.

Fossil fuels have enjoyed numerous tax benefits and subsidies such as royalty in-kinds fees for energy off federal lands, tax deferrals for tertiary recovery, depletion allowances, passive loss restrictions, alternative minimum tax exclusions, mining reclamation deductions and capital gains treatment of coal royalties. The Kansas legislature has passed or is considering numerous benefits for the fossil fuel industry. Americans in the West are about to spend billions of taxpayer dollars to shield electric ratepayers from the true costs recently incurred by using fossil fuels. Our federal government spends tens of billions of dollars each and every year for a military presence to attempt to defend oil supplies in the precarious Middle East. We spend billions more in environmental remediation and added in health care costs from fossil fuel use. And yet, I still often hear that the renewable energy can't compete economically with fossil fuels. I say that the deck has been stacked and the table has been tilted for too long. Renewable fuels can compete, but consumers are not seeing the true costs of fossil fuels. I urge you to help level the playing field by passing SB299. In survey after survey, citizens have said they want clean, home grown, renewable energy. Please give Kansans the opportunity to make that choice by passing SB299.

Utilities Committee
Kansas Senate
Written Testimony of the Kansas Energy Star
Home Energy Rating System (HERS)
March 6, 2001

Proposed Bill: Senate Bill 299
AN ACT relating to the promotion of energy efficiency;
providing certain income tax credits;
establishing a program to provide net metering.

Thank you Chairman Clark and members of the committee. I am Russell Rudy; I work for the Metropolitan Energy Center in Kansas City. I am the Director of the Heart of America Green Builder program, the Energy and Environmental Ratings Alliance (EERA) and the Kansas Energy Star home energy ratings program.

I commend Chairman Clark and the committee for the introduction of legislation that addresses improvement of energy performance in residential structures in Kansas using home energy ratings technology and certified Kansas Energy Star home energy raters to verify performance and improvements. This effort is especially timely considering this winter's significant increases in home fuel costs.

A home energy rating (HERS) energy performance analysis provides a nationally recognized, standardized method for rating the energy efficiency of residential buildings. As per Section 2, (b) of Senate Bill 299, Kansas Energy Star home energy raters are "certified home energy ratings technicians,... recognized by national secondary home mortgage lenders". With a Kansas Energy Star home energy rating homeowners, and potential homebuyers can assess valuable information on the cost of energy, and the potential for improving the efficiency of a home.

A rating can also be the basis for qualifying a home for an energy efficient mortgage. The home energy rating can be used to apply a life cycle cost analysis to recommended energy improvements to demonstrate that costs of improvements will be paid by resulting energy savings over the lifetime of the measures. The same methodology often verifies that a significant return on investment (ROI) over and above repayment of costs can be realized through energy improvements.

The home energy rating collects a comprehensive body of data on the size, shape, area and volume of a house or multi-family residential unit. Information describing roofs, walls, floors, doors and windows, mechanical heating and cooling systems, light, appliances, air leakage and duct leakage is collected. Most of this information can be collected from plans and specifications to project energy use for new structures at the design stage, and the full body of information can be collected from a site audit of an existing structure. An on-site review and verification, with an air leakage and duct leakage test is required for any final, "official" home energy rating.

The collected data is entered into a nationally tested and accredited computer auditing program which uses accepted engineering assumptions about the energy performance of the described components of the house to "model" the structure in the computer. The audit program uses weather data from the nearest National Oceanographic and Atmospheric Administration (NOAA) weather station, and utility costs from the local utility to predict actual energy use of the house as it was described to the audit. The test house is compared (*within the computer audit program*) to an identical version of the house (*a reference house*) that meets the standards established by the Council of American Building Officials Model Energy Code (CABO/MEC). The home energy rating provides a point score on a scale of 0-100 with each point corresponding to a 5% variance +/- from the *reference house* which is established as a score of 80 points. Thus a house that scores a 78 would be just below compliance with the Model Energy Code, while a score of 82 would be just above compliance.

Using this methodology certified Kansas Energy Star home energy raters can predict the actual energy performance of a house as-is, recommend, energy improvements and predict dollar, and energy savings. A home energy rating can also use actual contractor pricing to provide cost-benefit ratios for proposed improvements, demonstrate potential return on investment (ROI), and provide assurance for lending institutions that the energy savings will pay back the cost of the improvements.

The Alliance to Save Energy, a national coalition of government, industry and business professionals committed to energy savings, states that about 25% of the total of United States energy costs can be attributed to households. They state that the average American homeowner could reduce his/her energy bill by up to 50% using HERS recommendations. This could result in an energy savings of over \$100 billion by the year 2010. Testing completed by Community Action Weatherization in Topeka, Kansas in 1993 verified that in five existing (older) houses in Topeka an average energy use reduction of 40% for both heating and cooling was achieved with expenditures of under \$2000 per house

Section 3, (b) of Senate Bill 299 calls for a 25% home energy use savings over the pre-improvement home energy usage as the criteria for awarding a tax-credit. It is our experience that this level of energy use reduction is commonly achievable in existing Kansas housing stock. A tax-credit of 25% of the documented cost of improvements up to \$2000 would be a valuable, significant, and effective motivation to invest in energy improvements in existing houses in Kansas.

Section 3, (c) allows for the same tax-credit of 25% of the cost of improvements up to \$2000 for new residential units which exceed the requirements of the latest edition of the Model Energy Code by 30% or more, as verified by a home energy rating. This would require a home to achieve a rating score of 86 on a scale of 0-100. This is the same numerical score that has been established as the criteria for the Environmental Protection Agency (EPA) Energy Star Home program. Significant marketing and mortgage benefits are available through the EPA Energy Star Homes program for houses that meet this criteria.

Making buildings efficient saves money and the environment. Saving one unit of electricity inside a building saves three units of fuel at the power plant. Making the average home 30% more efficient than the Model Energy Code will reduce its carbon dioxide emissions by almost 90,000 pounds over the 30-year lifetime of a typical home mortgage. The same is true for commercial buildings. The less money a business spends on mortgages and utility bills, the more is available to pay off loans, invest in capital improvements, increase inventories, or hire new employees. Energy efficiency programs in communities that assist families in reducing utility bills can result in more family income being spent in the neighborhood.

Economic multipliers indicate that there is a tremendous potential for economic development to be realized through energy efficiency. Economic multipliers are a measure of how much economic activity can be generated by different combinations of purchasing, and investment. For example, a \$1.00 purchase of ordinary consumer goods in a local store generates about \$1.90 of economic activity in the local community. This occurs, as the dollar is re-spent. The store pays its employees, who in turn purchase more goods and services and pay taxes, all with the same original dollar. In comparison, Petroleum products; gas, oil, etc., produce an economic multiplier of about \$1.51. Utility services; electricity generation and distribution, natural gas production and distribution, etc., produce an economic multiplier of about \$1.66 for each dollar spent. Energy efficiency improvements; weatherization, insulation, air sealing, etc. generates an economic multiplier of about \$2.23 per dollar spent in our local communities.

The proposed tax credit would be a valuable, significant, and effective motivation for investment in energy improvements in new houses in Kansas. The EPA Energy Star Homes program indicates that energy savings through achieving proposed levels of energy performance could save additional billions of dollars and dramatically reduce airborne pollutants and atmospheric greenhouse gasses. The economic and environmental benefits of promoting this level of housing performance are widely recognized and would be a significant economic boon to the state of Kansas.

The use of certified home energy ratings technicians, and the Kansas Energy Star nationally accredited home energy ratings system, as third party verification for energy savings is of critical importance to the credibility and security of the proposed tax-credit. The HERS program is a nationally recognized, uniform, and accredited methodology that has been shown to have the capability to accurately predict energy use, and energy savings based on home energy performance analysis.

Thank You, I would be happy to answer any questions.

REFERENCES - LINKS:

Energy and Environmental Ratings Alliance <www.ratingsalliance.org>
Alliance to Save Energy <www.ase.org>
EPA Energy Star Homes <www.energystar.gov/homes>
Kansas Building Science Institute <www.kansasbuildingscience.com>
DOE <www.doe.eren.gov>
Metropolitan Energy Center <www.kcenergy.org>

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Testimony for Kansas Senate Bill No. 299

INTRODUCTION

Good Morning, my name is Art Richards, and I am the Plant Manager at Johns Manville's Building Insulation Plant in McPherson, Kansas. I'd like to tell you about our plant and speak to you about the energy savings benefits of fiberglass insulation.

- First production started in 1974, with continuing investment since then.
- We are a "flagship" operation – meaning we have been and continue to be one of the best manufacturing operations within Johns Manville.
- Our plant represents a major proportion of Johns Manville's sales volume.
- We employ 350 people from McPherson and surrounding counties.
- We serve all the major segments of the industry . . . commercial, residential, retail, metal building, and manufactured housing.
- Our customers for the most part reside between the Mississippi River and the Rockies, and Canada and Mexico.
- We are the third largest employer in McPherson behind NCRA Refinery, and Abbott Pharmaceuticals.
- We pay about \$800,000 per year in property taxes.

I'm pleased to be able to tell you that insulation is a great investment. A typical pound of fiberglass insulation saves twelve times as much energy per year as the energy used to produce it. It doesn't wear out . . . it continues to perform year after year.

According to a recent U.S Department of Energy EREC Reference Brief, a homeowner increasing attic insulation from R-19 to R-30 will see their investment pay back in just under seven years, seven years is a long time, that's why a Bill like this that will speed payback is a good Bill.

BODY OF TESTIMONY

Natural gas prices combined with higher usage rates caused by colder than normal weather have resulted in higher heating bills for us. For example, my well insulated newer home compared to friends older and sometimes smaller homes has half the heating bill.

At the plant, variance from budget due to price and usage amounted to an additional \$500,000 in cost last year. This year is stepping off to be some of the most expensive months in the history of the plant.

The United States is experiencing dramatic increases in the price of energy not seen since the days of the OPEC oil embargo of the 1970's. America imports close to 60% of its oil according to the U.S. Department of Energy. Demand continues to drive prices up. Homeowners and businesses have to cope with these higher prices and there is little relief in site for the next two to three years according to Cambridge Energy Research Associates.

Testimony for Kansas Senate Bill No. 299

The most recent report in the U.S. Energy Information Agency says that Kansans average use of energy per person in 1997 was 397 million BTUs, 13% above the nation's average rate of 351 million BTUs. To reduce demand for energy and to lower prices legislation is needed to provide tax incentives for homeowners and business owners to improve the energy efficiency of their homes and buildings. The legislation this committee is considering, Senate Bill No. 299 provides these incentives to save energy. We strongly support the effort to provide Kansans with relief from high energy prices while improving energy efficiency.

The typical U.S. family in 1998 spent \$1,300 per year on their homes utility bills. American families have faced a dramatic increase in this amount. According to the U.S. Department of Energy, heating and cooling account for 50 to 70% of the energy used in the average home, and one of the most cost-effective ways to reduce utility bills is to add insulation. Inadequate levels of insulation and air leakage are leading causes of energy waste in homes. Fiberglass insulation can be added to attics and crawl spaces by the homeowner or contractor. And, when a home is being remodeled insulation can be easily added in the walls. Fiberglass insulation can be purchased easily from just about any home improvement store, lumberyard or installed by a local insulation contractor. Kansas homeowners are fortunate to have major insulation producers, like our plant, in the state to efficiently supply additional insulation when needed.

Commercial buildings also consume significant energy, and traditionally are insulated to even lower levels than homes. There is an equally important opportunity in Kansas to bring commercial buildings up to modern insulation standards.

According to the Kansas Corporation Commission (KCC) "The price of natural gas is higher than it has been in the past and is predicted to climb even higher as demand increases in the upcoming winter. The price of natural gas has been deregulated at the Federal level and is driven by market forces of supply and demand. At this time, there appears to be a shortage of available natural gas when most utility companies are trying to build up reserves . . . while we cannot affect the price of gas we want to do everything we can to educate consumers so they can prepare for high winter heating bills through budgeting energy conservation measures. Thousands of Kansas families could be economically devastated by the bills we expect this winter." Senate Bill No. 299 goes right to the heart of energy conservation by helping Kansas families save energy.

Senate Bill No. 299 is a wise investment in the energy future of Kansas. It will improve energy efficiency in the long run, give homeowners and businesses some of their hard earned tax dollars back and provide relief from rising energy prices. Without this type of incentive embodied in Bill No. 299, Kansas will be hard pressed to address its future energy needs. We applaud your efforts to pass this vital legislation and stand ready to support you.

Thank you for letting me testify. I will be happy to answer any questions you may have.