

Approved

Date

3/4/91

MINUTES OF THE HOUSE COMMITTEE ON ENERGY & NATURAL RESOURCES

The meeting was called to order by Representative Ken Grotewiel at
Chairperson

3:30 ~~am~~/p.m. on February 25, 1991 in room 526-S of the Capitol.

All members were present except:

Committee staff present:

Raney Gilliland, Principal Analyst, Legislative Research
Mary Torrence, Revisor of Statutes' Office
Pat Mah, Legislative Research
Lenore Olson, Committee Secretary

Conferees appearing before the committee:

Joyce Wolf, Kansas Audubon Society
Brad May, Topeka and Kansas Audobon Societies
Ted Geisert, Northeast Kansas Amateur Astronomers League
Shaun McGrath, Kansas Natural Resources Council
Charles Douglas, Astronomical Society of Kansas City

Chairperson Grotewiel called the meeting to order and opened the hearing on HB 2389.

Joyce Wolf, Kansas Audubon Council, testified in support of HB 2389. She stated that this bill, when fully implemented, has the potential of helping restore the visibility of celestial bodies, by requiring state agencies to use shielded fixtures which direct light downward rather than lose light to the sky. (Attachment 1)

Brad May, Topeka and Kansas Audubon Societies, testified in support of HB 2389. Mr. May stated that the Audubon Society is devoted to preserving the natural world. The light pollution problem has been creeping up on the world since 1879 with the advent of the electric light. (Attachment 2)

Ted Geisert, Northeast Kansas Amateur Astronomers League, testified in support of HB 2389. He stated that quality lighting is needed to create a pleasing visual surrounding while maintaining nighttime safety without disturbing residential or commercial neighborhoods. Mr. Geisert then described negative lighting attributes. (Attachment 3) He then presented a slide show depicting various types of light pollution. Mr. Geisert then reviewed a proposal for dark skies over Kansas, which was endorsed by the Kansas Audubon Council, the Northeast Kansas Amateur Astronomers League, Topeka Audubon Society, Salina Astronomy Club, and the Astronomical Society of Kansas City. (Attachment 4)

Shaun McGrath, Kansas Natural Resource Council, testified in support of HB 2389. He stated that putting a curfew on non-security lighting will have the effect of reducing the state's energy bill. Mr. McGrath also proposed two amendments as shown on (Attachment 5)

Charles Douglas, Astronomical Society of Kansas City, testified in support of HB 2389, stating that this bill seeks to provide good lighting for security and prevention of crime.

Representative Freeman requested a fiscal note on HB 2389.

The Chair closed the hearing on HB 2389.

The Chair directed the Committee to turn to HB 2029 and explained the difference between the original bill and the proposed substitute bill. (Attachment 6)

CONTINUATION SHEET

MINUTES OF THE HOUSE COMMITTEE ON ENERGY & NATURAL RESOURCES,
room 526-S Statehouse, at 3:30 ~~am~~p.m. on February 25, 1991.

A motion was made by Representative McClure, seconded by Representative McKechnie, to amend HB 2029 by substituting the proposed substitute HB 2929.

A motion was made by Representative Gatlin, seconded by Representative Freeman, to table HB 2029. The motion failed.

The Chair directed the Committee back to the motion to amend HB 2029. The motion carried.

A motion was made by Representative McClure, seconded by Representative Stephens, to pass favorably as amended HB 2029. The motion carried.

The Chair directed the Committee to turn to HB 2088.

Representative McClure reviewed a balloon amendment to HB 2088. (Attachment 7)

A motion was made by Representative McClure, seconded by Representative McKechnie, to amend HB 2088 as shown on the balloon.

A motion was made by Representative Hendrix, seconded by Representative Gatlin, to table HB 2088. The motion failed.

The Chair called for a vote on the motion to amend HB 2088. The motion carried.

A motion was made by Representative Gatlin, seconded by Representative Freeman, to amend HB 2088 by striking the preamble words on page 1, lines 11 through 38. The motion failed.

A motion was made by Representative Patrick, seconded by Representative Lloyd, to recommend that HB 2088 be referred to an interim study committee. The motion carried.

The Chair directed the Committee to turn to HB 2161.

A motion was made by Representative McClure, seconded by Representative Stephens, to amend HB 2161 as shown on the attached balloon. The motion carried. (Attachment 8)

A motion was made by Representative Patrick, seconded by Representative McKechnie, to amend HB 2161 to include anti-discrimination legislation so that one class of rate payers will not be favored against another class of rate payers. The motion failed.

A motion was made by Representative Patrick, seconded by Representative Shore, to table HB 2161. The motion carried.

A motion was made by Representative Freeman, seconded by Representative McKechnie, to approve the minutes of February 19 and 20, 1991. The motion carried.

The Chair directed the Committee to turn to introduction of new bills.

CONTINUATION SHEET

MINUTES OF THE HOUSE COMMITTEE ON ENERGY & NATURAL RESOURCES,

room 526-S, Statehouse, at 3:30 ~~xxx~~/p.m. on February 25, 1991.

Several Committee members requested introduction of bills:

1. A least-cost planning bill concerning certain public utilities.
2. A bill concerning the state corporation commission; relating to procedures for certain hearings.
3. A bill providing for creation of a recreational river system.
4. A bill regarding hunting seasons and bag limits.
5. A bill on park summons - late payment fees.
6. A bill on game breeder permits.
7. A bill on penalty assessments for violations of Wildlife and Parks laws and regulations.
8. A bill on wildlife importation permits.

A motion was made by Representative Freeman, seconded by Representative McKechnie, to introduce the above bills. The motion carried.

The meeting adjourned.



Kansas Audubon Council

Joyce Wolf

HB 2389

February 25, 1991

House Energy and Natural Resources Committee

I am pleased to be here today to express the support of the Kansas Audubon Council for HB 2389. When fully implemented, this proposal has the potential of helping restore the visibility of celestial bodies, by requiring state agencies to use shielded fixtures which direct light downward rather than lose light to the sky.

The following statement of astronomer David Crawford of the Kitt Peak Observatory in Arizona expresses one of the reasons the Council is supportive of this proposal:

"The view of the universe that people get at night, particularly at dark-sky sites, is one of nature's greatest marvels. If we destroy that view, and in a few generations people can only see the Milky Way and galaxies on a screen in a planetarium, it'd be the same as only seeing nature on TV. That's not what we want, I think, for the earth."

Another reason we support this proposal is that increased lighting efficiency will be enhanced while providing considerable energy savings through the use of special luminaires. At the same time, it is important to recognize that safety and security will not be compromised by the use of shielded lighting. Again David Crawford has this to say:

"If we could get all quality lighting -- energy-efficient lighting that doesn't cause clutter and confusion on the ground -- we'd solve the problem of safety better, we'd keep the sky dark, and we'd save money."

I would now like to introduce Brad May who is an amateur astronomer and President of the Topeka Audubon Society. Brad is the person who brought this matter to the attention of the Council; he will expand on my comments and call upon others who will share their expertise and be willing to answer questions.

E+NR

2/25/91

Attachment 1



Chapter of National Audubon Society, New York, N.Y.

25 February 1991

Testimony concerning HB 2389, "Dark Sky" bill.

Brad May, President
Topeka Audubon Society
221 S. Franklin
Topeka, Kansas 66606
(H) 357-4849
(W) 296-4343

The Audubon Society is devoted to preserving the natural world. When we notice that something as splendid as the stars are disappearing, we ask why. We look around and see that this loss of beauty is caused by the hand of humanity.

This problem has been creeping up on us since 1879 when Edison invented the first electric light bulb and central power plant. For too long we have quietly acquiesced, either unaware of our loss or resigned to accepting the unacceptable.

My own awareness changed 20 years ago when I read a World Wildlife Fund list of serious environmental problems. The problem is now recognized worldwide. San Diego and Tucson have very restrictive outdoor lighting ordinances. Every county in Arizona and the state government itself have light pollution laws which apply to both public and private property. There are ordinances in New Zealand. And we have learned that Spain is retrofitting all the light fixtures in the entire country.

You now have the opportunity to take a small step toward recognizing and solving this problem in Kansas. The Kansas Audubon Council, Northeast Kansas Amateur Astronomers' League, Topeka Audubon Society, Salina Astronomy Club, Astronomical Society of Kansas City and the Kansas Natural Resource Council have joined together to endorse HB 2389. If there is any fault in the bill, it is that its language is less strong and less specific than in our original proposal.

Think about how outraged you would be if some man-made fog permanently blocked your view of the Kansas River Valley from the 5th floor of this Capitol. And yet the same blinding effect happens overhead every night when the lights come on.

It is time for us to control our technology, rather than allowing our technology to control us.

E+NR

2/25/91

Attachment 2

Ted Meier

"QUALITY LIGHTING"--THE ESSENTIAL ELEMENT

Outdoor lighting is not only something many people take for granted, it is also a subject about which most of us have little knowledge of. What is "good" lighting, and how is it achieved? What is considered to be the state-of-the-art in outdoor lighting today? Professional lighting designers involved in the planning of outdoor lighting seek solutions that are both dependable in performing tasks, and sensitive to environmental concerns. Such lighting is called QUALITY lighting. Quality lighting is needed to create a pleasing visual surrounding while maintaining nighttime safety without disturbing residential or commercial neighborhoods.

This requires a reliable means of light control that assures precise distribution. Today's state-of-the-art lighting fixtures are just that. These quality lighting fixtures have several unique features which make them superior to older versions of outdoor fixtures. Not only is quality lighting the best choice when selecting a fixture for a task, but it is the most economic choice.

In order to understand what quality lighting is one must become familiar with the adverse qualities with bad lighting. These negative attributes are recognized by the Illuminating Engineering Society of North America, and have been well documented.

LIGHT TRESPASS: light that spills over onto unintended areas, e.g. someone's bedroom window. While most of us may appreciate a well-lit parking lot or roadway, such may not be the case for their back yard, windows, etc. Fixtures which have poor optical control will nearly always have a high degree of horizontal light spread causing light trespass.

GLARE: today's plasma lamps must be housed in fixtures which can control their glare. Glare causes eye discomfort and a desensitizing of the eyes for night vision known as veiling. This form of light blindness is where the eye adjusts to the spot(s) of glare. The veiling effect is more pronounced with older people, and is often associated with accidents at night. Glare is never helpful.

UPLIGHTING: have you ever flown at night and seen the thousands of bright spots seem from above? Uplighting is the prime source of light pollution, and represents wasted light and energy. Uplighting is caused by fixtures which have poor light control, and by fixtures that are aimed upward. None of this promotes nighttime visibility or safety. Light pollution serves no useful purpose.

CLUTTER: trashy light, cluttering up our nighttime environment, in cities and in the country. It can cause confusion, rather than guidance, adding to the visual litter we so often live in. Clutter is always associated with poor quality lighting.

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2/25/91

Attachment 3

TESTIMONY IN SUPPORT OF HB 2389

Ted Geisert, presenter

This bill is jointly endorsed by:

KANSAS AUDUBON COUNCIL
Joyce Wolf
2535 Arkansas
Lawrence, Kansas 66046
H. 749-3203

NORTHEAST KANSAS AMATEUR ASTRONOMERS LEAGUE
Ted Geisert
RR 1 Box 681
St. George, Kansas 66535
H. 494-8376

TOPEKA AUDUBON SOCIETY
Brad May
221 S. Franklin
Topeka, Kansas 66606
H. 357-4849

SALINA ASTRONOMY CLUB
David Clark
5201 S. Halstead
Smolan, Kansas 67479
H. 668-2539

ASTRONOMICAL SOCIETY OF KANSAS CITY
Charles Douglas
4915 W. 57th Terr.
Shawnee Mission, Kansas 66205
H. 432-3671

*E & NR
2/25/91
Attachment 4*

A PROPOSAL FOR DARK SKIES OVER KANSAS

February 25, 1991

During the past few decades, our view of the grandest spectacle of nature, the universe, has been systematically destroyed. The stars, the source of inspiration for ages, the highest and figurative goal of humanity, are becoming increasingly invisible. This night sky, our only visible window to the entire universe, is being replaced with light pollution. This light pollution is robbing us of our view of meteors, comets, the Milky Way, and the constellations of our folklore. Astronomy writer, Fred Schaaf predicts, "If light pollution continues to increase at anything like the present rate, not one child in ten being born in the United States today will ever really see a star. What kind of people will be those who have never had this experience."

Light pollution is the culmination of many years of using poor quality lighting fixtures and lighting practices. It is easily recognized as the massive glow seen over our cities at night. LIGHT POLLUTION BENEFITS NO ONE. Controlling it does NOT require making a choice seeing starry skies and having properly illuminated streets. The fact is the two are completely compatible; both dark skies and properly illuminated, safe streets require the use of quality lighting systems. This is the goal in achieving quality outdoor lighting:

- (1) USE THE CORRECT AMOUNT OF LIGHT FOR THE LIGHTING TASK
- (2) USE THE LIGHTING ONLY WHEN NECESSARY
- (3) DIRECT ALL THE LIGHT TO WHERE IT IS SPECIFICALLY NEEDED

It is important to note that the Illuminating Engineering Society of North America supports similar goals. This in no way restricts the lighting professionals from practicing their trade. James R. Benya, senior principal and CEO of Luminae Souter, San Francisco, writes in the October, 1988 issue of Architectural Lighting, "Enthusiastic proponents of 'better outdoor lighting' often want the obvious: more light, more evenly distributed. But modern lighting designs for outdoor environments must also consider principles and issues that only recently became part of the design process. Some of these issues are light pollution, light trespass, glare and veil, and color and color rendition."

We know that putting an end to urban skyglow would help astronomers. But how would this change benefit the average Kansan? Along with a beautiful view, the average Kansan would see saving in public expenditures. Kansas has over two dozen cities which can be seen at night from hundreds of miles out in space. Due to this poor lighting control, the average street light wastes about \$25 of electricity each year producing light pollution. While this may not sound like much it becomes significant when you consider that there are at least 100,000 such lights in the state of Kansas. Therefore, Kansans spend about \$2,500,000 annually for the sole purpose of lighting up the night sky. None of this waste lighting contributes to the public's safety or utility. This is a prime example where those who only look at the front end costs are killing themselves. We are wasting too much energy. We simply must change our attitudes and let the economics of conservation and efficiency work for us.

We believe it is time for Kansans to vigorously join in ending light pollution practices. Quality fixtures like those with "sharp cut-off" designs are essential in achieving efficient and pleasing lighting environments. As Terry McGowan, Manager, General Electric Company, writes in the Fall, 1986 issue of Light magazine, "We use it (quality lighting) to mean lighting that goes beyond the basics, the ordinary; lighting that is sensitively designed and maintained to meet the user's requirements, while taking into account human needs, electrical energy, and financial resources. The idea of quality lighting is receiving attention because it delivers benefits." Simply put, quality lighting will provide BETTER lighting at LOWER cost. To reduce light pollution, even eliminate it, would accomplish two objectives. First, we would preserve for Kansans (and our visitors to Kansas) our view of the universe presently not visible to the vast majority of Americans. Second, we would significantly conserve expensive and finite energy resources by simply eliminating WASTE. This second point cannot be overemphasized as we witness the role oil is playing in our involvement in the Persian Gulf war.

Therefore, we petition the Kansas Legislature to examine HB 2389 which would regulate all outdoor lighting owned by, operated by, or paid for by the State of Kansas. The idea of using what we have grown accustomed to wasting is not new or unique, it is simply an idea whose time has come. Quality lighting fixtures are available today, and they are being used in growing numbers by those who understand the aesthetics and benefits of using them. Is there any legitimate reason why light pollution should continue? Are fossil fuels abundant? Is energy so cheap that we can afford to waste it? Is the featureless electromagnetic fog of light pollution more inspiring to young inquiring minds than a sky filled with stars? Eliminating light pollution is a WIN WIN proposition. The words of Baba Dioum, an African ecologist, express why we jointly endorse preserving the dark skies over Kansas: "In the end we will conserve only what we love, we will love only what we understand, and we will understand only what we have been taught."

Kansas Natural Resource Council

February 25, 1991

Testimony before the House Energy and Natural Resources Committee

Re: HB2389 Concerning Use of Lighting by State Agencies

From: Shaun McGrath, Program Director

My name is Shaun McGrath, and I represent the Kansas Natural Resource Council, a private, non-profit, organization which advocates sustainable resource policies for the state. Our membership is over 850 statewide.

As the Legislature looks for ways to cut the budget, and to raise revenues in order to avoid cutting important programs, HB2389 delineates an expensive and unnecessary waste in government spending which could easily be eliminated. Over 30% of outdoor lighting is totally wasted because it is misdirected. This means the State is paying 30% more for outdoor lighting than what is necessary. By simply directing the light, we could put that 30% back into the general fund without having taken anything away from anyone.

HB2389 also addresses unnecessary lighting. Putting a curfew on non-security lighting will have a similar effect of reducing the State's energy bill making more funds available for needed programs.

KNRC fully supports passage of HB2389. We offer two amendments which will create further energy savings:

- 1.) Line 13 - Expand the focus of the bill from "all agencies of this state" to include local governments and other public lighting as well.
- 2.) Because current outdoor lighting is mostly with the very inefficient 175-watt mercury vapor lights, we would recommend an amendment modeled after a San Diego ordinance which mandates the retrofit of mercury vapor lights with 35-watt low pressure sodium fixtures. San Diego enjoys savings of \$3 million per year because of its retrofit of all street lamps to LPS.



E+NR

2/25/91

Attachment 5

PROPOSED SUBSTITUTE FOR HOUSE BILL NO. 2029
By Committee on Energy and Natural Resources

AN ACT concerning certain public utilities; relating to certain mergers; prohibiting certain increases in rates and other charges.

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

Section 1. (a) As used in this section:

(1) "Acquisition costs" means: (A) The difference between the costs of acquisition and the net book value, prior to the merger, of assets acquired; and (B) the costs of any executive stock option, executive salary continuation, executive severance pay or other executive compensation arrangements offered as a part of a merger.

(2) "Electric or gas public utility" means any investor-owned electric public utility or combination electric and gas public utility.

(3) "Public utility" has the meaning provided by K.S.A. 66-104 and amendments thereto.

(b) In the event of a merger of two electric or gas public utilities, the state corporation commission shall not allow any increase in any rate or charge to any customer of such utilities if such increase is attributable to acquisition costs which are not offset by savings which result from the merger.

Sec. 2. This act shall take effect and be in force from and after its publication in the statute book.

E+NR
2/25/91
Attachment 6

HOUSE BILL No. 2088

By Committee on Energy and Natural Resources

1-31

*E+NR
2/25/91
Attachment 7*

8 AN ACT concerning radioactive materials; relating to ~~storage, treat-~~ regulation
9 ~~ment, recycling and disposal~~ thereof.

10
11 WHEREAS, It is the policy of this state to prevent the release into
12 ~~to~~ the environment of radioactive materials resulting from human
activities; and

13 WHEREAS, The U.S. Congress, Nuclear Regulatory Commission
14 and Environmental Protection Agency have promulgated measures
15 intended to make possible federal deregulation of certain radioactive
16 materials; and

17
18 WHEREAS, Such deregulation would result in virtually unre-
19 stricted disposal or release of these radioactive materials into landfills,
20 incinerators, transportation systems, waterways, sewage systems, re-
21 cycling centers, consumer products or other parts of the environ-
22 ment; and

23 WHEREAS, Such dissemination of radioactive materials in the
24 environment would represent an unnecessary increased risk to the
25 health, safety and welfare of the citizens of this state; and

26 WHEREAS, Such monitoring and verification of the absence of
27 unacceptable risks resulting from federal deregulation will be more
28 costly to the state than the current regulatory regime; and

29 WHEREAS, The Legislature of the State of Kansas hereby de-
30 clares that radioactive materials shall continue to be subject to reg-
31 ulatory control by the state ~~and~~

32 ~~WHEREAS~~, The Legislature declares that it is the purpose of this
33 statute to guarantee that all radioactive materials which were subject
34 to regulation by this state or the U.S. Nuclear Regulatory Com-
35 mission as of January 1, 1989, shall remain subject to regulation by
36 this state, and shall be stored or disposed of only in licensed or
37 approved radioactive waste storage or disposal facilities. Now,
38 therefore,

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

40 Section 1. (a) As used in this act, _____,

41 (1) "Radioactive materials" means any radioactive waste or other
42 radioactive materials resulting from activities of the United States
43 government, licensees or contractors of the United States govern-

ment, nuclear regulatory commission licenses or licensees of agreement states pursuant to the atomic energy act (42 U.S.C. 2021), that satisfied the definition of low-level radioactive wastes in the low level radioactive waste policy act [(42 U.S.C. 2021b(9)(a)] as of January 1, 1989. Radioactive materials do not include naturally occurring radionuclides, uranium mill tailings or high-level radioactive waste.

(2) "Facility approved by the state" means a facility for which there is a license, permit, letter of agreement or other means by which the state officially accepts the storage, treatment, recycling or disposal method for radioactive materials. Such approval shall include, but not be limited to, certification by the appropriate state agencies that the facility will comply with all applicable state and federal laws and regulations pertaining to radioactive and hazardous materials and wastes, air and water pollution control and any other environmental and fiscal responsibility laws and regulations.]

(b) Notwithstanding any declaration by the United States government that certain radioactive materials may be exempt from federal regulatory control or below federal regulatory concern, no radioactive materials may be stored, treated, recycled or disposed of in this state except at a facility approved by the hazardous waste disposal facility approval board or the secretary of health and environment expressly for the storage, treatment, recycling or disposal of radioactive materials. No facility for storage, treatment, recycling or disposal of radioactive materials that are or become exempt from federal regulatory control or below federal regulatory concern shall be approved by the board or secretary unless the facility, at a minimum, complies with all requirements applicable to such a facility on January 1, 1990.

(c) Radioactive waste may not be incinerated in this state.

(d) Any person may bring an action in the district court for injunction, damages or other appropriate relief for violation of this section by any party. Upon a finding that a violation has occurred, the court shall award costs of litigation, including reasonable attorney and expert witness fees, and reasonable costs for monitoring and testing in support of expert testimony and advice.]

Sec. 2. This act shall take effect and be in force from and after its publication in the statute book.

all
such radioactive materials shall be subject to regulation by the secretary of health and environment unless under the jurisdiction of the federal government.

(c) The secretary of health and environment shall adopt rules and regulations regulating radioactive materials which are subject to regulation by the secretary pursuant to subsection (b), as necessary to protect public health and safety.

7-2

1 minate its exemption in the same manner as prescribed in subsection
2 (c).

3 (e) An election under subsection (c) or (d) may be held not more
4 often than once every two years.

5 (f) Nothing in this section shall be construed to affect the single,
6 certified service territory of a cooperative or the authority of the
7 state corporation commission ~~over a cooperative with regard to serv~~
8 ice territory, wire stringing and transmission line siting, pursuant to
9 K.S.A. 66-131, 66-183, 66-1,170 *et seq.* or 66-1,177 *et seq.*, and
10 amendments thereto.

11 Sec. 2. This act shall take effect and be in force from and after
12 its publication in the statute book.

, as otherwise provided by law,

charges for transmission services, sales of power
for resale,

(g) (1) ^{at least} If a cooperative is exempt under this
section, ~~five~~ ^{at least} days' notice of the time and place
of any meeting of the board of trustees at which
rate changes are to be discussed or voted on shall
be given to all members of the cooperative.
Such meeting shall be open to all such members.

(2) Violations of subsection (g)(1) shall be
subject to civil penalties and enforcement in the
same manner as provided by K.S.A. 75-4320 and
75-4320a, and amendments thereto, for violations
of K.S.A. 75-4317 et seq. and amendments thereto.

EVNR
2/25/91
Attachment 8