M I N U T E S

SPECIAL COMMITTEE ON ENERGY

November 9-10, 1977
Room 532 - State House

Members Present

Representative Donald E. Mainey, Chairman
Senator Arnold Berman
Senator Bill Morris
Representative August Bogina
Representative Tim Holt
Representative J. Littlejohn
Representative Robert H. Miller
Representative Charles J. Schwartz

Staff Present

Ramon Powers, Kansas Legislative Research Department
Mary Torrence, Revisor of Statutes Office
Ron Smith, Kansas Legislative Research Department

Conferees Present

Steve Harris, Director, Kansas Energy Office
Professor Tom Dean, Kansas University School of Architecture

November 9, 1977
Morning Session

Chairman Mainey called the meeting to order at 9:30 a.m. He directed Committee members attention to the minutes of the October 13-14 meeting. Senator Berman proposed that paragraph nine on page eight, regarding Steve Harris' comments on gasohol programs, be deleted. Senator Morris suggested that the Committee delay approval of the minutes to give members time to read them more carefully.

Committee members were furnished copies of the Committee Report on Proposal No. 19 -- Energy Conservation, as prepared by the Research Department (Attachment No. 1). Ramon Powers reviewed the Committee Report which includes background information on federal and state activity in energy conservation, a review of Committee deliberations and Committee conclusions.

Representative Bogina proposed the report be changed to delete the reference to a specific Energy Efficiency Ratio (EER) in paragraph one, page 14. He noted that the Kansas Corporation Commission (KCC) standard, which the bill incorporates, includes references to two EERs and those EER standards change after a specified period. The Committee agreed.

Representative Miller proposed that, on page 11, fifth paragraph, sixth line of the Report, "carpool" be added to the statement that staggered work hours would encourage use of city busses. Also, on page 14, third paragraph, first line, the term "and carpooling" should be added after public transportation. Representative Miller also proposed that, since the outcome of President Carter's energy plan was uncertain, the details concerning the Carter plan enumerated in the report be deleted and a brief summary inserted instead. The Committee agreed.

Senator Morris brought up the subject of the Arkansas Plan of home construction on which the Committee had heard testimony. The Senator questioned if this plan was permitted by building codes in all areas of Kansas and if, perhaps,

the Committee should introduce a bill or resolution to encourage use in Kansas of the Arkansas Plan of construction. Representative Bogina stated that the plan would probably not be prohibited in most areas, but that there would be a few localities where codes would prohibit use of the Arkansas Plan. Senator Morris made a motion that a bill or resolution be introduced to encourage use of the Arkansas Plan in Kansas. The motion was seconded. Discussion which followed dealt with whether such a bill was necessary, since the bill mandating a statewide thermal efficiency standard for new buildings, which the Committee had voted to introduce, might already take care of the problem.

It was decided to have the staff secure information as to whether there actually are cities in Kansas which have building codes that prohibit the use of the Arkansas Plan, and to report back to Committee members.

The question of whether the Committee should take any action toward establishing standards for solar equipment was raised by Representative Miller. It was noted that Professor Tom Dean had not recommended action on solar equipment standards because of a lack of expertise in the field at this time. Professor Dean had recommended an informational and educational program to be funded by the state through the University of Kansas.

Senator Berman proposed that the description "another conferee" in paragraph four, page 12, be changed to identify the individual involved, and that the individual's recommendation of gas deregulation and encouragement of further expansion of nuclear power in Kansas be reflected in the Report. Senator Berman also suggested that the Report should reflect that conferees from the executive branch of Kansas government were negative regarding state conservation except for voluntary conservation programs. He also noted that executive branch conferees were opposed to the purchase of subcompacts for the state motor pool and that Mr. Jim Cobler was opposed to any action in the area of requiring carpooling by state employees.

Senator Berman stated that, in his opinion, the report should reflect more emphasis on Committee members' concern for legislative action to provide creative, productive and long range energy planning, as well as the belief that state government has the responsibility to take the lead in energy conservation. Senator Berman said he believed the Report was, in a sense, a passive report leaving the impression that there is a Committee concensus that "things are going pretty good" in the area of energy conservation.

Senator Morris expressed his opinion that he felt Mr. Cobler was being very practical, and that Mr. Cobler believed the state would lose employees to Goodyear or other private businesses with higher pay and parking privileges if too many restrictions were placed on parking for state employees. Senator Berman stated that if state employees are underpaid, salaries should be increased.

After further discussion, Representative Miller made a motion that the Committee Report should include a statement that the Committee strongly encourages the Legislature to evaluate all legislation considered during the 1978 Session as to its impact on energy usage and that the Committee strongly feels that the Legislature and state government have an obligation to provide moral leadership for the State of Kansas in the area of energy conservation.

Senator Berman said that the Committee had not studied the element of providing capital to assist the public in investing in energy conservation and alternative energy systems as directed in Proposal No. 19, and the Committee Report should reflect this fact.

It was also suggested that the Committee Report did not reflect strongly enough how the Committee felt about the KCC's implementation of the "conservation gas" issue in H.C.R. 5031. Representative Miller pointed out that though the KCC had received the mandate of the Legislature in H.C.R. 5031 in April, 1977, in November, the Commission did not know what the issue of "conservation gas" involved. Representative Miller pointed out that the Legislative Coordinating Council had directed the Committee to monitor KCC implementation of H.C.R. 5031 as pertains to "conservation gas," and the Committee has received no report from KCC as requested.

Chairman Mainey added that he had personally requested that the KCC have a staff member at all Committee meetings, but that the Commission does not have anyone present today.

Mr. Powers told Committee members that there would be a statement in the Rate-Making Report regarding the KCC. Chairman Mainey noted that the KCC had followed through on the rate study with recommendations only after the Committee had insisted on it.

Representative Miller's motion that his statement regarding Legislative consideration of the energy impact of bills studied during the 1978 Session be included in the Report was seconded by Representative Bogina. The motion was voted upon and passed.

Representative Miller then moved that the Report on Energy Conservation, Proposal No. 19, be approved as changed by Committee action. The motion was seconded and approved.

Chairman Mainey then requested that Steve Harris, Director of the Kansas Energy Office (KEO) give the Committee his report on the availability of insulation materials. Mr. Harris reported on the various types of insulation and their availability. Reviewing currently used insulation, Mr. Harris reported the following: (1) Fiber glass - Manufacturer's report that, at this time, their production cannot possibly meet demand. However, the fiber glass companies are presently expanding existing plants and building new plants for increased production; (2) Rock Wool - With the shortage of fiber glass, about ten percent of the insulation being sold and used is rock wool; (3) Cellulose - This insulation is the easiest and cheapest to manufacture, but the fire resistant material used to treat cellulose is imported boric acid, and it is in short supply; (4) Various Types of Foam - These are manufactured mainly by Dow Chemical Company and are not in short supply; (5) Vermiculite - Only small quantities are available but the import of this material is being stepped up. Mr. Harris told Committee members that it will be approximately two years before total supplies of insulation materials approach demand. A copy of Mr. Harris' testimony is attached (Attachment No. 2).

During a brief discussion regarding insulation materials, Mr. Harris told the Committee that most insulation companies are operating on 24-hour, seven-day week schedules, but that it will be a long time before they catch up to demand.

Senator Berman asked that since he had been absent from the meeting at the time of the vote on Committee approval of the Energy Conservation Report, his vote against acceptance of the Report be noted. He also stated that he would file a minority report.

Chairman Mainey asked Mr. Powers to review the Committee Report regarding Proposal No. 20 - Rate-Making Principles and Rate Structure (Attachment No. 3). The Report includes background information on various rate structures, and the Committee deliberations and conclusions. Mr. Powers pointed out the inclusion of an extra page nine which includes a recommendation for the addition of a staff economist in the 1979 KCC budget.

Representative Miller suggested that a summary of H.C.R. 5031, with a listing of five or six issues that the KCC study, be included in the Report. He also suggested that, in the section under Conclusions on page 8, a statement be included expressing the concern of the Committee that the KCC was not prepared and had not planned to make recommendations in regard to rate structures as directed in H.C.R. 5031.

Senator Berman suggested that the report include a statement that the Committee's concern regarding escalating rates of utilities was restricted to gas and electric companies and in no way was directed at the telecommunication companies, which have done a good job. It was noted by Committee members that there have been telephone rate increase requests which the KCC has rejected. During discussion which followed, Representative Bogina pointed out that any action of the Committee would effect Bell Telephone as much as any other utility.

Senator Berman suggested that a letter be written to the KCC requesting that their report to the Legislture indicate any recommendations for which the KCC would presently have the authority to implement, and any recommendations for which legislation would be needed.

Chairman Mainey announced that Jan Johnson had given him a news release which stated that the Kansas Energy Office (KEO) Director was not requesting the two additional staff members for the KEO office as previously planned, and that the present staff would implement the programs planned. (Attachment No. 3 a.)

Representative Miller made a motion that the Committee approve the Committee Report on Proposal No. 20, with the proposed changes. Representative Schwartz seconded the motion, and the motion was voted upon favorably.

Mr. Powers then reviewed the Committee Report relating to Proposal No. 21 - Energy Research and Production in Kansas (Attachment No. 4). This Report includes background on energy research and production in Kansas, and a summary of Committee deliberations and conclusions.

Senator Berman raised the question of who decides how and where research money is spent.

Representative Miller noted that tertiary recovery of oil was not mentioned in the report. Mr. Powers directed attention to references under "Energy Research in Kansas" to funding of tertiary oil recovery projects at K.U. and El Dorado, Kansas. On page nine the presentations to the Committee on tertiary oil are described.

In reviewing the report, Chairman Mainey noted that the Ozark Regional Commission study presented to the Committee did not reflect the amount of gas available and therefore did not reflect the true situation, since it did not include information on the Wyoming gas recently contracted for by Cities Service. It was requested that mention of that fact be included in the Report.

Senator Morris stated that he felt that the Attorney General's opinion on H.B. 2002 concerning development of subsurface zones should be included in the information on pooling and unitization. The Committee decided not to include any additional information on that subject.

Senator Berman asked if the bill (S.B. 420) requiring compulsory unitization was still being considered. It was suggested that some reference to S.B. 420 be included in the Report. Senator Berman also suggested that the last sentence in the section on gasohol should read - "$15 million for each of the four gasohol projects." The Committee agreed to those changes.

Senator Berman said he felt that there is an imbalance in the spending of research dollars; a disproportionate amount is being spent for nuclear, oil, and other non-renewable resources and an inadequate amount is going into research on solar, wind, biomass, and other renewable resources. He would like the Committee Report to express concern about this matter and to support greater funding for alternative energy research. The Committee agreed to make this recommendation.

Senator Berman then asked if the Committee was going to ignore the Wichita coal gasification project and the coal slurry pipeline question. Representative Holt noted that the minutes of the Committee's October meeting show that the Committee had requested that Mr. Harris of the KEO check on funding of a study on the coal gasification project by an outside firm. It was noted that the coal gasification project was one which would have statewide effects. Senator Morris expressed hope that Committee members would keep this fact in mind when the subject comes up during the 1978 Session. (Attachment No. 4 a.)

Senator Morris then moved that the report include a recommendation that an independent study of the coal gasification project be undertaken and that no action be taken by the Legislature regarding the coal gasification project until after the results of the study are completed and reported to the Legislature. The motion was seconded and approved.

The Committee recessed for lunch.

Afternoon Session

Chairman Mainey reconvened the meeting at 1:30 p.m. to resume deliberations on the Committee Report on Proposal No. 21. The Chairman furnished members with copies of a memorandum on a Consumer and Utility seminar, November 21-22, sponsored by the League of Women Voters (Attachment No. 5).

Mr. Powers read the statements prepared for inclusion in the Committee Report on Proposal No. 21, regarding use of funds for energy research and the coal gasification study, as proposed by the Committee during the morning session. Senator Berman requested that the language, "conclusions and recommendations be made available to the Legislature," be added to the statement regarding the coal gasification study.

Senator Berman offered a motion that the report include a statement that the Committee encourages further development of the intrastate pipeline system in order to insure adequate supplies of gas for Kansas. The motion was seconded by Senator Morris and passed.

Following Committee discussion on the subject of pooling or compulsory unitization, Senator Berman moved that the Committee Report reflect that the Committee opposes compulsory unitization. Senator Morris seconded that motion and the motion passed.

Representative Miller then moved the adoption of the Committee Report on Proposal No. 21, with the proposed changes. Representative Schwartz seconded the motion and the motion passed.

Mary Torrence furnished Committee members with copies of the draft of H.C.R. 1742, a resolution urging the Secretary of Transportation and the Kansas Turnpike Aughority to provide parking sites for persons engaged in carpooling (Attachment No. 6).

Senator Morris suggested that language dealing with the safety of parking areas be added to the draft, and that language be added to encourage the promotion of parking lots in order to make the public aware of the availability of these parking areas.

Representative Bogina suggested that there might be a need to include agencies other than the Secretary of Transportation and the Kansas Turnpike Authority who might be involved in the parking projects. Representative Bogina also proposed that the language of the Resolution should be changed by inserting "to conserve energy" rather than "present energy crisis" to make the project more long range in nature. Representative Miller moved the adoption of the Resolution with the proposed changes. Representative Schwartz seconded the motion and the motion passed.

Mary Torrence then furnished members with copies of proposed Bill No. 1741, relating to state parking property and parking permits (Attachment No. 7). Representative Bogina reminded Committee members of the opposition to the bill the Committee had heard. He stated that, with this bill, the Legislature would be dictating a change of life-style for state employees. In conclusion, Representative Bogina said, he believed that paragraph (b) of Section 1, which exempts state house ground parking and parking for legislators should be deleted from the bill if the Committee recommends it. Representative Bogina and Senator Morris agreed that they felt the bill would not accomplish the goals desired by the Committee, and that the state would lose employees to private sector employers if the bill were enacted. Senator Morris stated that he felt the bill was discriminatory and made second-class citizens of state employees.

Senator Berman moved that proposed Bill No. 1741 be recommended by the Committee. Representative Holt seconded the motion. Representative Miller moved that paragraph (b) Section 1 be deleted from the bill. The motion was seconded and passed.

Senator Berman stated that the bill merely required employees to look for less convenient meand of transportation to work, and he did not think this would necessarily mean they would seek other employment. He suggested, as an alternative, that the Committee study the proposed Bill No. 1731 which Chairman Mainey had drafted. Committee members were then furnished copies of proposed Bill No. 1731 (Attachment No. 8).

Representative Bogina pointed out that most city zoning regulations require the building of a certain amount of parking space in connection with all new construction. Senator Berman said that zoning regulations do not apply to state government.

Chairman Mainey suggested that after studying Bill No. 1731, he might suggest changing fee amounts so that when four or more persons rode in one car, they would have free parking, and fees would be charged for those cars with fewer riders.

Representative Bogina called for the question on Senator Berman's motion to introduce Bill No. 1741. Senator Berman asked to withdraw his motion. The Chairman explained that an amended motion could not be withdrawn. A vote was taken on Senator Berman's motion, and the motion failed. Senator Berman, Representatives Miller and Holt voted in favor of the motion, and Senator Morris and Representatives Bogina, Littlejohn and Schwartz voted against the motion.

Senator Berman then made a motion that the Committee introduce proposed Bill No. 1731. The motion was seconded. Committee discussion turned to fee amounts to be charged for parking. Representative Holt suggested the following fee schedule: $10 for one person using a single parking space; $7.50 for two persons using a single parking space; $5.00 for three persons using a single parking space; and, free parking for four persons using a single parking space.

Senator Berman offered an amendment to the motion to make fees apply to state house ground parking and to include members of the legislature during the Session, with the following fee schedule: $20 for one person using a single parking space; $10 for two persons using a single parking space; $5 for three persons using a single parking space; and, free parking for four persons using a single parking space.

Discussion which followed dealt with the difficulties legislators would have forming carpools since they work on a part-time schedule, and whether employees will want pay raises to cover the increase in parking fees.

Representative Bogina said he did not feel that the fee schedule was out of line. Chairman Mainey pointed out that permits are issued on an annual basis, and legislative parking should not be on a session basis. Representative Holt suggested that during the interim legislators might be charged a daily fee. Representative Miller called for the question on Senator Berman's motion to amend Bill No. 1731. The motion was seconded and voted upon favorably.

Chairman Mainey asked if there was furhter discussion regarding Senator Berman's motion to introduce Bill No. 1731. Senator Morris stated that although the intent of the bill was good, he beleived that its' introduction would make the Committee the laughing stock of the Legislature.

A vote was taken on Senator Berman's motion to introduce proposed Bill No. 1731 and the motion carried, with all Committee members present voting in favor of the motion, except Senator Morris, who opposed the motion.

Representative Miller stated that the Committee Report should include the recommendation of proposed Bill No. 1731. Representative Holt moved that the Committee Report include the recommendation of Bill No. 1731. Representative Miller seconded the motion. It was voted upon favorably.

Chairman Mainey announced that tomorrow's meeting, November 4, would entail a trip to Lawrence for a solar seminar to be presented by Professor Tom Dean, Kansas University School of Architecture. The Chairman then announced a 15 minute recess.

Following the recess, discussion turned to the Committee's recommendation of the place, House or Senate, where the bills the Committee has introduced are to be referred. Representative Miller moved that the bills recommended by the Committee be referred as follows:

1. Bill No. 1631, concerning flexible work hours for state employess - House
2. Bill No. 1632, concerning tax credits for heat pumps - Senate
3. Bill No. 1633, concerning the state motor pool - House
4. Bill No. 1635, concerning energy conservation standard for new buildings - House
5. Bill No. 1640, concerning prohibiting certain expenses in determining rates of utilities - Senate
6. Bill No. 1666, concerning construction work in progress - Senate
7. Bill No. 1631, concerning charges for state parking - Senate
8. Resolution No. 1742, concerning sites for parking of persons engaged in car pooling - House.

Representative Miller's motion was seconded. Senator Morris suggested that since Senator Hein's bill relating to flexible hours was in the Senate it would save time if the Committee's bill relating to flexible hours is also referred to the Senate. Representative Miller's motion on referral of bills was voted upon and passed.

Chairman Mainey then requested that Committee members meet at 8:15 a.m., Thursday morning at the State House to go to Lawrence, and he told the Committee that Professor Dean would expect Committee members in Room 111, Marvin Hall, the University of Kansas at 9:00 a.m.

Mr. Powers told Committee members that the information in their Committee books could be removed by Committee members or that the material would be kept in his office.

The Committee meeting adjourned.

November 10, 1977

The second meeting day of the Special Committee on Energy was held in Lawrence, Kansas, where Professor Tom Dean, of the School of Architecture, University of Kansas presented an informative seminar on the basic nature of solar energy and its application in the heating and cooling of buildings.

Professor Dean included in his presentation description of different types of solar collectors, solar systems, heat pumps, and the costs of the various applications of different systems. During discussion with Committee members, Professor Dean said that cost of electricity across the United States varies from 4¢ to 11¢ per KWH and that he could not fault electrical utility costs in this area since these rates are reasonable. Professor Dean contended that the cost of solar systems will not fall with mass production because solar units are material intensive and material costs will not go down.

Professor Dean also emphasized the federal funding available for the installation of insulation and solar systems. He noted that the installation of solar equipment is planned for the White House in Washington, D.C. which will stimulate interest in solar energy.

Professor Dean discussed the problem of sales of solar equipment and the need of getting architects and builders educated in the installation and planning of solar systems. He stressed the need of setting prescriptive standards for solar equipment, and the need of saturating the state with good solar data and information as it becomes available. He noted that he had presented a proposal to the KU administration for funding a solar information system from KU but the Board of Regents deleted it from the budget.

Following the seminar, Professor Dean and Committee members toured and inspected Professor Dean's solar home, and another home in rural Douglas County with a retrofit solar system.

Prepared by Ramon Powers

Approved by Committee on:

12-22-77
Date

RP/aem

COMMITTEE REPORT

TO: Legislative Coordinating Council

FROM: Special Committee on Energy

RE: PROPOSAL NO. 19 - ENERGY CONSERVATION*

Proposal No. 19 directed the Committee to review the proposed State Energy Conservation Plan, proposed federal energy conservation legislation, bills concerning energy conservation and alternative energy sources considered in the 1977 Session, and legislation in other states; study various means of providing capital to assist the public in investing in energy conservation and alternative energy systems; and monitor State Corporation Commission implementation of HC 5031 as it applies to "conservation gas."

Background

Federal Activity. The first federal legislation concerning energy conservation was the "Energy Policy and Conservation Act" of 1975 (PL 94-163). That act established fuel economy standards for new automobiles beginning in model year 1978, including labeling provisions and a civil penalty for any unlawful conduct under the act. One provision in the act provides that no state or political subdivision can adopt or enforce standards for automobiles covered by the federal standard. In addition, the federal government will require all passenger automobiles it acquires to meet a certain fuel economy standard.

PL 94-163 also provides for the testing of certain products to determine their energy usage and the labeling of those products except where it is determined that such labeling is not technologically and economically feasible and not likely to assist consumers in making purchasing decisions. The issuance of any energy efficiency standard will be accompanied by test procedures used to establish the standard.

PL 94-163 contains a section which proposed the "development and implementation by states of laws, policies, programs, and procedures to conserve and to improve efficiency in the use of energy (that) will have an immediate and substantial effect in reducing the rate of growth of energy demand and in minimizing the adverse social, economic, political, and environmental impacts of increasing energy consumption."

Atch. 1

To become eligible for federal assistance in implementing a state energy conservation plan, states must have as part of their plan:

1) mandatory lighting efficiency standards for public buildings (except public buildings owned or leased by the United States);

2) programs to promote the availability and use of carpools, vanpools, and public transportation (except that no federal funds provided under this part shall be used for subsidizing fares for public transportation);

3) mandatory standards and policies relating to energy efficiency to govern the procurement practices of such state and its political subdivisions;

4) mandatory thermal efficiency standards and insulation requirements for new and renovated buildings (except buildings owned or leased by the United States); and

5) traffic law or regulation which, to the maximum extent practicable consistent with safety, permits the operator of a motor vehicle to turn such vehicle right at a red stop light after stopping.

Any state energy conservation plan may include the following:

1) restrictions governing the hours and conditions of operation of public buildings (except buildings owned or leased by the United States);

2) restrictions on the use of decorative or nonessential lighting;

3) transportation controls;

4) programs of public education to promote energy conservation;

5) any other appropriate methods or programs to conserve and to improve efficiency in the use of energy..

Industrial energy conservation is also targeted for energy conservation initiatives in PL 94-163. Industries that consume at least one trillion BTU of energy per year and those corporations identified as the 50 most energy-consumptive corporations in such industry are to be identified for individual energy efficiency improvement. Within one year after enactment of this act, the Administrator of the Federal Energy Administration must set an industrial energy efficiency improvement target for each of the ten most energy-consumptive indistries. The chief executive officer of each corporation identified must report annually on the progress which such corporation has made in improving its energy efficiency.

Other energy conservation provisions of PL 94-163 include mandatory standards with respect of energy conservation and energy efficiency to govern procurement policies and decisions of the federal government. The President is directed to develop a ten-year plan for energy conservation with respect to buildings owned or leased by the federal government including mandatory lighting efficiency standards and mandatory thermal efficiency standards. Public education programs will be established and van and carpooling encouraged. Government agencies are to report on programs for savings in energy consumption. Finally, the recycling of oil is to be encouraged and regulated.

In 1976, the federal government enacted the "Energy Conservation and Production Act" (PL 94-385). This act includes a provision for developing electric utility rate design initiatives. The administrator of the Federal Energy Administration is directed to develop proposals that are designed to encourage energy conservation, minimize the need for new electrical generating capacity, and minimize costs of electric energy to consumers. Demonstration projects are to be funded which will improve electric utility load management procedures and regulatory rate reform initiatives. Offices for consumer services in states where they have been created will be assisted in their presentations before utility regulatory commissions.

In the area of energy conservation standards for new buildings, PL 94-385 proposed to:

1) redirect federal policies and practices to assure that reasonable energy conservation features will be incorporated into new commercial and residential buildings receiving federal financial assistance;

2) provide for the development and implementation, as soon as practicable, of performance standards for new residential and commercial buildings which are designed to achieve the maximum practicable improvements in energy efficiency and increases in the use of nondepletable sources of energy; and

3) encourage states and local governments to adopt and enforce such standards through their existing building codes and other construction control mechanisms, or to apply them through a special approval process.

The act provides for establishing a thermal performance standard for new commercial and residential buildings. After that standard has been established, no federal financial assistance will be made available or approved with respect to the construction of any new commercial or residential buildings in any area of any state unless the state has certified that the local government which has jurisdiction over the area has adopted a building code that meets or exceeds the final performance standard or the state has adopted a standard that meets or exceeds the final performance standard on a statewide basis.

One method of energy conservation in existing buildings is encouraged through weatherization assistance for low-income persons. The purpose of this part of the act is to develop and implement a supplementary weatherization program to assist in achieving a prescribed level of insulation in the dwellings of low-income persons. Financial assistance provided under this section is for the purchase of weatherization materials with not more than 10 percent of the funds for administration of weatherization projects.

PL 94-385 amends the "Energy Policy and Conservation Act' by including provision for supplemental state energy conservation plans. to be eligible for federal financial assistance under this section of the act, states must:

1) provide procedures for carrying out a continuing public education effort to increase significantly public awareness of:

   a) the energy and cost savings which are likely to result from the implementation (including implementation through group efforts) of energy conservation measures and renewable-resource energy measures; and

   b) information and other assistance (including information as to available technical assistance) which is or may be available with respect to the planning, financing, installing, and with respect to monitoring the effectiveness of measures likely to conserve, or improve efficiency in the use of, energy including energy conservation measures and renewable resource energy measures;

2) procedures for insuring that effective coordinating exists among various local, state and federal energy conservation programs within and affecting such state, including any energy extension service program administered by the Energy Research and Development Administration;

3) procedures for encouraging and carrying out energy audits with respect to buildings and industrial plants within such state; and

4) any procedures, programs, or other actions required by the administrator.

PL 94-385 also amends the Housing and Urban Development Act to provide a national demonstration program designed to test the feasibility and effectiveness of various forms of financial assistance for encouraging the installation or implementation

of approved energy conservation and approved renewable-resource energy measures in existing dwelling units. The program involves financial assistance in the form of grants, low-interest-rate loans, interest subsidies, loan guarantees, and other types of assistance. The amount of any grant cannot exceed the lesser of $400 or 20 percent of the cost of installing or implementing an energy conservation measure or $2,000 or 25 percent of the cost of intalling or implementing an approved renewable-resource energy measure. Finally, the Administrator of the Federal Energy Administration is to prescribe rules for energy conservation and renewable-resource obligation guarantees.

The Carter "National Energy Plan" relies heavily on "energy conservation" as a means of reducing the reliance of the United States on imports of petroleum and other fuels. The conservation elements relate to various aspects of the plan:

Transportation. President Carter proposed a graduated excise tax on new automobiles and light duty trucks whose fuel economy fails to meet set mileage standards. The tax would be coupled with rebates on cars that do better than those standards. The standard would increase from 18 miles per gallon on 1978 models to 27.5 miles per gallon on 1985 models.

Strict enforcement of the 55 mile per hour speed limit is also part of Carter's proposed plan. Withholding highway trust fund revenues from states not enforcing the limit has been suggested as a means of requiring enforcement.

A standby gasoline tax is proposed if targets for gasoline consumption are not met. The targets would allow limited increases in consumption until 1980. If consumption exceeds the target in 1978 and increases by 1 percent over the previous year thereafter, a 5 cent per gallon tax would be imposed for the following year. Funds collected from such taxes would be rebated to the public through the federal income tax system or by direct payments. To compensate for losses of revenues to states from gasoline taxes, the federal government would reimburse the states this loss through the Highway Trust Fund.

Additional incentives include removing the 10 percent excise tax on intercity buses to encourage use of that form of transportation. Fuel tax preference

would be eliminated for all aviation and maritime fuels except for commerical airlines and commercial fishermen. Finally, the government would purchase cars for its fleet with average fuel economy of at least two miles per gallon better than the federal standard.

Buildings. To encourage energy conservation in buildings, the Carter Plan includes a tax credit of 25 percent of the first $800 and 15 percent of the next $1,400 spent by a homeowner on approved conservation measures for improvements undertaken between the time the proposal is enacted and 1985. State public utility commissions would be required to direct the utilities under their jurisdiction to offer customers a residential conservation service to be financed by loans to be repaid through monthly utility bills.

Residential energy conservation loans would be made available through the Federal Home Loan Mortgage Corporation and the Federal National Mortgage Association. Fund for the existing low-income residential conservation program (weatherization) would be increased. Recipients of funds allocated for Comprehensive Employment and Training Act (CETA) would supply labor for the residential conservation program. Rural homes would be weatherized through a cooperative program provided by the Secretary of Agriculture, rural electric cooperatives, and the Farmer's Home Administration.

Federal grants would be available to public and nonprofit institutions for installation of energy conservation measures. And, state and local government would be encouraged to include in their local public works programs items which contribute to energy conservation.

As proposed, the Carter plan calls for voluntary conservation measures in the above-mentioned areas. However, if such voluntary methods are not successful, mandatory measures will be considered.

In the mandatory area, Housing and Urban Development will require compliance by 1980 with efficiency standards for new buildings under the Energy Conservation and Production Act of 1976. This is a one-year acceleration of the program. Conservation efforts, including solar installations, will be initiated in all appropriate federal buildings.

Appliances. Certain home appliances, such as air conditioners, furnaces, water heaters and refrigerators, would have to comply with mandatory standards for efficiency. Present developments of testing procedures and labeling will be continued.

Industrial Conservation. A five-year investment tax credit of 10 percent for investment in conservation equipment, including solar, would be made available to industry.

Cogeneration of Electricity and Process Steam. Cogeneration (production of electric power and other useful forms of energy from waste heat) would be encouraged through:

1) Exempting industrial users of cogeneration from federal and state public utility regulations.

2) Establish procedures under the Federal Power Commission to assure fair rates for both sale of power by cogenerators and for purchase of back-up power.

3) A tax credit of 10 percent in addition to the current 10 percent tax credit for purchase of cogeneration equipment.

District Heating. State public utility commissions would be encouraged to use district heating as a criterion in siting certification and ratemaking for new generating facilities.

Utility Rate Reform. To encourage conservation through utility pricing policies, the Carter plan will propose the following:

1) Mandating State Public Utility Commission to require regulated electric utilities to phase out and eliminate promotional, declining, and other rates for electricity which discourage conservation.

2) Encourage utilities to offer reduced rates to customers for off-peak use and to those will to have their power interrupted at times of highest demand.

3) Mandate State Public Utilities Commission to require gas utilities to eliminate declining block rates.

4) Extend Federal Power Commission authority to include utilities not owned under its jurisdiction to require interconnection and power pooling between utilities.

Finally, the oil and natural gas pricing and tax policy proposed by President Carter is directed at achieving substantial savings in natural gas and petroleum consumption. The oil and gas consumption taxes are directed primarily at industrial and utility use, and will encourage investments by industry to use scarce fuels more efficiently.

At the time this Committee report is being submitted, the Carter Energy Plan has been substantially altered by the U.S. Senate. A conference committee is attempting to negotiate an acceptable compromise bill that both promotes energy conservation and encourages the production of additional energy sources through various tax measures.

State Activity

The Kansas Energy Office has prepared and received approval of a state energy conservation plan in compliance with federal guidelines and is eligible for federal assistance in implementing the plan. The Energy Office contracted with the College of Engineering at Kansas State University for the formal development of a proposed State Energy Conservation Plan for Kansas. The Plan analyzes energy use in Kansas and develops energy conservation techniques which can result in at least a 5 percent savings in energy by 1980.

In February, 1977, the State Corporation Commission in Kansas issued a show-case order setting a hearing on the motion that no new hook-up be allowed for new homes and commercial institutions served by utilities under the Commission's jurisdiction unless such homes are adequately insulated. The Commission has issued an order establishing a maximum energy consumption standard for new construction served by utilities under its jurisdiction.

The 1977 Legislature enacted a bill which allows a state income tax deduction of 50 percent or $500, whichever is less, for the costs of labor and materials for the insulation of the taxpayer's principal dwelling.

Weatherization programs for the homes of the elderly and the poor are being funded in Kansas. Federally funded programs through community action agencies (there are seven in the state), area agencies on aging, and SRS Title XX funding provide for weatherizing homes of those eligible under each specific program.

The 1977 Legislature directed the State Corporation Commission to study the feasibility of permitting utilities to consider "conservation" gas as a gas supply option. Gas saved as a result of properly insulating homes, equipping thermostats with automatic controls, and installing furnace modifications designed to improve efficiency has been defined "conservation" gas. Cost of these alterations has been financed by including the incurred costs in the rate base of the utilities in pilot projects conducted by the Federal Energy Administration in three states.

Committee Deliberations

The Committee heard testimony from representatives of the Kansas Energy Office, the Department of Administration, the Kansas Corporation Commission, the Wichita Energy Resources Office, the Topeka-Shawnee County Metropolitan Planning Commission, Windustries, Mid-America Coalition on Energy Altarnatives, the League of Women Voters of Kansas, the Kansas Chapter of the Sierra Club, the Kansas Organic Producers, Inc., the Kansas Society of Architects, Kansas Power and Light Company, Topeka Metropolitan Transit Authority, the Wichita Homebuilders Association, Energy

Management and Control Corporation of Topeka, Solar Assist Corporation of Lawrence, and the Kansas Turnpike Authority. A State Senator also presented testimony.

An overview of the Kansas Energy Conservation Plan and a supplemental plan were presented to the Committee. It was noted that legislation would be required to implement certain parts of the Plan, and the KEO is working with the Division of Planning and Research to provide a recommended legislative package.

A representative of the Department of Administration reviewed the procurement practices of the State of Kansas as they relate to the purchase of automobiles for the state motor pool. It was reported that since 1975 compact cars have been purchased and the maintenance record has been better than expected. The Committee was informed that of the approximately 1,500 cars and station wagons owned by the State of Kansas, only 803 are included in the motor pool.

Parking for state employees which is primarily under the jurisdiction of the Department of Administration was also reviewed by the Committee. Concern for state parking was tied to the Committee's desire to get state employees to carpool or vanpool. The Committee discovered that the State of Kansas is planning to build two additional parking lots adding approximately 700 parking stalls to the 1,595 stalls that presently exist.

Efforts to stimulate carpooling in Topeka in 1974 were described to the Committee by a representative of the Topeka-Shawnee County Metropolitan Planning Commission. It was reported that the public will not respond to appeals for voluntary energy conservation particularly as it relates to carpooling or vanpooling. A policy of staggered work hours for state employees was recommended to encourage use of city buses. Restrictions on state parking was also recommended as a means of encouraging carpools and vanpools.

The Committee was urged to give consideration to making capital available for the installation of solar energy systems or other nondepletable alternative energy systems. It was proposed that low interest loans be made available through the state either underwriting loans or subdizing part of the interst, or public utilities making capital available for alternative energy systems and placing the cost into their rate base.

The insulation order of the KCC was issued in the spring of 1977 with an enforcement date of November 1, 1977. Throughout the interim the Committee received various reports on the status of the order; the KCC allowed a rehearing on enforcement of a certain portion of the order because of an alleged shortage of insulation materials to the homebuilders in the state. Various conferees advocated extending the KCC order to apply to all new homes built in the state including new homes in municipalities not under the KCC's jurisdiction.

The energy conservation program of the City of Wichita, Kansas, was described to the Committee. It was reported that Wichita has adopted Chapter 53 of the 1977 Uniform Building Code Supplement which went into effect October 1, 1977. The thermal efficiency standard in that code exceeds the standard in the KCC order, according to the Wichita Homebuilders Association. Wichita also has a program of no interest, full payback loans for attic insulation of owner-occupied residences, and the city operates an energy conservation facility which is open to the public as a demonstration home.

One conferee argued that the energy crises is, in reality, a capital crisis. Large expenditures of capital for massive high technological systems is counterproductive, it was reported. A copy of an analysis of this approach to the energy situation by Amory Lovins was presented to the Committee. Low technological and less capital intensive energy systems combined withstrong energy conservation measures were advocated by various conferees before the Committee.

Another conferee criticized the National Energy Plan because it was too dependent on energy conservation. It was argued that the Plan is deficient because of two missing elements: (1) reliance on basic market force supply and demand principles, and (2) incentives to increase energy production. No Manhattan type project will solve the energy problem for the United States, it was reported.

Various conferees requested the Committee consider recommending legislation supporting solar energy such as adding heat pumps to the solar tax credit law, requiring recycling of energy intensive materials, requiring energy forecasting, imposing a severance tax to fund development of alternative energy sources, enacting a

statewide building code with thermal and lighting efficiency standards, providing for infrared photography techniques to identify buildings needing insulation, requiring wiser management of solid waste, requiring enforcement of the 55 m.p.h. speed limit, establishing of major appliance efficiency standards and auto efficiency standards, implementing utility rate changes designed to encourage energy efficiency, requiring disconnecting of decorative gas lamp, providing for the use of tax incentives as tools for energy conservation, requiring some kind of regulation of solar energy equipment sold and installed in Kansas, and requiring the Kansas Energy Office to serve Kansans by making available extensive conservation information.

Energy savings from enactment of a "Bottle Bill" similar to Oregon's Bottle Bill was described to the Committee. Also, the dangers, expense, and energy waste of chemical farming was described to the Committee by an advocate of organic farming.

The KPL "Stop the Energy Thief" program providing an inspection and financing of attic insulation was described to the Committee. Energy audits for commercial and industrial customers, and KPL's own efforts to reduce its energy consumption were explained.

A movie and information was provided to the Committee on energy conservation methods developed for home construction in Arkansas. The Committee was told that energy conservation is a major concern of homebuilders. The public is demanding homes that are energy efficient, and builders are actively responding to the demand. Perscriptive energy efficiency standards were advocated because they are easier to enforce. Also, it was recommended that consideration of energy efficiency standards for existing buildings be entirely separated from consideration of energy efficiency standards for new construction.

Committee Conclusions

The Committee believes that the State of Kansas must provide leadership in energy conservation. Indeed, we believe the state should move actively in promoting the conservation of our depletable fossil fuels, and the development of nondepletable energy resources.

As a result of its study the Committee recommends _____ Bill _____ to establish an energy conservation standard for new buildings constructed in the state after July 1, 1978. The standard provides for a maximum heat loss of 35 BTU's per hour per square feet of floor area of heated spaces for all new structures. Also, an Energy Efficiency Ratio (EER) of 7.0 is established for all air conditioners and heat pumps installed in such buildings.

In the area of solar energy, the Committee recommends _____ Bill _____ which provides that heat pump be included in the solar energy income tax credit law (1976 H.B. 1).

To encourage state employees to make greater use of public transportation, the Committee recommends _____ Bill _____ directing the Secretary of Administration to adopt and implement a system of flexible working hours and other variations in the work day and work week schedules for state employees.

The Committee recommends _____ Bill _____ which requires the transfer of all nonspecially equipped passenger vehicles to the state motor pool. This portion of the bill is intended to increase efficiency in the use of state vehicles. The bill also requires that 80 percent of all new passenger vehicles purchased for the state motor pool meet the standard of 33 miles per gallon for highway driving and 24 miles per gallon for city driving by January 1, 1979.

The Committee also recommends _____ Bill _____ urging the Department of Administration and the Turnpike Authority to provide adequate parking at turnpike interchanges and appropriate crossroads for supporting and encouraging carpooling and vanpooling. Such mini-parking areas should be adequately marked and publicized.

The Committee notes that it was charged with monitoring the KCC's implementation of HCR 5031 as it applies to "conservation gas." During the interim, the Commission was asked to report on its studies that are directed by the resolution; however, at the November meeting the Committee was informed that there would be no specific assessment of the "conservation gas" issue. In fact, it appeared from the statements of KCC staff that they were not familiar with the concept of "conservation gas" as it is presented in HCR 5031.

Respectfully submitted,

Rep. Donald E. Mainey,
Chairperson
Special Committee on Energy

Sen. Donn Everett,
Vice-Chairperson
Sen. Arnold Berman
Sen. Bill Morris
Rep. Gus Bogina

Rep. Tim Holt
Rep. J. B. Littlejohn
Rep. Robert H. Miller
Rep. Jamie Schwartz

Attachment No. 2

STATE OF KANSAS
ENERGY OFFICE
503 KANSAS, TOPEKA, KANSAS 66603

November 8, 1977

The Honorable Donald E. Mainey, Chairman
Special Committee on Energy
430 Sumner
Topeka, Kansas 66616

Dear Chairman Mainey:

On October 25th, I received from you a letter requesting a survey of insulation manufacturers within Kansas relative to a shortage of insulation materials. Relatively simultaneous with your letter, I received a similar request from the Kansas Corporation Commission. The Commission granted a rehearing on their proposed minimum thermal efficiency standards which were being challenged by the Greater Kansas City Home Builders Association.

I agreed to present testimony, copies of which are attached, at the Commission's November 1st hearing. The KCC testimony was general in nature and I would therefore be glad to expand those parts of the testimony given to the KCC in which you are most interested. Please let me know if I may of any assistance to you in this regard.

Sincerely,

Steve Harris

Steven D. Harris
Director

SDH:pt
enclosures

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TESTIMONY OF STEVEN D. HARRIS
DIRECTOR, KANSAS ENERGY OFFICE

Before the Kansas Corporation Commission
November 1, 1977

Mr. Chairman, Commissioners. I appreciate the opportunity to appear before you as the Director of the Kansas Energy Office (KEO) to present testimony relative to the show cause order to require all new residential and commercial construction to meet thermal efficiency standards. Particularly, I would like to share with you the KEO's view of the availibility of insulation materials to comply with the order.

When Doctor Robert Robel, Chairman of the Energy Advisory Council appeared before the Commission in its initial hearing April 7, 1977 in this matter, he pointed out quite graphically the increasingly worrisome gap between domestic energy supply and demand. I think there is no doubt that an active energy conservation program is imperative if we are to prevent serious economic and social dislocations. The Commission's show cause order will, in my opinion, do nothing more than require those few builders who have been installing little or no insulation in construction to come up to what has become a standard in the construction industry. Further, I think from a policy standpoint that it is imperative to require minimum standards, so that our precious nonrenewable energy resources not be squandered away.

An obvious question arises at this point: Even if everyone agrees that the proposed Commission thermal efficiency standard is desirable, is there enough insulation for builders or their insulation subcontractors to comply with the order? Rather than hypothesize, the KEO undertook this past week an informal telephone survey of eight insulation manufacturers, seventeen retailers and contractors, and four home builders to determine the extent of an insulation shortage and how people up and down the chain of distribution are coping with the shortage. A narrative summary of the results of the survey by group follows.

I. MANUFACTURERS

Primary insulation materials marketed in Kansas are fibrous glass, cellulose, rock wool, foam, and vermiculite. Manufacturers of each product were contacted. Due to a heavy increase in demand over the last 18 months, none of the manufacturers have any inventory on hand, and products literally go from the production

line to the truck. While an accelerated housing market and increasing installed poundage of insulation in new construction have been key factors in the escalating demand, retrofits of existing residential construction account for a larger portion of the increase. The shortage is national in scope, and most manufacturers are allocating product on an equitable basis due to the inability of supply to meet total demand, with established accounts receiving first consideration.

To try to meet the continuing supply/demand inbalance, manufacturers are undertaking four steps: (1) They have stepped up production, running three shifts a day, seven days a week; (2) They are modifying processes or expanding existing plants; (3) Manufacturers are speeding up distribution, tying up a lesser quantity of product in transit; and (4) New plant construction is underway. Manufacturers expect supply and demand to equalize between 1980 and 1985.

II. RETAILERS AND CONTRACTORS

Outlets across the state from Kansas City to Garden City were surveyed. Products sold or applied were primarily fibrous glass, cellulose, rock wool, foam, and vermiculite, with most firms relying on a combination of products to form their inventories. The most widely used products are fibrous glass and cellulose. Inventories are low or nonexistent for fibrous glass. Foam and vermiculite inventories are as high as six months supply. The time from order placement to delivery has gone from a pre-1976 span of several weeks to as much as five months now for the same products. Business has increased dramatically in the last 18 months, but more sales have been generated by residential retrofits than increased new construction needs. Most of those surveyed have attempted to meet increased demand by earlier placement of orders; increasing supplies of more easily obtained products, such as foam or vermiculite; undertaking a vigorous purchasing policy from current suppliers; and, for contractors, instituting delays between the time they receive an order and apply the product. Most retailers and contractors see supply and demand coming into balance before 1980.

III. HOME BUILDERS

Four home builders in the Topeka area were contacted. Home builders meet insulation requirements either by direct purchase or subcontract with applicators. It would appear that, from a practical standpoint, the vast majority of builders are already close to or exceeding the KCC insulation standard. While insulation is difficult to obtain at the time they would like, the shortage of material predates the proposed Commission order. Of those builders surveyed, concern with a minimum thermal efficiency standard centers more on philosophical opposition to "government interference," and potential increased legal liability should a home

buyer be able to establish after purchase that the home does not meet the standard.

* * * *

It is apparent that there is indeed an inability of insulation manufacturers to meet total actual and potential demand. While they are instituting both long and short-range measures to improve their production capabilities, it appears fairly certain that not enough product will be available to supply total demand for at least the next several years. As utility costs continue to rise, as public awareness of the need for energy conservation increases, and as the federal government and states provide incentives or mandates for conservation measures, there will continue to be a high demand for insulation products.

The insulation shortage, however, predates the Corporation Commission's order. Since early 1976, demand for all types of energy-conserving products has doubled and trebled. Energy-conscious home buyers are on the rise and are insisting on an energy-thrifty home. Insulation contractors, home builders, and retail stores have met the challenge by advance ordering and aggressive purchasing, and by shifting to more available insulation products. The proposed Commission order will primarily impact those few home builders who have not been meeting high insulation standards. The fact that a shortage of insulation materials does exist should not prevent the Commission from protecting the public interest, and I would therefore urge that the order be sustained.

COMMITTEE REPORT

TO: Legislative Coordinating Council

FROM: Special Committee on Energy

RE: PROPOSAL NO. 20 - RATE-MAKING PRINCIPLES AND RATE STRUCTURES*

Proposal No. 20 directed the Committee to conduct a study of rate-making principles and alternative rate structures which have been adopted in other states; and review bills from the 1977 Session concerning utility rates and the implementation of HCR 5031 which directs the State Corporation Committee to study rate structures.

Background

In a recent hearing before the State Corporation Commission, the Gas Service Company proposed to structure its prices so that the big users of gas will pay a higher amount of increases than residential customers. The utility is requesting authority to raise its rates by $12 million. The rate design in the application proposed to raise the cost of gas to large industrial and commerical users by about 15 percent and increase the cost of residential customers by about 9 percent. The proposed rate change represents a fundamental change from rate designs in the past because it will reallocate the rates by moving in the direction of assessing the same rate to all types of customers, i.e., flattening the rate instead to allowing larger users to pay a lower rate. The proposed new rate design by Gas Service Company in Kansas symbolizes the trends that are taking place throughout the country in changing the allocation of costs for utility services. The major changes being proposed in utility rate design, however, are in the electric utility industry under the authority of state regulatory commissions. The following is a review of utility rate design structures principally as they relate to electricity and alternative rate design structures presently being considered in various jurisdictions.

Electric rates were usually established on the basis of the cost of servicing various classes of customers. These costs are of three types:

1) Customer service cost;

2) Energy cost, or the cost for delivery of each kwh of electric energy;

3) Capacity cost, meaning the customer's contribution to the requirement for system plant capacity. It is in the last category, the manner in which capital costs for system capacity are allocated among customers, together with the inherent technical difficulty in assigning such allocations, that is primarily the subject of current debate.

In the period 1966 to the present, utility rate increases have become common place, particularly during the last half of the period. In the electric utility industry there has been financial stress; this was particularly evidenced in the period 1973-75 as it became increasingly difficult and costly to obtain capital for required expansions. During the same period, the overall efficiency of use (load factor) for existing generating facilities dropped substantially, from 65.3 percent in 1967 to 61.2

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percent in 1974. At the same time there have been, and continues to be, tremendous jumps in the cost of fuels. These developments in the electric utility industry have resulted in higher electric bills and an increasing demand for reform in the industry. As stated in the March 7, 1977 issue of Energy Report to the States: "The states are being called upon to restrain the rising costs of electricity. The demands are plain; limit costs increase, ensure that price matches the cost of service, and protect the poor or limited-income person from unavoidable price inflation." (page 2)

With increasing pressure for rate reform, there has been a trend in which the declining block system of energy charges is being gradually altered and, in some instances, abandoned. In many states a variety of rate structures is being evaluated by utilities, regulatory commissions, research organizations, and the federal government. These changes range from a simple flattening of rates (charging all customers the same rate), to an inclining block system (charging a higher rate for larger usage), to rates which vary with the time of usage. These alternatives are being considered in order to meet various objectives:

1. Accurately signaling the utility's costs to customers;
2. conservation of energy;
3. improving capacity utilization;
4. relief for the needy;
5. maintaining the financial viability of the utility; and
6. lessening the impact of rates on residential customers.

The most commonly discussed price system designed to meet some or all of these objectives are: (1) inverted rates, (2) peak-load pricing, (3) lifeline rates and energy stamps, (4) customer-energy-demand rates (CED) and (5) marginal cost pricing.

Traditionally, the declining block rate has been the basis for pricing electricity. Under this pricing structure, each successive block of kilowatt hours is cheaper than the preceding one. Consequently, the more kwh's you use the less you pay per kwh. The large commercial and industrial customers which benefit from such a pricing structure do have to pay an additional demand charge. Demand (or load) relates to the maximum amount of power (kw) use at one time. The aggregate peak demand of customers creates a peak demand for the overall system.

It is the peak demand of the system that determines the capacity of the utility which must be available at any given time. The problem is to provide incentives for consumers to change their energy use habits so that the growth of the peak demand is slowed down which therey improves the efficiency of the power plant.

Inverted Rates. Inverted rates are the opposite of declining block rates. With each successive block, the price per kwh for the block rises. According to Alan Finder, in his recent The States and Electric Utility Regulation, "Inverted rates, or inclining blocks, signal customers they should conserve at all times to reduce their bills

and the utility's costs. The price system (under inverted rates) further implies that increased use and capacity expansion increase unit electricity costs." Few regulatory commissions have directed implementation of inclining block because customers have responded to calls for conservation by limiting overall usage except during the peak periods. By decreasing the base-load consumption which is the less expensive electricity to produce, there is an increase in the unit cost of production because the utility must still provide for the peak load capacity which is expensive to produce. It is believed that inclining blocks will have the same effect as conservation proposals.

Peak-Load Pricing. The peak load is the maximum demand on the utility's entire system during a one-hour interval. That one-hour interval can be for any period - for a year, a season, a month, a week, or a day. In utility regulation, the concern is for the peak period during a year, a season, or a day.

The annual peak is significant because it establishes the amount of capacity that a utility must have installed and be able to produce.

Seasonal rate differentials have been adopted in many states as a result of the increased use of electric air conditioning and heating. Utilities have sought to balance the two largest seasonal peaks of summer and winter in order to use their capacity most efficiently. At present, utilities will offer incentives to either winter or summer prices in order to curb the growth of the larger peak. Such rates charge higher prices for larger volumes of use (generally over 1,000 kwh) during a specific season. Because seasonal rates do not distinguish between daily peak and off-peak periods, there is no signal to the customer to conserve at the hour when the actual seasonal peak occurs. Also, seasonal differentials do not necessarily discourage growth of seasonal peak demand.

Time-of-day rates, which charge more for the energy consumed during peak hours and less for that used during off-peak periods, are widely regarded as the way to solve problems of capacity utilization and expansion created by the very large peak loads. According to Alan Finder, "time-of-day pricing is the option most likely to meet all of the six objectives of pricing system reforms." By charging more per kwh during certain peak hours and less for off-peak hours, the price charged for electricity varies not only with the amount and rate of electricity consumed but also with the time of consumption.

The problem with time-of-day rates is that residential customers must install special metering equipment which vary in cost from $40 to $250 per customer. However, according to most authorities, the cost is justified if it is accompanied by a reduction in peak capacity requirements.

Several agencies and organizations are testing time-of-day pricing. The Federal Energy Administration, the Tennessee Valley Authority, and the Electric Power Research Institute (the research arm of the investor-owned electric utility industry) have contracted with private and public utilities as well as regulatory commissions to test aspects of peak-load pricing, including the use of metering and load control equipment. As of August 1975, commissions in New York and Vermont had ordered the implementation of peak-load pricing, and those in California, Missouri, and Wisconsin were planning to do so.

Advocates of peak load pricing have three primary goals: (1) load management, or a way of reducing future system capacity requirements by raising load factor; (2) "efficient" pricing, or a desire to price electricity at its true cost, taking into account time variations in demand; and (3) escape from the cost spiral, that is, to devise a rate structure with which a consumer can choose to reduce his costs, although perhaps at his or her own inconvenience.

Relief for the Poor and the Elderly. The cost of electricity has a disproportionate impact on the various income groups in society according to research. As income decreases, the proportion of it required to pay for electricity increases; consequently the poor and elderly on fixed incomes must spend large portions of their incomes on electric service. Two methods had been suggested for dealing with the problem of providing minimum levels of service to the poor and elderly; lifeline rates and energy stamps.

The lifeline rate generally is a low, uniform charge for the first several hundred kwh of consumption per month for those who qualify. The base amount is to cover the necessary minimum service requirements for cooking, heating, and lighting. Most proposals have established a minimum service amount ranging from 300 to 700 kwh.

The lifeline rate can be specifically designed for certain persons who must qualify through a procedure established for that purpose. Or, the lifeline rate would apply to all residential users whose consumption does not exceed the lifeline amount. In this instance, the lifeline rate operates like the inverted rates whereby the cost per kwh is lower for the first block of electricity as compared with subsequent blocks. In either case there are problems in administering either type of lifeline rate whether it is in identifying those in need of the benefit or allowing even the wealthy to benefit.

In Ohio, a proposed constitutional amendment providing 700 kwh lifeline rate was defeated in 1976. Little Rock, Arkansas voters and the California legislature approved likeline rates during 1976. In 1975-76, a pilot study of lifeline rates was conducted by a utility in Maine. Winfield, Kansas adopted a lifeline rate for electric and gas utilities for people who qualify. That program is still operating.

An alternative method is energy (fuel or utility) stamps similar to federal food stamp subsidy programs. The government (either local, state, or federal) would subsidize in varying amounts the energy or electricity purchases of qualifying individuals. To receive the subsidy, individuals would have to pass eligibility tests. Once eligible, individuals could purchase coupons at a cost which would vary according to their income. Participating utilities would accept the stamps at their face value as payment for service.

Energy stamps would have to be supported by tax revenues either from local, state or federal sources. The largest burden of taxation would fall upon the individual taxpayer consumer ratepayer who cannot pass his or her costs on through the sale of goods and services. The type of tax used would have important implications for the collections and distribution of capital in the society.

CED Rates. Another suggested reform is the customer-energy-demand (CED) rate which is also called three-part rates. It is a refinement of existing tariffs for large industrial and commercial users. CED proposes to price electricity to all customers through three specific charges:

1. A flat customer charge per month regardless of consumption which recovers metering, billing, and other customer charges;

2. A uniform energy charge per kwh, perhaps with some modifications, to recover variable production costs such as labor and fuel;

3. A demand charge per kw to recover capacity, transmission, and distribution costs.

The CED rate informs the customers of the specific and varied nature of the utility's costs used in rate-setting. Also, by figuring the demand each electrical device requires, customers can stagger equipment usage and minimize their bills. However, CED does not promote conservation of energy and it does not improve capacity utilization. And, unless it is modified (which can be done easily), the rate does not signal the advent or occurance of a peak.

Marginal Cost Pricing. This pricing system is aimed at making consumers pay the true marginal (incremental) cost of adding one more kilowatt to the electricity "stream." In contrast to the present practice of basing rates on average embedded facility costs, this pricing theory suggests that the incremental cost associated with future equipment requirements be the cost basis for pricing. Economists generally agree on the validity of pricing according to marginal cost principles. They disagree, however, on methodology. Some advocate long-run incremental pricing (LRIC), which is generally interpreted to mean pricing based on the cost to produce electricity at some future point (e.g., in five to ten years);others advocate marginal cost pricing based on the cost of electricity at a more recent point in time.

Finally, in evaluating rate structure options, some regulatory commissions have conducted a comprehensive review and overhaul of all rates under their jurisdiction. Hearings are held at the commission's own initiative with the goal of setting objectives and structures for rates which will be the model for all rates in the commission's jurisdiction. This comprehensive approach to rate design is intended to produce a uniform structure so that rates among companies can be easily compared. This redesigning of rate structures has been completed in California, Florida, and North Carolina; it is nearing completion in New York; and it will soon be undertaken in Connecticut, Maryland, New Hampshire, and Utah.

Congress made its first move to consider some new concepts in electric rate design in the 1976 Energy Conservation and Production Act (ECPA), which requires the FEA to submit the proposals to encourage energy conservation, minimize the need for new electrical generating capacity and minimize the costs of electric energy to consumers. The act specifies that these rates are to reflect "marginal cost of service, or time of use service, or both." They would build in a cash incentive for consumers to change their energy use habits that should slow down the growth of peak demand and improve powerplant efficiency.

Committee Deliberations

The Committee heard testimony from representatives of the Kansas Corporation Commission, Ross Industries of Cargill, Inc., Gas Service Company, Northern Natural Gas Company, Black and Veatch Consulting Engineers, the Legal Aid Society of Topeka, Mid-America Coalition on Energy Alternatives, the Consumer Utility Rights Board of Wichita, the Electric Companies Association of Kansas, the Kansas Electric Cooperatives, Vulcan Material company, Mid-America, Inc., Parsons, Goodyear Tire and Rubber Company, and Pepsi-Cola Company of Topeka. A professor of economics at Kansas State University and a former state representative also presented testimony on rate structures.

The Committee received periodic reports on the progress of the KCC study of rate structures required under HCR 5031. The Committee was told that a final report will be available and presented to the Legislature by the 1978 Session. A representative of the KCC explained that the present Commission has been gradually flattening rate structures of utilities under its jurisdiction. The Committee was informed that the Commission will be requesting additional positions in its FY 1979 budget to upgrade its Utilities Division especially as it relates to the study of rate structures.

Consultants for the KCC provided the Committee with a briefing on how the rate base of a utility is determined in the rate-making proceedings. The Committee was told that the general intent of historical rate forms, declining block, two-part demand, voltage discount, interrruptable rates, and off-peak schedules, were intended neither to encourage nor to discourage the use of power. The energy shortage and the effects of inflation have stimulated the demand for reform. The arguments for an against various rate forms were presented to the Committee.

In testimony before the Committee the "time-of-use" concept was described in detail as a means of reducing the total use of electricity by encouraging consumers to shift use from high-cost periods to low-cost periods. Two conferees strongly advocated at least the limited adoption of "time of use" pricing of electricity in Kansas.

Various conferees expressed opposition to inverted rates which, it was argued, would not encourage conservation and would hurt low income customers, industry, small business, and rural customers. Life-line rates were also criticized as encouraging neither conservation or matching rates to cost of service. It was suggested that state social agencies handle directly the problem of high utility costs for the poor and elderly .

It was argued that the rates should reflect costs of providing service to each particular class of customers. A representative of the electric utilities suggested that legislation on rate structures be delayed until the results of a comprehensive study are completed. The study is being conducted under the auspices of the Electric Power Research Institute (EPRI), for the National Association of Regulatory Utility Commissioners and is scheduled for publication by the end of 1977. It was also recommended that jurisdiction over rate structures be left to the KCC which has discretion to adjust rate structures within the limits of its statutory authority.

The Committee also discussed the issue of load management as it affects utilities. One load management program requiring that irrigation systems be shut off when temperatures reach 90 degrees and air conditioners are in full use, resulted in 90 percent of the irrigators contacted voluntarily participating in the program this past summer. Through load management, the KCC could force the utilities to become more efficient in their production of electric power by distributing usage more evenly between seasons of the year or time of day. It was suggested that the KCC study power pooling arrangements to improve load factors such as trading power with utilities in a state like Minnesota which has awinter peaking whereas utilities in Kansas have summer peaking.

The Committee was told that any major proposal affecting rate structures should be carefully considered because the impact the changes might have on businesses and industries in the state. Any major inversion of rates would work a hardship on industries. Energy availability and costs are prime considerations to planners of industrial location factors, and inverted rate structures would place Kansas at a competitive disadvantage to other states in attracting new capital and job opportunities, the Committee was told.

Other issues directly and indirectly concerning rate structures of utilities were discussed by the Committee including late payment charges, fuel cost adjustments, and allowable business expenses permitted in rate-making. Testimony on each of these issues was presented to the Committee. It was noted that the KCC has issued an order on fuel cost adjustments which will require uniformity in the monthly reporting and filing of fuel costs by utilities under the Commission's jurisdiction. Also, the KCC is presently studying the late payment issue with the intention of issuing an order on the subject before the 1978 Session begins.

On the issue of allowable business expenses, the Committee considered excluding various advertising and lobbying expenses, that portion of any officer's or employee's salary from a utility that exceeds the salary of the Governor, and the costs incurred in the investigation of rate cases in computing a reasonable rate of return for a utility. It was argued that such expenses should not be borne by the ratepayers, rather they should be borne by the investors in utilities stocks because they are the beneficiaries of investments in the utilities. If the utilities would be forced to absorb those expenses below the line, as company expenses, instead of above the line, as allowed for rate-making purposes, there would be an incentive not to instigate so many cases, it was argued.

The argument was presented by the utilities that these expenses are "necessary expenses" relating to consumer service and if they are not allowed then utilities may have problems attracting capital. Since the filing and conducting of a rate case is necessary, because rates are regulated, such expenses should be legitimately borne by the ratepayers, the utilities argued.

Conclusions

The Committee makes no particular recommendation as to any specific rate structure that should be implemented at this time. However, the Committee notes that HCR 5031 requires the KCC make recommendations on alternative rate structures.

...ed that such

Their report will be made available to the 1978 Legislature. The Committee does express its concern that the KCC was not prepared to make recommendations in accordance with the directive in HCR 5031 until this Committee insisted that such recommendations were required by the resolution.

The Committee does recommend _____ Bill _____ which excludes for rate-making purposes certain expenses incurred by a utility. These include costs of advertising and lobbying, any portion of any officer's or employee's salary from a utility that exceeds the statutory salary of the Governor, expenses in preparing an application for a change in rates or other appeals to the KCC, and the payment of assessments against a utility for investigations, appraisals, or hearings required of the KCC.

The Committee was informed that the rate study being prepared by the KCC was assigned to two part-time law students hired during the summer. Because the rising utility rates are a source of grave concern to the Legislature, it is the Committee's feeling that a more thorough study is needed by the Commission which has primary jurisdiction in the area so that it can better inform the Legislature on alternative rate structures to better serve the long-range needs of the public. Consequently, the Committee recommends that at least one staff economist be provided for in the 1979 budget of the KCC. It is the Committee's feeling that the expertise of economists is needed by the Commission to more adequately project growth in demand of electric and gas service needs, to project the impact of any rate increase upon customers and utilities, to determine potential impacts of alternative rate structures upon customers and utilities, and to more accurately assess the utilities economic condition in the environment in which they operate.

Respectfully submitted,

Rep. Donald E. Mainey,
Chairperson
Special Committee on Energy

Sen. Donn Everett,
Vice-Chairperson
Sen. Arnold Berman
Sen. Bill Morris
Rep. Gus Bogina

Rep. Tim Holt
Rep. J. B. Littlejohn
Rep. Robert H. Miller
Rep. Jamie Schwartz

Attachment No.

STATE OF KANSAS
ENERGY OFFICE
503 KANSAS, TOPEKA, KANSAS 66603

PRESS RELEASE

For Immediate Release

Topeka....Kansas Energy Director Steven D. Harris today announced withdrawal of a request for Finance Council approval for three additional staff to carry out the Kansas Energy Conservation Plan (KECP).

Harris had requested that Finance Council approval be sought for the additional staff in an October 24 letter to Governor Bennett. The request was based upon a report prepared for the Kansas Energy Office (KEO) by Energy Management and Control Corporation (EMC^2), a Topeka energy consulting firm. The EMC^2 report concluded that state energy conservation programs under the KECP could be carried out more effectively and for less money with the additon of basic staff. The KEO was requesting a physical scientist, media specialist, and a secretary.

The state's energy chief stated that sufficient support could not be found for the request for additional staff among legislative members of the Finance Council.

"The office is dedicated to undertaking meaningful energy conservation activities," Harris said. "We will proceed to carry out exclusively by contract those programs which effectively meet the needs of Kansans. I hope that the Legislature will consider the benefits of adequate staff support for the Energy Office when it reconvenes in January," Harris said.

The KEO currently is staffed with a director and two assistants. The office has already received authority from the Department of Energy to spend $432,991 in federal conservation program funds this year.

- 30 -

November 9, 1977
Steven D. Harris, Director
Kansas Energy Office
503 Kansas Avenue
Topeka, Kansas
(913) 357-5272

Atch. 3a.

Attachment No. 4

COMMITTEE REPORT

TO: Legislative Coordinating Council

FROM: Special Committee on Energy

RE: PROPOSAL NO. 21 - ENERGY RESEARCH AND PRODUCTION

Proposal No. 21 directed the Committee to study various ways the state can encourage energy production and to study energy research conducted within the state.

Background

Energy Research in Kansas. Kansas has been an important producer of energy resources in the past and continues to supply a significant portion of oil and natural gas used in the state. The state is at present a net exporter of oil and natural gas. Diminishing supplies of depletable energy resources (such as oil and natural gas) have led to an intensification of research both in the recovery of residue supplies of energy resources and the search for new sources of energy which are not depletable.

Much of the energy research that is taking place in Kansas is at the state's universities. The Kansas Energy Office has surveyed the three major state universities — Wichita State University, Kansas University (including the State Geological Survey), and Kansas State University — and has identified energy-related research currently underway.

For Fiscal Year 1977, energy research projects totaling $2.2 million were reported by the three state universities identified above. By category, research expenditures were: $500,000 for oil and gas; $291,550 for nuclear; $316,806 for energy conservation; $255,020 for solar; $192,263 for biomass; $180,500 for general resource assessment; and $96,036 for research on coal. The sources of funding for the $1.9 million in research were from agencies of the federal government, private companies, and state and university funds. Over $1.2 million of the $1.9 million came from

Atch. 4

agencies of the federal government or private companies. The largest research project funded at the universities is the tertiary oil recovery project at Kansas University. The 1977 fiscal year costs for the project was $220,453 in state and university funding and $42,500 in National Science Foundation, Health, Education and Welfare, and Phillips Petroleum funds.

In the public utility sector, research is conducted by the Electric Power Research Institute (EPRI), a private research arm of the electric utility industry. A surcharge for research and development is placed on every ratepayer's bill by the major investor-owned utilities in Kansas. Funds from the surcharge go to EPRI for various types of projects that would benefit the electric utilities industry. In the past these funds went for projects conducted out of state. Beginning this year a portion of the EPRI funds collected in the state will be retained in the state. Three projects in Kansas are: field trials and evaluation of a plan to use fly ash in the manufacture of foamed glass power line poles; a research project to evaluate the use of fly ash and flue gas desulfurization waste as a soil additive; the storage of compressed air in abandoned salt mines and regions to be used to increase the efficiency of generating units at periods of high demand; and the construction and monitoring of a solar home in Lawrence, Kansas, by KPL.

Other energy-related research being conducted in the state includes a five year tertiary oil recovery project at El Dorado, Kansas, funded by Cities Service Oil Company and the Energy Research and Development Administration (ERDA). The total funding for the project is in the range of $7 million. Smaller projects are being conducted by small independent oil companies with ERDA funds in southeast Kansas.

ERDA is also funding a wind monitoring project at Russell, Kansas; the site is a candidate for installation of a wind turbine system.

Energy Production in Kansas

In recent years, numerous methods of enhancing energy production have been suggested, discussed, and researched in an effort to prepare for the country's

future energy needs. Much of the discussion about these methods of energy production have centered around the questions of how much energy will such methods produce and how soon can they be feasibly implemented. In the push to find a solution to our future energy needs, two of the methods proposed, nuclear and coal, have attracted the greatest amount of attention. Many states have begun to consider their position in the "national energy picture" and started the process of determining what the incentives are for adopting and implementing a particular method of energy production given the unique needs, resources, etc., of the particular state.

Nuclear Energy. On May 17, 1977, the construction permit was issued by the Nuclear Regulatory Commission to Kansas Gas and Electric Company and Kansas City Power and Light Company authorizing the construction of the Wolf Creek Generating Station. Construction of the Wolf Creek nuclear facility has been the subject of controversy in recent legislative sessions.

Coal. The Kansas Geological Survey estimates that demonstrated reserves of coal in Kansas is 526 million tons. In 1976, 576,000 tons of coal were mined in Kansas. Two-thirds of this coal reserve is located in Linn, Crawford, and Cherokee counties. Dr. Lawrence Brady, head of mineral resources division of the Geological Survey, predicts expanded strip mining in those counties. It remains to be seen, however, if Kansas will ever again reach the coal production level of seven million tons per year as it did in 1917 and 1918, according to Dr. Brady.

Kansas coal production had been on the decline since World War I as a result of the availability of cheaper, cleaner fuel alternatives. In addition, there were two other factors that contributed to the limited use of Kansas coal: it generally is high in sulfur content and comes in relatively thin seams. However, with the disappearance of cheaper fuels, and the development of new power plants equipped to burn high sulfur coal such as the LaCygne power plant of Kansas Gas and Electric, the demand for Kansas coal is on the increase again. There will be a continued need for Kansas to develop its own coal resources for its future energy needs.

Coal Gasification. Coal gasification is a process whereby synthetic gas is produced from coal. A coal gasification plant that would produce a high BTU gas is presently being considered by the City of Wichita and Panhandle Eastern Pipeline

Company. Present plans for the plant indicate that it would be the largest plant in the world. Although specific details about the plant are not available, some estimates of requirements for the plant are known and give an indication of the plant's size.

It is estimated that the plant will need approximately 30,000 tons of coal a day, or 11 million tons a year, to produce an output of 250-275 million cubic feet of high BTU of synthetic gas. The water requirement for the gasification process itself is expected to be about five million gallons per day; additional water will be required for cooling purposes. By-products of the plant would include sulfur, naptha, coal tar, and ammonia. Besides these marketable products, the plant would produce approximately 2,500 tons of ash per day.

The capital requirements of such energy production, risks involved, and unknown "real" costs of such projects, make it unclear as to its feasibility. The City of Wichita is presently awaiting results of a feasibility study on the proposed coal gasification plant for that city. The city is also studying the feasibility of financing the project.

Coal Slurry. Coal slurry pipelines are a means of moving coal in slurry form. The coal is ground to a powder and put into a solution with approximately 50 percent water and pumped through a pipeline to users. The coal slurry is then dewatered by centrifuge and burned. The use of coal slurry has gained prominence with recent suggestions that America begin using more of the coal that is available in the far west. Energy Transportation Systems, Inc., has been seeking the rights of eminent domain necessary to build a coal slurry pipeline across Kansas from Wyoming to Arkansas. The issue of coal slurry pipelines has been discussed in the Kansas Legislature during the past two years. The slurry pipeline was the subject of an interim study in 1975.

Testimony presented by Energy Transportation Systems, Inc., (ETSI) over the past two years indicates that there could be certain economic benefits to Kansas if a coal slurry pipeline crossed the state. ETSI estimates taxes of $2,920,000 per year would go to the state, and that Kansas could realize a construction payroll of $8,700,000 for one year.

Questions concerning its total economic impact on the nation as a whole and Kansas in particular have been raised in the debate over coal slurry in Kansas. In order

for the pipeline to cross Kansas the Legislature must decide whether or not they should grant private pipeline companies eminent domain rights so they can condemn land for their lines. Another question is what the overall affect on rail service in Kansas will be if the pipeline does severely effect the economic condition of railroads. Many general questions exist as to the overall impact of a coal slurry pipeline in the areas such as the source of water to produce the slurry. The University of Illinois Center for Advanced Computation indicates that upgrading existing rail lines to move coal would cost substantially less per ton mile than building a coal slurry pipeline.

Oil and Natural Gas. Oil and gas drilling activity was up significantly in 1976. Kansas drilling completions topped that of 1975 by 25.5 percent. Exploratory drilling was up by 97 operations over 1975. The new drilling work resulted in 100 oil discoveries, 49 gas fields and 653 dry holes, a success ratio of 18.5 percent.

Two studies have previously been completed by the Kansas Legislature in 1973 and in 1975 concerning natural gas supplies. The 1973 study culminated in legislation being passed which authorized cities to establish natural gas acquisition systems as a means of minimizing the impact of natural gas shortages. The 1975 study study looked at the possibility of designating intrastate pipelines as limited common carriers. This effort was suggested as a means of keeping "Kansas gas in Kansas." However, after brief hearings, the Committee decided there were two many questions still unanswered and did not recommend any bill be drafted on the subject.

At present, Kansas is the fifth largest producer of natural gas in the United States. Production of natural gas has steadily declined since 1973, with 1976 production dropping to 828 billion cubic feet (BCF) of natural gas compared to 1975 production of 844 BCF. Total natural gas consumption has also steadily declined since 1974. Although consumption has declined within the state, exports of natural gas from the state have risen since 1974. There are approximately 20 companies in Kansas that produce or purchase and sell natural gas. With the steady decline in known accessible natural gas reserves, alternative energy sources must be found to supplement this loss as well as continued conservation efforts.

In the past, significant industrial advances in Kansas were based on oil. Crude oil reserves and production have shown parallel declines in recent years. In 1975 and 1976, production decreased but at a slower rate than in previous years. The higher crude oil prices has caused increased activity by the oil industry in the state which has increased the drilling rate in the last two years. Refining capacity is at a high level, however, oil produced in Kansas supplies less than 50 percent of the crude oil needs of the refineries. Imported oil is now being brought in by pipelines from the Gulf Coast. In 1976, oil production was 58,714,000 barrels which represented a slight decline from the 59,108,000 barrels produced in 1975.

Solar Energy. Solar energy is the energy received by the earth from the sun in the form of electromagnetic radiation. According to a recent Energy Research and Development Administration (ERDA) study, solar heating and cooling can be competitive with oil or electric heat pumps if the cost of the solar system can be reduced 25 percent. This cost reduction has been interpreted by ERDA to mean a combination of tax credit, accelerated depreciation allowance and low-interest loan programs. Kansas has responded to the need to create incentives for solar energy use by passing legislation in 1976 granting income tax credits and accelerated amortization on solar system. The 1977 Session of the Legislature passed legislation granting a 35 percent property tax rebate on solar systems and providing for solar easements. As a result of the 1976 and 1977 legislation, Kansas provides perhaps the greatest financial incentives to the homeowners of the state who install solar energy systems of any of the states.

ERDA recently announced funding for four buildings in Kansas which use or will use solar energy. There are presently approximately 20 to 30 buildings in Kansas, both home and business, which use solar energy.

Gasohol. Much of the Research on the feasibility of alcohol-blend motor fuels has taken place prior to 1960. Although the idea has been demonstrated as technologically feasible, the basic limitation on the production and use of fermentation ethyl alcohol for fuel has been economics. However, with new advances in the process used to make ethyl alcohol, and the need to conserve energy yet stimulate the economy, gasohol appears as a new form of domestic energy ready for use.

Gasohol is an automotive fuel containing a blend of 10 percent agriculturally derived ethyl alcohol and 90 percent unleaded gasoline. In a two million mile road test in Nebraska using state highway vehicles, consumption of gasohol appears to be about 5 percent less than unleaded gasoline. Gasohol not only improves fuel consumption, it also provides an economic stimulus to the agricultural economy, according to Nebraska authorities. Legislation in Nebraska reduces the motor fuel tax on gasohol.

Recently a bill was passed by Congress and signed by the President to provide government guaranteed loans for four pilot plants that would convert farm crops into fuel for autos, feed for cattle, and protein for humans. The loans will guarantee up to $15 million for the four gasohol projects.

Committee Deliberations and Conclusions

In its study of Proposal No. 21, the Committee received testimony from representatives of the Kansas Energy Office, the Kansas Geological Survey, the Eastern Kansas Oil and Gas Association, the Kansas Independent Oil and Gas Association, the Southwest Kansas Royalty Owners Association, the Anadarko Production Company, Farmland Industries, the Nebraska Agricultural Products Industrial Utilization Committee, FAR-MAR-Company, Incorporated, the Kansas Wheat Commission, Mid-America Coalition for Energy Alternatives, the Division of Environment of the Department of Health and Environment, Cities Service Oil Company, the Tertiary Oil Project at the University of Kansas, and the Wind Energy Laboratory of Wichita State University. Also, the Committee heard from a Nebraska State Senator and a Kansas House member, Tom Dean of the Kansas University School of Architecture, and Steve Blake of Oskaloosa, Kansas.

In the area of energy production, the patterns of energy production and consumption were described to the Committee. This included a formal presentation of the "Regional Energy Alternatives Study" which had been comissioned by the Ozark Regional Commission. The study makes various recommendations concerning fuel switching, increasing energy availability from other states, energy resource development alternatives, conservation and contingency planning alternatives, and

needed institutional changes. Two primary issues were taken up under this part of the proposal: (1) the need for a forced pooling/unitization law in Kansas to encourage the exploration of oil and gas, and (2) whether Kansas should encourage the production of gasohol for sale in the state.

In the testimony on a forced pooling/unitization proposal, the Committee was told that such legislation would benefit the people of the state by: (1) encouraging more drilling and increased exploration, (2) returning greater revenue to the state, and (3) providing for energy for the state. Such a law would allow producers to force recalcitrant landowners into an agreement in the development of a particular oil or gas field.

Various opponents of forced pooling/unitization argued that the state should not act in this area as operators and landowners are cooperating voluntarily. They also emphasized the increased cost for additional staff for the Kansas Corporation Commission. Such legislation would take away landowner's rights and economic benefits they should have under oil and gas lease contracts, including the right to negotiate lease terms and lease bonuses, the right to negotiate for drilling of wells or additional development, and the right to refuse to lease land for the production of oil and gas for personal or business reasons.

The advocates of gasohol argued that the success of the program in Nebraska justifies its introduction and promotion in Kansas. It was also emphasized that a successful gasohol program would help solve the age-old problem farmers have in securing markets for excess grain.

Other conferees argued that the commerical production of gasohol is not economically feasible at this time. It was suggested that Kansas should not undertake such a program which merely repeats the Nebraska project. To improve markets for surplus grains, the state should encourage research projects on wheat by-products and their recovery in the most valuable form such as extracting starch and wheat bran and glutton. Concern was expressed over the amount of energy that is required to create energy in the form of gasohol. It was noted that if natural gas is used in creating gasohol, more energy is used than is created, however, if coal is used then there is a net

energy gain. Advocates of gasohol insist that the value of distillers dried grains, the by-product of the process, must be considered in estimating the net energy gain in the production of gasohol. It was agreed that converting grains to alcohol would be more attractive if the government became involved in funding gasohol plants.

In the area of energy research, the Committee was presented with a review of the tertiary oil recovery project at El Dorado, Kansas, which is funded by Cities Service Oil Company and the Energy Research and Development Administration. They also had a presentation on the tertiary oil project at Kansas University which is primarily funded by the State of Kansas.

The K.U. research project focuses on: (1) the evaluation of potential of tertiary processes in Kansas, (2) research and development of tertiary recovery methods, and (3) the dissemination of information on the oil recovery process. It is exclusively a laboratory research project, however, the process is being integrated into graduate and undergraduate classes.

The El Dorado project involves field work intended to test whether tertiary oil can be recovered using particular fluids injected into certain wells to force the residual oil to recovery wells. The project is also to evaluate if commercial oil recovery is practical with this process and to make data and results available to the public.

Two presentations were made to the Committee on wind research. Research into the use of large and small wind turbines for the generation of electricity was described in addition to a description of the way wind statistics are compiled. One of the projects described to the Committee is being conducted by the Wind Energy Laboratory of Wichita State University which is entirely funded by the State of Kansas.

Respectfully submitted,

Rep. Donald E. Mainey,
Chairperson
Special Committee on Energy

Sen. Donn Everett,
Vice-Chairperson
Sen. Arnold Berman
Sen. Bill Morris
Rep. Gus Bogina

Rep. Tim Holt
Rep. J. B. Littlejohn
Rep. Robert H. Miller
Rep. Jamie Schwartz

Attachment No. 4a

STATE OF KANSAS
ENERGY OFFICE
503 KANSAS, TOPEKA, KANSAS 66603

October 26, 1977

Honorable Donald E. Mainey
Chairman, Special Committee on Energy
Kansas House of Representatives
430 Sumner
Topeka, Kansas 66616

Dear Chairman Mainey:

When I appeared before the Special Committee on Energy on October 14, 1977, I was asked to investigate the possible funding sources, including use of Kansas' energy conservation grant funds, to conduct an independent evaluation of the proposal for a Wichita coal gasification facility. Based upon the Committee's request and conversations between myself and some members of the Wichita delegation, particularly Senator Feleciano, I agreed that the KEO provide assistance in this endeavor.

Preliminary discussions with possible contractors indicate that the evaluation ought to address the following areas: technical feasibility, economic feasibility, resource availability, environmental implications, costs and benefits to the Kansas economy, and alternatives to high-BTU gasification. For each area, the study would examine the adequacy of data and information sources used by the City and its contractors, the validity of major assumptions, the adequacy of detail and the validity of methodologies and techniques employed in projecting demands, costs, and so forth. It is expected that the evaluation would be conducted within a three-month period, given a level of effort of nine to twelve man-months and a cost of $30,000 - $50,000.

Gerald Thurston, Conservation Director in the Region VII office of the Department of Energy, has indicated that the DOE considers such a study to be an inappropriate activity for funding under the conservation plan. The basis for this position was that the proposed study would not meet with the DOE's objectives of reducing energy consumption by 1980, but rather deals with developing a new fossil fuel supply source. Therefore, it is not possible for the KEO to fund the proposed study using conservation funds.

Other alternatives for funding have been and are still being explored. While our efforts to seek funding have not yet been completed, I would like to give you a status report on our findings to date. The following groups have been considered as potential funding sources and preliminary contacts have either been made or attempted with each: the U.S. Department of Energy; the Economic Development Administration; the Environmental Protection Agency; the Ozarks Regional Commission; and private organizations such as the American Gas Association.

The most logical funding source would appear to be the U.S. Department

Atch. 4a

of Energy's resource development function, previously carried out by ERDA. The initial response given to us, however, was that it is unlikely that DOE would fund an independent study if the decision is made to approve the $24 million proposal submitted by the City of Wichita. I have not excluded the DOE as a possible funding sponsor, but it is certain that we could not expect a firm answer until the decision is made on the Wichita proposal.

A second possibility - and probably the most accessible agency - is the Ozarks Regional Commission. The difficulty with the ORC is that project funding priorities have already been set for the current fiscal year. Approval of any new projects would have to be given at the expense of one or more projects already planned. It is at least questionable that the Commission would be willing to take such an action. I would further point out that any request would have to be considered by four other state governors, and their agreement certainly cannot be presumed.

Contacts with the Economic Development Administration and the Environmental Protection Agency have not yet been completed. Projects funded by these agencies typically are of a more narrow scope than what would be required for the gasification study. In the case of EDA, emphasis generally is placed on projects which stimulate the economy and create jobs in depressed areas. For EPA, projects relating to energy facilities address only the environmental effects and control requirements of the facility.

I have also considered requesting grant assistance from private organizations such as the American Gas Association or the National Coal Association. Although it is possible that funds might be available from these groups, I do not believe it wise to pursue them because of the interest such a group might have in a particular outcome of the study.

The final option for funding the study would be a direct state appropriation, either authorized by the State Finance Council or the Legislature once it convenes. All the non-state funding sources would necessarily entail delays in making applications and having the proposals considered. While there may be other problems, a state appropriation could be acted upon more quickly.

I will keep you informed of our progress in seeking an outside funding source for the gasification study and would appreciate your thoughts on how to proceed if none materialize.

Sincerely,

Steven D. Harris
Director

SDH:pt

cc: Governor Bennett
Members, Special Committee on Energy
Members, Wichita delegation

Attachment 5

—TENTATIVE AGENDA—

THE CONSUMER AND THE UTILITIES

MONDAY, NOVEMBER 21, 1977

8:30 AM	REGISTRATION	Coffee and information packets
9:45 AM	WELCOME	MAXINE HANSEN, President League of Women Voters of Kansas GOVERNOR ROBERT F. BENNETT Governor of Kansas
10:00 AM	THE UTILITY PERSPECTIVE	WILLIAM WALL, President Kansas Power & Light Co.
	THE CONSUMER PERSPECTIVE	LAURA KEEVER, Energy Committee member League of Women Voters of the United States
11:00 AM	THE UTILITY DOLLAR	G. T. VAN BEBBER, Chairman Kansas Corporation Commission
11:30 AM	THE NATURAL GAS PERSPECTIVE	ROBERT D. FINK, Manager, Marketing Department Gas Service Co.
11:50 AM	INFORMAL BOX LUNCH	
12:50 PM	COST OF ENERGY	CHARLES ROSS, General Manager Kansas Electric Cooperatives WILSON CADMAN, Executive Vice President Kansas Gas & Electric Co. WES JACKSON, Director The Land Institute, Salina, Kansas
1:50 PM	HOW MUCH ENERGY DO WE REALLY NEED?	ARTHUR BENSON II, Attorney-at-Law Kansas City DR. MARGARET MAXEY, University of Detroit Associate Professor of Bioethics
3:10 PM	COFFEE BREAK	
3:30 PM	HOW WILL WE PAY?	JOHN F. CHILDS, Vice President Kidder Peabody & Co., Inc. New York City, New York MICHAEL VIRENE, Director of Utility Research & Planning Division Missouri Public Service Commission
4:50 PM	ADJOURNMENT	
5:00 PM	RECEPTION AND DISPLAYS	
	DINNER ON YOUR OWN	
7:30 PM	INFORMAL DISCUSSION SESSIONS WITH AFTERNOON SPEAKERS	
8:30 PM	INSULATION SHOW	
10:30 PM	CONCLUSION OF INFORMAL EVENING PROGRAM	

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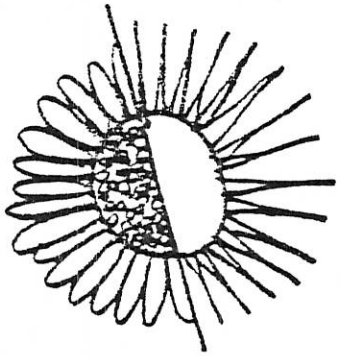
TUESDAY, NOVEMBER 22, 1977

9:00 A.	INNOVATIVE RATE DESIGNS	ROBERT UHLER Electric Power Research Institute
9:30 AM	ROLE OF THE COMMISSION IN RATE REFORM	MICHAEL VIRENE, Missouri Public Service Commission Staff
9:45 AM	WORKSHOPS	
11:45 AM	FIRING LINE	R. C. LOUX, Commissioner Kansas Corporation Commission REP. DON MAINEY Kansas House of Representatives SEN. ROBERT TALKINGTON Kansas State Senate WES JACKSON, Director The Land Institute ART DOYLE, Executive Vice President Kansas City Power & Light Co. ROBERT UHLER Electric Power Research Institute ROBERT FINK Gas Service Co.
1:00 PM	LUNCHEON "ELECTRICITY IS BLACK"	PROFESSOR DWIGHT NESMITH, Director of Cooperative Education, Department of Engineering Kansas State University
2:30 PM	ADJOURNMENT	



THE CONSUMER AND THE UTILITIES

a conference sponsored by the League of Women Voters of Kansas in cooperation with the Kansas Corporation Commission and the gas and electric utilities in Kansas.

21 AND 22 NOVEMBER 1977

DOWNTOWN RAMADA INN • TOPEKA, KANSAS

Attachment No. 6

7 RS 1742

_____ CONCURRENT RESOLUTION NO. _____

By Special Committee on Energy

Re Proposal No. 19

A CONCURRENT RESOLUTION urging the secretary of transportation and the Kansas turnpike authority to provide for sites for parking of persons engaged in car pooling.

WHEREAS, Because of the ~~present energy crisis~~ need to preserve our depletable energy resources it is necessary and desirable to encourage citizens to participate in car pooling; and

WHEREAS, Storage or parking of vehicles by persons engaged or desiring to engage in car pooling is a problem; and

WHEREAS, If roadside parking could be established near junctions or central points along highways, such parking areas would afford places of assembly for participants in car pooling: Now, therefore,

Be it resolved by the _____ of the State of Kansas, the _____ concurring therein: That the legislature urges the secretary of transportation and the Kansas turnpike authority to study and select suitable sites which are along the routes of the roads and highways under their respective jurisdictions, and which are on property under their respective jurisdictions, for parking for persons engaged in car pooling and to erect signs indicating the availability of parking space for persons engaged in car pooling. The secretary and the authority are further requested to report to the 1979 legislature other possible sites which would require site preparation or acquisition and to make requests for appropriations or authority required therefor; and

Be it further resolved: That the secretary of state be directed to transmit enrolled copies of this resolution to the secretary of transportation and the chairperson of the Kansas turnpike authority.

Atch. 6

Attachment No. 1

7 RS 1741

_____ BILL NO. _____

By Special Committee on Energy

Re Proposal No. 19

AN ACT relating to parking on certain state property; placing certain limitations on permits therefor.

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

Section 1. (a) On and after January 1, 1979, no parking permit issued pursuant to K.S.A. 75-4506 and amendments thereto shall be valid unless such permit is a carpool permit issued to three (3) or more persons using a single parking space in common.

(b) The provisions of this section shall not apply to permits to park on the statehouse grounds or in parking spaces provided to meet the needs of the legislative branch.

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

Atch. 7

Attachment No. 8

7 RS 1731

_____ BILL NO. _____

By Special Committee on Energy

Re Proposal No. 19

AN ACT relating to parking on certain state property; relating to rents, charges and fees therefor; amending K.S.A. 75-4506 and repealing the existing section.

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

Section 1. K.S.A. 75-4506 is hereby amended to read as follows: 75-4506. No motor vehicle, whether privately or publicly owned, may be parked upon parking lots, facilities or drives of any state owned or operated property or building in Shawnee county, Kansas, except on properties listed as exceptions in K.S.A. 75-4503, or except as authorized under rules and regulations adopted by the secretary of administration as provided in K.S.A. 75-3706 or, in the case of the statehouse grounds, in accordance with signs posted by the capitol area security patrol. Such rules and regulations ~~may~~ shall fix and provide for collection of rents, charges or fees to be imposed in connection with and for the use of ~~the~~ such parking facilities ~~so owned and operated~~ other than those located on the statehouse grounds and those provided for use by the general public, and the secretary of administration may enter into any contract or contracts therefor with any state officer or employee or with any board, commission, agency or instrumentality of the state of Kansas. The secretary of administration may design and issue parking permits to facilitate the best use of any such parking lots, facilities or drives. Parking permits to park on the statehouse grounds shall be designed and issued in accordance with rules or instructions of the legislative coordinating council. Notwithstanding the foregoing provisions of this section, the secretary of administration shall provide, without

Atch. 8

rent, charges or fees, not less than one hundred forty (140) parking spaces to meet the needs of the legislative branch and whenever the legislative coordinating council shall determine that additional parking spaces are necessary the secretary of administration shall provide such number of additional parking spaces as may be specified by the legislative coordinating council.

New Sec. 2. All rents, charges and fees imposed in connection with and for the use of parking lots, facilities or drives of state owned or operated property or buildings, and contracts therefor, imposed pursuant to K.S..A. 75-4506 and amendments thereto, shall be in amounts as follows:

(a) For one person using a single parking space, the ~~current rate~~ $10.00 charged ~~for the use of similar commercial~~ parking facilities in the same area;

(b) for two (2) persons using a single parking space in common, three-fourths (3/4) the $7.50 current rate charged for the use of similar commercial parking facilities in the same area;

(c) for three (3) persons using a single parking space in common, one-half (1/2) the current rate charged for the use of similar commercial parking facilities in the same area; and

(d) for four (4) or more persons using a single parking space in common, one-fourth (1/4) the current rate charged for the use of similar commercial parking facilities in the same area.

Sec. 3. K.S.A. 75-4506 is hereby repealed.

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