

ENERGY RESOURCES STUDY COMMITTEE

**REPORT TO THE LEGISLATIVE COUNCIL
AND THE MEMBERS OF THE
FIRST SESSION OF THE SIXTY-SEVENTH GENERAL ASSEMBLY**

**STATE OF IOWA
1977**

FINAL REPORT

ENERGY RESOURCES STUDY COMMITTEE

During the 1976 Session of the Sixty-sixth General Assembly several resolutions were introduced calling for interim studies of energy conservation proposals, energy resource projects and the state's role in hazardous and radioactive materials management. The Legislative Council created and assigned these resolutions (Senate Concurrent Resolution 116, House Concurrent Resolution 124, Senate Concurrent Resolution 111, House Concurrent Resolution 114, House Concurrent Resolution 157 and House Concurrent Resolution 138) to the Energy Resources Study Committee.

Legislative members appointed to the Study Committee by the Legislative Council were Senators James V. Gallagher, Irvin L. Bergman, Cliff Burroughs, Louis P. Culver, James Briles, Norman G. Rodgers and Dale L. Tieden and Representatives Mary T. O'Halloran, Cooper Evans, William B. Griffee, Arlo Hullinger, Wendell C. Pellett, Carroll Perkins and Andrew Varley. At its first meeting the Study Committee named Senator Gallagher and Representative O'Halloran as Co-chairpersons.

The Study Committee held six meetings during the interim. At the first meeting, two subcommittees were organized, one to examine a request submitted by the Iowa State University of Science and Technology for additional funds to continue and expand the Iowa Coal Research Project and the other to study problems associated with the transportation, use and disposal of hazardous materials in Iowa and the need for a state role in protecting the public from the hazards associated with certain types of radiation producing equipment. Because of the perceived importance of responsibilities assigned to the Study Committee in the area of energy conservation and to familiarize all members of the Committee with the substance and effects of various conservation proposals, the full Committee rather than a Subcommittee examined issues in this area. The remainder of this report discusses the energy conservation, coal project and hazardous materials areas separately with Committee recommendations presented at the end of each section.

ENERGY CONSERVATION

Background

In 1976, Congress enacted the Energy Policy and Conservation Act which provides funds to the states for energy conservation planning and programming. The Act requires that states meet the following statutory or program requirements as a condition for the receipt of funds:

1. Statewide lighting efficiency standards for all new buildings.

2. Statewide thermal efficiency standards for all new buildings and for additions and renovations to existing buildings.
3. Car pool, van pool and mass transit programs.
4. Energy conserving procurement practices in government at all levels.
5. Right turn on red traffic law.

The Act also establishes as a goal for each state a five percent decrease in total energy consumption by 1980 based on projections for that year. According to the Iowa Energy Policy Council even if Iowa enacted legislation or established programs in these required areas (currently only the fifth requirement has been satisfied) such conservation efforts would result in only a 1% decrease in projected energy consumption by 1980. Energy conservation proposals discussed by the Study Committee and recommended in this section are not offered merely as a response to this federal requirement but are being proposed primarily because the members of the Study Committee are concerned over the increasing costs of energy to consumers, coupled with the diminishing supplies of nonrenewable fossil fuels and are convinced that a decrease in energy consumption would be in the public interest and could be effected by eliminating waste and utilizing energy more efficiently without altering our present standard of living.

The Study Committee sought assistance from Mr. Maurice Van Nostrand, Chairman of the Iowa State Commerce Commission and the Iowa Energy Policy Council, Mr. Rodson Riggs, Director of the Iowa Energy Policy Council and members of his staff, Mr. Don Appell, State Building Code Commissioner and several persons representing the various gas and electric public utilities serving the state. At the onset of the study, Committee members committed themselves to producing a package of individual energy conservation measures for consideration by the General Assembly.

Proposals discussed included property tax exemptions for alternative energy devices, energy efficiency standards for certain appliances, the incorporation of energy efficiency standards in the state building code, and home insulation programs and incentives. The staff prepared compilations of bills introduced in previous general assemblies on these subjects, a summary of energy conservation statutes and programs in effect in other states, and a report on the efforts of public utilities to encourage their customers to adequately insulate their homes, to aid the Committee in their deliberations.

The Energy Policy Council also provided summaries of federal laws which impact on energy conservation programs, information on the winterization program in Iowa which provides funds and volunteer labor to elderly low-income persons to winterize their homes and an informative report detailing how the

energy efficiency rating for an appliance is determined and the energy savings which would result if mandatory appliance efficiency standards were established.

The Study Committee identified three options regarding the types of proposals which could be recommended. These were: Mandatory standards for energy efficiency, voluntary programs and programs which offer an incentive for energy conserving practices. It was generally concluded that voluntary programs alone, such as promotional and financial services provided by public utilities for home insulation will not affect energy savings of the magnitude desired. However, the Study Committee emphasized the importance of educational programs which inform the public of the advantages, both in terms of dollar savings and energy savings, which would result from home insulation and other voluntary energy conservation measures. Such educational efforts, it was noted, must convince the public that an energy shortage still exists, as we continue to deplete nonrenewable resources at an alarming rate and should prepare them to accept mandatory conservation measures.

Recommendations

The Study Committee recommends two mandatory conservation proposals to the General Assembly for consideration. Bill II (attached to this report) requires the state building code commissioner to promulgate energy efficiency standards, including lighting and thermal efficiency standards for buildings and factory built structures which are intended for human occupancy. Although the present state building code applies only to state buildings and in those governmental subdivisions which have adopted it, energy efficiency standards would apply to all new buildings and additions to buildings for which architectural and engineering plans had not been finalized prior to January 1, 1978. Lighting efficiency standards would apply as well to all buildings, both new and existing, which are open to the public. This extensive coverage is required by the Energy Policy and Conservation Act discussed earlier in this report. That Act also mandates the development of energy efficiency standards for renovated buildings, however the Study Committee thought this issue warranted further investigation to determine primarily what constitutes a renovation and should be addressed in a separate bill at a later date.

Regulations promulgated pursuant to the federal law require the states to adopt standards which are no less stringent than either the 90-75 standards developed by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) or the Department of Housing and Urban Development Minimum Property Standards (HUD-MPS) for residential dwellings and the ASHRAE 90-75 for commercial and industrial units. (These are the only building standards available which address the energy conservation aspects of design and construction.) An impact study commissioned by the Energy Research and Development Administration on the ASHRAE 90-75 revealed that the standard would reduce annual energy consumption from 11% in single family dwellings to 60% in office buildings while

the HUD-MPS would decrease consumption from 18% in a single family residence to 4% in low rise apartment buildings. Furthermore the report indicated that ASHRAE 90-75 would decrease construction costs from \$.02 to \$.63 a square foot depending on the type of building. HUD-MPS would increase initial costs slightly in the Northeast and North Central regions of the country. Both standards would require additional design time but the payback for these additional costs would be less than six months.

Nationally, energy conservation building standards are expected to reduce annual energy consumption between 13-27% depending on the standard. For the North Central region of which Iowa is a part the savings are estimated at 4.083 trillions BTU's annually. Given this tremendous potential for energy savings and the resultant long-term cost savings to the public, the Study Committee unanimously recommends Bill II.

The Study Committee also recommends that minimum energy efficiency standards be established for refrigerators, freezers, refrigerator-freezers and air conditioners. The Energy Policy Council is currently formulating such standards which will be incorporated in a bill to be drafted at a future date which would require all covered appliances manufactured after January 1, 1978 and sold in Iowa to meet such standards. Contrary to similar proposals introduced last session, the bill would not assign any regulatory functions in this area to the Energy Policy Council. A retailer found guilty of selling an appliance which does not meet the standards must replace the inefficient model with a comparable model which meets the standards. The Study Committee recommends this bill because of its potential for eliminating wasteful energy consumption.

The legislation also has important implications for reducing power demand. It is estimated that if the present average efficiency rating of a room air conditioner were doubled the state energy demand would decrease in an amount equivalent to the capacity of the Duane Arnold Energy Plant.

Decreasing energy consumption can also be affected by using renewable sources of energy such as solar energy, wind energy and energy generated from certain organic wastes. To this end, the Study Committee determined that an incentive to encourage the use of such alternative energy sources would be appropriate. Bill I (attached) provides a property tax exemption for property constituting a solar, wind or methane gas production system and is recommended to the General Assembly for consideration. The exemption would extend for a period of five years and unlike the current exemption for pollution control equipment, where the property owner must file each year with the department of revenue for the exemption, this bill provides that the assessing authority locate and certify exempt property. This method was seen by the Committee as being less cumbersome to the property owner than the current practice.

A survey of county and city assessors conducted by the staff revealed that there are 9 solar and 2 wind energy systems currently on the tax rolls and 8 solar units not currently being assessed or under construction. Thus, Bill I would have a negligible effect on current property tax revenues.

THE IOWA COAL RESEARCH PROJECT

Background

The Iowa Coal Research Project was initiated in 1974 through a three million dollar appropriation by the General Assembly. The Project includes a demonstration mine located near Bussey which has produced 68,000 tons of coal in the last thirteen months and a coal processing plant located on the campus of Iowa State University of Science and Technology in Ames.

The original goals of the Project were to demonstrate to the Iowa coal mining industry that the ripper-scraper method of removing coal from the earth can be economical, to research different modes of land restoration and their impact on agricultural productivity and to develop techniques for processing Iowa coal which would reduce the sulfur content to environmentally acceptable levels. The three million dollar appropriation will extend through June of 1977. The Project has requested an additional 2.155 million dollars from the General Assembly to continue its research through 1982. This second phase of the Project would involve opening a second mine and constructing a preparation plant on the mine site. Goals of this second phase would include economic studies of the dragline-scraper mining method and of a mining operation coordinated with an on-site preparation facility. Extensive environmental studies would be conducted and further reclamation schemes analyzed, including determining what reclamation techniques work best with a dragline-scraper operation. The Project will also investigate and demonstrate various methods of cleaning and recovering fine size coal including froth flotation, oil agglomeration and pelletization. The proposal includes provisions for selling the coal extracted from the second mine to the three state universities which is anticipated to result in a net savings to the state although this cannot be guaranteed because of fluctuations in the market value of coal and future projections as to the availability of natural gas.

The proposal calls for a return over a period of five years of \$1,908,000 to the state in terms of profits from coal sales and the sale of salvageable equipment upon the Project's termination so that the net cost to the state will be \$246,900.

In examining the Project and the request for additional funds, the Subcommittee looked at the Project's degree of success in meeting original goals and raised the fundamental question of whether it would be to the state's benefit to continue the Project

and if so, in what direction. The Subcommittee met several times with representatives from the Project and discussed the proposal with the heads of various state agencies which share an interest in the mining of Iowa's coal resources, including the Energy Policy Council, the Department of Soil Conservation and the Iowa Geological Survey. Persons from the Iowa Coal Producer's Association were also invited to comment on the value of the Project and the new proposal. The entire Study Committee participated in this discussion. A majority of the miners indicated that they had voted in favor of the new proposal when it was presented to the Association. They did, however, express reservations concerning the need for opening a new mine. Also discussed was the concern that the Project would, by marketing its coal, be competing with the private mining industry in Iowa. In response to this concern, Project representatives pointed out that the proposal provides for the sale of Project coal to the state universities because these markets are currently being supplied by out-of-state producers. When the Study Committee suggested that the Project conduct its research at an established mine operated by an independent producer, both the miners and Project representatives agreed that this would present management problems because in order to do reclamation research all mining operations would have to be run by Project personnel.

Recommendations

The Study Committee, upon the suggestion of the Subcommittee, concluded that continued coal research as proposed by the Iowa Coal Project is necessary for the following reasons:

1. The Project has aided Iowa's independent coal miners by demonstrating that the ripper-scraper method for extracting coal can be used successfully in Iowa.

2. Coal will become increasingly important as an energy source in the United States as the country aims toward energy independence and Iowa can profit by using the vast coal resources located within its borders.

3. Research to develop methods of reducing the sulfur content of Iowa coal to meet environmental standards is essential if this valuable resource is to be utilized to meet some of the state's energy needs.

4. Methods for recovering fine size coal so that the potential for use of our coal resources is enhanced are desirable.

5. The proposal emphasizes long-term research in the area of reclamation. (This is why the bill includes provisions for the possible ownership of land by the Project.) Such research will be invaluable to the coal mining industry as it proposes to demonstrate the effects of different mining methods on reclamation and poor as well as good reclamation techniques.

The Study Committee recommends Bill III (attached to this report) which embodies the Coal Project's proposal for a second mine and preparation plant to the General Assembly for consideration.

HAZARDOUS MATERIALS

Background

The Hazardous Materials Subcommittee focused its attention primarily on the question of whether the state should play a role in monitoring or regulating the use of radiation producing equipment and radioactive materials in Iowa. At their first meeting members were briefed concerning past study efforts in this area including recommendations issued by the 1975 interim ad hoc committee on radiation safety which resulted in the passage of House File 1281 last session. This bill created an interagency coordinating council on radiation safety composed of the heads of various state agencies whose activities touch upon radiation protection. The council is responsible for coordinating the radiation-related activities of its member agencies and for recommending additions and changes in their statutory responsibilities.

Also reviewed were efforts of the 1975 House Subcommittee on Nuclear and Radiation Safety which included an attempted survey of all radiation producing equipment used by health practitioners. The survey was not completed because of financial and personnel problems. For a more detailed account of these past activities see the Report of the House Subcommittee on Nuclear and Radiation Safety to the Second Session of the Sixty-sixth General Assembly (which includes the ad hoc committee's report) and a subsequent document prepared by the Legislative Service Bureau entitled "The State's Role in X-ray Equipment Management."

Past studies in this area have agreed and the Subcommittee recognized early in its deliberations that the state should exercise more control over the use of radiation producing equipment in Iowa. Iowa and Texas are the only two states in the nation which do not have state radiation protection programs. Because surrounding states are enforcing design and operational standards for x-ray equipment it has been asserted that Iowa has become the "dumping ground" for substandard machines. The Department of Health and the State Hygienic Laboratory differ widely in their estimates of how many x-ray machines are being used in Iowa which only serves to emphasize the lack of state involvement in an area which presents a real threat to the public health and safety.

On November 4, the Subcommittee held a public hearing. At this point the Subcommittee narrowed its study to include only radiation producing equipment and radioactive materials used in the healing arts. Persons who testified included representatives from the State Hygienic Laboratory, the Iowa Medical Society, the

Society of Nuclear Medicine Technologists, the Iowa Society of Radiologic Technologists, the Iowa Radiological Society, the Iowa State Department of Health, Ames Laboratories, Iowa State University of Science and Technology Department of Environmental Health and Safety, and the medical products division of Picker Corporation. Witnesses were asked to respond to a prepared series of questions which included whether a state equipment registration program should be initiated and by what agency, whether inspections should be required and whether training standards for users should be established. In addition witnesses also provided Subcommittee members with information concerning federal radiation protection activities. It was generally agreed that nuclear medicine is being adequately monitored by the federal government and that state programs should focus on safety standards for diagnostic equipment.

Subcommittee members learned that the federal government has established performance standards for all new diagnostic systems and components manufactured after August 1, 1974. Beginning in 1979, performance standards will also apply to reconditioned equipment. While x-ray machines in some of the smaller nonaccredited hospitals throughout the state are currently being inspected by a state team for Medicare certification purposes a majority of persons testifying expressed concern that no inspection program exists now nor are federal inspections anticipated in the future for machines located in practitioners' offices and clinics.

All witnesses agreed that a state registration and preferably an inspection program is desirable. It was also pointed out that many untrained persons are currently operating x-ray equipment. While professional organizations such as the society of radiologic technologists have educational standards for members, not all persons who practice radiologic technology are members of the society and many do not meet the educational standards. It was suggested that user education should be emphasized but that if a user meets standards established by a professional society no further state certification should be required.

All witnesses agreed that the state department of health is the most logical agency with which to place radiation protection responsibilities. The department, however, emphasized that additional funds would be necessary to develop the staff expertise to conduct radiation protection activities.

One final area of discussion was the possibility of requiring exposure records for patients and establishing maximum exposure levels. Medical professionals opined that such requirements would be rather superfluous as a doctor would order an x-ray for a patient, even if the patient's exposure level had reached the maximum, if the doctor thought the exam was necessary.

Recommendations

The Study Committee unanimously recommends to the General Assembly for consideration Bill IV (attached) which creates a division of radiation protection within the State Department of Health.

The division would be responsible for registering all sources of ionizing, non-ionizing and electromagnetic radiation in the state and not just those sources used by health practitioners in their professions. This bill gives the Department the authority to inspect sources of radiation but such inspections are not mandated. Educational programs for users could be offered but attendance could not be compelled.

In past years radiation protection programs have been recognized by supporters of both parties as being important in protecting the health and safety of Iowans, however legislation in this area has not been a priority of either party. The Study Committee urges the General Assembly to give this important issue full consideration during the upcoming legislative session.

BILL I

RECOMMENDED BY THE ENERGY
RESOURCES STUDY COMMITTEE FOR
CONSIDERATION BY THE SIXTY-
SEVENTH GENERAL ASSEMBLY

Passed House, Date _____ Passed Senate, Date _____
Vote: Ayes _____ Nays _____ Vote: Ayes _____ Nays _____
Approved _____

A BILL FOR

1 An Act providing an exemption from property taxation for solar
2 and wind energy devices and methane gas production systems.
3 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

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S.F. _____ H.P. _____

1 Section 1. Section four hundred twenty-seven point
2 one (427.1), Code 1977, is amended by adding the following
3 new subsection:

4 NEW SUBSECTION. Solar and wind energy devices and
5 methane gas production systems.

6 a. Improvements to real property which constitute a
7 solar or wind energy device or which are used to produce
8 methane gas from organic wastes, not to exceed the actual
9 value of the improvements, shall be exempt from taxation for
10 the periods and to the extent provided in this subsection.

11 b. This exemption shall apply to new installations
12 of the property for a period of five years beginning on January
13 first after the construction or installation of the property
14 is completed. The exemption under this subsection shall apply
15 for a period of five years beginning on January 1, 1978 to
16 property existing on the effective date of this Act if its
17 construction or installation was completed after January 1,
18 1975. The exemption for existing property shall begin with
19 respect to the assessment as of January 1, 1978, and the taxes
20 payable on the basis of this assessment during the fiscal
21 year beginning July 1, 1979.

22 c. The assessing authority shall assess and list any
23 property exempt from taxation under this subsection in the
24 same manner as other tax-exempt property is assessed and
25 listed under section four hundred twenty-seven point one
26 (427.1), subsection thirty-one (31) of the Code. Not later
27 than the first of March of the year in which the property
28 is first assessed and listed as tax-exempt property under
29 this subsection, the assessing authority shall notify the
30 owner in writing of the tax-exempt status for the property,
31 the duration of the exemption, and the assessed value of the
32 property. If the construction or the installation of property
33 which is eligible for tax exemption under this subsection
34 is unknown to the assessing authority on the first of January
35 of the year following its completion or any subsequent year,

1 the assessing authority, upon the discovery and assessment
2 of such property, shall reduce the number of years that the
3 property is eligible for the tax exemption by the number of
4 assessment years that the property should have been assessed
5 and listed as provided in this subsection. The determination
6 of eligibility for tax exemption shall be made by the assessing
7 authority. Judicial review of a determination of the director
8 of revenue under this subsection may be sought in accordance
9 with chapter seventeen A (17A) of the Code. Review of a
10 determination by an assessing authority may be sought from
11 the board of review as provided in chapter four hundred forty-
12 one (441) of the Code.

13 d. The department of revenue shall adopt any rules
14 necessary to implement this subsection, including rules on
15 identification and valuation of the property, but the rules
16 shall not require a property owner to apply for the tax
17 exemption as a prerequisite to eligibility. All rules adopted
18 shall be subject to the provisions of chapter seventeen A
19 (17A) of the Code.

20 e. As used in this subsection "solar or wind energy
21 device" means a man-made system for converting or upgrading
22 the natural energy of the sun or wind into mechanical,
23 electrical or heat energy which is more useful to humans than
24 the natural solar or wind energy, and includes equipment used
25 to store such natural energy so converted or upgraded.

26 EXPLANATION

27 This bill provides an exemption from property taxation
28 for improvements to real property which constitute a solar
29 or wind energy device or a methane gas production system.
30 The exemption is for a period of five years beginning on
31 January 1, 1978 and applies to all improvements completed
32 after January 1, 1975.

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BILL II

RECOMMENDED BY THE ENERGY
RESOURCES STUDY COMMITTEE FOR
CONSIDERATION BY THE SIXTY-
SEVENTH GENERAL ASSEMBLY.

Passed Senate, Date _____ Passed House, Date _____
Vote: Ayes _____ Nays _____ Vote: Ayes _____ Nays _____
Approved _____

A BILL FOR

1 An Act providing for the promulgation of energy efficiency
2 standards for buildings and factory built structures in the
3 state building code.

4 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

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1 Section 1. Chapter one hundred three A (103A), Code
2 1977, is amended by adding the following new section:

3 NEW SECTION. ENERGY EFFICIENCY STANDARDS.

4 1. The commissioner shall, with the approval of the
5 advisory council, promulgate standards for inclusion in the
6 state building code designed to conserve energy in buildings
7 and factory built structures. Provisions of the state building
8 code establishing energy conservation standards, including
9 thermal efficiency standards shall apply to all new
10 construction throughout the state regardless of whether or
11 not the construction is located in a governmental subdivision
12 which has adopted the state building code. Provisions of
13 the state building code which establish lighting efficiency
14 standards shall apply as well to all buildings in the state
15 which are open to the public. Notwithstanding the definition
16 in subsection fifteen (15) of section one hundred three A
17 point three (103A.3) "construction" as used in this section
18 is limited to the erection of new buildings or factory built
19 structures and additions to existing buildings or factory
20 built structures and does not include renovations or repairs.
21 "Existing building or factory built structure" as used in
22 this section means buildings or factory built structures
23 intended for human occupancy which are occupied or ready for
24 occupancy on January 1, 1978 or for which engineering and
25 architectural plans have been finalized prior to January 1,
26 1978.

27 2. Energy efficiency standards established in the state
28 building code shall be administered and enforced by the state
29 building code commissioner, however local administration and
30 enforcement apparatus and procedures available pursuant to
31 section one hundred three A point nineteen (103A.19) of the
32 Code shall be used whenever possible.

33 Sec. 2. Section one hundred three A point ten (103A.10),
34 subsection two (2), Code 1977, is amended to read as follows:

35 2. The Except as provided in section one (1) of this

1 Act, the state building code shall be applicable:

2 Sec. 3. Section one hundred three A point twenty-two
3 (103A.22), subsection one (1), Code 1977, is amended to read
4 as follows:

5 1. Nothing in this chapter shall be construed as
6 prohibiting any governmental subdivision from adopting or
7 enacting any building regulations relating to any building
8 or structure within its limits, but a governmental subdivision
9 in which the state building code has been accepted and is
10 applicable or in which the energy conservation provisions
11 of the state building code are applicable shall not have the
12 power to supersede, void, or repeal or make more restrictive
13 any of the provisions of this chapter or of the rules adopted
14 by the commissioner.

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EXPLANATION

16 This bill requires the state building code commissioner
17 to promulgate energy efficiency standards for buildings and
18 factory built structures as part of the state building code.
19 The standards would apply to all new buildings in the state
20 constructed after January 1, 1978 and to all additions to
21 existing buildings made after that date. Other provisions
22 of the building code are applicable only to state owned
23 buildings, all factory built structures and to other buildings
24 and structures located in a governmental subdivision which
25 chooses to adopt the code. An existing building or factory
26 built structure is defined as including those buildings or
27 structures for which engineering and architectural plans have
28 been finalized as of January 1, 1978 (which gives the
29 commissioner six months to promulgate standards). The bill
30 does not affect renovations to existing buildings. Energy
31 standards shall be administered and enforced by the
32 commissioner but local administration and enforcement shall
33 be used whenever possible.

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BILL III

RECOMMENDED BY THE ENERGY
RESOURCES STUDY COMMITTEE FOR
CONSIDERATION BY THE SIXTY-
SEVENTH GENERAL ASSEMBLY

Passed House, Date _____ Passed Senate, Date _____
Vote: Ayes _____ Nays _____ Vote: Ayes _____ Nays _____
Approved _____

A BILL FOR

1 An Act making an appropriation from the general fund of the
2 state to Iowa state university of science and technology to
3 carry out a coal research project within the state.

4 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

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1 Section 1. There is appropriated from the general fund
2 of the state to Iowa state university of science and tech-
3 nology the sum of two million one hundred and fifty-five
4 thousand (2,155,000) dollars, or so much thereof as may be
5 necessary, for the energy and mineral resource research
6 institute to conduct a coal research project within the state.

7 Sec. 2. It is the intent of the general assembly to pro-
8 vide for the continuation of coal research within this state.
9 The coal research project authorized under this Act shall
10 include economic studies of the dragline-scraper mining method,
11 the analyses of alternative reclamation schemes, the
12 establishment and operation of a field coal processing plant,
13 the establishment and evaluation of the environmental impact
14 of coal processing and strip coal mining, the investigation
15 and demonstration of various methods of cleaning and recovering
16 fine-size coal, and the assessment and evaluation of methods
17 and costs of dewatering, handling, transporting and utilizing
18 fine-size coal.

19 Sec. 3. Iowa state university of science and technology
20 or the governor and the state comptroller may accept federal
21 grants for the state to be used in connection with funds ap-
22 propriated by this Act. All federal grants to and the fed-
23 eral receipts of Iowa state university of science and tech-
24 nology to carry out the purposes of this Act are appropriated
25 for the purpose set forth in the federal grants or receipts.

26 Sec. 4. Iowa state university of science and technology
27 or the energy and mineral resource research institute may
28 enter into management, research, development or mining con-
29 tracts and may purchase, or execute a long-term lease for,
30 not more than two mine sites, if the total cost of the con-
31 tracts, leases or purchases are within the limits of funds
32 provided by the appropriation made by or grants received un-
33 der the provisions of this Act. The purchase or a lease ex-
34 ceeding five years of any land shall be subject to the ap-
35 proval of the executive council of the state. Upon execu-

1 tion, the contracts or leases shall be filed in the office
2 of the legislative fiscal bureau. The energy and mineral
3 resource research institute shall also enter into contracts
4 with the state university of Iowa, the university of northern
5 Iowa and Iowa state university of science and technology for
6 the sale of the coal from the coal research project.

7 Sec. 5. Any unencumbered funds appropriated by this Act
8 remaining on June 30, 1979, shall revert to the general fund
9 on September 30, 1979.

10 Sec. 6. The balances remaining from income derived from
11 the sale of coal or the sale or rental of any equipment less
12 the operating and research costs of the coal research project
13 authorized under this Act during the fiscal years ending June
14 30, 1979, June 30, 1980, June 30, 1981, and June 30, 1982
15 shall be paid to the treasurer of state not later than
16 September 30 of such years and credited to the general fund
17 of the state. At the conclusion of mining operations, the
18 energy and mineral resource research institute shall also
19 pay to the treasurer of state to be credited to the general
20 fund of the state the proceeds from the sale of any salvageable
21 equipment remaining from the mining or processing operation.

22 EXPLANATION

23 This bill provides for the continuation of coal research
24 by the energy and minerals resources research institute at
25 Iowa state university. The broad goals of this project will
26 include economic studies of the dragline-scraper mining method,
27 of a mining operation coordinated with an on-site coal process
28 plant, additional reclamation schemes, the installation and
29 operation of fine coal processing equipment at the Iowa state
30 university campus research coal preparation plant, and en-
31 vironmental impact studies of the various mining and pro-
32 cessing operations. The bill authorizes the purchase or long-
33 term leasing of not more than two mining and reclamation
34 sites to facilitate the long-term study of restoration
35 strategies, some of which will not prove satisfactory.

S.F. _____ H.F. _____

1 The \$2.155 million appropriation will provide the cost
2 of research, construction and purchase of equipment and land,
3 and operation for the fiscal years beginning July 1, 1977
4 and July 1, 1978. During the fiscal years beginning July
5 1, 1979, July 1, 1980 and July 1, 1981, the costs of such
6 operations and research will be paid from income derived from
7 the sale of processed coal. During the final three years
8 of the mining operation, it is anticipated that income will
9 exceed expenses by approximately \$400,000 per year. This
10 money will be paid to the general fund of the state, together
11 with money from the salvage value of mining and processing
12 equipment, approximately \$700,000.

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BILL IV

RECOMMENDED BY THE ENERGY
RESOURCES STUDY COMMITTEE
FOR CONSIDERATION BY THE
SIXTY-SEVENTH GENERAL AS-
SEMBLY

Passed House, Date _____ Passed Senate, Date _____
Vote: Ayes _____ Nays _____ Vote: Ayes _____ Nays _____
Approved _____

A BILL FOR

1 An Act creating a division of radiation protection within the
2 state department of health, prescribing its powers and du-
3 ties and providing penalties for violations.

4 BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF IOWA:

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