

Reprinted 3/79

MAR 8 1979

HOUSE FILE 669

Place On Calendar

By COMMITTEE ON ENERGY

(Formerly Study Bill 171)

Passed House, Date 3-12-79 (p. 882) Passed Senate, Date \_\_\_\_\_

Vote: Ayes 87 Nays 6 Vote: Ayes \_\_\_\_\_ Nays \_\_\_\_\_

Approved June 4, 1979

# A BILL FOR

1 An Act requiring a life cycle cost analysis for certain  
2 government construction projects.

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

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669

1 Section 1. NEW SECTION. DEFINITIONS. As used in this  
2 Act unless the context otherwise requires:

3 1. "Public agency" means a county, city or school district  
4 or combination thereof or an executive board, commission,  
5 bureau, division, office or department of the state.

6 2. "Major facility" means a building having twenty-five  
7 thousand square feet or more of usable floor space that  
8 contains a heating or cooling system.

9 3. "Initial cost" means the moneys required for the capital  
10 construction or renovation of a major facility.

11 4. "Renovation" means a project where additions or  
12 alterations exceed fifty percent of the value of a major  
13 facility and will affect an energy system.

14 5. "Economic life" means the projected or anticipated  
15 useful life of a major facility as expressed by a term of  
16 years.

17 6. "Life cycle cost" means the initial cost of a major  
3364-18 facility, the estimated cost of the energy required to maintain  
19 and operate the facility over useful life, including the cost  
20 of energy consumed.

3367 >  
21 Sec. 2. NEW SECTION. POLICY--ANALYSIS REQUIRED. The  
22 general assembly declares that it is the public policy of  
23 this state that energy conservation is of primary importance  
24 in the design of major publicly-owned facilities. Commencing  
25 January 1, 1980, a public agency responsible for the  
26 construction or renovation of a major facility shall, in a  
27 design begun after that date, include as a design criterion  
28 the requirement that an analysis of life cycle cost be  
29 conducted for the major facility. The objective of the  
30 analysis shall be to maximize energy efficiency and minimize  
31 the life cycle cost of the major facility. The life cycle  
32 cost analysis shall be prepared or reviewed by a registered  
33 architect or a registered engineer. The analysis shall include  
34 consideration of the feasibility of the use of other than  
35 fossil fueled energy systems.



FISCAL NOTE

HOUSE FILE 669

Requested by Representative Evans

March 8, 1979

In compliance with a written request, there is hereby submitted a Fiscal Note for House File 669 pursuant to Joint Rule 16.

House File 669, An Act requiring a life cycle cost analysis for certain government construction projects.

This bill requires a life cycle cost analysis be conducted for publicly-owned buildings constructed or substantially renovated after January 1, 1980. This requirement applies only to buildings that have 25,000 square feet or more of usable floor space and that are heated or cooled.

The bill prohibits the use of public funds for the construction or renovation of a major facility when the design was not prepared in accordance with this Act.

No cost estimate available

FILED  
MARCH 13, 1979

GERRY D. RANKIN  
Legislative Fiscal Bureau

HOUSE FILE 669

H-3369

- 1 Amend House File 669 as follows:
- 2 1. Page 2, line 11, by striking the words
- 3 "eligible for,".

H-3369 FILED - ADOPTED (*p. 881*) BY PERKINS of Greene  
MARCH 12, 1979

HOUSE FILE 669

H-3364

- 1 Amend House File 669 as follows:
- 2 1. Page 1, line 18, by striking the word
- 3 "facility," and inserting in lieu thereof the words
- 4 "facility and".....

H-3364 FILED - ADOPTED (*p. 880*) BY EVANS of Grundy  
MARCH 12, 1979

HOUSE FILE 669

H-3360

- 1 Amend House File 669 as follows:
- 2 1. Page 2, line 20, by inserting after the word
- 3 "Act" the words "and the construction or renovation
- 4 meets the requirements of the design".

H-3360 FILED *Adopted 3/12 (p. 882)* BY PERKINS of Greene  
MARCH 9, 1979

HOUSE CLIP SHEET

TUESDAY, MARCH 13, 1979

HOUSE FILE 669

H-3367

Amend House File 669 as follows:

1. Page 1, by inserting after line 20 the following:

"7. "Life cycle cost analysis" includes, but is not limited to the following elements:

a. The coordination and positioning of a major facility on its physical site.

b. The number, position, and design of windows and doors to be included in a major facility.

c. The amount and thermal characteristics of insulation incorporated into the design of a major facility.

d. The variable occupancy and operating conditions of a major facility, including illumination levels.

e. Other architectural features that affect energy consumption."

2. Page 2, by inserting after line 20 the following:

"Sec. 6. NEW SECTION. RULES. The energy policy council established in section ninety-three point two (93.2) of the Code shall administer this Act and shall promulgate rules to implement its provisions."

H-3367 FILED MARCH 12, 1979

BY HOWELL of Floyd

Div. A - Lost } (p. 881)  
Div. B - Lost }

HOUSE FILE 669

H-3368

Amend House File 669 as follows:

1. Page 2, line 16, by inserting after the word "department." the following: "The provisions of this Act also do not apply to the renovation of a penal or correctional facility, mental health institute or hospital-school owned by the state, or jail."

H-3368 FILED - LOST (p. 882)  
MARCH 12, 1979

BY DOYLE of Woodbury  
HOWELL of Floyd

Sen. Energy 3/14  
Do Pass per 3249 3/20 (p. 872)  
Referred 4/2 Do Pass per 3273 4/4 (p. 1085)

HOUSE FILE 669

By COMMITTEE ON ENERGY

(As Amended and Passed by the House)

Passed House, Date 4-30-79 (p. 1913) Passed Senate, Date 4-17-79 (p. 1233)

Vote: Ayes 87 Nays 1 Vote: Ayes 47 Nays 1

Approved June 4, 1979

*Repassed Senate as further amended by House 5-3-79 (p. 1525) 39-5*

# A BILL FOR

1 An Act requiring a life cycle cost analysis for certain  
2 government construction projects.

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

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\_\_\_\_\_ House Amendments  
\* Stricken Language

3373, 3249 *stricken*

1 Section 1. NEW SECTION. DEFINITIONS. As used in this  
2 Act unless the context otherwise requires:

3 1. "Public agency" means a county, city or school district  
4 or combination thereof or an executive board, commission,  
5 bureau, division, office or department of the state.

6 2. "Major facility" means a building having twenty-five  
7 thousand square feet or more of usable floor space that  
8 contains a heating or cooling system.

9 3. "Initial cost" means the moneys required for the capital  
10 construction or renovation of a major facility.

11 4. "Renovation" means a project where additions or  
12 alterations exceed fifty percent of the value of a major  
13 facility and will affect an energy system.

14 5. "Economic life" means the projected or anticipated  
15 useful life of a major facility as expressed by a term of  
16 years.

17 6. "Life cycle cost" means the initial cost of a major  
18 facility and the estimated cost of the energy required to  
19 maintain and operate the facility over useful life, including  
20 the cost of energy consumed.

21 Sec. 2. NEW SECTION. POLICY--ANALYSIS REQUIRED. The  
22 general assembly declares that it is the public policy of  
23 this state that energy conservation is of primary importance  
24 in the design of major publicly-owned facilities. Commencing  
25 January 1, 1980, a public agency responsible for the  
26 construction or renovation of a major facility shall, in a  
27 design begun after that date, include as a design criterion  
28 the requirement that an analysis of life cycle cost be  
29 conducted for the major facility. The objective of the  
30 analysis shall be to maximize energy efficiency and minimize  
31 the life cycle cost of the major facility. The life cycle  
32 cost analysis shall be prepared or reviewed by a registered  
33 architect or a registered engineer. The analysis shall include  
34 consideration of the feasibility of the use of other than  
35 fossil fueled energy systems.

1 Sec. 3. NEW SECTION. ANALYSIS APPROVED. The analysis  
2 shall be approved by the public agency before contracts for  
3 the construction or renovation are let. A public agency may  
4 accept a facility design and shall meet the requirements of  
5 this Act if the design meets the operational requirements  
6 of the agency and promises a low life cycle cost. A copy  
7 of the life cycle cost analysis and a statement justifying  
8 a design decision shall be retained by the public agency and  
9 shall be available for public inspection at reasonable hours.

10 Sec. 4. NEW SECTION. EXCEPTIONS. The provisions of this  
\* 11 Act do not apply to the renovation of property nominated to,  
12 or entered in the national register of historic places,  
13 designated by statute, or included in an established list  
14 of historic places compiled by the director of the division  
15 of historical preservation of the Iowa state historical  
16 department.

17 Sec. 5. NEW SECTION. RESTRICTION ON USE OF PUBLIC FUNDS.  
18 No public funds shall be used for the construction or  
19 renovation of a major facility unless the design for such  
20 work is prepared in accordance with this Act and the  
21 construction or renovation meets the requirements of the  
22 design.

23 EXPLANATION

24 This bill requires a life cycle cost analysis be conducted  
25 for publicly-owned buildings constructed or substantially  
26 renovated after January 1, 1980. This requirement applies  
27 only to buildings that have 25,000 square feet or more of  
28 usable floor space and that are heated or cooled.

29 The bill prohibits the use of public funds for the  
30 construction or renovation of a major facility when the design  
31 was not prepared in accordance with this Act.

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HOUSE FILE 669

S-3270

- 1 Amend the Committee on Energy Amendment, S-3249
- 2 to House File 669 as amended and passed by the
- 3 House as follows:
- 4 1. Page 3, line 15, by inserting after the word
- 5 "apply" the following words: "to buildings currently
- 6 used by the Department of Adult Corrections as
- 7 maximum security detention facilities or".

S-3270 FILED *Ruled out of order 4/17* BY EARL M. WILLITS  
MARCH 23, 1979 *(p. 1230)*

HOUSE FILE 669

S-3507

- 1 Amend the Committee on Energy admendment, S-3373
- 2 to House File 669 as amended, passed and reprinted by
- 3 the House as follows:
- 4 1. Page 2, line 44, by inserting after the word
- 5 "apply" the following words: "to buildings currently
- 6 used by the division of adult corrections of the
- 7 department of social services as maximum security
- 8 detention facilities or".

S-3507 FILED & ADOPTED *(p. 1233)* BY EARL M. WILLITS  
APRIL 17, 1979

S-3249

1 Amend House File 669 as amended and passed by the  
2 House as follows:

3 1. By striking everything after the enacting  
4 clause and inserting in lieu thereof the following: -

5 "Section 1. NEW SECTION. DEFINITIONS. As used  
6 in this Act unless the context otherwise requires:

7 1. "Public agency" means an executive board,  
8 commission, bureau, division, office or department  
9 of the state.

10 2. "Facility" means a building having ten thousand  
11 square feet or more of usable floor space that contains  
12 a heating or cooling system.

13 3. "Initial cost" means the moneys required for  
14 the capital construction or renovation of a facility.

15 4. "Renovation" means a project where additions  
16 or alterations exceed fifty percent of the value of  
17 a facility and will affect an energy system.

18 5. "Economic life" means the projected or  
19 anticipated useful life of a facility as expressed  
20 by a term of years.

21 6. "Life cycle cost analysis" means an analytical  
22 technique that considers certain costs of owning and  
23 operating a facility over its economic life including  
24 but not limited to the following:

- 25 a. Initial costs.
- 26 b. System repair and replacement costs.
- 27 c. Maintenance costs.
- 28 d. Operating costs, including energy costs.
- 29 e. Salvage value.

30 7. "Energy system" includes, but is not limited  
31 to the following equipment or measures:

- 32 a. Equipment used to heat or cool the facility.
- 33 b. Equipment used to heat water in the facility.
- 34 c. On-site equipment used to generate electricity  
35 for the major facility.

36 d. On-site equipment that uses the sun, wind,  
37 oil, natural gas, coal or electricity as a power  
38 source.

39 e. Energy conservation measures in the facility  
40 design and construction that decrease the energy  
41 requirements of the facility.

42 Sec. 2. NEW SECTION. POLICY--ANALYSIS REQUIRED.  
43 The general assembly declares that energy management  
44 is of primary importance in the design of publicly-  
45 owned facilities. Commencing January 1, 1980, a  
46 public agency responsible for the construction or  
47 renovation of a facility shall, in a design begun  
48 after that date, include as a design criterion the  
49 requirement that a life cycle cost analysis be  
50 conducted for the facility. The objectives of the

MARCH 21, 1979

S-3249

Page 2

1 life cycle cost analysis are to optimize energy  
2 efficiency at an acceptable life cycle cost as  
3 determined under subsection one (1) of section three  
4 (3) of this Act. The life cycle cost analysis shall  
5 meet the requirements of section three (3) of this  
6 Act and shall be reviewed by a registered architect  
7 or a registered engineer.

8 Sec. 3. NEW SECTION. STANDARD PROCEDURES. The  
9 energy policy council shall promulgate rules specifying  
10 standard procedures that must be used in preparing  
11 a life cycle cost analysis. The following elements  
12 shall be addressed and included in the rules  
13 prescribing standard procedures:

14 1. The steps to be included in the life cycle  
15 cost analysis including but not limited to the  
16 following:

17 a. Specification of energy management objectives  
18 and health safety and functional constraints. The  
19 facility design shall meet state or local building  
20 code requirements that apply to the facility.

21 b. Identification of energy system needs and  
22 alternatives.

23 c. Costs of alternatives identified in paragraph  
24 b of this subsection.

25 d. Determination of amounts and timing of cash  
26 flow.

27 e. Calculation of life cycle cost.

28 f. Evaluation of design and system alternatives.

29 2. The method used to calculate life cycle cost  
30 and the minimum acceptable life cycle cost criterion  
31 for the method selected. If rate of return is the  
32 method selected, the minimum acceptable rate of return  
33 is ten percent.

34 3. The economic life of an average facility shall  
35 be twenty-five years. Salvage value shall equal one  
36 third of the cost of replacing the facility. However,  
37 economic life and salvage value may be adjusted to  
38 reflect variations in facility use and design.  
39 Economic life and salvage value shall be the same  
40 for all alternatives examined.

41 4. A general inflation rate of eight point five  
42 percent and an energy cost escalation rate of nine  
43 percent shall be used.

44 5. A method for evaluating design and system  
45 alternatives.

46 Sec. 4. NEW SECTION. ANALYSIS APPROVED. The  
47 life cycle cost analysis shall be approved by the  
48 public agency before contracts for the construction  
49 or renovation are let and a copy of the analysis filed  
50 with the energy policy council. A public agency shall

1 select a facility design which complies with the  
2 minimum acceptable life cycle cost criterion as  
3 determined by the energy policy council under section  
4 three (3) of this Act. If the public agency does  
5 not select a design that meets or exceeds the minimum  
6 acceptable life cycle cost criterion, a statement  
7 justifying the decision shall be submitted to the  
8 energy policy council with the life cycle cost  
9 analysis. A copy of the life cycle cost analysis  
10 and any statement justifying a design decision shall  
11 be retained by the energy policy council and the  
12 public agency and shall be available for public  
13 inspection at reasonable hours.

14 Sec. 5. NEW SECTION. EXCEPTIONS. This Act does  
15 not apply to the renovation of property eligible for,  
16 nominated to, or entered in the national register  
17 of historic places, designated by statute, or included  
18 in an established list of historic places compiled  
19 by the director of the division of historical  
20 preservation of the Iowa state historical department.

21 Sec. 6. NEW SECTION. RULES. The energy policy  
22 council established in section ninety-three point  
23 two (93.2) of the Code shall administer this Act and  
24 shall promulgate rules to implement its provisions.

25 Sec. 7. NEW SECTION. REPEAL. This Act is repealed  
26 effective January 1, 1983."

S-3249 FILED  
MARCH 20, 1979

*Drawn 4/17*  
*(p. 1230)*

BY COMMITTEE ON ENERGY  
RICHARD R. RAMSEY, CHAIRPERSON

S-3373

1 Amend House File 669 as amended and passed by the  
2 House as follows:

3 1. By striking everything after the enacting  
4 clause and inserting in lieu thereof the following:

5 "Section 1. NEW SECTION. DEFINITIONS. As used  
6 in this Act unless the context otherwise requires:

7 1. "Public agency" means an executive board,  
8 commission, bureau, division, office or department  
9 of the state.

10 2. "Facility" means a building that is heated  
11 or cooled by a mechanical or electrical system.

12 3. "Initial cost" means the moneys required for  
13 the capital construction or renovation of a facility.

14 4. "Renovation" means a project where additions  
15 or alterations exceed fifty percent of the value of  
16 a facility and will affect an energy system.

17 5. "Economic life" means the projected or  
18 anticipated useful life of a facility as expressed  
19 by a term of years.

20 6. "Life cycle cost analysis" means an analytical  
21 technique that considers certain costs of owning,  
22 using and operating a facility over its economic life  
23 including but not limited to the following:

24 a. Initial costs.

25 b. System repair and replacement costs.

26 c. Maintenance costs.

27 d. Operating costs, including energy costs.

28 e. Salvage value.

29 7. "Energy system" includes, but is not limited  
30 to the following equipment or measures:

31 a. Equipment used to heat or cool the facility.

32 b. Equipment used to heat water in the facility.

33 c. On-site equipment used to generate electricity  
34 for the major facility.

35 d. On-site equipment that uses the sun, wind,  
36 oil, natural gas, coal or electricity as a power  
37 source.

38 e. Energy conservation measures in the facility  
39 design and construction that decrease the energy  
40 requirements of the facility.

41 Sec. 2. NEW SECTION. POLICY--ANALYSIS REQUIRED.

42 The general assembly declares that energy management  
43 is of primary importance in the design of publicly-  
44 owned facilities. Commencing January 1, 1980, a  
45 public agency responsible for the construction or  
46 renovation of a facility shall, in a design begun  
47 after that date, include as a design criterion the  
48 requirement that a life cycle cost analysis be  
49 conducted for the facility. The objectives of the  
50 life cycle cost analysis are to optimize energy

GE 2

1 efficiency at an acceptable life cycle cost. The  
2 life cycle cost analysis shall meet the requirements  
3 of section three (3) of this Act.

4 Sec. 3 NEW SECTION. ELEMENTS OF ANALYSIS.

5 1. A life cycle cost analysis shall include but  
6 is not limited to the following elements:  
7 a. Specification of energy management objectives  
8 and health, safety and functional constraints. The  
9 facility design shall comply with applicable state  
10 or local building code requirements.  
11 b. Identification of the energy needs of the  
12 facility and energy system alternatives to meet those  
13 needs.  
14 c. Cost of the energy system alternatives  
15 identified in paragraph b of this subsection.  
16 d. Determination of amounts and timing of cash  
17 flow.  
18 e. Calculation of life cycle cost using an economic  
19 model such as but not limited to rate of return,  
20 annual equivalent cost or present equivalent cost.  
21 f. Evaluation of design and system alternatives  
22 using a method such as, but not limited to design  
23 matrixes, ranking tables or network analysis.

24 2. A public agency or a person preparing a life  
25 cycle cost analysis for a public agency shall consider  
26 the methods and analytical models in section six (6)  
27 of the manual of procedures for authorized class "A"  
28 energy auditors as amended to March 31, 1979 by the  
29 engineering research institute at Iowa state university  
30 of science and technology in preparing a life cycle  
31 cost analysis.  
32 Sec. 4. NEW SECTION. ANALYSIS APPROVED. The  
33 life cycle cost analysis shall be approved by the  
34 public agency before contracts for the construction  
35 or renovation are let. A public agency may accept  
36 a facility design and shall meet the requirements  
37 of this Act if the design meets the operational  
38 requirements of the agency and provides the optimum  
39 life cycle cost. The public agency shall retain a  
40 copy of the life cycle cost analysis and a statement  
41 justifying a design decision both of which shall be  
42 available for public inspection at reasonable hours.  
43 Sec. 5. NEW SECTION. EXCEPTIONS. This Act does  
44 not apply to the renovation of property eligible for,  
45 nominated to, or entered in the national register  
46 of historic places, designated by statute, or included  
47 in an established list of historic places compiled  
48 by the director of the division of historical  
49 preservation of the Iowa state historical department.  
50 Sec. 6. NEW SECTION. RESTRICTION ON USE OF PUBLIC

PAGE 3

1 FUNDS. Public funds shall not be used for the  
2 construction or renovation of a facility unless the  
3 design for the work is prepared in accordance with  
4 this Act and the actual construction or renovation  
5 meets the requirements of the design.

6 Sec. 7. NEW SECTION. REPEAL. This Act is repealed  
7 effective January 1, 1983."

S-3373 FILED *Adopted as* BY COMMITTEE ON ENERGY  
APRIL 4, 1979 *amended by* RICHARD R. RAMSEY, CHAIRPERSON  
*3507 4/17 (p. 1233)*

SENATE AMENDMENT TO  
HOUSE FILE 669

H-3993

1 Amend House File 669 as amended and passed by the  
2 House as follows:

3 1. By striking everything after the enacting  
4 clause and inserting in lieu thereof the following:

5 "Section 1. NEW SECTION. DEFINITIONS. As used  
6 in this Act unless the context otherwise requires:

7 1. "Public agency" means an executive board,  
8 commission, bureau, division, office or department  
9 of the state.

10 2. "Facility" means a building that is heated  
11 or cooled by a mechanical or electrical system.

12 3. "Initial cost" means the moneys required for  
13 the capital construction or renovation of a facility.

14 4. "Renovation" means a project where additions  
15 or alterations exceed fifty percent of the value of  
16 a facility and will affect an energy system.

17 5. "Economic life" means the projected or  
18 anticipated useful life of a facility as expressed  
19 by a term of years.

20 6. "Life cycle cost analysis" means an analytical  
21 technique that considers certain costs of owning,  
22 using and operating a facility over its economic life  
23 including but not limited to the following:

- 24 a. Initial costs.
- 25 b. System repair and replacement costs.
- 26 c. Maintenance costs.
- 27 d. Operating costs, including energy costs.
- 28 e. Salvage value.

29 7. "Energy system" includes, but is not limited  
30 to the following equipment or measures:

- 31 a. Equipment used to heat or cool the facility.
- 32 b. Equipment used to heat water in the facility.
- 33 c. On-site equipment used to generate electricity  
34 for the major facility.
- 35 d. On-site equipment that uses the sun, wind,  
36 oil, natural gas, coal or electricity as a power  
37 source.
- 38 e. Energy conservation measures in the facility  
39 design and construction that decrease the energy  
40 requirements of the facility.

41 Sec. 2. NEW SECTION. POLICY--ANALYSIS REQUIRED.  
42 The general assembly declares that energy management  
43 is of primary importance in the design of publicly-  
44 owned facilities. Commencing January 1, 1980, a  
45 public agency responsible for the construction or  
46 renovation of a facility shall, in a design begun  
47 after that date, include as a design criterion the  
48 requirement that a life cycle cost analysis be  
49 conducted for the facility. The objectives of the  
50 life cycle cost analysis are to optimize energy

PAGE TWO

1 efficiency at an acceptable life cycle cost. The  
2 life cycle cost analysis shall meet the requirements  
3 of section three (3) of this Act.

4 Sec. 3. NEW SECTION. ELEMENTS OF ANALYSIS.

5 1. A life cycle cost analysis shall include but  
6 is not limited to the following elements:

7 a. Specification of energy management objectives  
8 and health, safety and functional constraints. The  
9 facility design shall comply with applicable state  
10 or local building code requirements.

11 b. Identification of the energy needs of the  
12 facility and energy system alternatives to meet those  
13 needs.

14 c. Cost of the energy system alternatives  
15 identified in paragraph b of this subsection.

16 d. Determination of amounts and timing of cash  
17 flow.

18 e. Calculation of life cycle cost using an economic  
19 model such as but not limited to rate of return,  
20 annual equivalent cost or present equivalent cost.

21 f. Evaluation of design and system alternatives  
22 using a method such as, but not limited to design  
23 matrixes, ranking tables or network analysis.

24 2. A public agency or a person preparing a life  
25 cycle cost analysis for a public agency shall consider  
26 the methods and analytical models in section six (6)  
27 of the manual of procedures for authorized class "A"  
28 energy auditors as amended to March 31, 1979 by the  
29 engineering research institute at Iowa state university  
30 of science and technology in preparing a life cycle  
31 cost analysis.

32 Sec. 4. NEW SECTION. ANALYSIS APPROVED. The  
33 life cycle cost analysis shall be approved by the  
34 public agency before contracts for the construction  
35 or renovation are let. A public agency may accept  
36 a facility design and shall meet the requirements  
37 of this Act if the design meets the operational  
38 requirements of the agency and provides the optimum  
39 life cycle cost. The public agency shall retain a  
40 copy of the life cycle cost analysis and a statement  
41 justifying a design decision both of which shall be  
42 available for public inspection at reasonable hours.

43 Sec. 5. NEW SECTION. EXCEPTIONS. This Act does  
44 not apply to buildings currently used by the division  
45 of adult corrections of the department of social  
46 services as maximum security detention facilities  
47 or to the renovation of property eligible for,  
48 nominated to, or entered in the national register  
49 of historic places, designated by statute, or included  
50 in an established list of historic places compiled

PAGE THREE

1 by the director of the division of historical  
2 preservation of the Iowa state historical department.

3 Sec. 6. NEW SECTION. RESTRICTION ON USE OF PUBLIC  
4 FUNDS. Public funds shall not be used for the  
5 construction or renovation of a facility unless the  
6 design for the work is prepared in accordance with  
7 this Act and the actual construction or renovation  
8 meets the requirements of the design.

9 Sec. 7. NEW SECTION. REPEAL. This Act is repealed  
10 effective January 1, 1983."

H-3993 FILED  
APRIL 19, 1979

RECEIVED FROM THE SENATE  
*House amended & concurred*  
4/30 (p. 1913)

## HOUSE FILE 669

H-4054

- 1 Amend the Senate amendment, H-3993, to House  
 2 File 669 as follows:  
 3 1. Page 1, line 7, by inserting after the word  
 4 "means" the words "a county, city, school district,  
 5 school corporation or combination thereof or".  
 6 2. Page 3, by striking lines 9 and 10.

H-4054 FILED *Adopted 4/30 (p. 1912)* BY HOWELL of Floyd  
 APRIL 23, 1979 EVANS of Grundy

## HOUSE FILE 669

H-4055

- 1 Amend the Senate amendment, H-3993, to House  
 2 File 669 as follows:  
 3 1. Page 2, line 47, by striking the words  
 4 "eligible for,".  
 H-4055 FILED *Adopted 4/30 (p. 1913)* BY PERKINS of Greene  
 APRIL 23, 1979

## HOUSE FILE 669

H-4139

- 1 Amend the Senate amendment, H-3993, to House  
 2 File 669 as amended, passed and reprinted by the  
 3 House, as follows:  
 4 1. Page 3, by inserting after line 8 the  
 5 following new section:  
 6 "Sec. \_\_\_\_ . This Act shall be effective January 1,  
 7 1980, except that for a county, city, school district,  
 8 school corporation, or combination thereof the Act  
 9 shall be effective January 1, 1982."

H-4139 FILED *Adopted 4/30* BY EVANS of Grundy  
 APRIL 26, 1979 *(p. 1913)*

## HOUSE FILE 669

H-4134

- 1 Amend the Senate amendment, H-3993, to House File  
 2 669 as follows:  
 3 1. Page 1, line 10, by inserting after the word  
 4 "building" the words "having twenty thousand square  
 5 feet or more of usable floor space".  
 6 2. Page 1, line 29, by striking the word  
 7 "includes," and inserting in lieu thereof the word  
 8 "includes".  
 9 3. Page 3, by striking lines 9 and 10.

H-4134 FILED *A. Adopted B. W/drawn* BY EVANS of Grundy  
 APRIL 26, 1979 *4/30 (p. 1912)*

S-3675

1 Amend the Senate amendment, H-3993, to House File  
2 669 as follows:

3 1. Page 1, line 7, by inserting after the word  
4 "means" the words "a county, city, school district,  
5 school corporation or combination thereof or".

6 2. Page 1, line 10, by inserting after the word  
7 "building" the words "having twenty thousand square  
8 feet or more of usable floor space".

9 3. Page 1, line 29, by striking the word  
10 "includes," and inserting in lieu thereof the word  
11 "includes".

12 4. Page 2, line 47, by striking the words "eligible  
13 for,".

14 5. Page 3, by inserting after line 8 the following  
15 new section:

16 "Sec. \_\_\_\_\_. This Act shall be effective January  
17 1, 1980, except that for a county, city, school  
18 district, school corporation, or combination thereof  
19 the Act shall be effective January 1, 1982."

20 6. Page 3, by striking lines 9 and 10.

S-3675 FILED  
MAY 2, 1979

RECEIVED FROM THE HOUSE

*Senate concurred 5/3 (p. 1525)*

HOUSE FILE 669

AN ACT

REQUIRING A LIFE CYCLE COST ANALYSIS FOR CERTAIN GOVERNMENT CONSTRUCTION PROJECTS.

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

Section 1. NEW SECTION. DEFINITIONS. As used in this Act unless the context otherwise requires:

1. "Public agency" means a county, city, school district, school corporation or combination thereof or an executive board, commission, bureau, division, office or department of the state.
2. "Facility" means a building having twenty thousand square feet or more of usable floor space that is heated or cooled by a mechanical or electrical system.
3. "Initial cost" means the moneys required for the capital construction or renovation of a facility.
4. "Renovation" means a project where additions or alterations exceed fifty percent of the value of a facility and will affect an energy system.
5. "Economic life" means the projected or anticipated useful life of a facility as expressed by a term of years.
6. "Life cycle cost analysis" means an analytical technique that considers certain costs of owning, using and operating a facility over its economic life including but not limited to the following:
  - a. Initial costs.
  - b. System repair and replacement costs.
  - c. Maintenance costs.
  - d. Operating costs, including energy costs.
  - e. Salvage value.
7. "Energy system" includes but is not limited to the following equipment or measures:
  - a. Equipment used to heat or cool the facility.

- b. Equipment used to heat water in the facility.
- c. On-site equipment used to generate electricity for the major facility.
- d. On-site equipment that uses the sun, wind, oil, natural gas, coal or electricity as a power source.
- e. Energy conservation measures in the facility design and construction that decrease the energy requirements of the facility.

Sec. 2. NEW SECTION. POLICY--ANALYSIS REQUIRED. The general assembly declares that energy management is of primary importance in the design of publicly-owned facilities. Commencing January 1, 1980, a public agency responsible for the construction or renovation of a facility shall, in a design begun after that date, include as a design criterion the requirement that a life cycle cost analysis be conducted for the facility. The objectives of the life cycle cost analysis are to optimize energy efficiency at an acceptable life cycle cost. The life cycle cost analysis shall meet the requirements of section three (3) of this Act.

Sec. 3. NEW SECTION. ELEMENTS OF ANALYSIS.

1. A life cycle cost analysis shall include but is not limited to the following elements:
  - a. Specification of energy management objectives and health, safety and functional constraints. The facility design shall comply with applicable state or local building code requirements.
  - b. Identification of the energy needs of the facility and energy system alternatives to meet those needs.
  - c. Cost of the energy system alternatives identified in paragraph b of this subsection.
  - d. Determination of amounts and timing of cash flow.
  - e. Calculation of life cycle cost using an economic model such as but not limited to rate of return, annual equivalent cost or present equivalent cost.

f. Evaluation of design and system alternatives using a method such as, but not limited to design matrixes, ranking tables or network analysis.

2. A public agency or a person preparing a life cycle cost analysis for a public agency shall consider the methods and analytical models in section six (6) of the manual of procedures for authorized class "A" energy auditors as amended to March 31, 1979 by the engineering research institute at Iowa state university of science and technology in preparing a life cycle cost analysis.

Sec. 4. NEW SECTION. ANALYSIS APPROVED. The life cycle cost analysis shall be approved by the public agency before contracts for the construction or renovation are let. A public agency may accept a facility design and shall meet the requirements of this Act if the design meets the operational requirements of the agency and provides the optimum life cycle cost. The public agency shall retain a copy of the life cycle cost analysis and a statement justifying a design decision both of which shall be available for public inspection at reasonable hours.

Sec. 5. NEW SECTION. EXCEPTIONS. This Act does not apply to buildings currently used by the division of adult corrections of the department of social services as maximum security detention facilities or to the renovation of property nominated to, or entered in the national register of historic places, designated by statute, or included in an established list of historic places compiled by the director of the division of historical preservation of the Iowa state historical department.

Sec. 6. NEW SECTION. RESTRICTION ON USE OF PUBLIC FUNDS. Public funds shall not be used for the construction or renovation of a facility unless the design for the work is prepared in accordance with this Act and the actual construction or renovation meets the requirements of the design.

Sec. 7. This Act shall be effective January 1, 1980, except that for a county, city, school district, school corporation, or combination thereof the Act shall be effective January 1, 1982.

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FLOYD H. MILLEN  
Speaker of the House

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TERRY E. BRANSTAD  
President of the Senate

I hereby certify that this bill originated in the House and is known as House File 669, Sixty-eighth General Assembly.

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DAVID L. WRAY  
Chief Clerk of the House

Approved June 4, 1979

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ROBERT D. RAY  
Governor