

2 EHB 2347 - S COMM AMD
3 By Committee on Energy & Utilities

4 ADOPTED 3/2/94

5 Strike everything after the enacting clause and insert the
6 following:

7 "Sec. 1. RCW 19.27A.020 and 1990 c 2 s 3 are each amended to read
8 as follows:

9 (1) No later than January 1, 1991, the state building code council
10 shall promulgate rules to be known as the Washington state energy code
11 as part of the state building code.

12 (2) The council shall follow the legislature's standards set forth
13 in this section to promulgate rules to be known as the Washington state
14 energy code. The Washington state energy code shall be designed to
15 require new buildings to meet a certain level of energy efficiency, but
16 allow flexibility in building design, construction, and heating
17 equipment efficiencies within that framework. The Washington state
18 energy code shall be designed to allow space heating equipment
19 efficiency to offset or substitute for building envelope thermal
20 performance.

21 (3) The Washington state energy code shall take into account
22 regional climatic conditions. Climate zone 1 shall include all
23 counties not included in climate zone 2. Climate zone 2 includes:
24 Adams, Chelan, Douglas, Ferry, Grant, Kittitas, Lincoln, Okanogan, Pend
25 Oreille, Spokane, Stevens, and Whitman counties.

26 (4) The Washington state energy code for residential buildings
27 shall require:

28 (a) New residential buildings that are space heated with electric
29 resistance heating systems to achieve energy use equivalent to that
30 used in typical buildings constructed with:

31 (i) Ceilings insulated to a level of R-38. The code shall contain
32 an exception which permits single rafter or joist vaulted ceilings
33 insulated to a level of R-30 (R value includes insulation only);

34 (ii) In zone 1, walls insulated to a level of R-19 (R value
35 includes insulation only), or constructed with two by four members,
36 R-13 insulation batts, R-3.2 insulated sheathing, and other normal

1 assembly components; in zone 2 walls insulated to a level of R-24 (R
2 value includes insulation only), or constructed with two by six
3 members, R-22 insulation batts, R-3.2 insulated sheathing, and other
4 normal construction assembly components; for the purpose of determining
5 equivalent thermal performance, the wall U-value shall be 0.058 in zone
6 1 and 0.044 in zone 2;

7 (iii) Below grade walls, insulated on the interior side, to a level
8 of R-19 or, if insulated on the exterior side, to a level of R-10 in
9 zone 1 and R-12 in zone 2 (R value includes insulation only);

10 (iv) Floors over unheated spaces insulated to a level of R-30 (R
11 value includes insulation only);

12 (v) Slab on grade floors insulated to a level of R-10 at the
13 perimeter;

14 (vi) Double glazed windows with values not more than U-0.4;

15 (vii) In zone 1 the glazing area may be up to twenty-one percent of
16 floor area and in zone 2 the glazing area may be up to seventeen
17 percent of floor area where consideration of the thermal resistance
18 values for other building components and solar heat gains through the
19 glazing result in thermal performance equivalent to that achieved with
20 thermal resistance values for other components determined in accordance
21 with the equivalent thermal performance criteria of (a) of this
22 subsection and glazing area equal to fifteen percent of the floor area.
23 Throughout the state for the purposes of determining equivalent thermal
24 performance, the maximum glazing area shall be fifteen percent of the
25 floor area; and

26 (viii) Exterior doors insulated to a level of R-5; or an exterior
27 wood door with a thermal resistance value of less than R-5 and values
28 for other components determined in accordance with the equivalent
29 thermal performance criteria of (a) of this subsection.

30 (b) New residential buildings which are space-heated with all other
31 forms of space heating to achieve energy use equivalent to that used in
32 typical buildings constructed with:

33 (i) Ceilings insulated to a level of R-30 in zone 1 and R-38 in
34 zone 2 the code shall contain an exception which permits single rafter
35 or joist vaulted ceilings insulated to a level of R-30 (R value
36 includes insulation only);

37 (ii) Walls insulated to a level of R-19 (R value includes
38 insulation only), or constructed with two by four members, R-13
39 insulation batts, R-3.2 insulated sheathing, and other normal assembly

1 components;

2 (iii) Below grade walls, insulated on the interior side, to a level
3 of R-19 or, if insulated on the exterior side, to a level of R-10 in
4 zone 1 and R-12 in zone 2 (R value includes insulation only);

5 (iv) Floors over unheated spaces insulated to a level of R-19 in
6 zone 1 and R-30 in zone 2 (R value includes insulation only);

7 (v) Slab on grade floors insulated to a level of R-10 at the
8 perimeter;

9 (vi) Heat pumps with a minimum heating season performance factor
10 (HSPF) of 6.8 or with all other energy sources with a minimum annual
11 fuel utilization efficiency (AFUE) of seventy-eight percent;

12 (vii) Double glazed windows with values not more than U-0.65 in
13 zone 1 and U-0.60 in zone 2. The state building code council, in
14 consultation with the state energy office, shall review these U-values,
15 and, if economically justified for consumers, shall amend the
16 Washington state energy code to improve the U-values by December 1,
17 1993. The amendment shall not take effect until July 1, 1994; and

18 (viii) In zone 1, the maximum glazing area shall be twenty-one
19 percent of the floor area. In zone 2 the maximum glazing area shall be
20 seventeen percent of the floor area. Throughout the state for the
21 purposes of determining equivalent thermal performance, the maximum
22 glazing area shall be fifteen percent of the floor area.

23 (c) For log built homes with space heat other than electric
24 resistance, the building code council shall establish equivalent
25 thermal performance standards consistent with the standards and maximum
26 glazing areas of (b) of this subsection.

27 (d) The state building code council may approve an energy code for
28 pilot projects of residential construction that use innovative energy
29 efficiency technologies intended to result in savings that are greater
30 than those realized in the levels specified in this section.

31 (5) U-values for glazing shall be determined using the area
32 weighted average of all glazing in the building. (~~U-values for
33 glazing are the tested values for thermal transmittance due to
34 conduction resulting from either the American architectural
35 manufacturers' association (AAMA) 1503.1 test procedure or the American
36 society for testing materials (ASTM) C236 or C976 test procedures.
37 Testing shall be conducted under established winter horizontal heat
38 flow test conditions using the fifteen miles per hour wind speed
39 perpendicular to the exterior surface of the glazing as specified under~~

1 ~~AAMA 1503.1 and product sample sizes specified under AAMA 1503.1. The~~
2 ~~AAMA 1503.1 testing must be conducted by an AAMA certified testing~~
3 ~~laboratory. The ASTM C236 or C976 testing U-values include any tested~~
4 ~~values resulting from a future revised AAMA 1503.1 test procedure.))~~
5 U-values for vertical glazing shall be determined, certified, and
6 labeled in accordance with the appropriate national fenestration rating
7 council (NFRC) standard, as determined and adopted by the state
8 building code council. Certification of U-values shall be conducted by
9 a certified, independent agency licensed by the NFRC. The state
10 building code council may develop and adopt alternative methods of
11 determining, certifying, and labeling U-values for vertical glazing
12 that may be used by fenestration manufacturers if determined to be
13 appropriate by the council. The state building code council shall
14 review and consider the adoption of the NFRC standards for determining,
15 certifying, and labeling U-values for doors and skylights when
16 developed and published by the NFRC. The state building code council
17 may develop and adopt appropriate alternative methods for determining,
18 certifying, and labeling U-values for doors and skylights. U-values
19 for doors and skylights determined, certified, and labeled in
20 accordance with the appropriate NFRC standard shall be acceptable for
21 compliance with the state energy code. Sealed insulation glass, where
22 used, shall conform to, or be in the process of being tested for, ASTM
23 E-774-81 ((level)) class A or better. ((The state building code
24 council shall maintain a list of the tested U-values for glazing
25 products available in the state.))

26 (6) The minimum state energy code for new nonresidential buildings
27 shall be the Washington state energy code, 1986 edition, as amended.

28 (7)(a) Except as provided in (b) of this subsection, the Washington
29 state energy code for residential structures shall preempt the
30 residential energy code of each city, town, and county in the state of
31 Washington.

32 (b) The state energy code for residential structures does not
33 preempt a city, town, or county's energy code for residential
34 structures which exceeds the requirements of the state energy code and
35 which was adopted by the city, town, or county prior to March 1, 1990.
36 Such cities, towns, or counties may not subsequently amend their energy
37 code for residential structures to exceed the requirements adopted
38 prior to March 1, 1990.

39 (8) The state building code council shall consult with the state

1 energy office as provided in RCW 34.05.310 prior to publication of
2 proposed rules. The state energy office shall review the proposed
3 rules for consistency with the guidelines adopted in subsection (4) of
4 this section. The director of the state energy office shall recommend
5 to the state building code council any changes necessary to conform the
6 proposed rules to the requirements of this section.

7 (9) The state building code council shall conduct a study of county
8 and city enforcement of energy codes in the state. In conducting the
9 study, the council shall conduct public hearings at designated council
10 meetings to seek input from interested individuals and organizations,
11 and to the extent possible, hold these meetings in conjunction with
12 adopting rules under this section. The study shall include
13 recommendations as to how code enforcement may be improved. The
14 findings of the study shall be submitted in a report to the legislature
15 no later than January 1, 1991.

16 (10) If any electric utility providing electric service to
17 customers in the state of Washington purchases at least one percent of
18 its firm energy load from a federal agency, pursuant to section
19 5.(b)(1) of the Pacific Northwest electric power planning and
20 conservation act (P.L. 96-501), and such utility is unable to obtain
21 from that agency at least fifty percent of the funds for payments
22 required by RCW 19.27A.035, the amendments to this section by chapter
23 2, Laws of 1990 shall be null and void, and the 1986 state energy code
24 shall be in effect, except that a city, town, or county may enforce a
25 local energy code with more stringent energy requirements adopted prior
26 to March 1, 1990. This subsection shall expire June 30, 1995.

27 NEW SECTION. **Sec. 2.** This act is necessary for the immediate
28 preservation of the public peace, health, or safety, or support of the
29 state government and its existing public institutions, and shall take
30 effect immediately."

1 **EHB 2347** - S COMM AMD
2 By Committee on Energy & Utilities

3
ADOPTED 3/2/94
4 On page 1, line 2 of the title, after "products;" strike the
5 remainder of the title and insert "amending RCW 19.27A.020; and
6 declaring an emergency."

--- END ---