
HOUSE BILL 1886

State of Washington

56th Legislature

1999 Regular Session

By Representatives Delvin and Koster

Read first time 02/09/1999. Referred to Committee on Economic Development, Housing & Trade.

1 AN ACT Relating to energy-related building standards; and amending
2 RCW 19.27A.020.

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

4 **Sec. 1.** RCW 19.27A.020 and 1998 c 245 s 8 are each amended to read
5 as follows:

6 (1) No later than January 1, 1991, the state building code council
7 shall adopt rules to be known as the Washington state energy code as
8 part of the state building code.

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

18 (3) The Washington state energy code shall take into account
19 regional climatic conditions. Climate zone 1 shall include all

1 counties not included in climate zone 2. Climate zone 2 includes:
2 Adams, Chelan, Douglas, Ferry, Grant, Kittitas, Lincoln, Okanogan, Pend
3 Oreille, Spokane, Stevens, and Whitman counties.

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

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

9 (i) Ceilings insulated to a level of ~~((R-38))~~ R-30. The code shall
10 contain an exception which permits single rafter or joist vaulted
11 ceilings insulated to a level of ~~((R-30))~~ R-19 (R value includes
12 insulation only);

13 (ii) In zone 1, walls insulated to a level of ~~((R-19))~~ R-11 (R
14 value includes insulation only)~~((, or constructed with two by four~~
15 ~~members, R-13 insulation batts, R-3.2 insulated sheathing, and other~~
16 ~~normal assembly components))~~; in zone 2 walls insulated to a level of
17 ~~((R-24))~~ R-19 (R value includes insulation only), or constructed with
18 two by ~~((six))~~ four members, ~~((R-22))~~ R-13 insulation batts, R-3.2
19 insulated sheathing, and other normal construction assembly components;
20 for the purpose of determining equivalent thermal performance, the wall
21 U-value shall be ~~((0.058))~~ 0.075 in zone 1 and ~~((0.044))~~ 0.058 in zone
22 2;

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

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

28 ~~((v))~~ (iv) Slab on grade floors insulated to a level of ~~((R-10))~~
29 R-4 at the perimeter;

30 ~~((vi))~~ (v) Double glazed windows with values not more than
31 ~~((U-0.4))~~ U-0.65;

32 ~~((vii))~~ (vi) In zone 1 the glazing area may be up to twenty-one
33 percent of floor area and in zone 2 the glazing area may be up to
34 seventeen percent of floor area where consideration of the thermal
35 resistance values for other building components and solar heat gains
36 through the glazing result in thermal performance equivalent to that
37 achieved with thermal resistance values for other components determined
38 in accordance with the equivalent thermal performance criteria of (a)
39 of this subsection and glazing area equal to fifteen percent of the

1 floor area. Throughout the state for the purposes of determining
2 equivalent thermal performance, the maximum glazing area shall be
3 fifteen percent of the floor area; and

4 ~~((viii))~~ (vii) Exterior doors insulated to a level of ~~((R-5))~~ R-
5 3; or an exterior wood door with a thermal resistance value of less
6 than ~~((R-5))~~ R-3 and values for other components determined in
7 accordance with the equivalent thermal performance criteria of (a) of
8 this subsection.

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

12 (i) Ceilings insulated to a level of ~~((R-30))~~ R-19 in zone 1 and
13 ~~((R-38))~~ R-30 in zone 2 the code shall contain an exception which
14 permits single rafter or joist vaulted ceilings insulated to a level of
15 ~~((R-30))~~ R-19 (R value includes insulation only);

16 (ii) Walls insulated to a level of ~~((R-19))~~ R-11 (R value includes
17 insulation only)~~((, or constructed with two by four members, R-13~~
18 ~~insulation batts, R-3.2 insulated sheathing, and other normal assembly~~
19 ~~components))~~;

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

23 ~~((iv))~~ Floors over unheated spaces insulated to a level of ~~((R-19))~~
24 R-11 in zone 1 and ~~((R-30))~~ R-19 in zone 2 (R value includes insulation
25 only);

26 ~~((v))~~ (iv) Slab on grade floors insulated to a level of ~~((R-10))~~
27 R-4 at the perimeter;

28 ~~((vi))~~ (v) Heat pumps with a minimum heating season performance
29 factor (HSPF) of 6.8 or with all other energy sources with a minimum
30 annual fuel utilization efficiency (AFUE) of seventy-eight percent;

31 ~~((vii))~~ (vi) Double glazed windows with values not more than
32 ~~((U-0.65))~~ U-0.90 in zone 1 and ~~((U-0.60))~~ U-0.65 in zone 2~~((—The~~
33 ~~state building code council, in consultation with the department of~~
34 ~~community, trade, and economic development, shall review these U-~~
35 ~~values, and, if economically justified for consumers, shall amend the~~
36 ~~Washington state energy code to improve the U-values by December 1,~~
37 ~~1993. The amendment shall not take effect until July 1, 1994))~~; and

38 ~~((viii))~~ (vii) In zone 1, the maximum glazing area shall be
39 ~~((twenty-one))~~ twenty-five percent of the floor area. In zone 2 the

1 maximum glazing area shall be seventeen percent of the floor area.
2 Throughout the state for the purposes of determining equivalent thermal
3 performance, the maximum glazing area shall be fifteen percent of the
4 floor area.

5 (c) The requirements of (b)(ii) of this subsection do not apply to
6 residences with log or solid timber walls with a minimum average
7 thickness of three and one-half inches and with space heat other than
8 electric resistance.

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

13 (5) U-values for glazing shall be determined using the area
14 weighted average of all glazing in the building. U-values for vertical
15 glazing shall be determined, certified, and labeled in accordance with
16 the appropriate national fenestration rating council (NFRC) standard,
17 as determined and adopted by the state building code council.
18 Certification of U-values shall be conducted by a certified,
19 independent agency licensed by the NFRC. The state building code
20 council may develop and adopt alternative methods of determining,
21 certifying, and labeling U-values for vertical glazing that may be used
22 by fenestration manufacturers if determined to be appropriate by the
23 council. The state building code council shall review and consider the
24 adoption of the NFRC standards for determining, certifying, and
25 labeling U-values for doors and skylights when developed and published
26 by the NFRC. The state building code council may develop and adopt
27 appropriate alternative methods for determining, certifying, and
28 labeling U-values for doors and skylights. U-values for doors and
29 skylights determined, certified, and labeled in accordance with the
30 appropriate NFRC standard shall be acceptable for compliance with the
31 state energy code. Sealed insulation glass, where used, shall conform
32 to, or be in the process of being tested for, ASTM E-774-81 class A or
33 better.

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

36 ~~(7)((a) Except as provided in (b) of this subsection,~~) The
37 Washington state energy code for residential structures shall preempt
38 the residential energy code of each city, town, and county in the state
39 of Washington.

1 (~~(b) The state energy code for residential structures does not~~
2 ~~preempt a city, town, or county's energy code for residential~~
3 ~~structures which exceeds the requirements of the state energy code and~~
4 ~~which was adopted by the city, town, or county prior to March 1, 1990.~~
5 ~~Such cities, towns, or counties may not subsequently amend their energy~~
6 ~~code for residential structures to exceed the requirements adopted~~
7 ~~prior to March 1, 1990.))~~

8 (8) The state building code council shall consult with the
9 department of community, trade, and economic development as provided in
10 RCW 34.05.310 prior to publication of proposed rules. The department
11 of community, trade, and economic development shall review the proposed
12 rules for consistency with the guidelines adopted in subsection (4) of
13 this section. The director of the department of community, trade, and
14 economic development shall recommend to the state building code council
15 any changes necessary to conform the proposed rules to the requirements
16 of this section.

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