

# Energy Efficiency/Zero Fossil-Fuel Greenhouse Gas Emissions from Homes, Buildings, and Neighborhoods

This Act requires the state department of community, trade, and economic development to implement a strategic plan to enhance energy efficiency in and reduce greenhouse gas emissions from homes, buildings, districts, and neighborhoods. It directs the department and the state building code council to convene a work group to develop the plan. The Act requires the state energy code be designed to accelerate construction of energy efficient homes and buildings which help achieve a broad goal of building zero fossil-fuel greenhouse gas emission homes and buildings by the year 2031.

This legislation requires the state building code council adopt starter energy codes from 2013 through 2031 which incrementally move towards achieving seventy percent reduction in annual net energy consumption.

It requires utilities to:

- maintain records of the energy consumption data of all nonresidential and qualifying public agency buildings to which they provide service;
- create an energy benchmark for each reporting public facility using a portfolio manager;
- report the environmental protection agency national energy performance rating for each reporting public facility included in the technical requirements for this rating to the department of general administration; and
- link all portfolio manager accounts to the state portfolio manager master account to facilitate public reporting.

The bill requires the department of community, trade, and economic development to recommend to the legislature a methodology to determine an energy performance score for residential buildings and an implementation strategy to use such information to improve the energy efficiency of the state's existing housing supply.

This Act requires the department of general administration to:

- establish a state portfolio manager master account;
- select a standardized portfolio manager report for reporting public facilities;
- make the standard report of each reporting public facility available to the public through the portfolio manager web site;
- develop a technical assistance program to facilitate the implementation of a preliminary audit and the investment grade energy audit and design the program to utilize audit services provided by utilities or energy services contracting companies when possible; and
- conduct a review of facilities not covered by the national energy performance rating, and based on this review, develop a portfolio of additional facilities that require preliminary energy audits.

Submitted as:

Washington

[Chapter 423, Laws of 2009](#)

Status: Enacted into law in 2009.

## Suggested State Legislation

(Title, enacting clause, etc.)

1 Section 1. [*Short Title.*] This Act shall be cited as “An Act to Promote Energy Efficiency  
2 in Buildings.”  
3

4 Section 2. [*Definitions.*] Unless the context clearly requires otherwise, as used in this Act:

5 (1) “Benchmark” means the energy used by a facility as recorded monthly for at least  
6 [one year] and the facility characteristics information inputs required for a portfolio manager.

7 (2) “Conditioned space” means conditioned space, as defined in the [state energy code].

8 (3) “Consumer-owned utility” includes a municipal electric utility formed under [insert  
9 citation], a public utility district formed under [insert citation], an irrigation district formed under  
10 [insert citation], a cooperative formed under [insert citation], a mutual corporation or association  
11 formed under [insert citation], a port district formed under [insert citation], or a water-sewer  
12 district formed under [insert citation], that is engaged in the business of distributing electricity to  
13 one or more retail electric customers in the state.

14 (4) “Cost-effectiveness” means that a project or resource is forecast to be reliable and  
15 available within the time it is needed and to meet or reduce the power demand of the intended  
16 consumers at an estimated incremental system cost no greater than that of the least-cost similarly  
17 reliable and available alternative project or resource, or any combination thereof.

18 (5) “Council” means the [state building code council].

19 (6) “Department” means the [department of community, trade, and economic  
20 development].

21 (7) “Embodied energy” means the total amount of fossil fuel energy consumed to extract  
22 raw materials and to manufacture, assemble, transport, and install the materials in a building and  
23 the life-cycle cost benefits including the recyclability and energy efficiencies with respect to  
24 building materials, taking into account the total sum of current values for the costs of investment,  
25 capital, installation, operating, maintenance, and replacement as estimated for the lifetime of the  
26 product or project.

27 (8) “Energy consumption data” means the monthly amount of energy consumed by a  
28 customer as recorded by the applicable energy meter for the most recent [twelve-month] period.

29 (9) “Energy service company” has the same meaning as in [insert citation].

30 (10) “General administration” means the [department of general administration].

31 (11) “Greenhouse gas” and “greenhouse gases” includes carbon dioxide, methane, nitrous  
32 oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

33 (12) “Investment grade energy audit” means an intensive engineering analysis of energy  
34 efficiency and management measures for the facility, net energy savings, and a cost-effectiveness  
35 determination.

36 (13) “Investor-owned utility” means a corporation owned by investors that meets the  
37 definition of “corporation” as defined in [insert citation] and is engaged in distributing either  
38 electricity or natural gas, or both, to more than one retail electric customer in the state.

39 (14) “Major facility” means any publicly owned or leased building, or a group of such  
40 buildings at a single site, having [ten thousand square feet] or more of conditioned floor space.

41 (15) “National energy performance rating” means the score provided by the Energy Star  
42 Program, to indicate the energy efficiency performance of the building compared to similar  
43 buildings in that climate as defined in the United States Environmental Protection Agency  
44 “ENERGY STAR® Performance Ratings Technical Methodology.”

45 (16) “Net zero energy use” means a building with net energy consumption of zero over a  
46 typical [year].

47 (17) “Portfolio manager” means the United States Environmental Protection Agency's  
48 Energy Star Portfolio Manager or an equivalent tool adopted by the [department].

49 (18) “Preliminary energy audit” means a quick evaluation by an energy service company

- 50 of the energy savings potential of a building.
- 51 (19) “Qualifying public agency” includes all [state agencies, colleges, and universities].
- 52 (20) “Qualifying utility” means a consumer-owned or investor-owned gas or electric  
53 utility that serves more than [twenty-five thousand] customers in this state.
- 54 (21) “Reporting public facility” means any of the following:
- 55 (a) A building or structure, or a group of buildings or structures at a single site,  
56 owned by a qualifying public agency, that exceed [ten thousand square feet of conditioned  
57 space];
- 58 (b) Buildings, structures, or spaces leased by a qualifying public agency that  
59 exceeds [ten thousand square feet of conditioned space], where the qualifying public agency  
60 purchases energy directly from the investor-owned or consumer-owned utility;
- 61 (c) A wastewater treatment facility owned by a qualifying public agency; or
- 62 (d) Other facilities selected by the qualifying public agency.
- 63 (22) “State portfolio manager master account” means a portfolio manager account  
64 established to provide a single shared portfolio that includes reports for all the reporting public  
65 facilities.

66

67 Section 3. [*Strategic Plan to Enhance Energy Efficiency In and Reduce Greenhouse Gas*  
68 *Emissions from Homes, Buildings, Districts, and Neighborhoods.*]

69 (A) To the extent that funding is appropriated specifically for the purposes of this section,  
70 the [department] shall develop and implement a strategic plan for enhancing energy efficiency in  
71 and reducing greenhouse gas emissions from homes, buildings, districts, and neighborhoods. The  
72 strategic plan must be used to help direct the future code increases in [insert citation], with  
73 targets for new buildings consistent with section 5 of this Act. The strategic plan will identify  
74 barriers to achieving net zero energy use in homes and buildings and identify how to overcome  
75 these barriers in future energy code updates and through complementary policies.

76 (B) The [department] must complete and release the strategic plan to the [legislature] and  
77 the [council] by [December 31, 2010], and update the plan every [three years].

78 (C) The strategic plan must include recommendations to the [council] on energy code  
79 upgrades. At a minimum, the strategic plan must:

80 (1) Consider development of aspirational codes separate from the state energy  
81 code that contain economically and technically feasible optional standards that could achieve  
82 higher energy efficiency for those builders that elected to follow the aspirational codes in lieu of  
83 or in addition to complying with the standards set forth in the [state energy code];

84 (2) Determine the appropriate methodology to measure achievement of [state  
85 energy code] targets using the United States Environmental Protection Agency’s Target Finder  
86 Program or equivalent methodology;

87 (3) Address the need for enhanced code training and enforcement;

88 (4) Include state strategies to support research, demonstration, and education  
89 programs designed to achieve a [seventy percent] reduction in annual net energy consumption as  
90 specified in section 5 of this Act and enhance energy efficiency and on-site renewable energy  
91 production in buildings;

92 (5) Recommend incentives, education, training programs and certifications,  
93 particularly state-approved training or certification programs, joint apprenticeship programs, or  
94 labor-management partnership programs that train workers for energy-efficiency projects to  
95 ensure proposed programs are designed to increase building professionals’ ability to design,  
96 construct, and operate buildings that will meet the [seventy percent] reduction in annual net  
97 energy consumption as specified in section 5 of this Act;

98 (6) Address barriers for utilities to serve net zero energy homes and buildings and

- 99 policies to overcome those barriers;
- 100 (7) Address the limits of a prescriptive code in achieving net zero energy use  
101 homes and buildings and propose a transition to performance-based codes;
- 102 (8) Identify financial mechanisms such as tax incentives, rebates, and innovative  
103 financing to motivate energy consumers to take action to increase energy efficiency and their use  
104 of on-site renewable energy. Such incentives, rebates, or financing options may consider the role  
105 of government programs as well as utility-sponsored programs;
- 106 (9) Address the adequacy of education and technical assistance, including school  
107 curricula, technical training, and peer-to-peer exchanges for professional and trade audiences;
- 108 (10) Develop strategies to develop and install district and neighborhood-wide  
109 energy systems that help meet net zero energy use in homes and buildings;
- 110 (11) Identify costs and benefits of energy efficiency measures on residential and  
111 nonresidential construction; and
- 112 (12) Investigate methodologies and standards for the measurement of the amount  
113 of embodied energy used in building materials.
- 114 (D) The [department] and the [council] shall convene a work group with affected parties  
115 to inform the initial development of the strategic plan.

116  
117 Section 4. *[State Energy Code.]*

- 118 (A) The state [building code council] shall adopt rules to be known as the [state energy  
119 code] as part of the [state building code].
- 120 (B) The [council] shall follow the [legislature's] standards set forth in this section to  
121 adopt rules to be known as the [state energy code]. The [state energy code] shall be designed to:
- 122 (1) Construct increasingly energy efficient homes and buildings that help achieve  
123 the broader goal of building zero fossil-fuel greenhouse gas emission homes and buildings by the  
124 year [2031];
- 125 (2) Require new buildings to meet a certain level of energy efficiency, but allow  
126 flexibility in building design, construction, and heating equipment efficiencies within that  
127 framework; and
- 128 (3) Allow space heating equipment efficiency to offset or substitute for building  
129 envelope thermal performance.
- 130 (C) The [state energy code] shall take into account regional climatic conditions. [Climate  
131 zone [1] shall include [insert zones and counties as necessary].
- 132 (D) The [state energy code for residential buildings] shall be the [insert year] edition of  
133 the [state energy code], or as amended by rule by the [council].
- 134 (E) The minimum state energy code for new nonresidential buildings shall be the [insert  
135 year] edition of the [state energy code], or as amended by the [council] by rule.
- 136 (F) (1) Except as provided in (2) of this subsection, the [state energy code for  
137 residential structures] shall preempt the residential energy code of each city, town, and county in  
138 this state.
- 139 (2) The [state energy code for residential structures] does not preempt a city,  
140 town, or county's energy code for residential structures which exceeds the requirements of the  
141 [state energy code] and which was adopted by the city, town, or county prior to [March 1, 1990].  
142 Such cities, towns, or counties may not subsequently amend their energy code for residential  
143 structures to exceed the requirements adopted prior to [March 1, 1990].
- 144 (G) The [state building code council] shall consult with the [department of community,  
145 trade, and economic development] as provided in [insert citation] prior to publication of  
146 proposed rules. The [director of the department of community, trade, and economic  
147 development] shall recommend to the [state building code council] any changes necessary to

148 conform to the proposed rules to the requirements of this section.

149 (H) The [state building code council] shall evaluate and consider adoption of the  
150 [international energy conservation code] in this state in place of the existing [state energy code].

151

152 Section 5. [*Reducing Annual Net Energy Consumption: Targets.*]

153 (A) Except as provided in subsection (B) of this section, residential and nonresidential  
154 construction permitted under the [2031 state energy code] must achieve a [seventy percent]  
155 reduction in annual net energy consumption, using the adopted [insert date] [state energy code]  
156 as a baseline.

157 (B) The [council] shall adopt [state energy codes] from [2013 through 2031] that  
158 incrementally move towards achieving the [seventy percent] reduction in annual net energy  
159 consumption as specified in subsection (A) of this section. The [council] shall report its progress  
160 by [December 31, 2012, and every three years thereafter]. If the [council] determines that  
161 economic, technological, or process factors would significantly impede adoption of or  
162 compliance with this subsection, the [council] may defer the implementation of the proposed  
163 energy code update and shall report its findings to the [legislature] by [December 31st of the year  
164 prior to the year in which those codes would otherwise be enacted].

165

166 Section 6. [*Recording Energy Consumption of Nonresidential and Qualifying Public*  
167 *Agency Buildings.*]

168 (A) On and after [January 1, 2010], qualifying utilities shall maintain records of the  
169 energy consumption data of all nonresidential and qualifying public agency buildings to which  
170 they provide service. This data must be maintained for at least the most recent [twelve months]  
171 in a format compatible for uploading to the United States Environmental Protection Agency's  
172 Energy Star Portfolio Manager.

173 (B) On and after [January 1, 2010], upon the written authorization or secure electronic  
174 authorization of a nonresidential building owner or operator, a qualifying utility shall upload the  
175 energy consumption data for the accounts specified by the owner or operator for a building to the  
176 United States Environmental Protection Agency's Energy Star Portfolio Manager in a form that  
177 does not disclose personally identifying information.

178 (C) In carrying out the requirements of this section, a qualifying utility shall use any  
179 method for providing the specified data in order to maximize efficiency and minimize overall  
180 program cost. Qualifying utilities are encouraged to consult with the United States  
181 Environmental Protection Agency and their customers in developing reasonable reporting  
182 options.

183 (D) Disclosure of nonpublic nonresidential benchmarking data and ratings required under  
184 subsection (E) of this section will be phased in as follows:

185 (1) By [January 1, 2011], for buildings greater than [fifty thousand square feet];  
186 and

187 (2) By [January 1, 2012], for buildings greater than [ten thousand square feet].

188 (E) Based on the size guidelines in subsection (D) of this section, a building owner or  
189 operator, or their agent, of a nonresidential building shall disclose the United States  
190 Environmental Protection Agency's Energy Star Portfolio Manager benchmarking data and  
191 ratings to a prospective buyer, lessee, or lender for the most recent continuously occupied  
192 [twelve-month] period. A building owner or operator, or their agent, who delivers United States  
193 Environmental Protection Agency's Energy Star Portfolio Manager benchmarking data and  
194 ratings to a prospective buyer, lessee, or lender is not required to provide additional information  
195 regarding energy consumption, and the information is deemed to be adequate to inform the  
196 prospective buyer, lessee, or lender regarding the United States Environmental Protection

197 Agency's Energy Star Portfolio Manager benchmarking data and ratings for the most recent  
198 [twelve-month] period for the building that is being sold, leased, financed, or refinanced.

199 (F) Notwithstanding subsections (D) and (E) of this section, nothing in this section  
200 increases or decreases the duties, if any, of a building owner, operator, or their agent under this  
201 chapter or alters the duty of a seller, agent, or broker to disclose the existence of a material fact  
202 affecting the real property.

203

204 Section 7. [*Energy Performance Score for Residential Buildings.*] By [December 31,  
205 2009], to the extent that funding is appropriated specifically for the purposes of this section, the  
206 [department] shall develop and recommend to the [legislature] a methodology to determine an  
207 energy performance score for residential buildings and an implementation strategy to use such  
208 information to improve the energy efficiency of the state's existing housing supply. In  
209 developing its strategy, the [department] shall seek input from providers of residential energy  
210 audits, utilities, building contractors, mixed use developers, the residential real estate industry,  
211 and real estate listing and form providers.

212

213 Section 8. [*Energy Benchmark.*]

214 (A) The requirements of this section apply to the [department of general administration]  
215 and other qualifying state agencies only to the extent that specific appropriations are provided to  
216 those agencies referencing this Act or chapter number and this section.

217 (B) By [July 1, 2010], each qualifying public agency shall:

218 (1) Create an energy benchmark for each reporting public facility using a portfolio  
219 manager;

220 (2) Report to general administration, the Environmental Protection Agency  
221 national energy performance rating for each reporting public facility included in the technical  
222 requirements for this rating; and

223 (3) Link all portfolio manager accounts to the state portfolio manager master  
224 account to facilitate public reporting.

225 (C) By [January 1, 2010], [general administration] shall establish a state portfolio  
226 manager master account. The account must be designed to provide shared reporting for all  
227 reporting public facilities.

228 (D) By [July 1, 2010], [general administration] shall select a standardized portfolio  
229 manager report for reporting public facilities. [General administration], in collaboration with the  
230 United States Environmental Protection Agency, shall make the standard report of each reporting  
231 public facility available to the public through the portfolio manager web site.

232 (E) [General administration] shall prepare a [biennial] report summarizing the statewide  
233 portfolio manager master account reporting data. The first report must be completed by  
234 [December 1, 2012]. Subsequent reporting shall be completed every [two years] thereafter.

235 (F) By [July 1, 2010], [general administration] shall develop a technical assistance  
236 program to facilitate the implementation of a preliminary audit and the investment grade energy  
237 audit. [General administration] shall design the technical assistance program to utilize audit  
238 services provided by utilities or energy services contracting companies when possible.

239 (G) For a reporting public facility that is leased by the state with a national energy  
240 performance rating score below [seventy-five], a qualifying public agency may not enter into a  
241 new lease or lease renewal on or after [January 1, 2010], unless:

242 (1) A preliminary audit has been conducted within the last [two years]; and

243 (2) The owner or lessor agrees to perform an investment grade audit and  
244 implement any cost-effective energy conservation measures within the first [two years] of the  
245 lease agreement if the preliminary audit has identified potential cost-effective energy

246 conservation measures.

247 (H) (1) Except as provided in (2) of this subsection, for each reporting public facility  
248 with a national energy performance rating score below [fifty], the qualifying public agency, in  
249 consultation with [general administration], shall undertake a preliminary energy audit by [July 1,  
250 2011]. If potential cost-effective energy savings are identified, an investment grade energy audit  
251 must be completed by [July 1, 2013]. Implementation of cost-effective energy conservation  
252 measures are required by [July 1, 2016]. For a major facility that is leased by a [state agency,  
253 college, or university], energy audits and implementation of cost-effective energy conservation  
254 measures are required only for that portion of the facility that is leased by the [state agency,  
255 college, or university].

256 (2) A reporting public facility that is leased by the state is deemed in compliance  
257 with (1) of this subsection if the qualifying public agency has already complied with the  
258 requirements of subsection (G) of this section.

259 (I) Schools are strongly encouraged to follow the provisions in subsections (B) through  
260 (H) of this section.

261 (J) The [director of the department of general administration], in consultation with the  
262 affected state agencies and the [office of financial management], shall review the cost and  
263 delivery of agency programs to determine the viability of relocation when a facility leased by the  
264 state has a national energy performance rating score below [fifty]. The [department of general  
265 administration] shall establish a process to determine viability.

266 (K) [General administration], in consultation with the [office of financial management],  
267 shall develop a waiver process for the requirements in subsection (G) of this section. The  
268 [director of the office of financial management], in consultation with [general administration],  
269 may waive the requirements in subsection (G) of this section if the [director] determines that  
270 compliance is not cost-effective or feasible. The [director of the office of financial management]  
271 shall consider the review conducted by the [department of general administration] on the  
272 viability of relocation as established in subsection (J) of this section, if applicable, prior to  
273 waiving the requirements in subsection (G) of this section.

274 (L) By [July 1, 2011], [general administration] shall conduct a review of facilities not  
275 covered by the national energy performance rating. Based on this review, [general  
276 administration] shall develop a portfolio of additional facilities that require preliminary energy  
277 audits. For these facilities, the qualifying public agency, in consultation with [general  
278 administration], shall undertake a preliminary energy audit by [July 1, 2012]. If potential cost-  
279 effective energy savings are identified, an investment grade energy audit must be completed by  
280 [July 1, 2013].

281

282 Section 9. [*Severability*.] [Insert severability clause.]

283

284 Section 10. [*Repealer*.] [Insert repealer clause.]

285

286 Section 11. [*Effective Date*.] [Insert effective date.]