Chapter 39.35 RCW
ENERGY CONSERVATION IN DESIGN OF PUBLIC FACILITIES

Sections

RCW 39.35.010 Legislative finding. The legislature hereby finds:

(1) That major publicly owned or leased facilities have a significant impact on our state's consumption of energy and emission of greenhouse gases from the buildings sector;

(2) That energy conservation practices including energy management systems, combined heat and power systems, and renewable energy systems adopted for the design, construction, and utilization of such facilities will have a beneficial effect on our overall supply of energy;

(3) That the beneficial effect of the electric output from combined heat and power systems includes both energy and capacity value;

(4) That the cost of the energy consumed by such facilities, and the greenhouse gas emissions associated with that energy consumption, over the life of the facilities shall be considered in addition to the initial cost of constructing such facilities;

(5) That the cost of energy is significant and major facility designs shall be based on the total life-cycle cost, including the initial construction cost, and the cost, over the economic life of a major facility, of the energy consumed, and of the operation and maintenance of a major facility as they affect energy consumption, including the costs associated with greenhouse gas emissions from energy consumption; and

(6) That the use of energy systems in these facilities which utilize combined heat and power or renewable resources such as solar energy, wood or wood waste, or other nonconventional fuels, and which incorporate energy management systems, shall be considered in the design of all publicly owned or leased facilities. [2022 c 178 § 1; 2015 3rd sp.s. c 19 § 2; 2001 c 214 § 15; 1982 c 159 § 1; 1975 1st ex.s. c 177 § 1.]

Finding—Intent—2015 3rd sp.s. c 19: "The legislature finds that it is in the public interest to encourage and foster the development of a thermal standard and to encourage combined heat and power (cogeneration) systems throughout the state. Combined heat and power systems can help the state achieve energy independence and comply with new federal electric energy emission efficiency standards by generating both electric power and useful thermal energy from a single fuel source, thereby increasing energy efficiency and decreasing grid-based emissions. It is the intent of the legislature to promote the deployment of combined heat and power by requiring consideration of combined heat and power systems in the construction of new critical governmental facilities, incorporating reports on combined heat and

power facilities in integrated resource plans, and streamlining the process by which combined heat and power facilities obtain permits." [2015 3rd sp.s. c 19 § 1.]

Findings—2001 c 214: "(1) The legislature hereby finds that:

(a) The economy of the state and the health, safety, and welfare of its citizens are threatened by the current energy supply and price instabilities;

(b) Many energy efficiency programs for public buildings launched during the 1970s and 1980s were not maintained during the subsequent sustained period of low energy costs and abundant supply; and

(c) Conservation programs originally established in the 1970s and 1980s can be improved or updated. New programs drawing on recently developed technologies, including demand-side energy management systems, can materially increase the efficiency of energy use by the public sector.

(2) It is the policy of the state of Washington that:

(a) State government is committed to achieving significant gains in energy efficiency. Conventional conservation programs will be reviewed and updated in light of experience gained since their commencement;

(b) State government must play a leading role in demonstrating updated and new energy efficiency technologies. New programs or measures made possible by technological advances, such as demand-side response measures and energy management systems, shall be treated in the same manner as conventional conservation programs and will be integrated into the state's energy efficiency programs." [2001 c 214 § 14.]

Severability—Effective date—2001 c 214: See notes following RCW 80.50.010.

Applicability—1982 c 159: "This act does not apply to a major facility construction or renovation on which a life-cycle cost analysis is commenced under chapter 39.35 RCW before June 10, 1982." [1982 c 159 § 5.]

RCW 39.35.020 Legislative declaration. The legislature declares that it is the public policy of this state to ensure that energy conservation practices, greenhouse gas emissions reduction practices, and renewable energy systems are employed in the design of major publicly owned or leased facilities and that the use of all-electric energy systems and at least one renewable energy or combined heat and power system is considered. To this end the legislature authorizes and directs that public agencies analyze the cost of energy consumption of each major facility and each critical governmental facility to be planned and constructed or renovated after September 8, 1975. [2022 c 178 § 2; 2015 3rd sp.s. c 19 § 3; 1982 c 159 § 2; 1975 1st ex.s. c 177 § 2.]

Finding—Intent—2015 3rd sp.s. c 19: See note following RCW 39.35.010.

Applicability—1982 c 159: See notes following RCW 39.35.010.

RCW 39.35.030 Definitions. For the purposes of this chapter the following words and phrases shall have the following meanings unless the context clearly requires otherwise:

(1) "Combined heat and power" means the sequential generation of electricity and useful thermal energy from a common fuel source where, under normal operating conditions, the facility has a useful thermal energy output of no less than thirty-three percent of the total energy output.

(2) "Critical governmental facility" means a building or district energy system owned by the state or a political subdivision of the state that is expected to:

(a) Be continuously occupied;

(b) Maintain operations for at least six thousand hours each year;

(c) Have a peak electricity demand exceeding five hundred kilowatts; and

(d) Serve a critical public health or public safety function during a natural disaster or other emergency situation that may result in a widespread power outage, including a:

(i) Command and control center;

(ii) Shelter;

(iii) Prison or jail;

(iv) Police or fire station;

(v) Communications or data center;

(vi) Water or wastewater treatment facility;

(vii) Hazardous waste storage facility;

(viii) Biological research facility;

(ix) Hospital; or

(x) Food preparation or food storage facility.

(3) "Department" means the state department of enterprise services.

(4) "Design standards" means the heating, air-conditioning, ventilating, and renewable resource systems identified, analyzed, and recommended by the department as providing an efficient energy system or systems based on the economic life of the selected buildings.

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

(6) "Energy management system" means a program, energy efficiency equipment, technology, device, or other measure including, but not limited to, a management, educational, or promotional program, smart appliance, meter reading system that provides energy information capability, computer software or hardware, communications equipment or hardware, thermostat or other control equipment, together with related administrative or operational programs, that allows identification and management of opportunities for improvement in the efficiency of energy use, including but not limited to a measure that allows:

(a) Energy consumers to obtain information about their energy usage and the cost of energy in connection with their usage;

(b) Interactive communication between energy consumers and their energy suppliers;

(c) Energy consumers to respond to energy price signals and to manage their purchase and use of energy; or

(d) For other kinds of dynamic, demand-side energy management.

(7) "Energy systems" means all utilities, including, but not limited to, heating, air-conditioning, ventilating, lighting, and the supplying of domestic hot water.

(8)(a) "Energy-consumption analysis" means the evaluation of all energy systems and components by demand and type of energy including the internal energy load imposed on a major facility or a critical governmental facility by its occupants, equipment, and components, and the external energy load imposed on a major facility or a critical governmental facility by the climatic conditions of its location. An energy-consumption analysis of the operation of energy systems of a major facility or a critical governmental facility shall include, but not be limited to, the following elements:

(i) The comparison of three or more system alternatives, at least one of which shall include renewable energy systems, and one of which shall include all-electric energy systems;

(ii) The simulation of each system over the entire range of operation of such facility for a year's operating period;

(iii) The evaluation of the energy consumption of component equipment in each system considering the operation of such components at other than full or rated outputs;

(iv) The identification and analysis of critical loads for each energy system; and

(v) For a critical governmental facility, a combined heat and power system feasibility assessment, including but not limited to an evaluation of: (A) Whether equipping the facility with a combined heat and power system would result in expected energy savings in excess of the expected costs of purchasing, operating, and maintaining the system over a fifteen-year period; and (B) the cost of integrating the variability of combined heat and power resources.

(b) The energy-consumption analysis shall be prepared by a professional engineer or licensed architect who may use computers or such other methods as are capable of producing predictable results.

(9) "Greenhouse gas" has the same meaning as provided in RCW 70A.45.010.

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

(11) "Life-cycle cost" means the initial cost and cost of operation of a major facility or a critical governmental facility over its economic life. This shall be calculated as the initial cost plus the operation, maintenance, and energy costs over its economic life, reflecting anticipated increases in these costs discounted to present value at the current rate for borrowing public funds, as determined by the office of financial management. The energy cost projections used shall be those provided by the department. The department shall update these projections at least every two years.

(12) "Life-cycle cost analysis" includes, but is not limited to, the following elements:

(a) The coordination and positioning of a major facility or a critical governmental facility on its physical site;

(b) The amount and type of fenestration employed in a major facility or a critical governmental facility;

(c) The amount of insulation incorporated into the design of a major facility or a critical governmental facility;

(d) The variable occupancy and operating conditions of a major facility or a critical governmental facility; and

(e) An energy-consumption analysis of a major facility or a critical governmental facility.

(13) "Major facility" means any publicly owned or leased building having twenty-five thousand square feet or more of usable floor space.

(14) "Public agency" means every state office, officer, board, commission, committee, bureau, department, and all political subdivisions of the state.

(15) "Renewable energy systems" means methods of facility design and construction and types of equipment for the utilization of renewable energy sources including, but not limited to, hydroelectric power, active or passive solar space heating or cooling, domestic solar water heating, windmills, waste heat, biomass and/or refuse-derived fuels, photovoltaic devices, and geothermal energy.

(16) "Renovation" means additions, alterations, or repairs within any twelve-month period which exceed fifty percent of the value of a major facility or a critical governmental facility and which will affect any energy system.

(17) "Selected buildings" means educational, office, residential care, and correctional facilities that are designed to comply with the design standards analyzed and recommended by the department. [2022 c 178 § 3; 2015 3rd sp.s. c 19 § 4. Prior: 2011 1st sp.s. c 43 § 247; 2001 c 214 § 16; 1996 c 186 § 402; 1994 c 242 § 1; 1991 c 201 § 14; 1982 c 159 § 3; 1975 1st ex.s. c 177 § 3.]

Finding—Intent—2015 3rd sp.s. c 19: See note following RCW 39.35.010.

Effective date—Purpose—2011 1st sp.s. c 43: See notes following RCW 43.19.003.

Severability—Effective date—2001 c 214: See notes following RCW 80.50.010.

Findings—2001 c 214: See note following RCW 39.35.010.

Findings—Intent—Part headings not law—Effective date—1996 c 186: See notes following RCW 43.330.904.

Applicability—1982 c 159: See notes following RCW 39.35.010.

RCW 39.35.040 Facility design to include life-cycle cost analysis. Whenever a public agency determines that any major facility or a critical governmental facility is to be constructed or renovated, such agency shall cause to be included in the design phase of such construction or renovation a provision that requires a life-cycle cost analysis conforming with the guidelines developed in RCW 39.35.050 to be prepared for such facility. Such analysis shall be approved by the agency prior to the commencement of actual construction or renovation. A public agency may accept the facility design if the agency is satisfied that the life-cycle cost analysis provides for an efficient energy system or systems based on the economic life of the facility.

Nothing in this section prohibits the construction or renovation of major facilities or critical governmental facilities that utilize renewable energy or combined heat and power systems. [2015 3rd sp.s. c 19 § 5; 1994 c 242 § 2; 1982 c 159 § 4; 1975 1st ex.s. c 177 § 4.]

Finding—Intent—2015 3rd sp.s. c 19: See note following RCW 39.35.010.

Applicability—1982 c 159: See notes following RCW 39.35.010.

RCW 39.35.050 Life-cycle cost analysis—Guidelines. The department, in consultation with affected public agencies, shall develop and issue guidelines for administering this chapter. The purpose of the guidelines is to define a procedure and method for performance of life-cycle cost analysis to promote the selection of low-life-cycle cost alternatives. At a minimum, the guidelines must contain provisions that:

(1) Address energy considerations during the planning phase of the project;

(2) Identify energy components and system alternatives including energy management systems, all-electric energy systems, renewable energy systems, and combined heat and power applications prior to commencing the energy consumption analysis;

(3) Identify simplified methods to assure the lowest life-cycle cost alternatives for selected buildings with between twenty-five thousand and one hundred thousand square feet of usable floor area;

(4) Establish times during the design process for preparation, review, and approval or disapproval of the life-cycle cost analysis;

(5) Specify the assumptions to be used for escalation and inflation rates, equipment service lives, economic building lives, and maintenance costs;

(6) Determine life-cycle cost analysis format and submittal requirements to meet the provisions of chapter 201, Laws of 1991;

(7) Provide for review and approval of life-cycle cost analysis. [2022 c 178 § 4; 2001 c 214 § 17; 1996 c 186 § 403; 1994 c 242 § 3; 1991 c 201 § 15.]

Severability—Effective date—2001 c 214: See notes following RCW 80.50.010.

Findings—2001 c 214: See note following RCW 39.35.010.

Findings—Intent—Part headings not law—Effective date—1996 c 186: See notes following RCW 43.330.904.

RCW 39.35.060 Life-cycle cost analysis—Review fees. The department may impose fees upon affected public agencies for the review of life-cycle cost analyses. The fees shall be deposited in the enterprise services account. The purpose of the fees is to recover the costs by the department for review of the analyses. The department shall set fees at a level necessary to recover all of its costs related to increasing the energy efficiency of state-supported new construction. The fees shall not exceed one-tenth of one percent of the total cost of any project or exceed two thousand dollars for any project unless mutually agreed to. The department shall provide detailed calculation ensuring that the energy savings resulting from its review of life-cycle cost analysis justify the costs of performing that review. [2015 c 225 § 45; 2001 c 292 § 1; 1996 c 186 § 404; 1991 c 201 § 16.]

Findings—Intent—Part headings not law—Effective date—1996 c 186: See notes following RCW 43.330.904.