

Energy Code for the State of Washington

Washington State has its own State specific energy code which is similar to, but more stringent than, ASHRAE 90.1-2004.

It should be noted that the city of Seattle has its own energy code, which is generally more stringent than the Washington State Energy Code.

The following are highlights of the Washington State Energy Code which pertain to lighting controls.

INTERIOR LIGHTING.

GENERAL. For any building, each space enclosed by walls or ceiling-height partitions shall have controls within that space. Controls can be automatic, or can be manual that are readily accessible at entry/exit. All daylighted zones shall be provided with individual controls or occupant-sensing automatic controls. Specialty lighting shall be controlled independently.

AREA CONTROLS. The maximum lighting power controlled by a single switch or automatic control shall not exceed that provided by a 20A circuit loaded to 80%. Master controls may be installed provided the individual switches retain their capability to function independently. Circuit breakers may not be used as the sole means of switching.

DAYLIGHTED AREA CONTROLS. Daylighted areas shall be provided with individual controls, or daylight or occupancy sensing automatic controls, which control lights independently of general area lighting.

AUTOMATIC SHUT OFF CONTROLS. Buildings greater than 5000 ft² and all school classrooms shall have automatic controls to shut off lighting during unoccupied hours. Automatic controls can be occupancy sensors, time switches or other automatic switching devices. All enclosed office areas less than 300 ft², all meeting and conference rooms and all school classrooms shall be equipped with occupancy sensors.

OCCUPANCY SENSORS. Occupancy sensors must turn off lights no later than 30 minutes after the area is vacated. Fixtures controlled by occupancy sensors must have manual override.

AUTOMATIC TIME SWITCHES. Automatic time switches shall have a minimum 7-day clock with each day capable of independent settings and with 24-hour holiday shutoff feature. Automatic time switches shall have program backup capabilities of at least 10 hours if power is interrupted. Automatic time switches must have an accessible manual override switch. Override switches cannot allow lighting to remain on longer than 2 hours after override is initiated and cannot control an area exceeding 5000 ft² or 5% of building footprint, whichever is greater.

EXIT SIGNS. Exit signs shall have an input power demand of 5W or less per sign.

INTERIOR POWER ALLOWANCE. The interior power allowance for a building area shall be determined by multiplying the interior floor area by the allowed power density factor for how that area will be used. The lighting power allowance for each use area within the building shall be separately calculated and summed to obtain the interior power allowance for the building. Power allowance factors are listed in Table 15-1 of the Washington State Code.

EXTERIOR LIGHTING.

GENERAL. Lighting for all exterior applications shall have automatic controls capable of turning off exterior lighting when sufficient daylight is available or when lighting is not required during nighttime hours.

Lighting not designated for dusk-to-dawn operation shall be controlled by either a combination of a photosensor and time switch or by an astronomic time switch. Lighting designated for dusk-to-dawn operation shall be controlled by an astronomic time switch or photosensor. All time switches shall be capable of retaining programming and settings during power loss for a period of at least 10 hours.

EXTERIOR POWER ALLOWANCE. All exterior luminaires operating at greater than 100W shall contain lamps with a minimum efficacy of 60lm/W unless controlled by a motion sensor. The exterior power allowance is the sum of the individual power densities found in Table 15-2 of the State Code.

Lighting for the following exterior applications is exempt when equipped with an independent control device: transportation marker lighting, signage, equipment lighting, theatrical lighting, athletic playing field lighting, temporary lighting, industrial production or storage area lighting, theme lighting in theme/amusement parks, and lighting that highlights monuments.

The above is a very brief guideline, as interpreted by Douglas Lighting Controls. Refer to the Washington State area code, or that of your municipality, for details applicable to your lighting control project.

DOUGLAS LIGHTING CONTROLS

tel: (604) 873-2792 (toll free) 1-877-872-2792

fax: (604) 873-6939

email: lighting@douglaswest.com

website: www.douglaslightingcontrols.com