Energy Codes for the State of Hawaii

Currently, there is no mandatory energy code for the State of Hawaii. However, there are mandatory energy codes for all of the counties except Kalawao.

Honolulu, Maui, and Kauai Counties require compliance with ASHRAE 90.1-1999 for commercial applications. Hawaii County requires compliance with ASHRAE 90.1-1989 for commercial applications.

The following are some highlights of these codes as they pertain to lighting controls.

ASHRAE 90.1-1999 (Oahu, Maui and Kauai Counties)

INTERIOR LIGHTING. Interior lighting in buildings larger than 5000 ft.^{2} shall be controlled with an automatic control device to shut off building lighting in all spaces. This automatic control device shall function on either a time-of-day operated control device or an occupancy sensor that shall turn lighting off within 30 minutes of an occupant leaving a space or by occupant intervention. Each space enclosed by ceiling-height partitions shall have at least one control device to independently control the general lighting within the space. Each control device shall be activated either manually by an occupant or automatically by sensing an occupant.

EXTERIOR LIGHTING. Lighting for exterior applications shall be controlled by a photosensor or an astronomical time switch that is capable of automatically turning off the exterior lighting when sufficient daylight is available or lighting is not required.

ADDITIONAL CONTROLS. Display or accent lighting, display case lighting, hotel/motel room lighting, task lighting, nonvisual lighting or demonstration lighting shall each have a separate control device.

TANDEM WIRING. Luminaires designed for use with one or three linear fluorescent lamps greater than 30W each shall use two-lamp tandem-wired ballasts in place of single-lamp ballasts when two or more luminaires are in the same space and on the same control device.

INTERIOR POWER ALLOWANCE. The interior lighting power allowance for a building shall be determined by either the building area (building area times allowed power density for building type) or the space-by space method (sum of individual space allowances as determined by building type).

EXTERIOR POWER ALLOWANCE. The exterior lighting power allowance is the sum of lighting power allowances for all exterior applications, as determined by their type and the area covered.

ASHRAE 90.1-1989 (Hawaii County)

INTERIOR LIGHTING. All lighting systems, except those used for emergency or exit lighting, must be provided with manual, automatic or programmable controls. Acceptable control devices include manual switches, programmable time clocks, photocells and occupancy sensors. Each space enclosed by walls or ceiling-height partitions shall have a manual on/off switch plus an additional manual control for each task location or group of task locations within an area of 450 ft.^{2} or less.

EXTERIOR LIGHTING. All exterior lighting that is not intended for 24 hour use shall be automatically switched by photocells, time switches or a combination of the two. Timers must be 7-day and have some means of seasonal daylight adjustment. Timers must be equipped with power backup provisions to allow accurate timekeeping through a minimum four-hour power loss.

TANDEM WIRING. One-lamp and three-lamp fluorescent luminaires in the same room and within 10' of one another shall be tandem-wired to eliminate the use of single-lamp ballasts. Surface mounted or pendant fluorescent luminaries within 1' of one another must also be tandem-wired. Use of three-lamp ballasts is permitted in place of tandem wiring.

INTERIOR POWER ALLOWANCE. The interior lighting power allowance for a building shall be determined by either the building area (building area times allowed power density for building type) or the space-by-space method (sum of individual space allowances as determined by building type). Power density factors are less stringent than they are for ASHRAE 90.1-1999.

EXTERIOR POWER ALLOWANCE. The exterior lighting power allowance is the sum of lighting power allowances for all exterior applications, as determined by their type and the area covered. Power allowances are less stringent thay they are for ASHRAE 90.1-1999.

The above is a very brief guideline. Refer to your County's Energy Code for details applicable to your lighting control project.