



# City of Hayward Green Building Checklist for Private Non-Residential Development

## For All Non-Residential Projects That Exceed 1,000 Square Feet

### Energy Efficiency

For all non-residential projects entailing 1,000 square feet or more of new or remodeled space, and where at least half of the light fixtures are new or replaced, one of the following must be met:

- 1. the lighting load for such fixtures shall be reduced by at least 15% below 2008 Title 24 Building Energy Efficiency Standards, or
- 2. 15% of the lighting loads of such fixtures shall be provided by solar, wind, or other renewable energy source, as approved by the Building Official, or
- 3. the project must show compliance for overall energy budget at 5% below 2008 Title 24 Building Energy Efficiency Standards, using the performance method.

#### Note:

When tailored method is used for retail sales lighting compliance, such 15% reduction shall apply only to LTG-6-C part 1, but not to LTG-6-C parts 2 & 3 for display lighting.

#### Background on Energy Efficiency:

According to the U.S. Department of Energy, buildings use about 68% of the electricity generated in the country on an annual basis. The California Energy Commission estimates that about one third of the energy used in commercial buildings is dedicated to lighting. This makes commercial lighting one of the single biggest energy users nationally. Reducing lighting power demand is an essential step in making buildings "green".

The California Energy Commission establishes the maximum allowed lighting power for commercial buildings and the city enforces this through the T-24 energy report. All designers and contractors are familiar with the process of calculating the allowed lighting power for a project.

This measure is based on *LEED Energy and Atmosphere Credit 2*. In the LEED system, however, the renewable energy percentage is only based on the total electricity demand of the building.

### Water Conservation

For non-residential projects entailing 1,000 square feet or more of new or remodeled space, and where a new bathroom is proposed or a bathroom is proposed to be remodeled and involves new water closets or urinals:

- Reduce indoor water use by 20% below baseline, per 2007 California Plumbing Code, for each water closet or urinal that is installed or replaced

#### Note of the design process:

Instead of 1.6 gallons per flush (gpf) toilets/water closets, 1.28 gpf units shall be installed. For urinals, either 0.5 gpf or waterless units shall replace the standard 1.0 gpf units.

#### Background on Water Efficiency:

Reducing water use in commercial buildings is relatively easy to achieve. Technologies such as waterless urinals\*, occupant sensors and ultra low-flow toilets are available and provide instant savings. This measure is based on the LEED Water Efficiency Credit 2. In the LEED system additional credit is given for a 30% reduction as well. For the Hayward ordinance it will probably be sufficient to start with a 20% reduction initially and see if a higher threshold is appropriate at a later time.

**Waterless Urinals:** These units utilize a trap insert filled with a sealant liquid instead of water. The lighter-than-water sealant floats on top of the urine collected in the U-bend, preventing odors from being released into the air. Although the cartridge and sealant must be periodically replaced, the system saves anywhere between 15,000 and 45,000 gallons of water per urinal per year.