

LIGHT-EFFICIENT COMMUNITIES (LECs) BASIC REQUIREMENTS

www.Light-EfficientCommunities.com

Goal:

The goal of Light-Efficient Communities is to assist communities in obtaining the best in community lighting by eliminating and/or minimizing light waste, trespass, glare, pollution and their serious negative effects on all living things and the night environment. This will reduce energy waste, carbon footprint, climate change, improve safety, security and the health of humans, flora and fauna while improving the night environment and the dark sky.

Definition:

A Light-Efficient Community (LEC) is one that uses lighting intelligently and responsibly. It uses the most effective, efficient, colour-appropriate artificial lighting available to minimize energy waste, glare, light trespass and light pollution. A Light-Efficient Community employs education, sound planning, designs, measures, legislation, fixtures, technologies and best lighting practices to reduce its energy costs and carbon footprint while preserving the natural environment and, ensuring for all, health, safety, security and a high quality of life.

Prime Principle:

Light only what needs to be lit only when it needs to be lit with the most efficient light source of appropriate intensity and colour (2700K or less) without creating light trespass on neighboring properties and the night sky. Keep your light to yourself!

Specifically, exterior building and street/area lighting is to be produced by a fully-shielded luminaire using a flat black interior, and a LED, or some other similarly highly-efficient light source, of 2700K or less to prevent high levels of toxic blue light and light waste, trespass, glare and light pollution. (Lighting of 3000K or higher is NOT LEC-Compliant!) Using a black internal reflector, the light print from the luminaire and internal reflections must be constrained to the area of use only at all times. Lights under sensor control provide for use only when it is necessary. Light emanating through windows should also be minimized or eliminated through appropriate lighting fixtures, curtains, shrubs and tree shielding, etc..

The light intensity produced must be only that necessary to provide appropriate lighting for the intended purposes and no brighter. The light source is to be aimed downward (never upward) and situated close to the area being served to prevent light dispersion, waste of electricity and to allow for lower wattage sources to be used while providing an acceptable level of lighting within the designated area.

Approach:

LECs will meet these goals worldwide through education and the design, development, production and dissemination of current scientific-based information and free, high quality multi-media via its web site. With lack of copyright restraint the materials are freely provided to interested individuals, community groups, municipal councils, etc. without charge. Users are encouraged to download, freely duplicate and distribute LEC information to anyone interested.

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