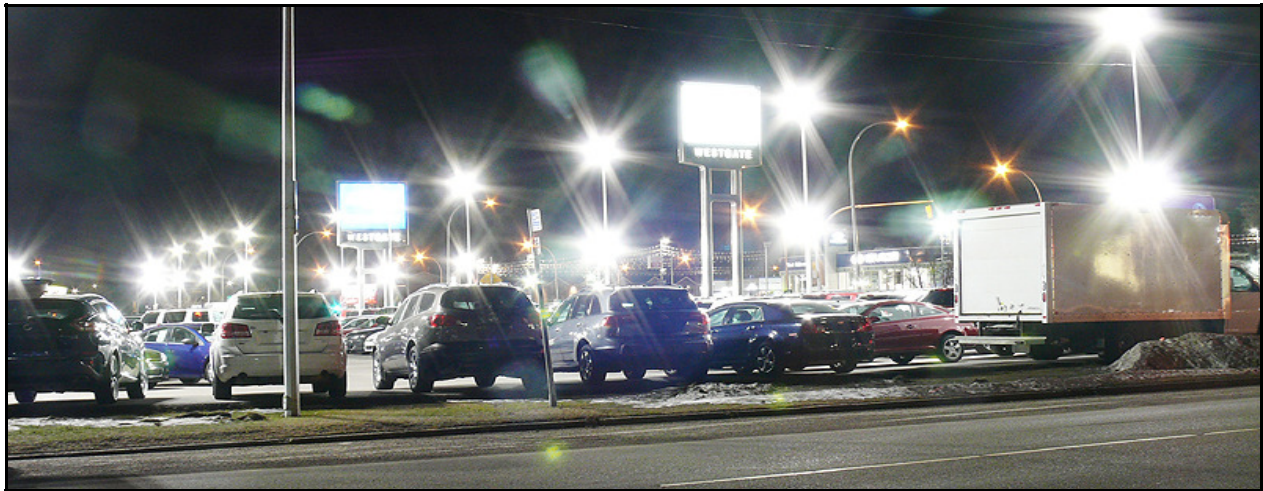




Why We Are Becoming a Light-Efficient Community 2016-09-15



Most communities are filled with waste light at night due to inefficient, unshielded luminaires and bad practices.

Introduction

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

Our community, along with numerous others in the world, is now creating plans and policies which will address many of the problems created by the wasteful use of light. This applies to streetlights, municipal-owned lighting fixtures and waste light throughout the community. We and our citizens will be making the changes necessary in our lighting to be less wasteful, healthier, and more sustainable. To this end, the plans and policies we are adopting will enable us to attain the following goals:

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1. Reduced Energy Consumption

The introduction of LED technologies in the past few years has seen a dramatic reduction in the amount of energy required to create the same level of lighting in all types of fixtures. Thus, an old style cobra-head streetlight that required 100 watts can now be replaced with one of much higher efficiency, one which requires half as much power or less. Some communities have cut their lighting energy consumption in half by installing LED streetlighting. Use of sensors and computer controls make for further, dramatically increased efficiency and effectiveness as they control where and when light is used depending on need.

2. Reduced Costs

Reduced energy consumption means reduced costs, a vital concern as energy costs spiral ever upward and out of sight. Depending on lighting choices, controls, maintenance costs, etc., one can save much more electricity with adherence to LEC policies. Ultimately, this benefits everyone while making for a better, healthier community.



3. Improved Lighting

LED streetlights focus their light on the main areas of concern, sidewalks and streets. Thus, energy is not wasted on light trespass - lighting up adjacent buildings and even the sky such as current streetlights do. As all light is directed downwards, less energy is required and more savings in electricity and costs are to be had.

4. Improved Visibility & Safety

With the LED streetlight reduction in glare and light trespass, drivers are better able to see while driving. Pedestrians, now much more visible, are also better able to see while walking.

5. Improved Security & Reduced Light Trespass Conflicts

Much waste lighting is used for ‘security.’ However, most current security lighting is overkill, badly directed and ill used, while creating much light waste. More often, it assists a vandal/burglar in his job. Sensor-based, well-directed, high efficiency lights dramatically improve security while reducing costs and complaints by neighbors over light trespass.

6. Improved Community Health

Light is a form of radiation and has definitely been linked to increases in breast and prostate cancers and Alzheimer’s. As well, people who suffer from sleep deprivation and related illnesses are aggravated by high levels of night light. Waste light, glare and trespass must be well controlled to reduce health problems and related medical costs.

7. Reduced Carbon Footprint

With the increase in global warming, every community must try to reduce its carbon footprint in every way it possibly can.

By cutting the amount of energy we use through LED-related technologies and new policies, we will be reducing light waste, a major factor in our community’s carbon footprint and environmental damage.

8. Improved Resource Sustainability

We will also be reducing the amount of irreplaceable resources we are using to produce the electricity consumption. It has been estimated that every watt used by the consumer requires 100 watts in production and distribution! Every watt we use or don’t use has a major impact on resource use!

9. Improved Environment for Humans, Flora and Fauna

Light at night affects humans, flora and fauna, not only in the community but the surrounding area which exceeds many times the diameter of the community itself. The light domes of major cities can be seen for hundreds of kilometers and this ‘extended daylight’ gives predators of all types the advantage, upsetting the balance of nature. Night light also negatively affects bird and animal migrations, hormones and reproduction, etc.

10. Improved Dark Night Skies

The dark night sky is a vital part of our environmental and cultural heritage. Protecting it from light waste not only improves our health and environment but assists those scientists, teachers, students, hobbyists and star-lovers who need dark night skies for research, teaching, learning, nature appreciation and quality of life. As well, the stars and constellations are part of our artistic, religious and social culture but have disappeared, smothered in waste light. Support our efforts to improve our quality of life and reduce costs through policies which will create a *Light-Efficient Community*. Read the related information sheets on LEC’s.