

Streetlighting and Outside Lights: Preserving the Night Sky and Saving Energy

The Middlesex Energy Committee has some recommendations discouraging the use of streetlighting – the use of bright outdoor lights that stay on all night, on roads and in yards and driveways – except in cases where it is needed, both to save energy and to help prevent light pollution that reduces the clarity of the night sky.

History

Streetlighting has its purpose. It is typically used in urban settings to provide safety for pedestrians, typically over sidewalks and at crosswalks. They are less frequently (and less effectively) used for illuminating roadways, as cars provide their own illumination with their headlights. (Glare from poorly designed streetlighting actually makes it harder to see things in front of you).

“Security lighting” was promoted by utility companies in the past. They often would install streetlights at no charge so that they could charge a monthly energy fee. The theory that a lighted yard or space provides greater security has been debunked, and allowing the criminals to see what they are doing has been shown to be of no advantage. With the advent of motion sensor controlled lights and motion controlled security cameras, leaving a streetlight on all night is both wasteful and ineffective, and contributes to light pollution.

Act 250 recognizes the negative impacts of all exterior lighting, and requires them to be “cut-off” type fixtures, which means all their light shines down on what you want to see, and no light spills horizontally or upward.

Recommendations

1. USE FOR PEDESTRIAN SAFETY ONLY, where sidewalks or crosswalks are part of densely populated areas and auto/pedestrian conflicts exist. These should be energy efficient cut-off type, which are controlled by timers, and thus off when not needed.
2. “SECURITY LIGHTING” should be motion-controlled, ideally in combination with motion detector cameras.
3. AVOID LIGHT POLLUTION/LIGHT SPILL. Where streetlighting is required for pedestrian safety, it should utilize fixtures that shine downward only, not sideways or up into the sky.
4. ENERGY EFFICIENCY: All fixtures should be LED type, which are now common and save energy compared to the Mercury Vapor, High or Low Pressure Sodium lamps.
5. TIMER CONTROL IN PUBLIC AREAS: All exterior lighting in public spaces for sidewalks and crosswalks should be on timers, so they are not left on all night during times when no one is likely to be awake and therefore are not needed.
6. MOTION CONTROL IN PRIVATE USE: For private yard lighting or driveway or security lighting, motion detection should be used to have lights on only when needed. This saves energy, reduces light pollution, and provides more effective security as well.