

Light Pollution

- Today, people who live in or near cities have lost much of their view of the universe. The view is often substantially diminished even for people who live in smaller towns and rural areas. The spectacular view of the night sky that our ancestors had on clear dark nights no longer exists. This excess light in the sky has an adverse impact on the environment and seriously threatens to remove forever one of humanity's natural wonders, our view of the universe.
- This sky glow that adversely affects the environment and compromises astronomical research is called **light pollution**. It is wasted light that does nothing to enhance nighttime safety, utility, or security. Such wasted light only serves to produce glare, clutter, light trespass, light pollution, and wastes energy, money, and natural resources in the process, all the while creating additional pollution at the source where the wasted energy is produced.
- The negatives associated with light pollution include:
 1. *Energy waste.* We waste an astronomical amount of energy and money by all this bad lighting, shining it where it is not needed or wanted (including up into the sky) and by using energy inefficient light sources and lighting designs. In the United States alone, over One Billion Dollars is wasted every year just to light up the night sky. In a small city the size of Peoria, IL, over \$200,000 is wasted annually on it's municipally owned street lights alone. This waste is totally unnecessary, since there are cheap and efficient substitutes.
 2. *Glare.* Glare never helps visibility, but it is far too common in all of our cities and in most lighting everywhere. We should strive for and accept only a glare free environment. Let's not be blinded by glare. Far too much present day lighting has glare; it is always bad.
 3. *Light trespass.* Many present lighting installations bother us as much or more than they help. The wasted light shines into our yards, our windows, even our telescope buildings. As with noise pollution, we don't need any of these intrusions. Such lighting is not best serving the purpose for which it was installed.
 4. *Trashy looking, confusing nighttime environment.* We should, all of us, be striving for an attractive nighttime environment, just as we should be doing in the daytime. Such poor environments are part of the stress of today's life. We should help with the problem, not compound it. The night is part of the environment, too.
- If we as a nation want to achieve energy independence, one of the simplest steps is to end light pollution.
- Following are some solutions that minimize light pollution without compromising in any way nighttime safety, security, or utility:
 1. Use night lighting only when necessary, turn off lights when they are not needed, and use the correct amount of light for the need, not overkill.

2. Direct the light downward, where it is needed. The goal is to use fixtures that control the light well, minimizing glare, light trespass, light pollution, and energy usage. This can be done cheaply and efficiently.