How to Talk to Your Neighbor Who Has a Bad Light

Here's a typical scenario: your neighbors have just installed a dusk-to-dawn 175W mercury vapor light fixture because they are worried about security. You can see what happened: they went down to the discount supply house and said something like" Give me the brightest, cheapest outdoor lighting fixture you have." And that's exactly what they got, paying "only" $29.95 (maybe even less). They brought it home and hung it up. Now it's splattering light everywhere, including onto your lawn and in through your windows. They have their blinds drawn, of course, because they can't stand the glare either.

What did they get? A very bright light with very little light control and lots of glare. It produces lots of light trespass, light pollution, and energy waste. They probably now have a "feeling of security". Real security is probably no better than before, maybe worse.

Here are some ideas on what you can do: First and foremost, be tactful and understanding. Don't argue. Do your homework first. Be well prepared. Understand the essence of the energy facts given below, and of what makes a good security light. Know the local costs of electricity (cents per KWH). Know if there is a local lighting control ordinance and, if so, the details of what is included, what enforcement is being done, who was involved, etc. Look around for the availability of good security lighting fixtures and how much they cost. Facts are not enough, however. Emotions and perceptions are there all the time. Personal relations are very important and are in play all the time.

Approach them in a friendly way. They are worried about their security and safety. They tried to do something about it. Maybe they saw an ad from a store, or elsewhere, touting these specific lights. Maybe they got a "good deal" from the power company. Maybe they just didn't know what to do, but thought that adding a lot of light would help. Don't tell them, particularly in an unfriendly way, to shut off their light because it bothers you. They won't, and you will likely have hardened their position.

Make positive approaches. Help them solve their problems. Offer alternatives. Be flexible to the local needs. Ask for their advice in solving your problem. Most people really like to be helpful, when they can. Let them know how. Be prepared to compromise, but always keep the overall goal in mind. You want and need dark skies, and no light trespass. You also want a secure and safe nighttime environment, just as they do. You want to help the country save energy and money. Show that you care, for all of those things in general, for your sky, and for them.

Here are two specific issues you can discuss with them, to help win them over:

1. **The Energy Issue, and Cost Savings:** When new, the 175 watt mercury vapor lamp puts out about 8000 lumens (a lumen is a measure of the amount of light produced by a lamp), declining in light output with time. The mean lumen output (after some years of use) is about 7000 lumens. That amount of light output compares approximately to a 400 watt incandescent lamp, a 100 watt metal halide lamp, a 70 or 100 watt high pressure sodium lamp, or a 55 watt low pressure sodium lamp. (See IDA Information Sheet No. 4.)

These lamps use considerably different amounts of energy to produce the same amount of light. When energy costs were very low, not that many years ago, it made little difference. Now, however, it does make a difference, especially when you consider how many of these lamps are in use in an urban area, or in the United States as a whole. There are many other lighting installations wasting light as well, with their use of inefficient lighting fixtures. (See IDA Information Sheet No. 26.)

The cost to the country of all this wasted light is over one billion dollars a year. (See IDA Information Sheet No. 26.) And all this wasted light and energy is doing nothing to promote safety, security, or a better life at night. It is merely lighting up the sky, causing glare (glare never helps visibility), and offending neighbors.

None of the billion dollars is being used to light the ground or to provide safety and security. The glare and confusion and clutter caused by the bad lighting are definite factors in accidents and losses caused by such accidents. This also costs the nation too much money and pain. As individuals, we must do what we can to stop such waste.

continued

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2. **Real Safety vs. Perceived Safety:** The 175 watt dusk-to-dawn security light may give the illusion of safety, because it's so bright, but it is really counterproductive to good vision. The criminal can hide in the glare or in the deep shadows near such poor lighting. (Look around near one. See the deep shadows next to the overlit areas? It is hard for the eye to adapt to such sharp transitions.) Light used for security should be of such a nature that the owner can see better than the criminal.

So what to do? Here are two suggestions. Other good ideas are possible, too, with conscious thought given to the issues. Remember that quality lighting is only one facet of good security, and no lighting system — no matter how good — will ensure security. But quality lighting may help whereas poor lighting may, in fact, help the criminal.

3. **Use a low wattage** light source, in a good (well shielded) fixture. The fixture should control the light output so that it goes only where needed, not into a neighbor's yard or windows, or up into the sky. There is lots of light (many quite low wattage fixtures will put out more useful light than the typical 175 watt dusk-to-dawn security light; even an 18 watt one will probably do a better job, at one tenth the energy cost). There is essentially no glare at all. One is not blinded, one can see. There is essentially no light trespass or sky glow produced. There are no dark, deep shadows for criminals to hide in. Visibility is the goal of night lighting, and these quality fixtures offer excellent visibility. There are also some excellent well-shielded High Pressure Sodium, Low Pressure Sodium, compact fluorescent, and other fixtures, but they are not as energy efficient.

4. **Use an infrared sensor spotlight fixture.** The spotlights only come on when the sensor sees movement. Any intruder will be scared off by the sudden turn-on of the spotlights. You are alerted by the light coming on, and your neighbors are more likely to notice, too (you can buy fixtures which will also sound an alarm inside the house, if you want the added security). What could be better? This type of fixture is a great security lighting system, and it provides effective, quality lighting. (Be sure that the fixture is mounted under the eaves, so that there's no wasted light or glare, and point the light beam where it's needed, not into your neighbor's yard.)

The infrared sensor lights are widely available, in stores or by mail order. The cost ranges from about $20 to over $100, depending on the quality and who is selling them. They are easy to install (just mount them, plug them in, and adjust them) and use. The good fixtures are often harder to find, as few know of their existence. Ask for them at the local lighting suppliers. Insist on them. With some demand, they will start stocking them.

Most quality fixtures will certainly cost more than the cheap 175 watt mercury ones. But even if they cost $120, they begin to save a lot of energy and money the day they are installed. For example, 175 minus 35 watts is 140 watts, times 4100 hours per year, yields 574 KWH saved per year. At 8 cents per KWH, that is $46 dollars saved per year compared to the mercury. So the payoff period to replace a mercury vapor light with an effective one is $120 divided by $46 or about two and a half years. If one considers the cost of the mercury fixture, say $30, then it's $120 - $30 = $90 extra cost, and $90 divided by $46 gives a payoff period of only two years. The spotlight solution has an even faster payoff period, of course. Very few energy savings concepts have shorter payoff periods than replacing ineffective and inefficient security lights with better ones.

Many other information sheets are available from IDA that also address the issues of energy savings and better lighting.