

Energy use and its impacts on our environment has become one of the top concerns facing humanity.



### What is Energy Waste?

Poorly designed outdoor lighting wastes energy by not being shielded, emitting more light than necessary or shining when and where it's not needed. Wasting energy in this way has huge economic and environmental consequences.

Lights left on overnight while we're sleeping – such as those in office buildings – wastes energy and contributes to the general skyglow of the city. Dark sky friendly lighting does not mean “no light.” It means using the light that you need for a specific task in the most efficient manner possible.

“We can create a more sustainable, cleaner and safer world by making wiser energy choices.”

— Robert Alan Silverstein,  
children's science book author



# SKYGLOW

Skyglow is the artificial brightness of the night sky that's caused by light pollution. Lights that are overly bright, unshielded or left on overnight get scattered by dust and gas molecules in the atmosphere, producing a bright sky. The skyglow from Las Vegas, Nevada, can be seen from 250 miles away!

## About IDA

The International Dark Sky Association, a 501(c)(3) nonprofit organization based in Tucson, Ariz., is dedicated to preserving the natural nighttime environment by educating policymakers and the public about night sky conservation and promoting eco-friendly outdoor lighting.

### Our Mission

To preserve and protect the nighttime environment and our heritage of dark skies through environmentally responsible outdoor lighting.

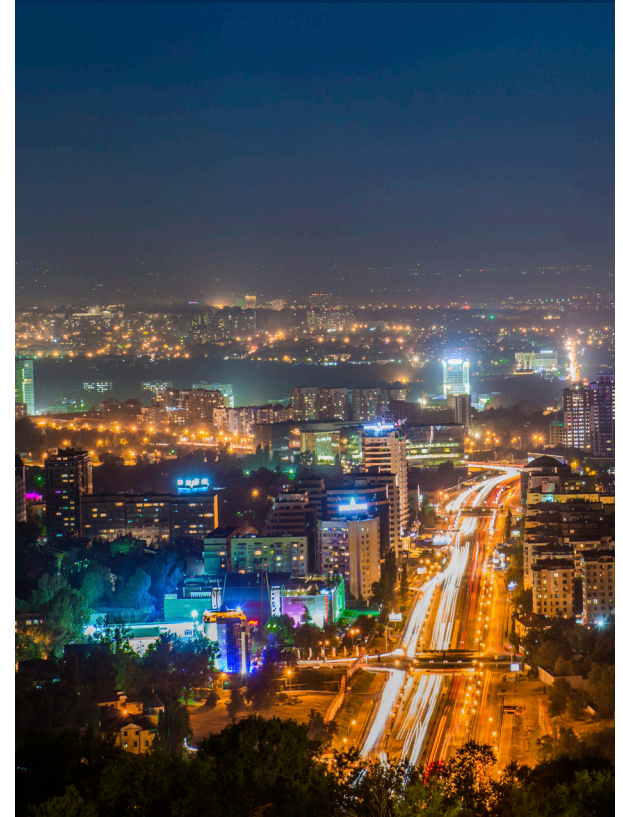
### Our Goals

- Advocate for the protection of the night sky
- Educate the public and policymakers about night sky conservation
- Promote environmentally responsible outdoor lighting
- Empower the public with tools and resources to help bring back the night



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Light pollution  
wastes energy  
and money



# Light Pollution Costs Money and Wastes Resources

Save energy and enjoy the night sky

## How Does Energy Waste Harm the Environment?

Millions of tons of carbon are pumped into our atmosphere every year due to light pollution—wasted energy.

Light pollution:

- Increases greenhouse gas emissions
- Contributes to climate change
- Increases our energy dependence

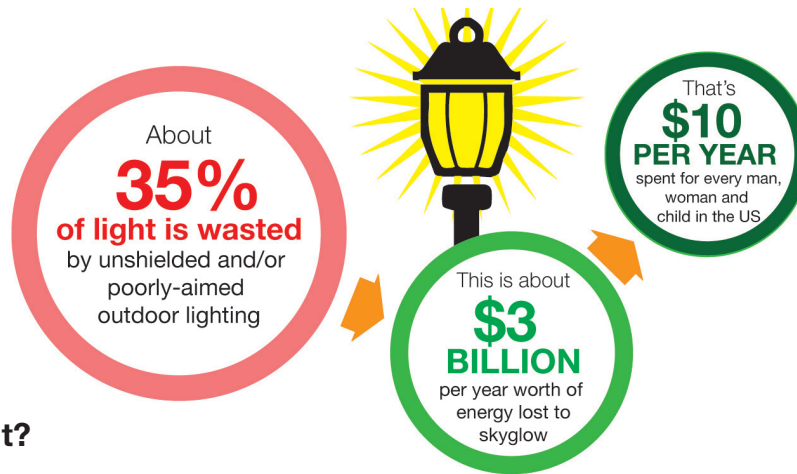
## What About Our Carbon Footprint?

In the U.S. alone, about 15 million tons of CO<sub>2</sub> are emitted each year to power residential outdoor lighting. That equals the emissions of about 3 million passenger cars and adds up to 40,000 tons per day. To offset all that carbon dioxide, we'd need to plant about 600 million trees annually!



## What Does Light Pollution Cost?

About \$3 billion dollars per year worth of energy is lost to bad lighting. This is about \$10 a year for every man, woman and child in the U.S.



## How Much Energy am I Wasting?

The average house with bad outdoor lighting wastes 0.5 kilowatt-hours (kWh) per night. A kilowatt hour is a unit of energy equivalent to one kilowatt of power for an hour. It's enough energy to power a 50-inch plasma TV for one hour or run one load in your dishwasher!



It just takes small changes to save energy, money and our night skies. You can make a difference today.

Keep Light on the Ground

## Energy Efficiency Solutions

Shielding outdoor lighting saves energy and money, reduces our carbon footprint and helps protect night skies. Luckily, the solutions are easy. Work with your neighbors and local government to keep the light on the ground and the skies natural. It's a win-win for everyone. You save money while preserving a valuable natural resource.

Tips to help you conserve energy and use light efficiently:

- Install quality outdoor lighting to cut energy use by 60-70%, save money and cut carbon emissions
- Fully shield all outdoor lighting — light should go down on the ground where it's needed, not up into the sky
- Be aware that fully shielded fixtures can provide the same level of illumination as unshielded fixtures, but with lower cost and less energy waste
- Turn off indoor lights in office buildings or homes when not in use to save money and energy

Visit [darksky.org](http://darksky.org) and join IDA for resources and more information.

## Good vs. Bad Lighting

This photo (right) shows examples of good and poor lighting design. The unshielded light fixture on the left throws light into the sky and creates glare, impairing visibility. The shielded light fixture on the right not only directs light to the ground where it is needed, it isn't creating lighting pollution. To learn about light fixtures that are environmentally friendly, energy efficient and certified with the IDA Fixture Seal of Approval, visit [darksky.org](http://darksky.org).

