LEDs may not be the best solution to light pollution

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The sky over New York City is always bright, even at night. Photo from: Wikimedia Commons.

On March 25, cities everywhere will turn off their lights for Earth Hour. The event was created to call attention to climate change. It is now in its 11th year.

Climate change refers to changes in the Earth's temperature, weather and more. It is caused by burning fossil fuels like oil and gas. Burning these fuels helps power our cars, light our homes and run our factories and power plants. But burning them also creates gases that get trapped in the atmosphere and warm up the Earth.

Climate change is not the only reason for Earth Hour, its supporters say. The moment of darkness is also a reminder of another problem that gets far less attention: light pollution.
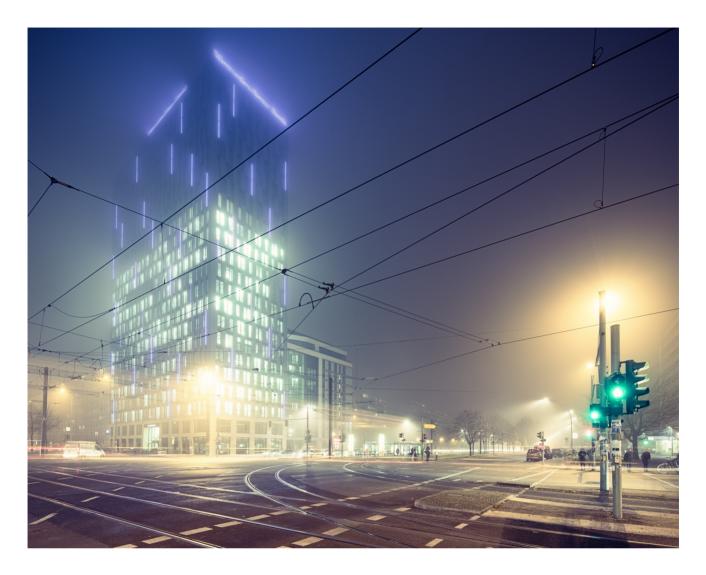
Unnatural Lighting

Most people live under skies filled with light that isn't natural. Traffic lights, street signs and buildings all give off artificial light. Because of it, people in large cities can't see the stars at night.

Artificial light is troublesome for creatures big and small. Our bodies' natural rhythms can be thrown out of whack by too much light at night. Birds cannot navigate using the stars because they cannot see them. Some insects get confused by artificial lights when they try to fly at night.

People who oppose light pollution are not saying cities should go dark. They are not saying that lights are unnecessary, either. Still, they believe that society needs to address a growing list of concerns.

"In general, it's getting worse," said Diana Umpierre about light pollution. She is president of the International Dark-Sky Association. It is a group that works to protect the night sky from too much light pollution. Members worry about even more lighting as populations grow.

Some scientists are concerned, too. They say that light pollution can harm the study of space. In large cities, it is difficult to use telescopes to study the night sky because of all the bright lights.

One of the biggest challenges in fighting light pollution is changing people's thinking. People believe that brightness is the same thing as safety, said Umpierre.

"Sometimes it's just the opposite," she said. Often people drive more carefully and slowly on roads with little to no lighting at night.

Possible Links Between Health And Night Light

The problem is slowly getting more attention. In 2012, the American Medical Association (AMA) concluded that too much night light can cause sleep problems. The group wants to study possible links to other diseases, too.

Last year, the AMA raised a red flag about LED lights. LED stands for light-emitting diode. A diode is a tube with two ends. As electricity passes through the diode, heat and light are released.

LED lights use less energy and last longer than traditional bulbs. That is good news for the fight against global warming. It reduces fossil-fuel burning for electricity. Many countries around the world and cities in the United States are replacing existing streetlights with LED lights.

It is not all good news, though. "Some LED lights are harmful when used as street lighting," said Maya Babu from the AMA. Their bluish, high-intensity light creates a glare. That makes it hard to see. LED lights also disturb sleep more than traditional street lamps.

LED lights also block our view of the night sky even more than traditional lights do. LEDs make the sky two to three times brighter. This causes the stars to fade even more into the background.

Is LED Lighting The Right Choice?

Some people are starting to push back little by little. Citizens of Madrid, Spain, are calling for scientists to study LED lighting. They want to know more about the safety and health effects of the lights.

Public pressure has already pushed some cities to use yellow LED lights. They are thought to be less disturbing. Quebec and Montreal, both cities in Canada, and Phoenix, Arizona, are lighting the way.