

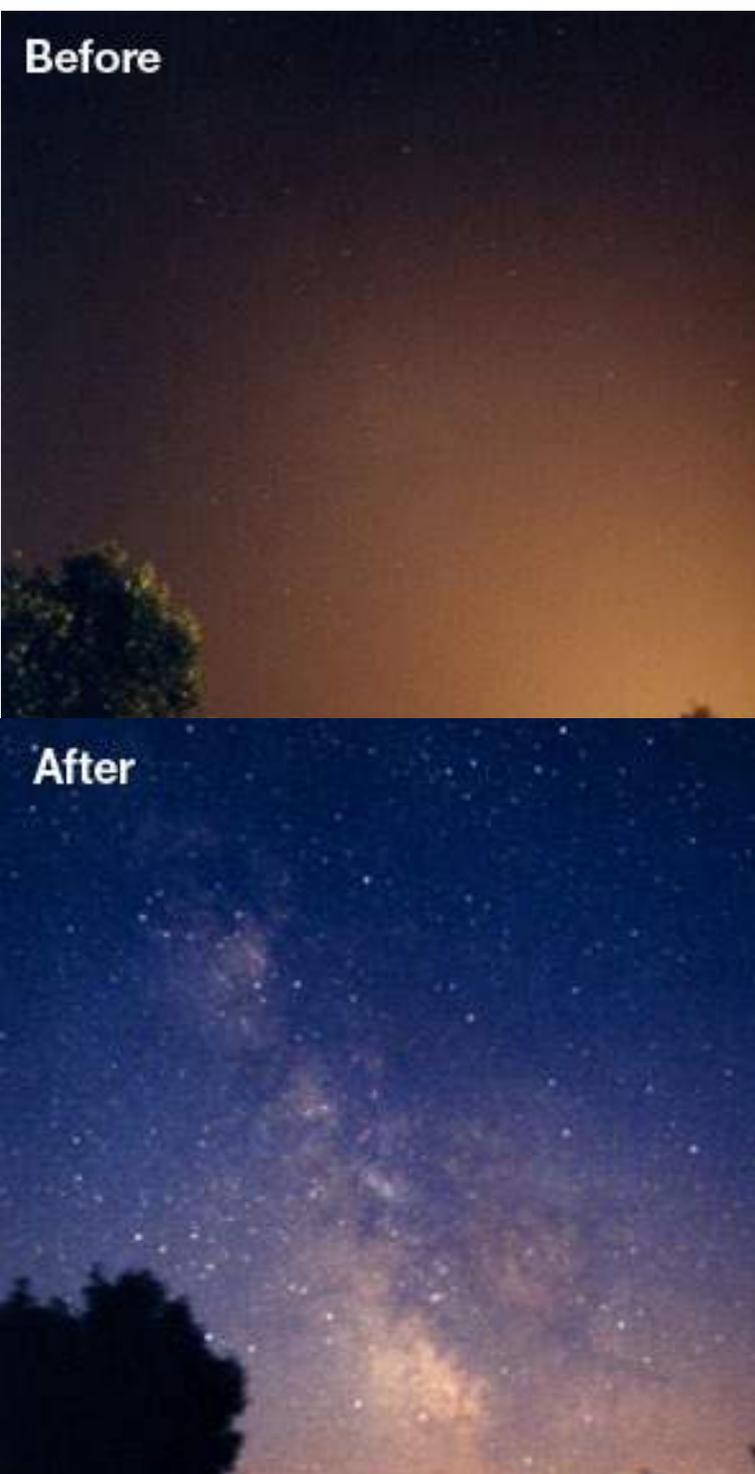
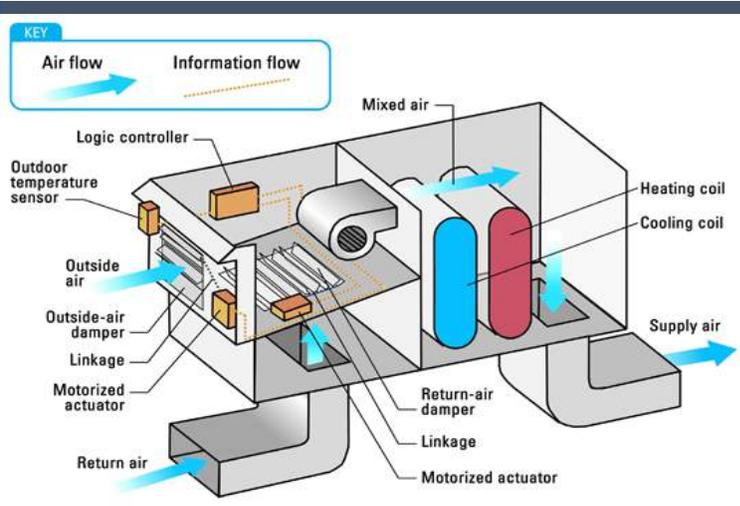
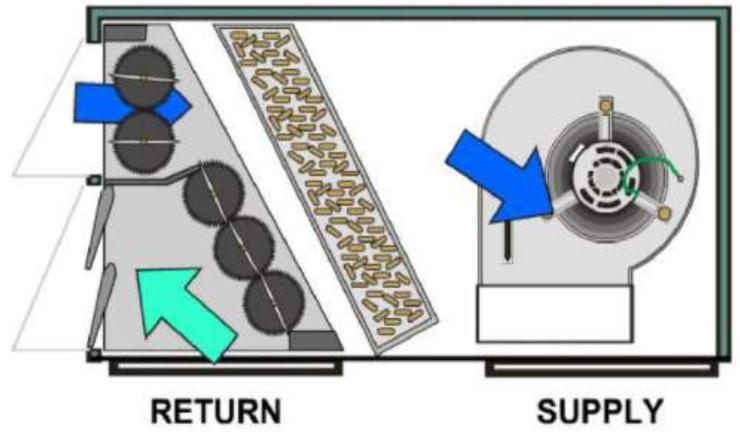
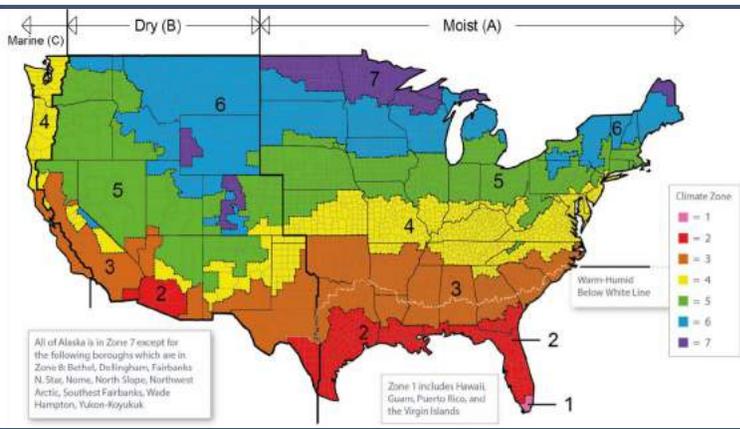
INSIGHTS FOR A COMPLETE GAME PLAN

INSIGHT #1 // AIRSIDE ECONOMIZER APPLICATION

The primary function of an Airside Economizer is to conserve energy by supplying outdoor air to reduce or eliminate the need for mechanical cooling. Airside Economizers are often misapplied and misunderstood, leading to poor operation. It is normal to run into installations where controls are disabled, dampers are disconnected, or openings are blocked for adequate system function. Properly designed airside Economizers should not significantly increase a systems heating energy.

It is assumed economizers will always save energy, so we don't typically put in much effort in the design and selection as we do other components. Research shows economizers can lower energy costs when properly applied. Some criteria to consider are climate zones, system capacity, conditioned space and system design. Collaboration with all stake holders like owners, engineers, contractors, service and operations is important to realize the purpose of an economizer: achieving thermal comfort while using the least amount of energy as possible. Proper equipment/control commissioning, maintenance and operations are necessary for ongoing performance. As seasons change and hardware degrades, economizers can fall out of calibration and fail to deliver thermal comfort with the least amount of energy consumed.

SOURCES: ASHRAE, CONTRACTING BUSINESS



INSIGHT #2 // LIGHT POLLUTION

We are all familiar with air, land, and water pollution, but did you know that light is also a form of pollution? The inappropriate or excessive use of artificial light is known as light pollution, and it has serious consequences for the environment, wildlife, and human health. Humans rely on the light-dark cycle of day and night to maintain circadian rhythm, while plants and animals use this cycle to govern behaviors such as reproduction, nourishment, sleep, and protection.

There are 4 different types of light pollution that affect the environment in different ways:

- Light Trespass – light falling where it is not intended or needed
- Skyglow – brightening of the night sky over inhabited areas. Also known as urban glow and is caused by unobstructed, upward projection, or spill of light
- Glare – excessive brightness that causes visual discomfort
- Clutter – excessive groupings of lights that are poorly placed

According to a 2016 study, 80% of the world's population lives under skyglow and in the US and Europe a staggering 99% of the public can't experience a natural night. The good news is that light pollution is reversible. The reduction of light pollution is the responsibility of everyone and together we can protect our natural night sky.

See how bad the light pollution is where you live with this interactive map: cires.colorado.edu/artificial-sky

SOURCES: DARKSKY.ORG