

# Specifier Bulletin

## for Dark Sky Applications

VOLUME 1: ISSUE 3 : 2008 — [International Dark-Sky Association](http://www.ida-ds.org)



For more information on OCAS visit their Web site [www.ocasinc.com](http://www.ocasinc.com).



Control unit



Solar power option



Lighting



Radar and VHF radio



For more information on other FSA approved luminaires please visit the IDA Web site [www.darksky.org](http://www.darksky.org).



## A Dark Sky Solution for Obstacle Collision Avoidance

**Top:** Day and night depictions of existing detection markings. With OCAS, these lights would not be seen unless an aircraft were approaching at a dangerous altitude. Unless located near an airport, the lights would rarely be activated. However, OCAS will always be at the ready.

### Introduction: The Dark Sky Friendly Device

**T**HIS EDITION OF IDA's Specifier Bulletin introduces a new category of products that help reduce light pollution. Until recently, our focus has been upon identifying, designating, and promoting well designed Dark Sky Friendly Fixtures. The program has been quite a success, with small and major lighting manufacturers alike discovering the benefit of obtaining IDA certification. The concept of the Dark Sky Friendly Device is to designate lighting accessories or alternate illumination sources that, when utilized, will reduce light pollution in one of two ways: by replacing a conventional lighting application with one that has substantially less impact on the environment and better accomplishes the task at hand; or by modifying an existing product to mitigate undesirable effects of its normal operation.

The "Dark Sky" concept is now widely recognized, and market success is directing new and creative product development. Technological advances now include light dimmers and other timing and sensory control. Considering the potential for dark sky compliance and additional benefits such as energy savings, IDA encourages the installation and broad utilization of these new products. These innovative lighting accessories are important and worthy of promotion. IDA's certification and formal recognition of products other than luminaires marks an exciting period in the evolution of the Dark Sky Friendly Device to include a variety of lighting applications.

Obstacle Collision Avoidance

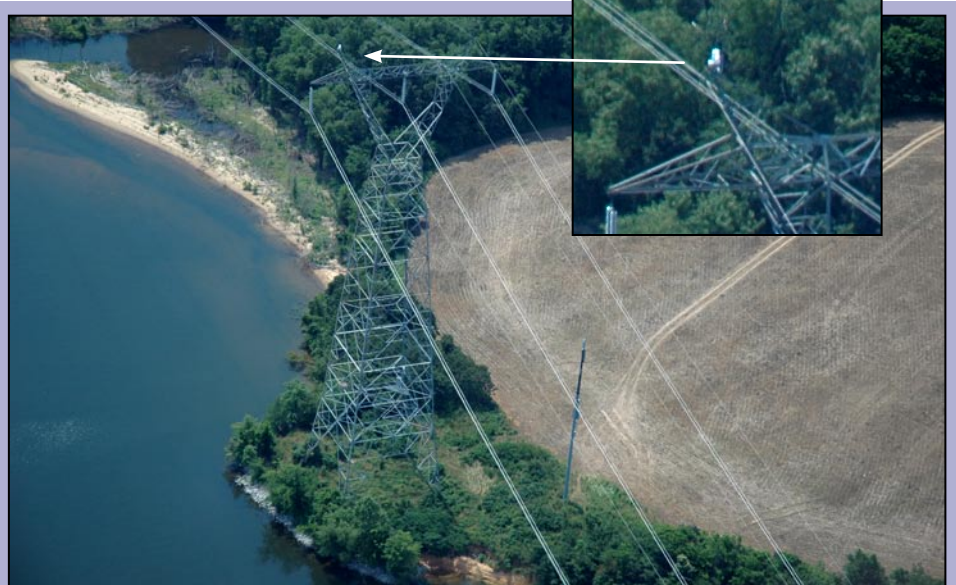


# Introducing the Obstacle Collision Avoidance System, or OCAS:

**F**OR YEARS, TALL objects such as radio transmission towers, power poles, and wire crossings have had to comply with visibility regulations to indicate their presence. These regulations allow aircraft in close proximity to evade these hazards safely. However, aircraft collisions are increasing despite the well intentioned visual markers and illumination standards now in place. Quite simply, the present methods are inadequate. To make matters worse, while these detection systems fail to function as designed, they are creating more problems. Blinking lights are costly to operate, are responsible for millions of migratory bird deaths, are irritating to look at, and interfere with the simple enjoyment of the night time sky. With the increasing popularity of wind power, the blinking warning lights atop wind turbine generating facilities are beginning to affect far greater areas.

Fortunately, there is a solution to all of the present drawbacks: The Obstacle Collision Avoidance System, or OCAS. The system utilizes a proprietary ground-based radar to detect approaching air traffic. Upon detection, otherwise unlit light beacons will flash white during daytime and red at night. If the aircraft continues on an uncorrected course, the system activates a radio squawk and warns the pilot, "Powerline, powerline, powerline!"

Such an active system is exceptionally effective as a warning device that remains in an alert yet invisible state, ready to work only when needed. The system was developed by two fighter pilots that had lost friends and colleagues due to poorly marked aviation hazards. OCAS, Inc. originated in Norway and has recently opened in the U.S. The system has been utilized in Norway for several years on many of their tall power transmission lines and water crossings. It is now in use in Tennessee and Kentucky, USA; as well as British Columbia, Canada. Later this year the system will be in place at the Whistler Blackcomb Ski Resort in Canada, the site of the next Winter Olympics. The OCAS system has received FAA approval, and the release of an amendment to the existing FAA Tower Lighting and Marking Requirements in September will verify this. It is hoped that many of the existing or proposed wind turbine power generating installations will consider the OCAS for FAA marking requirements. Officials at a proposed installation near Pennsylvania's Cherry Springs State Park, recently designated an International Dark Sky Park, are aware of the system but have yet to decide on its adoption. Input from the public is encouraged. Please contact the park operations manager, Chip Harrison, at [lymanrunsp@state.pa.us](mailto:lymanrunsp@state.pa.us).



Here the OCAS radar tower is located near a power pole; the beacon can be seen on the top of the transmission line. Only aircraft approaching at a certain altitude will activate the system. Aircraft with sufficient clearance will not activate OCAS. The radar unit can be solar powered or utilize line current.



The standard marker balls are virtually invisible until viewed from a location too close to safely respond. Amazingly, this FAA approved marker ball system was put in place without the opinion of pilots. They are a legacy from shipping traffic warning systems, and have been outmoded for years.



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**For information on IDA membership and the FSA program visit our Web site at [www.darksky.org](http://www.darksky.org).**