

# POSITION PAPER

# SOLAR ENERGY

Summary: Large commercial solar arrays seem to be cropping up everywhere. However, solar energy development has the potential to harm birds, both through the so-called “lake effect” and through incineration.

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ABC supports the development of alternative energy as a means of reducing our dependence on fossil fuels and to address the growing problem of anthropogenic climate change. However, as with wind energy development, ABC believes that it must be done right and with minimal impact on our nation’s ecologically-important birds and their habitats (see Lovich and Ennen, 2011). ABC therefore encourages the USFWS and other U.S. natural resource agencies to study systematically the effects of solar energy on birds and other wildlife and their habitats.

Scientists have known since the mid-1980s that solar energy facilities could pose risks to birds (McCrary et al., 1986). However, the full extent of these risks are becoming more evident due to a recent federal study on bird mortality at three solar energy facilities in California (Kagan et al. 2015). Large, commercial solar energy facilities appear to be an “evolutionary trap” for birds who perceive them to be bodies of water on which they attempt to land. Insects, the prey of insectivorous birds, are also apparently attracted by this so-called “Lake Effect.” Depending on the type of solar facility involved, deaths can occur from birds being incinerated by concentrated beams of sunlight, or killed as they make contact with the hard solar panels or surrounding ground as they attempt to land (Upton, 2014).

Although little is known about precisely how many birds are being killed by the nation’s operational solar energy facilities, there is cause for concern, particularly when it comes to their impact on threatened and endangered species.

The Ivanpah wind energy project in California reported-

ly killed 3,500 birds in its first year of operation, including two endangered Yuma Clapper Rails (Meier 2015, Upton, 2015).

ABC does not agree with the common argument that because feral cats, collisions with buildings and power lines and pesticides kill vastly more birds than alternative energy that we should not be concerned about such losses (Kahn, 2014). These losses are not trivial and, when population numbers are low, the loss of even small numbers of individuals can have a population-level effect (Clarke, 2013). The loss of two Yuma Clapper Rails, an endangered species, with less than 1,000 extant individuals, generated the concern (Upton, 2014). In addition, the impact of all human-caused sources of avian mortality is cumulative and unsustainable. We should therefore be addressing all major sources of avian mortality.

Our nation’s native birds should not be viewed as “collateral damage” in our war on climate change, particularly if much of the conflict can be eliminated through improved science, siting and regulation.

ABC therefore encourages immediate research on ways to mitigate the effects of solar energy on birds, including ways to retrofit photovoltaic solar panels or reflective mirrors so that insects and birds do not perceive them as bodies of water (Upton, 2014).

Siting is also critical, and in order to reduce risk, large-scale solar facilities should not be placed near populations of rare or endangered species, in major migratory routes, near wetlands or close to active agricultural lands (McCrary et al., 1986). Steps must also be taken to

require mitigation and compensation when public trust resources, including federally-protected birds, are being killed by solar facilities, even after every precaution has been taken.

As with wind energy development, ABC would favor mandatory, rather than voluntary guidelines for solar energy development that will effectively protect our nation's native birds from this rapidly expanding industry. ABC also favors independent assessment of risks pre-construction and monitoring of bird deaths post-construction to remove any potential conflict of interest.

ABC will be closely monitoring studies on the impact of solar energy on birds and may change its policy on solar energy as more information becomes available.

ABC believes that whenever energy development and land use decisions are made, the public should be offered the opportunity to fully assess a range of renewable energy alternatives. Only focusing on large, industrial-scale solar projects does not consider potential, less harmful alternatives, including distributed solar generation on existing structures (e.g. office buildings, homes, parking lots, canals, etc.) that do not harm wildlife, alter pristine habitat, or require the construction of new power lines and towers, which can also kill large numbers of birds (Manville 2005).

## References

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