

# Solar power development in US Southwest could threaten wildlife

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Government agencies are considering scores of applications to develop utility-scale solar power installations in the desert Southwest of the United States, but too little is known to judge their likely effects on wildlife, according to an article published in the December 2011 issue of *BioScience*. Although solar power is often seen as a "green" energy technology, available information suggests a worrisome range of possible impacts. These concern wildlife biologists because the region is a hotspot of biodiversity and includes many endangered or protected species, notably Agassiz's desert tortoise. It and another tortoise, Morafka's, dig burrows that shelter many other organisms.

The article, by Jeffrey E. Lovich and Joshua R. Edden of the US Geological Survey's Southwest Biological Science Center, notes that solar energy facilities are poised for rapid development and could cover hundreds of thousands of hectares. Assessments of their effects should count both onsite and offsite effects and include construction and decommissioning as well as the operational phase, the authors point out. Yet there are to date almost no peer-reviewed studies on the impacts of [solar installations](#) specifically.

The authors' initial attempt to catalogue the foreseeable effects draws attention to [habitat fragmentation](#) caused by roads and power lines, which could restrict gene flow, as well as the production of large amounts of dust through ground-disturbance. Solar plants are also expected to release pollutants such as dust suppressants, rust suppressants, and antifreeze, both in routine operation as well as through

spills. They will predictably generate heat, electromagnetic fields, noise, polarized light, and possibly ignite fires. Evaporative ponds, which concentrate toxins, may be used and are a recognized hazard to wildlife. Because wet-cooled turbines need to be supplied with large amounts of water, developers are leaning toward using dry-cooled turbines, but these have a larger "footprint" than wet-cooled ones.

The dearth of reliable information indicates an urgent need for careful, controlled, pre- and post-construction studies of the effects of solar power plants in the Southwest, Lovich and Ennen argue. Such studies could attempt to determine information useful for optimally siting the plants, such as whether damage is minimized if they are concentrated in a few places or dispersed, as well as suggest preferred locations and mitigation possibilities.

Provided by American Institute of Biological Sciences

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