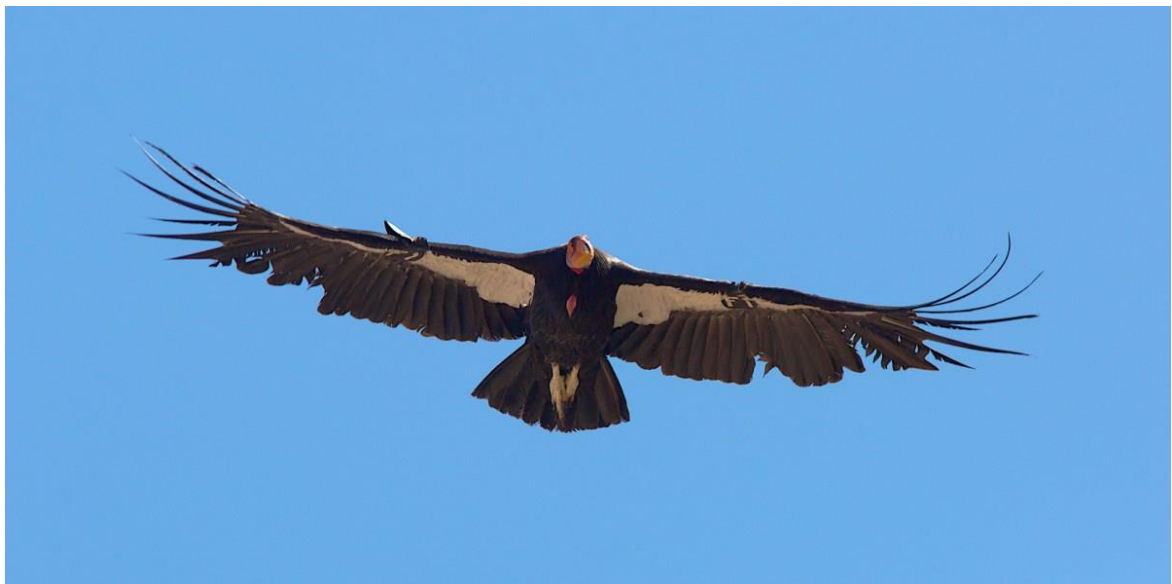


The paradox of the California condor

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California condor. Photo via iStock

IN SUMMARY

A first-of-its-kind proposal to mitigate condor collisions with wind turbines places the trade-off for renewable energy in stark perspective.

By Jane Braxton Little, Special to CalMatters

The young California condor stood patiently in a makeshift field laboratory, tolerating the team of biologists taking a blood sample to test for lead poisoning. I could feel the bird's composure through the

feathers of his blackish folded wings as I hunched behind him, providing an extra set of hands. The next morning he was back in the air, sketching circles across the Southern California sky in one of nature's most majestic spectacles.

This juvenile joined just 75 other condors flying wild over the mountains of western North America in 2002. Today there are more than 340. Reduced to 22 birds in the 1980s, [Gymnogyps californianus](#) has become the poster child of the [Endangered Species Act](#). Using VHF transmitters, GPS wing patches and \$5 million a year, the U.S. Fish and Wildlife Service has [revived the species](#) from near extinction. California condor chicks have been born in the wilds of California, Arizona, Utah and Baja California, Mexico.

Ironically, these birds are poised to become victims of their own success.

While their population was recovering – first entirely in captivity, then with tentative releases at sites where they were closely monitored – their traditional territory in the Mojave Desert was overtaken by wind turbines. Once the exclusive domain of condors, golden eagles and other raptors, today the air east of the Tehachapi Mountains is whirling with blades half the length of a football field on about 5,000 wind turbines.

The Fish and Wildlife Service was approving wind farms in the Mojave even as it was releasing condors into the wild. The turbines are part of a surge in alternative energy development that has nearly quadrupled in the last decade, producing more than half of California's wind energy. Encouraged by a state committed to reducing carbon emissions to zero by 2045, California's wind farms have been

embraced by conservationists for shifting energy sources from fossil fuels to renewables.

For condors just reclaiming their roosts in the mountains west of the Mojave, wind generation is a mixed blessing. They benefit from anything that reduces the effects of climate change, one of the greatest overall threats facing wildlife. But those spinning blades are killers. They have slaughtered numerous golden eagles and hawks, and pulverized countless migratory songbirds. Scientists and wind industry representatives say it is simply a matter of time until a turbine claims one of the 518 condors on the planet.

[Avangrid Renewables](#) officials are acutely aware of the danger – and the liability. Condors are protected under federal law; killing one could result in fines up to \$250,000.

At the [Manzana Wind Power Project](#), company biologists have spotted North America's largest flying land birds on the Tehachapi ridgeline a mile and a half away. To detect and minimize conflict between wildlife and wind generation, they have installed [artificial intelligence devices](#). In 2018 they erected a [geofence](#), which tracks GPS-tagged condors entering the wind farm area and shuts down the turbines.

Now Avangrid is proposing a first-of-its-kind measure to mitigate condor collisions. In a draft [conservation plan](#) pending Fish and Wildlife Service approval, it predicts that up to two adult condors will die by a fatal injury and each of their two chicks or two eggs will be lost accidentally over the next three decades. Anticipating that tragedy – and the potential fines – Avangrid will protect condors for the next 30 years by providing \$527,000 to produce six condor chicks and raise

them at the Oregon Zoo until they are released into the wild, according to the plan.

The Avangrid proposal puts the condor-wind energy tradeoff in stark perspective. Boiled down to its unsavory essence, it is a plan to raise new birds to allow killing others. It inadvertently establishes a value for condors at \$87,833 per. That's about \$4,391 a pound.

This is the paradox of the condor: The successful recovery of the species may sanction the sacrifice of several individual birds.

Most conservationists agree we have to find a way to make wind energy and condor recovery compatible to stave off catastrophic climate change. And they reluctantly concede that the Avangrid proposal is the best alternative. But why stop at six? Why not breed 30? And why not impose the same requirement on every wind farm operating anywhere in traditional condor country?

The collision of condors and wind energy may be the most wrenching but it is one of an increasing number of compromises made to accommodate expanding conservation goals on a finite landscape. Painful as it is to put up condors for sacrifice, the Avangrid plan is an acknowledgment of two conservation successes: increasing renewable energy and recovering the iconic condor.

The juvenile bird I encountered 20 years ago has long since traded his black bill and grey-black head for the ivory bill and shocking pink head of an adult. His wings have stretched to their full 9½-foot span. He may have reared six chicks of his own, and they, too, may be breeding by now. The resilience of this species, its endurance and sheer

grandeur in the air, offer lessons as we learn to live with conservation trade-offs of our own creation. May we learn them well – and quickly.



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