

## Save Birds Now or Birds Later

**D**ue to a combination of climate change, habitat loss, water diversions, pesticides and other toxics, and other factors, the Earth is now facing the sixth mass extinction event in its geological history, on a par with the asteroid that killed the dinosaurs and much else.

The international goal for fighting climate change, as adopted and reaffirmed at several United Nations climate conferences, is to keep global average temperatures from rising more than two degrees Celsius above pre-industrial conditions. Even an increase at that level would have very negative consequences to humans as well as other species — the low-lying island nations and large chunks of Bangladesh would be under water, for example — but staying within this range is a colossal challenge.

Every scenario for staying below two degrees includes a massive increase in the use of renewable energy, on top of major improvements in energy efficiency. Most scenarios also rely heavily on nuclear power and on the continued use of fossil fuels but with carbon capture and sequestration; those that do not rely even more heavily on renewables.

One of the most detailed quantitative examinations of possible scenarios is from the Deep Decarbonization Pathways Project of the Sustainable Development Solutions Network and the Institute for Sustainable Development and International Relations. In November, this group released its report on pathways for the United States. Its numbers show that, even with an aggressive efficiency program and a considerable increase in nuclear and carbon capture, it will be necessary, every year from 2016 through 2050, for the U.S. to add 2,500 megawatts of wind energy and 1,400 megawatts of solar en-

ergy. That's like five Cape Winds and four Ivanpah solar projects for each of the next 35 years.

Alas, we have zero Cape Winds. That project was proposed in 2001; struggled through a decade and a half of permitting and litigation delays (some of them concerning species impacts); and may have suffered a fatal blow this year when the companies that had agreed to buy much of its power output pulled out, frustrated by all the delays. So far there is no commercial-scale offshore wind generation at all in the United States.

As Gordon Smith's accompanying article recounts, the impacts of wind turbines on birds and bats have posed major problems for wind developers, both in securing the necessary permits to build and in operating the turbines. Several large wind projects other than Cape Wind have been delayed or cancelled due to avian impacts.

Large-scale solar development is facing similar challenges. The Ivanpah solar project in California has problems because birds are killed if they fly into the concentrated solar rays. California is preparing a Desert Renewable Energy Conservation Plan for the Mojave Desert, which would seem to be an ideal place for large-scale solar facilities. However, the draft plan would deem only about 2 million acres of the 22.5-million-acre desert environmentally suitable for solar and wind development, and about half of that was tentatively rejected based on other issues. The U.S. Environmental Protection Agency has asserted that even this is too permissive of renewable projects, partly due to avian impacts.

At this pace and with these constraints, it is questionable whether

we will be able to come close to the Deep Decarbonization scenario for added renewables. If most large projects must endure years of delay, and if many project developers are scared away by the uncertain outcomes, it is hard to imagine how we will achieve the magnitude of project construction that is needed to meet our climate goals.

Thus the questions arise: Is slowing down or stopping renewable projects in order to protect certain bird and bat populations ultimately harmful to avian and other species overall? If there are mass extinctions due to climate change and other factors, won't some of the animals we are trying to protect be gone anyway, together with untold numbers of others?

This raises the further question:

Should we create special exemptions or at least expedited procedures for renewable energy projects, and allow them to go through even if they are bad for some birds and bats? This is a tragic choice, but it may be compelled by society's

failure to come to grips with the climate problem two decades ago, when scientists were already sounding the alarm and there was still time to act and avoid either tragic choices or environmental disaster.

The current system of U.S. environmental law, with its multiple delays and veto points, may be incompatible with the scale and pace of the transformation of the energy system that is needed to meet the climate problem. It is high time that we live the slogan: think globally, act locally.



Michael Gerrard

**Michael B. Gerrard** is Andrew Sabin Professor of Professional Practice and director of the Sabin Center for Climate Change Law at Columbia Law School.