

Opposition to Renewable Energy Projects – Particularly Wind Where is That Coming From?

By Martin Flusberg
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Image Courtesy of Georgetown University Library

Last month I posted [an article regarding electric power sources by state](#) focused on demonstrating that “Red States” are in fact ahead of “Blue States” in terms on the use of wind power to generate electricity. The article pointed out that the leading reason for this is that Red States are more prevalent in the “wind belt” – those areas of the country with more and faster wind. (Although it was not noted in that article, another factor is that Red states tend to be more rural and have larger swaths of land on which to build wind farms – as well as solar farms).

It could have been interpreted that this means that there is limited opposition to such installations – even in states that lean heavily on the conservative side and in many cases are known to be home to climate change deniers.

But, in fact, that is not the case.

The Spring 2024 issue of the Sierra Club Magazine had an article entitled [Against the Wind](#) – subtitled *Climate-science deniers, right wing think tanks, and fossil fuel shills are plotting to foil the renewable energy revolution*. That is essentially the title of the on-line version of the article, posted on March 12,

2024, and linked here. (In the print version of the magazine, the Opening Remarks/Editor's page was devoted to this article – and titled: *Tilting at Windmills*).

The article laid out multiple instances of organizations and individuals with ties to the fossil fuel industry objecting to proposed wind projects, often on environmental grounds. For example, it highlights Marc Morano of the blog site *Climate Depot* who, the author suggests, has done more than anyone else to cast doubt on global warming – and in fact has spoken about “global cooling”. Morano works at the *Committee for a Constructive Tomorrow*, a climate change denier with funding from ExxonMobil and the Charles Koch Foundation and “dark money” groups such as DonorsTrust. One of Morano's most recent claims is that offshore wind farms are responsible for the increase in whale strandings and deaths occurring along the east coast.

Last year, he and others went out on powerboats to the construction site of an offshore wind farm 35 miles from the eastern tip of Long Island, New York. As they approached their destination, they began to shout (using bullhorns) about ceasing wind farm construction. Morano was videoed yelling: "Hear this message: We're here to save the whales! If you were a fossil fuel project, you would have been shut down long ago." The video was shown on Fox News and then spread quickly through social media groups that oppose offshore wind.

The Sierra Club article points out that, in fact, whale strandings on the East Coast began in early 2016, before survey activity for offshore turbines had even begun. Federal agencies are still investigating "unusual mortality events" for several whale species, but researchers – and regulators – have stated that there is no evidence of a link between whale stranding and deaths and wind development. The article quotes Douglas Nowacek, Professor of Marine Conservation Technology at Duke: "There is absolutely zero evidence that any of the offshore wind activity has been involved in any of those strandings". He has also said that claims that noise from offshore wind surveys are driving whales into harm's way have no basis and noted that seismic surveys for oil and gas are far louder.

Whale deaths exploited in 'cynical disinformation' push against wind power, advocates say

Elizabeth Weise and Dinah Voyles Pulver Cape Cod Times

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Since 2019 hundreds of gray whales have also washed-up dead on the West Coast, where offshore wind development is only now getting underway. The clearest common factor is believed to be rising ocean temperatures, which are disrupting whales' feeding and migration patterns. That is - **climate change**.

That being said, sowing misinformation about wind - and solar - is proving to be an effective stall tactic. Public opinion surveys show that renewable energy remains popular with a bipartisan majority of Americans. A poll from the University of Maryland found that 7 of 10 people indicated that they'd be comfortable with a wind farm in their community. But in New Jersey—where Morano's group has among other things put up billboards reading "Save Whales Stop Windmills"—nearly half the state's residents now believe that such a connection probably exists ([as reported by Monmouth University](#)).

The article notes that the names of some individuals and groups are seen at many anti-wind events — and that many of these individuals and groups were involved with a 2012 anti-wind conference held in Washington, DC. The person that convened that meeting, John Droz, brought together people from climate change denying groups like the *American Legislative Exchange Council* (ALEC) and the *Committee for a Constructive Tomorrow*, along with local wind opponents. Droz edited a document that recommended tactics to fight wind projects. He also has a website that provides a menu of wind ordinance templates, including "setback" rules which mandate how far wind turbines must be located from neighboring properties. In one strategy document, Droz explains that the point of setbacks should be to make them "so restrictive that the cost of the project becomes prohibitive and the developer leaves."

The article also referenced a yearlong nationwide assault on state renewable energy mandates led by the *State Policy Network*, a 50-state group of Koch-affiliated think tanks. (The article noted a specific example with the Delaware affiliate of this group called the *Caesar Rodney Institute*). Network members turned up to testify on legislation that rolled back the renewable requirements—sometimes citing debunked studies from other Koch-backed groups. At least 5 of these groups work with the *American Coalition for Ocean Protection*, a new anti-wind umbrella group (that is not known to have received any Koch funding - yet).

As still another example of these activities, a June 2023 [article from the Kleinman Center for Energy Policy](#) at the University of Pennsylvania reported that “the fossil fuel industry uses anonymous dark money contributions to fund misinformation about clean energy and promote nonrenewable resources, influencing legislation and elections and undermining a renewable energy transition”.

They cited one example as Ohio House Bill 507 (which was passed) which includes natural gas under its definition of green energy. The article noted that the *Energy and Policy Institute* had reported the influence of 2 organizations known for their affiliation with fossil fuel organizations on this legislation – the afore-mentioned ALEC and *The Empowerment Alliance (TEA)*. This included exposed e-mails between TEA executives and several Ohio state senators that pushed the senators to support natural gas use.

The Energy and Policy Institute also highlighted records of TEA – whose leader is an executive at the Ariel Corporation, the largest manufacturer of natural gas compressors in the world – which shows them spending millions of dollars on ads attacking renewable energy sources. Many of these ads run through their affiliated PAC - the *Affordable Energy Fund* – which claims that natural gas is “the only way to secure America’s energy independence and keep prices low”. TEA’s 2022 plan highlights that their ads

specifically target voters in swing states, including Arizona, Florida, Georgia, Iowa, North Carolina, West Virginia and Wisconsin. One such ad placed on Facebook was titled “*Pigs will fly before wind energizes a significant portion of America*”.

Anti Solar Tactics

The Sierra Club article also reported that in many parts of the country the tactics used by anti-wind campaigners are now being deployed against solar. For example, late last year residents of Knox County, Ohio were invited to a meeting to learn about a solar project proposed for their area. The meeting was hosted by a newly formed corporation whose backers were anonymous – but some believe are affiliated with a local manufacturer of methane gas compressors. One of the speakers was a policy advisor for the well-known climate change denying organization the *Heartland Institute*. (This person recently released a book that forecasts a “coming renewable energy failure”). Attendees at the meeting were instructed on how they could voice their opposition to state regulators reviewing the solar project.

This was just one of multiple anti-renewables activities in Ohio – which has one of the lowest instances of **both** solar and wind in the US.



Source: Toledo Blade

As another example, a 2024 article in USA Today – 1 of a series of articles related to this topic - reported on a commissioners’ meeting in Madison County, outside Columbus, Ohio discussing the proposed Oak Run solar farm designed to generate 800 megawatts of electricity – and cover at least 4,000 acres with solar panels. A large number of people attended in an attempt to make sure that didn’t happen. They argued that the panels “are eyesores” and that they would “take up prime farmland and kill birds”. In September 2023 the county commission voted to prohibit all new wind and solar farms.

Another USA article in this series – this one entitled [US counties are blocking the future of renewable energy](#) - reported that at least 15% of counties in the U.S. have effectively halted new utility-scale wind or solar projects – or both. The limits come in the form of outright bans, moratoriums, construction impediments, and more.



Source: USA Today

USA Today's analysis found that 2023 was the first time the number of counties *curtailing* new solar installations was almost equal to the number of counties *adding* their first solar farm. And the blocks are even more significant for wind power. 183 counties got their first commercial wind-power project in the past decade, but nearly 375 counties blocked new wind development in the same period.

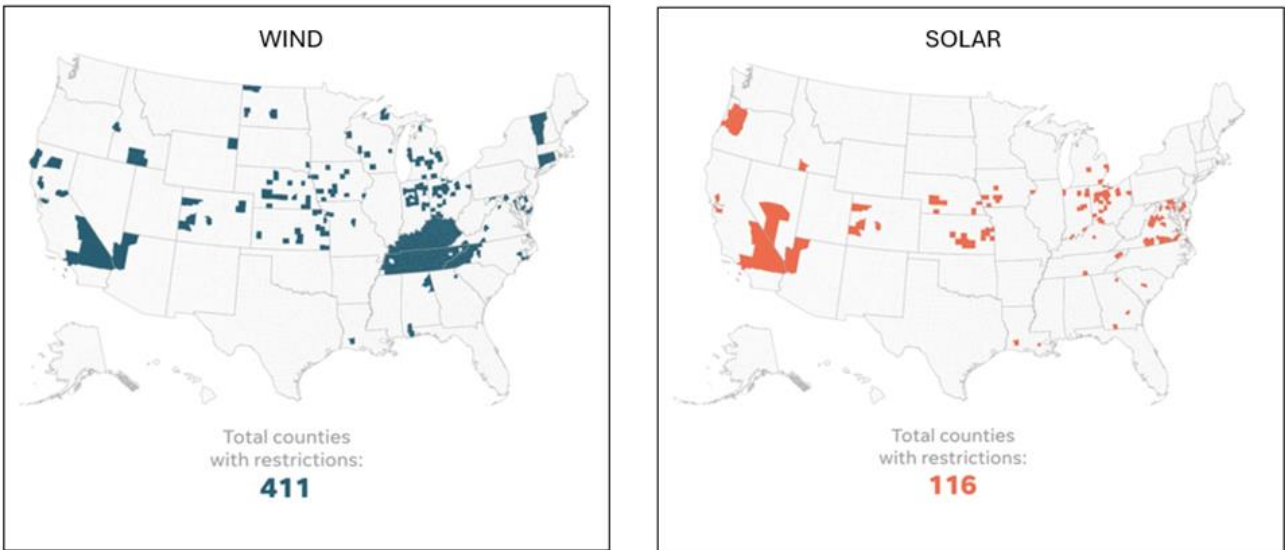
In 2009, 23 out of North Carolina's 100 counties banned new wind projects. In 2014, Kentucky made it almost impossible to build new turbines in any of its 120 counties. In 2018 Tennessee essentially stopped new wind projects in all but four of its 95 counties.

[A separate report from Columbia University](#) identified nearly 230 local measures across 35 states that have been enacted to restrict renewable energy development.

These statewide blocks are in addition to many individual counties in the Great Plains, the Midwest and Texas which have restricted wind turbines or created rules so power companies don't pursue certain locations – although these have become areas where numerous wind farms have in fact been built because of the amount and strength of winds.

The article highlighted where bans were happening across the US – for both wind and solar – summarized in the image below:

Counties That Had Renewable Energy Bans in 2023



The article went on to note that restrictions on wind energy tend to spread to nearby counties. Counties that have never had wind projects but are near counties that have are more likely to block new projects. Counties also restrict solar, in some cases to such a small area that it's unfeasible to build. More than half of these bans occurred in counties that already have some operational solar capacity.

Several zoning strategies are being used to block new energy plants. In the case of wind, the most common ones involves the height of a turbine or its distance from adjacent properties, known as the setback, which was noted earlier. In some cases, the setback is set so large as to simply make it unfeasible to site a wind farm.

Another restriction involves noise limits. In the 2010s, common concerns about wind turbines included health impacts from a swishing noise made by the blades. Research has shown that this is not the case, but decibel limits remain.

Other Claims About Wind and Solar

Another major claim being made in an effort to stop wind farm development: turbines kill birds – and bats.

A January 2024 article in the LA times entitled: *“Yes, wind turbines kill birds. But fracking is much worse”*. began by citing recent headlines (from other sources):

- Golden eagle’s death sparks shutdown of wind farm.
- Criminal cases for killing eagles decline as wind turbine dangers grow.
- Proposed wind farm fuels debate about threats and benefits to migrating birds.

As one can expect based on the title, the article admits that wind turbines are responsible for bird deaths, but that other activities – including those related to fossil fuels – do much more extensive killing of birds.

The first USA Today article mentioned earlier was entitled: [“Do wind turbines kill birds? Are solar panels toxic? The truth behind green-energy debates”](#).

The questions they tackle – and a brief summary of their responses – are summarized below:

- **Do wind turbines kill birds and bats?** Yes, but the real issue is how many they kill compared with other sources. A study being published in 2024 found that wind farms had no statistically significant effect on bird counts – while fracking reduced the total number of birds counted near shale and oil production sites by 15%. And the National Audubon Society has estimated that as many as two-thirds of North American bird species (398 species) – are at risk of extinction due to changes in habitat caused by global warming.
- **Are solar farms dangerous for birds?** Some water birds can mistake a solar farm for a body of water and attempt to land on it, which can harm the birds. According to the National Audubon Society, some solar developers are adding special patterns to panels or using other strategies to minimize the risk of crash landings, and many states require the developers to grow native plants in and among solar farms, benefiting birds and other pollinators.
- **Power produced by wind and solar is just exported to people in other areas. Why should we have to produce it here?** Agricultural communities have always exported what they produce, whether it’s crops or livestock. People in those communities see wheat and corn and soy being grown, see combines and grain bins, and know there’s money for farmers and taxes for their communities. Solar advocates and energy developers say their task is to persuade people living near turbines or solar farms to look at them and realize it means jobs and better-funded schools and repaired roads.
- **Will worn-out solar panels overwhelm dumps with waste?** Improved standards for solar panels and wind turbines mean both have much longer lifespans today; solar panels typically last 30 - 35 years while turbines now have a similar lifespan of about 30 years. When they reach the end of their lives they must be decommissioned and disposed of, but the trash this will produce pales in comparison to that produced by households, coal ash, and plastic waste. According to a study published in the journal *Nature Physics* in October 2023, global municipal waste is expected to reach 70 billion metric tons by 2050, coal ash more than 45 billion metric tons, and plastic waste 12 billion metric tons. Even in the worst-case scenario, waste from solar panels is expected to reach 160 *million* metric tons by then. And most solar zoning codes require that the solar companies post bonds for decommissioning at the end of their lifespans so that counties don’t have to pay for the disposal.
- **Do solar panels contain toxic materials such as arsenic, cadmium and gallium? Will that leach out of them in the rain?** Solar panels are mostly made of glass, aluminum and silicon: 77%, 10% and 3%, respectively. Trace elements of cadmium and copper and perhaps some other materials

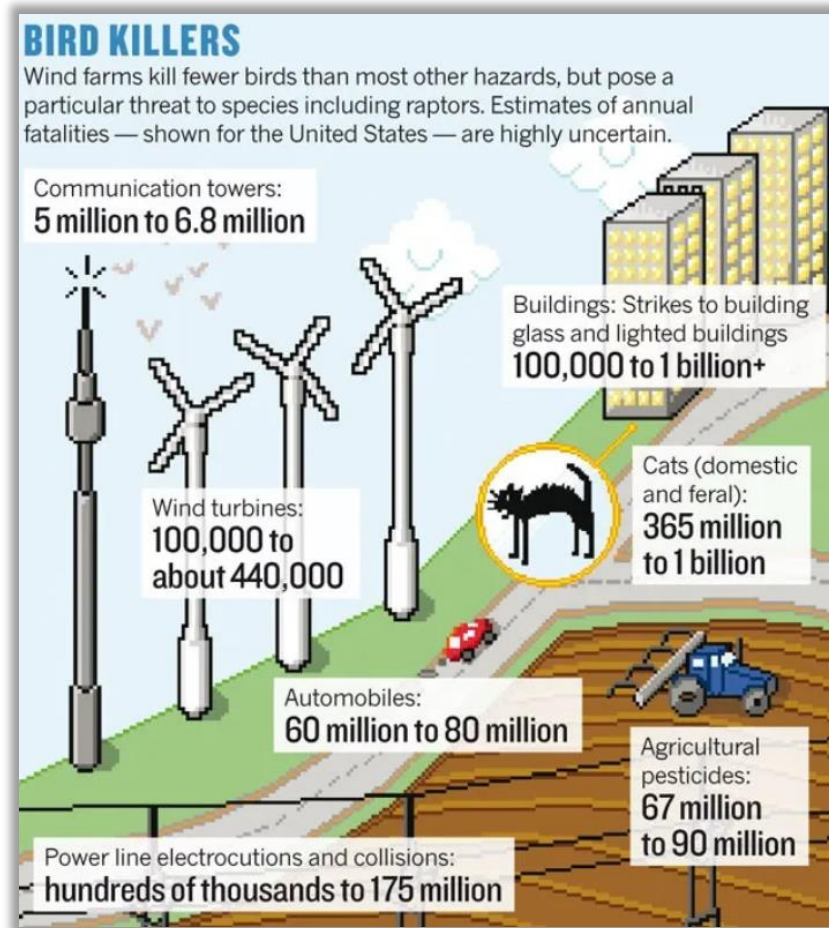
are added to make them better electricity conductors. There's no evidence that photovoltaic cells currently contain arsenic, germanium, hexavalent chromium or perfluoroalkyl substances. And there's no evidence of toxic material leaching out of solar panels in the rain. (The article notes that despite the lack of evidence, in 2020 community members in Horry County South Carolina raised concerns about the leaching of cadmium telluride from a proposed 138 MW solar project, questioning what would happen if the solar panels were damaged in a hurricane. County council members also raised concerns about decommissioning and whether landfills would accept solar panels. Although the developer agreed not to use solar panels that include cadmium telluride, the project was never built).

- **Will wind turbines hurt nearby property values?** A 2023 study by Lawrence Berkeley National Laboratory found that homes located within 1 mile of a commercial wind turbine experience about an 11% decline while homes between 1-2 miles were slightly affected, and homes further away weren't affected at all. However, the effect was short-lived, and prices returned to pre-wind project announcement levels within 3-5 years of the power project opening. The study looked at nearly 500,000 home sales between 2005 and 2009 across 34 states that were near 428 different wind projects. During that time, wind turbines were not as tall as state-of-the-art turbines today; however, because modern turbines produce more energy per turbine, fewer are required, so the area of potential shadow and noise is smaller. Interestingly, the journal *Energy* reported in 2022 that home values *increased* after wind projects began operating, suggesting that this is probably because taxes from the projects provided economic benefits to the area, including better schools and infrastructure, making the community more enticing.
- **Do wind turbines create harmful, low-frequency noises?** Sound from wind turbines may be annoying, but that has not been associated with any adverse health effects. Some opponents have said that turbines' low-frequency sounds cause headaches, nausea and other problems but a 2019 study found [no link between health outcomes and proximity to turbines](#).
- **Will solar farms use up all our farmland?** Farmland is a popular place to build solar because it's generally relatively flat and open and tends to have good sunlight. Opponents argue that too much farmland being turned into solar farms will affect the country's ability to feed itself, but there is no basis for this. The National Renewable Energy Laboratory estimates that for the U.S. to move completely to carbon-neutral power, it will require about 10,000 square miles of land. The Department of Agriculture already pays farmers to take almost 25 *million* acres of less productive and environmentally sensitive land out of production – way more than the entire amount of land that would be needed for green energy.¹ In 2023, about 40% of the US corn crop was used to produce ethanol. By some measures, an acre of solar power can make 70 times as much energy as an acre's worth of corn turned into ethanol.

¹ A very recent – May 14, 2024 – piece on NPR news discussed research being done at Iowa State University exploring whether solar panels can co-exist with certain vegetables growing between and beneath them. One of the researchers suggested that vegetables below the panels could perhaps keep them cooler and enable them to generate more power.

- **Do wind and solar farms destroy rural aesthetics?** Beauty is in the eye of the beholder. Some people see a wind turbine or a solar installation as clean energy that will help stop global warming. Others see them as a blight that destroys the landscape. It's worth noting that solar farms sit relatively low to the ground. In some parts of the country, once those panels are screened off by a row of trees or vegetation, they're hardly visible from afar.

The question about wind turbines killing birds has been addressed by multiple publications, and there are some very interesting comparisons. For example, a recent podcast from an MIT climate program featuring MIT professor Michael Howland noted that wind turbines may be responsible for 150,000 – 700,000 bird deaths per year, but that number pales in comparison to bird deaths from other sources – including powerlines, buildings, and above all cats - which could be responsible for billions of bird deaths a year. The podcast quoted death totals similar (but not identical) to those in this fascinating graphic:



Source: [Need to Know by Stephen Leahy](#)

Bottom Line: wind turbines do kill birds but, in the scheme of things, turbine-related bird deaths pale in comparison to other causes of bird deaths.

And there are other exaggerations being made as well - along with other absolute falsehoods. A certain former president of the US recently stated that wind farms only last 10 years, that they kill “all the birds”, that solar energy isn’t powerful enough to run factories, and that wind is 42 times more expensive than natural gas. While president he stated: "If you have a windmill anywhere near your house, congratulations, your house just went down 75 percent in value. And it's like a graveyard for birds; if you love birds, you never want to walk under a windmill. It’s a sad, sad sight. And *the noise from turbines causes cancer*".

Enough said.

Where Does That Leave Us?

The bad news is that renewable energy projects are being prohibited in many places across the country – and in other places they are being delayed by the tactics of groups opposed to renewable energy. There are several national think tanks and groups, many that receive fossil fuel funding, that have been putting out arguments, often false, opposing wind and solar power for years. Anti-renewable energy opposition points posted online are quickly taken up by people living near proposed projects who use them to fight what they see as a threat to their communities and way of life. And, to be fair, there is a lot of opposition from local activists without obvious ties to national groups.

The good news is that the use of renewable energy is still increasing. From 2000 to 2022 the percentage of electricity produced by renewable energy more than doubled from about 9% to 21% and it is still growing. As I noted in my article referenced at the start of this one, 10 states now generate more than 50% of their energy from renewable sources – half of which are Red States – and another 4 are at over 40% - with 3 of them Red States. (These numbers do not treat Nuclear Power as a renewable source).

There appear to be enough renewable energy-based generation projects in the pipeline to totally replace fossil fuels. But implementing them will take a fairly long time – not only because of the time involved in the process for getting them approved, but because the grid is not nearly ready to handle all of these new generation facilities. So, it will take a while to reach the goal of a 100% renewable energy grid. In the interim, more needs to be done to fight back against the anti-renewable activists that are helping to delay the process even more than it needs to be.