



Memorandum in Support

COMMITTEE ON ANIMALS AND THE LAW

Animals #27

February 29, 2024

S. 6257-A

By: Senator Sanders

A. 1903-A

By: M. of A. Glick

Senate Committee: Finance

Assembly Committee: Energy

Effective Date: 180th day after coloring turbines is permitted by the FAA

AN ACT to amend the executive law, in relation to the development of uniform standards for the coloring of wind turbine rotor blades

LAW & SECTIONS REFERRED TO: Amends subdivision 3 of section 94-c of the Executive Law by adding a new paragraph c-1.

THE COMMITTEE ON ANIMALS AND THE LAW SUPPORTS THIS LEGISLATION

This bill amends subdivision 3 of section 94-c of the Executive Law by adding a new paragraph c-1, which directs the Office of Renewable Energy Siting to establish uniform standards for the coloring of wind turbine rotor blades in order to minimize bird collisions. To do so, it also requires that the Office of Renewable Energy consult with the Department of Environmental Conservation to establish uniform standards for coloring the rotor blades of wind turbines, with such standards being designed to avoid or minimize, to the maximum extent practicable, bird collisions arising from the location, design, construction and operation of major renewable energy facilities using wind turbines.

Every change made to our energy systems to reduce environmental toxins from fossil fuels must be done carefully to ensure that those actions do not have unforeseen negative consequences. The use of wind turbines, which provide energy from a renewable resource, have unintentionally created great risk for some of the earth's non-human inhabitants. It has been estimated that at least 681,000 birds are killed annually in the United States when they collide with the rotor blades on the wind turbines in power-producing wind farms.¹ That number is expected to grow as the number of wind turbines grows each year. The uniform white or grey color of the rotor blades, intended to make them visible to planes, is exactly what makes them dangerous to birds.²

¹ Merriman, Joel, "How Many Birds Are Killed by Wind Turbines?" American Bird Conservancy, Jan. 26, 2021, <https://abcbirds.org/blog21/wind-turbine-mortality/> (last visited Jan. 28, 2024).

² "How Black and White Turbine Blades could Reduce Bird Mortality at Wind Farms," Robin Radar Systems (Apr. 20, 2021), <https://www.robinradar.com/press/blog/how-black-turbine-blades-could-reduce-bird-strikes-at-wind-farms> (last visited Jan. 28,

Opinions expressed are those of the Section/Committee preparing this memorandum and do not represent those of the New York State Bar Association unless and until they have been adopted by its House of Delegates or Executive Committee.

The species of birds colliding with wind turbines will be dependent upon the turbines' locations, e.g., in open fields, areas near mountains, or in the ocean. While all birds are impacted by wind turbines, particularly when they are placed close to nesting areas or in the path of migration routes,³ it has been found that raptors are particularly negatively impacted.⁴

In the last several years, there has been a general recognition that steps should be taken to reduce bird deaths caused by impacts with buildings; now the number of bird deaths caused by wind turbines has become a concern as well. A number of studies have sought to establish the number of bird deaths caused by wind turbines and also to find ways to reduce them. While various solutions are being considered, the one addressed by this bill is painting the rotor blades of wind turbines. This method was developed to address the problem of "motion smear," the visual effect created by fast moving objects, such as hummingbird wings, which makes such objects just appear to be a blur. The moving blades of wind turbines appear as a blur to birds, and when they are unable to see the blades as a fast-moving solid object, they collide with them.⁵ However, disrupting the uniformity of the rotors blades' coloration can also disrupt the motion smear, thereby allowing the rotors blades to be seen as solid objects. A study was conducted in Norway in which one rotor blade on each wind turbine was painted black, and it found that the change in coloration resulted in a dramatic decrease in bird deaths. The study showed that wind turbines with one rotor blade painted black reduced bird deaths by 71.9%, compared with the control group of wind turbines with uniformly colored rotors.⁶ It also reported a particularly significant reduction in raptor deaths.⁷ The Federal Aviation Administration has advised the National Audubon Society that it "[has] a process for considering . . . changes" in the current rule, which is designed with aircraft safety in mind.⁸ This bill will not go into effect until the FAA has made a determination to allow for coloring of wind turbine blades.

There can be no dispute that wind sourced energy is the way of the future and will lead the way in the production of green energy.⁹ The importance of wind energy in our energy future makes it particularly important that efforts be made to have wind turbines reduce negative environmental impact as much as possible. Painting rotor blades is a simple and inexpensive way to do so. The legislators of New York State should be commended for seeing the need to take action to help prevent bird collisions with wind turbines and resulting deaths.

For the foregoing reasons, the Committee on Animals and the Law **SUPPORTS** the passage and enactment of this legislation.

2024).

³ Dhanesha, Neel "Can Painting Wind Turbine Blades Black Really Save Birds?" Audubon Magazine, Sept. 18, 2020, <https://www.audubon.org/news/can-painting-wind-turbine-blades-black-really-save-birds> (last visited Jan. 28, 2024).

⁴ Taber D. Allison, Jay E. Diffendorfer, Erin F. Baerwald, *et. al.*, "Impacts to Wildlife to Energy Siting in the United States," Issues in Ecology, Report 21, Fall 2019 at p. 8, https://www.esa.org/wp-content/uploads/2019/09/Issues-in-Ecology_Fall-2019.pdf (last visited Jan. 28, 2024).

⁵ *Supra*, Dhanesha.

⁶ "Paint it black: Efficacy of increased wind turbine rotor blade visibility to reduce avian fatalities," Ecology and Evolution, Vol. 10, Issue 16 (August 2020), <https://onlinelibrary.wiley.com/doi/10.1002/ece3.6592> (last visited Jan. 28, 2024).

⁷ *Id.*

⁸ *Supra*, Dhanesha.

⁹ Dunhill, Jack "Make Wind Turbines Stripy To Stop Bird Deaths, Suggest Scientists," IFLScience (Feb. 28, 2023), <https://www.iflscience.com/make-wind-turbines-stripy-to-stop-bird-deaths-suggest-scientists-67738> (last visited Jan. 28, 2024)("As wind turbines have become one of the staple technologies humans have as a means of reaching the ultimate goal of net zero emissions, their production has skyrocketed and adoption of both land and offshore wind farms has never been higher.").

Opinions expressed are those of the Section/Committee preparing this memorandum and do not represent those of the New York State Bar Association unless and until they have been adopted by its House of Delegates or Executive Committee.