

RECONCILING THE MIGRATORY BIRD TREATY ACT WITH EXPANDING WIND ENERGY TO KEEP BIG WHEELS TURNING AND ENDANGERED BIRDS FLYING*

By
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The Migratory Bird Treaty Act (MBTA) has proven invaluable in minimizing the destruction of the 240 avian species listed by its enforcement agency, the United States Fish and Wildlife Service (FWS), as “endangered or threatened” or “birds of conservation concern.” Recently, however, the Act is faced with a new challenge: How can it continue to achieve its objective when a highly desirable domestic source of sustainable energy—wind power—is experiencing unprecedented growth? Ever-larger wind projects propelled by giant turbines have become a serious danger to the existence of migratory birds and their natural habitats. Yet most policy makers strongly welcome and support continued expansion of wind power, and are reluctant to permit impediments to halt or restrict its growth. The growing conflict between the goals of protecting migratory birds and producing more wind power should be reconciled. This Article proposes three basic policy revisions: (1) authorization for the FWS to issue incidental take permits to wind power developers; (2) creation of a uniform standard for assessing avian impacts; and (3) amendment of the MBTA to allow for civil sanctions and citizen suits. Although “big wheels in the sky” must keep on turning and expanding to help reduce America’s dependence on fossil fuels and foreign energy sources, this worthy objective must be pursued without weakening federal protection of migratory birds.

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* Attribution is given to John Fogerty for borrowing a phrase from his famous 1969 rock song, “Proud Mary.” See John Fogerty, CD, *Proud Mary*, on *Bayou Country* (Fantasy Recs. 1969) (“Big wheel keep on turnin’ . . .”). But, as noted by Broadway lyricist Oscar Hammerstein II, even interstate travelers acknowledge that “birds got to fly.” Oscar Hammerstein II, CD, *Can’t Help Lovin’ Dat Man*, on *Show Boat: Original Motion Picture Soundtrack (1951 Film)* (Rhino Recs. 1995).

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I. INTRODUCTION

We, as humans, have found it quite challenging to provide protections to wild animals while continuously striving to improve our own well-being. Trying to protect our country's endangered migratory birds while simultaneously seeking to advance our own self-interest—through rapid expansion of the internally produced and sustainable energy source of wind power—provides an excellent example of this challenge. Some policy makers argue that it is much more important to promote the immediate well-being of humans rather than to ensure protection for threatened bird species; and in an era in which energy independence has become a generally recognized national goal, this goal should not be minimized.¹ Nevertheless, many animal rights advocates continue to insist that threatened animals—including birds—must be given greater recognition and more protections.² The ongoing conflicts between those who strongly promote the growth of wind energy versus those who fear that “big wheels in the sky” may cause destruction—and possibly even the extinction—of highly valued migratory birds, including Bald Eagles, may never be fully resolved. However, this Article attempts to demonstrate how decision makers may be able to find ways to further both objectives—growth of wind energy and protection of migratory birds—by revising existing federal policies.

These policy revisions are intended to reconcile current practices reliant upon the Migratory Bird Treaty Act (MBTA)³ and its supplemental regulations that clash with and restrict the development of wind energy in the United States (U.S.). Utilization of wind power has now become one of the leading ways of producing more energy within the U.S.⁴ Needless to say, such renewable sources serve as welcome alternatives to traditional fossil fuels. For example, there is a domestic shortage of oil, and coal and gas have caused significant damage to the

¹ John Arnold McKinsey, *Regulating Avian Impacts under the Migratory Bird Treaty Act and Other Laws: The Wind Industry Collides with One of Its Own, the Environmental Protection Movement*, 28 Energy L.J. 71, 90 (2007).

² See *id.* at 85–88 (discussing three specific challenges to established and proposed wind energy projects).

³ 16 U.S.C. §§ 703–712 (2006).

⁴ Renewable energy can be defined as an energy source, such as electricity, heat, or combustible fuel that is consumed at a sustainable pace—i.e., it is replenished by Earth's natural processes at a rate that is greater than or equal to its depletion. See McKinsey, *supra* n. 1, at 78 (discussing the conflict between the development and expansion of renewable energy sources and environmental regulations).

environment.⁵ But as the demand for renewable energy increases, the debate regarding potential detrimental impacts to species and habitats—as well as ways to mitigate them—continues to heat up.

In entering this debate, this Article focuses on five main topics: (1) the applicable federal laws pertaining to avian protection, with primary emphasis on the MBTA; (2) the continued growth of large-scale wind energy projects in the U.S.; (3) the way in which these wind energy projects are causing threats to various avian species, especially migratory birds; (4) the interaction between the protection provided by the MBTA and other federal avian protection laws, and their impact on wind development; and (5) various policy recommendations for achieving a better balance between the competing interests of avian protection and wind power development. In doing so, this Article asserts that the current regulatory scheme, as overseen and implemented by the U.S. Fish and Wildlife Service (FWS), is inadequate and ineffective. This Article further asserts that the regulatory scheme not only fails to adequately protect migratory birds, but ironically, also stifles legitimate and desirable wind power development. Finally, this Article contends that existing MBTA policy should be substantially revised to more fully reconcile the objectives of these two worthy—albeit sometimes conflicting—national goals.

II. APPLICABLE FEDERAL LAWS

The law that generates the most controversy when discussing the dynamic between federal laws protecting avian species and wind development is the Migratory Bird Treaty Act (MBTA). The MBTA was enacted in 1918 in response to the overharvesting and resulting significant decline in populations of migratory birds in the 1800s.⁶ The hunting of migratory birds was rampant in the 1800s, leading to a need for federal legislation.⁷ Among other things, the country's first response to the widespread hunting of migratory birds was the Lacey Game and Wild Birds Preservation and Disposition Act of 1900 (Lacey Act), which made it illegal to ship captured birds across state lines.⁸ However, the Lacey Act was largely ineffective in defending migratory

⁵ See Frank P. Grad, *Treatise on Environmental Law* vol. 5, § 11.01(2)(a)–(g) (Lexis 2013) (describing the various energy sources and their environmental impacts).

⁶ Meredith Blaydes Lilley & Jeremy Firestone, *Wind Power, Wildlife, and the Migratory Bird Treaty Act: A Way Forward*, 38 *Envtl. L.* 1167, 1176–77 (2008).

⁷ As immigrants arrived in the 1800s, the nation's population grew, leading to habitat loss through additional land clearing and a significant decline in game bird species from overharvesting. *Id.* at 1177.

⁸ 16 U.S.C. §§ 3371–3378 (2006) The Lacey Act makes it “unlawful to import, export, sell, acquire, or purchase fish, wildlife or plants . . . possessed, transported, or sold: 1) in violation of U.S. or Indian law, or 2) in interstate or foreign commerce involving . . . fish, wildlife, or plants . . . possessed or sold in violation of State or foreign law.” FWS, Intl. Affairs, *Lacey Act*, <http://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/lacey-act.html> [<http://perma.cc/0j9tESsqv7g>] (accessed Nov. 17, 2013).

birds due to its indirect enforcement mechanism.⁹ Next, Congress passed the Weeks–McLean Migratory Bird Act of 1913,¹⁰ but this was struck down as unconstitutional because the federal government cannot abrogate states’ rights under the Tenth Amendment.¹¹

In 1916, the U.S. entered into a treaty with Great Britain to protect migratory birds from “indiscriminate slaughter.”¹² The MBTA ratified this treaty between the U.S. and Great Britain in 1918, as well as other treaties.¹³ The MBTA was also challenged as unconstitutional under the Tenth Amendment, but the U.S. Supreme Court held the Act constitutional under the Supremacy Clause because the MBTA implemented a treaty.¹⁴

Currently, 1,007 bird species are covered by the MBTA.¹⁵ The MBTA delegates its authority to the Secretary of the Interior,¹⁶ who in turn delegates authority to the U.S. Fish and Wildlife Service (FWS), the Act’s only enforcement agency.¹⁷ The MBTA provides in part:

[I]t shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, [or] offer for sale . . . any migratory bird, any part, nest, or eggs of any such bird . . . included in the terms of the conventions between the United States and Great Britain for the protection of migratory birds concluded August

⁹ See Robert S. Anderson, *The Lacey Act: America’s Premier Weapon in the Fight against Unlawful Wildlife Trafficking*, 16 Pub. Land L. Rev. 27, 41–44 (1995) (discussing early interpretations and limitations of the Act). “Before a violation occurs under [the Lacey Act], both parts of the [] Act must be triggered—the underlying or predicate law and then the Lacey Act.” Kristina Alexander, *The Lacey Act: Protecting the Environment by Restricting Trade* 4 (Cong. Res. Serv. July 16, 2013) (available at <http://www.fas.org/sgp/crs/misc/R42067.pdf> [<http://perma.cc/0ivetvLipkU>] (accessed Nov. 17, 2013)).

¹⁰ Pub. L. No. 62-430, 37 Stat. 828, 847–48 (1913) (repealed 1918). The Weeks–McLean Act of 1913 was a rider to an appropriation bill for the Department of Agriculture and rested on weak constitutional grounds, leading to its replacement by the Migratory Bird Treaty Act in 1918. FWS, *A Guide to the Laws and Treaties of the U.S. for Protecting Migratory Birds*, <http://www.fws.gov/migratorybirds/regulations/policies/treatlaw.html> [<http://perma.cc/0mkG3vCc2jd>] (updated Apr. 11, 2011) (accessed Nov. 16, 2013).

¹¹ Lilley & Firestone, *supra*, n. 6, at 1178–79; see e.g. *U.S. v. McCullagh*, 221 F. 288, 290–92 (D. Kan. 1915) (striking down the Weeks–McLean Act for attempting to regulate the hunting of migratory birds, a power that resides in the state); *U.S. v. Shauver*, 214 F. 154, 160 (E.D. Ark. 1914) (same).

¹² Convention between the United States and Great Britain for the Protection of Migratory Birds (Aug. 16, 1916), 39 Stat. 1702.

¹³ 16 U.S.C. § 703(a); see 50 C.F.R. § 10.13(a) (2012) (The MBTA implements four treaties.).

¹⁴ *Missouri v. Holland*, 252 U.S. 416, 435 (1920); see William S. Boyd, Student Author, *Federal Protection of Endangered Wildlife Species*, 22 Stan. L. Rev. 1289, 1293–95 (1970) (discussing the constitutional challenges to the MBTA and noting that in *Missouri v. Holland*, the Supreme Court held that “since the treaty was valid under the Supremacy Clause, implementing statutes were constitutional as a necessary and proper means of executing federal power”).

¹⁵ 75 Fed. Reg. 9282 (Mar. 1, 2010) (amending 50 C.F.R. pt. 10).

¹⁶ 16 U.S.C. § 704.

¹⁷ McKinsey, *supra* n. 1, at 78.

16, 1916, the United States and the United Mexican States for the protection of migratory birds and game mammals concluded February 7, 1936, the United States and the Government of Japan for the protection of migratory birds and birds in danger of extinction, and their environment concluded March 4, 1972 and the convention between the United States and the Union of Soviet Socialist Republics for the conservation of migratory birds and their environments concluded November 19, 1976.¹⁸

The FWS regulations define “take” broadly, as meaning to “pursue, hunt, shoot, wound, kill, trap, capture, or collect” any species protected by the Act.¹⁹ Furthermore, “any person, association, partnership, or corporation” found to be in violation of the MBTA “shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not more than \$15,000 or be imprisoned not more than six months, or both.”²⁰ In addition, the MBTA is a strict liability statute, meaning that one is subject to criminal punishment whether or not one knowingly or intentionally violated the statute.²¹ The FWS also does not allow permits for incidental taking under the MBTA.²²

In the latter part of the twentieth century, several courts evaluated whether the MBTA applies to an incidental take.²³ In 1978, the Ninth Circuit affirmed two convictions for violating the MBTA, holding that the defendants’ intent was irrelevant.²⁴ This court also held that the MBTA was not enacted solely to protect against the hunting of migratory birds, but extended to other forms of taking, such as poisoning.²⁵ Even after this decision, however, some courts construed the MBTA narrowly, determining that the MBTA did not apply to the unintended deaths of migratory birds.²⁶ Nevertheless, in 1999, a federal district court in the Ninth Circuit dismissed the defendants’ claim that they lacked the intent to kill any migratory birds and that their behavior therefore did not constitute violations of the MBTA.²⁷ Yet the court determined that there is a proximate cause requirement under section 707(a) of the Act, requiring the government to prove proximate causa-

¹⁸ 16 U.S.C. § 703(a) (internal citation and footnote omitted).

¹⁹ 50 C.F.R. § 10.12 (2012).

²⁰ *Id.* at § 707(a).

²¹ *Lilley & Firestone*, *supra* n. 6, at 1181.

²² *Id.* at 1180.

²³ *Id.* at 1181–83.

²⁴ *U.S. v. Corbin Farm Serv.*, 444 F. Supp. 510, 532 (E.D. Cal. 1978), *aff’d*, 578 F.2d 259 (9th Cir. 1978).

²⁵ *Id.*

²⁶ *See e.g. U.S. v. Rollins*, 706 F. Supp. 742, 744–45 (D. Idaho 1989) (finding the MBTA to be unconstitutionally vague as applied to a farmer who unintentionally killed migratory birds); *Mahler v. U.S. Forest Serv.*, 927 F. Supp. 1559, 1579 (S.D. Ind. 1996) (“There simply is no signal in any of these statutory terms that Congress intended the MBTA to be applied to any and all human activity that may result in unintended and accidental deaths of migratory birds . . .”).

²⁷ *U.S. v. Moon Lake Electric Assn., Inc.*, 45 F. Supp. 2d 1070, 1072, 1088 (D. Colo. 1999) (also rejecting the claim that the Act prohibits only physical conduct normally exhibited by hunters or poachers).

tion beyond a reasonable doubt.²⁸ In an attempt to eliminate further conflicting interpretations in the federal courts, President Clinton signed into effect Executive Order 13186 in 2001,²⁹ which clarified that the Act covers both intentional and unintentional taking.³⁰

The MBTA, in addition to not authorizing incidental take permits, does not allow for private citizen suits.³¹ Therefore, without the direct involvement of the FWS, there is no enforcement of the Act. This policy is reflected in an FWS memorandum,³² and avian advocates have criticized the FWS's lack of action. Thus, through this policy of selective enforcement by the Act's only enforcement agency—in combination with the lack of a private cause of action—few, if any, violators are currently being prosecuted.

In contrast, the Endangered Species Act (ESA),³³ which is also enforced by the FWS, allows for incidental take permits authorizing an otherwise prohibited take to occur under its specific provisions.³⁴ Through this process, the owner of a potential wind development project can submit a proposed Habitat Conservation Plan to the FWS for approval, along with an application for an incidental take permit.³⁵ The proposed plan must accurately predict and mitigate the impact on species covered under the Act, as well propose a mechanism to minimize taking.³⁶ In order to protect developers from any negative repercussions resulting from careless approval by the FWS—which it subsequently seeks to rectify—the ESA's related regulations contain a “no surprises rule,” stating that owners of wind projects will not be subject to enforcement of the Act if the species taken was part of the Habitat Conservation Plan.³⁷

Further differentiating itself from the MBTA, the ESA also allows for private citizen suits alleging violations.³⁸ In many cases, this citi-

²⁸ *Id.* at 1085.

²⁹ Exec. Or. 13186, 3 C.F.R. 719 (Jan. 10, 2001).

³⁰ The Order defines unintentional taking as a take “that results from, but is not the purpose of, the activity in question.” *Id.* at 720.

³¹ McKinsey, *supra* n. 1, at 78.

³² Memo. from Dep. Dir., FWS, to Regl. Dirs., Regions 1–7, *Service Interim Guidance on Avoiding and Mitigating Wildlife Impacts from Wind Turbines 2* (May 13, 2003) (available at <http://www.fws.gov/habitatconservation/wind.pdf> [<http://perma.cc/0EhxhYKdist>] (accessed Nov. 16, 2013)) [hereinafter FWS Memo].

³³ 16 U.S.C. §§ 1531–1544 (2006).

³⁴ *Id.* at § 1539.

³⁵ McKinsey, *supra* n. 1, at 76.

³⁶ See generally FWS, *Habitat Conservation Plans: Section 10 of the Endangered Species Act*, http://www.fws.gov/Endangered/esa-library/pdf/HCP_Incidental_Take.pdf [<http://perma.cc/0S12D6qSkaL>] (Dec. 2005) (accessed Nov. 16, 2013) (“The purpose of the habitat conservation planning process associated with the permit is to ensure there is adequate minimizing and mitigating of the effects of the authorized incidental take.”).

³⁷ 50 C.F.R. §§ 17.22, 17.32, 222.3, 222.22 (1998); McKinsey, *supra* n. 1, at 76. Generally speaking, the Habitat Conservation Plan must attempt to minimize impacts and taking of species and provide mitigation for expected takings. FWS, *Habitat Conservation Plans*, *supra* n. 36.

³⁸ McKinsey, *supra* n. 1, at 76.

zen suit provision is the reason why wind developers seek incidental take permits, since the FWS is somewhat lax in enforcing the Act.³⁹ Not surprisingly, some of the more sophisticated wind developers now request consultation from the FWS as a matter of routine practice in order to protect themselves from potential citizen suits.⁴⁰

The Bald and Golden Eagle Protection Act (BGEPA), limited to protecting only Bald and Golden Eagles, is yet another federal law affecting the potential growth of wind power.⁴¹ Unlike the ESA, however, the BGEPA does not allow for incidental take permits; it only authorizes the express take of eagles in limited circumstances.⁴² Therefore, although it is not as flexible as the ESA, it is certainly less black-and-white than the MBTA. Additionally, while the BGEPA provides for civil penalties regardless of intent, it only criminalizes “knowingly” causing the death of an eagle, or killing an eagle with a “wanton disregard” for the consequences.⁴³ Unlike the MBTA, the BGEPA is not construed as a strict liability statute within the criminal context.

As suggested above, there has been much criticism directed at the MBTA, given its harsh stance on the taking of migratory birds and the uncertainty in the FWS’s enforcement of the Act.⁴⁴ The MBTA is also criticized because it remains much less flexible than other federal statutes geared to the protection of birds and other species.⁴⁵ These concerns pose a great deal of trouble for the developers of wind energy in this country.⁴⁶ Therefore, attempts should be made to reconcile current MBTA policies to make them more tolerable for wind energy development without destroying the objective of migratory bird protection.

III. INCREASING POPULARITY OF WIND POWER DEVELOPMENT IN THE U.S.

As wind development continues to expand in this country and its territorial waters, its increasing impact on avian species cannot be ignored. Indeed, “[w]ind energy is one of the fastest growing sources of renewable energy in the [U.S.],” and the U.S. continues to have one of the fastest and largest growing wind markets in the world.⁴⁷ This is

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ 16 U.S.C. §§ 668–668d (2006).

⁴² *Id.* at § 668a (allowing the Secretary of the Interior to authorize take of a Bald or Golden Eagle for scientific, exhibition, and/or religious purposes).

⁴³ *Id.*

⁴⁴ McKinsey, *supra* n. 1, at 76.

⁴⁵ *Id.* at 77.

⁴⁶ Lilley & Firestone, *supra* n. 6, at 1209.

⁴⁷ Lori Pruitt & Jennifer Okajima, FWS, *Indiana Bat Fatalities at Wind Energy Facilities* 1 (July 2013) (available at <http://www.fws.gov/midwest/wind/wildlifeimpacts/pdf/IndianaBatFatalitiesSummaryJuly2013.pdf> [<http://perma.cc/0cnEpHbxRej>] (accessed Nov. 17, 2013)); Off. of Energy Efficiency & Renewable Energy, *Energy Department Reports U.S. Wind Energy Production and Manufacturing Reaches Record Highs*, <http://>

due in large part to both the increasing desire in the U.S. to move away from imported foreign oil, and continued technological advances in wind energy.⁴⁸ This increase in popularity is also fueled by incentives such as federal production tax credits and renewable portfolio standards⁴⁹ in approximately half of the states in the U.S.⁵⁰ For example, electricity providers in New Jersey are now obligated to obtain a minimum of 22.5% of their power from renewable energy resources by the year 2021.⁵¹ In addition, the U.S. Department of Energy (DOE) has proposed the goal of having 20% of all American electricity provided by wind energy by the year 2030.⁵²

Quite predictably, the number of wind projects has been increasing rapidly.⁵³ There were an estimated 30,000 operational wind turbines in the U.S. in 2009, a number that is projected to increase to over 100,000 by 2020.⁵⁴ In 2010 alone, for example, the cumulative wind power in the U.S. grew by 15%.⁵⁵ In addition to land-based wind development, offshore wind development is also projected to continue to develop at a rapid pace over the next decade.⁵⁶ This projection is dependent, in part, upon a coordinated goal between the Secretary of the Interior and the Secretary of Energy to install 10 gigawatts (GW)⁵⁷

energy.gov/eere/articles/energy-department-reports-us-wind-energy-production-and [http://perma.cc/02XQvReBHru] (Aug. 6, 2013) (accessed Nov. 17, 2013).

⁴⁸ Lilley & Firestone, *supra* n. 6, at 1169.

⁴⁹ Renewable portfolio standards are “state policies that require electricity providers to obtain a minimum percentage of their power from renewable energy resources by a certain date.” Am. Bird Conservancy, *Rulemaking Petition to the U.S. Fish & Wildlife Service for Regulating the Impacts of Wind Energy Projects on Migratory Birds* 27, 30 (Dec. 14, 2011) (available at http://www.abcbirds.org/abcprograms/policy/collisions/pdf/wind_rulemaking_petition.pdf [http://perma.cc/0GGKSGw6zNp] (accessed Nov. 16, 2013)) [hereinafter ABC Petition].

⁵⁰ DOE, *20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply* 5 (July 2008) (available at http://www.20percentwind.org/20percent_wind_energy_report_revOct08.pdf [http://perma.cc/0BDNwUurKMn] (accessed Nov. 16, 2013)) [hereinafter DOE, *Wind Energy Report*].

⁵¹ DOE, *Database of State Incentives for Renewables and Efficiency: New Jersey, Renewables Portfolio Standard*, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NJ05R [http://perma.cc/0oFME2AeU6f] (Mar. 28, 2013) (accessed Nov. 16, 2013); ABC Petition, *supra* n. 49, at 31.

⁵² DOE, *Wind Energy Report*, *supra* n. 50, at 1.

⁵³ ABC Petition, *supra* n. 49, at 28.

⁵⁴ *Id.* at 42.

⁵⁵ Ryan Wisser et al., DOE, *2010 Wind Technologies Market Report* iii (June 2011) (available at <http://eetd.lbl.gov/sites/all/files/publications/lbnl-4820e.pdf> [http://perma.cc/08jNodFaM8Y] (accessed Nov. 16, 2013)).

⁵⁶ See e.g. Press Release, U.S. Dept. of the Int., *Salazar, Chu Announce Major Offshore Wind Initiatives*, <http://www.doi.gov/news/pressreleases/Salazar-Chu-Announce-Major-Offshore-Wind-Initiatives.cfm> [http://perma.cc/0fNhk2feAa9] (Feb. 7, 2011) (accessed Nov. 16, 2013) (announcing Secretary of Interior Ken Salazar and Secretary of Energy Steven Chu’s “[u]nveiling [of] a coordinated strategic plan to accelerate the development of offshore wind energy”).

⁵⁷ A gigawatt (GW) equals one billion watts of power. One GW of wind power will supply 225,000 to 300,000 U.S. homes with power annually. BOEM, *Offshore Wind En-*

of offshore wind capacity by 2020, and 54 GW by 2030.⁵⁸ In support of this goal, in 2011, the Director of the U.S. Bureau of Ocean Energy Management (BOEM) approved the nation's first commercial offshore wind facility—the Cape Wind project off the coast of Massachusetts.⁵⁹ Similar projects are now being promoted for installation off the coasts of Delaware and New Jersey.⁶⁰

Major issues involving this fast-paced expansion of wind energy that could have serious adverse effects on avian populations are the increase in the size of wind turbines and their operation at much higher speeds.⁶¹ To fully grasp this issue, it should be understood that, fundamentally, most wind turbines operate in the same basic manner. As wind blows over the airfoil-shaped blades of wind turbines, the blades begin to spin.⁶² These blades are connected to a drive shaft, which turns an electric generator that produces electricity.⁶³ But wind turbines manufacturers keep making them bigger, primarily because larger turbines can produce more energy.⁶⁴ Modern wind turbines now range in size from 200 to 400 tons,⁶⁵ with blade tip speeds averaging about 180 miles per hour.⁶⁶

As an illustration of this continuing growth in turbine size, in 2006, the average turbine was reported to be as tall as the Statue of Liberty, with a rotor big enough to sweep a football field.⁶⁷ By 2010, turbines had grown significantly larger, some with diameters longer than 364 feet, which is long enough to fit 24 average-sized cars

ergy, <http://www.boem.gov/Renewable-Energy-Program/Renewable-Energy-Guide/Offshore-Wind-Energy.aspx> [<http://perma.cc/0kbM2bLSfYU>] (accessed Nov. 16, 2013).

⁵⁸ Press Release, U.S. Dept. of the Int., *supra* n. 56.

⁵⁹ BOEM, *Cape Wind Project*, <http://www.boem.gov/Renewable-Energy-Program/Studies/Cape-Wind.aspx> [<http://perma.cc/0eqzYztV6x8>] (accessed Nov. 16, 2013); *but see id.* (“While Cape Wind Associates has completed nearly all the regulatory requirements, a few items are still being addressed before construction can be authorized . . . The project is also undergoing litigation, which may impact the overall schedule.”).

⁶⁰ BOEM, *Current Projects*, <http://www.boem.gov/Renewable-Energy-Program/Current-Projects/Index.aspx> [<http://perma.cc/0j7FEeShhri>] (accessed Nov. 16, 2013).

⁶¹ ABC Petition, *supra* n. 49, at 40.

⁶² BOEM, *Offshore Wind Energy*, *supra* n. 57.

⁶³ *Id.*

⁶⁴ DOE, *Wind Power Today* 2 (May 2007) (available at <http://www.nrel.gov/docs/fy07osti/41330.pdf> [<http://perma.cc/0bGbmng8M2w>] (accessed Nov. 16, 2013)).

⁶⁵ Am. Wind Energy Assn. et al., *Winds of Change: A Manufacturing Blueprint for the Wind Industry* 20 (June 2010) (available at <http://www.thecemc.org/body/WindsOfChange.pdf> [<http://perma.cc/07p6fkbtJDK>] (accessed Nov. 16, 2013)).

⁶⁶ Natl. Wind Coordinating Collaborative, *Wind Turbine Interactions with Birds, Bats, and Their Habitats: A Summary of Research Results and Priority Questions* 1 (Spring 2010) (available at http://www1.eere.energy.gov/wind/pdfs/birds_and_bats_fact_sheet.pdf [<http://perma.cc/0x8iEYxcm5f>] (accessed Nov. 16, 2013)).

⁶⁷ DOE, *Wind Power Today*, *supra* n. 64, at 2; *see* Ryan Wisner et al., *2011 Wind Technologies Market Report* 24 (DOE 2011) (available at http://www1.eere.energy.gov/wind/pdfs/2011_wind_technologies_market_report_slides.pdf [<http://perma.cc/0AzvqZUK34c>] (accessed Nov. 16, 2013)) (showing the average rotor diameter in 2006 at just under 80 meters, or approximately 262 feet).

bumper-to-bumper along the diameter of the rotor.⁶⁸ Reliable studies predict that these structures will only continue to grow, at least in the near term, and project that the average turbine size could exceed 700 feet in height by the year 2015.⁶⁹

This continued increase in wind development could lead to substantial harm to birds that migrate through our nation's airways.⁷⁰ As the demand for wind power keeps expanding—with federal governmental approval and support—it seems reasonable that the federal government should also devote enhanced attention to protecting the wildlife that wind turbines may endanger. To provide such protection, federal laws enacted to protect animals—specifically avian species—should be revised and updated to keep up with the changing environment of this vital source of renewable energy. The more prevalent wind projects become, both on and offshore, the more important it becomes for federal agencies, such as the U.S. Fish and Wildlife Service and BOEM, to work together to ensure that both interests are served.

While wind power continues to expand—for justifiable reasons—at an accelerated rate, developers have been forced to comply with the existing regulatory structure of the Migratory Bird Treaty Act (MBTA). Ironically, the MBTA—as currently drafted and implemented—not only fails to provide sufficient protection for migratory birds against dangers emanating from wind turbines, it also fails to provide sufficient protection for developers who seek to comply when installing turbines.⁷¹ As will be explained shortly, the MBTA currently poses serious problems for these wind developers. Without resolution, these problems could eventually suppress the growth of highly sought wind power. But first, it should be explained just how threatening the growth of wind turbines has become to various species of migratory birds.

IV. WIND POWER DEVELOPMENT AND ITS EFFECT ON AVIAN SPECIES

Currently, about 30% of the birds protected by the Migratory Bird Treaty Act (MBTA) are officially recognized by the U.S. Fish and Wildlife Service (FWS) as being in need of particular protection; this number includes approximately 75 endangered and threatened species, and more than 240 species that are listed by the FWS as Birds of Con-

⁶⁸ DOE, *Wind Power Today*, *supra* n. 64, at 2.

⁶⁹ *Id.* at 3.

⁷⁰ U.S. Govt. Accountability Off., *Wind Power: Impacts on Wildlife and Government Responsibilities for Regulating Development and Protecting Wildlife*, GAO-05-906, 1 (Sept. 2005) (available at <http://www.gao.gov/assets/250/247787.pdf> [<http://perma.cc/0o8SbNk4Dnc>] (accessed Nov. 16, 2013)).

⁷¹ See McKinsey, *supra* n. 1, at 78 (explaining that the MBTA “is mostly accommodated in the [U.S.] by being ignored, or more euphemistically, by ‘selective enforcement’”); *id.* at 88–89 (explaining that reliance on such selective enforcement results in uncertainty for developers that can create barriers to project financing).

servation Concern.⁷² Unfortunately, the size of a bird population does not always guarantee its continued existence, as even a common bird—as once was the Passenger Pigeon—can be driven to extinction in a relatively short period of time.⁷³ All twenty birds on the National Audubon Society’s *Common Birds in Decline* list have lost at least half of their population in just four decades.⁷⁴ Migratory birds, especially, face many threats, including habitat loss, degradation and fragmentation, resource extraction, and energy industry operations.⁷⁵ Other human-made threats to such birds include disturbance of their environment, intentional illegal killing, and collisions with human-created structures.⁷⁶ Due to the large number of threats that birds encounter, it is increasingly important to reduce each type of risk whenever possible.⁷⁷

One group of migratory birds particularly at risk from wind development is Hawaiian birds.⁷⁸ Because more bird species are vulnerable to extinction in these islands than any other place on Earth, Hawaii has earned the title of “bird extinction capital of the world.”⁷⁹ Essentially, every potential site for wind development on the mountainous island chain carries with it a threat to a federally listed and endangered species.⁸⁰ Causing further concern, Hawaii has implemented a renewable portfolio standard requiring that 40% of its statewide electricity come from renewable energy by the year 2030;⁸¹ much of that is expected to come from wind energy. Several species of threatened birds have already been killed at a Hawaiian wind project, including the Hawaiian Goose, the Hawaiian Petrel, and the Hawaiian Short-eared Owl.⁸² Moreover, numerous other federally endangered birds, as well as other MBTA protected birds that have yet to be listed as endan-

⁷² ABC Petition, *supra* n. 49, at 10.

⁷³ The Passenger Pigeon was once the most abundant bird in North America, with a population in the billions, but was driven to extinction in less than 100 years. T. D. Rich et al., *Partners in Flight: North American Landbird Conservation Plan: Part 1. The Continental Plan* 4 (Jan. 2004) (available at http://www.pwrc.usgs.gov/pif/cont_plan/PIF2_Part1WEB.pdf [<http://perma.cc/Y5BG-HSB7>] (accessed Nov. 16, 2013)).

⁷⁴ Natl. Audubon Socy., *Common Birds in Decline*, <http://web4.audubon.org/bird/stateofthebirds/cbid> [<http://perma.cc/02nCcBicmfv>] (accessed Nov. 16, 2013).

⁷⁵ T. D. Rich et al., *Partners in Flight: North American Landbird Conservation Plan: Part 2 Conservation Issues* 39 (Jan. 2004) (available at http://www.pwrc.usgs.gov/pif/cont_plan/PIF3_Part2WEB.pdf [<http://perma.cc/0YtJYj2GoVh>] (accessed Nov. 16, 2013)).

⁷⁶ FWS, *Migratory Bird Mortality: Many Human-Caused Threats Afflict Our Bird Populations* (Jan. 2002) (available at <http://www.fws.gov/birds/mortality-fact-sheet.pdf> [<http://perma.cc/0KfQtvCv5os>] (accessed Nov. 16, 2013)).

⁷⁷ ABC Petition, *supra* n. 49, at 11.

⁷⁸ *Id.* at 12.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ Am. Wind Energy Assn., *Wind Energy Facts: Hawaii*, <http://www.firstwind.com/sites/default/files/AWEA%20-%20Hawaii%20Wind%20Development%20Impacts.pdf> [<http://perma.cc/0iQ22Xcb6jJ>] (May 2011) (accessed Nov. 16, 2013).

⁸² Kaheawa Wind Power II, LLC, *Kaheawa Wind Power II Habitat Conservation Plan* 52 (October 2011) (available at <http://hawaii.gov/dlnr/chair/meeting/submittals/>

gered, are located where wind energy development currently exists or is planned.⁸³

Other migratory birds at risk from wind development are grassland birds;⁸⁴ they are among the fastest and most consistently declining birds in North America.⁸⁵ Four species of grassland birds have been listed as federally endangered, and several other species that are MBTA protected have shown steep population declines in recent years.⁸⁶ Some birds that depend on grassland habitats for nesting are particularly susceptible to collision with wind turbines because they conduct aerial displays during courtship.⁸⁷ When male grassland birds perform aerial displays, they appear to pay less attention to their surroundings, leaving them vulnerable to the blades of nearby wind turbines.⁸⁸ Certain grassland birds, such as Sprague Pipits, engage in aerial displays that can last as long as three hours at heights of 50 to 100 meters above ground level.⁸⁹

It also been suggested that grassland birds may avoid wind turbines altogether, displacing them from their natural habitats.⁹⁰ Although studies are still in early stages, some have shown that displacement to lower quality habitats can lead to adverse long-term effects.⁹¹ Another species similar to grassland birds, sagebrush-dependent songbirds, have also been singled out as facing substantial risk from wind development due to destruction and fragmentation of their habitats by wind turbines.⁹²

Raptors are yet another group of migratory birds that are greatly affected by wind turbines and other wind development structures.⁹³ Many affected species of raptors are listed on both the FWS Birds of

111110/C-FW-Submittals-C3a.pdf [http://perma.cc/A6YT-8E5R] (accessed Nov. 16, 2013)).

⁸³ These federally endangered species include Newell's Shearwater, Hawaiian Common Moorhen, Hawaiian Coot, Hawaiian Duck, Hawaiian Hawk, Hawaiian Stilt, Band-rumped Storm-Petrel, and Pacific Golden-Plover. ABC Petition, *supra* n. 49, at 13. Those protected by the MBTA, but not yet federally endangered include frigatebirds, shearwaters, boobies, terns, noddies, and albatrosses. *Id.*

⁸⁴ *Id.* at 14.

⁸⁵ N. Am. Bird Conserv. Initiative, U.S. Comm. et al., *The State of the Birds, United States of America* 8 (2009) (available at http://www.stateofthebirds.org/2009/pdf_files/State_of_the_Birds_2009.pdf [http://perma.cc/0RDUUZS9aq] (accessed Nov. 16, 2013)).

⁸⁶ The MBTA-protected species include the Mountain Plover, Sprague's Pipit, Lark Bunting, Baird's Sparrow, Chestnut-collared Longspur, and McCown's Longspur. *Id.*

⁸⁷ Wyo. Game & Fish Dept., *Wildlife Protection Recommendations for Wind Energy Development in Wyoming* 5 (Nov. 17, 2010) (available at http://wgfd.wyo.gov/web2011/Departments/Wildlife/pdfs/WINDENERGY_WILDLIFEPROTECTION0000703.pdf [http://perma.cc/0AWbCAetCEZ] (accessed Nov. 16, 2013)).

⁸⁸ ABC Petition, *supra* n. 49, at 14.

⁸⁹ Mark B. Robbins, *Display Behavior of Male Sprague's Pipits*, 110 *Wilson Bull.* 435, 435-36 (Sept. 1998).

⁹⁰ ABC Petition, *supra* n. 49, at 17.

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.* at 18.

Conservation Concern list and the U.S. Watch List.⁹⁴ Listed species include the Swainson's Hawk, American Peregrine Falcon, Ferruginous Hawk, Short-eared Owl, Flammulated Owl, Golden Eagle, and Bald Eagle.⁹⁵ Not surprisingly, the two species that have garnered the most attention from the federal government are the Golden Eagle and the Bald Eagle, which are protected under both the MBTA and the Bald and Golden Eagle Protection Act (BGEPA).⁹⁶ As recently as 2011, the Golden Eagle population in the U.S. was estimated at only 30,000.⁹⁷ This is quite troubling, considering Golden Eagles are subject to a variety of risks occurring in modern society other than wind turbines.⁹⁸ The long list of risks includes habitat loss; electrocution by and collision with energy infrastructure (such as power lines); lead poisoning; human disturbance; climate change; disease; stock tank drowning; vehicle collisions; and illegal intentional killing.⁹⁹ At present, death by way of wind energy and its infrastructures has become the third largest direct threat to their survival.¹⁰⁰

One wind project that poses a significant and documented threat to Golden Eagles is located in Altamont Pass in Central California, where an estimated 55 to 94 Golden Eagles have been killed since 1998.¹⁰¹ Altamont Pass wind turbines kill more Golden Eagles than are born in the area, leading to a population sink.¹⁰² Because these

⁹⁴ *Id.*

⁹⁵ Wind projects in California, New Jersey, Washington, and Wyoming are responsible for killing these species. *Id.*

⁹⁶ ABC Petition, *supra* n. 49, at 20.

⁹⁷ FWS, *Golden Eagles Status Fact Sheet* (Feb. 2011) (available at http://www.fws.gov/habitatconservation/Golden_Eagle_Status_Fact_Sheet.pdf [<http://perma.cc/0HySxs3A1DC>] (accessed Nov. 16, 2013)).

⁹⁸ See FWS, *Minutes and Notes from the North American Golden Eagle Science Meeting* 15–23 (Sept. 21, 2010) (available at <http://www.dfg.ca.gov/wildlife/nongame/raptors/goldeneagle/docs/NAGoldenEagleScienceMeeting-2010-09-21.pdf> [<http://perma.cc/0mBu9bK3qn>] (accessed Nov. 16, 2013)) (identifying, ranking, and commenting on the numerous risks to Golden Eagles).

⁹⁹ *Id.* at 21–23.

¹⁰⁰ *Id.* at 22.

¹⁰¹ K. Shawn Smallwood, *Fatality Rates in the Altamont Pass Wind Resource Area 1998–2009* 25 (Jan. 6, 2010) (available at http://altamontsrc.org/alt_doc/p145_smallwood_fatality_monitoring_results_12_31_09.pdf [<http://perma.cc/042M8nkS4Mo>] (accessed Nov. 16, 2013)).

¹⁰² See Grainger Hunt & Teresa Hunt, *The Trend of Golden Eagle Territory Occupancy in the Vicinity of the Altamont Pass Wind Resource Area: 2005 Survey 2* (June 2006) (available at <http://www.energy.ca.gov/2006publications/CEC-500-2006-056/CEC-500-2006-056.pdf> [<http://perma.cc/04Edr6AVYJr>] (accessed Nov. 16, 2013)) (“The WRA [Wind Resource Area] kills more eagles than can be produced by the studied sample of 58 pairs The authors estimate, for example, that 167 breeding pairs are required to sustain 50 blade-strike fatalities per year.”); see also Jennifer Bogo, *Popular Mechanics, How the Deadliest Wind Farm Can Save the Birds: Green Machines*, <http://www.popularmechanics.com/science/environment/green-energy/4222351> [<http://perma.cc/0s69ShiNij6>] (Sept. 14, 2007) (accessed Nov. 16, 2013)) (“More than 4,700 birds are killed here each year Seventy [G]olden [E]agles, a federally protected species, are also among them, even though the area is only big enough to support one mating pair.”).

wind turbines have killed more than 1,000 raptors each year,¹⁰³ they have been given the unwanted name of “bird blenders.”¹⁰⁴ Several legal actions have been filed against the owners of the Altamont Pass wind farm in an effort to stop current operations or to at least force them to conduct detailed environmental studies.¹⁰⁵ But so far, none have prevailed.¹⁰⁶

A similar type of wind project in Flint Hills, Kansas, has exhibited issues similar to those found at Altamont Pass.¹⁰⁷ The Flint Hills Tallgrass Prairie Foundation was concerned that the turbines at Flint Hills, located on grassy prairie land, would kill migratory birds.¹⁰⁸ As a result, they brought suit alleging that the project violated the MBTA.¹⁰⁹ Like other challenges predicated on the MBTA, however, the Tenth Circuit held that it lacked jurisdiction because the MBTA does not authorize a private cause of action.¹¹⁰

Additionally, problems similar to those found at Flint Hills and Altamont Pass have occurred at the Pine Tree wind project in California, where at least six Golden Eagles were killed in 2011.¹¹¹ Likewise, similar problems have occurred in Wyoming, where in some areas the mortality rate is as high as one Golden Eagle per thirteen wind turbines per year.¹¹² These problems may become even more threatening, based on the FWS’s estimate that 1,000 wind turbines in operation in Wyoming in 2011 could eventually increase to a total of 10,000 wind turbines.¹¹³

While threats posed by wind energy to the Bald Eagle are not yet as serious as those to the Golden Eagle, there is growing concern that these iconic symbols of America will also face greater danger as wind development becomes more prevalent.¹¹⁴ Bald Eagle deaths have al-

¹⁰³ McKinsey, *supra* n. 1, at 86.

¹⁰⁴ *Id.* at 86 n. 74; *see e.g.* Nicholas Brown, “Bird Safe” Wind Turbines May Soon Take Flight, Clean Technica, <http://cleantechnica.com/2012/09/04/bird-safe-wind-turbines-may-soon-take-flight> [<http://perma.cc/07GDAP1sQXk>] (Aug. 31, 2012) (accessed Nov. 16, 2013)) (“To many, wind turbines are utterly destructive ‘bird blenders,’ while others don’t buy that notion.”).

¹⁰⁵ McKinsey, *supra* n. 1, at 86.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 86–87.

¹⁰⁹ *Flint Hills Tallgrass Prairie Heritage Found. v. Scottish Power, PLC*, 147 Fed. Appx. 785, 786 (10th Cir. 2005).

¹¹⁰ *Id.* at 786.

¹¹¹ ABC Petition, *supra* n. 49, at 21.

¹¹² Sophie Osborn, Wyo. Outdoor Council Blog, *Wind Turbines Killing More Golden Eagles in Wyoming Than Expected*, <http://wyomingoutdoorcouncil.org/blog/2011/06/21/wind-turbines-killing-more-golden-eagles-in-wyoming-than-expected> [<http://perma.cc/0XV63BAzF1j>] (June 21, 2011) (accessed Nov. 16, 2013).

¹¹³ *Id.*

¹¹⁴ Amber Travsky & Gary P. Beauvais, *Species Assessment for Bald Eagle (Haliaeetus Leucocephalus) in Wyoming* 25 (Nov. 2004) (available at <http://www.blm.gov/pgdata/etc/medialib/blm/wy/wildlife/animal-assessmnts.Par.41209.File.dat/BaldEagle.pdf> [<http://perma.cc/0BSX6nhyRFt>] (accessed Nov. 16, 2013)).

ready been reported at wind projects in Wyoming,¹¹⁵ as well as in Ontario, Canada.¹¹⁶ If future wind development projects are not carefully designed and sited, there will likely be even more deaths of this much-loved species, of which only 9,789 breeding pairs remained in existence in the U.S. as of 2006.¹¹⁷

Still another group of migratory birds at risk due to the expansion and location of wind turbines are eastern forest and woodland birds.¹¹⁸ Species within this category include the Bicknell's Thrush, Cerulean Warbler, Bay-breasted Warbler, and Blue-winged Warbler.¹¹⁹ The largest threats caused by the increase of wind projects to these species include habitat degradation and loss of habitat quality.¹²⁰ Because these birds are not as closely monitored as species such as Golden and Bald Eagles, the extent of their mortality rates is not known, although certain occurrences have been documented.¹²¹ Just as worrisome, endangered western forest and woodland birds—on the opposite side of the country—are also at risk to wind development.¹²² As with their eastern counterparts, studies conducted on the mortality rates of these species are scarce.¹²³ But at least some deaths of both the Oak Titmouse¹²⁴ and Lewis's Woodpecker have been reported in both California and Oregon.¹²⁵

Lastly, as offshore wind energy continues to develop in the U.S., it is anticipated that other migratory birds protected under the MBTA will be at greater risk. Once again, this is due primarily to the wind turbines themselves, coupled with the destruction of the birds' habitats in areas where wind projects are constructed.¹²⁶ Among the feder-

¹¹⁵ U.S. Dept. of Agric. & U.S. Dept. of Energy, *Final Environmental Impact Statement for the South Dakota PrairieWinds Project*, DOE/EIS #0418, 180 (July 2010) (available at http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/EIS-0418-FEIS-01-2010.pdf [<http://perma.cc/0qAaVNqtYwP>] (accessed Nov. 16, 2013)).

¹¹⁶ Daniel Pearce, Hancock Wildlife Found., *Bald Eagle Killed by Wind Turbine, Ontario*, <http://www.hancockwildlife.org/article.php/20100919095412140> [<http://perma.cc/0Qjji47q8aQ>] (Sept. 19, 2010) (accessed Nov. 16, 2013).

¹¹⁷ See FWS, *Chart and Table of Bald Eagle Breeding Pairs in Lower 48 States*, <http://www.fws.gov/midwest/eagle/population/chtotofprs.html> [<http://perma.cc/0ZY5bhFbR8u>] (updated Mar. 18, 2013) (accessed Nov. 16, 2013) (listing data on the number of Bald Eagle breeding pairs from 1963 to 2006).

¹¹⁸ ABC Petition, *supra* n. 49, at 23.

¹¹⁹ *Id.*

¹²⁰ *Id.* at 24.

¹²¹ *Id.* at 23–24.

¹²² *Id.* at 25.

¹²³ See *id.* (stating that no comprehensive studies of mortality rates of the Oak Titmouse or Lewis's Woodpecker at wind facilities have been conducted).

¹²⁴ ABC Petition, *supra* n. 49, at 25 (Oak Titmouse mortality was reported at the 2010 Pine Tree wind project in California.).

¹²⁵ Fatalities to Lewis's Woodpecker were reported at the Vansycle Wind facility in Oregon. Wallace P. Erickson et al., *Avian and Bat Mortality Associated with the Vansycle Wind Project, Umatilla County, Oregon, 1999 Study Year 9* (Feb. 7, 2000) (available at <http://www.west-inc.com/reports/vansyclereportnet.pdf> [<http://perma.cc/03PxlQpCfQ>] (accessed Nov. 16, 2013)).

¹²⁶ ABC Petition, *supra* n. 49, at 24.

ally threatened and endangered species projected to be negatively affected by these projects are the Piping Plover, Roseate Tern, Whooping Crane, Kirtland's Warbler, Red Knot, Black-capped Petrel, Wilson's Plover, Gull-billed Tern, Audubon's Shearwater, and Peregrine Falcons.¹²⁷ Admittedly, it is difficult to pinpoint exactly which species will be affected and the severity of the harm that will result from offshore wind power projects because most of them have yet to be implemented. Consequently, it is possible that even more species may be at risk than initially projected.¹²⁸

Overall, it appears that more than one-third of the migratory bird species protected under the MBTA are at risk of experiencing severe population decline, due to the variety of threats caused by wind power expansion onshore and offshore.¹²⁹ Consequently, the MBTA and its regulatory framework should be revised to create stronger protection for these birds. Many of the issues threatening these migratory birds seem to stem from problems of site location and poor planning on the part of wind developers.¹³⁰ Other issues arise from a lack of communication between the FWS and wind developers.¹³¹ These problems need to be remedied if the FWS expects the wind energy industry to continue to expand without destroying the populations of hundreds of species of endangered migratory birds.

V. UNCERTAINTY AND UNPREDICTABILITY OF THE MBTA'S IMPACT ON WIND ENERGY DEVELOPMENT

As noted in Part II, the Migratory Bird Treaty Act (MBTA)—unlike other federal laws affecting avian species¹³²—does not contain a mechanism allowing for “take permits.”¹³³ Instead, its enforcement agency, the U.S. Fish and Wildlife Service (FWS), has relied on the release of guidelines for those who may potentially cause harm to migratory birds.¹³⁴ Not only are these guidelines merely temporary, but they are also voluntary in nature.¹³⁵ In fact, the FWS has released a memo stating that “[t]he Interim Guidelines are not to be construed as rigid requirements, which are applicable to every situation, nor should they be read literally.”¹³⁶

¹²⁷ *Id.* at 26.

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.* at 92.

¹³¹ *Id.* at 79.

¹³² Those laws are the Endangered Species Act and the Bald and Golden Eagle Protection Act, which both provide mechanisms that authorize the taking of protected migratory birds as regulated by the FWS. 16 U.S.C. § 1539; 16 U.S.C. § 668a.

¹³³ See Lilley & Firestone, *supra* n. 6, at 1180 (noting that the FWS does not provide permits for incidental take under the MBTA).

¹³⁴ FWS Memo, *supra* n. 32.

¹³⁵ *Id.*

¹³⁶ Memo. from Steven Williams, Dir., FWS, to Regl. Dirs., Regions 1–7, *Implementation of Service Voluntary Interim Guidelines to Avoid and Minimize Wildlife Impacts*

Reliance on temporary guidelines and voluntary compliance has led to serious problems. One of the major problems stemming from the voluntary nature of the guidelines is that they fail to adequately address the issue of poor siting of wind turbines—an issue incredibly important in the protection of migratory bird species.¹³⁷ As wind energy has become increasingly popular, a growing number of wind developers have simply ignored guideline recommendations and failed to communicate with the FWS prior to beginning construction.¹³⁸ Consequently, the FWS has experienced difficulty in obtaining information regarding potential projects and their wildlife impacts and, in some instances, has not even known of the existence of wind projects for several months after their construction.¹³⁹ Because developers have found that they are not likely to face prosecution by the FWS and nothing requires them to share information, they simply are not doing so.¹⁴⁰

Another problem resulting from the guidelines is that they do not require standardized pre- and post-construction avian impact studies.¹⁴¹ Such studies could include ground surveys to determine how many birds fly through a given airspace and what percentage are likely to be killed.¹⁴² The guidelines could also require nighttime surveys by utilizing radar and operational studies as a means for counting carcasses.¹⁴³ Due to the inconsistency of current studies and lack of standardized requirements, however, the wildlife mortality estimates provided in many wind projects may substantially underestimate actual mortality levels.¹⁴⁴ Moreover, it has also been found that some developers fail to report mortality numbers for all of their facility's wind turbines, or fail to report incidental finds.¹⁴⁵

In addition to problems related to the guidelines, major issues have arisen over the way in which the FWS currently chooses to enforce the MBTA. At present, the FWS appears only likely to prosecute a wind project developer when an avian killing is reasonably foreseeable, and when the agency has previously directed the developer to take action to mitigate future deaths.¹⁴⁶ Because the MBTA does not allow for private citizen suits, there are no other means to ensure that violations are corrected. Thus, if the FWS fails to take action, violators

from *Wind Turbines* (Apr. 26, 2004) (available at http://www.fws.gov/habitatconservation/wind_guidelines.pdf [<http://perma.cc/OhfMyiGLsUd>] (accessed Nov. 16, 2013)).

¹³⁷ ABC Petition, *supra* n. 49, at 78.

¹³⁸ *Id.* at 78–80.

¹³⁹ *Id.* at 79–80.

¹⁴⁰ *Id.* at 79.

¹⁴¹ See McKinsey, *supra* n. 1, at 82–83 (describing various methods for pre-project and operational evaluation of avian impacts, and noting that the most significant problem of all may be lack of a standard).

¹⁴² *Id.* at 82.

¹⁴³ *Id.* at 82–83.

¹⁴⁴ ABC Petition, *supra* n. 49, at 81.

¹⁴⁵ *Id.*

¹⁴⁶ Lilley & Firestone, *supra* n. 6, at 1197.

will likely go unpunished.¹⁴⁷ By not prosecuting wind developers—and requiring only that they contact the agency and record their reasons for departing from its advice—the FWS is allowing developers to construct wind projects in high-risk areas.¹⁴⁸ So although the agency policy provides little incentive for wind developers to prevent or minimize damage to avian species, it still causes worry among more conscientious wind developers. They are certainly aware that they could be subject to severe punishments at any time should the FWS decide to commence vigorous enforcement of the MBTA.¹⁴⁹

Wind developers' concerns stem from the fact that the MBTA is a strict liability statute.¹⁵⁰ This is coupled with the reality that all wind projects are inherently dangerous to migratory birds; hence, the killing of some birds appears to be inevitable.¹⁵¹ Consequently, there remains the constant threat that the FWS could start strictly enforcing the MBTA against violators involved with wind projects, causing disruption of further development and a possible explosion of litigation.¹⁵² This uncertainty as to the extent and severity of statutory fines and penalties has the potential to cripple the industry,¹⁵³ since it is predicated on the real possibility of changes in selective and uneven enforcement. Without resolution, such practices could prove extremely harmful to an industry most policy makers would like to see grow and thrive.

Additionally, uncertainty regarding prosecution under the MBTA can also create problems for wind developers in the funding and planning of their future projects.¹⁵⁴ For example, wind projects often cost hundreds of millions of dollars,¹⁵⁵ and obtaining loans from banks could become increasingly difficult due to the possibility of service interruption and possible prosecution.¹⁵⁶ Lenders generally balance risk against rate of return, and risks associated with mitigating avian impacts, including pre-project permitting uncertainty; post-operation risk of reduced operations; shutdowns; and fines. These risks may discourage lenders from making loans to wind developers.¹⁵⁷

¹⁴⁷ McKinsey, *supra* n. 1, at 78.

¹⁴⁸ ABC Petition, *supra* n. 49, at 78.

¹⁴⁹ Lilley & Firestone, *supra* n. 6, at 1209.

¹⁵⁰ *Id.* at 1181.

¹⁵¹ *Id.* at 1190.

¹⁵² *See id.* at 1198 (“[P]erhaps the only certainty with regard to the application of the MBTA to incidental take is that litigation and controversy will continue well into the future.”).

¹⁵³ If the FWS were to start prosecuting wind developers for incidentally or unintentionally killing migratory birds, that action could put a halt to any further development and shut down all projects already in existence.

¹⁵⁴ McKinsey, *supra* n. 1, at 88.

¹⁵⁵ *See e.g.* S. Tegen et al., Natl. Renewable Energy Laboratory, 2011 *Cost of Wind Energy Review* (Mar. 2013) (available at <http://www.nrel.gov/docs/fy13osti/56266.pdf> [<http://perma.cc/0LkpsvSAz6B>] (accessed Nov. 16, 2013)) (estimating the capital cost of a land-based wind project in a Midwestern site in 2011 at nearly \$419 million).

¹⁵⁶ McKinsey, *supra* n. 1, at 88.

¹⁵⁷ *Id.*

It seems apparent, then, that the FWS's continued lack of communication and direction has caused undesirable uncertainty and unpredictability for future growth of wind energy development in the U.S.¹⁵⁸ It also raises serious questions regarding FWS accountability and responsibility. Moreover, the uncertainty and unpredictability causes an ongoing threat to the safety of migratory birds.¹⁵⁹ Unless the FWS makes regulatory policy revisions, the tension between MBTA enforcement and wind power expansion will only worsen.¹⁶⁰

VI. RECOMMENDED POLICY REVISIONS

As has been demonstrated, the current regulatory scheme implemented by the U.S. Fish and Wildlife Service (FWS) is inadequate and ineffective in protecting both migratory birds and promoting wind development. Therefore, this Article suggests that the regulatory policy involving the Migratory Bird Treaty Act (MBTA) should be revised in three fundamental ways: (1) the FWS should authorize incidental take permits to be issued to wind developers;¹⁶¹ (2) the FWS should create and enforce a uniform standard for assessing avian impacts;¹⁶² and (3) the MBTA should be amended to allow for civil sanctions, as well as citizen suits.¹⁶³

The most important policy change would be to provide the FWS with authority to issue incidental take permits pursuant to the MBTA.¹⁶⁴ The FWS's current inability to issue incidental take permits leads to unnecessary confusion on the part of wind developers, creates problems with siting, and causes difficulties for the funding of wind energy projects.¹⁶⁵ It should be noted that the FWS already possesses the statutory authority to implement such a policy change; it merely has to promulgate a regulatory change.¹⁶⁶ So long as the proposed reg-

¹⁵⁸ *Id.*

¹⁵⁹ *Id.* at 89.

¹⁶⁰ *Id.*

¹⁶¹ See ABC Petition, *supra* n. 49, at 89 (recommending that the FWS adopt a process for issuing individual incidental take permits); Lilley & Firestone, *supra* n. 6, at 1210 (stating the MBTA should be amended to allow incidental take permits).

¹⁶² See McKinsey, *supra* n. 1, at 89 (stating the lack of clear standards in the assessment of avian impacts creates both uncertainty and opposition to wind energy); see also Lilley & Firestone, *supra* n. 6, at 1211 (discussing potential avian impact mitigation measures).

¹⁶³ Lilley & Firestone, *supra* n. 6, at 1212.

¹⁶⁴ See Holland & Hart, LLC, *Development of a Permit Program for the Incidental Take of Migratory Birds* 2–3 (Oct. 2010) (available at <http://www.ingaa.org/File.aspx?id=11062> [<http://perma.cc/0QSmZt3QJZb>] (accessed Nov. 16, 2013)) (discussing the potential implementation of an incidental take permit program and the benefits of such a program).

¹⁶⁵ ABC Petition, *supra* n. 49, at 89.

¹⁶⁶ Section 704 of the MBTA provides that “the Secretary of the Interior is authorized and directed, from time to time . . . to determine when, to what extent, if at all, and by what means . . . to allow hunting, *taking*, capture, killing . . . of any such bird . . . and to adopt suitable regulations permitting and governing the same” 16 U.S.C. § 704 (emphasis added).

ulations are compatible with the four existing migratory bird treaties,¹⁶⁷ the FWS is authorized by the MBTA to issue incidental take permits to wind developers.¹⁶⁸

Therefore, the FWS should promulgate regulations that require wind developers to consult with the agency prior to the planning stage of development, which would eliminate many of the issues involved with siting, funding, and transparency. A policy that demands transparency by both parties would be the most effective way to ensure mitigation of negative impacts to avian species from proposed wind projects.¹⁶⁹ Issues of siting would be drastically reduced, because the FWS and developers would be forced to work together to find a site suitable for high production of energy while mitigating impact on avian species.¹⁷⁰ Requiring developers to obtain MBTA permits would also eliminate the uncertainty surrounding prosecution, which in turn would eliminate major issues of funding.¹⁷¹

Another proposed policy change would be to create uniform standards for assessing avian impacts at wind development projects. The FWS should enforce both pre- and post-construction monitoring protocols that are standard to the industry.¹⁷² Mandating that a developer comply with standard pre-construction assessments of avian impacts ensures that the FWS would obtain more detailed and consistent data, and thus allow the agency to make a more accurate determination on whether to grant a permit.¹⁷³ Industry-wide, post-construction monitoring protocols should also be imposed to confirm that pre-construction data was accurate in its prediction of avian impacts.¹⁷⁴ These standards should be crafted for the purpose of disclosing substantial problems such as inconsistencies in reporting and improper siting, and for providing greater transparency.

¹⁶⁷ The four treaties are between (1) the U. S. and Great Britain, (2) the U.S. and Mexico, (3) the U.S. and Japan, and (4) the U. S. and Russia. 16 U.S.C. § 703(a).

¹⁶⁸ 16 U.S.C. § 704(a); ABC Petition, *supra* n. 49, at 89.

¹⁶⁹ See Lilley & Firestone, *supra* n. 6, at 1212 (“FWS can only assist in and evaluate the development of environmentally responsible energy generation when industries in the energy sector, including the wind industry, share relevant research and monitoring data and collaborate effectively toward minimizing wildlife impacts.”).

¹⁷⁰ See ABC Petition, *supra* n. 49, at 89–90 (proposing that developers be required to share information with the agency at an early stage; the FWS would then be able to ensure that projects are not conducted in high-risk areas).

¹⁷¹ See McKinsey, *supra* n. 1, at 88 (“The uncertainty brought on by unknown avian impacts . . . can be an unbearable burden on project financing.”); see also *supra* nn. 146–157 and accompanying text (discussing concerns stemming from the strict liability of the MBTA and the FWS’s inconsistency in enforcing it).

¹⁷² Lilley & Firestone, *supra* n. 6, at 1211.

¹⁷³ See ABC Petition, *supra* n. 49, at 102 (setting forth proposed regulations requiring, as part of the permit application, “detailed descriptions and results of all pre-construction surveys that are of sufficient duration, nature, and scope” to evaluate the effect the site may have on birds that use the site and steps that may be taken to avoid or mitigate risks).

¹⁷⁴ Lilley & Firestone, *supra* n. 6, at 1211.

Additionally, Congress should amend the MBTA to allow for civil sanctions and private citizen suits. Creation of civil sanctions would help alleviate current concerns over non-enforcement and selective enforcement of the Act.¹⁷⁵ The FWS has endured much criticism by maintaining its current enforcement policies, which have permitted some wind developers to escape accountability and punishment for MBTA violations.¹⁷⁶ It appears that the FWS is reluctant to impose harsh criminal sanctions, except in the most egregious circumstances.¹⁷⁷ Hence, allowing for civil sanctions would provide needed flexibility to assess the most appropriate punishment for violations under the Act. A monetary award of damages, coupled perhaps with other civil remedies such as injunctions, would appear to be the proper remedy in a majority of cases, and would not leave developers fearful of potential criminal prosecution.¹⁷⁸

Amending the MBTA to allow for private citizen suits would provide an additional check on the FWS, which has often proven reluctant to enforce the MBTA in many situations.¹⁷⁹ But a limit on who would be permitted standing in these cases should be established in order to lessen the possibility of opening the floodgates of litigation for minor violations. Therefore, a requirement that alleges a minimum amount of damages should be imposed, as well as a heightened pleading standard. This limitation on standing would prevent casual bird watchers from filing suits resulting from small infractions of the Act.

These three policy changes would go a long way toward alleviating the existing tensions between the well-intended MBTA, and the highly desirable expansion of wind energy. These policy changes would not only reduce concerns about harmful impacts of wind power on endangered avian species, but would also provide much needed guidance to wind developers regarding project funding and siting, and reduce their uncertainty over sporadic enforcement of MBTA violations.

VII. CONCLUSION

This Article has examined the growing tension between the Migratory Bird Treaty Act (MBTA) and its impact on the expanding development of wind power throughout the U.S. Although wind power has been heralded as a welcome alternative to fossil fuel and foreign energy sources, its expanding facilities and utilization of ever-larger turbines now pose serious dangers to the well-being of migratory

¹⁷⁵ *Id.* at 1212.

¹⁷⁶ See McKinsey, *supra* n. 1, at 78 (explaining that the MBTA “is mostly accommodated in the [U.S.] by being ignored, or more euphemistically, by ‘selective enforcement’”).

¹⁷⁷ See FWS Memo, *supra* n. 32, at 35 (noting that the FWS Office of Law Enforcement “focuses on those individuals, companies, or agencies that take migratory birds with disregard for their actions and the law, especially when conservation measures have been developed but are not properly implemented”).

¹⁷⁸ Lilley & Firestone, *supra* n. 6, at 1212.

¹⁷⁹ ABC Petition, *supra* n. 49, at 93–94.

birds.¹⁸⁰ Ostensibly, the MBTA offers the means to protect threatened avian species, but the U.S. Fish and Wildlife Service (FWS) has proven reluctant to impose the MBTA's harsh sanctions against those serving the national interest by enhancing wind development.¹⁸¹

In an attempt to reconcile the often conflicting goals of migratory bird protection and increased wind energy capacity, three policy revisions have been proposed: (1) FWS authorization to issue incidental take permits to wind power developers; (2) FWS creation of a uniform standard for assessing avian impacts; and (3) congressional amendment of the MBTA to allow for civil sanctions and citizen suits.¹⁸² Such revisions would not only help mitigate the negative impact of wind power on endangered birds, they would also provide positive advantages and assurances to developers seeking to expand wind energy facilities.¹⁸³

Given the ever-increasing popularity of wind energy as a sustainable source of domestic energy, these policy revisions become even more necessary. As the wind industry evolves to keep up with the growing demand for renewable energy, the regulations enacted to mitigate damages to migratory birds must be altered to keep up with those changes. The expansion of wind energy development has become essential to the U.S.'s energy future, but this expanding industry must not lose sight of migratory birds continuing to fly in its path.

¹⁸⁰ Discussed *supra* pt. IV.

¹⁸¹ Discussed *supra* nn. 146–149 and accompanying text.

¹⁸² Discussed *supra* pt. VI.

¹⁸³ Discussed *supra* pt. VI.