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For the Birds: Wind Energy, Dead Eagles, and Unwelcome Surprises

Samuel J. Panarella*

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I. Introduction

Wind turbines kill birds.¹ A lot of birds.² In the seemingly endless and often contentious local planning board hearings, legal skirmishes and ad

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1. See *Birds and Wind Development*, AMERICAN BIRD CONSERVANCY (2012), http://www.abcbirds.org/abcprograms/policy/collisions/wind_farms.html (noting that hundreds of thousands of birds die each year in collisions with wind turbines). In addition to mortality from collisions with wind turbines, birds are killed by collisions with transmission lines associated with wind farms, as well as habitat disturbance from activities associated with the construction and operation of wind farms. See also U.S. FISH AND WILDLIFE SERVICE, DRAFT EAGLE CONSERVATION PLAN GUIDANCE 11-12 (Jan. 2011), available at http://www.fws.gov/windenergy/docs/ECP_draft_guidance_2_10_final_clean_omb.pdf.

hominem attacks that characterize the permitting process of a typical wind energy farm, there is never serious disagreement on this point—wind turbines kill birds. In fact, chances are that several birds will be killed by what is sometimes jocularly referred to in the wind energy industry as “bird-blade interfaces” in the time it takes you to read this article.³ What’s more, wind turbine blades are equal opportunity consumers of birds. Like a small child with a large allowance in a well-stocked candy store, turbine blades will generally collect and consume whatever avian offering is within reach.

Of course, plenty of other things (both natural and man-made) kill birds, too.⁴ In fact, if you’ll indulge me in a perhaps silly but nonetheless

2. The actual number of birds killed annually by wind turbines is a matter of some debate, but is almost certainly in the hundreds of thousands. The U.S. Fish and Wildlife Service estimates that collisions with wind turbines may kill as many as 500,000 birds per year in the United States. See *Wildlife Concerns Associated with Wind Energy Development*, U.S. FISH AND WILDLIFE SERVICE (2012), <http://www.fws.gov/midwest/wind/wildlifeconcerns.html>. A recent report on bird mortalities from wind turbines put the figure at 573,000 bird deaths per year, including 83,000 hunting birds such as eagles, hawks and falcons. See Dina Cappiello, *Wind Farms Get Pass on Eagle Deaths*, ASSOCIATED PRESS (May 14, 2013), available at <http://bigstory.ap.org/article/ap-impact-wind-farms-get-pass-eagle-deaths>.

3. Eighty birds, to be (somewhat) precise. The math is as follows: There are approximately 525,600 minutes in a non-leap year. Using the U.S. Fish and Wildlife Service estimate of 500,000 birds killed by wind turbines per year in the U.S., that’s an average of a little less than a bird killed per minute, but let’s make the math easier by rounding up to one bird per minute. This article contains approximately 20,000 words. An average adult reader reads at 250 words per minute. See Mark Thomas, *What Is the Average Reading Speed and the Best Rate of Reading*, HEALTHGUIDANCE <http://www.healthguidance.org/entry/13263/1/What-Is-the-Average-Reading-Speed-and-the-Best-Rate-of-Reading.html>. Assuming you are an adult reader of average speed, it will take you approximately 80 minutes to read this article. That’s 80 birds killed by wind turbines in the time it takes you to read this article, assuming you read the footnotes like this one (though it will be slightly more if you’re reading this article at night when bird mortality from wind turbines is higher).

4. See Meredith Blaydes Lilley & Jeremy Firestone, *Wind Power, Wildlife, and the Migratory Bird Treaty Act: A Way Forward*, 38 ENVTL. L. 1167, 1171 (2008) (“[W]ind turbines are not the only anthropogenic source of avian mortality . . . The leading contributors to bird fatalities in the United States are: collisions with buildings, power lines, and automobiles (with a combined total in the hundreds of millions, possibly over a billion); domestic and feral cats (possibly over 100 million); pesticide use (ranging from 67 million to 72 million); and communication tower collisions (ranging from as low as 4.5 million to 50 million). Collisions with wind turbines and airplanes fall at the lower end of the spectrum.”; see also WALLACE P. ERICKSON ET AL., NATIONAL WIND COORDINATING COMMITTEE, AVIAN COLLISIONS WITH WIND TURBINES: A

illustrative tangent, imagine for a moment a dystopian vision of a future world where the things have quite literally “gone to the birds.” In our future world, which, with apologies to Charlie Parker, we’ll call Birdland,⁵ our avian overlords have forcefully wrested control of society from humans. (If you are having a hard time imagining how this might look, I refer you to the movie trailer for Alfred Hitchcock’s 1963 horror film “The Birds.”⁶ Now those are some angry birds!)

Now imagine that a bird has been killed in Birdland. The murder is dutifully reported to the authorities and two bird detectives are assigned to the case (if it helps, picture two sparrows in cheap suits with world weary expressions). The first thing our bird detectives will do is put together a list of suspects. At this very early stage of the investigation, with no information other than that a bird has been killed, here’s what that list would probably look like, in descending order of probability: building, power line, car, house cat, tree, cell phone tower.⁷ You’ll note what is not on the list. Yes, wind turbines. That’s because while wind turbines kill birds, they are far down any list of the causes of bird mortality.

Alas, we don’t live in Birdland and humans are still firmly in control of our governments and legal systems. Humans are also voracious consumers of electricity.⁸ While an examination of the environmental price paid for the generation of electricity from nonrenewable resources such as oil and gas sufficient to meet the ever-increasing demands of humans both in America

SUMMARY OF EXISTING STUDIES AND COMPARISONS TO OTHER SOURCES OF AVIAN COLLISION MORTALITY IN THE UNITED STATES I (2001), available at http://www.nationalwind.org/assets/archive/Avian_Collisions_with_Wind_Turbines_-_A_Summary_of_Existing_Studies_and_Comparisons_to_Other_Sources_of_Avian_Collision_Mortality_in_the_United_States__2001_.pdf.

5. Charlie “Bird” Parker (August 29, 1920 – March 12, 1955) was a leading American jazz alto saxophonist and composer. Parker was the original headliner at one New York City’s most famous jazz clubs, Birdland, which was named in his honor. Since it opened in 1949, numerous jazz luminaries, including Count Basie and John Coltrane, have recorded albums at Birdland. See *History*, BIRDLAND JAZZ CLUB, <http://www.birdlandjazz.com/history>.

6. Movie trailer for THE BIRDS (Universal Studios 1963), available at <http://www.youtube.com/watch?v=R2Im8Lu5pP0>.

7. ERICKSON ET AL., *supra* note 4, at 1.

8. The world’s consumption of electricity increased from 16,391.506 billion kilowatt-hours in the year 2006 to 18,466.458 billion kilowatt-hours in the year 2010. See *International Energy Statistics, World Electricity Consumption*, U.S. ENERGY INFORMATION ADMINISTRATION, <http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=2&pid=2&aid=2&cid=ww,&syid=2006&eyid=2010&unit=BKWH>.

and elsewhere⁹ is beyond the scope of this article, it is inarguably a leading driver of the relatively recent boom in the installation of facilities that generate electricity using renewable resources, such as wind and the sun.¹⁰

Generating electricity by burning fossil fuels such as oil, gas and coal causes the release of greenhouse gases (GHG) such as carbon dioxide, methane and nitrous oxide into the atmosphere.¹¹ According to the United States Environmental Protection Agency, U.S. power plants that generate electricity by burning fossil fuels create 67% of the country's sulfur dioxide emissions, 23% of the nitrogen oxide emissions, and 40% of man-made carbon dioxide emissions.¹² In addition to causing smog, acid rain, and haze, these greenhouse gases are a primary cause of global warming through the greenhouse effect. The greenhouse effect occurs when thermal radiation from the Earth's surface is absorbed by GHG and re-radiated back towards the surface, elevating the average surface temperature above what it would be in the absence of GHG.¹³ Further, environmental costs aside, fossil fuels burned to generate electricity are a nonrenewable source of energy as the world's supplies of gas, coal and oil cannot be renewed or regenerated quickly enough to keep pace with their use.¹⁴

Wind energy, on the other hand, is a low-emissions and inexhaustible source of energy.¹⁵ Advocates for wind energy point out that, unlike fossil-

9. For example, China's consumption of electricity increased from 2,525.046 billion kilowatt-hours in the year 2006 to 3,633.786 billion kilowatt-hours in the year 2010., *International Energy Statistics, China Electricity Consumption*, U.S. ENERGY INFORMATION ADMINISTRATION, <http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=2&pid=2&aid=2&cid=CH,&syid=2006&eyid=2010&unit=BKWH>.

10. See Daniel M. Kammen, *The Rise of Renewable Energy*, SCIENTIFIC AMERICAN, (Aug. 21, 2006), available at <http://www.scientificamerican.com/article.cfm?id=the-rise-of-renewable-ene> (noting that the rapid rise of renewable energy is chiefly attributable to "the alarming trend of global warming"); see also *Renewable and Alternative Energy Sources*, SUNY LEVIN INSTITUTE, <http://www.globalization101.org/renewable-and-alternative-energy-sources/> (noting that the world's consumption of renewable energy has increased by almost 1,000% since 1980).

11. See *Clean Energy*, U.S. ENV'T PROTECTION AGENCY (2012), <http://www.epa.gov/cleanenergy/energy-and-you/affect/air-emissions.html>.

12. *Id.*

13. *Id.*

14. *Non-Renewable Energy*, NATIONAL GEOGRAPHIC ONLINE, http://education.nationalgeographic.com/education/encyclopedia/non-renewable-energy?ar_a=1.

15. See *The Benefits of Wind Energy*, NRG SYSTEMS (2008), <http://www.nrgsystems.com/AboutWind/BenefitsofWindEnergy.aspx> (noting that as compared to fossil-fuel generated energy, wind energy "won't dirty the air that we breathe"); U.S. DEP'T OF ENERGY, WIND ENERGY BENEFITS (Apr. 2011), available at <http://www.windpowering>

fuel burning power plants, wind energy farms generate electricity without releasing pollutants into the air.¹⁶ In fact, it's estimated that replacing one megawatt of power produced by burning a fossil-fuel with a megawatt produced by harnessing the wind can displace 1,800 tons of carbon dioxide in one year, which is the equivalent of the carbon dioxide displacement from planting one square mile of forest.¹⁷ Additional benefits of wind energy cited by its proponents include increased domestic security by reducing the U.S.'s dependence on foreign oil and economic benefits to rural communities where most wind farms are sited through lease and royalty payments to landowners and the creation of construction jobs.¹⁸

Finally, to the extent anything as prosaic as the generation of electricity can (or should) be described in such terms, wind energy is sexy. Its appeal derives both from the muscular yet sleek silhouettes of the wind turbines rising from the long grasses of a Midwestern plain like great steel giants and from the "green relief" it offers by taking some of the edge off the guilt many of us feel as we vegetate in front of our huge, electricity-sucking flat screen televisions. Put another way, I've yet to hear anyone describe a coal-fired generation facility as beautiful. Have you?

The potential for renewable energy to "solve" the global warming crisis is a matter of some dispute. In their 2009 article in *Scientific American* magazine, Mark Z. Jacobson and Mark A. Delucchi call for a "massive shift away from fossil fuels to clean renewable energy sources" and set forth a plan they contend would allow 100 percent of the world's energy, for all purposes, to be supplied by wind, water and solar resources by 2030.¹⁹ Energy from wind power makes up 51% of the renewable supply in Jacobson and Delucchi's plan, which if carried out would require the installation of approximately 3.6 million additional wind turbines worldwide over the next 18 years.²⁰ One can easily imagine the enormous impacts on birds such a

america.gov/pdfs/wpa/2011/wind_energy_benefits.pdf ("Electricity generated by wind turbines does not pollute the water we drink or the air we breathe, so wind energy means less smog, less acid rain, and fewer greenhouse gas emissions.").

16. *Benefits of Wind Energy*, WINDUSTRY, <http://www.windustry.org/news-and-resources/policy-and-research/benefits-wind-energy>.

17. U.S. DEP'T OF ENERGY, *supra* note 15.

18. U.S. *Energy Incentives*, AMERICAN WIND ENERGY ASSOCIATION, <http://awea.rd.net/Resources/Content.aspx?ItemNumber=5039> (estimating that \$1 million in economic development is generated for every megawatt of wind energy produced).

19. Mark Z. Jacobson & Mark A. Delucchi, *A Plan to Power 100 Percent of the Planet with Renewables*, SCIENTIFIC AMERICAN (Oct. 26, 2009), available at <http://www.scientificamerican.com/article.cfm?id=a-path-to-sustainable-energy-by-2030>.

20. *Id.* There were 199,064 wind turbines installed worldwide as of January 1, 2012. See *How Many Wind Turbines are there in the World?*, GLOBAL WIND DAY, <http://www.globalwindday.org/faq/how-many-wind-turbines-are-there-in-the-world>.

massive buildup of wind turbines would have. While there is no indication that the political will or financial backing exists to carry out such an ambitious plan, and the feasibility of doing so is disputed,²¹ it does highlight the serious thought being given the role wind energy can and should play in combatting climate change.

What is beyond dispute is the Obama administration's rhetorical and, increasingly, tangible support for increased renewable energy development as a necessary bulwark against the growing environmental and economic threats posed by our warming planet. In a speech on climate change and the environment delivered at Georgetown University on June 25, 2013, President Obama highlighted the important role the increased development of renewable energy has in combatting climate change, calling for the reduction of carbon pollution through the use of more clean energy.²² A key component of the plan announced by the President was his direction to the Department of the Interior to "green light enough private, renewable energy capacity on public lands to power more than 6 million homes by 2020."²³

Erecting many more wind turbines on federal lands will undoubtedly be a significant piece of any attempt to meet the President's directive.²⁴ And

The global installed capacity of wind turbines is expected to exceed 300 gigawatts, the equivalent of 114 nuclear power plants, by the end of 2013. See Barbara Lewis, *World's Wind Turbines to Cross the 300 Gigawatt Mark*, REUTERS ONLINE, UK EDITION (June 14, 2013), <http://uk.reuters.com/article/2013/06/14/us-eu-wind-idUKBRE95D0WT20130614>.

21. See James Hansen, *Baby Lauren and the Kool-Aid*, 5, available at http://www.columbia.edu/~jeh1/mailings/2011/20110729_BabyLauren.pdf ("[S]uggesting that renewables will let us phase rapidly off fossil fuels in the United States, China, India, or the world as a whole is almost the equivalent of believing in the Easter Bunny and Tooth Fairy.").

22. *Remarks by the President on Climate Change*, WHITE HOUSE PRESS OFFICE (June 25, 2013), available at <http://www.whitehouse.gov/the-press-office/2013/06/25/remarks-president-climate-change>. This was not the first time President Obama touted the potential of wind energy to replace carbon-based energy sources in the U.S. During a speech at a wind turbine manufacturing plant in Pennsylvania in 2011, the President said that wind energy was the future of American Energy. *Obama Touts Clean Energy in Pennsylvania*, UNITED PRESS INT'L (Apr. 6, 2011), available at <http://www.upi.com/story/photos/UPI-17811302078600>. And in his State of the Union address on February 12, 2013, President Obama called on Congress to pass laws to "speed the transition to more sustainable sources of energy." President Barack Obama, *President of the U.S., State of the Union Address* (Feb. 12, 2013) (transcript available at <http://www.whitehouse.gov/the-press-office/2013/02/12/remarks-president-state-union-address>).

23. *Remarks by the President on Climate Change*, *supra* note 22.

24. As of January, 2013, the U.S. Bureau of Land Management reported it was considering 40 pending wind energy development applications on public lands it manages with a total potential energy generation capacity of over 7,500 megawatts,

these new wind turbines will certainly cause many thousands of additional bird deaths, including increased mortality of a very special bird, the eagle.²⁵ That special bird and the protections afforded it (and not afforded it) and how the complicated regime of laws, regulations and guidelines creating those protections can be squared with an environmental imperative to generate more bird-killing renewable energy is the focus of this article.

Use of the word “special” is not meant to suggest that the life of an eagle is inherently more valuable than that of a night-migrating songbird. In fact, due in part to their much greater numbers, night-migrating songbirds are killed in collisions with wind turbines at a much higher rate than are

which is more than 12 times the currently installed capacity of wind energy on public lands. U.S. BUREAU OF LAND MGMT, BLM FACT SHEET, RENEWABLE ENERGY AND THE BLM: WIND (Jan. 2013), available at http://www.blm.gov/pgdata/etc/medialib/blm/wo.MINERALS__REALTY__AND_RESOURCE_PROTECTION_/energy/solar_and_wind.Par.38552.File.dat/Wind_12_2012.pdf. Wind power is growing at a remarkable rate in the U.S. In 2012, a record 13.1 gigawatts of new wind power capacity was installed in the U.S., representing a 28% increase in cumulative installed U.S. wind power capacity. These installations constituted 43% of all nameplate energy capacity additions in the U.S. for the year, more than any other source of capacity. See U.S. DEP’T OF ENERGY, 2012 WIND TECHNOLOGIES REPORT iv (Aug. 2013), available at http://www2.eere.energy.gov/wind/pdfs/2012_wind_technologies_market_report.pdf.

25. Unfortunately, because of their preference for nesting in high wind areas and their hunting habits, eagles appear to be particularly unsuited to coexistence with wind turbines. See *Obama Administration doesn’t Prosecute Wind Farms for Eagle Deaths*, OREGON LIVE (May 18, 2013), available at http://blog.oregonlive.com/today/print.html?entry=/2013/05/obama_administration_gives_win.html (“Flying eagles behave like drivers texting on their cell phones—they don’t look up. As they scan for food, they don’t notice the industrial turbine blades until it’s too late.”). See also Kristina Chew, *Wind Farms and Eagle Deaths: The Dilemmas of Green Energy*, CARE2 MAKE A DIFFERENCE (May 20, 2013), <http://www.care2.com/causes/wind-farms-and-eagle-deaths-the-dilemmas-of-green-energy.html> (Quoting eagle expert Grainger Hunt: “There is nothing in the evolution of eagles that would come near to describing a wind turbine. There has never been an opportunity to adapt to that sort of threat.”). Golden eagles appear to be at much higher risk of death by wind turbine than do bald eagles, even accounting for their greater numbers. See *Wildlife Concerns Associated with Wind Energy Development*, U.S. FISH AND WILDLIFE SERV. (2012), <http://www.fws.gov/midwest/wind/wildlifeconcerns.html>. A recent study by the U.S. Fish and Wildlife Service of 32 wind farms located in ten states (Iowa, Maryland, Wyoming, Oregon, Texas, California, Utah, Washington, New Mexico, and Colorado) found that between 1997 and 2012 the wind farms were responsible for 85 eagle mortalities, 79 of which were golden eagles. See U.S. Fish and Wildlife Serv., *Bald Eagle and Golden Eagle Mortalities at Wind Energy Facilities in the Contiguous United States* (2013), available at <http://www.bioone.org/doi/full/10.3356/JRR-12-00019.1#app1>.

eagles.²⁶ But therein lies the point; it is the relatively few number of eagles in the United States that has prompted the development of a regime of laws specifically aimed at ensuring the survival of the species.²⁷ As more wind farms are constructed in areas of the country that eagles frequent, more eagles are killed by wind turbines.²⁸ For example, on average, 67 golden eagles are killed every year at the Altamont Pass Wind Resource Area near San Francisco, California, where one of the country's highest densities of nesting golden eagles share the ridgelines with 5,000 wind turbines.²⁹ It would require 167 pairs of nesting golden eagles to produce enough young to compensate for this annual mortality rate in an area that has only 60 breeding pairs.³⁰

This is occurring in California; a state that like several others has imposed mandates on its regulated utilities to make energy produced from renewable resources a bigger part of their portfolios going forward.³¹ And it's occurring in a country led by a President who has consistently stressed the importance of developing America's sources of renewable energy,³² while touting advances made in installing new wind farms during his

26. See NATIONAL WIND COORDINATING COLLABORATIVE, WIND TURBINE INTERACTIONS WITH BIRDS, BATS, AND THEIR HABITATS: A SUMMARY OF RESEARCH RESULTS AND PRIORITY QUESTIONS (Spring 2010), available at https://www1.eere.energy.gov/wind/pdfs/birds_and_bats_fact_sheet.pdf (noting that roughly three quarters of bird casualties at U.S. wind facilities are songbirds).

27. See, e.g., Bald and Golden Eagle Protection Act, 16 U.S.C. §§ 668-668d (2000).

28. See U.S. FISH AND WILDLIFE SERV, *supra* note 25 (noting that large numbers of golden eagles have been killed by wind turbines in the western states, as have a much lesser number of bald eagles).

29. Louis Sahagun, *Wind Power Turbines in Altamont Pass Threaten Protected Birds*, L.A. TIMES (June 6, 2011), available at <http://articles.latimes.com/2011/jun/06/local/la-me-adv-wind-eagles-20110606>.

30. *Id.*

31. Under California's Renewable Portfolio Standard, all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators must have 20% of retail energy sales from renewable sources by the end of 2013, 25% by the end of 2016, and 33 percent by the end of 2020. S.B. XI, 2011-12 Leg. Sess. (Ca. 2011).

32. President Obama, in a speech made on March 12, 2012, said, "We can't have an energy strategy for the last century that traps us in the past. We need an energy strategy for the future—an all-of-the-above strategy for the 21st century that develops every source of American-made energy." See *Energy, Climate Change and Our Environment*, THE WHITE HOUSE, <http://www.whitehouse.gov/energy>.

administration.³³ And the federal government has done more than just talk. A recent report estimates that the U.S. federal government will spend just over \$150 billion on clean energy initiatives over the 2009-2014 period, which represents a more than 300% increase from the 2002-2008 period.³⁴ This is on top of federal subsidies already provided to owners of wind farms, such as the recently renewed Renewable Electricity Production Tax Credit (PTC). The PTC provides a 2.2¢ per-kilowatt-hour tax credit for electricity generated by from wind energy.³⁵

The tension is evident. For its part, the United States wants more wind energy, but the United States also wants to ensure the survival of its eagles, and it is inarguable that wind turbines kill eagles. For their part, wind energy developers want to build more wind farms, particularly in undeveloped high wind areas of the country that are also home to a lot of eagles, but wind turbines kill eagles and the developers risk substantial civil and criminal penalties for “taking” eagles under the Migratory Bird Treaty Act³⁶ and the Bald Golden Eagle Protection Act.³⁷ A third group, environmental organizations and bird advocacy groups, including the Sierra

33. See *President Obama's Approach to Energy Independence*, ORGANIZING FOR ACTION (2013), available at <http://www.barackobama.com/energy-info/#!/wind> (noting that electricity generated from wind more than doubled in the U.S. during President Obama's first three years in office).

34. JESSE JENKINS ET AL., BEYOND BOOM AND BUST: PUTTING CLEAN TECH ON A PATH TO SUBSIDY INDEPENDENCE 6, (Bookings Institute 2012), available at http://www.brookings.edu/~media/Research/Files/Papers/2012/4/18%20clean%20investments%20muro/0418_clean_investments_final%20paper_PDF.PDF.

35. American Taxpayer Relief Act of 2012 § 407, Pub. L. No. 112-240 (codified as amended in scattered sections of 26 U.S.C.). Originally enacted in 1992, the PTC has been renewed and expanded numerous times, most recently by the American Recovery and Reinvestment Act of 2009 (H.R. 1, 111th Cong. (1st Sess. 2009)) in February 2009 and the American Taxpayer Relief Act of 2012 (§ 407) in January 2013. The United States is one of the global leaders in installed wind energy capacity, with 60 gigawatts of installed capacity as of the end of 2012. This represents approximately 45,000 installed wind turbines, with capacity to power 14.7 million American homes. See Heather Zichal, *A Record Year for the Wind Industry*, WHITE HOUSE BLOG (Jan. 30, 2013, 5:08 PM), <http://www.whitehouse.gov/blog/2013/01/30/record-year-american-wind-industry>.

36. 16 U.S.C. §§ 703–712 (2006 & Supp. IV 2010).

37. A “take” of an eagle under the Act includes the unpermitted killing, molesting or disturbing an eagle. Bald and Golden Eagle Protection Act, 16 U.S.C. § 668c (2000). A violation of the Act can result in a fine of \$5,000, imprisonment for one year, or both, for a first offense. Penalties increase substantially for additional offenses, and a second violation of the Act is a felony. 16 U.S.C. § 668 (2000).

Club, National Audubon Society, and the American Bird Conservancy, publically supports the development of wind energy, but recognizing that wind turbines kill eagles, insist that it be accomplished with minimal impacts on eagles in accordance with existing laws.³⁸

This tension has had significant on-the-ground impacts for the development of wind farms in the United States as wind developers and bird interest groups engage in expensive and time-consuming battles at the permitting stage of wind projects throughout the country.³⁹ Seemingly natural allies in their shared interest in reducing our country's dependence on carbon-based energy production (albeit perhaps motivated by different incentives), wind developers and environmental and bird advocacy groups nevertheless find themselves at odds in this debate, with each side insisting it has the better legal, policy and economic arguments to support its position. The result is an uncomfortable reality for all concerned, with many environmentalists finding themselves in the awkward position of advocating against one of the few sources of carbon-free energy production on our rapidly warming planet and wind energy developers pitted against the environmental organizations they typically depend on to support their projects.

Perhaps this all could have been avoided if the federal laws offering protections to eagles were flexible in their approach to balancing species conservation with development, but little could be further from the truth. As discussed in Part I, as conceived and drafted, these laws make little to no allowance for the nuance required to accommodate the environmental good represented by wind energy development within their species protection frameworks. In an attempt to provide this nuance by giving some measure of regulatory and financial certainty to wind farm developers and investors and thereby encourage the development of wind energy, while also confirming the primary eagle-protection goal of these laws in response to concerns raised by bird advocacy groups regarding the large number of eagles being killed by wind turbines, the government, through the U.S. Fish and Wildlife Service (the "Service"), passed the Eagle Permit Rule⁴⁰ in 2009

38. See, e.g., *Wind and Eagles*, NATIONAL AUDUBON SOCIETY (2011), available at <http://policy.audubon.org/wind-and-eagles> (stating that U.S. Fish and Wildlife must address the "persistent problem" of unauthorized takes of eagles by wind farms).

39. See, e.g., the National Audubon Society's comments on the Draft Environmental Assessment to Permit Take as Provided Under the Bald and Golden Eagle Protection Act for the West Butte Wind Project, Oregon (Feb. 17, 2012), available at <http://policy.audubon.org/sites/default/files/documents/20120217finalwestbuttewindpermitappdea-auduboncomments.pdf>.

40. 50 C.F.R. §§ 22.26-27 (2012).

and issued the related Eagle Conservation Plan Guidance⁴¹ in 2013. Part II of the article argues that these steps, while well-intentioned and helpful in many respects, nevertheless fail to completely achieve either result and require further, targeted revisions to increase wind energy investor and developer security and spur more responsible development of wind energy. Part III argues that the Endangered Species Act's incidental take permit regime, with its "No Surprises" assurances and life-of-project permit duration, is the model the Service should follow in making these revisions.

II. Federal Laws Protecting Eagles

Befitting its status as the national bird of the United States,⁴² the bald eagle is afforded legal protection from harm under several different federal laws, as is its less celebrated species-mate, the golden eagle. Along with many other species of birds, bald and golden eagles enjoy the protections of

41. U.S. FISH AND WILDLIFE SERV., EAGLE CONSERVATION PLAN GUIDANCE: MODULE I – LAND BASED WIND ENERGY, VERSION 2 (Apr. 2013), *available at* http://www.fws.gov/wind/energy/eagle_guidance.html [hereinafter EAGLE CONSERVATION PLAN GUIDANCE].

42. The bald eagle was named the national bird of the United States in an act of the Continental Congress on June 20, 1782. The decision to make the bald eagle the national bird of the United States was not without its critics. No lesser light than Benjamin Franklin was no fan of the bald eagle and would have chosen a very different bird; a view he forcefully expressed in a letter to his daughter in 1874:

[I] wish the Bald Eagle had not been chosen the Representative of our Country. He is a Bird of bad moral Character. He does not get his Living honestly. You may have seen him perched on some dead Tree near the River, where, too lazy to fish for himself, he watches the Labour of the Fishing Hawk; and when that diligent Bird has at length taken a Fish, and is bearing it to his Nest for the Support of his Mate and young Ones, the Bald Eagle pursues him and takes it from him . . . Besides he is a rank Coward: The little King Bird not bigger than a Sparrow attacks him boldly and drives him out of the District. He is therefore by no means a proper Emblem for the brave and honest Cincinnati of America who have driven all the King birds from our Country . . . I am on this account not displeas'd that the Figure is not known as a Bald Eagle, but looks more like a Turkey. For the Truth the Turkey is in Comparison a much more respectable Bird, and withal a true original Native of America . . . and would not hesitate to attack a Grenadier of the British Guards who should presume to invade his Farm Yard with a red Coat on.

Symbols – Turkey, GREATSEALS.COM, <http://www.greatseal.com/symbols/turkey.html>.

the Migratory Bird Treaty Act.⁴³ Unlike other species of birds, however, bald and golden eagles are singled out for protection by two additional federal laws: The Bald and Golden Eagle Protection Act⁴⁴ and the Lacey Act.⁴⁵ Until August 9, 2007 when it was delisted, the bald eagle was also protected as an endangered species under the Endangered Species Act.⁴⁶

A. Migratory Bird Treaty Act

Administered by the U.S. Fish and Wildlife Service, the Migratory Bird Treaty Act (MBTA) is the oldest federal law protecting birds. Enacted in 1918 to carry out the United States' commitment to a 1916 convention between the United States and Great Britain for the protection of birds migrating between the U.S. and Canada, the MBTA was later amended to implement similar U.S. treaties with Mexico (1936), Japan (1972), and the Soviet Union (1976).⁴⁷ The MBTA makes it unlawful at any time, and by any means or in any manner, to take or kill, or attempt to take or kill, a migratory bird protected under the Act.⁴⁸ More than 1,000 bird species are protected under the MBTA.⁴⁹ The term "take" under the MBTA means to "pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot,

43. See Migratory Bird Treaty Act, 16 U.S.C. §§ 703-712 (2006 & Supp. IV 2010); and 50 C.F.R. § 10.13 (2012).

44. 16 U.S.C. §§ 668-668d.

45. 16 U.S.C. §§ 3371-3378 (2006). Passed in 1900, the Lacey Act makes it a Federal offense to take, possess, transport, sell, import, or export bald eagle nests, eggs and parts that are taken in violation of any state, tribal or U.S. law. Because its relationship to the harms caused bald eagles by wind turbines is tenuous, the Act will not be a focus of this article.

46. See *Bald Eagle*, U.S. FISH AND WILDLIFE SERV. (July 2, 2013), <http://www.fws.gov/midwest/eagle>.

47. See *Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service, Migratory Bird Treaty Act of 1918*, U.S. FISH AND WILDLIFE SERV., available at <http://www.fws.gov/laws/lawsdigest/migtrea.html>; see also *Convention between the United States of America and the United Mexican States for the Protection of Migratory Birds and Game Mammals, U.S.-Mex.*, Feb. 7, 1936, 50 Stat. 1311, available at <http://www.fws.gov/le/pdf/MigBirdTreatyMexico.pdf>; *Convention Between the Government of the United States of America and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction, and Their Environment, U.S.-Japan*, Mar. 4, 1972, 25 U.S.T. 3329; *Convention Between the United States of America and the Union of Soviet Socialist Republics Concerning the Conservation of Migratory Birds and Their Environment, U.S.-U.S.S.R.*, Nov. 19, 1976, 29 U.S.T. 4647.

48. 16 U.S.C. § 703(a) (2006).

49. 50 C.F.R. § 10.13.

wound, kill, trap, capture, or collect” a migratory bird protected under the Act.⁵⁰ The Act has no mens rea requirement, meaning, under the plain language of the Act, violators can be prosecuted on a strict liability basis without regard to the intent behind their actions that resulted in the taking or killing of a protected migratory bird.⁵¹

Bald and golden eagles are among the protected migratory birds under the MBTA,⁵² meaning, in theory, a wind farm operator whose wind turbines take a bald or golden eagle is subject to penalties including imprisonment and fines for each such take.⁵³ Further, unlike the Endangered Species Act, the MBTA does not provide a specific mechanism to permit “incidental” take of a covered bird, so there is no safe harbor available for the nonpermitted, unintentional take of a protected bird under the Act.⁵⁴ Upon the appropriate showing, the Service does have authority to issue take permits for certain intentional activities that result in the death of a protected bird under the MBTA, such as scientific collecting, educational purposes, taxidermy and falconry.⁵⁵ However, the construction and operation of wind turbines is not an intentional act for which a take permit may be issued under the Act.

Now recall, as discussed above, that wind turbines are documented killers of bald and golden eagles, along with many other species of migratory birds protected by the MBTA, and the MBTA has been the law of land for the entirety of the modern wind energy industry.⁵⁶ Given that wind turbines kills

50. *Id.* at § 10.12.

51. 16 U.S.C. § 707(b)(2) (2006).

52. 50 C.F.R. § 10.13.

53. 16 U.S.C. § 707. MBTA penalties include a maximum of two years imprisonment and \$250,000 fine for a felony conviction and six months imprisonment or \$5,000 fine for a misdemeanor conviction. Fines double if the violator is an organization rather than an individual.

54. *See, e.g.*, *Ctr. for Biological Diversity v. Pirie*, 201 F. Supp. 2d 113 (D.D.C. 2002) (Department of Navy training exercise that resulted in the incidental, unpermitted take of migratory birds violated the MBTA); *United States v. Apollo Energies, Inc.*, 611 F.3d 679, 684 (10th Cir. 2010) (incidental take resulting from failure to bird-proof oil drilling equipment is a violation of the MBTA); *United States v. Moon Lake Elec. Ass’n*, 45 F.Supp. 2d 1070 (D. Colo. 1999) (incidental take of migratory bird from failure to install protective equipment on power poles is a violation of the MBTA).

55. *See* U.S. FISH AND WILDLIFE SERV., MANUAL, AUTHORITIES, OBJECTIVES, AND RESPONSIBILITIES FOR MIGRATORY BIRD PERMITS 720 (Aug. 6, 2003), available at <http://www.fws.gov/policy/720fw1.html>.

56. The U.S. Fish and Wildlife Service estimates that collisions with wind turbines may kill as many as 500,000 birds per year in the United States, including large numbers of golden eagles. *See* U.S. FISH AND WILDLIFE SERV., *supra* note 25; *see also*

protected birds, that such deaths while clearly not the intended result of installing and operating wind turbines are indisputably an incidental result of such operations, and that the plain language of the MBTA extends liability to incidental killings of protected birds by corporate actors, one would expect there is a robust body of case law involving prosecutions of commercial wind turbine operators for violating the MBTA's clear prohibition against killing protected migratory birds.⁵⁷ That expectation, while reasonable, couldn't be further from reality. To date, no wind energy operator has been prosecuted under the MBTA for the death of a bird covered by the MBTA.⁵⁸ While there has lately been evidence of prosecutorial stirrings, with reports that the Service is investigating eighteen bird deaths at wind farms, with seven having been referred to the US Department of Justice for possible prosecution, at the time of this writing no prosecutions have been brought.⁵⁹

There are many explanations for this perhaps puzzling lack of enforcement, including: (i) its critics notwithstanding, the general public popularity⁶⁰ of, and governmental support⁶¹ for, wind energy as an alternative

Thomas Kunz et al., *Assessing Impacts of Wind-Energy Development on Nocturnally Active Birds and Bats: A Guidance Document*, 71(8) J. WILDLIFE MGMT. 2449, 2450 (2007), available at http://www.nationalwind.org/assets/publications/Nocturnal_MM_Final-JWM.pdf (citing studies of bird collisions reported from 31 studies wind energy facilities in the United States showing that 78% of carcasses found at these facilities were songbirds protected by the Migratory Bird Treaty Act.).

57. In this respect, of course, wind farm operators are not alone. Owners of buildings, drivers of cars, and cat owners, to name but a few, are all potentially at risk for prosecution under the MBTA for the deaths they (or, more precisely, the things within their control) cause to millions of migratory birds each year. See Lilley & Firestone, *supra* note 4, at 1171. (noting that the leading contributors to U.S. bird fatalities are collisions with buildings, power lines, and automobiles, and predation by domestic and feral cats).

58. Laurence Hurley, *Obama Admin Sweats Legal Response as Turbines Kill Birds*, ENERGY & ENV'T. PUBL'G, (Jan. 26, 2012), <http://www.eenews.net/public/Greenwire/2012/01/26/1> (noting that no wind turbine operator has been prosecuted under the MBTA for bird deaths caused by its wind turbines).

59. Capiello, *supra* note 2.

60. For example, in a poll of Iowa voters conducted by Public Opinion Strategies in July 2012, 63% of respondents thought that America's energy needs can be met by renewable energy. Glen Bolger, *Attitudes Toward Wind Power in Iowa*, PUBLIC OPINION STRATEGIES (July 30, 2012), http://images.politico.com/global/2012/07/120730_iowa_statewide_memo.html.

61. In addition to financial support for wind energy through vehicles such as the Production Tax Credit, as described in the Introduction, the Obama

source of clean and renewable energy, and concern for the chilling effect strict enforcement of the MBTA would have on the development of new wind farms; (ii) the absence of a citizen suit provision in the MBTA, which provides for criminal enforcement only by the United States,⁶² and does not allow suits by citizens or private rights of action to sue a private party for violating the Act (compare to the Endangered Species Act, which allows such citizen suits);⁶³ (iii) uncertainty about whether the MBTA's prohibitions against the taking and killing of migratory birds should extend beyond activities that are explicitly intended to result in bird deaths (e.g., hunting of migratory birds) to commercial activities, such as installing and operating wind turbines, where the death of migratory birds is an unintended, albeit perhaps foreseeable, result of the activity;⁶⁴ and, perhaps most important,

administration has been an enthusiastic supporter of wind energy, including providing \$28 million in grants to aid the development of seven proposed offshore wind projects. See *Energy Department Announces New Investments in Pioneering U.S. Offshore Wind Projects*, U.S. DEPT. OF ENERGY (Dec. 12, 2012), <http://energy.gov/articles/energy-department-announces-new-investments-pioneering-us-offshore-wind-projects>. Indeed, the federal government's stated policy is for 20% of all U.S. electricity to be generated by wind energy by 2030. See U.S. DEPT OF ENERGY, 20% WIND ENERGY BY 2030: INCREASING WIND ENERGY'S CONTRIBUTION TO U.S. ELECTRICITY SUPPLY (2008), available at <http://www1.eere.energy.gov/wind/pdfs/41869.pdf>.

62. See *Flint Hills Tallgrass Prairie Heritage Found. v. Scottish Power*, No. 05-1025-JTM, 2005 WL 427503, at *1-4 (10th Cir. Feb. 22, 2005) (finding that MBTA does not allow a private cause of action by an environmental nongovernmental organization against a wind farm developer for alleged MBTA violations).

63. There is a split among the U.S. federal courts on issue of whether the Administrative Procedure Act (APA) provides an avenue for a citizen to sue a federal agency for violations of the MBTA, with some courts allowing a private right of action against a federal agency to enforce the MBTA through a civil injunction action under the APA to enjoin the agency from granting necessary project permits unless the MBTA is complied with, see e.g., *Human Soc'y of the U.S. v. Glickman*, 217 F.3d 882 (D.C. Cir. 2000), while others find no such authority under the APA for private rights of action under the MBTA, see e.g., *Defenders of Wildlife v. EPA*, 882 F.2d 1294, 1302 (8th Cir. 1989).

64. Again, there is a split in authority on this question. In a recent decision from the federal district court in North Dakota, the court rejected the federal government's attempt to hold seven oil companies liable for misdemeanor "takings" under the MBTA for 27 bird deaths allegedly caused by the birds alighting on defendants' oil reserve pits. *United States v. Brigham Oil & Gas L.P.*, 840 F. Supp. 2d 1202 (D.N.D. 2012). In dismissing the case, the court stated that the MBTA was never intended to support prosecutions of "lawful commercial activity which may indirectly cause the death of migratory birds." *Id.* at 1213. See also *Newton County Wildlife Ass'n. v. U.S. Forest Serv.*, 113 F3d 110, 115 (8th Cir 1997) (court of appeals rejected extension of MBTA incidental take provisions to logging activities that would

(iv) the large degree of discretion afforded to U.S. Department of Justice is deciding whether to prosecute incidental takings of birds by commercial actors under the MBTA; a discretion that thus far federal prosecutors have exercised in demurring from filing suit against wind farm operators despite the clear evidence that wind turbines kill birds.⁶⁵ Although this last rationale is undercut somewhat by the government's more active pursuit of companies from other industries that kill MBTA-protected birds as an incidental result of their operations. For example, in 2010, oil giant British Petroleum was fined \$100 million for violations of the MBTA stemming from the Deep Water Horizon oil spill,⁶⁶ Exxon-Mobil was fined over \$600,000 for violations of the MBTA resulting from the deaths of 85 protected birds at its drilling and production facilities in Colorado, Wyoming, Oklahoma, Texas, and Kansas between 2004 and 2009,⁶⁷ and in 2009, PacifiCorp, a subsidiary of MidAmerican Energy Holdings Co. and a wind energy developer in its own right, pleaded guilty to 34 counts of taking protected birds in violation of the MBTA and was fined over \$10.5 million when its power lines and substations

inevitably resulting in the death of protected birds, holding that to do so would "stretch this 1918 statute far beyond the bounds of reason to construe it as an absolute criminal prohibition on conduct, such as timber harvesting, that indirectly results in the death of migratory birds."). *But see* *United States v. Apollo Energies Inc.*, 611 F3d 679 (10th Cir. 2010) (Tenth Circuit upheld misdemeanor criminal convictions under the MBTA of two oil companies whose oil field equipment trapped and killed migratory birds).

65. See 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, 78 (2007) (noting that "MBTA is mostly accommodated in the United States by being ignored, or more euphemistically, by "selective enforcement"); see also Letter from Newt Gingrich, Former Speaker of the House of Representatives, to Lamar Smith, Chairman, House Committee on the Judiciary (Feb. 22, 2012) available at http://heartland.org/sites/default/files/gingrich_letter_re_wind_turbines_0.pdf (calling the government's decision to bring charges in the *Brigham Oil* case (see *supra* note 64) an abuse of discretion when the wind turbine industry, which causes "vastly more accidental bird deaths on a regular basis," has never been prosecuted under the MBTA).

66. Guilty Plea Agreement, *U.S. v. BP Exploration and Prod., Inc.*, E.D. La. (Nov. 2012), available at <http://www.justice.gov/iso/opa/resources/43320121115143613990027.pdf>.

67. Press Release, U.S. Dept. of Justice, Office of Pub. Affairs, Exxon-Mobil Pleads Guilty to Killing Migratory Birds in Five States (Aug. 13, 2009), available at <http://www.justice.gov/opa/pr/2009/August/09-enrd-795.html>.

electrocuted 232 eagles.⁶⁸ As many critics have pointed out, it is difficult to identify a colorable legal rationale under the MBTA for the government's willingness to prosecute takings when they occur as an incidental result of generating energy from nonrenewable resources such as oil and gas and its refusal to do so when the taking is the incidental result of renewable energy development.

While a full discussion of the long-running and contentious debate over whether and how incidental takes of migratory birds by wind turbines should be prosecuted under the MBTA is beyond the scope of this article,⁶⁹ the existence of this still hovering "Sword of Damocles"⁷⁰ hanging over the wind energy industry provides important context for understanding the Service's decision to issue the Eagle Permit Rule and Eagle Conservation Plan Guidance and the mixed reception they received from both wind energy developers and bird advocacy groups.

B. Bald and Golden Eagle Protection Act

Passed in 1940 and administered by the U.S. Fish and Wildlife Service, the Bald and Golden Eagle Protection Act (BGEPA) provides protections for bald and golden eagles to achieve and maintain stable or increasing populations of the birds.⁷¹ As originally enacted in 1940, the Act was called the Bald Eagle Protection Act, and provided protections to bald eagles only. The act was amended in 1962 to extend its protections to golden eagles, at which time it became known by its present name.⁷²

The BGEPA prohibits the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit.⁷³ A "take" is defined broadly to include pursuing, shooting, shooting

68. Press Release, U.S. Fish & Wildlife Serv., Office of External Affairs, Utility Giant to Pay Millions for Eagle Protection (July 10, 2009), available at <http://www.fws.gov/mountain-prairie/pressrel/09-47.html>.

69. For a fuller discussion of this interesting debate, see e.g., Lilley & Firestone, *supra* note 4; Scott W. Brunner, *The Prosecutor's Vulture: Inconsistent MBTA Prosecution, its Clash with Wind Farms, and How to Fix it*, 3 SEATTLE J. ENVTL. L. 1 (2012), available at http://www.sjel.org/images/pdf/2013/brunner_prosecutors%20vulture.pdf; American Bird Conservancy Rulemaking Petition to the U.S. Fish & Wildlife Service (Dec. 14, 2011), available at http://www.abcbirds.org/abcprograms/policy/collisions/pdf/wind_rulemaking_petition.pdf.

70. See McKinsey, *supra* note 65, at 75.

71. 16 U.S.C. §§ 668-668d.

72. Bald and Golden Eagle Protection Act, Pub. L. No. 87-884, 76 Stat. 1246 (1962).

73. 16 U.S.C. § 668(a); 50 C.F.R. § 22.3 (2012).

at, poisoning, wounding, killing, capturing, trapping, collecting, molesting or disturbing a bald or golden eagle or their nests and eggs.⁷⁴ “Disturb” is defined as agitating or bothering a bald or golden eagle to a degree that injures the bird, causes a decrease in productivity, or results in nest abandonment.⁷⁵ A criminal violation of the Act can result in one year imprisonment and a \$100,000 fine for an individual or \$200,000 for an organization.⁷⁶ A second violation of the Act is a felony and can result in a maximum of two years imprisonment and a \$250,000 for an individual and \$500,000 for an organization.⁷⁷ Maximum civil penalties are \$5,000 for each violation.⁷⁸

While modeled after the MBTA, the BGEPA differs from that Act in that it does not impose strict liability for taking a protected species.⁷⁹ Rather, the BGEPA applies only to those who act “knowingly, or with wanton disregard for the consequences of [their] act.”⁸⁰ To meet this mens rea requirement under the BGEPA, the government must show that the defendant was “conscious from his knowledge of surrounding circumstances and conditions that his conduct will naturally and probably result in injury” to a protected bird.⁸¹

Like the MBTA, permits for the intentional take of the protected species are granted under the BGEPA. The Service may issue permits for the intentional take of bald or golden eagles in certain circumstances, including Indian religious purposes, falconry, and scientific and exhibition purposes, provided that such permits are compatible with the preservation of the species.⁸² The commercial generation of wind power is not a circumstance that allows for the issuance of an intentional take permit under the Act. However, unlike the MBTA, since mid-2009 the Service has authority under the Eagle Permit Rule to issue incidental take permits under the BGEPA for unavoidable incidental takes of eagles by commercial actors, including wind

74. 16 U.S.C. § 668c.

75. 50 C.F.R. § 22.3.

76. 16 U.S.C. § 668(a); 18 U.S.C. §§ 3571(b)–(c) (2000). Should explain that each violation is \$5,000 (or \$10,000 for second offense), but that each take is a separate violation. 18 USC § 3571 puts a cap on the total fine per offense, these are the numbers the author is using.

77. 18 U.S.C. §§ 3571(b)–(c).

78. 16 U.S.C. § 668(b).

79. See *U.S. v. Moon Lake Electric Ass'n, Inc.*, 45 F.Supp.2d 1070, 1074 (D.Colo. 1999) (“The BGEPA, in contrast to . . . the MBTA, is not a strict liability crime.”).

80. 16 U.S.C. § 668(a).

81. S.Rep. No. 92-1159, at 5 (1972), *reprinted in* 1972 U.S.C.A.N. 4285, 4289.

82. 16 U.S.C. § 668(a); 50 C.F.R. § 22.26 (2012).

energy developers, subject to compliance with appropriate avoidance, minimization and mitigation measures.⁸³

II. Incidental Eagle Take Permits

Whichever side of the eagle/wind energy line one falls on (assuming there is such a line), there is no question that the development of a wind energy facility in bald or golden eagle habitat is extremely likely to impact the resident eagle population.⁸⁴ In many cases, the “impact” will be the injury, harassment, displacement and/or death of one or more eagles. In other words, a “take” of an eagle that, absent preclearance, and notwithstanding the fact that the take is incidental to the main purpose of the development to generate electricity, but for the Eagle Permit Rule would be a per se violation of the BGEPA, with all attendant civil and criminal liabilities.

A. Eagle Permit Rule

In an attempt to balance to the BGEPA’s stated goal of limiting takes of bald and golden eagles to achieve and maintain stable or increasing populations with the on-the-ground realities of nonpurposeful eagle deaths caused by otherwise desirable large-scale commercial facilities, such as wind energy farms, on September 11, 2009, the Service published the Eagle Permit Rule under the BGEPA.⁸⁵ Similar to incidental take permits under Section 10 of the Endangered Species Act, the Eagle Permit Rule authorizes the Service to issue permits for the limited take of bald and golden eagles when the take is associated with, but not the purpose of, an otherwise lawful activity (Eagle ITP).⁸⁶ The Service’s authority to issue an Eagle ITP is

83. 50 C.F.R. § 22.26.

84. The Service recognizes this issue: “[T]he development and planned development of wind facilities (developments for the generation of electricity from wind turbines) has increased dramatically in the range of the Golden Eagle in the western United States. Golden Eagles are vulnerable to collisions with wind turbines . . . and in some areas such collisions are a major source of mortality.” DRAFT EAGLE CONSERVATION PLAN GUIDANCE, *supra* note 1, at 7.

85. 50 C.F.R. §§ 22.26-27 (2012).

86. *Id.* § 22.26(a). The Service may also issue a permit for the intentional removal or relocation of an active or inactive eagle nest where necessary to alleviate a safety emergency or an inactive eagle nest where necessary to ensure public health and safety, where the inactive nest is built on a human-engineered structure and creates a functional hazard that renders the structure inoperable for its intended use, or where the activity necessitating the nest removal, or the mitigation for the take, will provide a clear and substantial benefit to eagles. *Id.* § 22.27.

predicated on the Service finding that issuance of the Eagle ITP is compatible with the BGEPA's underlying goal of increasing or stabilizing bald and golden eagle breeding populations.⁸⁷ In making this determination, the Service is guided by regional take thresholds for bald and golden eagles established using the methodology contained in the National Environmental Policy Act Final Environmental Assessment (FEA) developed for the new permit rules.⁸⁸ The FEA set regional take thresholds at greater than zero for bald eagles in most of the Service's regional management areas, but set the threshold at zero for golden eagles in all regional management areas, meaning any new authorized take of golden eagles under the Eagle Permit Rule must be offset by the developer through compensatory mitigation.⁸⁹

The Service may issue an Eagle ITP where it determines the take is compatible with the preservation of bald and golden eagles (i.e., complies with the FEA's applicable take threshold for the regional management area at issue, either numerically or through appropriate compensatory mitigation), is necessary to protect a local interest, is not the purpose of the activity being undertaken by the permit applicant, and cannot practicably be avoided (for a "standard" Eagle ITP) or is unavoidable even after implementation of advanced conservation practices (for a "programmatic" Eagle ITP).⁹⁰ A programmatic take is a "take that is recurring, is not caused solely by indirect effects, and that occurs over the long term or in a location or locations that cannot be specifically identified."⁹¹ The Service may issue a programmatic Eagle ITP for takes resulting in both disturbance and mortalities based on implementation of "advanced conservation practices" developed in coordination with the Service.⁹²

87. *Id.* § 22.26(f)(1).

88. U.S. FISH AND WILDLIFE SERV., FINAL ENVIRONMENTAL ASSESSMENT, PROPOSAL TO PERMIT TAKE AS PROVIDED UNDER THE BALD AND GOLDEN EAGLE PROTECTION ACT (Apr. 2009), available at http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/BaldEagle/FEA_EagleTakePermit_Final.pdf.

89. *Id.* This so-called no-net-loss standard means in return for being permitted to incidentally take eagles despite the FEA's zero take threshold the wind developer must agree to implement compensatory mitigation measures that either reduce another ongoing form of eagle mortality or cause an increase in carrying capacity that grows the eagle population by an equal or greater amount than the anticipated incidental take from the wind farm.

90. 50 C.F.R. § 22.26(a).

91. *Id.* § 22.3.

92. *Id.* Defining "advanced conservation practices" as "scientifically supportable measures that are approved by the Service and represent the best

A standard Eagle ITP, which authorizes individual takes of bald and golden eagles where the take cannot practicably be avoided and occurs during a limited timeframe is not well-suited to addressing potential impacts to eagles from wind farms, which involve a continuous and lengthy (often in excess of 30 year) operating period throughout which takes of eagles can occur. But for one significant problem, a programmatic Eagle ITP that authorizes takes that recur over the long term, are not caused solely by indirect effects, authorize lethal take that is incidental to otherwise lawful activity, and are unavoidable even after implementation of advanced conservation practices would appear to be a better fit for mortalities caused by collisions with rotating wind turbines.⁹³ The problem lies in the Eagle Permit Rule's requirement that no Eagle ITP, including a programmatic Eagle ITP, is valid beyond 5 years of its issuance date; a time period that is at least 20 years less than the typical initial operating period for a wind farm.⁹⁴ At the end of this 5-year period, which is still less than 20% through the normal project life of a wind farm, the wind farm operator must apply for a new programmatic Eagle ITP, with no assurances that a new permit will be issued or, if a new permit is issued, that it will not require the permittee to implement advanced conservation practices that are far more burdensome than those required by the original permit.⁹⁵ Practically speaking, then, what is the value to a wind project developer of securing a 5-year programmatic Eagle ITP at the outset of a project with a 25-30 year operating life? The answer is: not much.

available techniques to reduce eagle disturbance and ongoing mortalities to a level where remaining take is unavoidable.”

93. A fit expressly recognized by the Service: “[Programmatic] permits may authorize lethal take that is incidental to an otherwise lawful activity, such as mortalities caused by collisions with rotating wind turbines.” Eagle Permits; Changes in the Regulations Governing Eagle Permitting, 77 Fed. Reg. 22,267 (proposed Apr. 13, 2012) (to be codified at 50 C.F.R. pts. 13, 22).

94. 50 C.F.R. § 22.26(h). This misalignment is demonstrated by the fact that in the more than three years since the publication of the Eagle Permit Rule, the Service has issued approximately 50 standard Eagle ITPs, but not a single programmatic Eagle ITP, despite numerous wind farms being built during this period in eagle habitat areas. See Eagle Permits; Revisions to Regulations Governing Take Necessary To Protect Interests in Particular Localities. 77 Fed. Reg. 22278, 22279 (proposed Apr. 13, 2012) (to be codified at 50 C.F.R. pt. 22). That may change in the near future, however, as two proposed wind farms, the West Butte Wind Project in Oregon and the New Era Wind Farm in Minnesota, have applied to the Service for programmatic Eagle ITPs for expected eagles deaths from operation of the proposed projects. Both applications have met with severe criticism from project opponents and, at the time of writing, it is far from certain that either project will be successful in its application.

95. 50 C.F.R. § 22.26(h).

B. Investor & Developer Insecurity

The initial capital outlay to build a utility-scale wind farm is enormous, with each megawatt of installed nameplate capacity costing between \$1.5 million to \$2 million to install and make operational.⁹⁶ The typical utility-scale wind farm has an installed nameplate capacity of at least 100 megawatts, with many exceeding 200 megawatts, requiring an initial capital outlay of hundreds of millions of dollars to build. There are very few wind farm developers that can (or for risk shifting reasons would want to) fund a wind farm entirely from their balance sheets, so most must venture into the credit markets to seek project financing from lenders. Project financing is a project loan, with the debt backed only the wind farm's assets (wind turbines, transmission infrastructure, etc.) and the revenues generated by those assets. The limited recourse nature of project financing, with the lender limited to the wind farm's owner and the farms assets and revenues if the debt cannot be serviced, causes the prudent project lender to carefully quantify and eliminate or minimize risk to the lender from the wind farm's failure before making the loan.

One critical area of potential project risk a project lender will focus on is the adequacy and security of all permits held by the project. A potential lender for a wind farm that is likely to result in the incidental take of bald or golden eagles finds very little to reassure it in the current Eagle Permit Rule. First, as discussed in more detail in Part III, because of the absence of a clear mechanism for "No Surprises" assurances like those offered for incidental take permittees under the ESA, and, second, because of the inadequate five-year duration of any programmatic Eagle ITP the wind farm developer might obtain for incidental takes of eagles—a lender wants to be assured that the wind farm it invests in will be able to service the debt for the life of the project, not merely for the first five years of operation.

When considering the potential impacts of undefined future compliance and mitigation obligations on wind farms, the locked in nature of a typical wind farm's economic profile is a first order reality that any potential investor must find comfort with. Unlike other types of developments with more flexible margins that allow the operator to pass on additional, post-operation project costs to end users, a wind farm typically sells the electricity generated pursuant to a fixed price power purchase agreement (PPA) with minimum energy production thresholds signed prior to operation of the wind farm. The inability to pass on additional costs due to the fixed price PPA structure and the built-in penalties (often including termination) in most wind PPAs for failure to meet energy production thresholds are yet another reason potential wind farm investors pay close

96. *How Much do Wind Turbines Cost?*, WINDUSTRY, <http://www.windustry.org/resources/how-much-do-wind-turbines-cost>.

attention to undefined future liabilities that might impact the wind farm's viability in making their decision on whether and on what terms to invest. Additional costs related to post-operational mitigation that erode the project's profit margin because they cannot be passed on to the end user and, most significantly, the potential for termination of the project's revenue generator - payments under the project PPA, because of a failure to meet production thresholds are two examples of plausible scenarios that would give even the hardiest potential investor pause. Project investors behave in a predictable manner when faced with future project cost uncertainty—they shift risk to the project developer by charging a premium for the right to borrow money, seek additional avenues of recourse (including personal or corporate liability) if the project revenues become insufficient to service the debt, or refuse to lend the money at all. In short, when the project risk premium is heightened by uncertainty as to future project compliance and mitigation costs, it is significantly harder for developers to obtain financing to build the project at all or on terms that make it economically viable for the developer to move forward with the project. The result is fewer wind projects are built.

C. Proposed Rule Change

Recognizing the crippling effect this short Eagle ITP duration was having on developers' ability to obtain financing at all or on reasonable terms, and also in response to intensive lobbying by wind energy developers, in 2012 the Service proposed revisions to the Eagle Permit Rules extending the maximum term for a programmatic Eagle ITP under 50 C.F.R. § 22.26 from 5 to 30 years to "facilitate the responsible development of renewable energy and other projects designed to operate for many decades while continuing to protect eagles consistent with statutory mandates."⁹⁷ In a question and answer document it created about the proposed rule change, the Service echoed the concerns with the five-year term for programmatic Eagle ITPs expressed by wind developers, stating: "It has become evident that the 5-year term limit imposed by the 2009 regulations . . . is not long enough to enable many [renewable energy] project proponents to secure the funding, lease agreements, and other necessary assurances to move forward with their projects. To address this problem, the Service proposes to amend

97. Eagle Permits; Changes in the Regulations Governing Eagle Permitting, 77 Fed. Reg. at 22,267. This proposed extension does not alter the terms of standard Eagle ITP under 50 C.F.R. § 22.26 or nest removal permits under 50 C.F.R. §§ 22.25 and 22.27, which will continue to have a maximum term of 5 years.

the regulations to provide for terms of up to 30 years for programmatic permits.”⁹⁸

The Service’s recognition of the problem did not, however, translate into a proposed rule that is likely to create the demand for programmatic Eagle ITPs, and more important, the development of more wind energy projects that the Service likely envisioned. The proposed rule takes a very targeted and literal approach to solving the temporal problem with programmatic Eagle ITPs: wind energy developers told the Service they were not applying for the programmatic permits because their 5 year duration was too short by at least twenty years to provide the cost and regulatory certainty they need to obtain the land rights and financing necessary to build a wind project, so the Service issued the proposed rule extending the permit duration to up to 30 years. One might think this a laudable (and if one were in a critical mood, rare) example of a federal agency identifying a fundamental flaw in a program it administers and quickly (remember, the Eagle Permit Rule was less than 3 years old at the time of the proposed rule change) offering a workable solution. And that would be true but for the proposed rule’s explicit retention of the Eagle Permit Rule’s condition to the issuance of a programmatic Eagle ITP that allows the Service to “amend, suspend, or revoke a programmatic permit . . . if new information indicates that revised permit conditions are necessary, or that suspension or revocation is necessary, to safeguard local or regional eagle populations.”⁹⁹

The proposed rule’s discussion of the mitigation and conservation measures the Service will require of the holder of a 30-year programmatic Eagle ITP begins with the rational proposition that the longer permit duration requires a commensurate commitment from the permit applicant in the permit’s terms and conditions to “implement additional specified mitigation measures” should the level of take anticipated in the permit be exceeded or if new scientific information shows that such measures are necessary to preserve eagles.¹⁰⁰ These additional mitigation measures would be a back-stop of sorts to be implemented during the life of the project should the advanced conservation practices to avoid and minimize eagle take that a permittee is required to agree to and implement to obtain a programmatic Eagle ITP not achieve their intended result.¹⁰¹ Continuing the

98. U.S. FISH AND WILDLIFE SERV., CHANGES IN THE REGULATIONS GOVERNING EAGLE PERMITTING QUESTIONS AND ANSWERS (2012), *available at* http://www.fws.gov/migratory_birds/PDFs/Eagle%20Tenure%20Rule%20QandA%204.12.12.pdf.

99. 50 C.F.R. § 22.26(c)(7).

100. Eagle Permits; Changes in the Regulations Governing Eagle Permitting, 77 Fed. Reg. at 22,268.

101. *Id.* The proposed rule states that these additional measures might include “additional compensatory mitigation to mitigate the level of authorized take, or, if necessary for the preservation of eagles, below the originally authorized take levels.”

theme of reducing the permittee's cost uncertainty, the Service suggests that these additional mitigation measures should be identified and described "up-front" in the permit itself.¹⁰² While one can easily imagine the Service and the permit applicant struggling to reach agreement on the triggers for and nature of these additional mitigation measures, the fact that they would be set in the application process does give the applicant and its investors the ability to factor their possible occurrence into the project's risk-benefit profile before they have committed significant resources into the project.

If the proposed rule stopped there, it would represent a significant step forward in providing wind developers the cost certainty required to secure the funding necessary to build wind farms. But it doesn't stop there. Instead, in two short sentences, the proposed rule undoes the seeming promise of cost certainty and obviates the Service's expressed intent in proposing the rule to "enable [wind developers] to secure the funding, lease agreements, and other necessary assurances to move forward with their projects."¹⁰³ Immediately after its discussion of the importance of providing the applicant with cost certainty by specifying additional mitigation measures up-front, the Service states:

"However, if such conditions prove inadequate to meet the Eagle Act's preservation standard, the regulations at § 22.26(c)(7) allow the Service to further amend programmatic permits if necessary to safeguard eagle populations. The last option would be permit revocation if the activity is not compatible with the preservation of the eagle."¹⁰⁴

The Eagle Act's preservation standard has been interpreted by the Service to mean that any take of eagles it authorizes is "consistent with the goal of stable or increasing breeding populations."¹⁰⁵ By applying this preservation standard in its on-going assessment of the efficacy of a programmatic permittee's mitigation measures, the Service essentially reserves the unfettered right to reduce a permittee's permitted incidental take all the way down to zero. This would very likely require the partial or complete suspension of operations for an unknown period of time, which acts to reintroduce the very permit and cost uncertainties the proposed rule change was intended to address.

The proposed rule change met with a mixed reception that broke along predictable lines. For their part, wind advocacy groups used the proposed

102. *Id.*

103. U.S. FISH AND WILDLIFE SERV., *supra* note 98.

104. Eagle Permits; Changes in the Regulations Governing Eagle Permitting, 77 Fed. Reg. at 22,268.

105. EAGLE CONSERVATION PLAN GUIDANCE, *supra* note 41, at 4.

rule's notice and comment period to submit comments endorsing the proposed permit term extension and the salutary effect it could have on attracting investment in renewable energy projects. At the same time, the groups asserted that the regulatory uncertainty created by the proposed rule's reservation of rights for the Service to impose additional mitigation measures on the permittee at any time during the life of the thirty-year permit, decrease the level of authorized take, and even revoke the permit entirely effectively destroyed this benefit.¹⁰⁶ Conversely, several bird advocacy groups joined together to submit a comment letter arguing that the proposed 25-year extension of the duration of a programmatic Eagle ITP was inconsistent with the Service's legal obligation under the BGEPA to ensure preservation of eagles, that the rulemaking itself, absent additional environmental review and analysis, violated NEPA and the Administrative Procedure Act, and was further proof of the Service's "disjointed and confusing" approach to issuing eagle take permits under the BGEPA.¹⁰⁷

This last point is a direct reference to the curious timing of the proposed rule-making, coming as it did more than a year after the Service issued its Draft Eagle Conservation Plan Guidance (the "Draft Eagle Guidance")¹⁰⁸ aimed at providing guidance on the issuance of programmatic eagle permits, less than a month after the Service issued its final Land-Based Wind Energy Guidelines,¹⁰⁹ and on the same day the Service issued an

106. For example, in its public comment submitted to the Service, the American Wind Energy Association, the leading wind energy trade association, lauded the Service's "increasing recognition that of the reality that, in order to secure financing for many capital-intensive, long-term projects, such as wind energy facilities, there must be a high level of certainty that regulatory approvals will remain in effect over a facility's serviceable life and not allow for unanticipated mitigation costs to be applied at a later date (e.g., upon renewal of a five-year permit)," but expressed concern that the proposed rule "still fails to provide sufficient certainty with respect to future mitigation costs, thereby perpetuating an imbalanced risk-benefit profile to all parties involved in wind energy development." See American Wind Energy Association Comments on Changes in the Regulations Governing Eagle Permitting to U.S. Fish and Wildlife Serv. (July 12, 2012), available at <http://www.regulations.gov/#!documentDetail;D=FWS-R9-MB-2011-0054-0138>.

107. See Defenders of Wildlife, National Audubon Society, Natural Resources Defense Council, The Wilderness Society, Sierra Club, and 89 Audubon Society state offices' Joint Comment Letter on Changes in the Regulations Governing Eagle Permitting to U.S. Fish and Wildlife Serv., available at http://wilderness.org/sites/default/files/jointcommentsDoWAudNRDCetalFWSeagleNOPR7122012_2.pdf.

108. DRAFT EAGLE CONSERVATION PLAN GUIDANCE, *supra* note 1.

109. U.S. FISH AND WILDLIFE SERV., LAND-BASED WIND ENERGY GUIDELINES (Mar. 23, 2012), available at http://www.fws.gov/windenergy/docs/WEG_final.pdf. Similar to the Final Eagle Guidance, the Land-Based Wind Energy Guidelines offer guidance to

advance notice of a separate proposed rulemaking aimed at soliciting public comments about how the Service can clarify the criteria for issuance of programmatic Eagle ITPs under the Eagle Permit Rule.¹¹⁰ Indeed it's not difficult to muster sympathy for the plight of both wind project developers and bird advocacy groups as they try to work their way through this extremely messy and at times contradictory mélange of rules, proposed rules, guidance and laws related to wind energy and eagles. Add to that the fact that many of the ingredients in this regulatory soup are not yet fully cooked and the chances for the recipe resulting in a satisfying result for anyone are slim.

D. Eagle Conservation Plan Guidance

The Service received over 130 public comments during the public comment period for the Draft Eagle Guidance, including voluminous comments from several wind developers, state agencies, wind energy trade groups, bird interest groups, and unaffiliated individuals.¹¹¹ These comments show that, as was the case with the Eagle Permit Rule and the proposed rule to extend the programmatic Eagle ITP term to 30 years, this attempt to balance many competing interests within an existing legal

wind project developers on voluntary steps they can take to address risks to species of concern from wind energy development. The Land-Based Guidelines specify that the "compatible" Eagle Plan Guidance, not the Land-based Guidelines, is to be consulted by a developer if eagles are identified as a potential risk at a project site. *Id.* at 3.

110. Eagle Permits; Revisions to Regulations Governing Take Necessary To Protect Interests in Particular Localities. 77 Fed. Reg. 22278 (proposed Apr. 13, 2012) (to be codified at 50 C.F.R. pt. 22) (noting that stakeholders have expressed concerns with the Eagle Permit Rule and seeking public input on how the Service can clarify the criteria for issuance of programmatic and standard Eagle ITPs. Specifically, the Service sought public input on whether the Eagle Permit Rule should be revised to make the "take that cannot practicably be avoided" criteria for issuance of a standard applicable to programmatic Eagle ITPs as well, rather than the current criteria for programmatic permits that the take be "unavoidable" and whether it should modify its current interpretation of the Eagle Act's preservation standard to mean "consistent with the goal of stable or increasing breeding populations" for purposes of issuing Eagle ITPs.)

111. The Service issued a Notice of Availability for public comments on the Draft Eagle Guidance on February 18, 2011. Migratory Birds; Draft Eagle Conservation Plan Guidance, 76 Fed. Reg. 9,529 (proposed Feb. 18, 2011) (to be codified at 50 C.F.R. pt. 22). By the close of the comment period on May 19, 2011, the Service received over 130 public comments. *See Comments - Draft Eagle Conservation Plan Guidance*, U.S. FISH AND WILDLIFE SERV. (OCT. 9, 2012), available at http://www.fws.gov/windenergy/Guidance_Comments6.html.

framework managed to make everyone unhappy. Perhaps recognizing this and presumably wrestling with how the Draft Eagle Guidance could be modified to address so many conflicting and often contradictory concerns raised by public comments, more than 18 months passed from the close of the public comment period on the Draft Eagle Guidance to the Service's issuance of the final Eagle Conservation Plan Guidance (the "Final Eagle Guidance") on April 26, 2013, a full year later than the issuance date of Spring 2012 projected in the Draft Eagle Guidance.¹¹²

At over 100 pages, the Final Eagle Guidance provides detailed recommended procedures "to promote compliance" with the BGEPA generally and programmatic permits under the Eagle Permit Rule

112. EAGLE CONSERVATION PLAN GUIDANCE, *supra* note 41. An open question since the development of the Eagle Permit Rule is whether a developer that obtains a take permit under those rules receives any protection from prosecution under the MBTA for the take of an eagle. The Draft Eagle Guidance suggested that no such protection exists: "Because neither the MBTA nor its permit regulations . . . provide a specific mechanism to permit 'unintentional' take, it is important for project proponents to work proactively with the Service to avoid and minimize take of migratory birds." In other words, caveat emptor—obtaining a take permit under the BGEPA does not insulate you from prosecution under the MBTA. This language remains in the Final Eagle Guidance, but it is now preceded by a somewhat startling statement: "For eagles, the BGEPA take authorization serves as authorization under MBTA per 50 C.F.R. 22.11(b). For other MBTA-protected birds, because neither the MBTA nor its permit regulations . . . currently provide a specific mechanism to permit "incidental" take, it is important for project proponents to work proactively with the Service to avoid and minimize take of migratory birds." Does this mean the Service is guaranteeing a wind project developer immunity from MBTA prosecution for taking a bald or golden eagle so long as it holds a valid incidental take permit under the BGEPA's Eagle Permit Rules? If so, does the Service even have the authority to make such a guarantee where it is the Department of Justice, not the Service that makes the ultimate decision on whether to bring a prosecution under the MBTA? 50 C.F.R. 22.11(b) provides that the holder of a BGEPA take permit does not need a permit under the regulations implementing the MBTA for any activity permitted under the MBTA with respect to bald or golden eagles. Sounds good, but recall that the incidental take of a protected bird (which includes eagles) is not an activity permitted under the MBTA. Thus, the Service's sole source of authority for this radical new conception of the extent of protection offered to the holder of an incidental take permit appears to contradict rather than support it. At the time of this writing, 2 months after the issuance of the Final Eagle Guidance, the author has found no discussion or analysis of what this apparently new approach means for MBTA liability for wind developers who take eagles pursuant to a BGEPA incidental take permit.

specifically.¹¹³ A wind developer seeking a programmatic Eagle ITP for the unintentional take of eagles by its proposed project is encouraged but not required to develop an Eagle Conservation Plan (ECP) that adheres to the data collection and analysis processes set forth in the Final Eagle Guidance.¹¹⁴ These processes fall into the following five stages that roughly correspond to the stages of constructing and operating a wind farm and must be addressed in the ECP: (1) collecting preconstruction information to identify important eagle use areas to identify appropriate development sites; (2) conducting surveys and assessments of the chosen site to quantify the risk of the wind project to eagles; (3) using the data gathered in stage 2, model the potential level of eagle fatalities and other forms of take from the project during the tenure of the permit; (4) determine potential conservation measures and advanced conservation practices to avoid or minimize these potential impacts; and (5) developing a protocol to monitor the actual impacts to eagles during construction and operation of the wind farm.¹¹⁵ It is the ECP (or an alternate submittal should the developer decide not to follow the guidelines) that the Service will evaluate in determining whether to issue a programmatic Eagle ITP.

There are many changes from the Draft Eagle Guidance in the Final Eagle Guidance; several of which strongly suggest that the Service was compelled by the criticisms leveled against the Draft Eagle Guidance by the American Wind Energy Association and other wind energy interest and trade groups. Most notable for purposes of this article is the addition of language to the guidance recommending a prenegotiated “cost cap” for any advanced conservation practices (ACPs) required in the programmatic Eagle ITP to provide “financial certainty” to the developer.¹¹⁶ Recall that under Section 22.26(a) of the Eagle Permit Rule a programmatic Eagle ITP may only be issued if it can be shown that the proposed incidental take is “unavoidable” even after implementation of ACPs. However, in the Eagle Permit Rule’s more than three years of existence, the Service has yet to approve a single ACP for wind energy projects because “there are currently no available scientifically supportable measures that will reduce eagle disturbance and

113. *Id.* at 4.

114. While the Service is at pains to emphasize that a wind developer seeking a programmatic Eagle ITP that chooses an approach to demonstrating Eagle Permit Rule compliance that deviates from the voluntary guidelines will not be denied the permit on that basis alone, it suggests that the developer should coordinate closely with the Service on this alternative approach and will be likely to experience longer application processing times. *See id.* at 5.

115. *Id.*

116. *Id.* at 10.

blade-strike mortality at wind projects.”¹¹⁷ Without an approved ACP to use in testing whether a proposed incidental take is in fact unavoidable after its implementation, the Service would appear to be powerless to issue a programmatic permit that meets 22.26(a)’s requirements. The Final Eagle Guidance’s creative solution to this problem is to suggest the development of “experimental ACPs” as part of the programmatic take permit process.¹¹⁸ The Final Eagle Guidance suggests that during the permitting process the Service and permit applicant should discuss and identify any experimental ACPs that might reduce or eliminate risks to eagles from the proposed wind farm. Unless there is “reasonable scientific basis” to implement an identified experimental ACP upon issuance of the permit, its implementation will be deferred until there is an actual eagle take by the wind farm or the Service determines its implementation is warranted by a heightened risk of eagle take by the wind farm’s facilities.¹¹⁹ The developer’s agreement to this scheme of deferred implementation is a condition to receiving the programmatic Eagle ITP.

The Service envisions negotiating the cost cap for implementing these experimental ACPs prior to issuance of the permit, and suggests the cap amount should be “relevant to the theorized risk factors identified for the project, and proportional to overall risk.”¹²⁰ That rather opaque language, which is the extent of the Final Eagle Guideline’s discussion of the cost cap, is illustrative of Final Eagle Guidance’s encouraging but ultimately unsuccessful attempt to address the cost uncertainty barrier to increasing programmatic Eagle ITP applications. Rather than basing the cost cap calculation on something tangible and presumably knowable, such as a joint determination of the expected costs of implementing the specific mitigation measures that make up the ACP, the Service opts for a far “squishier” standard focused exclusively on undefined risk factors. This standard is troubling on two fronts. First because it suggests the Service lacks confidence that it can create an experimental ACP with specific, scientifically supported mitigation requirements to support an activity and hard cost-based cap. If that’s the case, the financial certainty offered by the cost cap offers cold comfort to the wind developer, who must agree upfront to an experimental ACP with uncertain requirements. And second, even if the mitigation measures that make up the experimental ACP are amenable to

117. *Id.* See also 50 C.F.R. § 22.3.

118. EAGLE CONSERVATION PLAN GUIDANCE, *supra* note 41, at 10. These ACPs would be experimental because at the time of permitting they would not meet C.F.R. § 22.3 definition of ACPs as “scientifically supportable measures that are approved by the Service and represent the best available techniques to reduce eagle disturbance and ongoing mortalities to a level where remaining take is unavoidable.”

119. *Id.*

120. *Id.*

such a calculation, the Service could nevertheless find justification in the proposed risk-based standard for a cost cap far in excess of the actual ACP implementation costs based on a conception of the yet-to-be built project's risks to eagles that is at odds (perhaps radically so) with the developer's. While the idea of a cost cap is appealing in its potential to offer cost certainty, that appeal disappears without a corresponding assurance that the amount of the cap will be rationally related to actual cost of implementing the experimental ACP.

Further undermining the alleged cost certainty offered to developers by the proposed cost cap is the fact that it does not appear to be applicable to any compensatory mitigation measures required of the developer. The Final Eagle Guidance restates the Eagle Permit Rule's requirement that a programmatic Eagle ITP may only be issued if the proposed take is compatible with the BGEPA's underlying goal, as interpreted by the Service, of increasing or stabilizing eagle breeding populations. To meet this requirement, the project ECP should show that the level of eagle take from the wind farm predicted in the ECP is within the applicable regional eagle take threshold set out in the Eagle Permit Rule's FEO. However, even if the predicted take exceeds the applicable regional eagle take threshold, the permit may be issued if compensatory mitigation measures the developer commits to perform (by reducing another ongoing form of eagle mortality (e.g., electrocution by power lines) and/or causing an increase in carrying capacity) will bring the predicted take within the threshold. While the Service suggests that any compensatory mitigation measures should be specified in the permit to provide the developer to account for the cost of such measures in evaluating project economics, it warns that a failure to properly estimate eagle takes from the project (identified in post-permit issuance project monitoring in the ECP) may result in requiring the developer to undertake post-operation compensatory mitigation measures not anticipated in the permit that will pose "hardships" for the developer.¹²¹ The scale and scope of these hardships will be determined through the Final Eagle Guideline's recommended adaptive management framework, which "consists of case-specific considerations applied within a national framework" and that may include "operational adjustments at individual projects at regular intervals where deemed necessary and appropriate."¹²²

The Final Eagle Guidance, which was developed in response to "the urgent need for guidance on permitting eagle take at wind facilities"¹²³ tries but fails to provide a workable solution to balancing the wind developer/investor Holy Grail of permitting and cost certainty with bird advocates' insistence that the promise of eagle protection made by the

121. *Id.* at 11.

122. *Id.* at 9.

123. DRAFT EAGLE CONSERVATION PLAN GUIDANCE, *supra* note 1, at 8.

BGEPA be supported by a strong and thoughtful permitting regime, because it ultimately fails to adequately address the fundamental issues of permit insecurity and cost uncertainty that have caused the underutilization of programmatic Eagle ITPs and stymied the development of wind energy projects in eagle habitat. The continuation of this state of affairs is likely welcomed by some who believe that wind energy and eagles are inherently incompatible and that the death of even one eagle is too steep a price to pay for the environmental benefits offered by wind energy. While it's not hard to sympathize with this hardline stance, especially when faced with the horrible damage wind turbines inflict on these magnificent animals,¹²⁴ the present and future environmental catastrophe that is global warming and the dearth of currently available economically and politically viable clean energy alternatives to wind energy with the potential to reduce our dependence on the greenhouse gas emitting fossil-based energy sources that are a primary cause of global warming demands a more accommodating approach.

This is not to say that transitioning from coal, oil and gas to wind is the single solution to climate change. Wind energy must pass over many hurdles before it has a realistic chance of displacing fossil fuels as the primary source of electrical generation in the U.S., including its intermittent nature (the wind does not blow all of the time) which makes it ill-suited to providing the baseload power required by utilities and regulators, an economic handicap imposed by a major imbalance in the federal subsidies wind energy receives as compared to fossil fuels,¹²⁵ and significant opposition to expanded wind energy based on aesthetics, noise and other nuisance-based complaints. And even if and when those hurdles are overcome, wind energy would be just one resource in a suite of zero or low

124. For a graphic description of this damage, *see* Cappiello, *supra* note 2. ("The rehabilitation coordinator for the Rocky Mountain Raptor Program, Michael Tincher, said he euthanized two golden eagles found starving and near death near wind farms. Both had injuries he'd never seen before: One of their wings appeared to be twisted off.").

125. A study by the Environmental Law Institute found that during the period of 2002-2008 federal subsidies for fossil fuels outpaced subsidies for renewable energy (wind, solar, biomass, etc.) by almost three-to-one (\$72.5 billion to \$29 billion). *See* ENVIRONMENTAL LAW INSTITUTE, ESTIMATING U.S. GOVERNMENT SUBSIDIES TO ENERGY SOURCES: 2002-2008 (2009), *available at* http://www.elistore.org/Data/products/d19_07.pdf. What's more, most of the federal subsidies for fossil fuels are written in the Internal Revenue Code as permanent provisions that can be counted on in calculating project economics, while most renewable energy subsidies, such as the Production Tax Credit in I.R.C. § 45 (2006), are implemented through temporary enactments with short timeframes (often 2 years or less) that create uncertainty for project economics and depress investment interest.

emission energy sources necessary to fulfill our country's energy needs.¹²⁶ Nor is it meant to suggest that the immediacy of the environmental catastrophe that is global warming justifies wantonly sacrificing the survival of any animal that gets in the way of green energy. The same deep humanist concern that animates our profound concern for the future survival of the human animal on a hot planet should inform our efforts to find solutions to this threat, particularly those solutions that threaten the survival of non-human animals.

All of that said, however, there is likely no greater threat to the long-term survival of all animal species than climate change,¹²⁷ a fact that even many environmental groups who decry the injury done to animals by wind energy development recognize.¹²⁸ This dire threat demands solutions that recognize humankind's obligation to protect and preserve threatened and endangered animal species while also making rational allowances for the continued responsible production of the electricity upon which our society relies. While by no means a complete solution, for the dual goals of protecting eagles and growing wind energy, there are two changes the Service can make to the Eagle Permit Rule and Final Eagle Guidance. These changes will increase the utilization of programmatic Eagle ITPs and continue the growth of wind energy in eagle habitat without unduly weakening the protections currently afforded eagles under the BGEPA. The first change is to increase the term of a programmatic Eagle ITP from five years to thirty years to match the typical life of a wind energy project, as proposed by the Service and discussed above.¹²⁹ The second is to build on the cost cap concept, described in the Final Eagle Guidance, by offering

126. In 2012, 12% of the electricity generated in the U.S. was generated from renewable resources, with 28% of that amount coming from wind energy and the rest from hydro (56%), biomass (12%), geothermal (3%), and solar (1%). See *Energy In Brief, How much of our electricity is generated from renewable energy?*, U.S. ENERGY INFO. ADMIN. (May 7, 2013), available at http://www.eia.gov/energy_in_brief/article/renewable_electricity.cfm.

127. See e.g., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 13-14, available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf (Predicting that among the likely irreversible impacts from climate change are extinctions of 40% to 70% of species assessed if the global average temperature increase exceeds about 3.5° Celsius).

128. See NATIONAL WILDLIFE FEDERATION, SHIFTING SKIES: MIGRATORY BIRDS IN A WARMING WORLD (2013), available at https://www.nwf.org/pdf/Reports/NWF_Migratory_Birds_Report_web_Final.pdf (recognizing the hazards posed to birds by renewable energy but nevertheless describing climate change as the biggest threat facing birds and advocating for a responsible and rapid transition to renewable energy sources such as wind energy).

129. Eagle Permits; Changes in the Regulations Governing Eagle Permitting, 77 Fed. Reg. 22267 (proposed Apr. 13, 2012) (to be codified at 50 C.F.R. pts. 13, 22).

more tangible assurances to a programmatic Eagle ITP permittee (and by extension its investors). These assurances would provide that unforeseen eagle-related circumstances during the life of the project will not increase the permittee's compliance obligations and costs. While these changes alter the Eagle Permit Rule's current incidental take regime, they are neither radical nor unprecedented, and making them would actually be a positive step by the Service in the direction of regulatory consistency by bringing the Eagle Permit Rule's incidental take permitting requirements more in line with those of that "other" species protection act many wind developers must contend with—the Endangered Species Act.¹³⁰

IV. Intentional Harmonization of Incidental Takes

There is almost no end to the factors a wind developer must consider when evaluating the suitability of a site for a wind farm. At the top of the list of course is the site's wind resource, but not far behind are access to transmission lines, interconnection possibilities, ease of construction, landowner interest in leasing property, local land use rules, potential NIMBY issues, and on and on. There are also the all important considerations of what animals live on and above the site, how and to what degree those animals be impacted by the wind farm, and assuming there are impacts, what laws govern whether and to what extent those impacts are permissible.

A. A Parable

Imagine two fictional wind developers that in the grand tradition of uninspired law professor naming conventions (Blackacre? Greenacre? Ugh.) we'll call Developer A and Developer B. Each developer is searching high and low for a suitable site upon which to build its next wind farm and each stumbles across a site that appears to have it all. While these sites are in different parts on the U.S., they are both genuine wind energy nirvanas with strong and steady winds, transmission lines galore, a willing landowner, and strong local support for wind energy. After securing the necessary land rights for its site, each developer gets busy with its site studies, including a site assessment to determine what critters that live on or use the site. A few weeks later Developer A receives a completed site assessment from its overpriced but thorough consultant that highlights only one species of concern on the site: black-footed ferrets, a listed endangered species under the ESA.¹³¹ The next day Developer B receives its site assessment from its overpriced but thorough consultant that also highlights only one species of

130. Endangered Species Act of 1973, 16 U.S.C. §§ 1531 – 1544 (2006).

131. The black-footed ferret was first listed under the ESA on January 4, 1974. See Black-Footed Ferret Draft Recovery Plan, 78 Fed. Reg. 23,948 (published Apr. 23, 2013).

concern on the site: golden eagles, a protected species under the BGEPA. Concerned, both developers ask their overpriced but thorough consultant do some impact modeling. The modeling for Developer A's site shows that two black-footed ferrets will likely be killed as an incidental result of the construction and operation of the wind farm on the site. The modeling for Developer B's site shows that two golden eagles will likely be killed as an incidental result of the construction and operation of the wind farm on the site.

Undeterred by this news, Developer A and Developer B each decide to commit the significant time, resources and money to seek an incidental take permit under the relevant law. Now imagine that both developers are successful in this quest. What do they each have? Developer A has an incidental take permit under the ESA that lasts for the duration of the project and provides meaningful assurances that as long as Developer A is in compliance with the permit it will not bear the expense of responding to impacts on black-footed ferrets on the site resulting from unforeseen circumstances. Developer B has a programmatic Eagle ITP that lasts for only the first 5 years of the project with no automatic renewal and a very real possibility of incurring substantial additional mitigation costs even during this attenuated term.

What is the rationale for this difference? It can't be based on different approval standards and processes for the permits. The standards and processes for obtaining a Programmatic Eagle ITP are if anything more arduous than those for obtaining an ESA incidental take permit. It can't be related some extralegal conception of the intrinsic value of the animal at issue. Our species protection laws do not countenance such distinctions, and even if they did, it would be a strange result indeed to offer better protection to the non-listed species than to the listed endangered species.¹³² It can't be . . . well . . . it can't be anything really; yet it is. To understand why this difference exists and, more important, why it should be done away with, it's helpful to trace the evolution of incidental take permits under the ESA.

B. ESA Incidental Take Permits

In passing the ESA in 1973, Congress recognized the "esthetic, ecological, educational, historical, recreational, and scientific value" of endangered and threatened fish, wildlife and plants to the United States and

132. The golden eagle has never been listed as an endangered or threatened species under the ESA. Until its delisting on August 9, 2007, the bald eagle spent almost 30 years as a listed endangered or threatened species under the ESA. *See Removing the Bald Eagle in the Lower 48 States from the List of Endangered and Threatened Wildlife*, 72 Fed. Reg. 37,346 (July 9, 2007) (to be codified in 50 C.F.R. pt. 17).

its citizens.¹³³ Giving voice to the animating concern behind the law, it found that various species of fish, wildlife, and plants in the United States had been rendered extinct or were in danger of being rendered extinct “as a consequence of economic growth and development untempered by adequate concern and conservation.”¹³⁴ Congress’s answer to the problem of species extinction can be seen in the expressed purpose for the ESA: to protect and recover threatened and endangered species and the ecosystems upon which they depend.¹³⁵

Co-administered by the Service (with responsibility for terrestrial species and freshwater fish) and the National Marine Fisheries Service (NMFS) (with responsibility for marine species and anadromous fish), the ESA utilizes a listing mechanism in Section 4 to bring threatened and endangered species within the protections of the Act.¹³⁶ A species may be listed as either endangered or threatened. An endangered species is “in danger of extinction throughout all or a significant portion of its range.”¹³⁷ A threatened species is “likely to become an endangered species within the foreseeable future.”¹³⁸

Once a species has been listed, the full panoply of ESA protections are brought to bear to reverse its decline and hasten its recovery, including designating critical habitat for the species¹³⁹ and developing recovery

133. 16 U.S.C. § 1531(a)(3).

134. *Id.* § 1531(a)(1) - (2).

135. *Id.* § 1531(b). As many commentators have noted, while the ESA’s stated purpose to protect both imperiled species and the ecosystem upon which they rely, the Act’s failure to define the term “ecosystems” and its lack of any ecosystem protection requirements has resulted in the ESA’s primary use being the preservation of individual species and, more narrowly, the critical habitat they occupy, rather than broader shared ecosystems. See, e.g., Douglas P. Wheeler & Ryan M. Rowberry, *Habitat Conservation Plans and the Endangered Species Act*, in *ENDANGERED SPECIES ACT 220* (Donald C. Baur, William Robert Irvin, eds., 2010); LYNN SCARLETT, *RESHAPING THE ENDANGERED SPECIES ACT: A HOLISTIC APPROACH NEEDED?* (Resources for the Future 2010), available at <http://www.rff.org/rff/documents/rff-ib-10-15.pdf>.

136. 16 U.S.C. § 1533(a)(1). All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened under the ESA, “Species” is defined by Congress to include subspecies, varieties, and, for vertebrates, distinct population segments. For an excellent discussion of the listing process, see Kalyani Robbins, *Strength in Number: Setting Quantitative Criteria for Listing Species Under the Endangered Species Act*, 27 *UCLA J. ENVTL. L. & POL’Y* 1, 7 (2009).

137. 16 U.S.C. § 1532(6).

138. *Id.* § 1532(20).

139. *Id.* § 1533(a)(3).

plans.¹⁴⁰ Section 7 of the ESA imposes a requirement on all federal agencies to consult with the responsible agency (either the Service or NMFS) to insure that any action authorized, funded or carried out by the agency is “not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species.”¹⁴¹

Section 9 prohibits any person (private or public) from taking a listed species.¹⁴² Similar to the take definition under the BGEPA, a “take” occurs under the ESA when a listed species is harassed, harmed, pursued, hunted, shot, killed, wounded, trapped, captured or collected, or by any attempt to engage in such conduct.¹⁴³ The word “harm” in Section 9’s take standard was defined by the Secretary of Interior to include the injury or death of a listed species from “significant habitat modification or degradation” that impairs essential behavioral patterns, including breeding, feeding or sheltering, which significantly expanded the number of development activities requiring some habitat modification that could potentially be enjoined by the ESA.¹⁴⁴ In the absence of a valid exception (e.g., immunity from prosecution or holding a permit allowing the take), an entity that violates Section 9 by taking an endangered or threatened species faces potential monetary liability and imprisonment through federal enforcement or citizen suit.¹⁴⁵

This expansive take definition, coupled with several significant cases decided during the late 1970s and early 1980s constraining large development projects based on a strict reading of the ESA’s take prohibitions,¹⁴⁶ caused the financial and development communities to question the wisdom of investing the time, money and resources into a project that could be stopped at any time because of the presence of a listed species. In the large, capital-intensive project development world, financial investors demand a high degree of confidence in the return on their

140. *Id.* § 1533(f).

141. *Id.* § 1536(a)(2).

142. *Id.* § 1538(a)(1).

143. *Id.* § 1532(19).

144. Final Redefinition of “Harm,” 46 Fed. Reg. 54748, 54750 (Nov. 4, 1981) (codified in 50 C.F.R. pt. 17).

145. See 16 U.S.C. § 1540(a)-(f) (providing for monetary penalties, imprisonment, and property forfeiture for illegal takes of listed species).

146. See, e.g., *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 (1978) (enjoining the TVA’s construction of a dam that would eradicate the snail darter, a three-inch fish that was listed as endangered under the ESA); *Palila v. Haw. Dep’t of Land & Natural Res.*, 471 F. Supp. 985 (D. Haw. 1979), *aff’d*, 639 F.2d 495 (9th Cir. 1981) (affirming the district court’s ruling that harm caused by habitat modification from maintaining feral goats and sheep in the critical habitat of the endangered palila bird was a take under the ESA).

investment before they will commit funds. Simply put, investors are loathe to invest when their expected return on that investment is at risk because of factors that are hard to predict and quantify. The discovery of a listed species at a project site that can trigger ESA protections, up to and including stopping project operations that might take the species, particularly where the discovery is made at an operational project after investments have been made, presents just such an unacceptable investment risk and can stifle investment and development. This describes the environment in 1982 when Congress stepped in to amend the ESA to authorize the issuance of incidental take permits to private (non-federal) landowners under a revised Section 10(a) of the Act.¹⁴⁷ An incidental take is a take that is “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.”¹⁴⁸ This amendment represented a sea change in the ESA world. No longer was the take of a listed species a per se violation of the Act. Rather, a nonfederal project developer (and, importantly, its investors) was given an avenue for development of a project that might result in the incidental take a listed species but nevertheless would not run afoul of the Act.¹⁴⁹

An innovative conservation plan developed in 1982 between developers, citizen groups and the local government for the development of San Bruno Mountain in northern California is often credited for spurring the 1982 ESA amendment allowing for incidental take permits under the ESA. San Bruno Mountain was critical habitat for the Mission Blue butterfly, a listed endangered species. The coalition of developers, citizen groups and local government were well aware that any development of San Bruno Mountain was almost certain to violate Section 9 of the Act by taking Mission Blue butterflies, through injury or death resulting from habitat modification and more direct impacts. Undeterred, a steering committee was formed and it commissioned a biological study of the mountain that showed that even in the absence of development on the mountain, the butterflies’ host plants on the mountain would be destroyed due to naturally encroaching exotic species and brush, such as eucalyptus and grose.¹⁵⁰

147. 16 U.S.C. § 1539(a). Prior to the 1982 amendments, Section 10 allowed issuance of take permits to non-federal entities for very limited purposes, including scientific permits, hardship exemptions, and the release of experimental populations.

148. *Id.* § 1539(a)(1)(B).

149. Section 7 of the ESA provides authority for the issuance of incidental take permits to federal entities. *Id.* § 1536.

150. See SAN BRUNO MOUNTAIN COOPERATIVE SITE, SAN BRUNO MOUNTAIN HCP DOCUMENTS Volume 1, Summary at S-1 (Nov. 8, 1982), available at http://www.traenviro.com/sanbruno/hcp/vol_1_summary.pdf.

In light of this study, the steering committee developed the San Bruno Mountain Area Habitat Conservation Plan, which required the project developers to undertake mitigation measures such as developers dedicating privately owned lots on the mountain to “conserved habitat” to compensate for the estimated destruction of 14% of the butterflies’ habitat (and resultant ESA-prohibited takes) from the proposed development.¹⁵¹ By comparing the expected destruction of Mission Blue’s habitat from encroaching brush and exotic species in the absence of any development of the mountain with the preservation of 86% of the butterflies’ habitat expected from the mitigation measures required of the planned development, the Habitat Conservation Plan concluded that it was the latter path that better protected the listed species.¹⁵² Emboldened by this conclusion, the San Bruno constituents lobbied Congress for an exemption from the Act’s take prohibitions.

In amending Section 10(a) to allow for the issuance of incidental take permits, Congress also adopted the San Bruno model by requiring the development of a habitat conservation plan designed to further the long-term conservation of the species at issue and to avoid jeopardy to the continued existence of the species as part of the application for an incidental take permit.¹⁵³ Similar to the ECP described in the Final Eagle Guidance, the habitat conservation plan specifies the impact which will likely result from such taking; the steps the applicant will take to minimize and mitigate such impacts, including funding sources; and the alternative actions to the requested taking the applicant considered and why any such alternatives are not being utilized.¹⁵⁴

When it took a file to the sharp teeth of the ESA by providing for incidental take permits, Congress clearly intended to encourage investment in and development of commercial projects on lands occupied by listed species. Indeed, Congress indicated it was acting to “address[] the concerns of private landowners who are faced with having otherwise lawful actions not requiring Federal permits prevented by section 9 prohibitions against taking.”¹⁵⁵ Rather than the binary take or no take standard of Section 9, Section 10’s incidental take permits and associated habitat conservation

151. See *id.* at V-4, available at http://www.traenviro.com/sanbruno/hcp/vol_1_institutional_program.pdf.

152. See *id.* at IV-5, available at http://www.traenviro.com/sanbruno/hcp/vol_1_imp_on_species.pdf.

153. 16 U.S.C. § 1539(a)(2). In fact, Congress made the San Bruno HCP its model habitat conservation plan in drafting the amendments, even going so far as to adopt several of its elements into the 1982 amendments. See H.R. Conf. Rep. No. 97-835 (1982), reprinted in 1982 U.S.C.C.A.N. 2860.

154. 16 U.S.C. § 1539(a)(2).

155. H.R. Conf. Rep. No. 97-835 at 29 (1982), reprinted in 1982 U.S.C.C.A.N. 2860, 2870.

plans invited private development of lands even where a listed species might suffer injury as an incidental result of such development. An important component of this invitation was ensuring the duration of an ESA incidental take permit was coincident with the life of the proposed development.¹⁵⁶ Unlike a programmatic Eagle ITP under the Eagle Permit Rules that must be renewed every five years during the several decade life of the wind farm, an ESA incidental take is usually granted for the life of the project. This life-of-project permit duration resulted from Congress's expressed intent in passing the 1982 ESA amendments to encourage private development within the strictures of the ESA:

[S]ignificant development projects often take many years to complete and permit applicants may need long-term permits. In this situation, and in order to provide sufficient incentives for the private sector to participate in the development of such long-term conservation plans, plans which may involve the expenditure of hundreds of thousands if not millions of dollars, adequate assurances must be made to the financial and development communities that a[n incidental take] permit can be made available for the life of the project.¹⁵⁷

Proponents of the 1982 ESA amendments clearly expected the creation of a life-of-project incidental take permit would result in a flood of incidental take permit applications from project developers who finally had a way around the ESA's strict take prohibitions, but that flood turned out to be a trickle. Presaging the "tree falling in a forest" developer nonresponse to the Eagle Permit Rule's creation of programmatic Eagle ITPs more than two decades later, there was no boom in ESA incidental take permit applications during the remainder of the 1980s and into the early 1990s.¹⁵⁸ What was behind this indifference? In their article on habitat conservation plans under the ESA, Douglas P. Wheeler and Ryan M. Rowberry suggest an answer:

156. 50 C.F.R. § 17.32(b)(4) (2012) specifies the duration of incidental take permits: "The duration of permits issued under this paragraph shall be sufficient to provide adequate assurances to the permittee to commit funding necessary for the activities authorized by the permit, including conservation activities and land use restrictions."

157. H.R. Conf. Rep. No. 97-835 at 31 (1982), *reprinted in* 1982 U.S.C.C.A.N. 2860, 2872.

158. Only 14 incidental take permits were issued under Section 10 in the period from 1982 to 1992. Wheeler & Rowberry, *supra* note 135, at 224.

Unfamiliarity with the process for applying for an ITP, along with the time and cost associated with completion of the requisite biological surveys undoubtedly contributed to this sluggish start. But the overwhelming deterrent to greater use of HCPs remained the looming specter of continuing liability for species not covered by the Plan, and for unanticipated injury to habitat.¹⁵⁹

In other words, while the existence of a pathway to up-front project ESA liability certainty under Section 10's incidental takes permit regime offered some reassurance to nervous developers and investors, it was at best an incomplete and shaky reassurance because it did nothing to ameliorate the biggest unknown—what happens if, post-project operation, a non-permitted impact on a listed species covered by the permit is discovered? Must the project be taken off-line while the parties figure out how to deal with this new impact? How long will that take? And, most important from an investor's point of view, how does one model the impact of return on investment from an eventuality that is neither certain nor easily quantifiable?

Project developers and investors voted with their feet and made little use of incidental take permits. While it is no doubt the case that rather than failing to build projects that threatened listed species during this period, some developers opted instead to play ESA roulette by building unpermitted projects and hoping for the best, it is likely that many projects that would otherwise have been built, with all attendant economic benefits to local communities and the overall economy, withered on the vine for lack of capital. Something had to change to make the twin goals of species protection and economic development of the 1982 amendments a reality. That something (or, rather, someone) arrived in the person of Secretary of the Interior Bruce Babbitt. Appointed by President Clinton and confirmed by the Senate in 1993, Secretary Babbitt breached the dam holding back ESA incidental take permit applications through a series of regulatory reforms aimed at making the endangered species act friendlier to private sector development and investment while maintaining its core mission of protecting and restoring listed species. Secretary Babbitt focused particularly on unsticking the incidental take permit application process. The lubricant Babbitt selected for the job was the "No Surprises" rule.¹⁶⁰

159. *Id.* at 223-24.

160. Secretary Babbitt did not invent this rule out of whole cloth. In fact, Congress recognized the need for assurances of economic and regulatory certainty to encourage private development of lands containing listed species in its deliberations over the 1982 amendments to the ESA: "The Committee intends that the Secretary may utilize [Section 10(b)] to approve conservation plans which provide long-term commitments regarding the conservation of listed as well as unlisted species and

C. “No Surprises” Rule

First proposed in 1994¹⁶¹ and issued as a final rule in 1998,¹⁶² the “No Surprises” rule requires the agency (either the Service or NMFS) approving an incidental take permit and related habitat conservation plan under Section 10(b)(2) to provide the nonfederal applicant with assurances that the government “will honor its agreements under a negotiated and approved HCP for which the permittee is in good faith implementing the HCP’s terms and conditions.”¹⁶³ Specifically, the “No Surprises” rule provides that even if “unforeseen circumstances”¹⁶⁴ with regard to a listed species covered by the habitat conservation plan arise after approval of the plan, the incidental take permit holder will not be required to commit “additional land, water or financial compensation or additional restrictions on the use of land, water, or other natural resources” to respond to the impact of these unforeseen circumstances on the covered species.¹⁶⁵ In other words, as long as the incidental take permittee is in compliance with the approved habitat conservation plan, it will not be required to expend additional resources or commit to further restrictions on its use of the land beyond the level required in the HCP because of unforeseen circumstances impacting a covered species, even if such additional expenditures or restrictions would

long-term assurances to the proponent of the conservation plan that the terms of the plan will be adhered to and that further mitigation requirements will only be imposed in accordance with the terms of the plan. In the event that an unlisted species addressed in the approved conservation plan is subsequently listed pursuant to the Act, no further mitigation requirements should be imposed if the conservation plan addressed the conservation of the species and its habitat as if the species were listed pursuant to the Act.” See H.R. Conf. Rep. No. 97-835 at 30 (1982), *reprinted in* 1982 U.S.C.C.A.N. 2860, 2871. The No Surprises Policy cited and relied upon the same statement of the Congressional intent. See Habitat Conservation Plan Assurances (“No Surprises”) Rule, 63 Fed Reg. 8859, 8860 (Feb. 23, 1998) (codified in 50 C.F.R. pt. 17).

161. Habitat Conservation Plan Assurances (“No Surprises”) Rule, 63 Fed. Reg. at 8859.

162. *Id.*

163. No Surprises Policy, 62 Fed. Reg. 29091, 29093 (proposed May 29, 1997) (to be codified at 50 C.F.R. pt. 222).

164. “Unforeseen circumstances” means “changes in circumstances affecting a species or geographic area covered by an HCP that could not reasonably have been anticipated by the by plan developers or the Services at the time of the HCP’s negotiation and development, and that result in a substantial and adverse change in the status of a covered species.” Habitat Conservation Plan Assurances (“No Surprises”) Rule, 63 Fed. Reg. at 8868.

165. 50 C.F.R. § 17.32(b)(5)(iii)(B).

otherwise be appropriate under the ESA to conserve the covered species. The cost of any additional mitigation measures to respond to such unforeseen circumstances is borne by the federal government, not the permittee.¹⁶⁶

The extent to which the “No Surprises” rule met its stated objective to “provide economic and regulatory certainty”¹⁶⁷ for nonfederal incidental take permittees can be seen by the huge increase in the number of incidental take permits and related habitat conservation plans approved in the years following its finalization.¹⁶⁸ Here at last was the risk reduction long sought by private developers and investors. By diminishing the specter of post-operational ESA take liability and offering a heightened degree of cost certainty, the incidental take permit amendments, habitat conservation plans, and the “No Surprises” rule combined to open the door to private investment in projects with incidental impacts on ESA-listed species. Whereas before these projects might have struggled to attract investors because of Section 9’s harsh take prohibitions, this suite of reforms made them a viable investment target. In so doing, the twin goals of the 1982 ESA amendments of encouraging and accommodating development while preserving and bolstering listed species and their habitats were met. Once again developers and investors voted with their feet, but this time it was to walk toward, rather than away from, private development projects with ESA implications.

D. Finishing the Job

The BGEPA, like the ESA, is first and foremost a species preservation and recovery law. As originally drafted both laws took a strict approach to achieve their preservation and recovery goals by outlawing all takings of covered species. This inflexibility stifled desirable and necessary development without offering a clear benefit to species preservation and recovery, so both laws were changed to allow for incidental takings of covered species in limited circumstances. In both instances, these changes did not have the desired effect of providing a pathway to responsible development that would be utilized by developers. For the ESA, this was fixed through a life-of-project permit duration and the introduction of “no surprises” assurances that gave developers the regulatory certainty they needed to move forward under the ESA’s incidental take permit regime.

166. *Id.* § 17.32(b)(5).

167. Habitat Conservation Plan Assurances (“No Surprises”) Rule, 63 Fed. Reg. at 8867.

168. Compare the 14 incidental take permits were issued under Section 10 in the period from 1982 to 1992 to the 601 incidental take permits issued in the period from 1993 to 2009. See Wheeler & Rowberry, *supra* note 135, at 224-25.

The question of whether the ESA has been an overall success is the subject of no small debate that is beyond the scope of this article, but it's hard to argue with the ESA's remarkable track record of promoting the recovery of listed species. A 2012 report by the Center for Biological Diversity compared the actual recovery rate of 110 ESA listed species with the recovery rates projected in their federal recovery plans and found that 90% of the species are recovering at the rate called for by their federal recovery plans.¹⁶⁹ There is no evidence that the issuance of life-of-project incidental take permits with "no surprises" assurances to developers over the last 20 years has impeded this species recovery in any meaningful way. In fact, the opposite is likely true, as the development and implementation of the HCP required to obtain an ESA incidental take permit has the salutary effect of focusing the permittee on critical aspects of species protection and recovery (and obtaining its tangible and measurable commitment to adhere to them) before the first shovel of dirt has been turned on the project. In this way, the ESA has managed to meet its ultimate goal of species protection and recovery while allowing the incidental take of species under life-of-project permits with no surprises assurances. One can easily imagine a similar result should the Eagle Permit Rule track this same path toward balancing conservation with environmentally responsible development. It is a result we should welcome.

V. Conclusion

Wind turbines kill birds. A lot of birds. You would be hard pressed to find someone who is happy with that fact, including anyone in the wind energy development community. But until and unless there are technological advances in wind turbine design that eliminate their deadly impact on birds, it is something we must accept. Of course, acceptance does not and should not mean issuing a blank check to wind energy developers to wantonly injure birds. To do so would violate both the spirit and letter of a host of environmental laws that have at their core a stubborn insistence that human demands on the environment must be balanced against duties of stewardship owed to all animals. Among these laws is the BGEPA, which makes manifest our commitment to preserving bald and golden eagles. It does no damage to this commitment to recognize that it must be balanced other environmental imperatives, including and especially an imperative of the scope and seriousness of global warming. The Service's creation of programmatic incidental eagle take permits in the Eagle Permit Rule was a clear but thus far unsuccessful effort to strike this balance by allowing for the responsible development of wind energy projects in eagle

169. See KIERAN SUCKLING ET AL., ON TIME, ON TARGET: HOW THE ENDANGERED SPECIES ACT IS SAVING AMERICA'S WILDLIFE (Center for Biological Diversity 2012), available at http://www.esasuccess.org/pdfs/110_REPORT.pdf.

habitat. By adopting the targeted changes to the Eagle Permit Rule suggested in this article, however, balance is still possible.