Rulemaking Petition to the U.S. Fish & Wildlife Service for Regulating the Impacts of Wind Energy Projects on Migratory Birds

Petitioner: AMERICAN BIRD CONSERVANCY

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GLOSSARY

ABC	American Bird Conservancy
ABPP	Avian and Bat Protection Plan
APA	Administrative Procedure Act, 5 U.S.C. § 500 et seq.
AWEA	American Wind Energy Association
AWWI	American Wind Wildlife Institute
BCC	Birds of Conservation Concern
BGEPA	Bald and Golden Eagle Protection Act, 16 U.S.C. §§ 668-668c
BMPs	Best Management Practices
BOEM	U.S. Bureau of Ocean Energy Management
BLM	U.S. Bureau of Land Management
DOE	U.S. Department of Energy
DOI	U.S. Department of Interior
ESA	Endangered Species Act, 16 U.S.C. § 1531 et seq.
FAA	Federal Aviation Administration
FACA	Federal Advisory Committee Act, 5 U.S.C. App. 2 §§1-16
FOIA	Freedom of Information Act, 5 U.S.C. § 552
FWS or Service	U.S. Fish and Wildlife Service
GAO	U.S. Government Accountability Office
GW	Gigawatt
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit
MBTA	Migratory Bird Treaty Act, 16 U.S.C. § 703 et seq.
MOU	Memorandum of Understanding
MW	Megawatt
OCS	Outer Continental Shelf
Corps	U.S. Army Corps of Engineers

EXECUTIVE SUMMARY

Pursuant to the Administrative Procedure Act ("APA"), 5 U.S.C. § 553(e), and the implementing regulations of the U.S. Department of the Interior ("DOI"), 43 C.F.R. Pt. 14, American Bird Conservancy ("ABC"), hereby submits this Petition for Rulemaking to the U.S. Fish and Wildlife Service ("FWS" or "Service"), requesting the agency to promulgate regulations governing the impacts of wind energy projects on migratory birds. In particular, ABC petitions FWS to establish a permitting scheme that would regulate the impacts of wind power projects on migratory birds. As discussed in this Petition, such a scheme is clearly authorized by the Migratory Bird Treaty Act ("MBTA"), 16 U.S.C. § 703 et seq., would significantly improve the protection of birds covered by the MBTA, and would afford the wind power industry a degree of regulatory and legal certainty that cannot be provided in the absence of such a scheme.

ABC recognizes that properly sited and operated wind energy projects may be an important part of the solution to climate change, a phenomenon that indisputably poses an unprecedented threat to species and ecosystems. However, such projects also pose a serious threat to various species of birds, including large birds of prey and raptors such as the Bald Eagle, Golden Eagle, Ferruginous Hawk, Swainson's Hawk, American Peregrine Falcon, Short-eared Owl, and Flammulated Owl; endangered and threatened species such as the California Condor, Whooping Crane, Snail Kite, Marbled Murrelet, Hawaiian Goose, and Hawaiian Petrel; and other species of special conservation concern such as the Bicknell's Thrush, Sprague's Pipit, Cerulean Warbler, Oak Titmouse, Lewis's Woodpecker, Brewer's Sparrow, Long-billed Curlew, Bay-breasted Warbler, and Blue-winged Warbler. These species are impacted by existing wind energy projects and threatened by potential projects primarily through collision with wind turbines and associated power lines, and through loss or modification of essential habitat.

Based on the operation of approximately 22,000 turbines, FWS estimated in 2009 that at least 440,000 birds were killed each year by wind turbines. By 2020, there are expected to be more than 100,000 wind turbines in the United States and these are expected to kill at least one million birds each year, an estimate that ABC believes will be exceeded significantly. Further, wind energy projects are also expected to impact almost 20,000 square miles of terrestrial habitat, and another 4,000 square miles of marine habitat.

The MBTA, Endangered Species Act ("ESA"), 16 U.S.C. § 1531 et seq., and the Bald and Golden Eagle Protection Act ("BGEPA"), 16 U.S.C. §§ 668-668c, prohibit "take" of migratory birds, endangered and threatened species, and Bald and Golden Eagles. 50 C.F.R. § 10.12 (implementing regulations defining the term "take" to include to wound or kill, or to attempt to wound or kill). Bald and Golden Eagles are protected under both MBTA and BGEPA, and many species listed under the ESA are also protected under the MBTA, such as Whooping Cranes, California Condors, Least Terns, Kirtland's Warblers, Northern Aplomado Falcons, Roseate Terns,

and Piping Plovers. While the ESA and BGEPA provide mechanisms for FWS to regulate, and in some instances authorize, take of endangered and threatened species and Bald and Golden Eagles respectively, at present no such comparable mechanism exists under the MBTA to authorize incidental take by wind power projects.

This reality is particularly significant for the wind industry because wind energy projects will inevitably take birds protected under the MBTA. In fact, because it is virtually impossible to operate a wind energy project without killing or injuring at least some migratory birds, most wind energy projects that are already in operation are in ongoing violation of the take prohibition of the MBTA. In addition, FWS itself is aware of other projects that are being planned that will also take migratory birds in violation of federal law.

FWS has prepared "voluntary" Guidelines in an attempt to address the impacts of wind energy projects on migratory birds instead of imposing mandatory regulatory obligations on wind energy projects to anticipate and avoid such impacts before they occur. By allowing the industry itself to make siting decisions in this manner, FWS has permitted widespread disregard for legal mandates the Service is entrusted to enforce. Further, while the Guidelines essentially treat the agency as a quasi-permitting authority requiring it to evaluate extensive information and provide advice to the developers, unlike a formal permitting system, FWS neither obtains appropriate permit fees (which typically provide some amount of resources and revenue to the agency), nor does the wind industry obtain unequivocal regulatory certainty for incidental take of migratory birds.

Thus, as explained in this Petition, ABC supports "bird-smart" wind energy that employs careful siting, operation, construction, mitigation, bird monitoring, and compensation criteria, designed to reduce and redress any unavoidable bird mortality and habitat loss. ABC recognizes the need for renewable energy development and will support the wind industry in its efforts to extend the federal tax grant and production tax credit for wind energy production, if FWS puts in place a system that ensures ongoing compliance with the MBTA along with other wildlife protection laws.

In this Petition, ABC urges FWS to promulgate regulations establishing a mandatory permitting system for siting, constructing, and operating wind energy projects and mitigating of their impacts on migratory birds. The Petition first sets forth the factual basis establishing the need for such a system, i.e., the proliferation of wind energy projects and the significant adverse effects this development is having and will increasingly have on migratory birds, particularly those of conservation concern. Then the Petition describes the legal framework under which FWS has more than sufficient authority to promulgate MBTA regulations specifically aimed at encouraging the development of wind power in a manner that ameliorates, to the extent practicable, the adverse effects on migratory birds. Further, the Petition examines in detail the several benefits of the proposed permitting system. Finally, ABC offers specific regulatory language that would accomplish the objectives identified in this Petition.

A. PETITIONER: AMERICAN BIRD CONSERVANCY

This Petition for Rulemaking is submitted on behalf of ABC by Meyer Glitzenstein & Crystal, a Washington D.C.-based public interest law firm specializing in environmental and wildlife laws.[1]

Petitioner ABC is a 501(c)(3) non-profit organization whose mission is to conserve native birds and their habitats throughout the Americas. It achieves this by safeguarding the rarest bird species, restoring habitats, and reducing threats to bird species. ABC is the only U.S.-based group with a major focus on bird habitat conservation throughout the entire Americas. ABC has more than 8,000 individual members and 30,000 constituents. ABC's members, supporters, and activists enjoy viewing, studying, and photographing migratory birds. Some of its members and activists routinely observe migratory birds in states such as California, New York, Texas, Pennsylvania, Washington and Oregon, where rapid wind energy development poses a serious threat to such birds.

ABC is a leading organization working to reduce threats to birds from habitat destruction; from collisions with buildings, towers, and wind turbines; and from toxins such as hazardous pesticides and lead. ABC uses a variety of mechanisms to achieve these objectives including scientific research and analysis; advocating for bird conservation at the local, state, regional, and federal levels; forming bird conservation partnerships; and pressing for meaningful regulatory changes to address such threats effectively through various means, including rulemaking petitions and litigation. See, e.g., ABC v Fed. Commc'ns Comm'n, 516 F.3d 1027 (D.C. Cir. 2008) (in response to ABC's review petition seeking protection of migratory birds from collisions with communications towers, the court vacated a part of the order for violation of the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq.). ABC's staff includes more than 20 scientists with expertise in migratory birds, over a dozen of whom have doctoral degrees. ABC's scientists have published in many reputed journals.[2]

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[1] More information about Meyer Glitzenstein & Crystal is available at http://www.meyerglitz.com/.

[2] These journals include the Antarctic Journal of the United States, The Auk, Biodiversity Conservation, Biological Invasions, Biological Sciences, Bird Conservation International, Boletin SAO, Canadian Field Naturalist, Chelonion Research Monographs, Colonial Waterbirds, Condor, Cotinga, Ecological Applications, Ecology, Emu, Florida Field Naturalist, International Zoo Yearbook, Journal of Avian Medicine and Surgery, Journal of Field Ornithology, Journal of Raptor Research, Journal of Wildlife Diseases, Journal of Wildlife Management, Molecular Ecology, Neotropical Birding, North American Bird Bander, Oecologia, Ornitologiá Columbiana, Ornitologiá Neotropical, Oryx, Pacific Conservation Biology, Proceedings of the National Academy of Science, Proceedings of the Western Foundation of Vertebrate Zoology, Wilson Bulletin, Wilson Journal of Ornithology, and Zoo Biology.

ABC launched its "Bird-Smart Wind Program" to address the threats to birds and their habitats from wind energy development. ABC's Wind Program works to eliminate threats to birds and conserve habitat through the implementation of "Bird-Smart Wind Principles."[3] These Principles recognize that "bird-smart" wind energy is an important part of the solution to climate change. Bird-smart wind energy employs careful siting, operation, construction, mitigation, bird monitoring, and compensation criteria, designed to reduce and redress any unavoidable bird mortality and habitat loss. A key element of ABC's Bird-Smart Wind Principles is to work with FWS to establish appropriate mandatory federal standards for the siting, construction and operation of wind facilities. Thus, ABC believes that birds and wind power can co-exist, and that wind power can be "bird-smart," if the wind industry is held to mandatory standards that protect birds. More than 60 conservation groups, scientific societies, and businesses have endorsed ABC's Bird-Smart Wind Principles.[4]

ABC's experts have been extensively involved in studying and analyzing the impacts of wind energy, and its involvement in this issue predates the formation of the Wind Turbines Guidelines Federal Advisory Committee ("Wind FAC" or "Committee") established by DOI in 2007. For example, in 2005 ABC submitted comments on the Interim Guidance on Avoiding and Minimizing Impacts from Wind Energy prepared by FWS. In 2007, ABC's former Director of Conservation Advocacy, Dr. Michael Fry, testified before a Congressional subcommittee on the wildlife impacts of improperly sited wind energy projects.

Most recently, ABC has been actively involved in analyzing the ongoing preparation by FWS of voluntary guidelines for land-based wind energy projects. In this regard, ABC has attended every Wind FAC meeting, and has commented on each draft of the guidelines and the Wind FAC's recommendations.[5] ABC has also submitted comments during federal regulatory processes applicable to wind energy projects, including the FWS Draft Eagle Conservation Plan Guidance, the Great Plains Wind Energy Habitat Conservation Plan (scoping), the Desert Renewable Energy Conservation Plan (scoping), and the Mid-Atlantic Regional Environmental Assessment for Wind Leasing Areas (Delaware, Maryland, New Jersey, Virginia). ABC has also commented on

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[3] ABC's "Bird-smart Wind Principles" are available at http://www.abcbirds.org/abcprograms/policy/collisions/wind_policy.html

[4] A list of these organizations is available at http://www.abcbirds.org/abcprograms/policy/collisions/wind_letters.html

[5] ABC's comments on all iterations of the Wind Guidelines and the Eagle Guidance are available here: http://www.abcbirds.org/abcprograms/policy/collisions/wind_letters.html

individual wind projects, such as Kaheawa Wind II (Maui), Kawailoa Wind (Oahu), and Baryonyx (offshore Texas).[6]

ABC submits this Petition for Rulemaking to FWS pursuant to the APA, 5 U.S.C. § 553(e), and implementing regulations of the DOI, 43 C.F.R. Pt. 14, requesting the agency to expeditiously promulgate regulations establishing a permitting scheme for proper siting, construction, and operation of wind energy projects to reduce and redress bird mortality and habitat loss. Pursuant to 43 C.F.R. § 14.2, this Petition for Rulemaking provides the text of the proposed rule as well as detailed reasons in support of the Petition. ABC requests that the Petition be given prompt consideration as required by applicable regulations. 43 C.F.R. § 14.3. As an initial step, ABC requests that notice of this Petition be published in the Federal Register for public comment. 43 C.F.R. § 14.4.

B. SPECIES INFORMATION

Migratory birds protected under the MBTA, 16 U.S.C. § 703 et seq., are facing serious threats and many are in rapid decline. About 30% of the birds protected by the MBTA are officially recognized by FWS as being in need of particular protection, including approximately 75 endangered and threatened species, and more than 240 species that are listed by FWS as Birds of Conservation Concern ("BCC"). See FWS, Birds of Conservation Concern (2008);[7] see also FWS, Summary of Listed Species Listed Populations and Recovery Plans (Nov. 21, 2011).[8] FWS is statutorily required to designate and maintain the BCC list pursuant to a 1998 amendment to the Fish and Wildlife Conservation Act of 1980, 16 U.S.C. § 2901 et seq., which requires the agency to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973." Id. § 2912(a)(3). Only a handful of birds designated as BCC are not protected by the MBTA. Thus, nearly 1/3 of the birds protected by the MBTA are either listed under the ESA, 16 U.S.C. § 1531 et seq., or designated as in danger of being listed if action to prevent listing is not taken.

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[6] ABC's comment letters are available here: http://www.abcbirds.org/abcprograms/policy/collisions/wind_letters.html

[7] Available at http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/BCC2008/BCC2008.pdf. (last visited Nov. 20, 2011).

[8] Available at http://ecos.fws.gov/tess_public/pub/boxScore.jsp. (last visited Nov. 20, 2011).

Further, some common migratory birds that have not been officially designated as being of conservation concern are experiencing sharp population declines. According to the National Audubon Society, "[s]ince 1967 the average population of the common birds in steepest decline has fallen by 68 percent; some individual species nose-dived as much as 80 percent. All 20 birds on the national Common Birds in Decline list lost at least half their populations in just four decades." Nat'l Audubon Soc'y, Common Birds in Decline.[9] These declines indicate that birds in the United States are facing serious threats and potential extinction. For example, the fate of the Passenger Pigeon – once the most abundant bird in North America, with a population estimated in the billions, which was driven to extinction in fewer than 100 years – illustrates that even common birds can become extinct. T. D. Rich et al., Partners in Flight North American Landbird Conservation Plan: Part 1 The Continental Plan 4 (2004) ("N.A. Landbird Conservation Plan Part 1").[10]

Migratory birds face many threats including habitat loss, degradation and fragmentation; excessive logging and inappropriately managed forests; inappropriately or inadequately managed fires; hydrologic change to wetlands; exotic and invasive species; resource extraction and energy industry operations; overgrazing; climate change; contaminants and pesticides; prey resource depredation; human disturbance; long line and gill net fisheries; collisions with human-created structures; and intentional illegal killing. T. D. Rich et al., Partners in Flight North American Landbird Conservation Plan: Part 2 Conservation Issues 39 (2004) ("N.A. Landbird Conservation Plan Part 2");[11] see also Stephen Brown et al., United States Shorebird Conservation Plan 5 (2001) ("2001 U.S. Shorebird Conservation Plan");[12] Waterbird Conservation for the Americas, Waterbirds at Risk (Mar. 20, 2007).[13] Because there are serious threats to birds and such threats cumulatively pose even larger risks to their survival and conservation, it is important that action be taken to reduce each one.

ABC believes that threats to birds from wind energy development pose particular concern, especially because the industry is growing rapidly and projects are being frequently sited in important bird habitats. Wind energy is also recognized as a serious bird conservation issue in the North American Landbird Conservation Plan, which is an important conservation plan that has wide support throughout the bird conservation community. N.A. Landbird Conservation Plan Part 2 at 39,

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[9] Available at http://web4.audubon.org/bird/stateofthebirds/cbid/ (last visited Nov. 20, 2011).

[10] Available at http://www.pwrc.usgs.gov/pif/cont_plan/PIF2_Part1WEB.pdf (last visited Nov. 25, 2011).

[11] Available at http://www.pwrc.usgs.gov/pif/cont_plan/PIF3_Part2WEB.pdf (last visited Nov. 20, 2011).

[12] Available at http://www.fws.gov/shorebirdplan/USShorebird/PlanDocuments.htm (last visited Nov. 20, 2011).

[13] Available at http://www.waterbirdconservation.org/atrisk.html (last visited Nov. 20, 2011).

62. The plan was created by Partners in Flight, an international coalition of government agencies (including FWS), conservation groups, and scientific researchers. It identifies two types of native birds that are of high conservation importance, "those that show some combination of population declines, small ranges, or distinct threats to habitat, and those that are restricted to distinct geographical areas, but otherwise not currently at risk." N.A. Landbird Conservation Plan Part 1 at 5. Inclusion of the impacts of wind energy as a conservation issue in the plan indicates that there is widespread recognition among major bird conservation groups, government agencies, and scientists of the grave threats posed by wind energy projects to migratory birds. In addition, wind energy is described as a form of energy development that can have significant negative impacts on birds in the 2009 State of the Birds report, which is a document collectively drafted by government agencies (including FWS), bird conservation coalitions, conservation groups, and scientific researchers. N. Am. Bird Conservation Initiative, U.S. Comm., The State of the Birds, United States of America (2009) 9, 30, 31 ("2009 State of the Birds Report").[14]

Set out below is a brief discussion of certain bird species that are facing risks from wind energy development. The list of birds discussed below is merely illustrative and not a complete or exhaustive listing of birds that ABC believes are at serious risk due to wind energy development.[15]

Hawaiian birds

Hawaiian birds face special risks from wind energy. Unfortunately, Hawaii is now cited as "the bird extinction capital of the world," where more bird species are vulnerable to extinction than anywhere else in the world. 2009 State of the Birds Report at 26. Almost any imaginable site for a wind energy project in Hawaii has the potential to impact federally listed threatened and endangered species, as well as other birds of conservation concern. The state has adopted an aggressive mandate to produce 40% of its electricity from renewable energy by 2030, and consequently several wind energy projects are being developed at sites that seriously impact species of conservation concern. See Am. Wind Energy Ass'n ("AWEA"), Wind Energy Facts: Hawaii (Aug. 2011).[16]

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[14] Available at http://www.stateofthebirds.org/2009/pdf_files/State_of_the_Birds_2009.pdf (last visited Nov. 25, 2011).

[15] It is pertinent to note that some of the birds discussed in this Section are also listed by the American Wind Wildlife Institute ("AWWI") (which includes wind industry members) as potentially being adversely impacted by wind energy development. AWWI, Wind and Wildlife Landscape Assessment Tool: Wind and Wildife Species List (2011), http://wind.tnc.org/awwi/#app=515d&7843-selectedIndex=0&fefa-selectedIndex=3 (last visited Dec. 7, 2011). This list includes many, but not all, of the birds ABC has identified as being at special risk from wind energy development (for example, the AWWI list is mainland focused and thus misses many Hawaiian birds. Another species not identified by AWWI's list is the Ferruginous Hawk, which has demonstrated mortality at U.S. wind projects.).

[16] Available at http://www.awea.org/learnabout/publications/upload/Hawaii.pdf (last visited Nov. 20, 2011).

Bird species of conservation concern that have already been killed at one Hawaiian wind project include the Hawaiian Goose (federally endangered, Red WatchList), Hawaiian Petrel (federally endangered, Red WatchList) and (Hawaiian) Short-eared Owl (BCC, Yellow WatchList).[17] See Kaheawa Wind Power II, LLC, Kaheawa Wind Power II Draft Habitat Conservation Plan 52 (2010).[18] Other imperiled birds present in Hawaii where wind energy development and its associated infrastructure currently exist, or are in the process of development, include the Newell's Shearwater (federally threatened, Red WatchList), Hawaiian Common Moorhen (federally endangered), Hawaiian Coot (federally endangered, Red WatchList), Hawaiian Duck (federally endangered, Red WatchList), Hawaiian Hawk (federally endangered, Red WatchList), Hawaiian Stilt (federally endangered), Band-rumped Storm-Petrel (BCC, Red WatchList), and Pacific Golden-Plover (U.S. Shorebird Conservation Plan, high concern).[19] See 2001 U.S. Shorebird Conservation Plan at 57.[20] Also of concern are MBTA-protected birds that have not yet been listed as endangered or threatened, such as frigatebirds, shearwaters, boobies, terns, noddies, and albatrosses.

Although in recent years certain wind energy developers have applied under the ESA for incidental take permits ("ITPs") for federally listed birds at proposed Hawaiian wind projects, see 16 U.S.C. § 1539 (authorizing FWS to issue ITPs allowing limited take of endangered and threatened species if prescribed criteria are satisfied), such applications have not been filed by all developers and some existing projects that may impact federally listed birds continue to operate without an ITP.

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[17] The United States WatchList, a joint project between ABC and the National Audubon Society, reflects a comprehensive scientific survey and study of all the bird species in the United States. It identifies those bird species in greatest need of immediate conservation attention. Red WatchList species are those of greatest conservation concern. Yellow WatchList species are still of concern but not to as extreme a degree as Red WatchList species.

[18] Available at http://www.fws.gov/pacificislands/Publications/DRAFT%20KWP%20II%20HCP.pdf (last visited Nov. 27, 2011).

[19] As of November 17, 2011, draft or final incidental take permits issued under the ESA have already been prepared for various federally listed species, including, Hawaiian Common Moorhen, Hawaiian Coot, Hawaiian Duck, Hawaiian Goose, Hawaiian Petrel, Hawaiian Stilt, and Newell's Shearwater.

[20] The U.S. Shorebird Conservation Plan is a partnership effort of state and federal agencies (including FWS), non-governmental conservation organizations, academic institutions, and individuals from across the country committed to restoring and maintaining stable and self-sustaining populations of shorebirds in the United States and throughout the Western Hemisphere. The plan provides a scientific framework to determine species, sites, and habitats that most urgently need conservation action. Available at http://www.fws.gov/shorebirdplan/USShorebird/downloads/USShorebirdPlan2Ed.pdf (last visited Nov. 27, 2011).

Further, such ITPs do not apply to BCC species (which by definition are not federally listed under the ESA), unless the developer agrees to include them in a Habitat Conservation Plan ("HCP").[21]

Grassland birds

The birds of America's grasslands are also in trouble, and unless properly regulated, wind energy development will add to the impacts that are already causing these birds' numbers to dwindle. "Grassland birds are among the fastest and most consistently declining birds in North America." 2009 State of the Birds Report at 4. Of the 46 grassland-breeding bird species, 48% are of particular conservation concern and 55% are declining significantly. Four are already federally listed as endangered. Id. at 8. MBTA-protected birds such as the Mountain Plover (BCC, Red WatchList), Sprague's Pipit (federal listing candidate, Yellow WatchList), Lark Bunting (BCC, Yellow WatchList), Baird's Sparrow (BCC, Red WatchList), Chestnut-collared Longspur (BCC, Yellow WatchList), and McCown's Longspur (BCC) show steep population declines of 68–91%. Id. at 8.

All the above-mentioned birds (except the Baird's Sparrow) engage in aerial displays – a behavior that makes them more vulnerable to turbine strikes. During aerial displays, males may not be paying attention fully to the structures around them. Grassland birds that engage in aerial displays during courtship, such as the Long-billed Curlew, Upland Sandpiper, Vesper Sparrow, Horned Lark, Chestnut-collared Longspur, and McCown's Longspur, have a greater risk of colliding with wind turbine rotor blades that occur within a male's territory. See Wyo. Game and Fish Dep't, Wildlife Protection Recommendations for Wind Energy Development in Wyoming 5 (Apr. 23, 2010).[22] Thus, birds that engage in aerial displays face a greater threat from wind energy turbines as they are particularly prone to collisions. Other grassland species of conservation concern that are especially vulnerable to harm from wind energy development include the Long-billed Curlew (BCC, Yellow WatchList), Grasshopper Sparrow, and Lesser Prairie-Chicken (federal listing candidate, BCC, Red WatchList).

Sprague's Pipit is protected under the MBTA and is an ESA candidate species. It is also a BCC species and on the Yellow WatchList. The species is typically found in open plains, especially shortgrass prairies. Sprague's Pipit is one of the few species endemic to the North American

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[21] For example, the Hawaiian Short-eared Owl, which is not ESA-listed, will receive some protection under the proposed HCP for the Kaheawa Wind II facility. This happened because a conservation group worked to have protections for the species included in the HCP. Thus, it should not be assumed that all BCC species will be covered by HCPs for federally listed species at Hawaiian wind projects.

[22] Available at http://gf.state.wy.us/downloads/pdf/April%2023%202010%20Commission%20Approved%20Wind%20Recommendations.pdf (last visited Nov. 26, 2011).

grasslands. Like many grassland species, Sprague's Pipits are semi-nomadic, seeking suitable grassland conditions within their range for nesting in any particular year. They are associated with unbroken tracts of native grassland. In addition to the potential of losing additional habitat to wind energy development, Sprague's Pipit faces extra risk of being killed by collision with wind turbines because its behavior includes the longest periods of aerial display of any passerine species, and its display heights place the Pipit within the rotor-swept zone of modern wind turbines. Aerial displays lasting as long as three hours at display heights of 50 meters to over 100 meters above the ground have been documented. Mark B. Robbins, Display Behavior of Male Sprague's Pipits, 110 Wilson Bull. of Ornithology 435-438, 435 (1998).[23] The Government of Alberta identifies Sprague's Pipit as a species with potential for collisions with wind turbines due to its aerial display behavior. Gov't of Alta., Wildlife Guidelines for Wind Energy Projects 3 (Sept. 19, 2011) ("Alberta Wildlife Guidelines").[24] In addition, wind farms can cause Sprague's Pipits, like other grassland birds, to abandon otherwise suitable habitats. There is no reliable population estimate for Sprague's Pipit – according to the FWS Sprague's Pipit Conservation Plan, the global species population has been estimated at 870,000, but the plan also cautions that that number relies on standard assumptions and calculations that are "unverified with the existing data." FWS, Sprague's Pipit (Anthus spragueii) Conservation Plan 15 (2010).[25] The plan describes the estimate as a "rough" estimate with "unknown, but potentially large, error." Id.

Chestnut-collared Longspur is a shortgrass prairie species that is protected under the MBTA and has also been designated by FWS as a BCC species. It is on the Yellow WatchList. "The primary factor suspected to be limiting nesting populations of this species is the availability of native grasslands as they will not nest in croplands. Conversion of native grasslands to croplands and habitat loss to urbanization and industrialization have caused a contraction in this species' breeding range and range wide population declines." Wyo. Game and Fish Dep't, Chestnut-Collared Longspur 1 (2010).[26] In addition, "[w]ind power development in nesting areas can be problematic due to the courtship displays this species exhibits during the breeding season." Id. at 20. The 2004 N.A. Landbird Conservation Plan estimated the U.S and Canadian population of the Chestnut-collared Longspur at 5,600,000. N.A. Landbird Conservation Plan Part 1 at 21.

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[23] Available at http://elibrary.unm.edu/sora/Wilson/v110n03/p0435-p0438.pdf (last visited Nov. 20, 2011).

[24] Available at http://srd.alberta.ca/FishWildlife/WildlifeLandUseGuidelines/documents/WildlifeGuidelines-AlbertaWindEnergyProjects-Sep19-2011.pdf (last visited Nov. 20, 2011).

[25] Available at http://www.fws.gov/mountain-prairie/species/birds/spraguespipit/SpraguesJS2010r4.pdf. (last visited Nov. 20, 2011).

[26] Available at http://gf.state.wy.us/downloads/pdf/swap/birds/ChestnutcollarLongspur.pdf (last visited Nov. 20, 2011).

McCown's Longspur is a rare grassland bird which is protected under the MBTA and is also on the FWS BCC list. This species has suffered dramatic declines in the northern part of its range. Habitat loss and fragmentation due to loss of native prairie and conversion to agriculture are major threats to McCown's Longspur. If the ongoing population declines continue, McCown's Longspur could be petitioned for listing as a federally endangered species. The species engages in aerial display, putting the birds at heightened risk of collision with wind turbines. In addition, wind energy development in the plains will likely further decrease habitat availability for McCown's Longspur, potentially accelerating the population decline. The 2004 North American Landbird Conservation Plan estimated the U.S and Canadian population of the Chestnut-collared Longspur at 1,100,000. U.S. Landbird Conservation Plan Part 1 at 19.

The Long-billed Curlew is the largest North American shorebird. It is protected under the MBTA and is also listed as a FWS BCC species, a Species of Special Concern in Canada, and Highly Imperiled in both the U.S. and Canadian shorebird conservation plans. Additionally, it is listed on the Yellow WatchList. Its population has been estimated at only 20,000 birds. 2001 U.S. Shorebird Conservation Plan at 52. As the FWS Status Assessment and Conservation Action Plan for the Long-billed Curlew explains, "[t]he high levels of concern are due to the loss of the eastern third of their historical breeding range and apparent population declines, particularly in the shortgrass and mixed-grass prairies of the western Great Plains." FWS, Status Assessment and Conservation Action Plan for the Long-Billed Curlew (Numenius americanus) vii (2009).[27] The Conservation Plan further states that Long-billed Curlews are vulnerable to direct mortality due to strikes from wind power rotor blades, increased predation associated with additional wind farm structures and incursion into grasslands, disruption of aerial breeding displays, disturbance caused by increased human activity during both the development stage and during general maintenance of the wind farm, and habitat fragmentation. Id. at 12. The Long-billed Curlew relies primarily on native grasslands for nesting and overwintering. The conversion of these grasslands to agriculture is the primary ongoing threat to the species, and wind energy development will likely further decrease habitat availability. Long-billed Curlews also spend much time in flight defending their territories, thereby increasing their risk of colliding with wind turbines. The Government of Alberta identifies the Long-billed Curlew as a species with heightened potential for collisions with wind turbines due to its aerial display. Alberta Wildlife Guidelines at 3. A Long-billed Curlew fatality attributed to wind energy development has been recorded in the Pacific Northwest. See Gregory D. Johnson & Wallace P. Erickson, Avian, Bat And Habitat Cumulative Impacts Associated with Wind Energy Development in the Columbia Plateau Ecoregion of Eastern Washington and Oregon 12 (2010).[28]

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[27] Available at http://library.fws.gov/BTP/long-billedcurlew.pdf (last visited Nov. 20, 2011).

[28] The wind facility where the Long-billed Curlew was killed is not identified in the report. Nor did the report indicate whether the mortality searches took place during the times of Long-billed Curlew courtship, when the risk of turbine collision would be highest. Available at

Some grassland species may avoid areas with wind turbines, leading to reduced densities of birds in locations of highest quality habitat and with potentially adverse long-term impacts. Research to determine which grassland bird species are most susceptible to displacement from wind power development is still in its early stages. However, preliminary research by the U.S. Geological Survey has already demonstrated that displacement occurs with Grasshopper Sparrows and Clay-colored Sparrows, which are both listed as BCC species. See Partners in Flight, Landbird Population Estimates Database (2004) ("2004 PIF Population Estimates Database").[29] The North American Grasshopper Sparrow population is estimated at 14,000,000 and the North American Clay-colored Sparrow population is estimated at 23,000,000. Density of these birds decreased near wind turbines at study sites in Minnesota, North Dakota, and South Dakota. Jill A. Shaffer & Douglas H. Johnson, Displacement Effects of Wind Developments on Grassland Birds in the Northern Great Plains 51 (2010).[30] Some grassland birds have also been found to avoid important habitats near wind turbines and roads at other locations in Minnesota, Oregon, and Washington. Wallace Erickson et al., Protocol for Investigating Displacement Effects of Wind Facilities on Grassland Songbirds 2-3 (2007).[31]

Sagebrush-dependent songbirds

In addition to grassland songbirds, sagebrush-dependent songbirds also face threats from wind energy development in their habitat. One species known to have experienced mortality at U.S. wind energy facilities is the Brewer's Sparrow. Although no comprehensive study of Brewer's Sparrow mortality at wind energy facilities has been conducted, Brewer's Sparrow fatalities have been documented in Washington and Wyoming at the Tuolumne Wind and Foote Creek Rim facilities.[32] Brewer's Sparrow is a FWS BCC species and on the Yellow WatchList. Brewer's Sparrow breeds in sagebrush across the western United States and adjacent southern Canada, wintering from the southwestern United States to central Mexico. Threats it faces include

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http://www.whitmancounty.org/download/App%20F%20CPE%20Cumulative%20Impacts%20Report.pdf (last visited Nov. 26, 2011).

[29] Available at http://rmbo.org/pif_db/laped/ (last visited Nov. 20, 2011).

[30] Available at https://www.nationalwind.org/assets/research_meetings/Research_Meeting_VII_Shaffer.pdf. (last visited Nov. 20, 2011).

[31] Available at http://digitalcommons.unl.edu/usgsnpwrc/131/ (last visited Nov. 20, 2011).

[32] See, e.g., Tamara Enz & Kimberly Bay, Post-Construction Avian and Bat Fatality Monitoring Study, Tuolumne Wind Project, Klickitat County, Washington, Final Report, April 20, 2009 to April 7, 2010 19 (July 6, 2010), Attachment B; see also West, Inc., Avian and Bat Mortality Associated with the Initial Phase of the Foote Creek Rim Windpower Project, Carbon County, Wyoming November 1998 - June 2002 8 (Jan. 10, 2003), http://west-inc.com/reports/fcr_final_mortality.pdf (last visited Dec. 9, 2011).

destruction and fragmentation of sagebrush caused by agricultural expansion, over-grazing, altered fire regimes, invasive plants, and energy development. Daniel J. Lebbin et al., ABC, The North American Bird Conservancy Guide to Bird Conservation 108 (2010) ("ABC Guide to Bird Conservation "), Attachment A. Brewer's Sparrow population was estimated in 2004 at 16,000,000. The Landbird Conservation Plan recommends that the Brewer's Sparrow population be increased by 100% in order to protect the species. N.A. Landbird Conservation Plan Part 1 at 19.

Raptors

Many raptors are known to have been killed at U.S. wind energy facilities, with several on both the FWS BCC list and the U.S. WatchList. They include Swainson's Hawk (BCC, Yellow WatchList), American Peregrine Falcon (BCC), Ferruginous Hawk (BCC), Short-eared Owl (BCC, Yellow WatchList), Flammulated Owl (BCC, Yellow WatchList), Golden Eagle (BCC), and Bald Eagle (BCC).[33]

Swainson's Hawks breed in open grassland, shrub-land and agricultural land from Alaska through the Canadian prairies, then south through the western United States to northern Mexico. The California population has declined by 90%, and declines have been observed in Canada, but populations are believed to be stable elsewhere. See ABC Guide to Bird Conservation at 44, Attachment A. In 2004, the U.S. and Canadian population of the Swainson's Hawk was estimated at 460,000. N.A. Landbird Conservation Plan Part I at 18. Swainson's Hawks migrate in flocks through Central America to winter in the grasslands of Argentina, and this migration places the species at special additional risk of collision with wind turbines. More than 90% of the global population of Swainson's Hawk passes through the south of the Isthmus of Tehuantepec, where wind energy is being developed rapidly. According to Friends of the Swainson's Hawk, a California conservation group, 5,000 wind turbines are planned in the Isthmus of Tehuantepec. See Friends of the Swainson's Hawk, Energy Projects Challenge Wildlife and Habitat.[34] These proposed Mexican projects will add to the cumulative effects of wind energy development in the United States that Swainson's Hawks face.

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[33] Examples of wind energy facilities and regions where these raptors are known to have been killed include Shiloh I Wind, CA (Swainson's Hawk); Tehachapi Pass Wind Resource Area, CA (Flammulated Owl); Jersey-Atlantic Wind Farm, NJ (Peregrine Falcon); Stateline Wind Energy Center, OR-WA (Swainson's Hawk); Juniper Canyon Wind, WA (Ferruginous Hawk); Nine Canyon Wind, WA (Short-eared Owl); Big Horn Wind, WA (Short-eared Owl, Ferruginous Hawk); Harvest Wind, WA (Swainson's Hawk); and Foote Creek Rim Wind, WY (Short-Eared Owl). It should be noted that these examples are a fragmentary sampling of actual mortality, not a full accounting. Mortality data is not collected at all U.S. wind energy facilities, and even when data is collected, it is not collected during all operating hours, nor is it usually collected for all wind turbines in a facility. In addition, mortality data is very often not made publicly available.

[34] Available at http://www.swainsonshawk.org/story2.html (last visited Nov. 27, 2011).

The American Peregrine Falcon was removed from the federal endangered species list in 1999 but will continue to be monitored by FWS through 2015. See FWS, Proposed Information Collection; Monitoring Recovered Species After Delisting-American Peregrine Falcon, 76 Fed. Reg. 17147, 17148 (Mar. 28, 2011). Peregrine Falcons are most associated with mountain ranges, river valleys, and coastlines. FWS estimated their population in 2003 at 3,000 breeding pairs in Mexico, the United States, and Canada. Although the species has made a remarkable recovery, the pesticide best known for the falcon's decline, DDT, is still found in some parts of its environment within and outside the United States. See FWS, Peregrine Falcon (Falco peregrinus) Fact sheet (2006).[35] Wind energy development in Peregrine Falcon habitat adds to the cumulative impacts the species faces.

Another species potentially at risk from wind energy development is the Ferruginous Hawk, designated by FWS as a BCC species. The Ferruginous Hawk is the largest hawk in North America, inhabiting arid and open grassland, shrub steppe, and desert in the United States, Canada, and Mexico. It was petitioned for but denied endangered species status in the early 1990s. The 2004 estimate of the Ferruginous Hawk population was only 20,000. 2004 PIF Population Estimates Database. Ferruginous Hawks are known to have been killed at U.S. wind energy facilities in the West, for instance at the Big Horn Wind Energy Project in Washington. See, e.g., K. Shawn Smallwood, Avian and Bat Mortality at the Big Horn Wind Energy Project, Klickitat County, Washington 6 (Oct. 18, 2008).[36] Risk to Ferruginous Hawks from wind energy development has been acknowledged by FWS itself. See Patricia Y. Sweanor, FWS, Best Management Practices for Wind Energy in Areas with Golden Eagles (Aquila chrysaetos) in Wyoming 58 (abstract of paper submitted at the 2010 Raptor Research Foundation Conference).[37]

The Short-eared Owl nests in open habitats (tundra, grasslands, marshes, agricultural lands, and coastal dunes) throughout Eurasia and North America, with a Hawaiian subspecies that is also known to have been killed at a wind energy facility. In addition to the threat of collision with wind turbines and habitat loss and fragmentation posed by wind energy development, the Short-eared Owl also is threatened by loss and fragmentation of grassland, marsh, and coastal habitats due to agriculture, over-grazing and urban and coastal development, as well as invasive predators, potentially West Nile Virus, and pesticides. See ABC Guide to Bird Conservation at 74, Attachment A. In 2004, the U.S. and Canadian population of Short-eared Owls was estimated at 710,000. N.A. Landbird Conservation Plan Part 1 at 18.

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[35] Available at http://library.fws.gov/ES/peregrine06.pdf (last visited Nov. 27, 2011).

[36] Available at http://www.efsec.wa.gov/Whistling%20Ridge/Adjudication/Intervenor's%20pre-filed%20testimony/Ex%2022.03.pdf (last visited Dec. 12, 2011).

[37] Available at http://www.rmrp.info/pdf/2010_printed_program-9_091210_LAK.pdf (last visited Nov. 20, 2011).

The Flammulated Owl nests in cavities of dead and dying trees in open, montane ponderosa pine forest and is patchily distributed from southern British Columbia through the western United States to central Mexico. In addition to the threat of collision with wind turbines and habitat loss and degradation posed by wind energy development, the Flammulated Owl is threatened by degradation and loss of habitat, reduction of cavities available for nesting due to cutting of dead trees, declines in populations of woodpeckers that create the cavities in which the owls nest, and reductions in insect prey due to pesticide use in forests. Its global population is estimated at only 37,000. See ABC Guide to Bird Conservation at 73, Attachment A. In 2004, the Flammulated Owl population was estimated at only 29,000 in the United States and Canada. See N.A. Landbird Conservation Plan Part 1 at 19.

The American birds most emblematic of the need to properly regulate the wildlife impacts of wind energy are probably the Golden Eagle and Bald Eagle, both of which are protected under the MBTA. The Golden Eagle is a FWS BCC species; its population is difficult to state with certainty due to limited data. In 2011, FWS estimated the Golden Eagle population at perhaps only 30,000 in the United States. See FWS, Golden Eagles Status Fact Sheet (2011).[38] The 2004 Partners in Flight estimate of Golden Eagle population in North America was 80,000. 2004 PIF Population Estimates Database. Golden Eagles occur across much of the United States, utilizing habitats that include tundra, grasslands, forested habitat, woodlands, brush lands, and deserts. This broad range of habitats exposes Golden Eagles to a multitude of threats such as habitat loss, electrocution by and collision with energy infrastructure (including power lines and wind turbines), lead and rodenticide poisoning, human disturbance, climate change, disease, stock tank drowning, vehicle collisions, and illegal intentional killing. FWS, Minutes and Notes from the North American Golden Eagle Science Meeting (Sept. 21, 2010).[39] Scientific experts have ranked wind energy as the third greatest direct mortality threat to Golden Eagles (behind electric infrastructure, i.e., electrocutions from and collisions with power lines, which will also be expected from wind power expansion, and lead poisoning). Id. at 22.

The risk that wind power facilities pose to Golden Eagles has been known for some time due to the well-documented fatalities at Altamont Pass in California, where a 2010 study estimated that 55-94 Golden Eagles annually were killed by wind turbines since 1998. K. Shawn Smallwood, Fatality Rates in the Altamont Pass Wind Resource Area 1998-2009 (2010) at 25.[40] In fact,

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[38] Available at http://www.fws.gov/habitatconservation/Golden_Eagle_Status_Fact_Sheet.pdf (last visited Nov. 20, 2011).

[39] Available at http://www.dfg.ca.gov/wildlife/nongame/raptors/goldeneagle/docs/NAGoldenEagleScienceMeeting-2010-09-21.pdf (last visited Nov. 20, 2011).

[40] Available at http://altamontsrc.org/alt_doc/p145_smallwood_fatality_monitoring_results_12_31_09.pdf. (last visited Nov. 20, 2011).

Altamont Pass has not only been a death trap for the species, but has also been found to be a population sink, where turbine blade strikes kill more eagles than are produced within the area surveyed, thereby demanding a flow of recruits from outside the area to fill breeding vacancies as they occur. See Grainger Hunt & Teresa Hunt, The Trend of Golden Eagle Territory Occupancy in the Vicinity of the Altamont Pass Wind Resource Area: 2005 Survey 2 (2006).[41]

Further, FWS has been lax in providing information to the public regarding Golden Eagle deaths at wind energy projects through the Freedom of Information Act ("FOIA"), 5 U.S.C. § 552, or other mechanisms.[42] Indeed, the fragmentary picture of Golden Eagle mortality at wind farms that does emerge from the scattered bits of information made public is not encouraging.

For example, in 2011, the Los Angeles Times reported that at least six Golden Eagles had been killed at the Pine Tree wind project in California. Louis Sahagun, Federal Officials Investigate Eagle Deaths At DWP Wind Farm (L.A. Times, Aug. 3, 2011).[43] The Associated Press wrote about the death of a Golden Eagle at the Goodnoe Hills Wind Project in Washington in 2009. Associated Press, Golden Eagle killed by Wash. Wind turbines (Aug. 15, 2009).[44] In addition, Golden Eagle mortality at wind projects in Wyoming also appears serious. See Sophie Osborn, Wyo. Outdoor Council, Wind turbines killing more golden eagles in Wyoming than expected (June 21, 2011) (discussing Golden Eagle mortality at wind projects in Wyoming based on FWS data).[45] According to a FWS staff paper submitted at a 2010 conference of scientific experts specializing in raptor conservation, at one geographic region in Wyoming the mortality rate is one Golden Eagle death per 13 wind turbines per year; at another it is one Golden Eagle death per 39 wind turbines per year. Patricia Y. Sweanor, FWS, Best Management Practices for Wind Energy in Areas with Golden Eagles (Aquila chrysaetos) in Wyoming 58 (abstract of paper submitted at the 2010 Raptor Research Foundation Conference).

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[41] Available at http://www.energy.ca.gov/2006publications/CEC-500-2006-056/CEC-500-2006-056.PDF (last visited Dec. 11, 2011).

[42] It should be noted that information concerning wildlife fatalities, particularly Golden Eagle mortalities, at wind energy facilities is often known to FWS but such information is not easily accessible to the public, in part due to the increasingly long time that it takes the agency to respond to FOIA requests for wind project mortality data, typically extending well beyond the statutorily prescribed durations. For example, as of the beginning of December 2011, ABC is still waiting for FWS to send complete wind farm mortality data in response to a FOIA request that was made in April 2011.

[43] Available at http://articles.latimes.com/2011/aug/03/local/la-me-wind-eagles-20110803 (last visited Nov. 16, 2011).

[44] Available at http://www.nwcn.com/archive/62395757.html (last visited Nov. 16, 2011).

[45] Available at http://wyomingoutdoorcouncil.org/blog/2011/06/21/wind-turbines-killing-more-golden-eagles-in-wyoming-than-expected/ (last visited Nov. 16, 2011).

This means there are likely to be equivalents of the Pine Tree facility, or possibly worse, in Wyoming, where FWS staff has stated approximately 1,000 wind turbines were operating by September 2010 and another 1,000 are expected to be constructed in the following two years. Id. Unless steps are taken to better address these impacts – such as those proposed in this Petition – the number of Golden Eagles killed at wind power facilities will become even worse over time and will likely result in efforts to list the species as endangered or threatened under the ESA.

The Bald Eagle is another iconic American bird species that illustrates the need for effective regulation of wildlife impacts to wind energy. The FWS National Bald Eagle Management Guidelines state that there are breeding populations of Bald Eagles in each of the lower 48 states. The Guidelines also assert that, "[t]he largest North American breeding populations are in Alaska and Canada, but there are also significant bald eagle populations in Florida, the Pacific Northwest, the Greater Yellowstone area, the Great Lakes states, and the Chesapeake Bay region." FWS, National Bald Eagle Management Guidelines 3 (2007).[46] The Bald Eagle was removed from the endangered species list in 2007, but remains a FWS BCC species, and is undergoing post-delisting monitoring. The 2004 North American Landbird Conservation Plan estimated 330,000 Bald Eagles in the United States and Canada. N.A. Landbird Conservation Plan Part 1 at 20. At delisting, FWS estimated 9,789 Bald Eagle breeding pairs in the lower 48 states. FWS, Endangered and Threatened Wildlife and Plants; Removing the Bald Eagle in the Lower 48 States From the List of Endangered and Threatened Wildlife, 42 Fed. Reg. 37346, 37350 50 CFR Pt. 17 (July 9, 2007). Threats to the Bald Eagle include collisions with power lines, vehicles, and other obstacles; electrocution; disease; lead and pesticide poisoning; and shooting. See FWS, Post-delisting Monitoring Plan for the Bald Eagle (Haliaeetus leucocephalus) in the Contiguous 48 States 18 (2010).[47]

Wind energy development in Bald Eagle habitat is expanding and therefore Bald Eagles will over time have greater potential for collisions with wind turbines. A 2004 Bald Eagle species assessment prepared for the U.S. Bureau of Land Management ("BLM") states, "[i]t is assumed that an increase in the number and type of wind-power turbines will generally increase the number of bald eagle deaths by aerial collisions, especially if such turbines are positioned with little consideration of bald eagle habitat." Amber Travsky & Gary P. Beauvais, Species Assessment for Bald Eagle (Haliaeetus Leucocephalus) in Wyoming (prepared for BLM, 2004) at 25.[48] In fact, Bald Eagle deaths at wind facilities in Wyoming and Ontario, Canada have been reported in scattered

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[46] Available at http://www.fws.gov/pacific/eagle/NationalBaldEagleManagementGuidelines.pdf (last visited Nov. 20, 2011).

[47] Available at http://www.fws.gov/midwest/eagle/protect/FINAL_BEPDM11May2010.pdf (last visited Nov. 20, 2011).

[48] Available at http://www.blm.gov/pgdata/etc/medialib/blm/wy/wildlife/animal-assessmnts.Par.41209.File.dat/BaldEagle.pdf (last visited Dec. 6, 2011).

outlets. DecorahNews.com, Ask Mr. Answer Person about the Luther Wind Turbine (Nov. 16, 2011);[49] see also U.S. Dep't of Energy ("DOE"), South Dakota PrairieWinds Project, Final Environmental Impact Statement 180 (2010).[50]

While publicly reported Bald Eagle mortality at wind projects so far appears low, Bald Eagle mortality is also likely to increase as more wind facilities are built in Bald Eagle habitat, especially if those projects are inappropriately sited. There has been some speculation that Bald Eagles might be more likely than Golden Eagles to avoid wind turbines. Lynn Sharp, Comparison of Pre- and Post-construction Bald Eagle Use at the Pillar Mountain Wind Project, Kodiak, Alaska, Spring 2007 & 2010 66-68 (2010).[51]

Eastern forest and woodland birds

Although raptors such as eagles have been known for some time to be at risk from wind energy development on western ridgelines, as the industry spreads into new habitats the impacts of wind power on new groups of birds, such as Eastern forest and woodland birds, need to be addressed. These include the Bicknell's Thrush, Cerulean Warbler, Bay-breasted Warbler, and Blue-winged Warbler.

The Bicknell's Thrush is a rare forest bird with a fragmented and limited breeding range in montane and maritime forest habitats in the Catskills and Adirondacks of New York and the higher peaks of northern New England and Quebec, New Brunswick, and Nova Scotia. Wind energy has already been developed in Bicknell's Thrush habitat in New Hampshire, was proposed in Bicknell's Thrush habitat in Maine, and more projects are likely in its U.S. range, which could lead to further habitat loss and fragmentation. Bicknell's Thrush is an ESA candidate species, FWS BCC species and on the Red WatchList. The 2004 estimate of the Bicknell's Thrush population was only 40,000 in the United States and Canada; the International Bicknell's Thrush Conservation Group estimated 95,000 to 126,000 globally. U.S. Landbird Conservation Plan Part 1 at 18.

Another eastern forest bird of great concern is the Cerulean Warbler. It is protected under the MBTA, listed as a FWS BCC species and has been petitioned for ESA listing. (The listing petition was rejected in 2006). It is also on the Yellow WatchList, and is a Species of Continental

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[49] Available at http://www.decorahnews.com/news-stories/2011/11/1237.html (last visited Nov. 20, 2011).

[50] Available at http://www.rurdev.usda.gov/SupportDocuments/DOE-EIS-0418_Ch8_Use-Productivity.pdf (last visited Nov. 20, 2011).

[51] Available at http://www.nationalwind.org/assets/research_meetings/Research_Meeting_VIII_Proceedings1.pdf. (last visited Nov. 20, 2011).

Importance in the North American Landbird Conservation Plan. It has had the steepest rate of decline of any North American warbler that is monitored by North American Breeding Bird Surveys; Cerulean Warbler populations have been declining at more than 3% annually for the last 40 years. FWS, A Conservation Action Plan for the Cerulean Warbler (Dendroica cerulea) 3-4 (2007).[52] According to FWS, factors that limit the bird's population are not well understood, "[h]owever, it is widely assumed that loss of habitat quantity and degradation of habitat quality on the non-breeding and breeding habitats are critical factors that have contributed to the observed declines." Id. at 4. The Cerulean Warbler's U.S. breeding habitat is located in mature deciduous forests in the East, much of it in the Appalachian region, where wind power is developing rapidly. Id. at 3. Threats to the species' habitat include mountaintop removal coal mining and unregulated wind energy development. No comprehensive study of Cerulean Warbler mortality at wind facilities has been conducted, but a Cerulean Warbler mortality was reported in a one-year mortality study at a wind project in Tennessee. See J. K. Fiedler et al., Results of Bat and Bird Mortality Monitoring at the Expanded Buffalo Mountain Windfarm, 2005 21 (June 28, 2007), Attachment C.

The Bay-breasted Warbler migrates through the eastern United States and winters in forested habitats and shade coffee plantations in Central and South America; 90% of the population breeds in mature boreal forest in Canada. ABC Guide to Bird Conservation at 102, Attachment A. The Bay-breasted Warbler is a FWS BCC species and on the Yellow WatchList. Its population was estimated at 3,100,000 in 2004. N.A. Landbird Conservation Plan Part 1 at 18. It is threatened by forestry practices that favor young even-aged forests or trees resistant to budworm over older forests, as well as pesticide spraying for budworms, winter habitat loss and collisions during migration. ABC Guide to Bird Conservation supra at 102. No comprehensive study of Bay-breasted Warbler mortality at wind facilities has been conducted, but Bay-breasted Warbler fatalities were reported in 2011 at the NedPower Mt. Storm wind power project in West Virginia. David P. Young, Jr. & Zapata Courage, Avian/Bat Monitoring September 25, 2011 Memo 2 (Sept. 30, 2011), Attachment D.

The Blue-winged Warbler breeds in early successional habitats, ranging from the Midwest, east to New England and the Appalachians, and north to Ontario, Canada. It winters in tropical forests from Mexico to Panama. It is threatened by loss of breeding and wintering habitat; hybridization with Golden-winged Warblers; predation by feral cats; nest parasitism; and collisions with manmade structures. ABC Guide to Bird Conservation supra at 97. The Blue-winged Warbler is a FWS BCC species and on the Yellow WatchList. Its population was estimated in 2004 at 390,000 in the United States and Canada. N.A. Landbird Conservation Plan Part 1 at 19. No comprehensive study of Blue-winged Warbler mortality at wind facilities has been conducted, but Blue-winged Warbler fatality was reported between 2007 and 2009 at an unidentified Pennsylvania

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[52] Available at http://www.fws.gov/migratorybirds/CurrentBirdIssues/Management/FocalSpecies/Plans/CeruleanWarbler.pdf (last visited Nov. 20, 2011).

wind energy facility or facilities. Tracey Librandi Mumma & William Capouillez, Pa. Game Comm'n, Wind Energy Voluntary Cooperation Agreement: Second Summary Report 31 (rev. Mar. 16, 2011).[53]

Western forest and woodland birds

The Oak Titmouse nests in oak and pine-oak woodlands from southern Oregon south through California to Baja California, Mexico. It is threatened by loss and degradation of habitat for urban development, pasture, and agriculture, as well as fire suppression, over-grazing, fuel-wood harvesting, and West Nile virus. ABC Guide to Bird Conservation at 89, Attachment A. It is a FWS BCC species and on the Yellow WatchList. Its population was estimated in 2004 at 900,000 in the United States and Canada. N.A. Landbird Conservation Plan Part 1 at 18. No comprehensive study of Oak Titmouse mortality at wind facilities has been conducted, but an Oak Titmouse mortality was reported in 2010 at the Pine Tree wind project in California. BioResource Consultants Inc., 2009/2010 Annual Report Bird and Bat Mortality Monitoring, Pine Tree Wind Farm, Kern County, California 8 (Oct. 14, 2010), Attachment E.

Lewis's Woodpeckers occur locally in the western United States and southern British Columbia, Canada, breeding mainly in open ponderosa pine forests in mountains (especially burned forests), but also using open cottonwoods, aspen and oak woodlands, and pinyon-juniper forest. Northern populations migrate south during winter, sometimes as far as northern Baja California, Mexico. Lewis's Woodpecker is threatened by habitat loss and degradation, over-grazing, and pesticides. ABC Guide to Bird Conservation supra at 78. It is a FWS BCC species and on the Red WatchList (highest concern). Its population was estimated in 2004 at 130,000 in the United States and Canada. No comprehensive study of Lewis's Woodpecker mortality at wind facilities has been conducted, but Lewis's Woodpecker fatality was reported as early as 1999 at the Vansycle Wind, Oregon wind facility. Wallace P. Erickson et al., Avian and Bat Mortality Associated with the Vansycle Wind Project, Umatilla County, Oregon 1999 Study Year 9 (Feb. 7, 2000).[54]

Birds at risk from offshore wind development

With the development of the U.S. offshore wind industry in the oceans and the Great Lakes, additional birds of conservation concern protected under the MBTA are at risk of collision with turbines or displacement from important habitat, such as traditional feeding areas. Because offshore

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[53] The Pennsylvania Game Commission publishes wind energy mortality data in summary form, without the exact date or name of facility where it occurred. Available at http://www.scribd.com/doc/52395539/Wind-Energy-Voluntary-Cooperation-Agreement-Second-Summary-Report (last visited Nov. 27, 2011).

[54] Available at http://www.west-inc.com/reports/vansyclereportnet.pdf (last visited Nov. 27, 2011).

wind power is not currently installed in the United States, there is no existing U.S. track record to indicate which species will likely be killed. In addition, knowledge of offshore bird presence and migration routes is not as well developed as for birds onshore, so there may be species at risk from offshore wind development that have not yet been flagged as such.

Government agencies, academics, and conservation groups have already identified a number of birds of conservation concern believed to be at risk from offshore wind development in the United States. A sampling of these species includes federally threatened and endangered species such as the Piping Plover (also Red WatchList), Roseate Tern (also Yellow WatchList), Whooping Crane (also Red WatchList), and Kirtland's Warbler (also Red WatchList); candidate species for ESA listing such as the Red Knot (BCC, Yellow WatchList); and others such as the Black-Capped Petrel (BCC, Yellow WatchList), Wilson's Plover (BCC, Yellow WatchList), Gull-billed Tern (BCC, Yellow WatchList) and Audubon's Shearwater (BCC, Yellow WatchList), and landbirds that can fly through nearshore areas such as Bald and Golden Eagles (both BCC) and Peregrine Falcons (BCC). See, e.g., Doug Forsell, FWS, Waterbirds and Offshore Wind Energy Development, A Biologists [sic] Perspective On Regulation 2 (2010);[55] see also Sarah M. Karpanty, Virginia Tech, Virginia Coastal Energy Research Consortium: Potential Effects of Virginia Offshore Wind Power on Birds 4 (2011) ("Virginia Coastal Energy Research");[56] David N. Ewert et al., The Nature Conservancy, Wind Energy: Great Lakes Regional Guidelines 11 (2011).[57]

Other birds potentially at risk from U.S. offshore wind development include sea ducks (such as Long-tailed Ducks, mergansers, scoters, eiders), Redheads, loons, gannets, shorebirds, terns, and migratory songbirds. See Virginia Coastal Energy Research at 4; see also Albert Manville, FWS, Presentation on Shoreline, Near-shore, and Offshore Wind Energy Development in Texas State Waters: Tools to Help Avoid or Minimize "Take" of Waterbirds and Other Avifauna 14 (2011), Attachment F.

In sum, more than one-third of the migratory birds protected under the MBTA are facing several serious threats that are leading to declines in or uncertainty about their population numbers. In the absence of any regulations for avoiding and minimizing the impacts of wind energy projects through an appropriate permitting scheme – such as those proposed in this Petition – rapid wind energy development poses a grave threat to many migratory birds protected under the MBTA. As

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[55] Available at http://web2.uconn.edu/seagrantnybight/documents/Energy%20Docs/Forsell_NY%20Bight%20Energy%20Oct%207%202010_Seabirds.pdf (last visited Nov. 27, 2011).

[56] Available at http://vasierraclub.org/Karpanty.pdf (last visited Nov. 27, 2011).

[57] Available at http://www.glc.org/energy/wind/pdf/TNC-Great-Lakes-Regional-Guidelines.pdf (last visited Nov. 27, 2011).

described infra, see Section C.3, FWS's approach to these impacts, i.e., through voluntary inadequate guidelines in lieu of mandatory regulations, will likely exacerbate the decline of many species protected under the MBTA, potentially leading to the need to list such species as endangered or threatened under the ESA.[58]

C. FACTUAL BACKGROUND

C.1. Thousands of wind turbines are already in operation and thousands more are being planned.

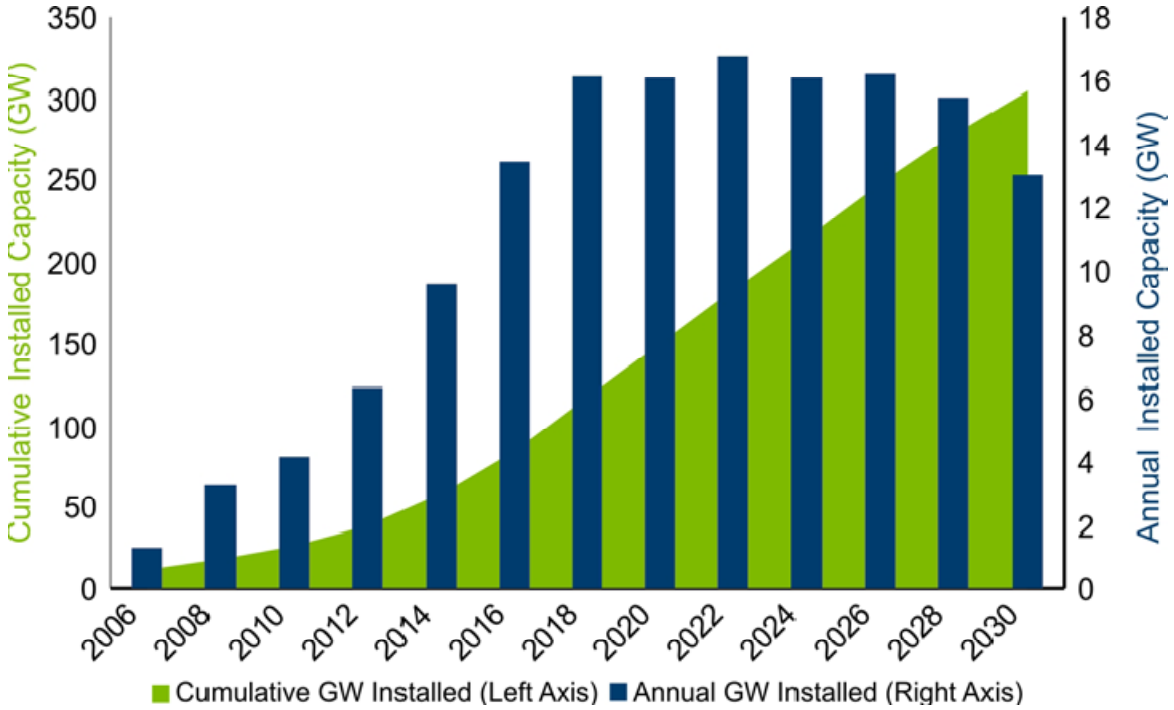
Growth in the wind industry

"[T]he U.S. wind industry is growing rapidly," driven by several policy incentives such as federal production tax credits, and renewable portfolio standards in roughly 50% of the states. See DOE, 20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply 1 (July 2008) ("DOE 20% Wind Report").[59] The DOE has announced a collaborative effort in which wind power is expected to provide 20% of U.S. electricity by 2030. Id. The 20% wind U.S. scenario would require an installation rate of 16 GW per year after 2018. See Figure 1: Cumulative and Annual Wind Installations By 2030.

[58] An upsurge in ESA listings will have serious consequences particularly for the industry, which will then be required to comply with comprehensive ESA requirements and may also be required to shut down projects due to potential ESA violations. For example, in response to a citizen suit, a federal court recently issued an injunction against the Beech Ridge wind energy project in West Virginia for potential take of the endangered Indiana bat without an incidental take permit. See Animal Welfare Inst. v. Beech Ridge Energy LLC, 675 F. Supp. 2d 540, 545 (D. Md. 2009). Accordingly, the industry has an enormous incentive to avoid additional ESA listings of species affected by wind power projects.

[59] Available at http://www.nrel.gov/docs/fy08osti/41869.pdf (last visited Dec. 11, 2011).

Figure 1: Cumulative and Annual Wind Installations By 2030[60]



The number of operating wind turbines is estimated at 30,000 in 2009 and will likely increase to over 70,000 turbines by end of 2011.[61] See Figure 2: Wind Turbines in the United States (2003-2011); Table: 1: Increase in Proposed and Existing Wind Turbines in the United States (2003-2011).

[60] Source: DOE 20% Wind Report at 7.

[61] These figures are estimates based on the data submitted to the FAA for proposed wind projects.

Figure 2: Estimate of Wind Turbines in the United States (2003-2011)

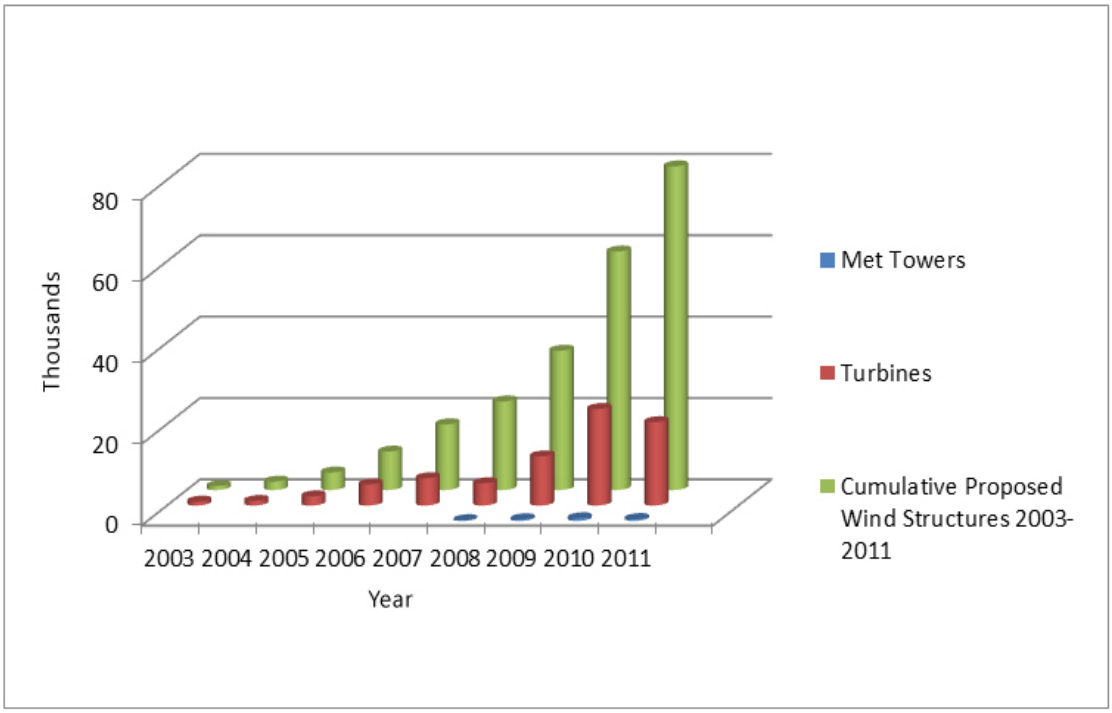


Figure 2 (above) is based on all unique wind turbines and associated meteorological tower proposals submitted to the Federal Aviation Administration/Obstruction Evaluation/Airport Airspace Analysis offices ("FAA - OE/AAA"). Wind turbines that were already proposed or existing prior to 2003 are not included in this analysis. Although meteorological towers were proposed during 2003-2007, they are not included in this data set due to data compilation and processing issues.

Table 1: Estimated Increase in Wind Turbines in the United States (2003-2011)

Year	# Wind Turbines	# Meteorological Towers[62]	Total Wind Related Structures	# Cumulative Proposed Wind Structures 2003-2011
2003	950	n/a	950	**950**
2004	1114	n/a	1114	**2064**
2005	2253	n/a	2253	**4317**
2006	5124	n/a	5124	**9441**
2007	6700	n/a	6700	**16141**
2008	5446	179	5625	**21766**
2009	12063	398	12461	**34227**

[62] Although meteorological towers were proposed during 2003-2007, they are not included in this data set due to data compilation and processing issues.

Year	# Wind Turbines	# Meteorological Towers[62]	Total Wind Related Structures	# Cumulative Proposed Wind Structures 2003-2011
2010	23714	661	24375	**58602**
2011 (through 11-1-11)	20460	451	20911	**79513**

The cumulative wind power capacity in the United States grew by a healthy 15% in 2010. DOE, 2010 Wind Technologies Market Report 1 (June 2011) ("2010 DOE Wind Market Report").[63] In fact, according to AWEA's most recent third quarter report published in October 2011, the wind industry had more than 1,200 MW installed in the third quarter, and more than 8,400 MW under construction – the most in any quarter since 2008. AWEA, U.S. Wind Industry Third Quarter Market Report (Oct. 2011) ("AWEA Third Quarter Report");[64] see also Meg Cichon, Meanwhile, Wind Industry Sees Big Gains – Will it Last? (RenewableEnergyWorld.com Nov. 17, 2011).[65]

Further, around 50% of U.S. states have adopted binding "renewable portfolio standards," i.e., state policies that require electricity providers to obtain a minimum percentage of their power from renewable energy resources by a certain date. See Table 2: State Renewable Portfolio Standards.

[63] Available at http://eetd.lbl.gov/ea/ems/reports/lbnl-4820e.pdf (last visited Nov. 17, 2011).

[64] Available at http://www.awea.org/learnabout/publications/reports/upload/3Q-2011-AWEA-Market-Report-for-Public-2.pdf (last visited Nov. 14, 2011).

[65] Available at http://www.renewableenergyworld.com/rea/news/article/2011/11/meanwhile-wind-industry-sees-big-gains-will-it-last (last visited Nov. 17, 2011).

Table 2: State Renewable Portfolio Standards[66]

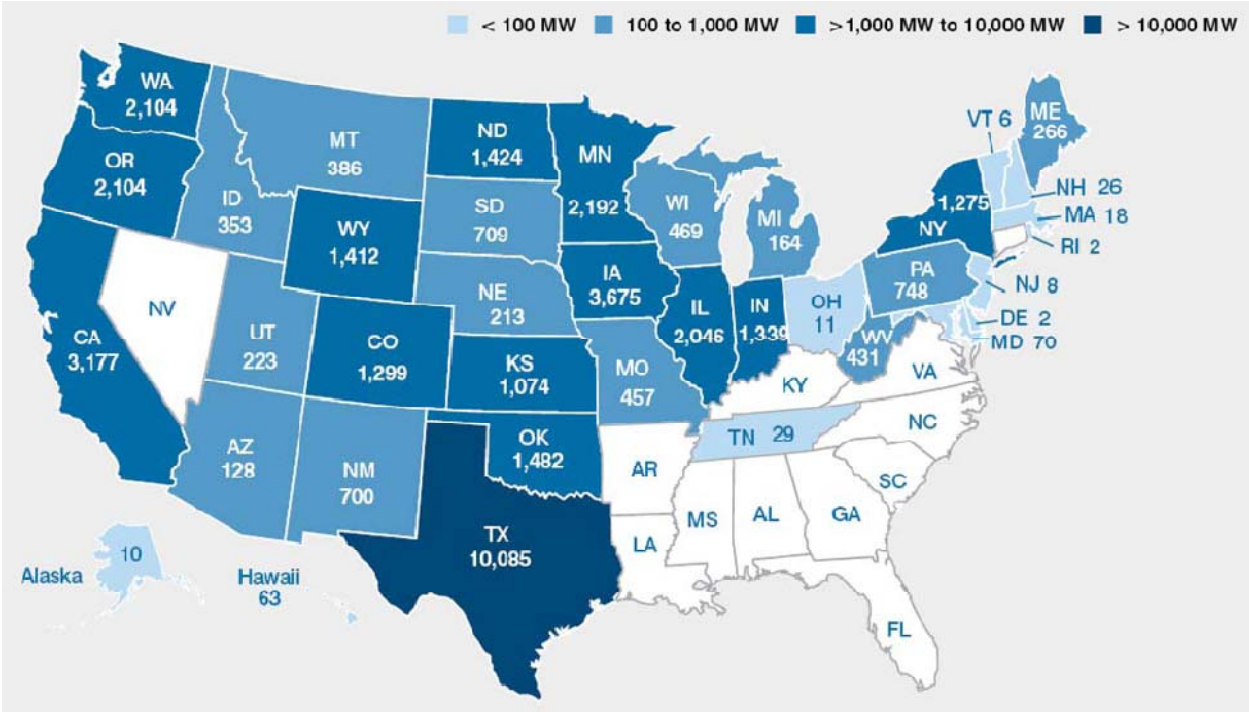
	State	Renewable Energy Amount	Year
1.	Arizona	15%	2025
2.	California	33%	2030
3.	Colorado	20%	2020
4.	Connecticut	23%	2020
5.	District of Columbia	20%	2020
6.	Delaware	20%	2019
7.	Hawaii	20%	2020
8.	Iowa	105 MW	-
9.	Illinois	25%	2025
10.	Massachusetts	15%	2020
11.	Maryland	20%	2022
12.	Maine	40%	2017
13.	Michigan	10%	2015
14.	Minnesota	25%	2025
15.	Missouri	15%	2021
16.	Montana	15%	2015
17.	New Hampshire	23.8%	2025
18.	New Jersey	22.5%	2021
19.	New Mexico	20%	2020
20.	Nevada	20%	2015
21.	New York	24%	2013
22.	North Carolina	12.5%	2021
23.	North Dakota*	10%	2015
24.	Oregon	25%	2025
25.	Pennsylvania	8%	2020
26.	Rhode Island	16%	2019
27.	South Dakota*	10%	2015
28.	Texas	5,880 MW	2015
29.	Utah*	20%	2025
30.	Vermont*	10%	2013
31.	Virginia*	12%	2022
32.	Washington	15%	2020
33.	Wisconsin	10%	2015

Thirty-eight states have utility-scale wind installations. See Figure 3: 2010 State Wind Installed Capacity. Texas has the largest installed wind capacity followed by Iowa and California.

[66] Source: DOE, State Renewable Portfolio Standards, http://apps1.eere.energy.gov/states/maps/renewable_portfolio_states.cfm (last visited Nov. 17, 2011). Percentages refer to a portion of electricity sales and megawatts (MW) to absolute capacity requirements. *Five states, North Dakota, South Dakota, Utah, Virginia, and Vermont, have set voluntary goals for adopting renewable energy instead of portfolio standards with binding targets.

AWEA, Wind Energy Facts: California (Aug. 2011).[67] Seven of the nation's ten largest wind farms are in Texas, including all of the top five. AWEA, Wind Energy Facts: Texas (Aug. 2011).[68]

Figure 3: 2010 State Wind Installed Capacity[69]



Further, the maps provided below (Maps 1.1 – 2.3) illustrate the actual locations of many of the wind projects in the United States – showing that this is an industry that is growing rapidly across the nation. The point maps and heat maps provided below are based on all unique wind turbine and associated meteorological tower proposals submitted to the FAA - OE/AAA between 2003 (the year when voluntary guidelines were established for wind energy projects by FWS) to 2011. Wind turbines that were already proposed or existing prior to 2003 are not shown. Meteorological towers represent 2.12% of the structures on the map.

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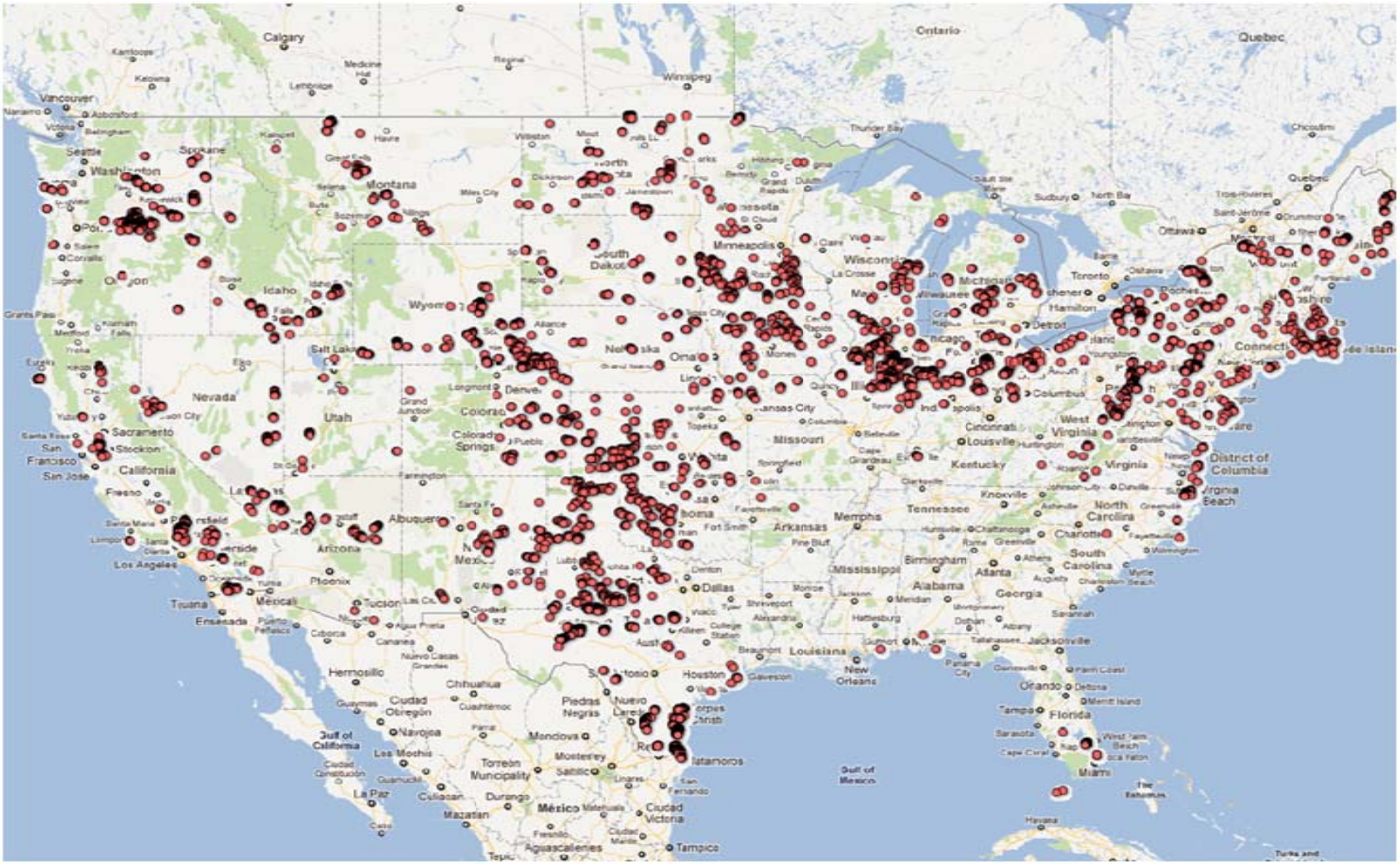
[67] Available at http://www.awea.org/learnabout/publications/upload/California.pdf (last visited Nov. 14, 2011).

[68] Available at http://www.awea.org/learnabout/publications/upload/Texas.pdf (last visited Nov. 14, 2011).

[69] Source: AWEA, 2010 U.S. Wind Industry Market Update, available at http://www.awea.org/learnabout/publications/factsheets/upload/Market-Update-Factsheet-Final_April-2011.pdf (last visited Nov. 14, 2011).

MAP 1.1: Estimated Wind Turbines in the Lower 48 States (2003 – 2011)[70]

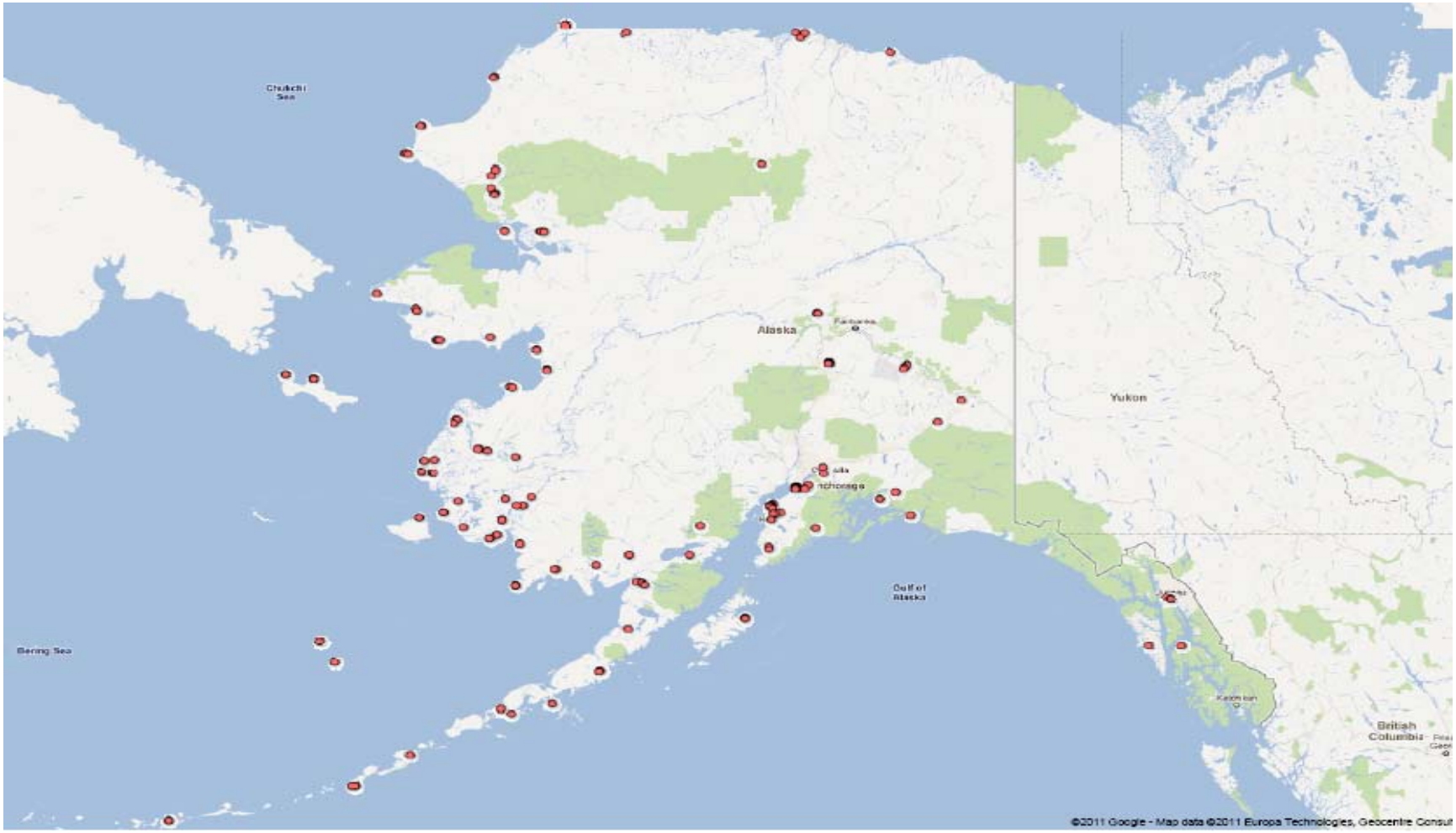


[70] Point map illustrating the location of wind turbines in 48 states in the United States that were logged with the FAA between 2003 and 2011. These are a mix of both existing and proposed wind turbines, as well as meteorological towers. Meteorological towers make up 2.12% of the logged structures on the overall U.S. map. All maps provided in this Petition are based on data available on the FAA website.

MAP 1.2: Estimated Wind Turbines in Hawaii (2003 – 2011)[71]

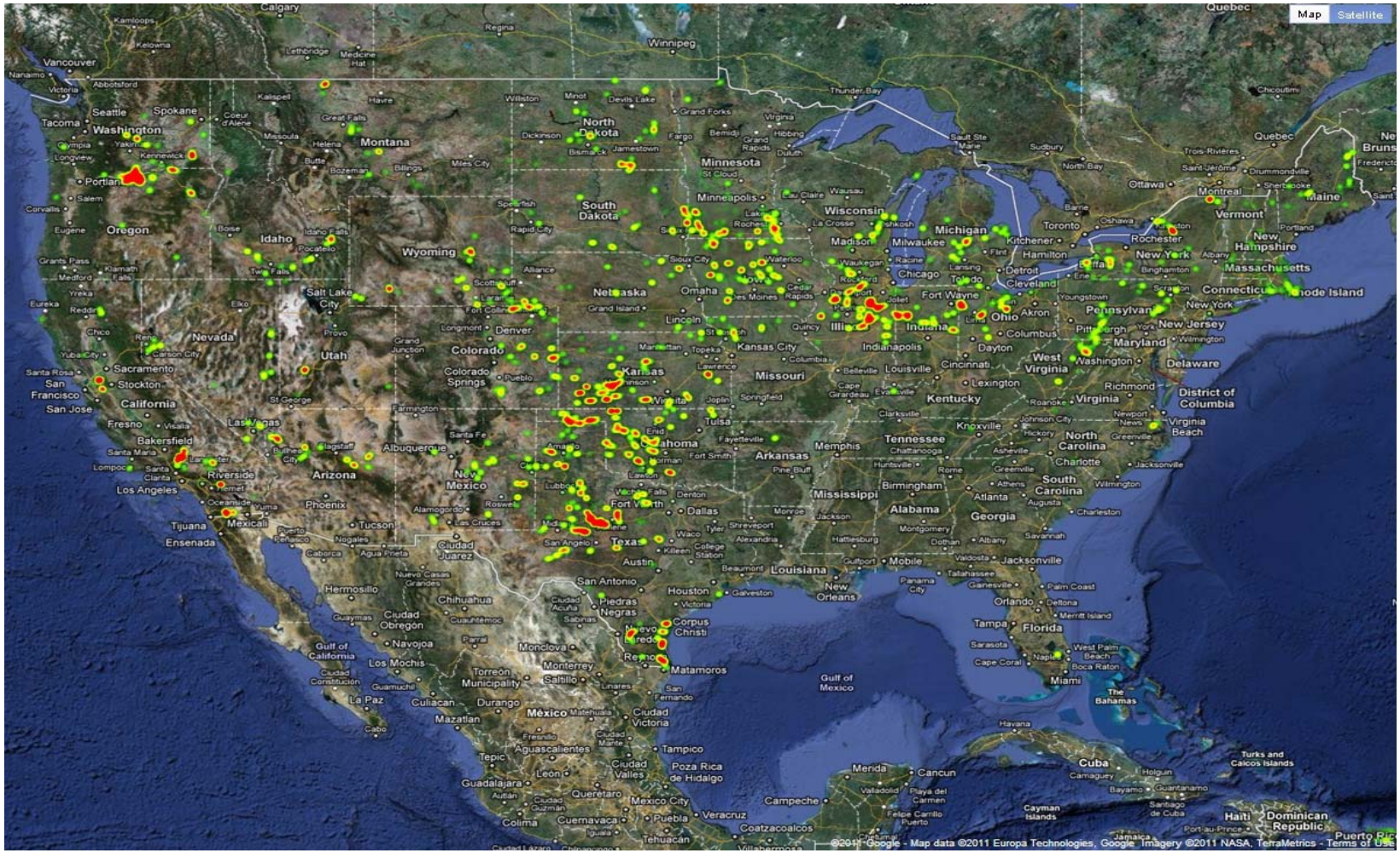
[71] Point map illustrating the location of wind turbines in Hawaii that were logged with the FAA between 2003 and 2011. These are a mix of both existing and proposed wind turbines, as well as meteorological towers. Meteorological towers make up 2.12% of the logged structures on the overall U.S. map. All maps provided in this Petition are based on data available on the FAA website.

MAP 1.3: Estimated Wind Turbines in Alaska (2003 – 2011)[72]



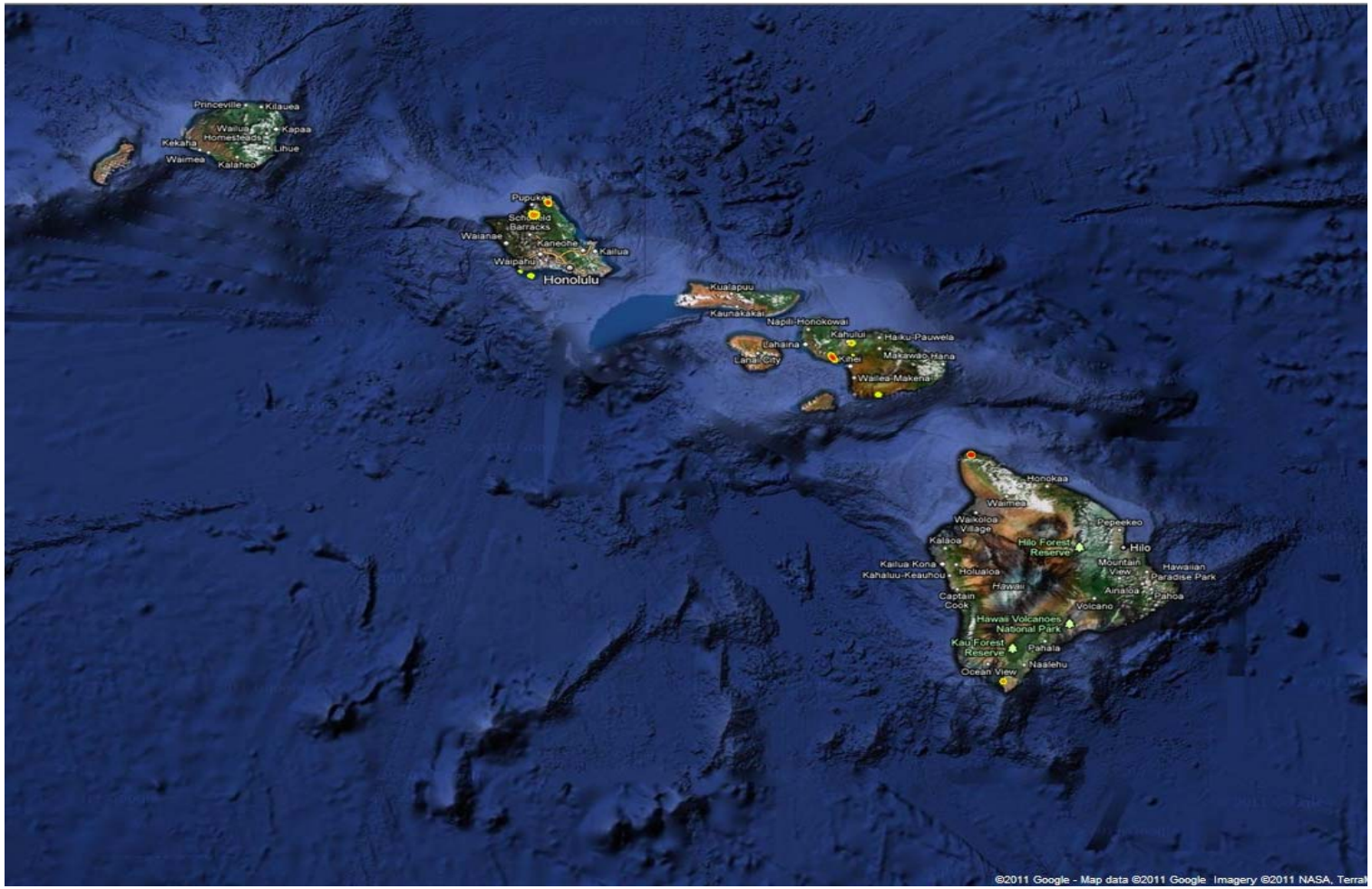
[72] Point map illustrating the location of wind turbines in Alaska that were logged with the FAA between 2003 and 2011. These are a mix of both existing and proposed wind turbines, as well as meteorological towers. Meteorological towers make up 2.12% of the logged structures on the overall U.S. map. All maps provided in this Petition are based on data available on the FAA website.

MAP 2.1: Estimated Wind Turbines in the Lower 48 States (2003 – 2011)[73]



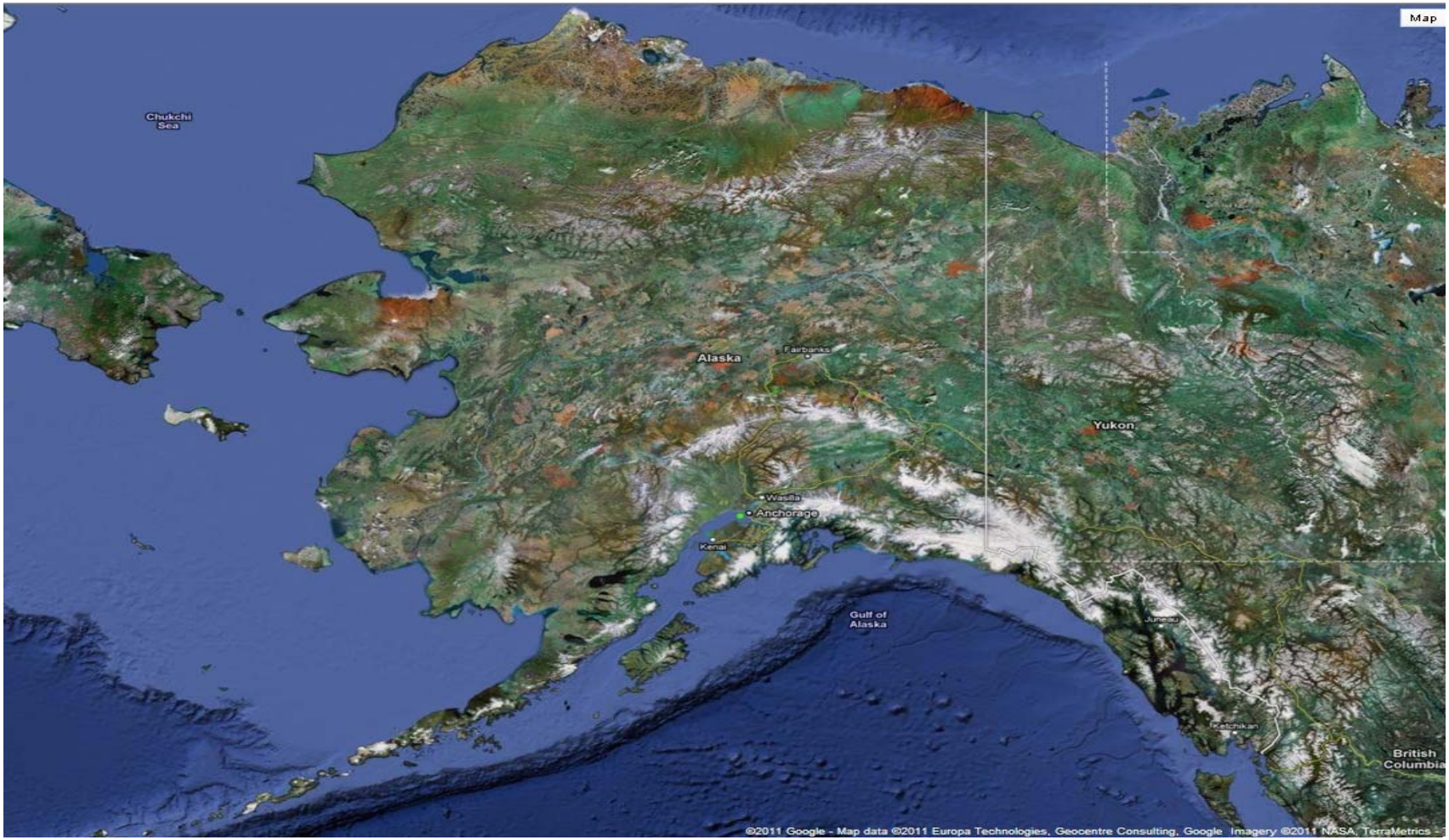
[73] Heat map indicating location of wind turbines in 48 states in the United States that were logged with the FAA between 2003 and 2011. These are a mix of both existing and proposed wind turbines, as well as meteorological towers. Meteorological towers make up 2.12% of the logged structures on the overall U.S. map. The darker orange and red dots represent areas with a relatively higher density of proposed wind structures than areas with green, yellow or no color dots. All maps provided in this Petition are based on data available on the FAA website.

MAP 2.2: Estimated Wind Turbines in Hawaii (2003 – 2011)[74]



[74] Heat map indicating location of wind turbines in Hawaii that were logged with the FAA between 2003 and 2011. These are a mix of both existing and proposed wind turbines, as well as meteorological towers. Meteorological towers make up 2.12% of the logged structures on the overall U.S. map. The darker orange and red dots represent areas with a relatively higher density of proposed wind structures than areas with green, yellow or no color dots. All maps provided in this Petition are based on data available on the FAA website.

MAP 2.3: Estimated Wind Turbines in Alaska (2003 – 2011)[75]



[75] Heat map indicating location of wind turbines in Alaska that were logged with the FAA between 2003 and 2011. These are a mix of both existing and proposed wind turbines, as well as meteorological towers. Meteorological towers make up 2.12% of the logged structures on the overall U.S. map. Because there are relatively few wind turbines in Alaska, they appear as small, light green dots on the map and might not be visible to some readers without magnification. All maps provided in this Petition are based on data available on the FAA website.

In addition to projects that have completed construction, there are over 90 separate projects totaling 8,400 MW of capacity currently under construction in 29 states. AWEA Third Quarter Report.

Along with land-based wind development, offshore wind energy is also poised to develop rapidly. See, e.g., DOI Press Release, Salazar, Chu Announce Major Offshore Wind Initiatives (Feb. 7, 2011)[76] (unveiling a coordinated strategic plan which pursues the deployment of 10 GW of offshore wind capacity by 2020 and 54 GW by 2030 and announcing $50.5 million in funding for offshore wind energy deployment). The Energy Policy Act of 2005 authorized the Secretary of the Interior to grant leases on the Outer Continental Shelf ("OCS") for alternative energy projects, including offshore wind energy projects. Pub. L. No. 109-58, 119 Stat. 594, § 388. The Secretary delegated this authority to the Director of the U.S. Bureau of Ocean Energy Management ("BOEM"), which subsequently approved the nation's first commercial offshore wind energy project with around 130 turbines – the Cape Wind project – in federal waters off the coast of Massachusetts. Many other projects are being planned for construction in federal waters off the coast of Delaware, New Jersey, Florida and Georgia. See BOEM, Offshore Renewable Energy: Interim Policy Projects.[77] In addition, several projects are also being planned for state waters, such as Baryonyx Corporation's proposal to construct 500 wind turbines off the Texas Gulf Coast. DOI has also announced a 'Smart from the Start Initiative' to facilitate siting, leasing and construction of new projects in the Atlantic Outer Continental Shelf. See DOI Press Release, Salazar Launches 'Smart from the Start' Initiative to Speed Offshore Wind Energy Development off the Atlantic Coast (Nov. 23, 2010).[78]

The leading wind energy developers in the United States include developers that have extensive past experience with renewable energy sources, such as Iberdrola Renewables and Horizon Wind Energy, as well as subsidiaries of large oil companies such as BP and Shell. See, e.g., BP Alternative Energy, Our Business: Wind Power;[79] Shell, Wind Energy Operations.[80]

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[76] Available at http://www.doi.gov/news/pressreleases/Salazar-Chu-Announce-Major-Offshore-Wind-Initiatives.cfm (last visited Nov. 15, 2011)

[77] Available at http://www.boemre.gov/offshore/RenewableEnergy/Projects.htm (last visited Nov. 15, 2010).

[78] Available at http://www.doi.gov/news/pressreleases/Salazar-Launches-Smart-from-the-Start-Initiative-to-Speed-Offshore-Wind-Energy-Development-off-the-Atlantic-Coast.cfm (last visited Nov. 15, 2010).

[79] Available at http://www.bp.com/sectiongenericarticle.do?categoryId=9024940&contentId=7046497 (last visited Nov. 11, 2011)

[80] Available at http://www.shell.us/home/content/usa/innovation/wind/projects/ (last visited Nov. 17, 2011).

Increase in size of wind turbines in order to produce more energy

The growth in the industry has been paralleled by an expansion in the size of the turbines. "Modern wind turbines are giant structures" and may vary from 200 to 400 short tons in weight. AWEA et al., Winds of Change: A Manufacturing Blueprint for the Wind Industry (June 2010) at 6, 20. The blade tip speed of the turbines is typically around 180 mph. See Albert Manville, FWS, Presentation on Framing the Issues Dealing with Migratory Birds, Commercial Land-based Wind Energy Development, USFWS, and the MBTA (Oct. 21, 2011) 5 ("FWS 2011 MBTA Conference Presentation") (explaining that the combination of large turbine blades and high speed increases the potential for bird collisions), Attachment G. Further, offshore wind energy projects use turbines much larger than those typically installed onshore. Id. at 16.

Larger turbines produce more energy. See DOE, Wind Power Today (May 2007) ("DOE Wind Power Today")[81] (explaining that DOE has been working with the wind industry to develop larger machines that are more efficient and that capture more energy from the wind). To meet the growing demand, in 2006 alone, average turbine size increased by more than 11% over the 2005 level. See DOE 20% Wind Report at 5; see also Global Energy Concepts, Wind Turbine Technology: Overview (Oct. 2005)[82] ("The rotor diameters and rated capacities of wind turbines have continually increased in the past 10 years"). The average turbine installed in 2006 (at 1.5 MW) was almost as tall as the Statue of Liberty and had a rotor large enough to sweep a football field. DOE Wind Power Today at 2. By 2010, the size of wind turbines had increased with the rotor diameter of the blades exceeding 364 feet (111 meters) (a space that could provide parking for 24 average-sized cars end to end across the diameter of its rotor). Id. at 3.

Significant increase in the size of wind turbines is expected in the near term. By 2015, the average turbine size is expected to exceed 700 feet (213 meters) in height. DOE Wind Power Today at 3; see also Figure 4: Comparison Of The Height Of A Large Wind Turbine With Other Tall Structures. A recent DOE study on trends in the wind industry found that: "[a]verage hub heights and rotor diameters have also scaled with time, to 79.8 and 84.3 meters, respectively, in 2010. Since 1998-99, the average turbine hub height has increased by 43%, while the average rotor diameter has increased by 76%. Industry expectations as well new turbine announcements (especially to serve lower-wind-speed sites) suggest that significant further scaling, especially in rotor diameter, is anticipated in the near term." 2010 DOE Wind Market Report at v; DOE Wind Power Today at 29-31.

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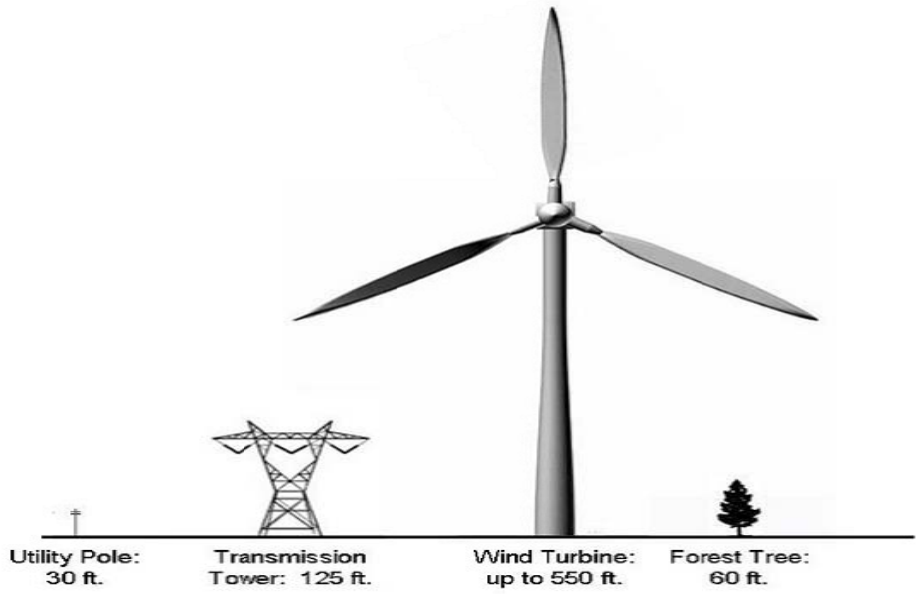
[81] Available at http://www.nrel.gov/docs/fy07osti/41330.pdf (last visited Nov. 16, 2011).

[82] Available at http://www.powernaturally.org/programs/wind/toolkit/9_windturbinetech.pdf (last visited Nov. 16, 2011).

Figure 4: Comparison Of The Height Of A Large Wind Turbine With Other Tall Structures[83]



In sum, the wind industry has developed rapidly over this decade and has great potential to continue to grow. Further, larger and more efficient turbines are generating greater amounts of wind power at lower costs. However, the industry has been concerned about the expiration of a federal production tax credit by the end of 2012. ABC recognizes the need for renewable energy development and will support the industry in its efforts to extend the tax credit for wind energy production, if FWS puts in place a system that ensures ongoing compliance with the MBTA along with other wildlife protection laws.

C.2. Unregulated wind energy projects pose a serious threat to migratory birds protected under federal wildlife laws.

Rapid development of the wind industry and proliferation of massive wind turbines pose a serious threat to migratory bird species if they take place without meaningful regulation and appropriate mandatory federal standards. Indeed, the wind power industry has two essential attributes that render it particularly suitable to development of a permitting system for regulating take of migratory birds.

First, it is an industry that is inherently risky to birds because it entails placing huge turbines and associated power lines and other infrastructure in areas where killing of migratory birds (and hence violations of the MBTA) are virtually inevitable. See Letter from Laury Zicari, FWS to Jennifer McCarthy, U.S. Army Corps of Engineers ("Corps") (May 11, 2011), Attachment H (in providing recommendations in relation to the wildlife impacts of the Saddleback Ridge wind project,

[83] Source: Virginia Wind, Turbine Size, http://www.vawind.org/#javascript (last visited Nov. 17, 2011).

FWS observed that, "[a]ll wind power projects will take birds and bats."); Nat'l Wind Coordinating Collaborative, Wind Wildlife Research Meeting VIII: Presentation and Poster Abstracts 45-46 (Oct. 2010)[84] ("The rapid development of the wind industry in the US has resulted in situations in which wind sites without environmental constraints are becoming increasingly rare. Therefore, more sites with potential conflicts with endangered species and their habitats are under consideration for development… Locations with threatened or endangered species issues are becoming more common as the industry becomes more competitive. Although the species may differ, consistent problems with special status species exist nationwide.").

Indeed, most birds impacted by wind energy projects are protected under the MBTA. See, e.g., 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)[85] ("In a review of bird collisions reported from 31 studies at utility-scale wind energy facilities in the United States, Erickson et al. (2001) showed that 78% of carcasses found at wind-energy facilities outside of California were songbirds protected by the Migratory Bird Treaty Act.").[86]

Second, the environmentally responsible development of wind power is generally recognized to be of benefit to society, particularly because it may be able to play a long-term role in alleviating the effects of climate change on ecosystems. A permitting system – such as that proposed in this Petition – is essential to such development.

Collision with wind turbines and related infrastructure

Wind energy projects adversely impact migratory birds in multiple ways. First, migratory birds are routinely killed by collisions with wind turbines or the infrastructure needed to support wind energy facilities. FWS estimated in 2009 that 440,000 birds were being killed annually by wind turbines in the United States. This mortality estimate is likely an underestimate based on the operation of approximately 22,000 turbines in 2009. See Albert Manville, FWS, Towers, Turbines, Power Lines, and Buildings – Steps Being Taken By the U.S. Fish and Wildlife Service to Avoid or Minimize Take of Migratory Birds at These Structures 6 (July 17 2009) ("Manville 2009 Paper"), Attachment I. By 2020, more than 100,000 turbines are projected to be operating, and it is expected that such an exponential increase of wind turbines will kill at least one million birds each year, and it

[84] Available at http://www.nationalwind.org/assets/research_meetings/Research_ Meeting_ VIII_ Abstracts.pdf (last visited Nov. 16, 2011).

[85] Available at http://www.batsandwind.org/pdf/jwm_m&m.pdf (last visited Nov. 16, 2011).

[86] Poorly sited and operated wind power projects may also have very detrimental effects on other wildlife, particularly bats. As discussed infra, see Section E.4, although this Petition is directed at migratory bird impacts, the permitting scheme that it advocates would have collateral benefits for other wildlife as well.

is likely that the actual mortality will significantly exceed this estimate. See ABC Bird-Smart Wind Principles.

Further, while there are no well-established estimates for the numbers of birds killed by wind energy infrastructure (other than turbines) such as power lines, substations, and meteorological towers, three examples demonstrate why this infrastructure is also of serious concern. See Manville 2009 Paper at 7.

First, power lines are known to be the greatest source of anthropogenic mortality for fledged Whooping Cranes, whose Aransas-Wood Buffalo migration corridor traverses the Great Plains, where a large build out of wind power is expected. See FWS Regions 2 and 6, Whooping Cranes and Wind Development – an Issue Paper 2-3 (2009).[87] Golden Eagle and hawk mortality at power lines are also well documented.

Second, substations associated with wind energy facilities can be another source of mortality, especially when steady-burning lights are left on in low-visibility conditions during migration, as happened during October 1-2, 2011 at the Laurel Mountain wind project and around May 23, 2003 at the Mountaineer wind facility, both in West Virginia. See Memo from Stantec Consulting (consultants for developer) to Laura Hill, FWS, Bird Mortality at Laurel Mountain Substation Memo (Oct. 25, 2011) at 1, Attachment J; Curry & Kerlinger, LLC, A Study of Bird and Bat Collision Fatalities at the Mountaineer Wind Energy Center, Tucker County, West Virginia: Annual Report for 2003 (Feb. 14, 2004) at 5.[88] 484 birds killed by the Laurel Mountain wind energy project, mostly MBTA-protected songbirds, were found at a substation and battery energy storage station on the site; at Mountaineer, 33 birds were found dead at a substation and three wind turbines.

Third, meteorological towers are documented to kill birds. For example, at the Shiloh II Wind Power Project in California, more than 52 birds were found dead at ten meteorological towers over a two-year period (these are unadjusted mortality numbers and actual mortality at the sites would have been higher). See Curry & Kerlinger LLC, Meteorological Tower Fatality Study at the

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[87] Available at ftp://wiley.kars.ku.edu/windresource/Whooping_Crane_and_Wind_Development_FWS_%20April%202009.pdf (last visited Nov. 17, 2011).

[88] Available at http://www.wvhighlands.org/Birds/MountaineerFinalAvianRpt-%203-15-04PKJK.pdf (last visited Nov. 17, 2011).

Shiloh II Wind Project, Solano County, California (Apr. 2008) at 6.[89] According to the Shiloh II study, 85% of the dead birds were legally protected.[90] Id. at 14.

Habitat loss and degradation

Development of wind energy projects can harm birds through long-term habitat loss, alteration, degradation, and fragmentation. Wind energy projects are expected to impact almost 20,000 square miles of terrestrial habitat, and another 4,000 square miles of marine habitat. See DOE 20% Wind Report at 110-11. A U.S. Government Accountability Office ("GAO") report on wind energy found that, "[a]ccording to FWS, the loss of habitat quantity and quality is the primary cause of declines in most assessed bird populations and many other wildlife species." GAO, Wind Power: Impacts on Wildlife and Government Responsibilities for Regulating Development and Protecting Wildlife 15 (2005) ("GAO Wind Power Report");[91] see also Ill. Dep't of Natural Res., The Possible Effects of Wind Energy on Illinois Birds and Bats 2 (2007).[92]

FWS itself has raised concerns about both direct and indirect effects of various wind energy projects. See, e.g., Letter from FWS to Amber Zuhlke, Wind Capital Group, Big Lake Wind Facility in Palm Beach, Florida (July 1, 2011), Attachment K (regarding construction of a project in the Everglades Agricultural Area, FWS stated that the site "supports a host of sensitive trust resources including federally protected migratory birds… The Service has significant concerns on the effects of the proposed project on our trust resources and their habitats. These include both the direct effects of "take" (i.e., mortality and injury through collision) and the indirect effects of habitat fragmentation, site avoidance, disturbance, habitat degradation, barriers, and creation of marginal/suboptimal adjacent wetlands habitats, among others.").

Wind energy facilities require not only wind turbines but also access roads and other infrastructure such as power lines, substations, and outbuildings, resulting in habitat impacts. Furthermore, another form of habitat that is lost due to wind energy development is the airspace that birds formerly used in flight, which can disrupt migrations and other essential behavioral patterns. See FWS 2011 MBTA Conference Presentation at 2.

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[89] Available at http://www.co.solano.ca.us/civicax/filebank/blobdload.aspx?blobid=8916 (last visited Nov. 17, 2011).

[90] The study states that 15% of the dead birds found at the met towers were legally unprotected. It is likely that the remaining 85% of the birds killed by the project were protected under the MBTA because almost all of the species that were listed as fatalities found during the study were those protected under the MBTA.

[91] Available at http://www.gao.gov/new.items/d05906.pdf (last visited Dec. 11, 2011).

[92] Available at http://dnr.state.il.us/publications/pdf/00000544.pdf (last visited Dec. 11, 2011).

In addition to the habitat lost to the cumulative footprint of wind facilities, habitat that remains but is fragmented by the facility can lose its value for some bird species. Examples of species sensitive to habitat fragmentation include the Lesser Prairie-Chicken and Grasshopper Sparrow. See Lesser Prairie-Chicken Interstate Working Group, Assessment and Conservation Strategy for the Lesser Prairie-Chicken (Tympanuchus pallidicinictus) 10 (1999).[93] For instance, the Grasshopper Sparrow has been found by the U.S. Geological Survey to avoid habitat near wind turbines. See Jill A. Shaffer & Douglas H. Johnson, U.S. Geological Survey, Displacement Effects of Wind Developments on Grassland Birds in the Northern Great Plains 51 (2010).[94]

Habitat fragmentation results in an increase of "edges" – areas where habitat is interrupted by human-created features such as access roads and substations. According to FWS, "an increase in edge may result in greater nest parasitism and nest predation." FWS, Revised Draft Land-Based Wind Energy Guidelines 86 (Sept. 13, 2011) ("Wind Guidelines Third Draft").[95] Moreover, some bird species are sensitive to tall structures and will abandon important habitat when tall structures are added. For example, Greater Sage-Grouse abandoned key habitat at an Idaho site after meteorological towers for wind testing were installed. See Biodiversity Conservation Alliance, Wind Power in Wyoming: Doing It Smart from the Start 21 (2008).

Barrier effects

In addition to collision with wind turbines and displacement from habitat, there are other serious threats posed by wind energy development to migratory birds. "Barrier effects," i.e., the energetic impacts to birds of avoiding wind energy facilities rather than flying through them, will become of increasing importance as the size of wind facilities increases and as migration pathways or regional use areas fill with wind turbines. See FWS, Barrier Effect (2011) (providing an overview of barrier effects).[96]

For example, more than 2,000 wind turbines have been proposed at a project in the Whooping Crane's Aransas-Wood Buffalo migration corridor in South Dakota (Titan Wind project). Clipper Wind Power, Clipper Windpower And BP Alternative Energy Form Joint Venture To Develop Up To 5,050 MW: Project to be World's Largest (2008).[97] Further, 1,000 wind turbines

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[93] Available at http://bsi.montana.edu/prairiemap/files/LesserChicken.pdf (last visited Dec. 11, 2011).

[94] Available at https://www.nationalwind.org/assets/research_meetings/Research_Meeting_VII_Shaffer.pdf (last visited Dec. 12, 2011).

[95] Available at http://www.fws.gov/windenergy/ (last visited Dec. 11, 2011).

[96] Available at http://www.fws.gov/windenergy/docs/Barrier_Effect.pdf. (last visited Nov. 15, 2011).

[97] Available at http://www.clipperwind.com/pr_073008.html (last visited Nov. 15, 2011).

have been proposed for a project in Golden Eagle use areas in Wyoming (Chokecherry-Sierra Madre project). See BLM, Chokecherry and Sierra Madre Draft Environmental Impact Statement (2011).[98]

According to FWS, barrier effects have been observed at both land-based and offshore wind projects. In addition, FWS has said that energetic impacts caused by birds avoiding wind turbines may lead to population impacts over time. Barrier Effect supra (2011).

Noise effects

The effects of noise produced by wind turbines can also have adverse impacts on bird species. For instance, utility-scale wind turbines have been demonstrated to produce noise within the range that can reduce densities in some grassland and woodland birds. Noise can also mask the calls birds use to communicate. See FWS, The Effects of Noise on Wildlife (2011) (providing an overview of noise impacts).[99]

Mapping of Estimated Wind Turbines in Key Bird Use Areas

The maps provided below, see Maps 3.1 – 3.3, demonstrate that many wind energy projects have already likely been constructed in areas that are extremely important for birds. These maps have been created by ABC based on data submitted to the FAA - OE/AAA between 2003 (the year when voluntary guidelines were established for wind energy projects by FWS) to 2011. They include all unique wind turbine and associated meteorological tower proposals submitted to the FAA during that time. Wind turbines that were already proposed or existing prior to 2003 are not shown. Meteorological towers represent 2.12% of the structures on the map. These FAA-documented proposed wind turbines and metrological towers are overlaid on the ABC Wind Development Bird Risk Map.[100]

On the maps provided below, red indicates critically important areas for birds where wind energy should not be developed. These areas include important habitat for endangered birds, for concentrations of 500,000 or more migratory birds, for concentrations of the rarest WatchList bird, or those that have special habitat requirements and/or are especially likely to be vulnerable to wind-

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[98] Available at http://www.blm.gov/wy/st/en/info/NEPA/documents/rfo/Chokecherry.html (last visited Nov. 15, 2011).

[99] Available at http://www.fws.gov/windenergy/docs/Noise.pdf (last visited Nov. 15, 2011).

[100] The data presented on the maps provided below are derived from a variety of sources. Examples of primary sources include ABC's list of the 500 most Important Bird Areas in the United States, data on Sage-Grouse core areas from the BLM, and data on the migration corridor of the Whooping Crane from The Nature Conservancy/AWWI. Boundaries of sites are either provided by existing federal or other Geographic Information System layers, or produced by ABC using the best available maps and expert staff opinion. The boundaries of these areas are set on the map based on ABC's best expert judgment as to where the greatest concentration of birds will be present during most migration periods.

related mortality or habitat impacts and the very highest importance bottleneck areas for migrant birds.

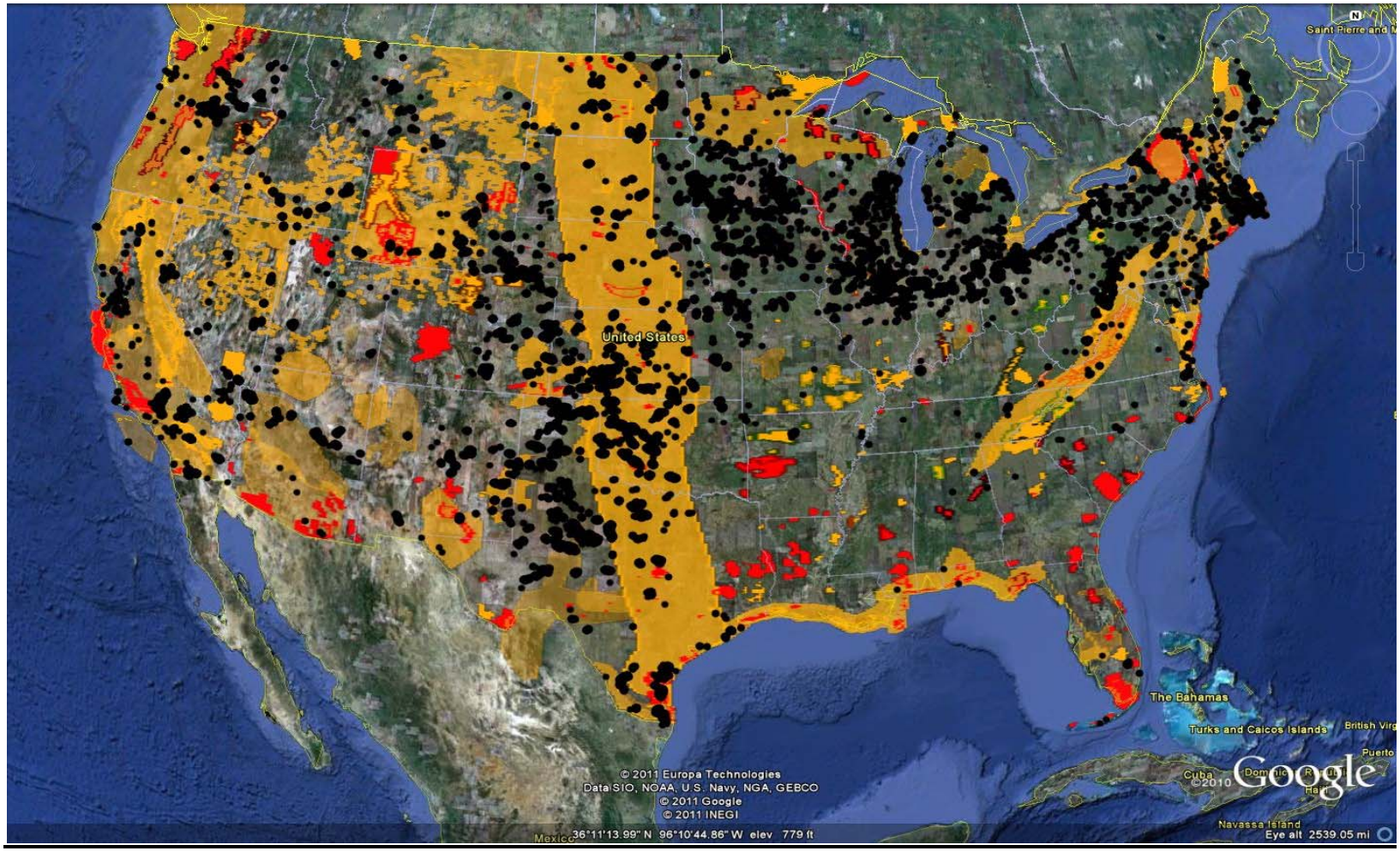
Orange indicates areas that are highly important to birds. Wind development might sometimes be possible in orange locations but will require especially careful siting and operation. Wind power should also only be developed after thorough pre-construction assessments can prove there is not a significant bird problem for a particular planned turbine configuration, or can identify ways that micro-siting or operational mitigation can effectively address any identified problem. Such areas include: Globally Important Bird Areas, important habitat for high-priority WatchList birds, and areas where migratory birds can be expected to be significantly affected. Monitoring and compensatory mitigation will be needed to redress the loss of any birds or habitat unavoidably harmed.

Areas shown in a tint of orange are either (a) Key Migration Corridors where risk to birds will differ from season to season, and may also differ from year to year between specific locations within the corridor, or (b) Key Habitat Areas for specific at-risk species where the species may not be present all year round, and birds are likely to be most at risk from wind development where their optimal habitat is found within the tinted area.

Areas that are not colored orange or red can generally be developed for wind energy if well-conducted pre-construction assessments do not indicate an unexpected or previously unknown bird impact or habitat problem, and so long as appropriate construction and operational mitigation, monitoring, and compensatory mitigation are implemented.

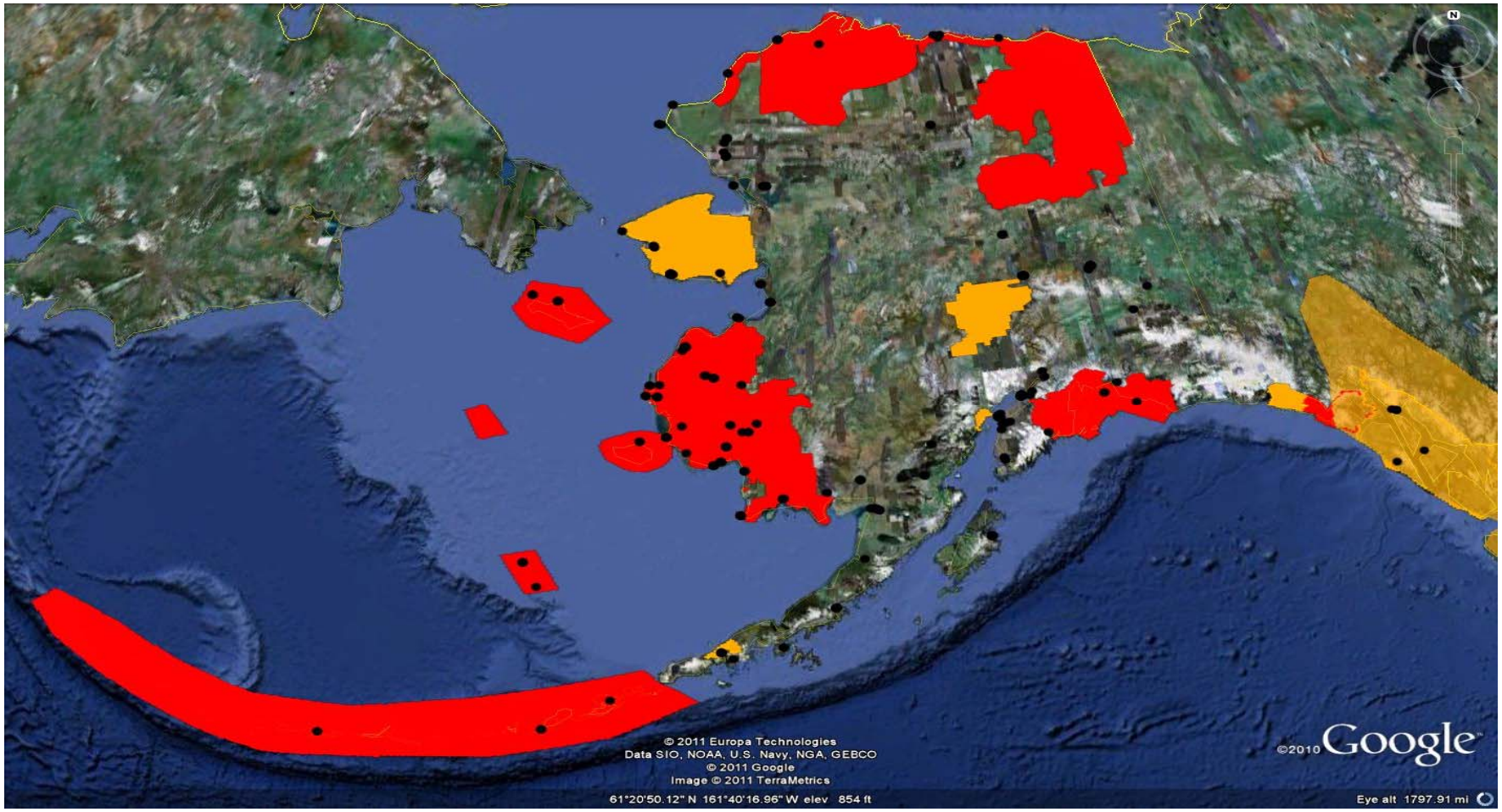
The maps are based on the best data available to ABC as of early December 2011 and ABC will update the maps over time.

MAP 3.1: Key Bird Use Areas and Estimated Wind Turbines in the Lower 48 States (2003-2011)[101]



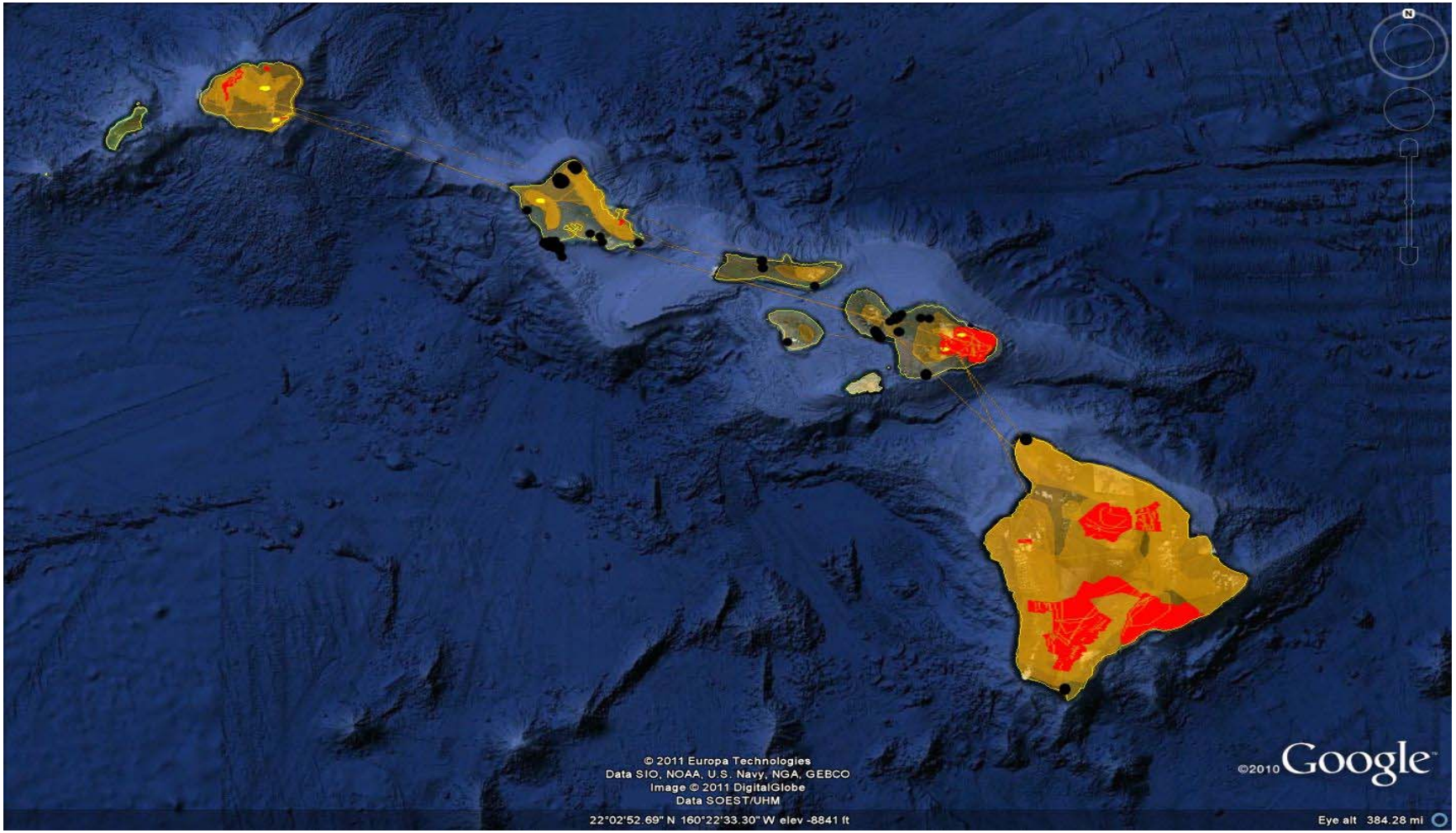
[101] Black represents proposed wind turbines and meteorological towers logged with the FAA between 2003 and 2011 in 48 states in the United States. Red indicates critically important areas for birds where wind energy should not be developed. Wind development might sometimes be possible in orange locations but will require especially careful siting and operation. All maps provided in this Petition are based on data available on the FAA website.

MAP 3.2: Key Bird Use Areas and Estimated Wind Turbines in Alaska (2003-2011)[102]



[102] Black represents proposed wind turbines and meteorological towers logged with the FAA between 2003 and 2011 in Alaska. Red indicates critically important areas for birds where wind energy should not be developed. Wind development might sometimes be possible in orange locations but will require especially careful siting and operation. All maps provided in this Petition are based on data available on the FAA website.

MAP 3.3: Key Bird Use Areas and Estimated Wind Turbines in Hawaii (2003-2011)[103]



[103] Black represents proposed wind turbines and meteorological towers logged with the FAA between 2003 and 2011 in Hawaii. Red indicates critically important areas for birds where wind energy should not be developed. Wind development might sometimes be possible in orange locations but will require especially careful siting and operation. All maps provided in this Petition are based on data available on the FAA website.

Cumulative impacts

Finally, wind energy development can harm birds through its addition to the cumulative impacts of all the threats that birds face. According to the GAO:

> Scientists, in particular, are concerned about the potential cumulative impacts of wind power on species populations if the industry expands as expected. Such concerns may be well-founded because significant development is proposed in areas that contain large numbers of species or are believed to be migratory flyways. Concerns are compounded by the fact that the regulation of wind power varies from location-to-location and some state and local regulatory agencies we reviewed generally had little experience or expertise in addressing the environmental and wildlife impacts from wind power. In addition, given the relatively narrow regulatory scope of state and local agencies, it appears that when new wind power facilities are permitted, no one is considering the impacts of wind power on a regional or "ecosystem" scale—a scale that often spans governmental jurisdictions. FWS, in its responsibility for protecting wildlife, is the appropriate agency for such a task and in fact does monitor the status of species populations, to the extent possible.

GAO Wind Power Report at 43 (emphases added). FWS has also stated that cumulative impacts are important: "Declining bird populations are probably most often the result of combined or cumulative impacts of all mortality, thus addressing each of the contributing factors is a priority." FWS, Migratory Bird Mortality: Many Human-Caused Threats Afflict our Bird Populations 2 (2002).[104]

All of the impacts of wind energy projects, described above, pose a serious threat to migratory birds. This is particularly so because at present FWS does not have any mandatory standards and regulations in place for development of wind energy projects in a manner that is protective of migratory birds.

C.3. At present, for land-based wind energy projects, FWS is relying on a system of voluntary compliance with the MBTA that is empirically ineffective in protecting migratory birds and will lead to rampant violations of federal law.

The MBTA, ESA, and BGEPA, prohibit "take" of migratory birds, endangered and threatened species, and Bald and Golden Eagles. Both the ESA and the implementing regulations of BGEPA provide mechanisms for FWS to regulate take of endangered and threatened species and Bald and Golden Eagles by individual wind energy projects (typically by issuing incidental take

[104] Available at http://www.fws.gov/birds/mortality-fact-sheet.pdf (last visited Nov. 15, 2011).

permits subject to various terms and conditions). However, at present no such comparable mechanism exists under the MBTA.

In lieu of mandatory standards and obligations for avoiding and minimizing the wildlife impacts of wind energy projects, FWS has long elected to merely provide non-binding "recommendations" to the wind industry that developers may "voluntarily" choose to follow or reject.

While such recommendations are wholly inadequate, as described further below, it should be noted that such recommendations recognize the need for a federal (and not a state) system to protect migratory birds from the threats posed by wind energy projects. For instance, state public service commissions, which are typically the state authorities that are involved in the approval of wind energy projects on non-federal lands, unlike FWS, are not equipped to address the cumulative migratory bird impacts of wind energy projects. Indeed, the MBTA itself is premised on the recognition that migratory birds constitute a unique federal trust resource that ought to be protected under a federalized system rather than in an ad hoc manner by individual states.[105] In State of Missouri v. Holland, 252 U.S. 416 (1920), the U.S. Supreme Court upheld the constitutionality and validity of the MBTA and particularly recognized the need for "national action" in lieu of potentially inconsistent state actions to protect and regulate take of migratory birds. The Court observed as follows:

> No doubt it is true that as between a State and its inhabitants the State may regulate the killing and sale of such birds, but it does not follow that its authority is exclusive of paramount powers…. The whole foundation of the State's rights is the presence within their jurisdiction of birds that yesterday had not arrived, tomorrow may be in another State and in a week a thousand miles away…. Here a national interest of very nearly the first magnitude is involved. It can be protected only by national action in concert with that of another power. The subject matter is only transitorily within the State and has no permanent habitat therein. But for the treaty and the statute there soon might be no birds for any powers to deal with. We see nothing in the Constitution that compels the Government to sit by while a food supply is cut off and the protectors of our forests and our crops are destroyed. It is not

[105] Further, under international law, migratory species that migrate between two or more nations constitute "shared natural resources" over which a single nation cannot assume unilateral control such that it deprives the other concerned nations of their right to an equitable and reasonable share of the resource. See, e.g., U.S.-Import Prohibition of Certain Shrimp and Shrimp Products, 12 October 1998, 38 ILM 118 ¶133 (observing that sea turtles are highly migratory animals, passing in and out of the waters of various coastal states and that each of such states can claim an interest in the species conservation); see also Philippe Sands, Principles of International Environmental Law 238 (2d ed. 2003); U. N. Env't Prog., Principles of Conduct in the field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, 17 ILM 1097 (1978), Principle 3(3).

> sufficient to rely upon the States. The reliance is vain, and were it otherwise, the question is whether the United States is forbidden to act. We are of opinion that the treaty and statute must be upheld.

252 U.S. at 434-435.

In recognition of its federal trust responsibility to protect migratory birds, in 2003, FWS issued "Interim Guidance" designed to address impacts of wind energy projects on migratory birds and other wildlife. See FWS, Interim Guidance on Avoiding and Minimizing Wildlife Impacts From Wind Turbines (May 13, 2003) ("2003 Interim Guidance").[106] FWS indicated its intent to evaluate the guidance over a two-year period. The guidance contained "voluntary" guidelines for the wind industry and did not impose any mandatory requirements to avoid or minimize wildlife impacts. In fact, in 2004, FWS issued a memo which reiterated "the voluntary and flexible nature" of the 2003 Interim Guidance and went so far as to state that, "[t]he Interim Guidelines are not to be construed as rigid requirements, which are applicable to every situation, nor should they be read literally." Memo from Steven Williams, FWS Director to FWS Regional Directors, Implementation of Service Voluntary Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines (Apr. 26, 2004).[107]

Subsequently, DOI announced the formation of a Wind Turbine Guidelines Federal Advisory Committee ("Wind FAC") to provide recommendations and advice to DOI and FWS "on developing effective measures to protect wildlife resources and enhance potential benefits to wildlife that may be identified." DOI, Establishment of Wind Turbine Guidelines Advisory Committee, 72 Fed. Reg. 11373 (Mar. 13, 2007). On October 26, 2007, the Secretary of the Interior announced in a press release that 22 individuals had been named to serve on the Wind FAC. Thereafter, several wildlife conservation groups raised objections about the skewed composition of the Wind FAC which was dominated by representatives of the wind power industry. Many members of the wildlife conservation community argued that the Committee violated the requirements of the Federal Advisory Committee Act ("FACA"), 5 U.S.C. App. 2 §§1-16, that all chartered advisory committees must be "fairly balanced in terms of the points of view represented and the functions to be performed by the advisory committee," and "will not be inappropriately influenced by … any special interest." Id. §§ 5(b)(2)-(3). In response to these objections, although DOI made some limited changes to the composition of the Committee, the members representing the wildlife protection interests continue to be clearly outweighed by industry advocates and do not represent the full spectrum of viewpoints on the issue that exist within the wildlife protection community.[108]

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[106] Available at http://www.fws.gov/midwest/wind/guidance/Serviceinterimguide.pdf (last visited Nov. 17, 2011).

[107] Available at http://www.fws.gov/habitatconservation/wind_guidelines.pdf (last visited Nov. 17, 2011).

[108] Indeed, by far the largest single voting bloc on the Committee is constituted by the wind industry representatives. Excluding the FWS official who works for the agency receiving the recommendations, there

On April 13, 2010, the Wind FAC submitted its final recommendations to FWS and DOI. See Wind Turbine Guidelines Advisory Committee Recommendations (2010) ("Committee Recommendations").[109] Instead of merely rubber-stamping the Committee Recommendations, FWS's wildlife biologists recognized that those Recommendations suffered from certain shortcomings and would not accomplish their stated conservation objectives, at least without substantial revision. See FWS, Comparison of FAC Recommendations to FWS Draft Voluntary Guidelines (Feb. 2011).[110] Thus, FWS convened a team of its wind-wildlife experts during late spring 2010 to prepare new guidelines for wind energy projects, which were finally published for public comment by FWS on February 8, 2011, i.e., the Draft Voluntary Land-Based Wind Energy Guidelines ("Wind Guidelines First Draft") and the Draft Eagle Conservation Plan Guidance ("Eagle Guidance"). See FWS 2011 MBTA Conference Presentation at 13. Both documents provided agency recommendations for industry to avoid and minimize wildlife impacts.

The Wind Guidelines First Draft was commended by many in the conservation community as an important first step, and there was strong support for further strengthening the guidelines and making their provisions mandatory for wind energy developers. See, e.g., ABC et al., Wind Energy Guidelines Comments (May 19, 2011) ("The guidelines must be strengthened and made mandatory"); Black Swamp Bird Observatory, Wind Energy Guidelines Comments (May 18, 2011) ("If the Guidelines are to truly avoid and minimize negative effects to fish, wildlife and their habitats resulting from construction, operation and maintenance of land-based, wind energy facilities, then the Guidelines, once finalized, must be regulatory and not voluntary on all lands, public and private."); Cornell Lab of Ornithology, Comments to the U.S. Fish and Wildlife Service: Draft Land-based Wind Energy Guidelines (May 2011) ("We respectfully suggest that at least some components of the Guidelines move forward as mandatory."); Friends of Blackwater et al., Wind Energy Guidelines Comments and Eagle Conservation Plan Guidance Comments (May 19, 2011) at 2 ("Unfortunately, as presently written, the Guidelines cannot satisfy this fundamental objective for a national policy on land-based wind power projects because the Guidelines' provisions addressing siting, construction, operation, and monitoring are merely voluntary, i.e., wind energy developers can choose not to adhere to the requirements in the Guidelines."); Conservation Biology Inst., Comments on Wind Energy Guidelines (May 19, 2011) ("the proposed wind energy guidelines, as drafted, are unlikely to lead to the types of rigorous regional analyses that are necessary to adequately assess potential ecological and cumulative impacts…. The guidelines should be

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are 21 current members in the Committee – 43% are wind industry representatives where 7 members work in wind energy companies and 2 members are lawyers who represent wind energy companies. See DOI Press Release, Interior Secretary Kempthorne Names Members for Committee to Address Wildlife Impacts of Wind Turbines (Oct. 26, 2007); see also FWS, Committee Background, http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee_information.html (providing a list of the current members of the Committee).

[109] Available at http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html (last visited Dec. 12, 2011).

[110] Available at http://www.fws.gov/windenergy/index.html (last visited Nov. 17, 2011).

regulatory, not voluntary, on both public and private lands, and should be enforced."); Pa. Game Comm'n, FWS Draft Land-based Wind Energy Guidelines (May 2011) ("the Guidelines would be more effective if they are regulatory rather than voluntary."); San Diego Audubon Soc'y, Wind Energy Guidelines Comments (May 19, 2011) ("Given the strong federal emphasis on expanding wind power throughout the country, mandatory guidelines are absolutely essential to preserve our avian heritage. They need to be mandatory now, before thousands of new wind turbines, transmissions lines, and access roads are installed in inappropriate locations, not later when it is too late."); Email Comment from Roger Shamley, President Chicago Audubon Soc'y (Mar. 5, 2011) ("I suggest that if you are serious about this issue that you make compliance mandatory, rather than optional."); Pub. Employees for Envtl. Responsibility (PEER), Wind Energy Guidelines Comments (May 19, 2011) ("Making the Guidelines voluntary rather than mandatory renders them meaningless…. PEER urges USFWS to make mandatory Guidelines for the siting of these facilities.").[111]

Nonetheless, the Committee itself – which in any event under FACA may only play a purely "advisory" role in the decision-making process, 5 U.S.C. App. II § 2(b)(6) ("the function of advisory committees should be advisory only") – expressed its "disappoint[ment]" with the agency's strengthened guidelines, and urged the agency to modify its recommendations in order "to mirror the FAC Recommendations." FWS, April 27, 2011 Wind Federal Advisory Committee Meeting Summary 2, 18 (2011).[112] Indeed, although FWS initially requested the public to specifically comment on whether the Wind Guidelines First Draft should be made mandatory, in response to pressure from the Wind FAC, FWS did not again raise or address this issue, despite extensive public comments (cited above) urging FWS to make the guidelines mandatory. See id. at 14 (summarizing FWS's position that, "FWS did not intend to write language that gave it control over the project or the process."); see also id. at 15 (summarizing the FAC's concern that "[t]he Draft Guidelines shift from trust and communication with the FWS to command and control by the FWS.").

Further, in response to extensive pressure (particularly from the industry representatives of the Committee), FWS substantially weakened the wildlife protections in its initial guidelines – so much so that on many issues the subsequent two drafts published by the agency presented a complete departure from the agency's previous position. See FWS, Revised Draft Land-Based Wind Energy Guidelines (July 12, 2011); ("Wind Guidelines Second Draft") and Wind Guidelines Third

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[111] Public comments on the Guidelines are available here: http://www.fws.gov/windenergy/index.html (last visited Nov. 17, 2011).

[112] Available at http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee_past_mtgs.html (last visited Nov. 14, 2011).

Draft (jointly, the "Revised Wind Guidelines"); see also FWS, Comparison of Wind Federal Advisory Committee Recommendations and Guidelines.[113]

For instance, the Wind Guidelines First Draft recommended pre-construction monitoring for a minimum duration of three years. However, that position of the expert agency on what was necessary to gather adequate pre-construction data for decision-making was modified substantially by draft Revised Guidelines (in accordance with the Committee Recommendations). Accordingly the Revised Guidelines eliminated the specific duration requirement for pre-construction studies. Another example of substantial watering down of FWS's own recommendations and language in the Guidelines concerns the agency's position on adaptive management. In the Wind Guidelines First Draft, FWS extensively premised its recommendations on the need for wind energy developers to carry out comprehensive adaptive management. See Wind Guidelines First Draft at 12 ("Monitoring should be designed to support the adaptive management decision-making/assessment process."); see also id. at 21 (discussing the applicability of adaptive management).

However, in the Revised Guidelines, FWS substantially weakened what were initially strong recommendations for adaptive management and went on to expressly state that: "[a]daptive management should not typically need to be applied to land-based wind energy projects because, in the majority of instances, when a developer follows the Guidelines, the impacts and the level of uncertainty should be low. Nevertheless, the tiered approach is designed to accommodate [adaptive management], when warranted." Wind Guidelines Third Draft at 22 (emphases added). The Service, however, proffered no new data to support the proposition that the impacts and level of uncertainty will be "low" in the absence of meaningful adaptive management.

Further, the changes made to the Guidelines based on the Committee's recommendations are designed to allow project developers to obtain assurances for non-prosecution in exchange for merely documenting FWS recommendations and developers' reasons for "disagreeing" with the Service to show "adherence" to the Guidelines. See Wind Guidelines Third Draft at 13 ("While the advice of the Service is not binding, neither can it simply be reviewed and rejected without a contemporaneously documented reasoned justification, at least if the developer seeks to have the benefit of the enforcement discretion provisions of these guidelines. Instead, proper consideration of the advice of the Service entails contemporaneous documentation of how the developer evaluated that advice and the reasons for any departures from it." (emphasis added)). Further, with respect to take of eagles by wind energy projects, in the Wind Guidelines Third Draft, FWS not only purported to provide non-enforcement assurances without regard to the applicable take permit regulations under BGEPA but, remarkably, did so based on the developers' own determination as to whether such take will occur. See id. ("If taking of eagles is not anticipated, adherence to the Guidelines would give rise to assurances regarding enforcement discretion if an unexpected taking occurs.").

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[113] All drafts of the Guidelines and related documents are available here: http://www.fws.gov/windenergy/index.html (last visited Nov. 17, 2011).

Thus, the Revised Guidelines eliminated important recommendations that FWS's own staff had initially adopted in the February 2011 Wind Guidelines First Draft – capitulating to the views of an industry-dominated advisory committee in lieu of the expert agency's own assessment of what is needed to conserve migratory birds and other wildlife resources held in trust for the American people. This is an apparent violation of FACA's directive that the "function of advisory committees should be advisory only," and in any event represents a failure to adopt a system even remotely approximating what the Service's own staff recognized as minimally acceptable to effectuate the MBTA.

Further, while the Revised Wind Guidelines are entirely "voluntary" in nature, the only measure that is "mandatory" as such is one imposed on FWS itself, and not the wind energy developer. The Revised Wind Guidelines impose no mandatory obligations on wind energy developers, but they require FWS to respond to industry proposals for site location within a truncated time frame, i.e., 60 days from receipt of the proposal. See Wind Guidelines Third Draft at 17 ("The Service has determined that Field Offices have 60 calendar days to respond to a request by a wind energy developer to review and comment on proposed site locations, pre- and post-construction study designs, and proposed mitigation."). If the agency fails to provide a response within 60 days, then the developer can proceed with construction of the project without waiting for Service input. Moreover, if the Service takes more than 60 days to respond to the industry proposal, the developer need only consider the Service's recommendations "if feasible" and no comparable flexibility is given to the Service, regardless of the size or complexity of the project, or its risk to wildlife. Id. ("If the Service does not respond within 60 days of receipt of the document, then the developer can proceed through Tier 3 without waiting for Service input. If the Service provides comments at a later time, the developer should incorporate the comments if feasible." (emphases added)).

Thus, despite being well-aware that wind energy projects will invariably take migratory birds protected under the MBTA, FWS has embarked on an approach that merely provides voluntary guidelines in lieu of mandatory obligations for wind energy developers, and that affords developers little incentive to abide by the determinations of FWS biologists as to which sites pose unacceptable risks to migratory birds. See infra Section E.3.ii (discussing various letters sent by FWS to wind energy developers and/or their consultants cautioning them about their project's wildlife impacts). There is no empirical, or even rational, basis for concluding that these guidelines, especially as so watered-down and weakened in response to industry pressure, will be sufficient to ameliorate the serious and growing impacts of poorly sited wind power projects on migratory birds. To the contrary, it is predictable that the Guidelines will have the opposite effect by, in essence, encouraging wind power companies to believe that they may avoid prosecution for violations of the MBTA by self-certifying that they have "complied" with the Guidelines simply by documenting their reasons for declining to abide by the Service's recommendations.

C.4. At present, FWS does not have any standards – not even voluntary guidelines – for addressing the impacts of offshore wind energy projects on migratory birds.

The "voluntary" Guidelines described supra, Section C.3, only apply to land-based wind energy projects and no such comparable document exists for avoiding and mitigating the serious wildlife impacts of offshore wind energy projects. The current draft of the Guidelines further states that "[o]ffshore wind energy projects may involve another suite of effects and analyses not addressed here." Wind Guidelines Third Draft at 16. In discussions in July and September 2011, FWS staff has told ABC personnel that while FWS might decide to prepare voluntary guidelines for offshore wind at some time in the future, the agency does not currently have a timeline for the preparation of such a document, and in fact has not made a decision to do so. Communication between Kelly Fuller, ABC and Albert Manville, FWS (July 12, 2011), and Jerome Ford, FWS (Sept. 20, 2011). Instead, FWS plans to provide case-by-case input to BOEM in regard to wildlife at proposed offshore wind facilities in federal waters. In addition, FWS plans to provide comments regarding Army Corps of Engineers' permits for offshore wind facilities.

FWS's approach to exercising oversight over offshore wind energy projects is extremely inadequate. At present, there are no mandatory standards or rules implementing the MBTA for offshore wind energy project developers. Indeed, there are not even inadequate "voluntary" guidelines such as those that exist for land-based projects. As a result, different FWS regional offices may propose varying methods and measures, resulting in no consistent standard for offshore wildlife protection. Furthermore, the lack of standardized regulatory guidance makes it impossible for offshore wind developers to plan ahead of time for what they will be asked to do. This uncertainty may complicate private-sector project financing, thus discouraging the development of offshore wind energy. In addition, in the absence of standardized regulatory guidance from FWS, other federal agencies that lack FWS's avian expertise may move into the void and issue what may become de facto offshore wind guidelines. In fact, BOEM has already taken a step down this road by including Best Management Practices ("BMPs") for reducing avian impacts of offshore wind projects in its Alternative Energy Programmatic Environmental Impact Statement. However, these BMPs set the bar very low and are entirely inadequate to reduce wildlife impacts. U.S. Minerals Mgm't Serv., OCS Alternative Energy and Alternate Use Programmatic Environmental Impact Statement at 2-25 to 2-26.[114]

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[114] The document lists merely five minimal BMPs: "The Lessee shall evaluate avian use of the project area and design the project to minimize or mitigate the potential for bird strikes and habitat loss. The amount and extent of ecological baseline data required will be determined on a project-by-project basis; Lessees shall take measures to reduce perching opportunities; Lessees shall locate cable landfalls and onshore facilities so as to avoid impacts to known nesting beaches; Wind turbine rotors should not come within 30 m (100 ft) of the ocean surface to minimize impacts to water birds; Lessees shall comply with the FAA and Corps requirements for lighting while using lighting technology (e.g., low-intensity strobe lights) that minimizes impacts to avian species." Needless to say, these five BMPs are not sufficient to avoid, minimize, and mitigate the impacts of offshore wind facilities on birds protected by the MBTA. Available at http://ocsenergy.anl.gov/documents/fpeis/Alt_Energy_FPEIS_Chapter2.pdf. (last visited Nov. 20, 2011).

It is also necessary for FWS to expeditiously take appropriate action to regulate the impacts of offshore wind energy projects on migratory birds because the regulatory processes of BOEM and the Corps will not ensure that all offshore wind energy projects adequately avoid, minimize and mitigate impacts to birds covered by the MBTA.

First, BOEM's regulatory authority over offshore wind projects is limited to those in waters over which BOEM has jurisdiction, which is currently limited to federal offshore waters and would not apply to state waters. In general, state waters extend three nautical miles from shore, however the state water limits in Texas and Florida (off the Gulf Coast) extend to about nine nautical miles. In addition, the Great Lakes are considered state waters. Office of Ocean and Coastal Res. Mgm't and Nat'l Oceanic and Atmospheric Admin., State Jurisdiction and Federal Waters 1 (2011).[115] The relative lack of federal regulatory processes in state waters has been marketed by some states, such as Texas, as a reason for offshore wind developers to develop projects in their state waters. Tex. Gen. Land Office, Texas Offshore Wind Energy ("Developers partnering with the Land Office find the state easy to do business in. Texas' unique coastal sovereignty - out to 10.3 miles - means less federal entanglement.").[116]

Second, while FWS can provide comments during BOEM and Corps processes, unless FWS has its own binding determination to issue under the MBTA, the agency's comments need not be followed, which will leave the agency without a clear path for fulfilling its mandate to protect migratory birds. Wind energy development in state water locations will present significant challenges if it is sited and operated without a concrete framework for avoiding, minimizing and mitigating wildlife impacts. As a general rule of thumb, more birds use near shore areas than locations farther out to sea. In the eastern United States, for example, large numbers of birds migrate along the Atlantic Coast. Likewise, the Texas Gulf Coast is heavily used by birds migrating to and from Globally Important Bird Areas. The Great Lakes are also potentially a difficult location because of the large amount of bird migration that takes place across them. Thus, offshore wind facilities in state jurisdictional waters are where some of the most serious impacts to birds protected by the MBTA could take place, but where FWS may have the least ability to fulfill its wildlife protection mandate, unless a permitting scheme such as that proposed in this Petition is adopted.

Wind energy development in waters outside of federal jurisdiction is already underway and several wind energy projects are being constructed in state waters – areas which, although covered by the MBTA's general prohibition on unauthorized take, may lack any other federal mechanism to the project affording an adequate review of wildlife impacts. The proposed Baryonyx offshore wind facility would entail 500 6-MW wind turbines between five and ten miles off the Texas shore, with

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[115] Available at http://seagrant.gso.uri.edu/coast/cmsp_material/state_fed-waters.pdf (last visited Nov. 20, 2011).

[116] Available at http://www.glo.texas.gov/glo_news/hot_topics/articles/offshore-wind-energy.html (last visited Nov. 20, 2011).

transmission cables potentially crossing Padre Island, Padre Island National Seashore, Corpus Christi Bay, and Laguna Madre. The project has already completed a public comment period related to scoping for an environmental review document (EA or EIS) from the Corps. The Baryonyx project could be disastrous for wildlife, as the FWS comment letter made clear. See Letter from Allan M. Strand, FWS to Jayson Hudson, Corps (Aug. 15, 2011), Attachment L; see also Kelly Fuller, ABC, Comments on Permit Application SWG-2011-00511 (Baryonyx Corporation Offshore Wind Project (Aug. 17, 2011) (ABC comments submitted to the Corps).

In addition, it is unclear whether the Corps' environmental review will be rigorous, given that it is taking place in the context of permit requirements under the Clean Water Act, and that the Corps has a long track record of failing to address all of the adverse wildlife impacts flowing from its permitting decisions. The proposed Baryonyx offshore wind facility is not the only one being considered for Texas state waters. ABC has been informed that as of August, 2011, Coastal Point had an offshore lease with the Texas State Land Commission and Offshore Wind Systems had a permit from the Corps for an offshore wind testing structure. Personal communication between Kelly Fuller, ABC and Bob Blumberg, Texas General Land Office (Aug. 29, 2011). Coastal Point has since announced plans to install one offshore wind turbine by the end of 2011. See Nathanial Gronewold, Texas is Bullish on Offshore Wind (E & E News, Nov. 21, 2011), Attachment M. Offshore wind projects in Texas are of tremendous concern because the Texas Gulf Coast is the most sensitive coastal area for birds in the United States, and the State of Texas does not have its own wind energy permitting process with environmental review.

Wind turbine projects in the jurisdictional waters of other states have also been proposed. Although these are currently small proposals, the scale of offshore projects is expected to increase. In addition, in the wrong location, even a single offshore wind turbine could have serious impacts. Some examples of offshore wind energy project proposals in state waters are listed below:

- Gamesa Energy USA and Northrup Grumman International have proposed building a 5-MW wind turbine in lower Chesapeake Bay and the state's Marine Resources Commission has given approval for preliminary studies of the site to take place. FWS staff have raised concerns about potential bird impacts at the Chesapeake Bay location, but the agency was informed that the site could not be changed. See Email from Tylan Dean, FWS to Keith Hastie, FWS (Mar. 30, 2011), Attachment N.
- Fishermen's Energy, LLC has proposed a five-turbine, 20 MW wind facility approximately three miles off Atlantic City in New Jersey state waters. See Fishermen's Energy, LLC, FAQ.[117] In spring 2011, the project received all the necessary state permits and is currently awaiting a permit from the Corps. The company has also expressed interest in developing

[117] Available at http://www.fishermensenergy.com/faq.html (last visited Nov. 20, 2011).

offshore wind in the Great Lakes. Fishermen's Energy, LLC, VA Offshore Wind 2011 Presentation (June 22, 2011).[118]

- The University of Delaware has proposed a six-turbine offshore wind facility approximately 2.8 miles off the coast in Delaware state waters and has met with the Corps to discuss it. Corps, Wind Turbine Proposals within Philadelphia District (2011).[119]
- Deepwater Wind has proposed a five turbine offshore wind facility approximately three miles off Block Island, in Rhode Island state waters. Deepwater Wind, Block Island Wind Farm.[120] In September, 2011, Deepwater announced that a marine survey at the site had begun. See Deepwater Wind, Block Island Wind Farm Project Advances with Cutting-Edge Marine Surveys, Expanded Team (Sept. 22, 2011).[121]
- West Wind Works, LCC has expressed interest in building a 400 MW offshore wind facility three nautical miles south of Oahu. This location may be in the state waters of Hawaii. Email from Kyle Avery, West Wind Works to Hawaii Inter-island Renewable Energy Program, Public Scoping Comment on Hawaii Interisland Renewable Energy Program: Wind (Mar. 9, 2011).[122]
- The Lake Erie Energy Development Corporation (LEEDCO) and Freshwater Wind, LLC announced in January 2011 that they have a signed option with the state of Ohio to lease lake bottom land in Lake Erie for a 20 MW offshore wind facility of five turbines, approximately seven miles offshore NW of Cleveland. LEEDCo's reported goal is 1,000 MW of offshore wind development in Lake Erie by 2020. See Offshorewindbiz.com, LEEDCo and Freshwater Wind Sign Option With State Ohio to Lease Lake Erie to Build Offshore Wind Farm (Jan. 11, 2011).[123] According to an October 2011 Corps fact sheet, LEEDCo's project would be five to eight turbines, and the Corps is encouraging its construction in Lake Erie in order to judge impacts. Larger projects would be built later, up to 1,520 offshore wind

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[118] Available at http://vasierraclub.org/Goldsmith.pdf (last visited Nov. 20, 2011).

[119] Available at http://www.nap.usace.army.mil/cenap-op/regulatory/wind_turbine.html (last visited Nov. 20, 2011).

[120] Available at http://dwwind.com/block-island/block-island-project-overview (last visited Nov. 20, 2011).

[121] Available at http://dwwind.com/news/block-island-wind-farm-project-advances-with-cutting-edge-marine-surveys-expanded-team/?a=news&p=news (last visited Nov. 20, 2011).

[122] Available at http://www.hirepeis.com/documents/scopingcomments/ngos_private_entities/WestWindWords.pdf (last visited Nov. 20, 2011).

[123] Available at http://www.offshorewind.biz/2011/01/09/leedco-and-freshwater-wind-sign-option-with-state-ohio-to-lease-lake-erie-to-build-offshore-wind-farm-usa/ (last visited Nov. 20, 2011).

turbines in the Great Lakes state waters of New York, Ohio, and Pennsylvania. See Corps, Offshore Wind Farm Sitings on the Lower Great Lakes Fact Sheet (Oct. 2011).[124]

Further, the first offshore wind energy project in federal waters approved by the federal government – the Cape Wind project – has raised several concerns about its wildlife impacts, particularly to migratory birds. Several environmental organizations including Public Employees for Environmental Responsibility have challenged that decision on the grounds that the project, as designed, will kill thousands of federally protected birds, without the level of pre-construction surveying that had been recommended by FWS and without any coherent post-construction monitoring or mitigation plan in place for the project. See Second Amended Complaint at 27, 31, Public Employees for Environmental Responsibility v. Bromwich, Case No. 1:10-cv-01067-RMU (D.D.C. 2010).

Thus, as things presently stand, there are patently inadequate, if not counterproductive, voluntary "Guidelines" for land-based wind power projects and not even a guidance document for offshore projects. On the other hand, as described in detail infra, Section D.2 and Section E.1, FWS has more than sufficient legal authority to establish meaningful, effective measures for protecting migratory birds.

D. STATUTORY BACKGROUND: THE BROAD SCOPE OF THE MBTA'S TAKE PROHIBITION

D.1. The MBTA is a broad wildlife conservation statute that prohibits both intentional and incidental take, unless expressly permitted by FWS.

The MBTA is a conservation statute "designed to prevent the destruction of certain species of birds." Andrus v. Allard, 444 U.S. 51, 52-53 (1979) (noting that the statute was originally enacted to give effect to the 1916 convention between the United States and Great Britain (then for Canada) for the protection of migratory birds, "and for other purposes.").[125] Subsequent MBTA amendments ratified similar bilateral conventions with Mexico in 1936, Japan in 1972, and Russia in 1976.

At present, approximately 1,007 bird species are protected under the Act, ranging from a wide variety of songbirds, waterfowl, and shorebirds to hawks, owls, vultures, and falcons, including

[124] Available at http://www.lrb.usace.army.mil/Factsheets/NYS/NY-22/Offshore%20 WindFarms% 20Oct%202011.pdf (last visited Nov. 20, 2011).

[125] The phrase "other purposes" has been interpreted to mean purposes other than giving effect to the treaty wherein "Congress intended to invoke its own powers to accomplish other purposes than those enabled by the treaty." Cerritos Gun Club v. Hall, 96 F.2d 620, 627-628 (9th Cir. 1938).

Golden Eagles and Bald Eagles.[126] See FWS, Revised List of Migratory Birds and Your Permit: Questions and Answers (Nov. 1, 2010).[127] These species are shared natural resources subject to FWS's "federal trust responsibility," i.e., FWS, as a trustee of these resources, has the duty to conserve, protect and enhance migratory birds. See FWS, Recommendations to Avoid Adverse Impacts to Migratory Birds, Federally Listed Species, and Other Wildlife form Communication Towers & Antennae (2000) ("Migratory birds are a federal trust resource responsibility, and the Service considers migratory bird concentration areas environmentally significant."); see also Wind Guidelines Second Draft at 3, 12.

The MBTA prohibits the taking or killing of migratory birds, as well as any attempt to take or kill migratory birds or any part, nest, or eggs of any such bird, "at any times, by any means, or in any manner." 16 U.S.C. § 703; see also Andrus, 444 U.S. at 56, 57, 59–60 (describing the statutory prohibitions of the MBTA as "comprehensive," "exhaustive," "carefully enumerated," "expansive," and "sweepingly framed"). Regulations implementing the statute explain that the term "take" means to "pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect." 50 C.F.R. § 10.12. Significantly, the statute does not have a mens rea requirement, i.e., entities that violate the Act can be prosecuted on a strict liability basis regardless of intent or motive to take or kill migratory birds. Further, it is pertinent to note that unlike BGEPA's take prohibition, the MBTA also prohibits "attempt" to take. Compare BGEPA, 16 U.S.C. § 668c and 50 C.F.R. § 22.3 with MBTA, 16 U.S.C. § 703 and 50 C.F.R. § 10.12.

Plainly, as courts have agreed, the take prohibition in the MBTA is broad and prohibits both intentional take, such as hunting, and incidental or unintentional take, such as bird mortality due to collision with wind turbines. See, e.g., Ctr. for Biological Diversity v. Pirie, 201 F. Supp. 2d 113 (D.D.C. 2002) (military training exercises of the Department of the Navy resulting in incidental take of migratory birds without a permit violated the MBTA); United States v. Apollo Energies, Inc., 611 F.3d 679, 684 (10th Cir. 2010) (failure to bird-proof oil drilling equipment resulting in incidental take of migratory birds is a violation of the MBTA); United States v. Moon Lake Elec. Ass'n, 45 F. Supp. 2d 1070 (D. Colo. 1999) (failure to install protective equipment on power poles by electrical association resulting in incidental take of migratory birds is a violation of the MBTA); United States v. FMC Corp., 572 F.2d 902 (2d Cir. 1978); United States v. Corbin Farm Serv., 444 F. Supp. 510

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[126] Bald and Golden Eagles are protected under both the MBTA and BGEPA. BGEPA makes it illegal to take any bald or golden eagle, or any part, nest or egg thereof. 16 U.S.C. § 668a. BGEPA provides broad authority to FWS to issue permits for the take of Bald or Golden Eagles in certain circumstances, provided that such permits are compatible with the preservation of the species. Id. § 668a. FWS has recently promulgated regulations establishing a general permit process for incidental takes, under which permits may be granted for unavoidable incidental takes, subject to compliance with appropriate avoidance, minimization and mitigation measures. 50 C.F.R. § 22.6(c).

[127] Available at http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/Part%2010.muscovy%20Fact%20Sheet.11-1-2010.pdf (last visited Nov. 8, 2011).

(E.D. Cal. 1978) (both cases holding that bird deaths related to pesticide use resulting in incidental take is a violation of the MBTA).

In brief, the MBTA is a national conservation statute which is premised on the "important public policy behind protecting migratory birds," FMC Corp., 572 F.2d at 908, and prohibits both intentional and incidental take.

D.2. FWS can authorize limited take of protected birds *only* by exercising its broad authority to promulgate regulations and issue take permits under the MBTA.

Despite the broad take prohibitions embodied in Section 703 of the Act, the scope for FWS to promulgate regulations permitting take and implementing the treaties, "render[s] the initial flat [take] prohibition eminently workable." Larry Martin Corcoran & Elinor Colbourn, Shocked, Crushed and Poisoned: Criminal Enforcement in Non-hunting Cases Under the Migratory Bird Treaties, 77 Denv. U. L. Rev. 359, 371 (1999). Under Section 704 of the MBTA, FWS is "authorized and directed" to determine the exceptions to the MBTA's take prohibition, i.e., FWS has the sole authority and responsibility "to determine when, to what extent, if at all, and by what means" taking of migratory birds is permissible, and to "adopt suitable regulations permitting and governing the same." 16 U.S.C. § 704(a);[128] see also infra Section E.1 (discussing in detail the broad rulemaking authority of FWS over incidental takes).

Such regulations are crucial because in the absence of authorization by FWS regulations for take of migratory birds, activities that kill or have the potential to kill migratory birds are "otherwise *wholly* unlawful." United States v. Catlett, 747 F.2d 1102, 1105 (6th Cir. 1984); see also, e.g., Ctr. for Biological Diversity v. Pirie, 201 F.Supp.2d 113 (D.D.C. 2002) (enjoining military training exercises of the Department of the Navy in the absence of appropriate permit from FWS for incidental take of migratory birds). In addition, under Section 712 of the MBTA, FWS is also expressly authorized to issue implementing regulations related to the international migratory bird treaties. See MBTA § 712(2).

Further, it is well-established that the delegation of authority to the agency was a valid exercise by Congress of its treaty and commerce powers. Bailey v. Holland, 126 F.2d 317, 321 (4th Cir. 1942) (holding that regulations promulgated by the Secretary of Interior prohibiting the hunting of migratory wildfowl on land and water adjacent to certain federally owned lands are valid).

FWS has recognized that its authority to issue take permits under the MBTA stems from the MBTA, 16 U.S.C. §§ 703-712, and its implementing regulations, 50 C.F.R. Pts. 10, 13, 21, 22. See

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[128] The authority vested in the President in Section 704(a) has been delegated to the Secretary of the Interior. See Executive Order 10250: Providing for the Performance of Certain Functions of the President by the Secretary of the Interior § 2(b) (June 5, 1951).

FWS, Manual, Authorities, Objectives, and Responsibilities for Migratory Bird Permits, 724 FW 1 (Aug. 6, 2003);[129] see also Meredith Blaydes Lilley & Jeremy Firestone, Wind Power, Wildlife, and The Migratory Bird Treaty Act: A Way Forward, 38 Envtl. L. 1167, 1180 (2008) ("Section 704 of the MBTA confers permitting authority to the Secretary of the Interior, who has, in turn, delegated that authority to U.S. Fish and Wildlife Service."). Further, FWS has stated that the objective of the migratory bird permit program is "[t]o promote the long-term conservation of migratory bird populations while providing opportunities for the public to study, use, and enjoy migratory birds consistent with the [MBTA] and [BGEPA]." Id.

At present, FWS issues MBTA take permits for a range of activities such as import/export, scientific collecting, taxidermy, waterfowl sale and disposal, educational use, game bird propagation, salvage, falconry, raptor propagation, rehabilitation, control of depredating migratory birds, and special purpose activities. See FWS, Manual: Migratory Bird Permits, 724 FW 2 (Aug. 6, 2003).[130] Permittees must maintain accurate records of their permitted activities and may be required to submit reports covering those activities to the Regional Migratory Bird Permit Office. Id. FWS may suspend or revoke a migratory bird permit for a violation of the terms and conditions of the permit or the regulations under which the permit was issued, or for any reason set forth in 50 C.F.R. § 13.27 (permit suspension) and 50 C.F.R. § 13.28 (permit revocation). Id. The validity of any permit is conditioned on observance of all applicable foreign, state, local, or other federal laws. Id. Further, regardless of issuance of a permit, FWS has expressly cautioned that "[t]he migratory birds, nests, eggs, and any portions thereof remain in the stewardship of the Fish and Wildlife Service and may be recalled at any time." Id.

Accordingly, FWS has the statutory mandate to protect "public trust resources" protected under the MBTA and may only authorize take of such resources in accordance with Section 704(a) of the Act, i.e., through "suitable regulations." In the absence of such authorization, any activities that take or have the potential to take protected birds are flatly unlawful.

D.3. FWS has the primary responsibility to enforce the MBTA and its implementing regulations.

The MBTA provides for both misdemeanor, 16 U.S.C. § 707(a), as well as felony offenses. Id. § 707(b). "Any person, association, partnership, or corporation" that "violate[s] any provisions" of the Act or its implementing regulations is guilty of a misdemeanor. Id. § 707(a). On the other hand, felony offenses are more limited in nature and involve "knowingly" taking birds for sale or barter. Id. § 707(b). Thus, taking of migratory birds without an appropriate permit can result in a criminal conviction – either a misdemeanor or, in some circumstances, a felony conviction.

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[129] Available at http://www.fws.gov/policy/724fw1.html (last visited Nov. 17, 2011).

[130] Available at http://www.fws.gov/policy/724fw2.html (last visited Nov. 17, 2011).

Unlike the ESA, the MBTA contains no citizen suit provision, meaning that entities other than the federal government may not initiate legal action against private parties for violating the Act. However, as a number of cases have recognized, private parties may use the APA to pursue civil claims against federal agencies for taking actions that authorize or lead to violations of the MBTA. See, e.g., City of Sausalito v. O'Neill, 386 F.3d 1186 (9th Cir. 2004); Humane Soc'y of the U.S. v. Glickman, 217 F.3d 882 (D.C. Cir. 2000). In any event, because the MBTA does not contain a citizen suit provision, FWS has the primary responsibility to administer and enforce the Act.

Further, in 2001, President Clinton executed Executive Order 13186, 66 Fed. Reg. 3853 (Jan. 17, 2001) ("Migratory Bird Executive Order"),[131] which identified the responsibilities of federal agencies to protect migratory birds under the Act. The Executive Order directs federal agencies to take actions to protect and conserve migratory birds. The Order resulted in memorandums of understanding ("MOUs") between certain federal agencies and FWS, which memorialize actions that each party will take to fulfill their respective responsibilities under the Act. See, e.g., MOU Between BLM and FWS to Promote the Conservation of Migratory Birds (Apr. 2010).[132]

E. DISCUSSION: FWS HAS BOTH THE LEGAL AUTHORITY AND COMPELLING CONSERVATION REASONS TO ESTABLISH AN MBTA PERMITTING REGIME FOR WIND POWER PROJECTS.

E.1. FWS has broad regulatory and permitting authority under the MBTA to regulate incidental take by wind energy projects.

Section 703 of the MBTA establishes a strict liability prohibition against take of listed migratory birds "at any time, by any means or in any manner" "[u]nless and except as permitted by regulations[.]" See 16 U.S.C. § 703 (emphasis added). Pursuant to Section 704, FWS is authorized to permit "take" through "suitable regulations" so long as such taking is compatible with the terms of the migratory bird conventions. Id. § 704(a); see also Fund for Animals v. Kempthorne, 538 F.3d 124 (2d Cir. 2008).

In establishing such regulations, FWS may consider factors such as the zones of temperature and the distribution, abundance, economic value, breeding habits, and times and lines of migratory flight of birds. 16 U.S.C. § 704(a). The regulations may stipulate "when" take is permissible, "to what extent," and "by what means." Id. In addition, under Section 712, FWS is authorized to issue

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[131] Available at http://frwebgate.access.gpo.gov/cgibin/getdoc.cgi?dbname=2001_register&docid=fr17ja01-142.pdf (last visited Nov. 8, 2011).

[132] Available at http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_information/2010/IB_2010-110.html (last visited Nov. 8, 2011).

"such regulations as may be necessary to implement" the migratory bird treaties with Canada, Russia, Japan, and Mexico. Id. § 712(2).

The rulemaking authority conferred upon the Secretary has been "liberally construed," Bailey v. Holland, 126 F.2d 317, 322 (4th Cir. 1942), and is "greatly flexible." Fund for Animals v. Norton, 365 F. Supp. 2d at 419. FWS has "broad permitting authority," Kempthorne, 538 F.3d at 124, and "plenary power" to establish permitting regulations controlling the "taking of migratory birds, which is otherwise *wholly unlawful*." Catlett, 747 F.2d at 1105.

FWS's "broad permitting authority" has been recognized to encompass authority to regulate both intentional and non-intentional or incidental take. Indeed, as described below, FWS's regulatory authority over incidental take has been recognized not only by FWS and federal courts, but by Congress itself.

i. *Congress has recognized FWS's broad rulemaking authority over incidental take under the MBTA.*

The MBTA authorizes FWS to regulate both intentional and incidental take. Congress recognized FWS's authority to regulate incidental take when it enacted the National Defense Authorization Act for FY 2003 ("National Defense Act"). Pub. L. No. 107–314, § 315, 116 Stat 2458 (Dec. 2, 2002). Section 315 of the Act provides that "the Secretary of the Interior shall exercise the authority of that Secretary under [Section 704(a) of the MBTA] to prescribe regulations to exempt the Armed Forces for the incidental taking of migratory birds during military readiness activities[.]" Id. (emphasis added). The Act clearly indicates that Congress did not bestow new authority on FWS to regulate incidental take, but directed it to exercise its existing authority under the MBTA to allow incidental take by the Armed Forces. Accordingly, there can be no legitimate dispute that FWS has the authority to establish permitting regulations for particular activities that are otherwise legitimate but that have adverse impacts on migratory birds.

Further, the legislative history of the National Defense Act shows that Congress deliberately rejected the original proposal to provide a blanket legislative exemption for military activities from the take prohibitions of the MBTA, and instead chose a course of action that would involve FWS exercising its regulatory authority and oversight over the Armed Forces. 148 Cong. Rec. S10858-01, 2002 WL 31520009 at S10861 (Nov. 13 2002) ("We were able to modify a House provision which authorized the exemption of certain Department of Defense activities from the provisions of the Migratory Bird Treaty Act. That was a highly controversial action on the part of the House. We were able to obtain some important concessions in the conference relative to that provision, including an agreement to structure the provisions so that the Department of Interior will be required to exercise its regulatory powers over the Department of Defense activities impacting migratory birds and to require appropriate actions to mitigate the impact of Department of Defense actions on migratory birds." (emphasis added)); see also id. at S10868 ("it is clear in Subsection (d) [of Section 315 of the National Defense Act] that the authority of the Secretary of the Interior to prescribe

regulations for the incidental taking of migratory birds during military readiness activities is limited to the Secretary's authority under section 3(a) of the Migratory Bird Treaty Act").

The experience with the National Defense Act further demonstrates that, even with activities as crucial as those necessary for national defense preparedness, Congress did not endorse a wholesale exemption from the MBTA (which, as discussed further below, is tantamount to what the wind power industry is now receiving in view of the Service's systemic failure to enforce the Act's take prohibition against wind power projects), nor did Congress authorize the military to take a purely voluntary approach to MBTA compliance.

Thus, FWS does not require any additional authorization from Congress to regulate incidental take and can do so by exercising its existing authority under the MBTA.

ii. *FWS has already established regulations for permitting certain incidental takes.*

As a result of the National Defense Act, FWS promulgated regulations governing take of migratory birds by the Armed Forces incidental to military readiness activities. See 50 C.F.R. § 21.15 (2007). The regulations require the Armed Forces to "confer and cooperate with the Service to develop and implement appropriate conservation measures" for "those ongoing or proposed activities" that may result in a significant adverse effect on a population of migratory bird species.[133] Id. § 21.15(a)(1) (emphasis added). However, the incidental take authorization provided therein can be suspended or withdrawn by the Secretary. The Secretary can "suspend" take authorization if he determines, after seeking the views of the Secretary of Defense and consulting with the Secretary of State, that the take authorization is no longer compatible with the migratory bird treaties. Id. § 21.15(b)(1). The Secretary can also "withdraw" take authorization in certain circumstances when a proposed military readiness activity is likely to result in significant adverse effects on the population of a migratory bird species. Id. § 21.15(b)(2).

In establishing the incidental take regulations for military incidental take, FWS reiterated that the agency had authority to regulate incidental take under the MBTA, independent of the National Defense Act's directive:

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[133] "Significant adverse effect on a population" has been defined by FWS to mean "an effect that could, within a reasonable period of time, diminish the capacity of a population of migratory bird species to sustain itself at a biologically viable level. A population is 'biologically viable' when its ability to maintain its genetic diversity, to reproduce, and to function effectively in its native ecosystem is not significantly harmed. This effect may be characterized by increased risk to the population from actions that cause direct mortality or a reduction in fecundity. Assessment of impacts should take into account yearly variations and migratory movements of the impacted species. Due to the significant variability in potential military readiness activities and the species that may be impacted, determinations of significant measurable decline will be made on a case-by-case basis." 50 C.F.R. § 21.3.

> [T]he authorization that this rule provides is essential to preserving the Service's role in determining what military readiness activities, if any, create an unacceptable risk to migratory bird resources and therefore must be modified or curtailed…. In the Authorization Act, Congress directed the Secretary to utilize his/her authority to permit incidental take for military readiness activities. Furthermore, Congress itself by passing the Authorization Act determined that allowing incidental take of migratory birds as a result of military readiness activities is consistent with the MBTA and the treaties. Thus, this rule does not abrogate the MBTA… The Defense Authorization Act does not limit that authority [of FWS under Section 704 of the MBTA]… the Defense Authorization Act does not restrict or limit our authority in 16 U.S.C. 704 and 712 relative to administering and enforcing the MBTA and complying with the four migratory bird treaties…. Even in the absence of the Authorization Act, regulations authorizing take incidental to military readiness activities are compatible with the terms of the treaties, and therefore authorized by the MBTA.

FWS, Final Rule: Migratory Bird Permits - Take of Migratory Birds by the Armed Forces (Feb. 28, 2007) ("Military Take Final Rule") (emphases added).

In addition to the incidental take regulations for military take, other existing regulations promulgated under the MBTA enable FWS to regulate and authorize certain incidental takes. For example, under 50 C.F.R. § 21.27, FWS has the authority to issue special purpose permits for take that is otherwise outside the scope of the standard form permits of Part 21. See United States v. Winddancer, 435 F.Supp.2d 687, 690 (M.D. Tenn. 2006) ("50 C.F.R. § 21.27 provides for special purpose permits available to all citizens 'for special purpose activities related to migratory birds, their parts, nests, or eggs' that are not otherwise provided for by the other permit provisions."); see also Military Take Final Rule at 8947 ("Special purpose permits may be issued for actions whereby take of migratory birds could result as an unintended consequence."); Wind FAC Legal Subcommittee White Paper at 13 (Oct. 22, 2008) ("FAC Legal White Paper").[134] The relevant portion of the regulation provides that:

> **§ 21.27 Special purpose permits.**
> Permits may be issued for special purpose activities related to migratory birds, their parts, nests, or eggs, which are otherwise outside the scope of the standard form permits of this part. A special purpose permit for migratory bird related activities not otherwise provided for in this part may be issued to

[134] Available at http://www.fws.gov/habitatconservation/windpower/Subcommittee/Legal/Reports/Wind_Turbine_Advisory_Committee_Legal_Subcommittee_White_Paper_(Final_As_Posted).pdf (last visited Nov. 17, 2011).

> an applicant who submits a written application containing the general information and certification required by Part 13 and makes a sufficient showing of benefit to the migratory bird resource, important research reasons, reasons of human concern for individual birds, or other compelling justification.

50 C.F.R. § 21.27 (emphases added).

FWS has issued special purpose permits to authorize certain incidental takes and to exercise ongoing federal oversight over such activities. For example, FWS has issued a special purpose permit to the Channel Islands National Park permitting incidental take of migratory birds resulting from spraying rat poison in order to eradicate black rats on Anacapa Island. See Anacapa Island Restoration Project, Channel Islands National Park, Phase I MBTA Summary Report (2002) (explaining that on Nov. 16, 2001, FWS issued a Special Purpose Permit (MB050154-0) providing incidental take authorization to Channel Islands National Park), Attachment O; see also FWS Memo from Acting Director to Regional Directors, Migratory Bird Permits for Controlling Invasive Species (Jan. 20 2010) ("FWS Invasive Species Memo") (advising that FWS may process applications for special purpose permits under 50 C.F.R. § 21.27 for take of migratory birds incidental to eradication or control of invasive species);[135] FAC Legal White Paper at 13-14 ("[Special purpose permits] potentially could be used to authorize incidental take caused by wind energy projects. For example, a wind energy project theoretically could apply to FWS for a special use permit for an incidental take of birds based on a showing that the wind facility was providing an overall positive benefit to the migratory bird resource, perhaps through accompanying mitigation measures, or constitutes a situation of compelling justification due to the benefits of renewable energy generation.").

Indeed, it appears that FWS has previously undertaken the process of developing general incidental take regulations. See FWS Invasive Species Memo ("The [FWS] Division of Migratory Bird Management is continuing work towards developing regulations to address the larger issue of incidental take of migratory birds. In the meantime, staff should continue to work with our agency counterparts to consider migratory bird impacts during project planning and to incorporate conservation measures where appropriate[.]"). In fact, during the course of litigation concerning take of migratory birds incidental to military readiness activities – a case that was eventually dismissed on mootness grounds upon the enactment of the National Defense Act – the federal government went on record to state that FWS had already drafted a proposed rule that would authorize incidental take of migratory birds by federal agencies. See Brief of Fed. Defendants-Appellants, Ctr. for Biological Diversity v. England, 2002 WL 34248159 (D.C. Cir. Sept. 17, 2002). In that case, the government argued as follows:

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[135] Available at http://nctc.fws.gov/CSP/Resources/mig_birds/CD/MBTA%20Resources/invasive_species_memo.pdf (last visited Dec. 11, 2011).

> There are several conceivable avenues by which the Navy could come into compliance with the district court's holding that its exercises on FDM violate the MBTA. First, the Navy may obtain a permit from the FWS. Indeed the Navy is actively pursuing an MBTA permit [under 50 C.F.R. s 21.27], in compliance with the court's order… Second, the Navy may petition the FWS to amend the regulations to authorize its taking of migratory birds. The MBTA grants the FWS this authority. 16 U.S.C. ss 704, 712(2). Although the FWS has in the past relied upon its enforcement discretion in cases of unintentional takes, it has already drafted a proposed rule that would authorize the unintentional taking of migratory birds by federal agencies incident to other lawful activities.

Id. (emphasis added).

Thus, FWS itself has been on record for many years that it has the authority to issue regulations circumscribing the conditions under which particular entities or activities may incidentally take migratory birds.

iii. *Federal courts and other sources have also recognized that FWS has the authority to regulate incidental take under the MBTA.*

As explained supra, Section D.2, federal courts have also recognized the "broad" "plenary power" of FWS to regulate take under Section 704(a) of the MBTA. In fact, regulations promulgated by FWS to avoid and minimize incidental take under the MBTA have been upheld at least in one instance. Nat'l Rifle Ass'n of Am. v. Kleppe, 425 F. Supp. 1101 (D.D.C. 1976). In that case plaintiffs challenged the adoption of regulations which required the use of steel shot in 12-gauge or larger shotguns for hunting. Although the regulations were related to intentional taking, the stated purpose for establishing these regulations was to avoid and minimize incidental take, i.e., "to limit further deposition of lead pellets in areas used by aquatic birds. . . . (which cause) lead intoxication and death…" Id. at 1103-04. The court upheld the regulations as being grounded in Section 704 of the MBTA. Id. at 1110. This decision was affirmed by the U.S. Court of Appeals for the D. C. Circuit, Nat'l Rifle Ass'n of Am. v. Andrus, 571 F.2d 674 (Table) (D.C. Cir. 1978), and has also been relied on in cases concerning other environmental statutes. See, e.g., Conn. Coastal Fishermen's Ass'n v. Remington Arms Co., 989 F.2d 1305, 1317 (2d Cir. 1993) (holding that lead shot was subject to regulation as hazardous waste under the Resource Conservation and Recovery Act of 1976).

Further, other sources have also recognized the authority of FWS to regulate incidental take. For example, the committee established by DOI under FACA to advise FWS on developing effective measures to avoid or minimize wildlife impacts related to land-based wind energy facilities, has also concluded that FWS has the authority to regulate incidental take, specifically in the wind energy context:

> The language of the MBTA gives the FWS authority and discretion to adopt regulations to permit reasonable activities that result in the taking of birds. Congress, in Section 704 of the MBTA, expressly authorizes the promulgation of regulations that permit the taking of migratory birds in a broad grant of authority to the FWS… From this broad Congressional grant of authority in Section 704(a), the FWS may have the authority to promulgate regulations establishing a new permit that would allow for the taking of birds at wind energy developments under certain conditions. Although the FWS does not have express authorization in the MBTA to issue "incidental take permits" as provided in the ESA, the broad grant of authority in Section 704 seems to allow issuance of such permits should the FWS choose to exercise this authority in the wind energy and other contexts. This would require the promulgation of a new regulation by the FWS.

FAC Legal White Paper at 13-14 (emphases added).[136]

In addition, FWS has been advised by its legal department that regulations specifically tailored for permitting incidental take may be more appropriate than using the mechanism provided for allowing incidental take through issuance of special purpose permits under 50 C.F.R. § 21.27. See Memorandum from Pete Raynor, Assistant Solicitor, Fish and Wildlife Branch, to John Rogers, Deputy Director, FWS, Permitted Incidental Take of Migratory Birds Listing Under the Endangered Species Act 3 (Feb. 5, 1996) ("although [50 C.F.R.] § 21.27 appears to be broad enough to encompass the permitting of unintentional take for the purposes of the MBTA, that section is not narrowly focused on incidental take. A regulatory permitting program specifically geared to the problems of incidental take may be advisable." (emphasis added)), Attachment P.

In sum, Sections 704(a) and 712(2) of the MBTA provide broad authority to FWS to promulgate regulations regulating, and authorizing certain incidental takes, subject to appropriate conditions and ongoing federal oversight. Accordingly, FWS clearly has the requisite rulemaking authority to establish a permitting scheme to regulate the incidental take of migratory birds by wind energy projects.

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[136] The White Paper prepared by the Legal Subcommittee was adopted by the full Wind Turbine Guidelines Federal Advisory Committee. See Appendix B (FAC Legal Subcommittee White Paper), Committee Recommendations.

E.2. Wind energy projects have been taking and are likely to continue to take migratory birds in violation of the MBTA's take prohibition.

As noted supra, see Section C.2, FWS is well aware that many wind energy projects are either already in operation or are being planned that will take migratory birds in violation of the MBTA. See Wind Guidelines Third Draft at 15 ("The Service recognizes that hundreds of wind energy projects exist and are being planned."). By 2020, it is expected that an exponential increase of wind turbines will kill at least one million birds each year, and impact almost 20,000 square miles of terrestrial bird habitat, and another 4,000 square miles of marine habitat. See ABC's Bird-smart Wind Principles.

Further, as explained supra, Section C.1, present-day utility scale wind turbines are massive machines and their size continues to increase on a regular basis. However, such an increase in turbine size also expands the rotor-swept area of the blades (at present exceeding 400 acres), which in turn further increases the potential for bird collisions. See FWS 2011 MBTA Conference Presentation at 5-6 (the rotor swept area of wind turbines has increased from 3,700 square meters (about 1 acre) in 2000 to 15,000 square meters (3.8 acres) in 2010). Like other for-profit industries that are made to internalize the environmental costs of their operations, the wind industry should be required to internalize the costs related to the impacts of its projects on migratory birds and other wildlife that have concrete societal benefits in terms of ecosystem functioning, ecotourism, and the like. See Cornell Lab of Ornithology, Comments to the U.S. Fish and Wildlife Service: Draft Land-based Wind Energy Guidelines (May 2011) ("we strongly encourage the Guidelines to require research protocols and open access to wildlife research data as a mandatory "cost of doing business." (emphasis added)).

Indeed, especially since the wind power industry seeks to present itself as a "green" energy source that is part of the solution to climate change – and hence beneficial to wildlife – the industry should not be permitted to simultaneously undermine the conservation of migratory bird populations in violation of the MBTA, especially with regard to species already at risk or otherwise of conservation concern. Yet FWS already possesses definitive evidence, much of which is discussed in and attached to this Petition, that wind energy projects in the United States will inevitably kill, injure, or otherwise harm many of the 1007 migratory bird species listed under the MBTA, such as a wide variety of songbirds, raptors, and waterfowl including but not limited to, the Bald Eagle, Golden Eagle, Ferruginous Hawk, Swainson's Hawk, American Peregrine Falcon, Short-eared Owl, Flammulated Owl, California Condor, Whooping Crane, Snail Kite, Marbled Murrelet, Hawaiian Goose, Hawaiian Petrel, Bicknell's Thrush, Sprague's Pipit, Cerulean Warbler, Oak Titmouse, Lewis's Woodpecker, Brewer's Sparrow, Long-billed Curlew, Bay-breasted Warbler, and Blue-winged Warbler. See supra Section C.2. Indeed, the agency's voluntary guidelines are themselves grounded on the fact that wind turbines that fail to abide by basic standards for siting, construction, operation, and monitoring will take listed migratory birds in violation of the MBTA. Given the reality that the wind industry as a whole is in patent violation of the MBTA, FWS must ensure that the entire industry is brought into compliance with the Act, and that individual projects that refuse to

comply will be subject to appropriate enforcement action. Such a comprehensive approach would be the simplest and most efficient method for assuring industry-wide compliance with the Act.

The reality is that migratory birds and wind turbines often tend to congregate in the same locations – corridors where strong winds blow. A majority of the nation's wind farms are located in major wind corridors – in general, the harder and more often the wind blows, the more efficiently the turbine works and the more power it creates. Given this reality and the high likelihood of conflict between wildlife protection and the industry, there is an urgent need for an appropriate means to resolve this conflict, and that is through an effective legal mechanism, i.e., regulations that balance the two objectives in a manner that promotes the industry by proving it with a reasonable degree of regulatory and legal certainty while at the same time protecting wildlife in compliance with federal wildlife law. Accordingly, this Petition seeks a permitting scheme that will facilitate siting decisions in a manner that avoids and minimizes wildlife impacts, and effectuates ABC's long-standing position with regard to wildlife impacts of wind energy projects – you can make a good site better through operational measures, but you cannot make a bad site good. In sum, the wind power industry is killing and otherwise harming migratory birds in clear violation of federal law and, consequently, steps need to be undertaken to bring the industry into conformance with the law while not needlessly impeding the development of wind power. The proposed regulations set forth in the Appendix to this Petition are designed to accomplish that result.

E.3. FWS should exercise its broad permitting authority to address the ongoing unregulated and wholly unlawful take of protected birds by wind energy projects.

As detailed below, there are several reasons grounded in fact, law and policy, for FWS to promulgate regulations governing the wildlife impacts of wind energy projects.

i. *FWS must encourage wind energy development by providing the industry a concrete and lawful means to comply with the MBTA.*

The crux of the problem is that the wind energy industry as a whole is in violation of the MBTA because essentially all projects are taking or inevitably will take MBTA-protected birds. See supra Section C.2; see also, e.g., supra Map 2.1 (map showing wind energy turbines that have been proposed in several areas of critical importance to birds). However, in the absence of a permitting system, even wind energy developers that know that their projects will take migratory birds and desire to operate within the law have no concrete means of doing so, short of abandoning the project.

The inadequate solution devised by FWS and the Committee, i.e., "voluntary" Guidelines in return for vague non-enforcement "assurances," does nothing to resolve this problem because the "guidelines do not authorize take under MBTA or BGEPA," and, regardless of efforts by individual projects to comply with the Guidelines, "[v]iolations of those statutes may result in prosecution." See Wind Guidelines Third Draft at 13. Indeed, the legal complications related to the voluntary

Guidelines have raised concerns not only among many in the conservation community but also by the U.S. Department of Justice.[137] In this regard, it is important to stress that federal agencies are not exempt from the MBTA's broad strict-liability take prohibition, and consequently any federal agency action that in effect authorizes or leads to take of migratory birds – in the absence of the specific mechanisms provided for in the MBTA – is itself a violation of the Act. See Humane Soc'y of the U.S. v. Glickman, 217 F.3d 882 (D.C. Cir. 2000). Thus, FWS itself is subject to the MBTA and therefore its actions, such as adoption of voluntary Guidelines that essentially endorse the unauthorized taking of migratory birds – by providing projects with any non-enforcement assurances at all – is in clear tension with the Act. See Migratory Bird Executive Order.

In Glickman, plaintiffs challenged implementation of a management plan for Canada Geese, which did not require the Department of Agriculture to seek permits before taking or killing such birds. The federal defendants argued that federal agencies were not subject to the MBTA and therefore need not obtain a permit before taking migratory birds. The court of appeals rejected the government's argument and held that the Department was required to seek a permit before implementing the management plan. That case may be particularly relevant in the context of the voluntary Guidelines, since there the court held that the Department of Interior's interpretive policy statement that allowed federal agencies to take without a permit violated the MBTA. Thus Glickman's ruling that mere non-binding policy statements of a federal agency could be in violation of the MBTA has clear implications for the legality of the voluntary Guidelines, because the Guidelines essentially endorse unauthorized take by wind energy projects without a permit, which is a clear violation of the MBTA by the agency.

Indeed, an agency need not itself be killing or taking birds to be in violation of the Act. See, e.g., Hill v. Norton, 275 F.3d 98, 106 (D.C. Cir. 2001) (subsequently superseded by statute) (holding that failure of the Department of Interior to list mute swans under the MBTA "ha[d] led to numerous adverse actions - including killing and egg destruction" and was therefore an action that violated the MBTA and was reviewable under the APA). Thus, FWS's failure to make the Guidelines mandatory – while providing assurances to developers that their compliance with the Guidelines will limit the agency's enforcement discretion – will likely lead to the unauthorized "taking" of birds by wind energy projects without a permit under the MBTA. Accordingly, FWS cannot, through non-binding Guidelines, absolve developers of liability for violation of the Act resulting from incidental take; and by purporting to do so FWS would itself be violating the MBTA and running afoul of the ruling in Glickman and other cases.

On the other hand, the Act expressly provides a mechanism for permitting take in Section 704, i.e., permitting take through "suitable regulations." 16 U.S.C. § 704(a). FWS should

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[137] This was communicated by FWS during the public comment session in the Wind Federal Advisory Committee meeting held on September 21, 2011. Further, ABC has repeatedly requested FWS to provide the meeting summary and recording of the September 2011 Committee meetings (as required under FACA, 5 U.S.C. App. 2 §§ 10(b)-(c)), and has to date not been provided the same.

implement Section 704 of the Act by promulgating regulations that not only establish mandatory standards for the industry, but also enable developers to cooperate with FWS in obtaining formal authorization through incidental take permits for appropriate projects, as envisaged in the Proposed Regulations. In sum, this is the critical juncture at which FWS must take stock of the legal and empirical inadequacy of the approach taken to date and then commit to a different one – which can build on the hard work done in drafting the Guidelines – under which wind energy developers have both a meaningful, reliable mechanism to site and operate their projects in a bird-friendly fashion, and a well-placed concern for potential agency enforcement if they do not.

ii. ***Mandatory standards for wind energy projects are necessary particularly due to the lack of enforcement of the MBTA by FWS against the wind industry.***

The MBTA does not have a citizen suit provision and therefore FWS has the primary responsibility to administer and enforce the Act. Many prosecutions for incidental take have been pursued by FWS under the MBTA, including against companies involved in resource and energy production. In 2009, for instance, the electric utility PacifiCorp paid approximately $1.4 million in fines and restitution and approximately $9.1 million to repair and replace equipment in order to minimize impacts on migratory birds, after pleading guilty to 34 counts of unlawfully taking Golden Eagles, hawks, and ravens in violation of the MBTA.[138] Also in 2009, Exxon-Mobil pled guilty to 85 violations of the MBTA for failure to take precautions to prevent the death of migratory birds at one of the company's petroleum facilities, and paid $600,000 in fines. Thus, there is a long history of these types of prosecution. See, e.g., United States v. Moon Lake Electric Ass'n Inc., 45 F.Supp. 2d 1070 (D. Colo. 1999) (prosecution of electric company for failing to take reasonable measures to minimize the impact of power lines on migratory birds); United States v. Stuarco Oil Co., 73-CR-129 (D. Colo. 1973) (prosecution of oil company for the death of 23 birds resulting from the company's failure to build oil sump pits in a manner that could keep birds away); United States v. Equity Corp., Cr. 75-51 (D. Utah 1975) (oil company charged for the death of 14 ducks caused by the company's oil sump pits); United States v. Union Tex. Petroleum, 73-CR-127 (D. Colo. 1973) (prosecution of oil company for no proper maintenance of oil sump pit).

As explained supra, see Section D.3, FWS has the primary responsibility to administer and enforce the MBTA. However, to date, despite conceded rampant violations of the MBTA by wind energy projects, FWS has never brought enforcement action against wind energy developers for incidental take. See Laura J. Beveridge, The Migratory Bird Treaty Act and Wind Development (N. Am. Wind Power, Sept. 2005) (opinion of attorney representing the energy sector that the government's ongoing reluctance to prosecute wind energy projects provides assurance to developers that they will not be held liable for avian deaths), Attachment Q.

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[138] FWS News Release: Utility Giant to Pay Millions for Eagle Protection (July 10, 2009), http://www.fws.gov/mountain-prairie/pressrel/09-47.html (last visited Nov. 8, 2011).

Further, the agency is aware of large-scale illegal killing and potential take of MBTA-protected birds at many wind energy projects across the country not merely in violation of federal statutes but also, in some cases, in clear violation of the specific standards provided in the voluntary guidelines. See, e.g., Memo from Alan Forster, NedPower Mt. Storm LLC to Laura Hill, FWS, NedPower September 25, 2011 Monitoring Event (Oct. 10, 2011) (describing an "unusual number of bird casualties" found near a single turbine), Attachment R; Letter from FWS to Amber Zuhlke, Wind Capital Group, Big Lake Wind Facility in Palm Beach, Florida (July 1, 2011) ("Many recommendations within the Draft Eagle Guidance were not included in the pre-construction monitoring plan for identifying potential risk to eagles. The Service requests the Draft Eagle Guidance be followed…"), Attachment K. Thus, there are situations in which a company flatly admits bird mortality at its project, and yet FWS fails to bring any enforcement action. See, e.g., Memo from Stantec Consulting (consultants for developer) to Laura Hill, FWS, Bird Mortality at Laurel Mountain Substation Memo (Oct. 25, 2011) (reporting the death of 314 birds), Attachment J; Louis Sahagun, Federal Officials Investigate Eagle Deaths At DWP Wind Farm (L.A. Times, Aug. 3, 2011) (explaining that the Los Angeles Department of Water had reported raptor mortalities to FWS at its Pine Tree Wind Project in the Tehachapi Mountains).[139]

Although FWS has considerable discretion in deciding whom to prosecute for violation of the MBTA, Alaska Fish & Wildlife Fed'n & Outdoor Council v. Dunkle, 829 F.2d 933 (9th Cir. 1987), courts have held that an ongoing "pattern of non-enforcement of clear statutory language" amounts to "an abdication of its statutory responsibilities," which is a violation of the APA. Heckler v. Chaney, 470 U.S. 821, 833 n.4 (1985) (citing Adams v. Richardson, 480 F.2d 1159 (D.C. Cir. 1973) (emphasis added)); see also id. at 839 (Brennan, J., concurring) ("It may be presumed that Congress does not intend administrative agencies, agents of Congress' own creation, to ignore clear jurisdictional, regulatory, statutory, or constitutional commands[.]"). Accordingly, an ongoing practice and policy of non-enforcement while wind energy projects openly flout the MBTA may open FWS to suit under the APA, for engaging in a "pattern of non-enforcement of clear statutory language." This is still another reason why the promulgation of a system for permitting wind power projects is far preferable to FWS's existing approach, under which it has, at least as a practical matter, made it abundantly clear that it has no intention of enforcing the MBTA against such projects.

In fact, FWS is further exacerbating the problem of non-enforcement and implementation of the MBTA, by endeavoring to provide "assurances" to wind energy developers that they will not be prosecuted for violations of the MBTA even when the Service disagrees with their reasons for siting in a particular location and the project results in take of migratory birds. Even worse, the most recent published version of the wind Guidelines (as of this writing) recommends that "if the developer seeks to have the benefit of the enforcement discretion" of FWS, it must merely maintain

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[139] Available at http://articles.latimes.com/2011/aug/03/local/la-me-wind-eagles-20110803 (last visited Nov. 16, 2011).

"contemporaneous documentation of how the developer evaluated [FWS's] advice and the reasons for any departures from it." Wind Guidelines Third Draft at 13 (emphases added). Simply put, what this means is that a private company can claim to be in "compliance" with the Guidelines and entitled to non-enforcement assurances, while at the same time refusing to abide by the position of the biologists of the federal agency whose stated mission is to "conserve, protect, and enhance" migratory birds "for the continuing benefit of the American people" and which has the statutory duty under the MBTA to protect and prevent taking of migratory birds. FWS, Mission Statement;[140] see also Wind Guidelines Third Draft at 1 (explaining that the "the advice of the Service is not binding" and that "the guidelines leave decisions up to the developer.").

This is a counterproductive and almost certainly unlawful approach to managing migratory bird impacts, especially because FWS is frequently in disagreement with the developer's analysis of the wildlife risks posed by its project. See, e.g., Letter from Deborah Carter, FWS to Curry & Kerlinger, LLC (environmental consultants of developer) at 2 (Sept. 30, 2009) (explaining that the agency "disagreed" with the developer's "conclusions drawn from [the risk assessments]."), Attachment S; Letter from Laury Zicari, FWS to Dana Vallieu, TRC (May 11, 2011) at 6 (explaining that the studies conducted by the developer's consultants were insufficient to assess the project's impacts on Golden Eagles and providing several recommendations to modify the developer's approach), Attachment T; Letter from Gary Miller, FWS to Sue Oliver, Or. Dep't of Energy (Feb. 14, 2011) at 8-9 ("Throughout this energy facility siting process, the Service and [developer] have reached agreement on some issues, but many remain. The Service continues to have concerns with this Project…"), Attachment U; see also id. at 13-16 (FWS providing a chart of items identifying the developer's response to agency recommendations - on some issues the developer had "declined" to follow the agency's recommendations).

In particular, the voluntary Guidelines do not effectively address the most crucial problem related to impacts of wind energy projects on birds, i.e., poor siting, because they allow developers to build projects in high risk areas so long as they communicate with the agency and record their reasons for departure from the agency's advice. See, e.g., Letter from Michael D. George, FWS to Jay Prothro, BP Wind Energy, Southwest Power Pool Docket #ERII-3833 (Oct. 11, 2011) (FWS expressing frustration with developer's decision to proceed with the project in complete disregard to the agency's recommendations – "British Petroleum representatives and their consultants have repeatedly been advised of the unacceptability of the proposed BP wind project west of Merna given its high risk to whooping cranes and other migratory birds. The Service again recommends that the proposed BP wind project not proceed as planned [because it] provides an abundance of suitable habitat for the federally endangered whooping crane."), Attachment V; see also Letter from Robert D. Williams, FWS to Tim Carlson, Nevada Wind, Proposed Virginia Peak Wind Facility and Existing Golden Eagle Resources in the Pah Rah Range, Washoe County, Nevada (Aug. 13, 2010) at 2 (FWS contacted the developer by telephone when it had not heard back from the developer for

[140] Available at http://www.fws.gov/info/pocketguide/fundamentals.html (last visited Nov. 11, 2011)

more than a year since communication of its recommendations, only to find out that construction of the project was to begin in 45 days without regard for its recommendations), Attachment W; Letter from Scott Hicks, FWS to Xio Cordoba, Heritage Sustainable Energy (Nov. 4, 2011) (even though FWS had for many years recommended that the developer "not construct a commercial wind energy development on the Garden Peninsula because of the high potential for avian mortalities and violations of Federal wildlife laws," the developer informed FWS that it "intended to move forward with construction of the wind energy development, regardless of [FWS's] previous recommendations and wildlife concerns."), Attachment X.

Thus, although FWS provides certain recommendations to the wind industry, such as its recommendations that developers apply the tiered approach adopted in the Guidelines and that they communicate extensively with the agency, the reality remains that these Guidelines are entirely non-binding and there is no means to ensure that developers follow the recommendations of the very authority that has the statutory mandate to protect migratory birds and other wildlife.

Being the primary authority responsible for protecting wildlife and enforcing federal wildlife statutes such as the MBTA, FWS has the statutory responsibility to either enforce the Act effectively so that future violations are deterred or to establish a comprehensive regulatory regime that avoids and minimizes wildlife impacts at wind energy projects. By refusing to regulate or prosecute wind energy companies, FWS is essentially providing the industry a free pass to violate federal wildlife law, and at the same time creating a regulatory limbo which simply cannot afford legal certainty to projects that are in fact in violation of the MBTA.

iii. *Regulations are crucial in order to require wind energy developers to share information with FWS at the earliest stage of the project.*

Given that proper siting of wind energy projects is the most important element in avoiding and minimizing wildlife impacts, FWS has urged developers to "'come to us at the get-go, before a site has been selected [and] before a landowner agreement has been signed.'" John Clapp, FWS Official Urges Cooperation (N. Am. Windpower June 2011) (quoting Albert Manville, Senior Wildlife Biologist, FWS);[141] see also Letter from FWS to Chris Taylor, Element Power (Jan. 31, 2011) ("Developers should seek this consultation ***prior to*** making irrevocable commitments."), Attachment Y.

Unfortunately in the absence of mandatory rules requiring developers to obtain permits to proceed with particular projects, at present FWS is facing a situation where it is not only having difficulties in obtaining information from the industry but is also in some cases entirely unaware of the existence of projects that may have serious wildlife impacts. Clapp, supra (quoting Albert

[141] Available at http://www.wind-watch.org/news/2011/06/03/fws-official-urges-cooperation/ (last visited Nov. 17, 2011).

Manville, Senior Wildlife Biologist, FWS, "'[u]nfortunately, right now in many cases, we find out about the development of a project through a news release or something on the evening news when we have not been consulted whatsoever, and that's frustrating.'" (emphasis added)); see also, e.g., Letter from Robert D. Williams, FWS to Tim Carlson, Nevada Wind, Proposed Virginia Peak Wind Facility and Existing Golden Eagle Resources in the Pah Rah Range, Washoe County, Nevada at 1 (Aug. 13, 2010) (stating that FWS "first became aware of this project when a local state agency contacted it"), Attachment W.

Further, increasingly some wind energy developers are becoming less forthcoming in sharing information with FWS and are proceeding with construction without regard to the agency's recommendations. See, e.g., Letter from Laury Zicari, FWS to Nicholas D. Livesay, Pierce Atwood LLP (attorneys of the developer) (Mar. 31, 2011) (FWS response to developer's application for an incidental take permit under BGEPA expressing "surprise" "to learn that USDA funded the project" and "to learn that groundbreaking for the project occurred despite the many concerns that [FWS] raised concerning this project" and even before completion of "two full seasons" of pre-construction studies as recommended by FWS for avoiding risks to Bald Eagles), Attachment Z; Letter from FWS to Chris Taylor, Element Power (Jan. 31, 2011) (despite developer's assurance that it would submit an ABPP based on the agency's recommendations, no such information was forthcoming from the developer – "Service biologists have not heard from any representative of the company, nor has the Service received a revised ABPP… We note that these deficiencies persist despite our attempts to work -cooperatively with the company to correct them."), Attachment Y; Letter from Robert D. Williams, FWS to Tim Carlson, Nevada Wind, Proposed Virginia Peak Wind Facility and Existing Golden Eagle Resources in the Pah Rah Range, Washoe County, Nevada at 2 (Aug. 13, 2010) ("We requested that you provide this information to us for review so that we could assist you in determining the level of risk of your project to golden eagles. To date we have not received the requested resource information."), Attachment W.

In addition, in some cases, developers are entering into confidentiality agreements with their hired biological consultants, thereby making it more difficult for the agency, and the public, to study the wildlife impacts of the projects.[142] See Manville 2009 Paper at 9 ("The transparency of research results conducted by wind industry consultants continues to be a recurrent frustration for USFWS—in part because of early project industry confidentiality issues.") (emphasis added).

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[142] In fact, when asked about the utility of such "confidentiality" agreements, a wind industry representative recently stated that the industry considered wildlife mortality information as "proprietary information." Statements made by FWS and Wind Industry Representative in a panel discussion on BGEPA during a conference on 'Reshaping the Migratory Bird Treaty Act_'organized by Lewis and Clark Law School (October 21, 2011). More information on this conference is available here: http://law.lclark.edu/programs/environmental_and_natural_resources_law/conferences_and_lectures/2011_migratory_bird_treaty_act/

In addition, recent incidents have documented the inherent problems associated in having surveys, monitoring and assessments of wildlife impacts at wind energy projects conducted by consultants retained by and paid for by the project developers themselves. For example, in finding a wind power project in violation of the ESA, a federal district court expressly rejected the findings of one such developer-hired consultant in favor of other independent experts who appeared before the Court. See Animal Welfare Inst. v. Beech Ridge Energy LLC, 675 F. Supp. 2d 540, 582 (D. Md. 2009). In Beech Ridge, the court found that the developer-hired consultant performed minimal surveys, presented result-oriented analyses, and even suppressed important acoustic data, placing the interests of the company ahead of wildlife protection interests. As the Beech Ridge ruling makes clear, often consultants have inherent conflicts of interest that lead to their adoption of "a minimalist approach to [their] responsibilities," leading to the sort of unacceptable, insufficient, and result-oriented studies done at Beech Ridge. 675 F. Supp. 2d at 582.

Indeed, the wildlife mortality estimates documented by many wind energy projects are underestimates of actual mortality levels because of inconsistent reporting of incidental mortality, which is not handled in a standard way across the industry. Incidental mortality refers to carcasses found in addition to the official mortality searches, either occurring at a different time than the scheduled searches, or at a wind turbine that wasn't searched. Mortality studies generally do not include all of a facility's wind turbines. Not all mortality studies report incidental finds. For example, a report about bird and bat mortality at wind facilities in the Montezuma Hills of California did not include Swainson's Hawk fatalities in the report even though the researchers were aware of them and the Swainson's Hawk is a species of conservation concern. See H. T. Harvey & Assocs., Bird and Bat Movement Patterns and Mortality at the Montezuma Hills Wind Resource Area;[143] see also Shiloh IV Wind Energy Draft Environmental Impact Report 4-7 (Aug. 23, 2011) (noting the Swainson's Hawk fatalities were found during the above study at some wind projects), Attachment AA.

A significant amount of the mortality for many species as a whole may be found incidentally, not during the standardized searches. See K. Shawn Smallwood & Brian Karas, Comparison of Mortality Estimates in the Altamont Pass Wind Resource Area When Restricted to Recent Fatalities 3 (June 2008).[144] For example, often the bird and bat mortality estimates are based only on carcasses found in routine searches. Such estimates often do not take into consideration, (a) carcasses found incidentally (i.e., found outside regular/routine carcass searches); and (b) bird and bats killed due to major fatality incidents (usually caused due to lights being left on at a turbine or substation, or heavy fog). See, e.g., Curry & Kerlinger, LLC, A Study of Bird and Bat Collision Fatalities at the

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[143] Available at http://www.co.solano.ca.us/civicax/filebank/blobdload.aspx?blobid=10104 (last visited Dec. 11, 2011).

[144] Available at http://www.altamontsrc.org/alt_doc/p101_smallwood_karas_mortality_restricted_to_recent.pdf (last visited Dec. 11, 2011).

Mountaineer Wind Energy Center, Tucker County, West Virginia: Annual Report for 2003 (Feb. 14, 2004) at 5 (wildlife mortality estimate did not take into consideration a major fatality incident that took place in May 2003, thus only carcasses found during standardized searches were used to calculate the mortality estimate).[145]

Finally, it has long been known that scavengers can remove carcasses before they are found and searchers do not always find all carcasses. Although mortality studies now attempt to correct for these factors, recent research suggests that some of the adjusted mortality numbers may still be too low. See K. Shawn Smallwood et al., Novel Scavenger Removal Trials Increase Wind Turbine–Caused Avian Fatality Estimates 74(5) J. Wildlife Mgmt. 1089 (2010), Attachment BB. Thus, there appears to be a serious problem of underestimating actual wildlife mortality at many wind energy projects.

In sum, a skewed picture of actual wildlife mortality at wind energy projects is emerging. In this regard, regulations requiring the developer to consult with FWS will enable the agency to thoroughly scrutinize the studies conducted and conclusions drawn by hired consultants in order to ensure unbiased biological information collection and surveying, and accurate analysis of biological data.

In the absence of mandatory regulations requiring the developer to consult FWS and share requested information, FWS cannot simply expect or rely upon the goodwill or cooperation of the industry. In any event, mandatory rules are required to resolve environmental conflicts in any given industry and are especially necessary to regulate the uncooperative actors in the industry that do not follow the law. Indeed, the good corporate actors that diligently follow the law are in effect penalized by a system that relies entirely on voluntary compliance because they will incur costs whereas less responsible companies will not.[146] Thus, there is a crucial need for establishing uniform industry-wide regulations so that FWS can exercise oversight on those developers and operators who will not otherwise cooperate with the agency.

The problems posed by a lack of information and failure to consult with FWS is further exacerbated by the fact that most wind energy projects are constructed on private lands. See Nat'l Research Council, Environmental Impacts of Wind-Energy Projects (Nat'l Academies Press, 2007) at 194. Thus, often, there is no "federal nexus" for wind energy projects to trigger NEPA review.

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[145] Available at http://www.wvhighlands.org/Birds/MountaineerFinalAvianRpt-%203-15-04PKJK.pdf (last visited Nov. 17, 2011).

[146] Good examples of such actors in the wind energy industry that are truly concerned about the impacts of their projects on migratory birds are some that have recently decided to abandon sites that are particularly adverse to wildlife. See, e.g., Richard Cockle, Developers drop plans for two wind farms on Steens Mountain slopes, but still plan a third (The Oregonian, Nov. 17, 2011), http://www.oregonlive.com/pacific-northwest-news/index.ssf/2011/11/developers_drop_plans_for_two.html (last visited Nov. 22, 2011)

See Manville 2009 Paper at 9 ("Since the vast majority of wind development is currently on private lands, the USFWS lacks any strong federal nexus"). Simply put, this means that there may be hundreds of wind turbines on private lands entirely outside the scrutiny of FWS due to the lack of any current mechanism that triggers FWS review. See, e.g., Email from Wende S. Mahaney, FWS to Donald E. Murphy, Maine Department of Conservation, First Wind - Blue Sky East, LLC Bull Hill Wind Project Development Application (Mar. 07, 2011)[147] (FWS biologist stating that the agency will not be submitting comments on the state permit application of a wind energy developer because "[i]t is our understanding that all wetland fill impacts are being avoided, so the project does not trigger federal jurisdiction with the Corps of Engineers. That being the case, there is no requirement for consultation under the federal Endangered Species Act … So, I don't believe USFWS will be submitting any comments… Many bird and bat issues are "flying under the radar screen" (pun intended.....) for USFWS."). Indeed, many more bird impacts due to wind energy projects will be "flying under the radar screen" of FWS under the approach adopted in the voluntary Guidelines, where FWS staff are required to respond to wind energy developers within a truncated 60 day review period. As explained supra, see Section C.3, the Guidelines impose the 60-day review requirement on FWS, regardless of the size or complexity of the project, or its risk to wildlife.

iv. *FWS should take action to prevent destruction of migratory birds before the actual taking occurs.*

The MBTA is a strict liability statute. See United States v. FMC Corp., 572 F.2d 902 (2d Cir. 1978). In essence what this means is that regardless of intent to violate the law, "when one enters into a business or activity for his own benefit, and that benefit results in harm to others, the party should bear the responsibility for that harm." Id. at 907. "The [MBTA] does not include as an element of the offense 'willfully, knowingly, recklessly, or negligently' [because] Congress recognized the important public policy behind protecting migratory birds." Id. at 908 (emphasis added).

The "public policy behind protecting migratory birds" informs FWS's "federal trust responsibility" over migratory bird species. Specifically, this policy governs FWS's MBTA-permit program which is premised on the need to prevent destruction of migratory birds by taking precautionary measures, such as requiring appropriate permits, before the actual taking or killing of birds takes place. See, e.g., 50 C.F.R. § 21.22(a) (banding permits required "before any person may capture migratory birds"); id. § 21.23(a) ("scientific collecting permit is required before any person may take"); id. § 21.24(a) (taxidermist permit is required before any person may perform taxidermy"); id. § 21.27(a) ("special purpose permit is required before any person may lawfully take"); see also Fund For Animals v. Norton, 281 F.Supp.2d 209, 217 (D.D.C. 2003) ("The MBTA authorizes the Secretary of the Interior to promulgate regulations permitting the taking of migratory birds as long as the regulations are consistent with the Convention. The regulations prohibit the

[147] Available at http://www.maine.gov/doc/lurc/projects/Windpower/FirstWind/BlueSkyEast/DP4886/ Application/ Comments/Federal_Agencies_Comments.pdf (last visited Nov. 15, 2011).

taking [] of any migratory birds except as allowed by a valid permit." (Citing 50 C.F.R. § 21.11) (emphasis added and other citations omitted)).

The precautionary approach is further reiterated in the MBTA definition of "take" which, like the definition of "take" under the ESA, prohibits "acts that lead to the taking of protected species." United States v. Apollo Energies, 611 F.3d 679, 684 n.3 (10th Cir. 2010) (citing Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687 (1995) ("The *regulatory* definition of 'take' [in the MBTA] is the same as the ESA's *statutory* definition except that the regulatory definition omits to 'harass' and 'harm.'"). Further, in the context of ESA enforcement, courts have accepted the reasonable certainty of future unlawful takes as sufficient to support remedies designed to prevent such takes from occurring, such as issuing an injunction against construction and operation until the developer obtains an appropriate take permit. See, e.g., Beech Ridge Energy LLC, 675 F. Supp. 2d at 545, 580 (holding that ESA requires courts to carefully scrutinize an activity that may take endangered species without a permit and granting injunction against wind energy project for likely take of endangered Indiana bat). In Beech Ridge, the court examined the potential conflict between two federal policies relevant to wind energy projects, one favoring the protection of endangered species under the ESA, and the other encouraging development of renewable energy resources, and observed that "[t]he two vital federal policies at issue in this case are not necessarily in conflict" so long as the project developer obtains take authorization in accordance with the ESA. Id. at 582-583. The court admonished the industry that, "[t]he development of wind energy can and should be encouraged, but wind turbines must be good neighbors" and that "the only way in which the Court will allow the [wind energy] project to continue" was through the permitting process under Section 10 of the ESA. Id.

Analogies for preventative regulations can also be drawn from conservation schemes in other federal wildlife laws that are premised on the precautionary approach to wildlife protection and are designed to prevent or minimize the taking of protected wildlife. The ESA and the Marine Mammal Protection Act ("MMPA"), 16 U.S.C. § 1361 et seq., also prohibit unauthorized take of protected wildlife. Further, like the MBTA those statutes provide FWS with broad rulemaking authority to protect such wildlife. For example, FWS has promulgated regulations under the ESA and the MMPA for protecting manatees through the establishment of "manatee protection areas" where waterborne activity is prohibited or subject to restrictions. 50 C.F.R. §§ 17.100-108. FWS describes the manatee regulations as "protective regulations," designed to "reduce the incidence of manatee injuries and deaths." FWS, Final Rule Providing for the Establishment of Manatee Protection Areas, 44 Fed. Reg. 60962 (Oct 22, 1979).

Similarly, in the case at hand, FWS should establish a mechanism through regulations to anticipate incidental take by wind energy projects and to be actively involved in ensuring that such projects are not constructed on sites that pose an undue risk to migratory birds and that any impacts that do occur are minimized and mitigated. Indeed, the incontrovertible evidence that wind energy projects, if operated as designed, will foreseeably take some migratory birds protected under the MBTA, strongly supports creation of a system for limiting the amount of take that will occur.

v. *The wind energy industry particularly lends itself to federal oversight through appropriate regulations established under the MBTA.*

As explained above, FWS has the authority to regulate incidental take and there are several concrete reasons for establishing such a regulatory scheme for incidental take by wind energy projects. Further as explained infra, see Section E.4, the permitting scheme recommended in this Petition is particularly beneficial for regulating the incidental take by wind energy projects. Other mechanisms may be more appropriate for other incidental takes. See, e.g., Memo from Willie R. Taylor, FWS to FCC, FCC Draft Programmatic Environmental Assessment (DPEA), Antenna Structure Registration (ASR) Program (recommending that FCC "create a programmatic approach to authorizing communication towers that, along with its goal of avoiding and minimizing hazards to air navigation, explicitly seeks to avoid or minimize bird mortality."), Attachment CC.

The wind energy industry has sought to trivialize incidental take of birds by wind energy projects by comparing it to the level of avian mortality due to other incidental takes, such as cat predation, collision with windows and vehicles, and other external threats – presumably in order to downplay the risk of wind energy projects to wildlife. See, e.g., EDP Renewables, FAQs: Wind Technology[148] (website of leading wind energy developer arguing that "wind's overall impact on birds is lower than other sources of avian mortality such as vehicles, buildings and house cats."). Further, objections have been raised (mostly by the industry) that incidental take regulations for wind energy projects will mean that FWS will be required next to regulate all forms of incidental take.

This justification (that other actions are incidentally taking birds as well) is a specious argument that fails to recognize several key issues, explained in detail below, including that bird mortality is cumulative across the full spectrum of causes and that different sources of anthropogenic bird mortality variously impact different species. It also sidesteps the crucial issue, i.e., are bird mortalities from wind farms an issue of concern from an environmental standpoint, and is a permitting scheme an appropriate way of addressing it? The simple answer to both questions is "yes." Wind turbines have burgeoned and continue to develop across the nation in critical bird areas and constitute a serious threat to many bird species. A permitting process is an appropriate means of both alleviating that threat and allowing wind energy development in a more bird friendly fashion. See supra Section C.2. In addition, as explained below, it is eminently clear that incidental take by wind energy projects is distinct from many other modes of incidental take and is, in any event, particularly appropriate for regulation by FWS.

FWS itself has expressly recognized that "[s]iting of a wind energy project is the most important element in avoiding effects to species and their habitats." Wind Guidelines First Draft at

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[148] Available at http://www.edprenovaveis.com/Technology/WindTechnology/FAQs (last visited Nov. 10, 2011).

8; Letter from FWS to Amber Zuhlke, Wind Capital Group, Big Lake Wind Facility in Palm Beach, Florida (July 1, 2011) ("[FWS] supports properly-placed renewable energy projects and is willing to assist companies in positioning these projects on the landscape in locations that are compatible with wildlife and their habitats."), Attachment K. Indeed, FWS biologists have recognized that even a single turbine can pose a serious threat to wildlife if it is constructed in an improper site. See, e.g., Letter from Mary Knapp, FWS concerning the operation of a single 25 kW wind turbine at Kelleys Island, Ohio at 6 (June 8 2011) ("The Service is concerned that the proposed project may result in take of migratory birds due to its location… While the small size and rotor-swept area of the turbine may aid in minimizing the likelihood of a migratory bird being struck, overall the Service believes this site poses a high risk to birds."), Attachment DD; see also Cornell Lab of Ornithology, Scientists to Investigate Impacts of Wind Energy on Migratory Wildlife (July 27, 2009) ("'We know that in some locations a small percentage of wind turbines may cause the majority of bird and bat deaths. For example, Altamont Pass, east of Oakland, California, is an extreme case: in an area used regularly by migrant and resident raptors, only a fraction of the 5,000 turbines are responsible for most of the raptor deaths annually."' (quoting Dr. Andrew Farnsworth of the Cornell Lab of Ornithology)).[149]

FWS has also recognized that in certain situations the most appropriate means to address the potential wildlife impacts of any given wind energy project is that the project is simply not constructed at a particular site. See, e.g., Wind Guidelines Third Draft at 36 (recommending abandoning a project site if there is "a high probability of significant adverse impacts to species of concern or their habitats"); Wind Guidelines Second Draft at 16 (explaining the possible outcomes arising from collection of information and cooperation with FWS and describing one such outcome as "the project site is abandoned because the risk is considered unacceptable."); see also Cornell Lab of Ornithology, Scientists to Investigate Impacts of Wind Energy on Migratory Wildlife (July 27, 2009)[150] ("Due to our significant [wildlife] concerns over the proposed project location, we encourage [the developer] to consider alternative locations to explore wind energy in the Southeast, with consideration of the issues outlined").

Thus, for some projects, the best available scientific information will indicate that the project should not be constructed at that site. As more and more projects are being constructed in pristine forested mountains and ridgelines, designated Important Bird Areas, and high risk areas crucial to migratory birds such as migratory bird flyways, feeding and nesting areas, and areas of high bird concentrations (i.e., rookeries, leks, state or federal refuges, staging areas, wetlands, riparian corridors, etc.) – without any mandatory standards and regulation whatsoever – mortality and habitat fragmentation due to wind energy projects is increasing tremendously. See, e.g., Letter from Thomas R. Chapman, FWS to Colonel Philip Feir, Corps at 10 (Mar. 12, 2009) ("Wind turbines located on ridgelines in the project area may pose multiple threats to migrating birds."), Attachment

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[149] Available at http://www.birds.cornell.edu/pr/wind_wildlife_pr.html (last visited Nov. 14, 2011).

[150] Available at http://www.birds.cornell.edu/pr/wind_wildlife_pr.html (last visited Nov. 14, 2011).

EE; Letter from David A. Stilwell, FWS to Michael Speerschneider, EverPower Wind Holdings (July 11, 2011) (discussing potential for incidental take of Bald Eagles or Golden Eagles as a result of the turbine blades striking eagles during migration, or as they pass through the project area on their way to foraging or roosting sites and cautioning that the project is located in an Important Bird Area), Attachment FF. In light of the unique significance of siting of massive wind turbines – which are inherently hazardous to birds and other flying animals – and hence the need for developers to work with FWS at the early stages of the project, the wind energy industry lends itself to appropriate regulation under the MBTA.

Additionally, it is also important to identify the particular species at risk at wind energy projects. Comparing other mortality threats, such as cat predation, to bird mortality from wind turbines is a misleading comparison because the birds threatened by wind turbines, often placed in critical bird migratory routes and habitats, disproportionately include species of particular conservation concern, particularly raptors such as the Bald Eagle, Golden Eagle, Ferruginous Hawk, Swainson's Hawk, and American Peregrine Falcon. See, e.g., Letter from Laury Zicari, FWS to Dana Vallieu, TRC (May 11, 2011) at 6 ("New information about migration and movements of golden eagles suggest this species may be the raptor most vulnerable to wind power in the eastern U.S." (emphasis added)), Attachment T; see also supra Section C.2. For example, a comparison of the types of bird species adversely impacted by wind energy projects with those that are taken due to cat predation demonstrates that this is an apples-to-oranges comparison – not only is it infeasible to develop a permitting scheme addressing cat predation but it is extremely unlikely that Bald Eagles could fall prey to house cats, or that California Condors could collide with skyscrapers, and yet they are at risk from poorly sited wind projects.

In addition, for many activities resulting in incidental take of migratory birds, implementing the MBTA wholly through post hoc enforcement actions (instead of establishing formal regulations for the same), may be feasible in light of the ready availability of effective avoidance and mitigation measures, such as use of anti-perching devices on power lines to avoid electrocution of birds, specific types of glass for tall buildings to avoid bird collisions, and bird-proofing oil drilling equipment to avoid bird deaths in oil and waste pits. Imposing sanctions for a company's failure to implement such measures may be an appropriate way of both punishing an individual violator and sending the message to an entire industry as to what is necessary to avoid migratory bird takes. At present, however, the best available science does not provide a similar 'quick-fix' solution for wind turbines to avoid bird mortality. See FWS 2011 MBTA Conference Presentation (explaining that FWS is lacking uniform best management practices for the industry, "except through *proper site location*"). Further, there may never be an across-the-board readily-applicable measure for avoiding and mitigating impacts of wind energy projects on migratory birds because, as explained above, due to the inherently hazardous nature of wind power for birds, the most significant step for avoiding impacts is proper siting of wind turbines, and, hence, in some situations, the best solution is to identify another site for the project. Post hoc enforcement, even if pursued by FWS – and, as discussed supra, Section E.3.ii, it never is pursued when it comes to wind power projects – is simply

not an effective means for addressing poor facility siting, the most fundamental factor in avoiding or minimizing bird impacts.

Moreover, the fact that other threats to birds exist does not provide a free pass to the wind industry to exacerbate wildlife mortality and violate the MBTA and other wildlife protection laws. To the contrary, the fact that migratory birds are killed by preexisting sources is an additional reason to avoid, minimize, and mitigate a new source of mortality before it irreversibly contributes to a further decline in bird populations. See FWS 2011 MBTA Conference Presentation at 16 (Comparing direct impacts of wind to other sources of anthropocentric mortality is not helpful since "overarching issues are about cumulative impacts – ALL things impacting birds"); see also, e.g., Letter from Laury Zicari, FWS to Dana Vallieu, TRC (May 11, 2011) at 6 (explaining that given that Golden Eagles in Maine were seriously impacted by pesticide contamination, "the potential harm to golden eagles from an additional source of mortality makes careful evaluation of the siting and effects of proposed wind power facilities essential"), Attachment T. Indeed, once again, the need to properly avoid, minimize and mitigate wildlife impacts is especially crucial for an industry that seeks to market itself as "green energy" and environmentally friendly.

Lastly, with regard to the oft-cited unjustified objection against regulating incidental take of wind energy projects under the MBTA, i.e., that the agency would eventually be required to regulate innocent incidental takes (such as accidentally killing a bird while driving a car), it should be noted that courts have clarified that the MBTA does not lead to such "absurd results." United States v. Moon Lake Elec. Ass'n, 45 F. Supp. 2d 1070, 1084 (D. Co. 1999). Such cases of incidental take from activities that have a low likelihood of impacting migratory birds – such as the probability that any single driver will kill a bird -- can clearly be distinguished from incidental take by wind energy projects on the basis of foreseeability of wildlife impacts, i.e., "if the injury be one which might be *reasonably anticipated or foreseen as a natural consequence of the wrongful act.*" Id. at 1085 (internal citation and quotation marks omitted). In Moon Lake the Court observed as follows:

> Because the death of a protected bird is generally not a probable consequence of driving an automobile, piloting an airplane, maintaining an office building, or living in a residential dwelling with a picture window, such activities would not normally result in liability under § 707(a), even if such activities would cause the death of protected birds. Proper application of the law to an MBTA prosecution, therefore, should not lead to absurd results…

Id.

In fact, in Moon Lake, the Court examined the many facets of the MBTA and its implementing regulations that enable avoiding such "absurd results," and expressly identified, as an example, Section 704 of the MBTA under which "the Secretary has established when and how migratory birds may be taken, killed, sold, etc." Id. (citing implementing regulations establishing permit requirements under the MBTA). Indeed, in the context of incidental take by wind energy

projects, the "absurd result" is that in the absence of appropriate regulations the industry's ordinary operation will inevitably and predictably place it in violation of federal law. FWS should promulgate regulations establishing mandatory standards and an incidental take permit system in order to avoid such a situation of having an industry (that the federal government especially wants to encourage and support) that is largely violating the MBTA.

In the end, FWS cannot refuse to promulgate needed permitting regulations for wind energy projects merely because other threats to wildlife exist or because such regulations will have purported implications for incidental bird deaths from everyday acts such as driving a car. Massachusetts v. E.P.A., 549 U.S. 497, 533 (2007) (an agency must proffer a "reasoned justification" for declining to regulate where it has statutory authority to do so).

E.4. Incidental Take Permits for Certain Wind Energy Projects Will Effectively Protect Migratory Birds, And Also Afford More Certainty to Wind Energy Developers.

As explained supra, Section D.2, FWS has very broad rulemaking authority under the MBTA to promulgate regulations so long as the regulations are "compatible" with the four migratory bird treaties. 16 U.S.C. § 704(a). In accordance with the MBTA, FWS has expressed statutory authority to promulgate regulations establishing a broad framework for wind energy development subject to mandatory conditions. Id.; see also id. § 712(2). ABC strongly recommends that such regulations adopt a process for issuing individual incidental take permits for certain wind energy projects, as recommended in the Proposed Regulations. See Appendix: Proposed Regulations.

The Proposed Regulations enable FWS to effectively carry out its statutory mandate to protect wildlife through establishing a clear permitting process under which the agency can regulate the siting of wind energy projects and their impacts on wildlife. As set forth in the Appendix, the Proposed Regulations would categorically require both land-based and offshore wind power projects to apply for MBTA permits. Both operating and planned projects would be required to comply with the Regulations, although the obligations would differ somewhat in light of the reality that siting alternatives for operating projects differ from those for projects that are still in the planning phase. With respect to the latter, the Proposed Regulations would afford a clear, up-front mechanism by which the Service can steer projects away from the most problematic sites. In addition, for both operating and planned projects, the Proposed Regulations would require FWS to adopt measures for minimizing and mitigating impacts on migratory bird populations to the maximum extent practicable.

In contrast to the present system – in which the conservation and independent scientific communities have, at best, ad hoc access to pertinent information and involvement in the review of wind power projects – the Proposed Regulations would ensure that there is at least some opportunity for public comment before an MBTA permit is issued. At the same time, as to projects for which the Service determines there is a low likelihood of adverse impact on bird populations, the Proposed

Regulations would provide for expediting project review and permit approval. Because the issuance of an MBTA permit is a federal action necessitating review under NEPA, the proposed permitting scheme would also afford a firm basis on which significant impacts to wildlife otherwise unprotected by federal law (e.g., unlisted bat species, and birds unprotected by the MBTA) would be addressed.

For a variety of reasons, implementing an effective incidental take mechanism along the lines of the Proposed Regulations is advantageous to the wind industry, FWS, and wildlife interests, in that it recognizes the value of renewable energy development and provides greater regulatory and legal certainty to the industry, while also enabling FWS to far more effectively carry out its statutory mandate to conserve federally protected wildlife, and avoid and minimize the harmful taking of migratory birds to the maximum extent practicable.

i. ***The permit mechanism recommended in the Proposed Regulations enables FWS to require developers to consult FWS and to establish mandatory standards for the siting, construction, and operation of wind energy projects.***

Unlike the Wind Guidelines, the Proposed Regulations enable FWS to require developers to consult and share information with the agency at the earliest stage of project planning. The Proposed Regulations enable FWS to ensure that projects are not constructed in high risk areas. For other projects that may have adverse impacts but which can be avoided or minimized through effective mitigation measures, FWS may issue individual incidental take permits that authorize the project subject to the terms and conditions stipulated in the permit. For the remaining projects that may have minimal impacts, the Proposed Regulations envisage a broad framework for authorizing such projects subject to a determination by the agency, and other standards and criteria that are prescribed in the Proposed Regulations and otherwise by the agency.

In the context of military incidental take, FWS chose to implement the MBTA through a broad authorization subject to mandatory conditions, in lieu of an approach that required individual take permits. However, the Service's reason for not imposing more comprehensive and concrete obligations on the Armed Forces is related to the reasonable expectation that the Armed Forces will be addressing the impacts of its actions through the NEPA process. See Military Final Rule at 8939-40. As NEPA only applies to federal agency actions, the same treatment cannot be assured for wind energy projects that lack any clear nexus to a federal agency action. Further, three other reasons provided by FWS for structuring the regulatory system for military incidental in the form of a "broad, automatic authorization," and that distinguish it from incidental take by wind energy projects are – (1) that military readiness activities rarely have significant impacts; (2) that the Armed Forces like other federal agencies are required to comply with the Migratory Bird Executive Order; and (3) that it was especially important not to create a complex process in light of the importance of military readiness to national security. Id. at 8947. This indicates an acknowledgment by FWS that it has the authority to promulgate regulations for issuing individual permits for incidental takes - but chose not to exercise this authority in the military take context given the unique features of that context. See id. ("Without the rule, the Armed Forces might not be able to complete certain military readiness

activities that could result in the take of migratory birds pending issuance of an MBTA take permit[.]").

Further, the reality that FWS is lacking uniform best management practices for the industry, "except through *proper site location*," FWS 2011 MBTA Conference Presentation, only strengthens the case for imposing concrete obligations on developers to consult FWS, in advance of project construction, in accordance with the "precautionary" principle that FWS itself has expressly relied on while advising wind energy developers. See, e.g., Letter from FWS to Amber Zuhlke, Wind Capital Group, Big Lake Wind Facility in Palm Beach, Florida (July 1, 2011) ("Wind facilities have not previously been sited in areas with Everglade snail kite presence or habitat; thus, there are no data indicating the potential risk of wind turbines on snail kites. Therefore, a conservative approach using precautionary principles is required."(emphasis added)), Attachment K.

ii. *The Permit mechanism recommended in the Proposed Regulations provides a means to protect species of concern that are not yet listed under federal wildlife laws, such as certain bat species.*

The permit mechanism in the Proposed Regulations will do more than protect birds listed under the MBTA – it will trigger NEPA review providing much needed protection for bats and other wildlife. One justification often cited for retaining "voluntary" guidelines in lieu of mandatory standards for wind energy projects is that the voluntary guidelines need not necessarily be tied to existing federal wildlife laws such as the ESA, MBTA, and BGEPA, and would therefore facilitate protection of both birds and bats that are not listed or protected under those statutes. See, e.g., Julia Pyper, New Bird Kills Raise Questions About Growth Of Wind Industry (E&E ClimateWire, Oct. 31, 2011) (quoting John Anderson, AWEA's Director of Siting Policy, that "there will actually be greater protection if the guidelines are voluntary" because this would entail protection of wildlife outside the scope of certain federal wildlife laws).

Although certain bat species such as hoary bats, red bats, and silver-haired bats, and certain birds, including such as sage grouse and prairie chickens[151] are not presently protected under the ESA, MBTA, or any other federal wildlife protection statute, and they could in theory be addressed

[151] Both the Lesser Prairie-Chicken and the Greater Sage-Grouse, are ESA candidate species and FWS Birds of Conservation Concern, which are not covered by MBTA. The population of the Lesser Prairie-Chicken is estimated at merely 32,000, while that of the Greater Sage-Grouse is estimated at only 150,000. Wind energy development is a serious threat to both species because much of the species' remaining ranges coincide with areas containing strong wind resources. Thus, wind turbines and associated transmission lines are likely to be a barrier to movements of both Greater Sage-Grouse and Lesser Prairie-Chicken. For example, in 2009, in Oklahoma alone there were approximately 250 wind turbines in Lesser Prairie-Chicken range, with at least another 1,300 proposed. Christin L. Pruet et al., It's Not Easy Being Green: Wind Energy and a Declining Grassland Bird, 59 BioScience 257, 260 (Mar. 2009), http://vmpincel.bio.ou.edu/download/publications/bio.2009.59.3.10.pdf.

by the Wind Guidelines, those Guidelines, once again, are entirely voluntary, and may be complied with by a project developer merely recording its reasons for disagreeing with the Service on site selection or any other issues. Therefore, the Guidelines will not effectively protect any wildlife.

On the other hand, the permit process in the Proposed Regulations will afford a far better mechanism for addressing project impacts on even non-MBTA protected birds, unlisted bat species, and other wildlife currently unprotected under federal law. This is because the proposed issuance of a federal MBTA permit will trigger NEPA review, which will necessarily encompass any significant impacts on any wildlife populations. See 42 U.S.C. § 4332 (requiring an analysis of "environmental impact[s] of the proposed action" for "major Federal actions significantly affecting the quality of the human environment"); 40 C.F.R. § 1508.18 (defining "Major Federal Action" as "actions with effects that may be major and which are potentially subject to Federal control and responsibility" such as "[a]pproval of specific projects… approved by permit or other regulatory decision."). NEPA requires the agency to consider a "range of alternatives" to the proposed action, including the no-action alternative, and to identify appropriate mitigation measures to address the various impacts of the proposed action. 40 C.F.R. § 1505.1(e). Thus, the proposed regulations do encompass a mechanism of protection of both listed and non-listed wildlife and, because the permitting process, as proposed, would also involve public comment, it would allow for a far more meaningful opportunity to address impacts on otherwise unprotected birds, bats, and other wildlife than under the entirely voluntary Guidelines, which, among other problems, afford no basis on which conservation groups or other members of the public may weigh in on project impacts on an ongoing basis.

Moreover, nothing in the proposed regulations would preclude FWS from establishing both a mandatory permitting system for species protected under the MBTA, and voluntary guidelines for otherwise unprotected species – just as the existence of permitting processes under the ESA and BGEPA did not preclude the Service from drafting the current Guidelines. In fact, the process proposed here and guidelines focused on otherwise unprotected species could function in an entirely complementary fashion, with such Guidelines being brought to bear on the NEPA analysis that must be conducted on the MBTA permit application.

iii. ***The permit mechanism recommended in the Proposed Regulations enables an evaluation of cumulative effects of wind energy development on a regional and national level.***

As discussed previously, the cumulative effects of the ever-escalating increase in wind projects, along with other impacts on migratory birds, pose extremely serious threats to the survival, habitat and behavior of migratory birds. In particular, habitat fragmentation from poorly sited wind power projects is an important contributor to cumulative impacts. Under the Proposed Regulations, the extent to which a proposed project will contribute to habitat loss and fragmentation, and other forms of cumulative impact, can be thoroughly evaluated in light of the early blueprints of a project, especially since the project's footprint and infrastructure needs (such as access roads, transmission

lines, and substations) should already be fairly well determined by that time. Similarly, consideration of adjacent projects and other habitat-harming activities can be accomplished early in project planning (although they may need to be reviewed if other projects are added during the development phase).

In contrast, the approach adopted by FWS in the voluntary Guidelines utterly fails to provide appropriate measures and directives to study, avoid and mitigate cumulative effects at a national or regional level. The Guidelines explicitly state that "where there is no federal nexus, individual developers are not expected to conduct their own cumulative impacts analysis." Thus, the Guidelines recommend an analysis for cumulative effects by federal agencies only for projects that have "a federal nexus" such as those that "require a federal permit." Id. at 21. This does not result in a thorough analysis of cumulative effects of wind energy development, particularly because most wind energy projects are constructed on private lands with no "federal nexus," other than the impact on birds protected under MBTA and BGEPA. Further, the Guidelines recommend that the developers "communicate" with the agency about cumulative effects of the project only in the final phase of the project where construction is complete and the developer is considering the need for post-construction studies. See Wind Guidelines Third Draft at 14-15 (recommending in Tier 5 – tier dealing with post-construction studies and research – that the developer "communicate with the Service about ways to evaluate cumulative impacts on species of concern, particularly species of habitat fragmentation concern"). In short, FWS has so far failed to take any concrete and effective measures to address the cumulative impacts of wind energy development. This is especially troubling since, as illustrated supra, see Map 2.1, there are hundreds of wind energy projects that have likely been constructed (and more in the pipeline) and many of these projects are built along common migratory corridors and have serious direct and indirect impacts on birds.

iv. *The Permit mechanism recommended in the Proposed Regulations provides an opportunity for concerned citizens to ensure compliance with the MBTA.*

Citizen suits are useful tools that empower citizens, including individuals and non-profit groups, to enforce federal law and supplement federal enforcement of the law. Unlike the ESA, however, the MBTA does not contain a citizen suit provision that allows "any person" to bring a civil suit to enjoin violation of the statute. 16 U.S.C. § 1540(g)(1)(A). The only means by which a private lawsuit can be brought to enforce the MBTA is via the APA and only then in the event that there is a federal agency action involved in project planning or pursuit, i.e., lawsuits under the APA cannot be brought directly against a private party or state/municipal agencies and may only be brought against federal agencies when they take a final action that is connected to the alleged violation (for example where a wind energy project is located on public lands, or where it requires a permit from the Corps or another federal agency). Consequently, with regard to incidental take by wind energy projects, at present, the primary means of enforcing the MBTA must be through FWS enforcement actions – an avenue for enforcement that is essentially meaningless and is certainly not an effective check unless FWS opts to enforce the Act for at least flagrant violations of the Act, which has never happened in the context of wind power projects. See supra Section D.3.

The permit mechanism envisaged in the Proposed Regulations will effectively address this overriding problem of non-enforcement of the MBTA because the process is specifically designed to delineate the conditions under which the Service may authorize the take of migratory birds in connection with wind power projects. In addition, issuance of a federal incidental take permit under the MBTA will constitute a final federal agency action thereby triggering the availability of APA review. Consequently, the grant (or denial) of a permit can be set aside by a federal court if it is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2).

v. *The Permit mechanism recommended in the Proposed Regulations will not unnecessarily constrain the agency's staff and resources.*

For many years now, FWS has been grappling with drafting and implementing voluntary Guidelines for wind power projects, thereby expending a large amount of time, money and other resources of the agency on a cause that, unfortunately, has proven to be of little value in attaining its stated objective, i.e., to effectively avoid and minimize wildlife impacts of wind energy projects. In 2011 alone, FWS has issued three iterations of voluntary Guidelines (in a process that substantially weakened the initial agency recommendations), and as of the date of this writing is yet to finalize the Guidelines. In the meantime, wind power projects continue to proliferate, and adverse impacts on migratory birds and other wildlife continue to become ever more severe in the absence of better mechanisms for addressing and ameliorating such impacts.

Further, for wind energy developers that do consult the agency, the Guidelines envisage a "tiered approach" whereby the agency is expected to be involved in all phases of the project, albeit on an informal "voluntary" basis. While the Guidelines essentially treat the agency as a quasi-permitting authority requiring it to evaluate extensive information and provide advice to the developers, unlike a formal permitting system, FWS does not obtain appropriate permit fees which typically provide some amount of resources and revenue to the agency. See, e.g., 50 C.F.R. §13.1(d)(4) (specifying applicable fee for take permits under federal wildlife laws such as the MBTA, BGEPA, and ESA). Thus, this is plainly not a cost-effective arrangement because under the Guidelines, the agency is in any event using extensive resources and expending the time of its experienced staff, to make non-binding recommendations that the project proponents are free to disregard (so long as they document their reasons for disagreeing).

In sharp contrast, under the proposed permitting system, FWS will inevitably obtain much more conservation bang for its buck – and will also be able to defray at least some of its expenses in processing applications through appropriate permit fees, as it has done with other permitting regimes.

vi. *The Permitting mechanism recommended under the Proposed Regulations complements the protections afforded by the ESA and BGEPA.*

While a wind energy developer is able, when the relevant criteria are satisfied, to obtain an incidental take permit for impacts on endangered or threatened species of birds under the ESA, there is presently no comparable mechanism for authorizing take by developers under the MBTA, which strictly prohibits take of all birds protected under the Act in the absence of a permit issued pursuant to the Act. This places project developers in the legally untenable position of obtaining a federal permit under one law (the ESA) for taking a particular species, but being in violation of another law for taking the very same species. See Memorandum from Pete Raynor, Assistant Solicitor, Fish and Wildlife Branch, to John Rogers, Deputy Director, FWS, Permitted Incidental Take of Migratory Birds Listing Under the Endangered Species Act (Feb. 5, 1996) at 2 ("ESA incidental take documents do not provide any relief from the prohibitions of the MBTA and BGEPA; indeed, some of those documents specifically state that they do not provide any such relief. Therefore, an applicant that wants complete protection from prosecution for the take of an ESA-listed migratory bird pursuant to an ESA incidental take document must also seek a permit under the MBTA, or []BGEPA"), Attachment P. In addition, by issuing an ITP that authorizes a project that will result in the take of migratory birds – in the absence of any permitting mechanism under the MBTA for doing so – FWS places itself at risk of being sued under the APA. See supra Section D.3. The Proposed Regulations rectify these problems and legal confusion, at least insofar as wind power projects are concerned by authorizing FWS to issue take permits under the MBTA, as well as the ESA.

The Proposed Regulations will also resolve legal anomalies involving Golden Eagles and Bald Eagles, and result in enhanced protection of those species. Although incidental take permits can be issued for eagles under BGEPA, in the absence of a permitting scheme under the MBTA, even wind power projects receiving BGEPA permits will be in at least technical non-compliance with the MBTA. More importantly, while providing for the issuance of take permits, nothing in the BGEPA regulations categorically requires wind power projects to obtain such a permit, even where FWS biologists believe that eagle take is likely. Worse, the current version of the Guidelines provide that if project developers themselves do "not anticipat[e]" taking eagles, and "adhere" to the Guidelines by documenting their disagreement with the Service concerning the likelihood of take, this alone "would give rise to assurances regarding enforcement discretion if an unexpected taking occurs." Wind Guidelines Third Draft. Accordingly, with regard to wind power projects, the Guidelines undercut any potential safeguards afforded by the BGEPA regulations, by not only providing that project developers may override the concerns of FWS biologists, but that they may even obtain "assurances regarding enforcement discretion" if they do so and nonetheless kill or otherwise take a Bald or Golden Eagle. Id.

The Proposed Regulations would both resolve the legal anomaly concerning compliance with the MBTA and BGEPA, and also far better protect eagles than at present. The Proposed Regulations would categorically provide that all wind power projects must, prior to construction, obtain an

MBTA permit, thus necessarily triggering a FWS (and public) review of all potential migratory bird impacts, including to eagles in the vicinity or migrating through the project site.

vii. ***The Permitting Mechanism recommended under the Proposed regulations will afford more legal and regulatory certainty to the wind power industry than can be afforded under the current, confusing regulatory regime.***

According to the wind power industry, regulatory uncertainty and potential criminal liability under the MBTA has been a barrier to the growth of the industry and has proven to be especially troubling in terms of securing investor confidence. See, e.g., Bryan McBournie, Q&A with Peter Duprey: Leading in an uncertain energy industry (interview with CEO of Broadwind Energy, a provider of products and services primarily for the wind-energy industry, who stated, "[w]e undoubtedly need more regulatory certainty to help tame the volatility of the wind industry in the U.S., as the industry will remain challenged without it." (emphasis added)).[152] The wind industry desires regulatory and legal certainty particularly with regard to the application of federal wildlife laws to wind energy projects.

In contrast to the voluntary Guidelines, the establishment of a permitting scheme under the Proposed Regulations would provide far greater regulatory and legal certainty to wind energy developers and their investors, and will also establish a level playing field for all wind energy developers. By failing to impose clear regulatory obligations on wind energy projects to anticipate and avoid migratory bird impacts before they occur, and by largely allowing the industry itself to make siting decisions, FWS has not only effectively penalized those companies that do attempt to comply with the agency's guidance – since they are essentially placed at a competitive disadvantage with those companies that refuse to do so – but has also tacitly approved widespread disregard for wildlife statutes the Service is entrusted to enforce. Indeed, since the Service cannot lawfully extend non-enforcement assurances for compliance with voluntary Guidelines – particularly Guidelines that allow wind power projects to "comply" merely by recording their reasons for disagreeing with the Service's concerns – under the current regime, wind power projects will necessarily be facing an ongoing risk of prosecution when they, inevitably, take migratory birds in violation of the MBTA. In addition, there is nothing to prevent a new Administration from adopting, if it so chooses, a tougher stance when it comes to enforcing the MBTA against wind power projects that are in fact in violation of the law. And, where there is a federal nexus to a project, compliance with anemic Guidelines surely will not insulate a project from APA review and a potential ruling by a federal court that an agency's approval of a project should be set aside because it will lead to migratory bird takes in violation of the MBTA.

In short, with a valid permit in hand, wind power developers would not face these risks, but rather would be provided assurance against prosecution so long as they comply with the terms and conditions of the permit. Thus, the Proposed Regulations will enable the wind industry to have far

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[152] Available at http://smartblogs.com/leadership/tag/renewable-energy/ (last visited Dec. 11, 2011).

greater predictability and regulatory certainty, while also far better establishing itself as a genuinely green and environmentally protective industry.

E.5. The Proposed regulations are compatible with the international migratory bird treaties.

As explained supra, Section D.1, the MBTA is the domestic implementing legislation for various international treaties designed to safeguard migratory birds and their habitats. Accordingly, the present system of non-regulation of wind power projects, and reliance on voluntary Guidelines and industry self-certification of compliance with them, flouts not only the statute, but also the underlying conventions. On the other hand, regulation of incidental take by wind energy projects, as proposed in this Petition, is entirely compatible with the terms of the migratory bird conventions. Indeed, the large-scale ongoing taking of a wide variety of bird species protected under the migratory bird conventions, coupled with lack of oversight, regulation, and enforcement of the law by FWS, is a clear contravention of the conventions.[153] Further, FWS has previously determined, albeit in the context of military incidental take, that regulations permitting incidental take are compatible with all four migratory bird conventions. See Military Take Final Rule at 8946.

i. *Convention between the United States and Canada*

The United States entered into a convention with Great Britain (for Canada) in 1916 for the protection of migratory birds in the United States and Canada. See 39 Stat. 1702 (1916). This convention was amended in 1995 by a protocol which replaced most of the provisions of the original convention. See Protocol Amending the 1916 Convention for the Protection of Migratory Birds, S. Treaty Doc. No. 104-28, 1995 WL 877199 ("1995 Protocol") (hereinafter jointly referred to along with the convention as "Canada Treaty").

The 1995 Protocol recognized the commitment of both parties towards "long-term conservation of shared species of migratory birds" through a comprehensive international framework that involves, among other things, regulation of take. See Preamble, 1995 Protocol. The Treaty requires the parties to "ensure the long-term conservation of migratory birds" in accordance with certain "conservation principles" such as managing migratory birds internationally, ensuring a variety of sustainable uses, sustaining healthy migratory bird populations for harvesting needs, providing for and protecting habitat necessary for the conservation of migratory birds, and restoring depleted populations of migratory birds. Id. Art. II. The Treaty recognizes that the conservation principles may be achieved through means such as monitoring and regulation. Id. Further, the Treaty expressly provides that "subject to laws, decrees or regulations to be specified by the proper

[153] Moreover, the obligation of nations, to ensure that activities within their jurisdiction or control do not harm the environment beyond their territory, is also firmly entrenched in customary international law. See, e.g., Co-operation in the Field of Environment Concerning Natural Resources Shared by Two or More States, U.N.G.A.Res. 3129 (XXVIII) (1973).

authorities," the taking of migratory birds may be allowed at any time for specific purposes consistent with the conservation principles. Id. Art. II(3). In addition, the Treaty requires parties to seek means to prevent damage to migratory birds. Id. Art. IV(a).

In sum, the Canada Treaty contemplates the permitting of take through regulation "for specific purposes" consistent with the conservation principles of the Treaty and subject to appropriate regulations. Regulations monitoring and regulating incidental take by wind energy projects will likely be compatible with the terms of the Canada Treaty. Such regulations facilitate the parties' long-term commitment to conserve migratory birds through appropriate regulations and are consistent with the conservation principles adopted in the Treaty.

ii. *Convention between the United States and Mexico*

In 1937, the United States entered into a convention with Mexico for the protection of migratory birds and game mammals. See Convention between the United States of America and Mexico for the Protection of Migratory Birds and Game Mammals, 50 Stat. 1311, T.S. No. 912 (1937) ("Mexico Treaty"). The Treaty recognized that "it is right and proper to protect the said migratory birds . . . in order that the species may not be exterminated," and that there is a need "to employ adequate measures which will permit a rational utilization of migratory birds for sport as well as for food, commerce and industry." Id. Preamble (emphasis added).

Specifically, the Mexico Treaty allows the parties to use "adequate methods which will permit…the utilization of [migratory birds] rationally for purposes of sport, food, commerce and industry." Id. Art. I (emphases added). Towards this end, the Treaty requires the parties "to establish laws, regulations and provisions" to satisfy the need to permit rational utilization of migratory birds for various uses, including, commerce and industry. Such regulations may adopt various appropriate measures such as establishment of "refuge zones" in which taking will be prohibited, and prohibition of the killing of migratory insectivorous birds. Id. Art. II.

In sum, the Mexico Treaty allows parties to adopt regulations permitting take of migratory birds for industry or commerce on a rational utilization basis. Thus, regulations permitting incidental take by wind energy projects will likely be compatible with the terms of the Mexico Treaty so long as the taking is based on a rational utilization of the resources and measures are adopted to ensure against the extermination of any species.

iii. *Convention between the United States and Japan*

The United States entered into a treaty with Japan in 1972 for the protection of migratory birds and birds in danger of extinction. See 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, T.I.A.S. No. 7990, 25 U.S.T. 3329, 1974 WL 166630 (U.S. Treaty) (1974) ("Japan Treaty"). The Japan Treaty recognizes that the "great value" of

migratory birds can be "increased with proper management," and that there is a need to take measures for the "management, protection, and prevention of the extinction of certain birds." Id. Preamble (emphasis added).

The Japan Treaty prohibits the taking of migratory birds. Id. Art. III. However, "[e]xceptions to the prohibition of taking may be permitted in accordance with the laws and regulations [of the parties]….[for] specific purposes not inconsistent with the objectives of this Convention." Id. Further, the Treaty recognizes that special protection is required for preservation of birds that are in danger of extinction. Id. Art. IV(1). In addition, the Treaty provides that the parties shall endeavor to establish sanctuaries and other facilities for the protection and management of migratory birds. Id. Art. III(3). The parties are also required to "take measures necessary to carry out the purposes" of the Treaty. Id. Art. VII.

In sum, the Japan Treaty allows parties to permit taking through regulations in accordance with applicable law so long as it is consistent with the objectives of the conventions. Thus, regulations governing incidental take by wind energy projects will likely be compatible with the terms of the Japan Treaty if it facilitates the objectives of the Treaty and, as stated in its preamble, protects and prevents the extinction of migratory birds.

iv. *Convention between the United States and Russia*

The United Stated entered into a treaty with Russia in 1978 to conserve migratory birds and their environment. See Convention between the United States of America and the Union of Soviet Socialist Republics Concerning the Conservation of Migratory Birds and Their Environment, T.I.A.S. No. 9073, 29 U.S.T. 4647, 1978 WL 182150 (U.S. Treaty) (1978) ("Russia Treaty"). The Russia Treaty recognizes that - the value of migratory birds can be "increased under proper management;" that there is a need to protect migratory bird species along with their flyways, and breeding, wintering, feeding and moulting areas; and that certain endangered bird species are in need of particular protective measures. Id. Preamble (emphasis added).

The Treaty requires the parties to prohibit the taking of migratory birds. Id. Art. II(1). "Exceptions to these prohibitions may be made on the basis of laws, decrees or regulations" for "specific purposes" not inconsistent with the principles of the Treaty. Id. (emphasis added). To the extent possible, the parties are required to prevent "detrimental alteration" of the environment of migratory birds. Id. Art. IV(1). Accordingly, the parties are required to identify areas of breeding, wintering, feeding and moulting that are of special conservation importance to migratory birds. Id. Art. IV(2)(c). In addition, the Treaty enables the parties to enter into special agreements for the conservation of particular species of migratory birds, id. Art. II(3), and to undertake necessary measures to establish preserves, refuges, and protected areas for the conservation of migratory birds and their environment. Id. Art. VII. The Treaty specifically provides that parties may adopt stricter domestic measures that are deemed to be necessary to conserve migratory birds and their environment. Id. Art. IX.

Similar to the other conventions, the Russia Treaty allows parties to devise exceptions to the take prohibition so long as it is consistent with the principles of the Treaty. Regulations governing incidental take by wind energy projects are necessary to ensure that important bird areas such as flyways are protected and that wind turbines are not constructed in such areas of special conservation importance. Thus, regulations for take by wind energy projects are not only compatible with the terms of the Russia Treaty, but will likely also facilitate the Treaty's mandate to prevent "detrimental alteration" of migratory bird habitat.

F. CONCLUSION

ABC requests that FWS issue, as expeditiously as possible, new regulations based on those proposed in this Petition, see Appendix: Proposed Regulations, pursuant to Sections 704(a) and 712(2) of the MBTA, for establishing a framework for regulating and authorizing conditional take by wind energy projects.

APPENDIX: PROPOSED REGULATIONS

PERMITS FOR WIND POWER PROJECTS PURSUANT TO THE MIGRATORY BIRD TREATY ACT

Subpart A – Introduction

§ 1.1 Purpose of Regulations

These regulations are designed to facilitate the development of wind power projects while, to the maximum extent practicable, avoiding, minimizing, and mitigating their adverse impacts on birds protected by the Migratory Bird Treaty Act ("MBTA"). The regulations contained in this part supplement the Department of the Interior's general permit regulations contained in Part 13 of this subchapter, as well as the Department's general regulations implementing the MBTA contained in Part 21 of this subchapter. Compliance with the regulations contained in this part does not relieve wind power projects from also complying, where applicable, with other regulations that impose requirements or prohibitions concerning particular migratory birds, such as regulations implementing the Endangered Species Act ("ESA") and the Bald and Golden Eagle Protection Act ("BGEPA").

§ 1.2 Definitions

In addition to definitions contained in Part 10 of this chapter, and unless the context requires otherwise, as used in this part:

FWS or Service is the United States Fish and Wildlife Service.

Migratory bird is any species that is covered by the MBTA and treaties implementing the MBTA.

Person means any individual, corporation, partnership, academic institution or any legal entity formed in any manner for the purpose of developing, constructing, and/or operating a wind power project.

Practicable alternative is an alternative site for a proposed wind power project that would accomplish essentially the same objectives as the proposed project without significantly increased costs or other practical or financial constraints.

Wind power project means any land-based or offshore project that uses, or is designed to use, the wind to generate electricity within the jurisdiction of the United States and includes but is not limited to, the project's wind turbines and associated infrastructure such as transmission lines, substations, meteorological towers, and access roads.

§ 1.3 General Requirements and Exceptions

§ 1.3.1 General Permit Requirements

No person shall construct or operate a wind power project except as may be permitted under the terms of a valid permit issued pursuant to the provisions of this part and Part 13, as well as any other applicable regulations issued pursuant to the ESA, BGEPA, or other pertinent law. A wind power project that is in receipt of a valid permit issued pursuant to this part and that is in compliance with that permit shall not be subject to criminal or civil penalties for violation of the take prohibition of the MBTA.

§ 1.3.2 General Exception to Permit Requirement

Any wind power project that is operational – *i.e.*, generating any electricity through turbine operation – on the date that these regulations become effective may continue to operate without a permit issued pursuant to this part so long as a complete application for such a permit that complies with § 1.5, as set forth below, is submitted to FWS within 120 days of the date that these regulations become effective. For the purpose of these regulations, any substantial upgrade, modification, or expansion of the project that has the potential to impact migratory birds – *e.g.*, an expansion in the number of turbines or the rotor swept area – is treated as a new project.

§ 1.4 Specific Permit Provisions Applicable to Non-Operational Wind Power Projects

§ 1.4.1. General Requirement

The requirements of this part must be satisfied in order for any non-operational wind power project – *i.e.*, a project that is not generating electricity on the date that these regulations become effective – to obtain a permit pursuant to this part.

§ 1.4.2. Contents of Permit Application

Each application for a permit pursuant to this section must contain the following, along with any other information that FWS may prescribe in guidance supplementing these regulations:

(a) a detailed description of the proposed site for the project, including the proximity of the site to known ridges and other migratory routes, nesting locations, wetlands and other areas where migratory birds are present, and other resources of particular importance to migratory birds;

(b) detailed descriptions and results of all preconstruction surveys that are of sufficient duration, nature, and scope to reasonably evaluate the extent to which (1) a particular proposed site is used by specific species of migratory birds; (2) the degree of risk that the site poses to the various species of birds that use the site; and (3) local siting of turbines or other design modifications may be employed to avoid or mitigate the risk to affected bird species. In determining the duration, nature, and scope of surveys that will be deemed adequate for a particular site, and who

is qualified to conduct such a survey, the project developer shall comply with any written guidance issued by FWS supplementing these regulations, and shall consult as appropriate with the Migratory Bird Permit Office of the Regional FWS Office in which the proposed project is located;

(c) a detailed description of the proposed project, including (1) the number, size and type of turbines contemplated; (2) the anticipated life of the project; (3) the proposed layout of the entire project, including turbines, transmission lines, power stations, roads, and other physical features; (4) the proposed schedule for project construction; (5) the applicant's proposed pre-construction and post-construction monitoring plans; (6) all measures that the applicant is proposing to undertake to avoid, minimize, and mitigate the effects of the anticipated take of migratory birds to the maximum extent practicable; and

(d) any other information that FWS may request to evaluate and study the wildlife impacts of the project.

§ 1.4.3. Public Comment

The public will be afforded an opportunity to comment on each application for a permit. The public comment period will be for a period of no less than thirty days. If, after reviewing the application, FWS believes that the project poses a low risk for migratory birds, and will not otherwise have any significant adverse environmental impacts, the Service's notice soliciting public comment will advise the public that the Service intends, subject to the consideration of public comments, to expedite its review of, and determination on, the application.

Prior to the initiation of the public comment period, FWS will make available to the public all survey data and other information submitted by the permit applicant in support of the application. If FWS complies with the National Environmental Policy Act ("NEPA") by preparing an Environmental Assessment ("EA") in connection with the permit application, the Service will make the EA available to the public prior to the initiation of the comment period on the permit application. If the Service complies with NEPA by preparing an Environmental Impact Statement ("EIS") in connection with the project, the Service will coordinate public comment on the permit application with public comment on the EIS.

§ 1.4.4. Evaluation of Permit Applications

In determining whether to issue a permit, the Service will evaluate all factors relevant to whether a permit may be issued consistent with the purposes of the MBTA, including but not limited to:

(a) the overall impact of the project on migratory birds and important migratory bird habitat, and the extent to which the project is compatible with the maintenance of populations of migratory birds likely to be affected by the project, taking into account the cumulative present and projected impacts of other activities on the affected bird species, including from other wind projects;

(b) the proximity of the project to important bird habitats, including migratory routes and nesting, roosting, and/or feeding areas;

(c) the proposal for pre-construction and post-construction monitoring;

(d) whether the applicant has proposed avoidance, minimization, mitigation, and monitoring measures to reduce the take and the adverse effects of the take to the maximum extent practicable;

(e) the extent to which the project will result in adverse impacts to any species that FWS has determined qualify as a Bird of Conservation Concern and any species that is a candidate for listing under the ESA; and

(f) whether there are practicable alternative sites for the project that would have a less deleterious impact on migratory bird populations and habitats.

§ 1.4.5 Required Determinations

Before issuing a permit, FWS must find that:

(a) the effects of the anticipated take and required mitigation, together with cumulative effects of other activities and additional factors affecting the bird populations and habitats impacted by the project, are compatible with the maintenance and conservation of bird populations, particularly populations of birds designated by FWS as Birds of Conservation Concern and bird species that are candidates for listing under the ESA;

(b) the permit applicant will conduct appropriate, adequate pre-construction and post-construction monitoring;

(c) the permit applicant will to the maximum extent practicable avoid, minimize, and mitigate adverse effects on migratory birds and important migratory bird habitats;

(c) the permit applicant will conduct such monitoring and adaptive management as the Service determines is necessary to fully and effectively evaluate the impact of the project, including the efficacy of minimization and mitigation measures, on migratory birds and migratory bird habitat, and to evaluate whether changes need to be made in the project's operation in order to better minimize and mitigate the impact on migratory birds; and

(d) there are no practicable alternatives to the project as proposed that would entail less adverse impact on migratory birds.

§ 1.4.6 Permit Conditions

FWS will attach to any issued permit such terms and conditions, including if appropriate specified take limits, and requirements for additional mitigation, adaptive management and monitoring, as are deemed necessary to avoid, minimize, and mitigate to the maximum extent practicable the adverse effects of the project on migratory birds. The permit holder must comply with all such terms and conditions, as well as with the avoidance, minimization, and mitigation measures set forth in the permit application and approved by the Service.

§ 1.4.7 Permit Duration

The duration of each permit issued under this section will be designated on its face, and will

be based on the duration of the proposed project, the level of anticipated impacts, the difficulty of reliably predicting the impacts, and the likelihood that adaptive management will be able to address impacts beyond those anticipated. In no event, however, will the permit length exceed five years unless it is extended in response to a renewal request that must be made available for public comment in accordance with this subpart prior to action by FWS.

§ 1.4.8 Monitoring and Incident Reports

The permit terms and conditions shall specify the frequency with which monitoring reports must be prepared and submitted to FWS but in no event will such reports be required less than annually. In addition, the permit terms and conditions will require the permit holder to promptly submit incident reports containing detailed information about any incidents involving major wildlife mortality. All monitoring and incident reports will promptly be made available to the public.

§ 1.4.9 Revocation, Suspension and Modification

The Service shall revoke and/or suspend any permit when it determines that a permitted project is failing to comply with the requirements in this subpart, or, for any reason, is having a significant adverse effect on a migratory bird population and that is not promptly addressed by modification of the permit. The Service may modify the terms and conditions of the permit if necessary to avoid, minimize and mitigate the impacts of the project, and subject to public comment. Any member of the public may petition the Service to revoke, suspend, or modify a permit on these grounds, and the Service shall respond to any such petition in a timely manner and no later than 90 days after receipt of the petition. For purposes of this provision, a significant adverse effect is one that could, within a reasonably foreseeable period of time, diminish the capacity of a population of migratory birds to sustain itself at a biologically viable level. A population is 'biologically viable' when its ability to maintain its genetic diversity, to reproduce, and to function effectively in its native ecosystem is not significantly harmed**.**

§ 1.5 Permit Provisions Applicable to Operational Wind Power Projects

All of the foregoing provisions shall also be applicable to operational projects, except that the applicant need not address the practicability of alternative sites and the Service will not base any decisions on that factor. In imposing any permit terms or conditions the Service will take into account the extent to which ongoing project operations may reasonably be modified without causing significant disruptions in the operation of the project.

§ 1.6 Review Period

FWS will review and make a decision on whether to grant a permit within a reasonable time in light of such factors as the complexity and size of the project and the degree of risk it poses to migratory birds. For a project for which the Service decides to prepare an EA rather than an EIS, the

Service will ordinarily make a final decision on a permit application no later than 12 months after a complete application is received by the Service.

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LIST OF ATTACHMENTS

A. Daniel J. Lebbin et al., ABC, The North American Bird Conservancy Guide to Bird Conservation (2010) (excerpts)

B. Tamara Enz & Kimberly Bay, Post-Construction Avian and Bat Fatality Monitoring Study, Tuolumne Wind Project, Klickitat County, Washington, Final Report, April 20, 2009 to April 7, 2010 (July 6, 2010) (excerpts)

C. J. K. Fiedler et al., Results of Bat and Bird Mortality Monitoring at the Expanded Buffalo Mountain Windfarm, 2005 (June 28, 2007) (excerpt)

D. David P. Young, Jr. & Zapata Courage, Avian/Bat Monitoring September 25, 2011 Memo (Sept. 30, 2011)

E. BioResource Consultants Inc., 2009/2010 Annual Report Bird and Bat Mortality Monitoring, Pine Tree Wind Farm, Kern County, California (Oct. 14, 2010)

F. Albert Manville, FWS, Presentation on Shoreline, Near-shore, and Offshore Wind Energy Development in Texas State Waters: Tools to Help Avoid or Minimize "Take" of Waterbirds and Other Avifauna (2011)

G. Albert Manville, FWS, Presentation on Framing the Issues Dealing with Migratory Birds, Commercial Land-based Wind Energy Development, USFWS, and the MBTA (Oct. 21, 2011)

H. Letter from Laury Zicari, FWS to Jennifer McCarthy, Corps (May 11, 2011)

I. Albert Manville, FWS, Towers, Turbines, Power Lines, and Buildings – Steps Being Taken By the U.S. Fish and Wildlife Service to Avoid or Minimize Take of Migratory Birds at These Structures (July 17 2009)

J. Memo from Stantec Consulting (consultants for developer) to Laura Hill, FWS, Bird Mortality at Laurel Mountain Substation Memo (Oct. 25, 2011)

K. Letter from FWS to Amber Zuhlke, Wind Capital Group, Big Lake Wind Facility in Palm Beach, Florida (July 1, 2011)

L. Letter from Allan M. Strand, FWS to Jayson Hudson, Corps (Aug. 15, 2011)

M. Nathanial Gronewold, Texas is Bullish on Offshore Wind (E & E News, Nov. 21, 2011)

N. Email from Tylan Dean, FWS to Keith Hastie, FWS (Mar. 30, 2011)

O. Anacapa Island Restoration Project, Channel Islands National Park, Phase I MBTA Summary Report (2002)

P. Memorandum from Pete Raynor, Assistant Solicitor, Fish and Wildlife Branch, to John Rogers, Deputy Director, FWS, Permitted Incidental Take of Migratory Birds Listing Under the Endangered Species Act (Feb. 5, 1996)

Q. Laura J. Beveridge, The Migratory Bird Treaty Act and Wind Development (N. Am. Wind Power, Sept. 2005)

R. Memo from Alan Forster, NedPower Mt. Storm LLC to Laura Hill, FWS, NedPower September 25, 2011 Monitoring Event (Oct. 10, 2011)

S. Letter from Deborah Carter, FWS to Curry & Kerlinger, LLC (environmental consultants of developer) (Sept. 30, 2009)

T. Letter from Laury Zicari, FWS to Dana Vallieu, TRC (May 11, 2011)

U. Letter from Gary Miller, FWS to Sue Oliver, Or. Dep't of Energy (Feb. 14, 2011)

V. Letter from Michael D. George, FWS to Jay Prothro, BP Wind Energy, Southwest Power Pool Docket #ERII-3833 (Oct. 11, 2011)

W. Letter from Robert D. Williams, FWS to Tim Carlson, Nevada Wind, Proposed Virginia Peak Wind Facility and Existing Golden Eagle Resources in the Pah Rah Range, Washoe County, Nevada (Aug. 13, 2010)

X. Letter from Scott Hicks, FWS to Xio Cordoba, Heritage Sustainable Energy (Nov. 4, 2011)

Y. Letter from FWS to Chris Taylor, Element Power (Jan. 31, 2011)

Z. Letter from Laury Zicari, FWS to Nicholas D. Livesay, Pierce Atwood LLP (attorneys of the developer) (Mar. 31, 2011)

AA. Shiloh IV Wind Energy Draft Environmental Impact Report (Aug. 23, 2011) (excerpt)

BB. K. Shawn Smallwood et al., Novel Scavenger Removal Trials Increase Wind Turbine–Caused Avian Fatality Estimates, 74(5) J. Wildlife Mgmt. 1089 (2010)

CC. Memo from Willie R. Taylor, FWS to FCC, FCC Draft Programmatic Environmental Assessment (DPEA), Antenna Structure Registration (ASR) Program

DD. Letter from Mary Knapp, FWS concerning the operation of a single 25 kW wind turbine at Kelleys Island, Ohio (June 8 2011)

EE. Letter from Thomas R. Chapman, FWS to Colonel Philip Feir, Corps (Mar. 12, 2009)

FF. Letter from David A. Stilwell, FWS to Michael Speerschneider, EverPower Wind Holdings (July 11, 2011)