

**BEFORE
THE OHIO POWER SITING BOARD**

In the Matter of the Ohio Power Siting)	
Board's Review of Rule 4906-4-08 of the)	Case No: 16-1109-GE-BRO
Ohio Administrative Code.)	

**REPLY COMMENTS OF
ICEBREAKER WINDPOWER, INC.**

I. INTRODUCTION

These reply comments are provided pursuant to the September 22, 2016 entry issued by the Ohio Power Siting Board ("Board") requesting comments from interested persons on staff's proposed changes to Ohio Administrative Code ("OAC") Rule 4906-4-08 and new OAC Rule 4906-4-09. The following interested parties filed comments on the OPSB staff's proposal: The Honorable Michael J. Skindell, State Senator; The Honorable William J. Seitz, State Senator; Greenwich Windpark, LLC; the Mid-Atlantic Renewable Energy Coalition; Ohio Environmental Council; WIRE-Net/Global Wind Network; Alicia Rodrian; Union Neighbors United, Julia F. Johnson, and Robert and Diane McConnell; Gary J. Biglin; Greenwich Neighbors United; the Ohio Farm Bureau Federation; Katie Elsasser; Ohio State Historic Preservation Office, Ohio History Connection; and Black Swamp Bird Observatory and the American Bird Conservatory ("BSBO/ABC"). In accordance with the Board's schedule, Icebreaker Windpower, Inc. ("Icebreaker Windpower" or "company") submits the following reply comments.

II. NON-GOVERNMENTAL ORGANIZATION CRITERIA SHOULD NOT BE ADOPTED BY STATE AND FEDERAL REGULATORY AGENCIES

BSBO/ABC provide comments requesting a higher standard of review and treatment for wind projects designated as Important or Globally Important Bird Areas (IBAs). With respect to Rule 09(D)(1), the groups ask that the Board require the applicant to “...enumerate proven, effective measures to be taken to avoid impacts on resident and migratory bird and bat populations, particularly in *high risk areas* such as those designated as Important Bird Areas and Globally Important Bird Areas.” (emphasis added).

It is important to recognize that IBAs are not recognized in the Ohio Revised Code and are not a regulatory tool. The BSBO/ABC comment, if adopted by the Board, would convert a concept created solely by a *non-governmental* organization (NGO),¹ into a regulatory requirement of government. The criteria used for the establishment of the IBAs proposed by BSBO/ABC were developed by an NGO. These criteria have not been subject to agency review and have not been vetted through the proper and necessary process required for inclusion in rules² adopted by a state regulatory agency. For instance, the criteria themselves were not subject to a public notice and comment period. Furthermore, the criteria for designation of a specific area as an IBA are subjective and arbitrary. Perhaps even more important, there is no public notice and no opportunity for comment on an IBA designation by regulators, wind energy developers, or the general public.

¹ IBAs and the criteria to define them were the creation of a British NGO, Birdlife International (BI). BI enlists a partner NGO in each country that then becomes that country’s IBA designator. In the United States, that entity is the National Audubon Society.

² While not the subject of this rulemaking, Icebreaker Windpower would also note that IBAs should not be used as a criterion for selection of appropriate or favorable sites for wind projects.

BSBO/ABC, as well as other environmental and birding organizations, employ tactics, like the designation of IBAs, to advocate against wind energy development. It is easy for an organization to establish IBA guidelines without any real public oversight or review, and without any data regarding empirically demonstrated risk.

We have attached for the Board's information maps showing the location of the NGO designated IBAs both in the northeast portion of the United States and in the United States overall (Attachments A and B, respectively). In addition, we have provided a chart referencing the location of 139 wind farms that are located within IBAs in the United States (Attachment C).

In Attachment C to these comments, Icebreaker has also provided the publicly available bird and bat fatality rate estimates for the IBAs for which such data was available. Attachment C reflects the averages of all the reported fatality rates for wind farms in IBAs, which is 3.5 birds/MW/year and 7.4 bats/MW/year. Comparing the fatality numbers at or approximate to IBAs to comprehensive studies of wind farms nationally,³ shows that wind farms in or approximate to IBAs do not, in fact, pose a higher risk to birds and bats than other areas. Accordingly, the rules should not refer to IBAs as "high risk" areas, as BSCO/ABC recommend.

III. COLLECTION OF POST-CONSTRUCTION MORTALITY DATA

In their comments, BSBO/ABC recommend that post-construction mortality data be collected by independent third-party experts using standardized methods and reported directly to the agencies. Icebreaker Windpower does not agree with these groups' implication that wind industry consultants are automatically biased, and would point out that funding for third-party experts could prove challenging. Icebreaker Windpower does support continued state regulatory

³ Strickland, M. D., E. B. Arnett, W. P. Erickson, D. H. Johnson, G. D. Johnson, M. L. Morrison, J. A. Shaffer, and W. Warren-Hicks. 2011. *Comprehensive Guide to Studying Wind Energy/Wildlife Interactions*. Prepared for the National Wind Coordinating Collaborative (NWCC), Washington, D.C., USA (June 2011).

oversight of the collection of this data by third parties. The company also supports engagement of other independent bodies, such as academic institutions, in the collection of post-construction mortality data.

Furthermore, Icebreaker Windpower would note its goal to be transparent and to make its post-construction data publicly available. However, the company understands the reluctance of some wind developers not to release this data due to potential legal challenges.⁴

IV. CONCLUSION

Icebreaker Windpower appreciates the opportunity to respond to the comments filed by interested persons and we respectfully request that the proposal by BSBO/ABC to set a higher bar for wind projects in IBAs be rejected. We would look forward to working with these groups and any others on any changes needed to collect the most trusted post-construction mortality data and to encourage wind developers to publicly report post-construction mortality data.

Icebreaker Windpower looks forward to working with the Board to ensure reasonable regulations that support the state of Ohio's economic future and the public interest are advanced.

Respectfully Submitted,

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⁴ Under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act, wind power developers could face prosecution for even the unintentional and unforeseen "take" of not only eagles, but most bird species. Icebreaker Windpower believes that wind developers would be much more willing to make mortality data publicly available if they did not fear possible legal consequences should they make their reports public.

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing Reply Comments were served by electronic mail or regular mail, as indicated below, upon the following on this 8th day of November, 2016.

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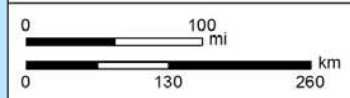
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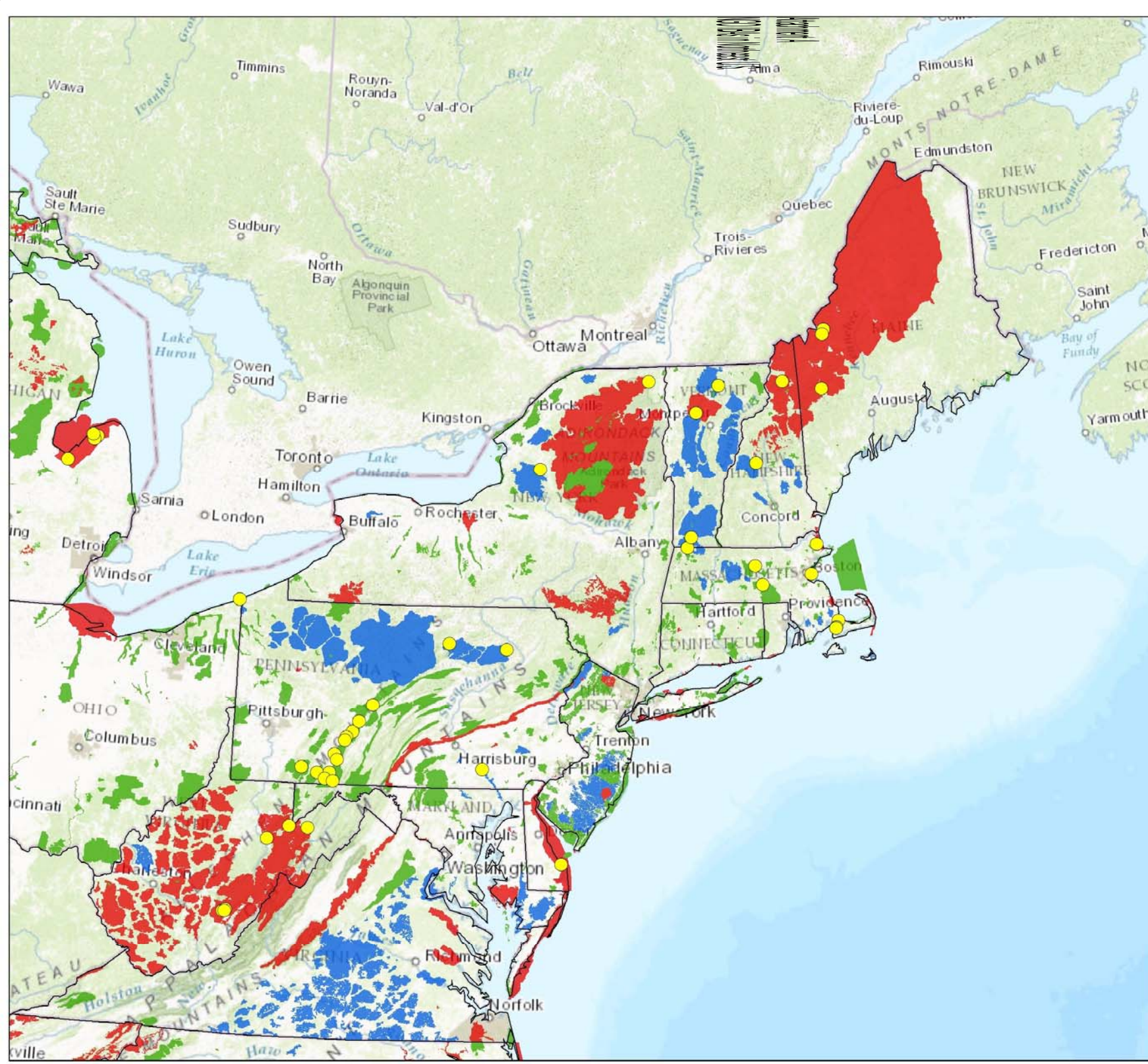
US Wind Facilities
Within Important Bird Area
Boundaries



- Wind Facility
- State Boundaries
- Continental
- Global
- State



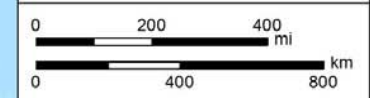
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Coordinate System:
NAD 1983 UTM Zone 18N
Author: Jeff Fruhwirth Date: 11/4/2016



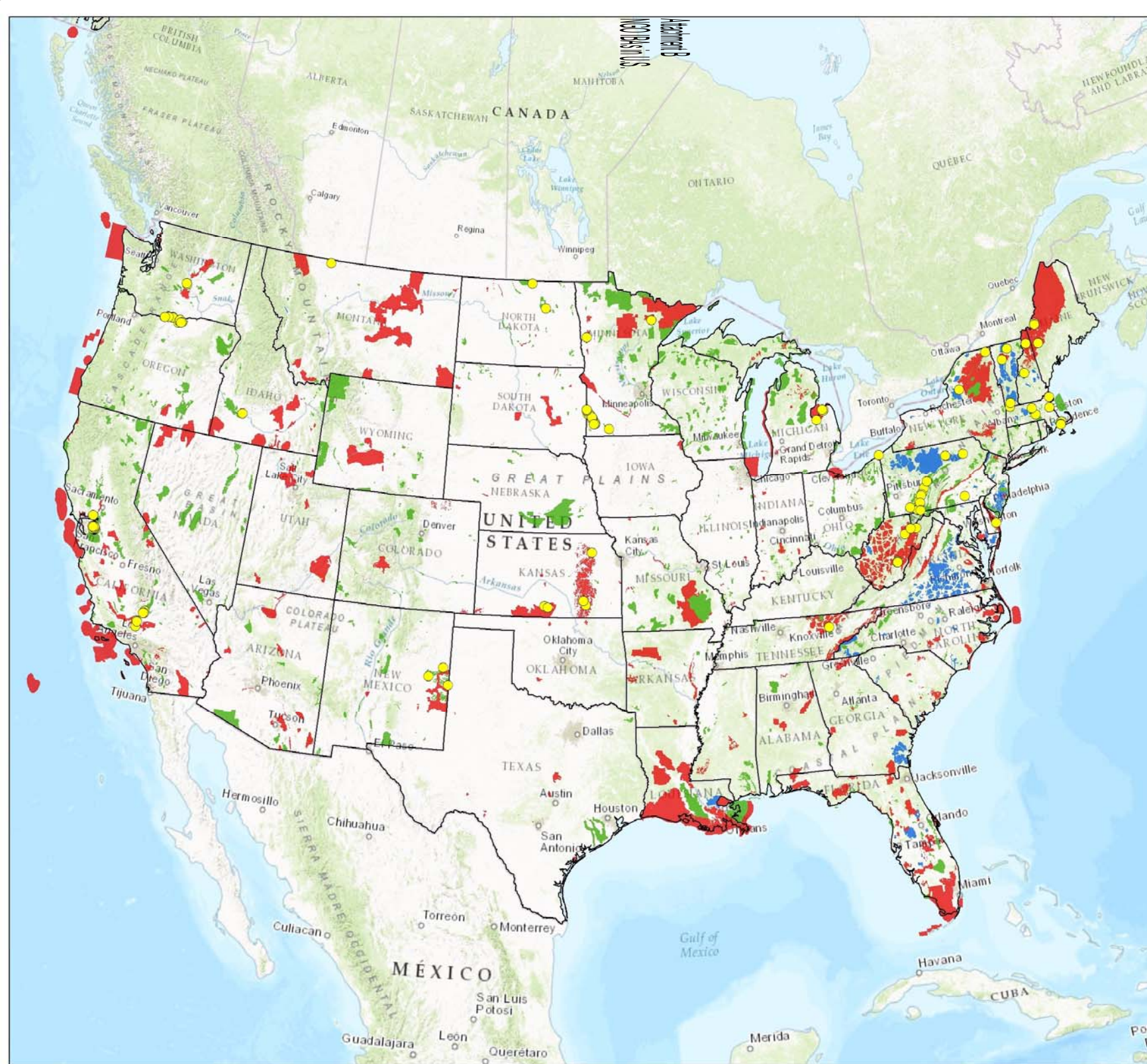
US Wind Facilities
Within Important Bird Area
Boundaries



- Wind Facility
- State Boundaries
- Continental
- Global
- State



Data Source: ESRI World Topo
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Author: Jeff Fruhwirth Date: 11/4/2016



Attachment C
Wind Farms in IBAs in U.S./ with Available Fatality Data

Facility Name	IBA Name	IBA Priority	State	Estimated MW	Number of Turbines	Bird Fatalities/MW/Year	Bat Fatalities/MW/Year	Year	Reference
Groton Wind Farm	Grafton Forest Block	Continental	New Hampshire	8	4				
Hoosac Wind	Northern Berkshires Forest Block	Continental	Massachusetts	16.5	11				
Kingdom Community Wind	Northern Green Mountains Forest Block	Continental	Vermont	63	21				
Laurel Hill	Loyalsock-North Mountain Forest Block	Continental	Pennsylvania	69	30				
Maple Ridge Wind (Multiple Stage)	Tug Hill Area	Continental	New York	75.9	46		7.3	2012	Tidhar et al. 2013
Mehoopany Wind Farm	Loyalsock-North Mountain Forest Block	Continental	Pennsylvania	139.2	87				
Searsburg Wind Turbines	Bennington South Forest Block	Continental	Vermont	2.75	5				
Agassiz Beach	Felton Prairie IBA	Global	Minnesota	1.98	3				
Alaska Village Cooperative	Central Yukon-Kuskokwim	Global	Alaska	UNK	4				
Beech Ridge 1	Allegheny Mountains Forest Block Complex	Global	West Virginia	100.5	67	1.19	2.03	2012	Tidhar et al. 2013
Beech Ridge 2	Allegheny Mountains Forest Block Complex	Global	West Virginia	UNK	46	1.48	0.58	2013	Young et al. 2014
Beech Ridge 3	Allegheny Mountains Forest Block Complex	Global	West Virginia	UNK	8				
Bolton Valley Resort	Mansfield Worcester Forest Block	Global	Vermont	0.1	1				
Buena Vista Wind	Byron Area	Global	California	0.975	13	1.22	0.08	2008	Insignia 2009
Buena Vista Wind Repower	Byron Area	Global	California	24	24				
Buffalo Mountain Wind Farm	Cumberland Plateau Forest Block Complex	Global	Tennessee	28.98	18	1.1	39.7	2005	Fiedler et al. 2007
Caney River Wind Farm	Flint Hills Region	Global	Kansas	192.6	107				
Chevak	Central Yukon-Kuskokwim	Global	Alaska	0.4	4				
Delta Junction	Upper Tanana River Valley	Global	Alaska	1	2				
Elk River Wind Farm	Flint Hills Region	Global	Kansas	150	100				
Fairmont Reservoir	Antelope Valley	Global	California	UNK	1				
Flat Ridge Wind Farm 1	Red Hills Region	Global	Kansas	2.5	1				
Flat Ridge Wind Farm 2	Red Hills Region	Global	Kansas	1.6	1				
Granite Reliable Power Windpark	Northern New Hampshire Forest Block	Global	New Hampshire	90	30				

Facility Name	IBA Name	IBA Priority	State	Estimated MW	Number of Turbines	Bird Fatalities/MW/Year	Bat Fatalities/MW/Year	Year	Reference
Harvest Wind 1	Saginaw Bay	Global	Michigan	52.8	32	2.94	1.27	2010-2012	
Harvest Wind 2	Saginaw Bay	Global	Michigan	70.2	39				
Hooper Bay	Central Yukon-Kuskokwim	Global	Alaska	0.3	3				
Howden Wind	Byron Area	Global	California	31.68	96				
Hugh R Sharp Campus Wind Project	Delaware Coastal Zone	Global	Delaware	2	1				
Ipswich Wind	Great Salt Marsh	Global	Massachusetts	3.6	2				
Kibby Mountain	Northern Maine Forest Block	Global	Maine	66	22	0.54	0.12	2011	Stantec 2012
Kibby Range	Northern Maine Forest Block	Global	Maine	66	22				
Laker Elementary	Saginaw Bay	Global	Michigan	1.95	3				
Laurel Mountain	Allegheny Mountains Forest Block Complex	Global	West Virginia	80	50				
Manzana Wind Project	Antelope Valley	Global	California	189	126				
McKinley Wind Park	Saginaw Bay	Global	Michigan	14.4	9				
Mount Storm NedPower	Allegheny Mountains Forest Block Complex	Global	West Virginia	18	9	4.24	7.43	2011	Young et al. 2012
Mountaineer Wind Energy Center	Allegheny Mountains Forest Block Complex	Global	West Virginia	51	34		25.17	2004	Arnett et al. 2005
Noble Altona Wind	Adirondack Forest Tract	Global	New York	81	54	1.84	4.34	2010	Jain et al. 2011
Northwind Energy	Byron Area	Global	California	12.09	186				
Pacific Wind	Antelope Valley	Global	California	143.5	70		0.14	2012-2013	Sapphos Environmental 2014
Quinhagak	Kuskokwim River Delta	Global	Alaska	0.3	3				
Record Hill	Northern Maine Forest Block	Global	Maine	50.6	22	1.84	0.55	2014	Stantec 2015
Savoonga Wind Turbines	Savoonga Colonies	Global	Alaska	0.2	2				
Shiloh Wind 2	Jepson Grasslands	Global	California	18.45	9	2.8	3.8	2010-2011	Kerlinger et al. 2013
St. Paul Island	St. Paul Island Colony	Global	Alaska	0.675	3				
Taconite Ridge	Superior National Forest	Global	Minnesota	25	10				
Tuntutuliak	Kuskokwim River Delta	Global	Alaska	0.475	5				
Tuscola Bay Wind	Saginaw Bay	Global	Michigan	104	65				
unknown Contra Costa County 1	Byron Area	Global	California	UNK	6				
unknown Contra Costa County 2	Byron Area	Global	California	UNK	7				

Facility Name	IBA Name	IBA Priority	State	Estimated MW	Number of Turbines	Bird Fatalities/MW/Year	Bat Fatalities/MW/Year	Year	Reference
unknown Contra Costa County Kenetech 56_100	Byron Area	Global	California	58.8	588				
unknown Contra Costa County KVS33	Byron Area	Global	California	8	20				
Vasco Wind Energy Center	Byron Area	Global	California	59.8	26				
Westar Wind	Flint Hills Region	Global	Kansas	1.5	2				
AFCEE MMR Turbines	Massachusetts Military Reservation	State	Massachusetts	UNK	4				
Allegheny Ridge	Allegheny Front	State	Pennsylvania	150	75				
Altamont Power LLC	Mount Hamilton Range	State	California	25.9	259				
Buffalo Ridge Wind (Phase I)	Prairie Coteau Complex	State	Minnesota	UNK	UNK	1.43	0.74	1999	Johnson et al. 2000
Buffalo Ridge Wind (phase II)	Prairie Coteau Complex	State	Minnesota	2.16	6	3.57	2.59	1999	Johnson et al. 2000
Buffalo Ridge Wind (Phase III)	Prairie Coteau Complex	State	Minnesota	2.16	6	5.93	2.72	1999	Johnson et al. 2004
Caprock Wind	Clovis Playas	State	New Mexico	27	27				
Casselman Wind	Winding Ridge Forest Block	State	Pennsylvania	34.5	23	2.88	8.6	2009	Arnett et al. 2010
Chandler Hills	Prairie Coteau Complex	State	Minnesota	1.98	3				
Chestnut Flats Wind Farm	Allegheny Front	State	Pennsylvania	38	19				
Conneaut Wastewater Facility	Conneaut Harbor	State	Ohio	0.4	1				
Deer Island Wind	Boston Harbor Islands National Recreation Area	State	Massachusetts	1.2	2				
Diablo Wind	Mount Hamilton Range	State	California	11.88	18	4.29	0.82	UNK	WEST 2008
Emmonak	Yukon River Delta	State	Alaska	0.5	5				
Fenton Wind	Prairie Coteau Complex	State	Minnesota	21	14				
Fort Totten	Devils Lake Basin	State	North Dakota	0.1	1				
Forward Windpower	Allegheny Front	State	Pennsylvania	29.4	14	2.18	18.17	UNK	Grodsky and Drake 2011
Frey Farm Landfill	Conejohela Flats	State	Pennsylvania	1.6	1				
Goodnoe Hills	Columbia Hills	State	Washington	96.35	47	1.4	0.34	UNK	URS 2010
Green Ridge Power	Mount Hamilton Range	State	California	134.3	1343				
Hammet Hill Wind	Snake River Birds of Prey NCA/CJ Strike Reservoir	State	Idaho	6.9	3				
Highland North	Allegheny Front	State	Pennsylvania	72.5	29				

Facility Name	IBA Name	IBA Priority	State	Estimated MW	Number of Turbines	Bird Fatalities/MW/Year	Bat Fatalities/MW/Year	Year	Reference
Highland Wind Project	Allegheny Front	State	Pennsylvania	62.5	25				
Holy Name Central Catholic School Wind Turbine	Blackstone River Valley National Heritage Corridor	State	Massachusetts	0.66	1				
Lake Benton 1	Prairie Coteau Complex	State	Minnesota	68.25	91		1.64	2002	Johnson et al. 2004
Lake Benton 2	Prairie Coteau Complex	State	Minnesota	72	96		1.81	2002	Johnson et al. 2004
Lakefield Wind	Heron Lake IBA	State	Minnesota	16.5	11	2.75	19.87	UNK	Minnesota Public Utilities Commission (MPUC), 2012
Lakota Ridge	Prairie Coteau Complex	State	Minnesota	11.25	15				
Leaning Juniper 2b	Boardman Grasslands	State	Oregon	15	10	6.66	1.98	UNK	Gritski et al. 2008
Linden Ranch	Columbia Hills	State	Washington	51.25	25	6.65	1.68	UNK	Enz and Bay 2011
Llano Estacado Wind Ranch	Clovis Playas	State	New Mexico	1.98	3				
Lookout Windpower	Allegheny Front	State	Pennsylvania	37.8	18				
Lower Davenport	Columbia Hills	State	Washington	35	14				
Massachusetts National Cemetery Wind Turbine	Massachusetts Military Reservation	State	Massachusetts	UNK	1				
Meyersdale Wind Power	Allegheny Front	State	Pennsylvania	30	20		16.74	2004	Arnett et al. 2005
Mill Run Windpower	Youghiogheny Valley, Ohio State Park	State	Pennsylvania	15	10				
MinnDakota Wind	Prairie Coteau Complex	State	Minnesota	40.5	27				
Minnesota Wind Share	Prairie Coteau Complex	State	Minnesota	5.4	3				
Moraine 1	Prairie Coteau Complex	State	Minnesota	13.5	9				
Moraine 2	Prairie Coteau Complex	State	Minnesota	10.5	7	5.59	2.42	2009	Derby et al. 2010
Moulton Wind Power	Prairie Coteau Complex	State	Minnesota	1.98	3				
Mountain Wachusett Wind	Wachusett Mountain	State	Massachusetts	3	2				
Murray Various	Prairie Coteau Complex	State	Minnesota	12	8				
New Mexico Wind Energy Center	Clovis Playas	State	New Mexico	7.5	5				
North Shaokatan Wind	Prairie Coteau Complex	State	Minnesota	11.88	18				
North Sky River Wind Energy Project	Southern Sierra Desert Canyons	State	California	160	100				
Patterson Pass	Mount Hamilton Range	State	California	13.65	210				

Facility Name	IBA Name	IBA Priority	State	Estimated MW	Number of Turbines	Bird Fatalities/MW/Year	Bat Fatalities/MW/Year	Year	Reference
Patterson Wind	Mount Hamilton Range	State	California	7.67	118				
Pebble Springs	Boardman Grasslands	State	Oregon	98.7	47	109		2009-2010	Gritski and Kronner 2010
Pine Tree Wind 1	Southern Sierra Desert Canyons	State	California	117	78	114		2009-2010	BioResource Consultants 2012
Pine Tree Wind 2	Southern Sierra Desert Canyons	State	California	13.5	9				
Rim Rock	Kevin Rim	State	Montana	73.5	49				
Salty Dog 1	Prairie Coteau Complex	State	Minnesota	3.75	3				
Sandy Ridge Wind Farm	Allegheny Front	State	Pennsylvania	50	25				
Santa Clara Wind	Mount Hamilton Range	State	California	20	200				
Shane Cowell Wind	Prairie Coteau Complex	State	Minnesota	2.1	1				
Shaokata Power Partners Wind	Prairie Coteau Complex	State	Minnesota	1.7	2				
Shaokatan Hills	Prairie Coteau Complex	State	Minnesota	11.88	18				
Shepards Flat Central	Boardman Grasslands	State	Oregon	235	94				
Shepards Flat North	Boardman Grasslands	State	Oregon	265	106				
Sky River	Southern Sierra Desert Canyons	State	California	36	160				
Stony Creek Wind Farm	Allegheny Front	State	Pennsylvania	56	35				
Threemile Canyon	Boardman Grasslands	State	Oregon	9.9	6				
Turtle Mountain Community College	Turtle Mountains	State	North Dakota	0.66	1				
Twin Ridges	Allegheny Front	State	Pennsylvania	125.05	61				
unknown Alameda County 1	Mount Hamilton Range	State	California	UNK	8				
unknown Alameda County 1 NEG Micon 60KW	Mount Hamilton Range	State	California	2.28	38				
unknown Alameda County 2	Mount Hamilton Range	State	California	-99999	1				
unknown Alameda County 250KW	Mount Hamilton Range	State	California	4.25	17				
unknown Alameda County 3	Mount Hamilton Range	State	California	UNK	49				
unknown Alameda County 65KW	Mount Hamilton Range	State	California	3.64	56				
unknown Alameda County Bonus	Mount Hamilton Range	State	California	13.56	113				

Facility Name	IBA Name	IBA Priority	State	Estimated MW	Number of Turbines	Bird Fatalities/MW/Year	Bat Fatalities/MW/Year	Year	Reference
unknown Alameda County Darwin	Mount Hamilton Range	State	California	3.08	28				
unknown Alameda County Flowind	Mount Hamilton Range	State	California	1.65	11				
unknown Alameda County KVS33	Mount Hamilton Range	State	California	7.6	19				
unknown Alameda County Polenko	Mount Hamilton Range	State	California	1.2	12				
unknown Alameda County Windmatic	Mount Hamilton Range	State	California	1.69	26				
unknown Alameda Kenetech 56_100	Mount Hamilton Range	State	California	42.1	421				
unknown Barnstable County	Massachusetts Military Reservation	State	Massachusetts	UNK	1				
unknown Klickitat County 1	Columbia Hills	State	Washington	UNK	7				
Valley View Wind	Prairie Coteau Complex	State	Minnesota	10	5				
Wild Horse 1	Quilomene-Colockum Wildlife Area	State	Washington	228.6	127	1.55	0.39	UNK	Erickson et al. 2008
Wild Horse 2	Quilomene-Colockum Wildlife Area	State	Washington	44	22				
Willow Creek	Boardman Grasslands	State	Oregon	72	48				
Windy Point/Windy Flats	Columbia Hills	State	Washington	399.8	176	8.45	0.41	UNK	Enz et al. 2011

This foregoing document was electronically filed with the Public Utilities

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Summary: Comments Reply Comments of Icebreaker Windpower, Inc. electronically filed by Terrence O'Donnell on behalf of Icebreaker Windpower, Inc.