
Chapter 1

Purpose of and Need for Action

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1 Purpose of and Need for Action

1.1 Introduction

This Environmental Impact Statement (EIS) has been prepared by the U.S. Fish and Wildlife Service (USFWS) pursuant to the National Environmental Policy Act (NEPA) (42 U.S.C. §4321 *et seq.*). The U.S. Army Corp. of Engineers (USACE) has cooperated in the preparation of this EIS by reviewing and providing comments back to the USFWS. This EIS evaluates the effects of issuing an Incidental Take Permit (ITP) pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531 *et seq.*, 1539), for activities associated with the proposed Buckeye Wind Power Project (Project). Under Section 10(a)(2)(A) of the ESA, any application for an ITP must include a conservation plan that details, among other things, the impacts of the take and the steps taken to minimize and mitigate such impacts.

The permit applicant, Buckeye Wind LLC, a wholly owned subsidiary of EverPower Wind Holdings, Inc. (Buckeye Wind or the Applicant) proposes to construct and operate a commercial wind energy facility in Champaign County, Ohio. To achieve a generation capacity of 250 megawatts (MW), Buckeye Wind's Covered Activities include the installation of up to 100 wind turbines, to be built in the approximately 32,395-hectare (ha; 80,051 acre [ac]) Buckeye Wind project area (hereinafter referred to as the "Action Area") in Champaign County, Ohio. Within the Action Area, a relatively small portion of that land, approximately 0.16 percent (128.9 ac), will be permanently occupied by the Project facilities. The Project would be constructed in a location that supports the federally endangered Indiana bat (*Myotis sodalis*). Buckeye Wind has developed a Habitat Conservation Plan (HCP, located in Appendix B) to ensure that impacts to the federally listed Indiana bat are adequately minimized and mitigated in accordance with the requirements of Section 10 of the ESA. The USFWS received an application for an ITP from Buckeye Wind for the Project on February 23, 2012.

The ESA and its implementing regulations prohibit the take of any fish or wildlife that is designated as a threatened species or endangered species under Section 4 of the ESA (federally listed species) without prior approval pursuant to either Section 7 or Section 10(a)(1)(B) of the ESA. The ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (16 U.S.C. §1532(19)). Pursuant to the Code of Federal Regulations (CFR), "incidental taking" means "any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity" (50 C.F.R. 17.3). "Harm" is defined in the CFR as "an act which actually kills or injures federally listed wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures federally listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 C.F.R. 17.3). "Harass" means "an intentional or negligent act or omission which creates the likelihood of injury to federally listed wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering" (50 C.F.R. 17.3).

Issuance of a Section 10 ITP constitutes a discretionary federal action by the USFWS and is thus subject to NEPA, which requires that all federal agencies assess the effects of their actions on the

human environment by preparing an Environmental Assessment (EA) or Environmental Impact Statement (EIS) to document the potential effects of the federal action (42 U.S.C. § 4332). Accordingly, the USFWS, in cooperation with the USACE, has prepared this EIS to evaluate the potential impacts associated with issuance of an ITP and implementation of the HCP, and to evaluate alternatives. Three alternatives to the Proposed Action are considered in this EIS, including a No Action Alternative (see Chapter 3). The consequences of these actions on various resources are discussed in this EIS.

1.2 General Project Description and Location

The Action Area is an approximately 32,395-ha (ha; 80,051 ac) area that includes portions of Union, Wayne, Urbana, Salem, Rush, and Goshen Townships in Champaign County in west central Ohio (Figure 1-1). The Project would consist of up to 100 wind turbines, each with a nameplate capacity rating of 1.6 to 2.5 MW, resulting in a total generating capacity of up to 250 MW for the facility. The Project also would include construction of access roads, crane paths, electrical interconnection lines, staging areas, a substation, permanent meteorological towers, temporary concrete batch plants, and an operations and maintenance (O&M) facility. Additionally, the Project includes activities for operation, maintenance, decommissioning, and mitigation.

The Project is located in a rural setting, with the landscape primarily composed of agricultural properties with wooded areas interspersed throughout. Several small towns (such as Mutual and Cable) occur within the Project vicinity along with scattered individual homes and low-density residential areas. The Project is expected to operate at an average annual capacity factor¹ of approximately 30 percent, resulting in approximately 657,000 megawatt hours (MWh) of electricity generation per year (assuming an installed capacity of 250 MW). The energy generated by the Project would collect to an electric substation in Union Township in Champaign County (Figure 1-2). Section 3.1 of this EIS provides a detailed description of the Project.

¹ Capacity factor is a measure of the productivity of a wind turbine or any other power production facility. It compares the plant's actual production over a given period of time with the amount of power the plant would have produced if it had run at full capacity for the same amount of time. A wind power facility is "fueled" by the wind, which blows with variable strength. Although modern utility-scale wind turbines typically operate 65 to 90 percent of the time, they often run at less than full capacity. Therefore, a capacity factor of 25 to 40 percent is common, although they may achieve higher capacity factors during windy weeks or months. As a point of comparison, a capacity factor of 40 to 80 percent is typical for other (not operated by wind) types of power generation facilities (<http://www.awea.org>).

Figure 1-1 Project Vicinity

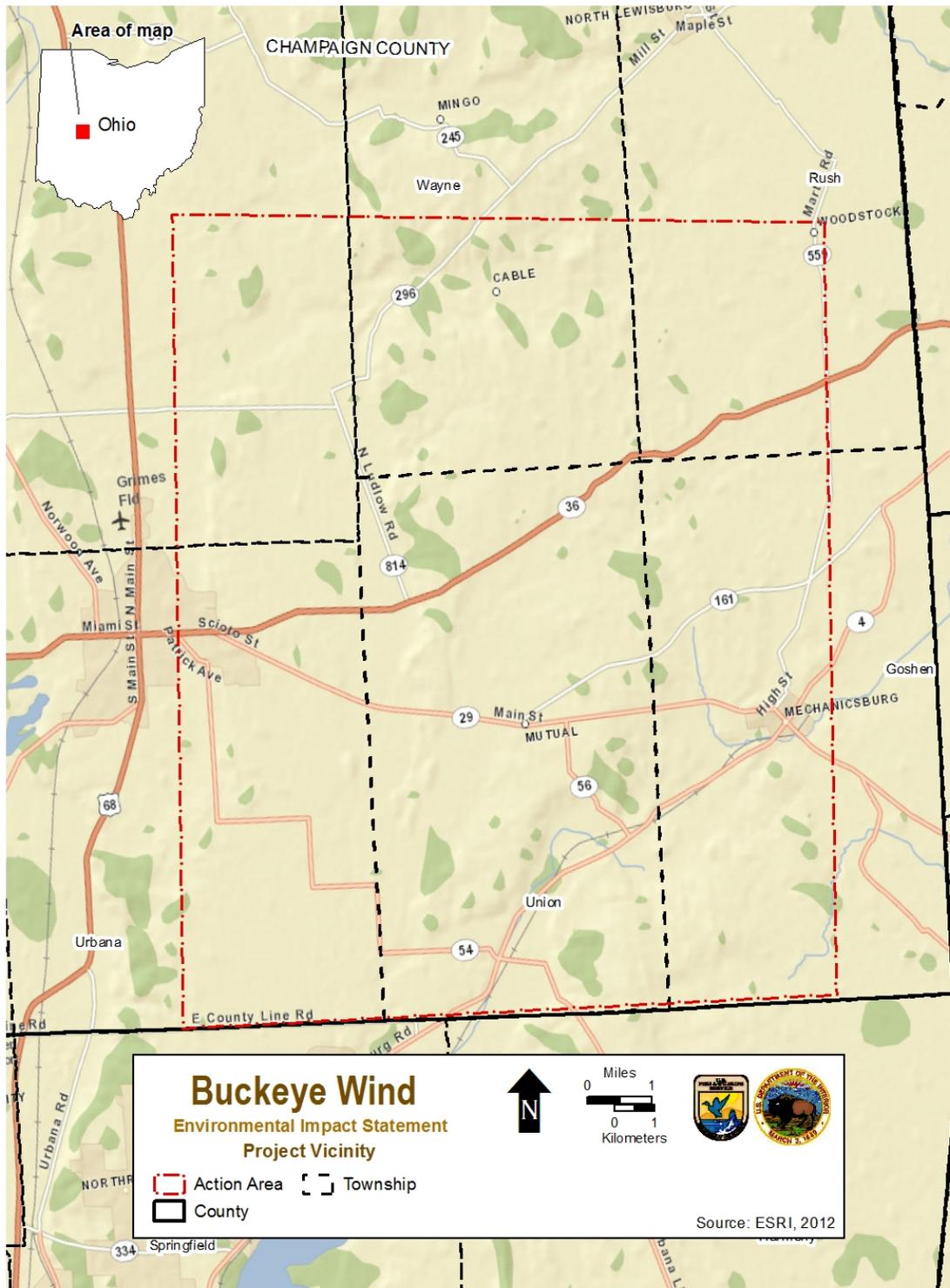
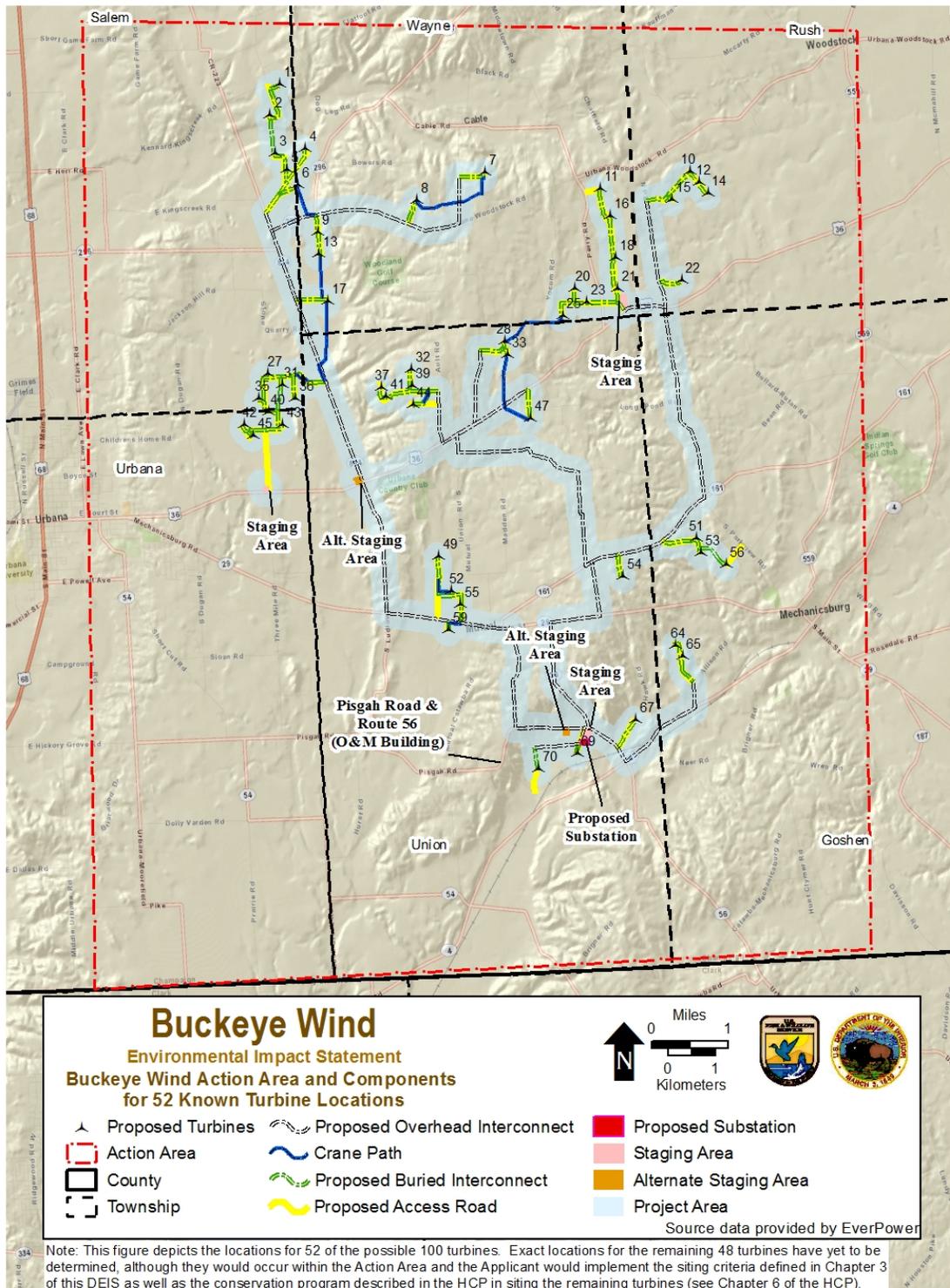


Figure 1-2 Buckeye Wind Action Area and Components for 52 Known Turbine Locations



1.3 Species Covered by the HCP

The Indiana Bat (*Myotis sodalis*), a federally-listed endangered species under the ESA, is the single federally listed species covered by the HCP.

1.4 Proposed Action Addressed in this EIS

The Proposed Action is USFWS' issuance of a Section 10(a)(1)(B) ITP for the Covered Activities proposed in the HCP. The HCP (Section 2.3) describes what are considered Covered Activities, including construction, operation, maintenance, decommissioning, and mitigation. The HCP outlines specific measures to avoid and minimize impacts to the Indiana bat as well as mitigation to offset the impacts of take that cannot be avoided or minimized. The HCP describes the monitoring that will occur to ensure that permitted take is not exceeded and mitigation is successful. The proposed permit duration is 30 years. Accordingly, this EIS analyzes the direct, indirect, and cumulative impacts of approving the HCP and issuing an ITP, including impacts of the Covered Activities and measures proposed to avoid, minimize, or mitigate potential impacts on the Indiana bat as well as the effects of the activities on the human environment.

1.5 Purpose of and Need for the Proposed Action

1.5.1 Purpose of the Federal Action

The purposes for the proposed action and preparing this EIS are to:

- Respond to Buckeye Wind's application for an ITP for the federally endangered Indiana bat related to Project activities that have the potential to result in take, pursuant to the provisions of Section 10(a)(1)(B) of the ESA, as amended, and its implementing regulations (50 C.F.R. part 17.22(b)(1)) and policies.
- Protect, conserve and enhance the Indiana bat and its habitat for the continuing benefit of the people of the United States (U.S.).
- Provide a means and take steps to conserve the ecosystems depended on by the Indiana bat.
- Ensure the long-term survival of the Indiana bat through protection and management of the species and its habitat.
- Ensure compliance with the ESA, NEPA, and other applicable Federal laws and regulations.

1.5.2 Need for the Federal Action

The need for the action is based on the potential that activities proposed by Buckeye Wind could result in the incidental take of Indiana bats, and thus the need for an ITP. Consideration of issuance of the ITP and preparation of this EIS will help USFWS and other federal and state agencies address a number of important needs, as described below.

- Commercial wind facilities have been shown to cause high numbers of bat fatalities in many locations. There is a need to ensure that take of Indiana bats is avoided and minimized to the maximum extent practicable and to ensure that the impact of any remaining take is fully mitigated. There is also a need to protect the habitat of Indiana bats including their maternity trees, swarming areas near hibernacula, and nearby foraging and roosting habitat.
- The USFWS needs to consider all of the environmental impacts to the human environment that will occur if an ITP is issued for this Project.

1.6 Agency Roles and Responsibilities

1.6.1 USFWS

The primary responsibility of the USFWS is the conservation and enhancement of the nation's fish and wildlife populations and their habitats. The USFWS' mission is: "working with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people" (USFWS 2008a, pg 1). The USFWS has specific trust responsibilities for migratory birds, federally threatened and endangered species, and certain anadromous fish and marine mammals (USFWS 2008a). The USFWS is also responsible for enforcing certain Federal wildlife laws.

The USFWS' responsibilities for management of federally-listed species, including the Indiana bat, are authorized under the ESA (USFWS 2008a). There are several laws and treaties that comprise or inform the USFWS Migratory Bird Program; however, the two primary pieces of legislation focused on in this analysis are the Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§703-712) and the Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. §§668-668d). The USFWS is responsible for preparing the regulations that implement these two Acts. USFWS updates these regulations periodically to reflect the current status of migratory bird populations as well as the interests and needs of government agencies, the scientific community, and the public (USFWS 2002).

The USFWS has worked with the wind industry to avoid and minimize impacts to wildlife from construction and operation of wind energy facilities for many years. This has resulted in publication of the USFWS Land Based Wind Energy Guidelines (USFWS 2012c). The USFWS is concerned about any level of take from wind energy facilities, but is particularly concerned about take of ESA-protected species and species that are under additional protection, such as eagles and migratory birds. In its recently published Land Based Wind Energy Guidelines, the USFWS "urges voluntary adherence to the Guidelines and communication with the USFWS when planning and operating a facility" (USFWS 2012c, pg 6). USFWS will regard such actions as "appropriate means of identifying and implementing reasonable and effective measures to avoid the take of species protected under the MBTA and BGEPA" (USFWS 2012c, pg 6). USFWS will also consider such adherence and communication when exercising its discretion on potential referrals for prosecution related to the take of any MBTA or BGEPA protected species (USFWS 2012c).

1.6.1.1 Assessments and Decisions Required

(a) NEPA

The USFWS is the lead agency for preparation of this EIS. The USACE has cooperated on the preparation of this EIS by reviewing and providing comments back to the USFWS. As required by NEPA, the USFWS, as the lead agency, will use a systematic, interdisciplinary approach for the EIS, considering environmental amenities and values in decision-making along with economic and technical considerations. The purpose of NEPA is to ensure that the potential environmental impacts of any proposed federal action are fully considered and made available for public review.

Upon the completion of the EIS process (including a 90-day public comment period on the Draft EIS [DEIS]), the USFWS will issue a Final EIS and provide a concise record of its consideration of the environmental analysis in the Record of Decision (ROD). The ROD will discuss the agency's assessment of the alternatives considered in the EIS and its determination on whether to issue an ITP for the Project. No permit decision would be made until at least 30 days after completion of the ROD.

(b) ESA

As required by the ESA Section 10(a)(2)(B) and 50 C.F.R.17.22(b)(2) and 50 C.F.R. 17.32(b)(2) as well as the guidance in the USFWS' Five Point Policy (Fed.Reg. 65, 35241-35257), the USFWS must determine that the following criteria are met before issuing an ITP:

- The taking will be incidental;
- The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking;
- The applicant will ensure that adequate funding will be provided for the HCP;
- The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild;
- The HCP addresses the five concepts outlined in the Five Point Policy: permit duration, public participation, adaptive management, monitoring provisions, and biological goals;
- The HCP will be implemented; and
- Such other measures that the Secretary may require as being necessary or appropriate for purposes of the HCP will be implemented.

The USFWS' decision pursuant to the ESA may consist of one of the following:

- Issue an ITP conditioned on implementation of the Applicant's HCP;
- Issue an ITP conditioned on implementation of the Applicant's HCP together with other specified measures; or
- Deny the ITP application.

Section 7 of the ESA² requires intra-Service consultation to address the action of issuing the ITP. In the intra-Service consultation, the USFWS, in the case of this EIS, evaluates the potential effects relative to baseline conditions to determine whether the Proposed Action is likely to jeopardize the continued existence or result in destruction or adverse modification of designated critical habitat of the species under consultation. The USFWS then prepares its Biological Opinion (BO), which contains an effects assessment of issuing the ITP under the implementation of the HCP on listed species and their habitats. The BO includes an incidental take statement with take limits, reasonable and prudent measures, and other terms and conditions. The internal Section 7 consultation on the USFWS' action of ITP issuance will be completed before the ROD finding is reached under NEPA.

1.6.2 USACE

1.6.2.1 Section 10 of the Rivers and Harbors Act

The USACE is directed by Congress under Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 U.S.C. § 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the U.S. The intent of this law is to protect the navigable capacity of waters important to interstate commerce. Navigable waters of the U.S. are defined in 33 C.F.R. 329 as those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

1.6.2.2 Section 404 of the Clean Water Act

The USACE is directed by Congress under Section 404 of the Clean Water Act (CWA) (33 U.S.C. §1251, 1344) to regulate the discharge of dredge and fill material into all waters of the U.S., including wetlands. The intent of the law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity. Waters of the U.S. are defined in 33 C.F.R. 328 and may include lakes, rivers, streams, mudflats, vegetated shallows, ditches, ponds, and wetlands.

1.6.2.3 USACE Permit Requirements

While the Applicant has had some initial discussions with the USACE regarding potential permit requirements, it has not been determined whether the Project would impact any areas within the USACE's jurisdiction. Buckeye Wind will continue to consult with USACE as the design phase of the Project progresses to determine the need for a permit. If the Project would impact a navigable water of the U.S., or if it would result in the placement of fill material into jurisdictional waters of the U.S., a USACE permit would be required.

² 16 U.S.C. § 1536(a)(2), Interagency cooperation. Requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of critical habitat of such species.

1.7 Statutory and Regulatory Framework

The Project is subject to a combination of federal, state, and local laws and regulations aimed at protecting human health and the environment. This section discusses the federal, state, and local laws and regulations that apply to the Project. Finally, this section summarizes the state and federal policies and goals related to renewable energy that are relevant to the Project.

1.7.1 Key Federal Statutes and Regulations

1.7.1.1 NEPA

NEPA requires that federal agencies consider the potential environmental consequences of proposed actions in their decision-making process. The law's intent is to protect, restore, or enhance the environment through well-informed federal decisions. The Council on Environmental Quality (CEQ) was established under NEPA for the purpose of implementing and overseeing federal policies as they relate to this process.

In 1978, the CEQ issued Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 C.F.R. parts 1500-1508). Section 102(2)(C) of NEPA mandates that the lead federal agency must prepare a detailed statement for legislation and other major federal actions that significantly affect the quality of the human environment (42 U.S.C. § 4332(2)(C)). Such projects include any actions under the jurisdiction of the federal government or subject to federal permits; actions requiring partial or complete federal funding; actions on federal lands or affecting federal facilities; continuing federal actions with effects on land or facilities; and new or revised federal rules, regulations, plans, or procedures. Any action with the potential for significant impacts to the human environment requires the preparation of an EIS (40 C.F.R. part 1508). During the Project development phase, it was determined that take of federally endangered Indiana bats is possible from construction/decommissioning and is likely to occur during operation of the proposed Project. To authorize take, Buckeye Wind has developed an HCP and has requested issuance of an ITP from the USFWS. Issuance of an ITP is considered a major federal action and is therefore subject to the requirements of NEPA and the CEQ regulations, which include preparation of an EA or EIS. In this case, the USFWS decided that an EIS was necessary because: 1) the effects of the Project, including effects on federally listed species, were uncertain and required thorough analysis in an EIS; and 2) if approved by USFWS, the Project would receive one of the first ITPs for Indiana bats associated with a wind project. To comply with NEPA and other relevant environmental statutes described below, this EIS involves a thorough examination of all pertinent environmental issues.

1.7.1.2 Federal ESA

The ESA is administered by the USFWS and National Marine Fisheries Service (NMFS). With some exceptions, Section 9 of the ESA³ prohibits unauthorized take of any fish or wildlife species listed as endangered or threatened under the ESA. Subject to specified terms and conditions, Section 10 of the ESA allows for the incidental take of listed species by non-federal

³ 16 U.S.C. § 1538 Prohibited acts. This section and ESA implementing regulations prohibit any action that causes a "taking" of any fish or wildlife species listed as endangered or threatened and also prohibits the import, export, interstate, and foreign commerce of listed species.

entities otherwise prohibited by Section 9 of the ESA. Pursuant to Section 10, an ITP is issued through adoption of an USFWS-approved HCP that demonstrates that take has been avoided, minimized, and mitigated to the maximum extent practicable.

Section 7(a)(2) of the ESA states that each federal agency shall ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of designated critical habitat. A federal action “means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas” (50 C.F.R. 402.2). Actions of federal agencies that do not jeopardize the continued existence of listed species or result in destruction or adverse modification of their designated critical habitat, but that could result in a take, must be addressed under Section 7.

The Proposed Action is subject to the ESA because incidental take of federally listed Indiana bats may occur from construction, operation, maintenance, and/or decommissioning of the Project and the USFWS is considering issuing an ITP under Section 10(a)(1)(B) of the ESA to authorize this take, which would otherwise be prohibited under Section 9 of the ESA. Prior to issuing an ITP, the USFWS must internally conduct an ESA Section 7 analysis of the ITP to ensure the take will not jeopardize the continued existence of the species.

1.7.1.3 MBTA

A migratory bird is any individual species or family of birds that crosses international borders at some point during their annual life cycle to live or reproduce. The MBTA implements four treaties that prohibit take, possession, transportation, and importation of all migratory, native birds (plus their eggs and active nests) occurring in the wild in the U.S., except for House Sparrow, European Starling, Rock Pigeon, any recently listed unprotected species in the Federal Register (70 Fed. Reg. 12710), and non-migratory upland game birds, except when specifically authorized by the USFWS. The MBTA provides that it is unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior. Some regulatory exceptions apply. Take is defined in regulations as: “pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect” (16 U.S.C. § 1532(19)). In total, more than 1,000 bird species are protected by the MBTA⁴, 58 of which can be legally hunted with a permit as game birds. The MBTA addresses take of individual birds, not population-level impacts, habitat protection, or harassment. Failure to comply with the MBTA can result in criminal penalties. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, educational, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal.

The USFWS regards voluntary adherence to its Land-Based Wind Energy Guidelines (USFWS 2012c) and communications as evidence of due care with respect to avoiding, minimizing, and mitigating adverse impacts to species protected under the MBTA and BGEPA, should a violation

⁴ A revised list of birds protected by the MBTA can be found in the federal register notice at: <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/10-13%20Final%20Rule%201%20March%202010.pdf>

of either act occur. Though compliance with the USFWS Guidelines does not limit or preclude the USFWS from exercising its authority under any law, statute, or regulation, or from conducting enforcement actions against any individual, company, or agency, the USFWS Office of Law Enforcement focuses its resources on investigating and prosecuting those who take migratory birds without identifying and implementing reasonable and effective measures to avoid the take of species protected under the MBTA and BGEPA (USFWS 2012c). According to the USFWS Guidelines, “The Chief of Law Enforcement or more senior official of the Service will make any decision whether to refer for prosecution any alleged take of such species, and will take such adherence and communication fully into account when exercising discretion with respect to such potential referral” (USFWS 2012c, pg 6).

Under the MBTA, a Federal Special Purpose – Utility Migratory Bird Mortality Monitoring Permit is required for utilities to collect, transport and temporarily possess migratory birds found dead on utility property, structures, and rights-of-way for mortality monitoring purposes. Utilities include communications, electric, wind power, solar, and other power generation and transmission entities. Migratory Bird Mortality Monitoring permits to collect carcasses and parts will be available to wind energy companies that submit an application that includes a project-specific monitoring plan and protocol that are of sufficient detail and rigor to enable the permittee to develop information needed to determine bias-corrected fatality rates or other metrics of affected species, and assess how different parts of the facility or operations affect those species. The permit will authorize collection of dead migratory birds for the purpose of monitoring mortality associated with operation of the wind facility. Any threatened or endangered species or bald or golden eagles encountered must be turned over to the USFWS immediately. Possession of a permit to collect carcasses of birds taken by the wind facility does not absolve the company from liability for such take, nor does it relieve the company of its obligations to comply with applicable Federal, state, tribal or local laws. Buckeye Wind will obtain a Migratory Bird Mortality Monitoring Permit to authorize collection of migratory bird carcasses during post-construction monitoring at the Project.

1.7.1.4 BGEPA

The BGEPA affords specific legal protection to bald eagles and golden eagles. Under this Act, it is a violation to “...take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or in any manner any bald eagle commonly known as the American eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof...”(16 U.S.C. § 668). The BGEPA defines take as pursuing, shooting, shooting at, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing (16 U.S.C. § 668c). “Disturb” is defined in regulation 50 C.F.R. 22.3 as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

In fall 2009, USFWS implemented two rules (50 C.F.R. 22.26 and 22.27) authorizing limited legal take of bald and golden eagles “when the take is associated with, but not the purpose of an otherwise lawful activity, and cannot practicably be avoided” (USFWS 2011a, pg 1). Failure to comply with the BGEPA can result in criminal penalties.

Although take permits may be issued under these new rules, Buckeye Wind is not seeking an eagle take permit under the BGEPA at this time since the Project is not expected to result in activities that would incidentally take (harm or harass) eagles. While both bald and golden eagle use of the Action Area has been documented, to date use has been limited to the migration season when they occur as transients or to limited summer use by non-reproductive transient individuals (refer to Section 5.7 of this EIS for further details on eagle use of the Action Area). As such, the Project is considered to be of low risk to eagles.

1.7.1.5 CWA

The Clean Water Act (CWA, 33 U.S.C. §§ 1251 to 1387) is the principal law governing protection of the nation's surface waters. The CWA provides the basic structure for regulating discharges of pollutants into U.S. waters. USACE is directed by Congress under Section 404 of the Clean Water Act (33 USC 1344) to regulate the discharge of dredged and fill material into all waters of the U.S., including wetlands. As noted in Section 1.6.2.3, the Applicant has had preliminary discussions with the USACE regarding potential USACE permits required for this Project.

1.7.1.6 National Historic Preservation Act

The National Historic Preservation Act (NHPA, 16 U.S.C. §§ 470a to 470w-6) is the primary federal law governing the preservation of cultural and historic resources in the U.S. The NHPA establishes a national preservation program and the basic structure for encouraging the identification and protection of cultural and historic resources of national, state, tribal and local significance. Issuance of an ITP is a federal action requiring review under the NHPA.

1.7.1.7 Rivers and Harbors Act

The USACE is directed by Congress under Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC 403) to regulate all work or structures in or affecting the course, condition or capacity of navigable waters of the U.S. The intent of this law is to protect the navigable capacity of waters important to interstate commerce. Navigable waters of the U.S. are defined in 33 CFR 329 as those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

1.7.2 State Statutes and Regulations

1.7.2.1 Ohio Power Siting Board Process

The Ohio Power Siting Board (OPSB) has regulatory authority over all proposed wind power projects in Ohio capable of generating five or more MW of electricity. Prior to issuance of a Certificate of Environmental Compatibility and Public Need by the OPSB (OPSB Certificate), a wind developer must demonstrate that its wind facility is in compliance with a variety of requirements to ensure that potential impacts to the human environment, including natural resources, have been adequately addressed. The Project is the subject of one of the first applications submitted to the OPSB for a large-scale commercial wind powered electric generation facility in Ohio. Buckeye Wind initiated the OPSB application process on June 4,

2008 upon filing a letter of notification to apply for a certificate to install numerous electricity generating wind turbines in Champaign County (in accordance with Ohio Administrative Code [OAC] Rule 4906-5-02). Buckeye Wind filed its application for an OPSB Certificate (Case Record 08-0666-EL-BGN) in April 2009 (hereafter OPSB Application). The Project received its OPSB Certificate on March 22, 2010. The issuance of this Certificate was subject to specific conditions, including that Buckeye Wind develop and implement a USFWS-approved HCP for the Indiana bat and obtain an ITP for the species from the USFWS. Appendix A to this EIS contains a more detailed discussion of the OPSB process and the complete record is available at <http://dis.puc.state.oh.us/CaseRecord.aspx?Caseno=08-0666&link=DI>.

The Project proposed in Buckeye Wind's OPSB application included a 70-turbine layout. As part of the Certificate process, 16 turbines were prohibited by the OPSB due to unresolved Federal Aviation Administration (FAA) obstruction violations. Once the 16 turbines were omitted, two additional turbines became unviable due to cost associated with collection line construction and operation. As a result, 18 turbines were dropped from the original OPSB Application 70-turbine layout, resulting in a final layout of 52 turbines. The OPSB Certificate to Construct issued on March 22, 2010 covers these 52 turbines.

Up to 48 additional turbines could be erected within the Action Area to fully utilize Buckeye's request to connect with the PJM Interconnection network. Champaign Wind LLC has initiated the OPSB application procedure for the Buckeye II Wind Project, consisting of approximately 56 turbines (no more than 100 total turbines will be constructed for the Buckeye Wind and Buckeye II Wind projects combined). The Buckeye II Wind Project will be transferred to Buckeye Wind prior to construction. A public information meeting for Champaign Wind LLC was held on January 24, 2012. Champaign Wind LLC's record of public interaction is available through the PUCO Docketing Information System (<http://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=12-0160-EL-BGN>). Under no circumstances will more than 100 turbines be covered under the ITP Application.

1.7.2.2 Ohio Department of Natural Resources

State threatened and endangered species, including birds and bats, are protected under ORC § 1518.01–99; 1531.25, and 1531.99, which prevent the “taking or possession of native wildlife, or any eggs or offspring thereof, that [are found] to be threatened with statewide extinction” (ORC § 1531.25). Ohio Department of Natural Resources (ODNR) must issue a scientific collectors permit in accordance with ORC §1533.08 (and further defined under OAC Section 1501:31-25-01 and 02) to authorize collection of carcasses during post-construction monitoring. There is currently no state-specific permit system authorizing incidental take of state listed species.

1.7.3 Other Applicable Regulations

In addition to the regulations discussed above, there are numerous other federal, state, and local regulations that apply to the Project, some of which require permits or authorizations from authorizing agencies. Table 1.7-1 summarizes these regulations, their relevance to the Project, and permits or authorizations required where applicable.

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Table 1.7-1 Applicable Federal, State and Local Statutes, Regulations and Permits and Authorizations Required for the Buckeye Wind Project

Agency	Statutes/Regulation	Permit/Approval	Reason Permit is (or May be) Needed
Federal			
U.S. Fish and Wildlife Service	Endangered Species Act Section 7	ITP and ITS - see section 1.6.1 above	Requires intra-Service consultation to address the actions of issuing both the ITP and the accompanying Incidental Take Statement (ITS).
U.S. Fish and Wildlife Service	Endangered Species Act Section 9	ITP – see Section 1.7 above	The Project is expected to result in incidental take of Indiana bats, listed as federally endangered and protected under the ESA.
U.S. Fish and Wildlife Service	Endangered Species Act Section 10	ITP – see Section 1.5 above	The Project is expected to result in incidental take of Indiana bats, listed as federally endangered and protected under the ESA.
U.S. Fish and Wildlife Service	Migratory Bird Treaty Act	MBTA Special Purpose Salvage Permit	The MBTA protects over 1,000 U.S. bird species. It is unlawful to take any migratory bird, or any part, nest, or egg of any such bird, unless authorized under a permit issued by the USFWS. MBTA Special Purpose – Utility Migratory Bird Mortality Monitoring Permit will be required to collect carcasses during post-construction monitoring.
U.S. Fish and Wildlife Service	Bald and Golden Eagle Protection Act	None – see Section 1.7.1 above	Prohibits the take of bald eagles and golden eagles. Permits may be issued for otherwise lawful activities that result in a take of bald and golden eagles on a limited basis. A risk assessment conducted by the USFWS concluded that there is low likelihood of Project-related impacts to eagles; therefore no permit will be sought at this time. Buckeye Wind has committed to working with USFWS and ODNR to develop a plan to periodically update the predicted risk of the Project.
U.S. Army Corps of Engineers	Clean Water Act – Section 404	Section 404 permit may be required	For discharge of dredge or fill material into waters of the United States, including special aquatic sites such as wetlands under the jurisdiction of the USACE.
U.S. Army Corps of Engineers	Rivers and Harbors Act – Section 10	Section 10 permit may be required	For work or structures in or affecting the course, condition or capacity of navigable waters of the United States.
U.S. Department of Agriculture – Natural Resources Conservation Service	Farmland Protection Policy Act	Compliance with guidelines	Federal programs (i.e., permitted by federal government) must be compatible with state, local and private efforts to protect farmland.
Lead Federal agency varies: is the Federal agency with the undertaking	National Historic Preservation Act - Section 106	Consultation with the Ohio Historic Preservation Office	Projects with federal undertaking (i.e., granting a federal ITP) must determine the potential for the proposed undertaking to affect historic properties and avoid or mitigate any adverse effects.

Agency	Statutes/Regulation	Permit/Approval	Reason Permit is (or May be) Needed
Lead Federal agency varies: is the Federal agency with the undertaking	American Indian Religious Freedom Act (AIRFA) of 1978	Compliance with regulation/Consultation	AIRFA requires federal agencies to respect the customs, ceremonies, and traditions of Native American religions. AIRFA also provides for access to sacred sites, freedom to worship through ceremonial and traditional rights and use, and possession of objects considered sacred. Tribes recognized both by the federal and state government may be consulted to ensure these rights are respected.
Environmental Protection Agency	Executive Order 11990 – Wetlands Protection	Compliance with guidelines	Federal agencies must avoid causing adverse impacts associated with the destruction or modification of wetlands.
Environmental Protection Agency	Executive Order 11988 – Floodplain Management	Compliance with guidelines	Federal agencies must avoid construction within the 100-year floodplain unless no other practicable alternative exists.
No lead Federal agency for this regulation	Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	Compliance with guidelines	Federal agencies must incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.
No lead Federal agency for this regulation	Executive Order 13186 - Responsibilities of Federal Agencies to Protect Migratory Birds	Compliance with guidelines	Each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations is directed to develop and implement a Memorandum of Understanding (MOU) with the USFWS that shall promote the conservation of migratory bird populations.
State			
Ohio Power Siting Board	OAC Chapter 4906-17	OPSB Certificate – see Section 1.7.2 above	OPSB has regulatory authority over all proposed wind power projects in Ohio capable of generating 5 or more MW of electricity.
Ohio Department of Natural Resources Division of Wildlife	ORC §1533.08, Ohio Administrative Code Section 1501:31-25-01 and 02	Scientific collectors permit	Would authorize salvage of birds and bats during post-construction monitoring.
Ohio Department of Transportation	ORC Chapter 5577.04, 05	Roadway Usage permit and Oversized/overweight permit may be required	A permit is required to move oversized and/or overweight loads along or across state roads.
Ohio Environmental Protection Agency	ORC Chapter 6111 – Water Pollution Control	National Pollutant Discharge Elimination System (NPDES) permit	To authorize the discharge of substances at levels that meet water quality standards with regard to water pollution control.
Ohio Environmental Protection Agency	ORC Chapter 6111.30	Water Quality Certification	Any action requiring a Clean Water Act Section 404 permit must receive a Section 401 WQC from the Ohio EPA.
Local			
Champaign County-County Engineer		Right-of-way permit/Road Use Agreement may be required	A permit to work on and change the existing condition of a county right-of-way.

1.7.4 Relevant Federal and State Guidelines and Policies

1.7.4.1 USFWS Land-Based Wind Energy Guidelines

The USFWS first addressed wind power and wildlife, specifically migratory birds, by adopting “Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines” in 2003 (USFWS 2003).

A Federal Advisory Committee (FAC) was established in 2007 by the Secretary of the Interior to provide advice and recommendations on developing effective measures to avoid or minimize impacts to wildlife and their habitats related to land-based wind energy facilities. In April 2010, the FAC provided to the Secretary a set of Recommendations (http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html).

The USFWS convened an internal working group to review the Recommendations and develop voluntary wind energy guidelines that consider the Recommendations. In March 2012, the USFWS Guidelines were published (USFWS 2012c). These Guidelines “use a ‘tiered approach’ for assessing potential adverse effects to species of concern and their habitats. The tiered approach is an iterative decision-making process for collecting information in increasing detail; quantifying the possible risks of proposed wind energy projects to species of concern and their habitats; and evaluating those risks to make siting, construction, and operation decisions...Subsequent tiers refine and build upon issues raised and efforts undertaken in previous tiers. Each tier offers a set of questions to help the developer evaluate the potential risk associated with developing a project at the given location...enabling a developer to abandon or proceed with project development, or to collect additional information if required” (USFWS 2012c, pg vi).

Further, the USFWS “urges voluntary adherence to the Guidelines and communication with the [USFWS] when planning and operating a facility” (USFWS 2012c, pg 6). The USFWS will regard such actions as “appropriate means of identifying and implementing reasonable and effective measures to avoid the take of species protected under the MBTA and BGEPA” (USFWS 2012c, pg 6). The USFWS will also consider such adherence and communication when exercising its discretion on potential referrals for prosecution related to the take of any such protected species (USFWS 2012c).

One methodology used by the electric utility industry and some wind power companies to document consideration of and intent to comply with the MBTA and BGEPA is the implementation of an Avian Protection Plan (APP) or Avian and Bat Protection Plan (ABPP). The USFWS Guidelines refer to such plans as “Bird and Bat Conservation Strategies” (USFWS 2012c, pg 55). Regardless of the name, the intent is that the document should provide a written record of the developer’s actions to avoid, minimize and compensate for potential adverse impacts (USFWS 2012c). Typically the document will explain the analyses, studies, and reasoning that support progressing from one tier to the next in the tiered approach and describe the steps a developer could or has taken to apply the USFWS Guidelines to mitigate for adverse impacts and address the post-construction monitoring efforts the developer intends to undertake (USFWS 2012c).

Buckeye Wind has voluntarily developed an ABPP for the Project (Appendix C) to provide a detailed framework through which potential adverse impacts to migratory birds and non-

federally listed bats (including state-listed species) will be avoided and minimized during Project planning, siting, construction, operation, and decommissioning. Further the ABPP specifies a monitoring plan, and adaptive management and mitigation strategies based on monitoring results. The ABPP documents Buckeye Wind's consideration of the USFWS's (2003) Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines as well as the 2010 FAC recommendations, which were used to guide project development. The ABPP is not part of the HCP, but a separate voluntary plan.

1.7.4.2 ODNR Protocol for Commercial Wind Energy Facilities in Ohio

The ODNR is one of the seven voting members of the OPSB, and provides input and recommendations to the OPSB regarding the potential impact a proposed wind power facility may have on Ohio's wildlife resources. Accordingly, the ODNR Division of Wildlife has established study guidelines for bird and bat pre- and post-construction monitoring at proposed on-shore wind energy facilities (ODNR Protocol, ODNR 2009⁵). This Protocol allows the ODNR Division of Wildlife to make broad-scale comparisons of wildlife impacts at multiple sites in Ohio in order to minimize wind power and wildlife interactions. Typically, implementation of the ODNR Protocol and pre-construction survey results are considered when determining if OPSB Certificate issuance is appropriate, and post-construction monitoring surveys approved by ODNR are a condition on every OPSB certificate issued to wind project developers.

The ODNR Protocol outlines pre-construction wildlife survey efforts based on the wildlife habitat within a proposed wind project area, standardized post-construction monitoring to detect bird and bat carcasses during the first one to two years of operation, and methods for correcting carcass counts for searcher efficiency and scavenger rates (ODNR 2009).

The Project began pre-construction wildlife monitoring prior to ODNR completing their Protocol; however, the pre-construction wildlife monitoring plan for the Project was reviewed and approved by both ODNR and USFWS. Post-construction monitoring proposed in the HCP is designed to document compliance with the ITP, while Buckeye Wind has committed to work with the ODNR to implement any additional monitoring efforts that may be necessary in order to ensure consistency with ODNR Protocol objectives. Over the ITP Term, modifications to this monitoring plan may be appropriate and will be made as part of the ongoing adaptive management of the Project and in compliance with the terms of the HCP.

1.7.4.3 Federal and State Policies and Goals Related to Renewable Energy

Federal policy has also promoted increased renewable energy generation in the United States. The Project is consistent with Executive Order 13212 (dated May 18, 2001), which states:

“The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well being of the American people. In general, it is the policy of this Administration that executive departments and agencies shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy” (Executive Order 13212, 2001, Section 1).

⁵ Can be downloaded at: <http://www.dnr.state.oh.us/LinkClick.aspx?fileticket=loJTSEwL2uE%3d&tabid=21467>

The Obama-Biden administration affirms this goal within its comprehensive “Barack Obama and Joe Biden: New Energy for America” plan, which includes in its objectives the creation of five million new jobs over the next 10 years and ensuring that 10 percent of our electricity comes from renewable sources by 2012, and 25 percent by 2025 (Obama for America 2008).

The CEQ issued an internal memorandum, “Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions,” to heads of federal departments and agencies on February 18, 2010. The CEQ memorandum advises federal agencies to consider opportunities to reduce greenhouse gas (GHG) emissions caused by proposed federal actions, to adapt their actions to climate change impacts throughout the NEPA process, and to address these issues in their agency NEPA procedures (CEQ 2010). The CEQ memorandum states that “by statutes, Executive Orders, and agency policies, the federal government is committed to the goals of energy conservation, reducing energy use, eliminating or reducing GHG emissions, and promoting the deployment of renewable energy technologies that are cleaner and more efficient. Where a proposal for federal agency action implicates these goals, information on GHG emissions (qualitative or quantitative) that is useful and relevant to the decision should be used when deciding among alternatives” (CEQ 2010, pg 2). The memorandum also states that if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO₂-equivalent GHG emissions on an annual basis, agencies should consider this an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public (CEQ 2010). The Project is expected to displace nearly 19 times this amount of CO₂ emissions (Table 5.11-1), which suggests that these offsets should be considered meaningful to decision makers and the public and should be considered when deciding among alternatives, according to the CEQ memorandum.

Ohio’s electricity law, substitute Senate Bill 221 signed into law by Governor Strickland on May 1, 2008, created the state’s Ohio Alternative Energy Portfolio Standard (AEPS). The AEPS requires that by 2025 at least 25 percent of electricity sold in the state by electric distribution utilities and electric services companies must be generated from alternative energy resources. At least half of that standard, or 12.5 percent of electricity sold, must be generated by renewable resources,⁶ and at least half of this renewable energy must be generated in-state. The Applicant anticipates selling the power to Ohio entities, helping to satisfy the AEPS. Consistent with these state and federal policies, the Project would help fulfill the need for the production and transmission of renewable energy.

1.8 Scope and Organization of this EIS

1.8.1 Scope of this EIS

A total of 52 turbines have been sited and approved by the OPSB (see Section 1.5.2). Up to 48 additional turbines could be erected within the Action Area to fully utilize Buckeye’s request to connect with the PJM Interconnection network (i.e., the regional electricity grid, see OPSB Application Exhibit C for further details). The exact locations of the additional 48 turbines have not been determined so the impact of these additional 48 turbines is evaluated in this EIS using a

⁶ In addition to renewables, the additional 12.5 percent of the overall 25 percent standard can also be met through alternative energy resources such as third-generation nuclear power plants, fuel cells, energy efficiency programs, and clean coal technology that can reduce or prevent carbon dioxide emissions.

maximum impact scenario. The layout for the remaining 48 turbines will be designed in accordance with the criteria and standards used for siting the 52 turbines as defined in the OPSB Certificate (e.g., minimum setbacks from residences, etc.) and as described in the HCP and this EIS.

1.8.2 Organization of this EIS

This EIS follows the CEQ's recommended organization (40 CFR 1502.10) and complies with guidance provided in the USFWS NEPA Reference Handbook, including Proposed National Environmental Policy Act – Compliance Guidance (550 FW 2). The EIS is organized as follows:

- Chapter 1.0 provides descriptions of the purpose of and need for the Proposed Action, agency roles in the EIS process, and the required permits and authorizations for the Project;
- Chapter 2.0 includes a summary of the scoping process and associated outcomes and also documents the public and agency participation, consultation, and coordination undertaken to prepare the EIS;
- Chapter 3.0 describes the Proposed Action and alternatives including the No Action Alternative;
- Chapter 4.0 summarizes the affected environment within the analysis area for the Proposed Action;
- Chapter 5.0 summarizes the direct, indirect, and cumulative effects of the Proposed Action and alternatives; possible mitigation measures to reduce or minimize impacts; and any residual adverse effects following the implementation of mitigation;
- Chapter 6.0 presents the comparison of alternatives (including mitigation measures), presents the USFWS's Preferred Alternative and the rationale for selection of the Preferred Alternative, presents the environmentally preferred alternative, and summarizes the irreversible and irretrievable commitment of resources;
- Chapter 7.0 contains the references; and
- Chapter 8.0 is the list of preparers.