



Illinois Department of Natural Resources

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Bruce Rauner, Governor
Wayne A. Rosenthal, Director

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (Act) (520 ILCS 10/5.5) and the regulations adopted to implement the Act (17 Ill. Adm. Code 1080), authorization is hereby granted to Bishop Hill Energy, LLC (hereinafter referred to as Bishop Hill) for the incidental take of the State-threatened black-billed cuckoo (*Coccyzus erythrophthalmus*). The Illinois Department of Natural Resources (hereinafter referred to as the Department) has determined that the taking is incidental to activities associated with the operation of Phase I of the Bishop Hill Wind Energy Project in Henry County, Illinois. This authorization does not include take that is incidental to the operation of Phase II of the Bishop Hill Wind Energy Project.

Procedural History

The Department received a conservation plan prepared by Western Ecosystems Technology, Inc., on behalf of Bishop Hill on May 29, 2015, then owned by Invenergy LLC, as a request for authorization for the incidental take of black-billed cuckoos. The Department requested additional information on June 26, 2015, to make the conservation plan complete as prescribed by Ill. Adm. Code 1080.10. That additional information was received by the Department on May 5, 2016, from new owner Sun Edison. The Department requested additional information on June 2, and August 2, 2016. The final complete conservation plan was accepted by the Department on August 18, 2016. The public notice period will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria that must be satisfied for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each are listed below.

1. The taking will not be the purpose of, but will only be incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is the **continued operation** of 133 wind turbines with a total nameplate capacity of 200 megawatts (MW), including 34 1.5 MW turbines and 99 1.6 MW turbines, an operations and maintenance facility, a 34.5-kilovolt (kV)/138-kV substation, access roads, and underground communications and power collection systems. The project has been operational since July 2012. Bishop Hill estimates that there are approximately 2,103 acres of potential black-billed cuckoo foraging and nesting habitat within the 39,053 acre project boundary. Bishop Hill anticipates that the

continued operation of this project will not directly impact any black-billed cuckoo breeding habitat. Take of the black-billed cuckoo could occur as a result of collisions with active wind turbines, particularly during migration. The take of black-billed cuckoos that could result from this project is not the purpose of Bishop Hill's activities, but is incidental to the carrying out of an otherwise lawful activity.

2. The parties to the conservation plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking:

Proposed minimization and mitigation measures were included in Bishop Hill's conservation plan. Minimization measures previously implemented by Bishop Hill during the initial construction of the wind energy facility included the following:

- a. During siting of the project, all turbines were placed in cultivated areas to avoid forested or non-cultivated avian habitat.
- b. All turbines were sited more than 0.5 mile from the South Edward River, and the majority were more than 1.0 mile from the river. All turbines were located more than 328 feet from woodlots located along the river to provide setbacks from potential riparian habitat.
- c. Project facilities were located to avoid: (1) documented locations of any federal or State-listed species; (2) known local bird migration pathways and daily movement flyways; and (3) areas where birds are highly concentrated.
- d. Fragmentation of wildlife habitat was avoided through use, where practical, of lands already disturbed, including existing roadways.
- e. All native habitats directly impacted by construction activities during the breeding season were surveyed for nests by a trained biologist prior to construction.
- f. Removal or disturbance of vegetation was minimized through site management and reclaiming all disturbed areas not required for operations.
- g. All personnel were advised regarding speed limits on roads (25 mph), and travel was restricted to designated roads to minimize wildlife mortality due to vehicle collisions.
- h. Turbines employ unguaged, tubular towers and slow-rotating, upwind rotors, minimizing the risk of bird collision.
- i. Avian Power Line Interaction Committee-suggested practices were used to ensure that the transmission line was designed and constructed in a manner to minimize bird collision and electrocution risk.
- j. Collection and communication lines are buried, avoiding the potential for bird collision.
- k. Lighting is minimized to that which is required by the Federal Aviation Administration. To avoid disorienting or attracting birds, lighting on turbines employs strobed, minimum-intensity lights as recommended by the US Fish and Wildlife Service.

- l. All applicable hazardous material laws and regulations existing or hereafter enacted are complied with and a Spill Prevention, Control, and Countermeasure Plan has been implemented. Hazardous chemicals are not stored near any stream, nor does any vehicle refueling or routine maintenance occur in or near streams. When work is conducted in or adjacent to streams, fuels and coolants are contained in fuel tanks and radiators of vehicles or other equipment.
- m. A Fire Protection and Prevention Plan has been implemented to prevent adverse effects to potential avian habitat.

To meet the “maximum extent practicable” standard, additional minimization and/or mitigation measures may be required beyond those proposed by Bishop Hill, based on the life history needs of the black-billed cuckoo. **Those minimization and mitigation measures are presented under the Authorization section below.**

3. The parties to the conservation plan will ensure that adequate funding for the conservation plan will be provided:

Bishop Hill verified adequate funding exists to carry out all aspects of the conservation plan. Bishop Hill understands that if any additional activities are planned at the facility that may affect black-billed cuckoos or other endangered or threatened species, coordination with the Department will be required.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of survival or recovery of the endangered species or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species’ existence in Illinois:

The **black-billed cuckoo** is an Illinois State-threatened migratory bird species. It is typically found in extensive tracts of deciduous forest. Black-billed cuckoos spend the breeding season in the northern United States and southern Canada (east of the Rocky Mountains), and the winter months in South America.

Black-billed cuckoos nest in deciduous trees, shrubs, or brambles, and occasionally coniferous trees such as hemlock. Nests are flimsy, shallow cups constructed of twigs and grasses and lined with dead or green leaves, pine needles, stalks, plant fibers, rootlets, mosses, and spider webs. Both adults help build the nest, and the female may start laying eggs in it before the nest is completed. They lay clutches of 2-5 greenish blue eggs. The incubation period of black-billed cuckoo eggs is 10-11 days. Nestlings are helpless after hatching, fledge the nest within 6-7 days, but are unable to fly until about 3 weeks of age. The period between egg-laying to fledging of young is among the shortest for any bird species. Like Old World cuckoos, the black-billed cuckoo is known to occasionally lay its eggs in other birds’ nests.

Black-billed cuckoo populations are threatened by habitat loss and fragmentation. Ingestion of their main prey of caterpillars also makes them susceptible to pesticide use. Black-billed cuckoos are frequently felled by collisions with TV towers, tall buildings, and other structures during migration. Populations tend to fluctuate considerably from year to year as the individuals follow outbreaks of prey, making it difficult to accurately estimate population numbers. Regional estimates indicate that populations are currently declining and have been since before the introduction of the North American Breeding Bird Survey in 1966.

Black-billed cuckoos, a common migrant but uncommon breeding resident of Illinois, can be found in areas throughout the State from late April to early October, after which they migrate to South America for the winter. Black-billed cuckoos have been observed breeding in 9 of 102 Illinois counties. There are currently 14 extant Element Occurrence Records for black-billed cuckoo in the Illinois Natural Heritage Database. The Department has issued one previous Incidental Take Authorization for black-billed cuckoo for the installation of an electrical transmission line. This is the first authorization to be granted for black-billed cuckoo in Henry County. The previous authorization required that the applicant minimize construction impacts and maintain woody vegetation.

The Bishop Hill Wind Energy Project has been monitored by WEST, Inc. for collision fatalities of birds and bats in the four years since construction of the facility was completed. Two black-billed cuckoo carcasses have been found and documented as fatalities potentially caused by turbine collision. Pre-construction fixed-point bird use surveys, breeding songbird surveys, and nesting surveys were conducted by WEST, Inc. in the project area between August 2009 and June 2010. No black-billed cuckoos or black-billed cuckoo nests were detected during the pre-construction avian surveys. Bishop Hill estimates that the continued operation of this project for the next 25 years could result in the take of 25 black-billed cuckoos, or one cuckoo per year of operation.

Based on the amount of habitat impacted by this project, the number of known occurrences of black-billed cuckoos in Illinois, an assessment of the potential effect of this project on black-billed cuckoos within the project footprint, the conservation measures included in this authorization for incidental take, and the understanding that vulnerability and recovery information on the species remains limited; the Department has concluded that the taking proposed herein will not reduce the likelihood of survival or recovery of the black-billed cuckoo in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois.

5. Any measures required under Section 5.5(b)(6) of the Act will be performed:

These measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and the signature of a representative of Bishop Hill indicates their commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application:

Public notice of Bishop Hill's request for authorization of incidental take was published in the *Breeze Courier* (official state newspaper) on August 26, 2016, and in The Galva News on August 26, September 2, and September 9, 2016. A copy of the conservation plan was deposited at The Galva Public Library and posted on the Department's website where it was available for public review. The deadline for public comment was October 10, 2016. No comments were received from the public.

Authorization

It is the determination of the Department that the measures that will be implemented by Bishop Hill will adequately minimize and mitigate the anticipated taking of the black-billed cuckoo incidental to activities associated with the continued operation of Phase I of the Bishop Hill Wind Energy Project in Henry County, Illinois. Further, the Department has concluded that the take authorized herein will not reduce the likelihood of survival or recovery of the black-billed cuckoo in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois. Additional listed bird and bat species could be impacted by the continued operation of Phase I of the Bishop Hill Wind Energy Project; **this agreement does not authorize take of any species except the black-billed cuckoo.**

All terms and conditions included in the aforementioned conservation plan submitted by Bishop Hill to the Department are incorporated into this agreement by reference and are made a part thereof.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5] and the Administrative Rules for the Incidental Taking of Endangered and Threatened Species [Ill. Adm. Code 1080.40(b)], this authorization is issued subject to the following terms and conditions, which may include additions or modifications to the minimization and mitigation measures proposed by Bishop Hill in the conservation plan:

1. This authorization is effective upon the signature of the Department and shall remain in effect for a period of **twenty-five (25) years** from the date of the Department signature, unless terminated by written agreement of both parties. It is the understanding of the Department, based on the estimated lifespan of wind energy installations, that this project may extend beyond the 25-year agreement term. The term of the permit may be reviewed and extended by the Department in accordance with Authorization condition #2 below upon written request by Bishop Hill no less than three months prior to expiration. Review and analysis of Bishop Hill's Conservation Plan took into consideration this potential infrastructure lifespan; mitigation was calculated accordingly. See Authorization condition #11 below for the Department's position on future review and analysis with regard to mitigation.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that Bishop Hill has failed to comply with any of these terms and conditions or has been responsible for the taking of black-billed cuckoos beyond that which is incidental to activities associated with the operation of Phase I of the Bishop Hill Wind Energy Project in Henry County, Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between Bishop Hill and the Department. The Illinois Endangered Species Protection Board shall be notified of any such alteration.

Any substantive changes, including but not limited to a change in the project footprint or a change in the State-listed species which could potentially be affected, will require that a new conservation plan be submitted to the Department to initiate the review and public notice process as required by the Act.

3. This authorization is non-transferable.
4. The Department reserves the right of entry by its staff or representatives to inspect species, potential habitat, and species management practices.
5. On-site personnel shall be educated on the sensitive biological resources in the area, the identification of the listed species, regulations protecting the species, where the species might be found, avoidance areas, travel restrictions for equipment and vehicles, how to report sightings or incidents that may involve take, and the importance of avoiding take of the species. Bishop Hill shall submit a copy of the education materials to the Department.
6. Biological consultants employed by Bishop Hill shall hold the necessary permits for work with non-listed and listed species; these include an Illinois Department of Natural Resources Scientific Collection Permit and an Illinois Department of Natural Resources Endangered Species Permit.
7. Bishop Hill shall notify the Department of the discontinuation of the operation of Phase I of the Bishop Hill Wind Energy Project in Henry County, Illinois, if it should occur during the term of this agreement.
8. Bishop Hill shall conduct, or cause to be conducted, the following minimization measures throughout the duration of operation of the wind energy facility:
 - a. Hunting, fishing, dogs, or possession of firearms by Bishop Hill employees and designated contractors in the project area shall be prohibited during operation and maintenance of the facility to minimize the potential for injury to wildlife.
 - b. Turbine blades shall remain fully feathered so that rotors move very slowly prior to reaching the turbine cut-in speed. This measure reduces the amount of time that blades are actively spinning and reduces the risk of bird collision.

9. Bishop Hill shall continue to conduct, or cause to be conducted, bird and bat fatality monitoring around turbines. The monitoring includes standardized carcass searches, searcher efficiency trials, and carcass removal trials. Monitoring shall continue to follow the protocol that has been used since construction of the facility was completed. Monitoring shall take place every three (3) years for the duration of this agreement during the late summer and fall season (July 15 to September 15). The dates of this monitoring period shall not be adjusted in later surveys even if no black-billed cuckoos are found. If identification of a carcass is uncertain, the carcass shall be collected and frozen for later identification by a Department biologist. **All carcasses of State-endangered or threatened species found during standardized searches or incidentally shall be photographed, collected, frozen for identification or study, and reported to the Department within 48 hours.** A report including, but not limited to, the survey methodology utilized, maps of areas searched, and all fatalities observed, shall be submitted to the Department within 90 days of field season completion. For each fatality of a State-listed species, the following data shall be included: the potential date of fatality, turbine location, wind speed profile, air temperature profile, power production profile for the responsible turbine on estimated date of fatality, and photographs of the carcass(es).
10. If, over a three-year period, three (3) or more black-billed cuckoo carcasses are detected (an average of 1 detected per year), the following adaptive management measures shall be taken:
- a. If a particular cause for the mortality can be identified, Bishop Hill shall develop specific additional on-site and/or operational mitigation measures in consultation with the Department to address those causes. Bishop Hill shall conduct follow-up post-construction monitoring during the subsequent year during the season in which the carcass was found to assess whether on-site mitigation measures were successful at reducing mortality.
 - b. If there continues to be no spatial, weather, or temporal pattern to when and where black-billed cuckoo carcasses are found, no mitigation measures will be taken based on one three-year period of exceeding the anticipated take levels. However, if two consecutive three year periods occur where three or more black-billed cuckoo carcasses are detected and no spatial or temporal pattern is detected, Bishop Hill will work with the Department to determine the need to pursue an amendment to this Authorization and the potential for additional mitigation.
11. Bishop Hill shall mitigate for the potential taking of black-billed cuckoo to the maximum extent practicable by bringing conservation benefit to the species potentially impacted. Compensatory mitigation in the amount of \$75,000 shall be provided to the University of Illinois – Illinois Natural History Survey within 90 days of execution of this agreement to support research efforts to provide a better understanding of the black-billed cuckoo’s habitat requirements informing management decisions to help conserve, protect, and enhance black-billed cuckoo habitat and populations within the State of Illinois.

At this time, the Department believes that the specified mitigation sufficiently meets the “maximum extent practicable” as defined by the Act for the term of this Authorization.

Future reviewers will make a determination as to whether the mitigation standard met herein is sufficient for any potential term extensions based on the known life history information of the covered species at that time and on the accumulated understanding of the interface between wind energy development and the covered species.

Mitigation valuations are based on the Department's best current understanding of the species life history needs and impact analysis relevant to the project site's design elements available at the time of review.

12. All reports, notifications, and other project documentation shall be submitted to:

Illinois Department of Natural Resources
Office of Resource Conservation
Endangered Species Program – Incidental Take Authorization Coordinator
One Natural Resource Way
Springfield, IL 62702-1271

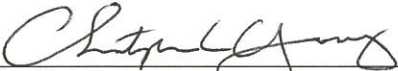
(217)557-8243
DNR.ITAcordinator@illinois.gov

The Department's Endangered Species Program shall provide all reports required under this agreement to the Illinois Endangered Species Protection Board and to the Department's Natural Heritage Database.

13. The Bishop Hill official identified below is authorized to execute this agreement. Execution by Bishop Hill indicates acceptance of all terms and conditions described in this authorization.

14. The execution of this agreement does not waive or excuse the responsibilities of Bishop Hill to comply with other Federal, State, or local regulations, including but not limited to obtaining any required permits for the execution of this project.

For the Illinois Department of Natural Resources:




Mr. Christopher L. Young, Director
Office of Resource Conservation

Date

4/20/17

For Bishop Hill Energy, LLC:



Marc Fioravanti
Authorized Representative

Date

7 April 2017