

PENNSYLVANIA GAME COMMISSION
WIND ENERGY VOLUNTARY COOPERATION AGREEMENT
February 23, 2007

The Pennsylvania Game Commission (Commission) seeks to coordinate wind energy projects with wind energy developers (Cooperator) in order to work collaboratively to ensure that wind-energy development project sites are developed in both an environmentally conscientious manner and with best regard to the conservation of the Commonwealth's wildlife resources.

Whereas, the Commission under its jurisdiction from Title 34 (Game and Wildlife Code) has authority to avoid, propagate, manage and preserve the game or wildlife of this Commonwealth and to enforce, by proper actions and proceedings, the laws of this Commonwealth relating thereto.

Whereas, both the Commission and Cooperator support renewable energy initiatives and are dedicated to arriving at uniform guidance, in the absence of comprehensive state regulations, on how best to avoid, minimize, and/or potentially mitigate adverse impacts to wildlife resources.

Whereas, the Commission and Cooperator, in an effort to best avoid, minimize, and/or mitigate potential adverse impacts with specific intent to birds and mammals, have entered into this Cooperative Agreement in an effort to standardize wildlife monitoring protocols and wildlife impact review methods associated with wind-energy development projects in a mutually beneficial and flexible manner and with high regard to both parties goals, objectives, and purviews.

Therefore, the Commission and Cooperator enter into this Cooperative Agreement and agree as follows:

1. The Cooperator will notify the Commission of any potential wind energy development sites (or an expansion of an existing site with the addition of 5 or more turbines), at least fourteen months prior to construction. The notification prior to the initiation of construction at the site will allow the Commission to provide as much known information on bird and mammal resources which may be present and/or potentially impacted by the development of the proposed wind-energy project. The notification should include a brief narrative of the project's planned development and proposed construction times and include as much detailed information as available such as: an original copy of the U.S.G.S.

topographic map(s) depicting the proposed project area boundary limits with the quadrangle name and associated county identified on it, the proposed project site's general infrastructure delineations (both known and planned) to include access roads, electric transmission lines, wind turbine locations, planned surface impact areas, development and future maintenance of the project, and any known wetland areas or predetermined wildlife habitat regimes which are deemed to be of critical importance or high value.

For those projects, which the Cooperator has already initiated prior to the effective date of this agreement, or that are planned for construction prior to the fourteen-month time frame noted herein, the Cooperator shall submit the required information within ninety days (90) from the date of this agreement.

For all other projects, which are currently under construction prior to the date of this agreement, the Cooperator shall only be required to comply with the monitoring efforts within Paragraph 6 *iii* (post-construction bird & bat mortality) as contained herein. Further, within 90 days of the agreement date, the Cooperator can provide to the Commission a listing of all projects, which are planned for construction to begin within 12 months from the date of this agreement. The listing will include all available site-specific project information as more clearly specified within this paragraph for each project identified on the list. For each project identified on the list which construction commences within 12 months from the date of this agreement, the Cooperator shall only be required to comply with the monitoring efforts within Paragraph 6 *iii* as contained herein. All other paragraphs, provisions, terms and conditions, which are not inconsistent to the above, shall remain in full force and effect.

2. It is understood between the Cooperator and Commission that both parties may support the use of other potential funding mechanisms or processes which directly or indirectly reduce the overall costs associated with the Cooperator's monitoring requirements as identified herein providing further the intent of those monitoring requirements remain the same.

3. The Commission and Cooperator will share all relevant information concerning wildlife resources under the jurisdiction of the Commission in and around the project area and the potential adverse impact to those resources. Shared information will include all known publicly available data from past/current/future monitoring efforts and pre and post-construction study results relative to the subject project area. The Commission further agrees to consider all existing relevant wildlife resource information provided by the Cooperator and the Commission will reduce to the fullest extent possible any further requests made to the Cooperator to provide additional relevant data and/or monitoring results which can be ascertained from known existing data regarding potential known wildlife impacts.
4. The Commission will provide the Cooperator with the results of all its internal reviews and provide written comment and or meet with the Cooperator within 45 days of receiving the information specified in Paragraph 1, as well as the results of the Pennsylvania Natural Diversity Inventory, and all pre and post-monitoring methods and recommendations on how best to avoid and reduce direct and indirect impacts to birds and mammals. Additional coordination will occur from the Commission for actions needed in regards to species listed in the Pennsylvania Comprehensive Wildlife Conservation Strategy (CWCS) to include all state threatened and endangered bird and mammal species known to occur or determined to exist within or adjacent to the project area.
5. The Commission in consultation with the Cooperator will determine the risk level for monitoring and survey efforts. If needed, the risk level may be adjusted based on new relevant information. The Commission may request the Cooperator conduct an additional year's post-construction monitoring if a T&E species is killed or other mortality is deemed to be at an unacceptable level for any species. The Cooperator may request a reduction in the mortality monitoring effort for the second year based on the first year's mortality results. Such a request by either party for additional or reduced monitoring shall be made in writing by the party requesting a change and an informal meeting will be arranged between the parties to discuss and mutually agree upon any changes in monitoring efforts.

6. All suggested pre-construction and some post-construction techniques are designed to reduce the exposure of state-listed species in order to avoid, minimize or mitigate potential adverse risk to species of special concern.

- i. Birds

- Migrating Raptors and Eagle Surveys

- Goal: Assess risk to migrating raptors from development of wind power at a particular site in order to avoid, minimize, and mitigate adverse impacts.

- Objective 1) Observe raptors to determine the number, height of flight, time of day, flight path, avoidance behavior, and species passing through the project area and zone of greatest risk.

- Objective 2) Use the survey data to make recommendations to decrease potential adverse impacts to the wildlife resource.

1. Migrating Raptors Survey – If recommended by the Commission, raptor surveys will be conducted according to the attached protocol Exhibit A. The maximum level of effort per project will be one person per five days per week during the pre-construction phase and post construction phase, in both the spring and fall seasons during March and from August 15 through December 15. The minimum level of effort will be that no raptor survey is requested or conducted.

2. Eagles – If the project area is within proximity to a known migratory fly route for eagles, then additional monitoring shall occur in the spring in conjunction with the monitoring criteria noted in Paragraph 6=(i.) The maximum level of effort per project will be one person per five days per week for the entire month of March during the first years monitoring effort. The minimum level of effort

will be that no eagle survey is requested or conducted

3. Breeding Bird Surveys–

Goal: Assess risk to bird species listed in the Pennsylvania Comprehensive Wildlife Conservation Strategy (CWCS) in order to avoid and minimize direct and indirect impacts to these species and evaluate the potential for habitat enhancement/mitigation measures.

Objective 1) Proactively evaluate critical wildlife resources that may cause risk to the future stability of project operation.

Objective 2) Use the data to help develop and implement the most appropriate post-construction habitat reclamation and management for the site.

Objective 3) Determine if state listed species are present. If present then further coordination with the Commission is required in order to avoid, minimize, or mitigate potential impacts to the species or their habitat.

If the project area is within an Important Bird Area (IBA) as previously designated by the Audubon process, or within an area supporting birds identified as those priority species of “greatest conservation concern” within the Pennsylvania Comprehensive Wildlife Conservation Strategy, the Cooperator will conduct a survey to confirm or deny the presence of the species. The survey will consist of three days of effort (one day in May, two in June, separated by at least one week). Projects with existing data on species of special concern will be coordinated with the Commission as to the appropriate survey methods required to be used by the Cooperator.

4. The Commission will to the extent feasible, be made available to provide consistency and oversight management for all conducted surveys.

ii. Bats

Hibernacula

Goal: Determine if any hibernacula exist within the project area in order to avoid and minimize impacts to active hibernacula and the associated bat species due to project development and its operation.

Objective 1) Conduct an on site field review to locate and determine use of potential bat hibernacula in the project area.

Objective 2) Survey bat hibernacula for species presence and abundance in order to assess potential impacts to bat species during the planning phase of the project construction.

Objective 3) Evaluate the potential to avoid, minimize, and mitigate adverse impacts to bats and or enhance their habitat from project construction and operations.

1. Pre-construction survey- If recommended by the Commission, the Cooperator is responsible for surveying the project area for any caves, abandoned mine portals, or other openings that may harbor bats as per the Commission's protocol. All openings with potential as suitable bat hibernacula will be surveyed by a qualified bat biologist according to Exhibit B.

Goal: Determine those bat hibernacula existing within 5 miles of the project area that may induce additional avoidance and minimization measures due to anticipated adverse bat impacts from project operations.

Objective 1) The Commission will conduct surveys to locate and determine use of potential bat hibernacula within 5 miles of the project area boundary.

Objective 2) The Commission will survey bat hibernacula (outside of the project area) for species presence and abundance in order to establish potential impacts to bat species during the planning phase of the project construction.

Objective 3) Evaluate the potential to avoid and minimize adverse impacts to bats and their habitat from project construction and operations.

2. Prior to the Cooperator conducting the field survey(s) as noted in Paragraph 6 (ii), the Commission will conduct a literature search for other mine portals/caves/openings which are suitable and/or known bat hibernacula and are on or within 5 miles of the proposed wind-energy project boundary delineation. The information will be provided to the Cooperator along with the relevant known bat hibernacula as per the Commission's review and the Commission's recommendations on the need for the Cooperator to conduct additional surveys based on the probable presence of Pennsylvania listed threatened, endangered, and/or candidate bat species. If the Commission recommends additional surveys, the Cooperator will conduct those surveys with a qualified bat biologist according to the attached protocol Exhibit B.
3. Cooperator will conduct pre and post-monitoring surveys as outlined in the Commission's attached Exhibit B & C. The maximum level of effort per project is one-year pre-construction survey and two years post-construction. The minimum level of effort is no bat survey is required.

4. Acoustic Monitoring

Goal: Determine the presence, activity, and temporal use of the project area by bats in order to avoid and minimize potential adverse impacts.

Objective 1) Surveys will be conducted to evaluate the levels of bat activity within the project area and determine their temporal patterns.

Objective 2) Evaluate the potential to avoid and minimize adverse impacts to bats based on their probable use of the project area during the project's construction and future operations.

Cooperator will conduct pre- and post-construction acoustic surveys based on priority level. This survey will assess the level of bat activity for both hibernating and tree bats. The priority level will be used for acoustic monitoring due to a lack of knowledge on the temporal and spatial activity of tree bats, as outlined in the Commission's attached Exhibit B. The maximum level of effort per project is one-year pre-construction and one-year post-construction from April 1 through November 15. The minimum level of effort is from July 15 to October 15 before and after construction.

5. The Commission will to the extent feasible, be made available to provide consistency and oversight management for all conducted surveys.

6 iii. Post-Construction Bat & Bird Mortality Monitoring

Goal 1) Determine the mortality of bats and birds from project operation and whether those mortality rates would cause an unacceptable level of impact and if needed induce additional minimization or mitigation measures.

Objective 1) Conduct mortality surveys in the most cost-effective and proficient manner.

Objective 2) Provide a mechanism to evaluate the proficiency of the project's mortality survey methodology.

Goal 2) Assess the predictive value of pre-construction monitoring, minimization and avoidance measures by comparing those results with post-construction mortality.

Objective 1) Identify those protocols or monitoring methods that need revision, adaptation, replacement, or abandonment because of their level of success.

Objective 2) To make appropriate adjustments to monitoring protocol and future effort as indicated by the acquired information.

1. The Cooperator will perform the bird and bat mortality monitoring as outlined in the Commission's attached mortality protocol Exhibit C for a minimum of two years post-construction. Mortality studies shall be conducted from April 1 through November 15 by a qualified biologist(s) having expertise in the identification of bats and/or birds and at the interval as noted in the attached Exhibit C.
2. The Commission will to the extent feasible, be made available to provide consistency and oversight management for all conducted surveys.
7. Cooperator agrees to utilize to the greatest extent possible, all reasonable and feasible generally accepted wind industry and Commission best management practices relevant to the conservation of wildlife resources during construction and subsequent operation of the wind-energy facility. The Commission shall provide copies of all known and updated best management practices to the Cooperator on an annual basis.
8. Commission agrees to issue a special use permit defining the terms and conditions for use throughout the project area by the Cooperator's designated biologist(s) for all bats, birds, and state listed threatened or endangered species which are collected while conducting the Commission's approved monitoring plan and

mortality protocol. The general format for the special use permit is attached as Exhibit D and may be automatically renewed upon the anniversary date of the permit, providing further that the permit terms and conditions have been strictly adhered to and this Cooperation Agreement remains in effect.

9. The Commission agrees not to pursue liability against the Cooperator due to any incidental takings of the Commonwealth's bird and mammal resources for which it has purview under Title 34 (Game & Wildlife Code) as a result of the Cooperator's wind-energy development and operations within the Commonwealth of Pennsylvania providing further such incidental takings were not malicious in their intent and the Cooperator remains in compliance with the terms and conditions of this agreement and has with a good faith effort avoided and minimized potential adverse impacts by way of implementing best management practices and Commission guidance as noted herein.

The Commission and Cooperator agree to work cooperatively in the future to avoid, and minimize further impacts to the Commonwealth's bird and mammal resources as new relevant project information becomes available. In the event that an incidental take occurs upon a Pennsylvania listed threatened or endangered species of bird or mammal during the operation of any of the Cooperator's wind-energy facilities, the Cooperator agrees to take all reasonable measures as deemed appropriate by the Commission and the Cooperator to further avoid, minimize and/or mitigate such wildlife losses in the future.

10. Commission recommendations or decisions under the Cooperative Agreement do not supercede any comments, decisions, or recommendations of the United States Fish & Wildlife Service.
11. The Cooperator agrees to provide coordinated access, upon prior notice during normal business hours, to all its wind-energy facilities as deemed necessary by Commission staff in order to ensure both parties compliance to this agreement. All Commission access shall be coordinated as far in advance as possible and subject to all the normal safety measures implemented by the Cooperator with regard to access to the facility.

12. Either party upon their own discretion and reason can terminate this agreement in its entirety after having first provided the other party written notification of such termination forty-five (45) days in advance of such termination date. Said written notification to be sent certified mail to the respective parties place of address as noted herein. Termination can be conditioned to exclude those projects identified, which remain in compliance with the agreement.
13. It is understood between the parties that information resulting from the Cooperator's compliance with this agreement shall be treated with the highest affordable level of confidentiality available unless otherwise agreed to in writing by both parties OR if it is necessary to support the Commission's waiver of liability set forth in Paragraph 9 hereof. It is the intent of both parties to release to the general public relevant project monitoring & mortality information deemed to be in the best interest of both the Commission and Cooperator. Release of information will be by mutual consent only.
14. Assignment: The Cooperator may assign this Agreement, or any project covered under the terms of this Agreement, to any affiliate (as defined below) without the approval or consent of the Commission provided that (i) the Cooperator is not in default of this Agreement with respect to the project(s) being so assigned at the time of the proposed assignment and (ii) the Cooperator notifies the Commission of any proposed assignment in accordance with this Agreement. The Cooperator may assign this Agreement, or any project covered under the terms of this Agreement, to any non-affiliate (as defined below) provided that (a) the Cooperator is not in default of this Agreement with respect to the project(s) being so assigned at the time of the proposed assignment, (b) the proposed assignee has agreed in writing to be bound by all of the terms and conditions of this Agreement, (c) the Commission has met with the proposed assignee and the Cooperator, after being notified of the proposed assignment, to discuss the terms and conditions of the project(s) covered by the assignment and (d) the Commission consents to the proposed assignment in writing, which consent shall not be unreasonably withheld, conditioned or delayed. For purposes of this section, an "affiliate" of the Cooperator refers to any person, corporation or entity that (i) has a direct or indirect ownership interest in the Cooperator or vice

versa or (ii) is subject to common operating control and is operated as part of the same system or enterprise as the Cooperator. Any person, corporation or entity that is not an "affiliate" as defined above shall be a non-affiliate for purposes of this section. At the request of the Cooperator, the Commission and the assignee shall execute, after said assignment is approved if required, a new Agreement with terms identical to the terms of the Agreement at the time of the assignment.

15. Notices. All notices demands or requests required or permitted under this Agreement shall be in writing and shall be personally delivered or sent by certified United States mail (postage prepaid, return receipt requested), overnight express mail, courier service, facsimile transmission or electronic mail with confirming receipt (in the case of facsimile transmission and electronic mail with the original transmitted by any of the other aforementioned delivery methods) addressed as follows:

If to Commission to: Pennsylvania Game Commission
ATTN: William A. Capouillez, Director
Bureau of Wildlife Habitat Management
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

and

If to Cooperator to:

or to such other person at such other address as a Party shall designate by like Notice to the other Party. Unless otherwise provided herein, all Notices hereunder shall be effective at the close of business on the Day actually received, if received during business hours on a Business Day, and otherwise shall be effective at the close of business on the first Business Day after the Day on which received.

16. No Third-Party Beneficiaries. This Agreement is not intended to, and does not, confer upon any Person other than the Parties hereto and their respective successors and permitted assigns, any rights or remedies hereunder.

17. Entire Agreement. This Agreement, including all Schedules hereto, constitutes the entire agreement between the Parties hereto with respect to the matters contained herein and therein, and all prior agreements with respect to the matters covered herein are superseded, and each Party confirms that it is not relying upon any representations or warranties of the other Party, except as specifically set forth herein or incorporated by reference hereto.

18. Amendment. This Agreement may not be amended or modified except by a written instrument signed by each of the Parties hereto.

IN WITNESS WHEREOF, Commission and Cooperator have caused this agreement to be duly executed and have caused their seals to be hereto affixed and attached by their proper officers, all hereunto duly authorized, on the date first above written.

COMMONWEALTH OF PENNSYLVANIA
 PENNSYLVANIA GAME COMMISSION

ATTEST:

Executive Director

Date

COOPERATOR

ATTEST:

President or Vice-President

Date

Company Name