



PENNSYLVANIA WIND ENERGY COOPERATIVE AGREEMENT

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WIND ENERGY COOPERATIVE AGREEMENT

THE PENNSYLVANIA GAME COMMISSION IN AN EFFORT TO BEST PROTECT, MINIMIZE, AND MITIGATE POTENTIAL ADVERSE IMPACTS TO BIRDS AND MAMMALS SEEKS TO STANDARDIZE WILDLIFE MONITORING PROTOCOLS AND THE WILDLIFE IMPACT REVIEW PROCESS IN COOPERATION WITH WIND ENERGY DEVELOPERS.

HOW DID WE GET TO THIS POINT??



WIND ENERGY COOPERATIVE AGREEMENT ADVANTAGES

- INCREASED COOPERATION ON PROJECTS USING A STREAMLINED APPROACH & KNOWN GUIDANCE
- DATA SHARING TO REDUCE MONITORING COSTS
- POSITIVE PUBLIC RELATIONS
- COMPETITIVE EDGE
- STANDARDIZED METHODS FOR SITE COMPARISON'S
- LIMITED LIABILITY FOR BAT & BIRD IMPACTS
- POTENTIAL FULFILLMENT OF LOCAL, TOWNSHIP, OR COUNTY REQUIREMENTS FOR WILDLIFE RESOURCE CONSIDERATIONS
- PGC SUPPORT & OVERSIGHT MANAGEMENT



JURISDICTION

Title 34 (Game and Wildlife Code) authorizes the Pennsylvania Game Commission to protect, 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.



30 Signed Cooperators to date

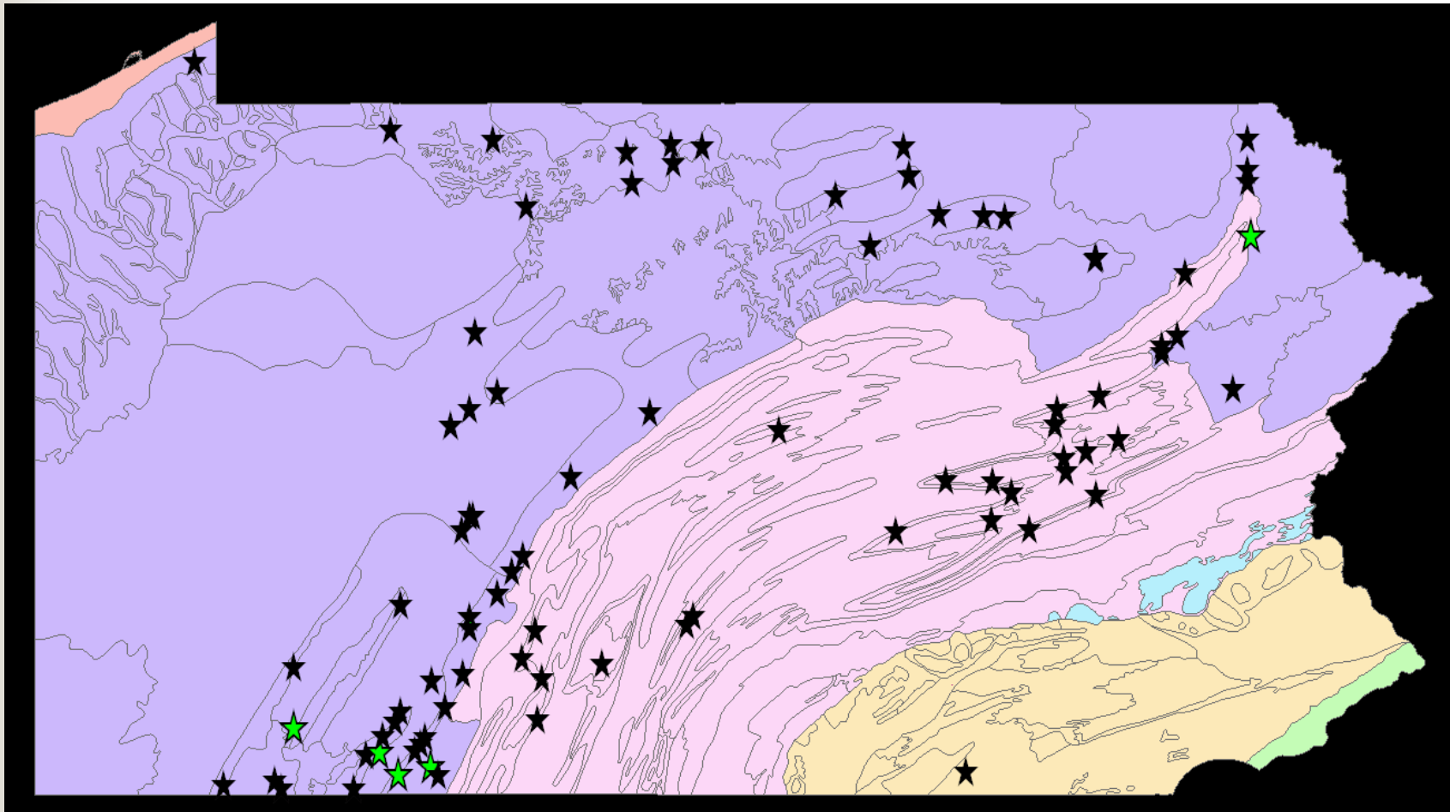
AES	04/18/2007
E. ON Climate & Renewables North America, Inc.	04/18/2007
Competitive Power Ventures, Inc.	04/18/2007
Energy Unlimited, Inc.	04/18/2007
Freedom Wind Energy, LLC	04/18/2007
Gamesa Energy USA	04/18/2007
Iberdrola Renewable Energies USA	04/18/2007
PPM Atlantic Renewable	04/18/2007
ReEnergy, LLC	04/18/2007
First Wind	04/18/2007
US Wind Force	04/18/2007
Acconia Wind Energy USA, LLC	08/20/2007
Global Winds Harvest, Inc.	08/20/2007
Penn Wind	09/28/2007
Laurel Hill Wind Energy, LLC	01/08/2008
Everpower Renewables	02/01/2008
AMP-Ohio/MESA	02/15/2008
Lookout Windpower, LLC	03/21/2008
Forward Windpower, LLC	03/21/2008
BP Alternative Energy	06/24/2008
Wind Park Bear Creek, LLC	04/03/2009
Inenergy Wind Development, LLC	06/01/2009
Tuthill Corporation DbA Blue Mountain Ski Area	12/18/2009
PPL Renewable Energy LLC	12/29/2009
New Tech Wind Inc.	12/30/2009
Duke Energy	02/16/2010
Apex Wind Energy Holdings LLC	03/10/2010
Allegheny Ridge Wind Farm LLC	06/03/2010
Volkswind USA	07/20/2010

WIND ENERGY COOPERATIVE AGREEMENT BASICS

- VOLUNTARY AGREEMENT
- PROJECT NOTIFICATION
- SHARED DATA
- PGC WRITTEN COMMENT WITHIN 45 DAYS
- MINIMUM MONITORING PROTOCOL WITH FLEXIBILITY BASED ON RISK ASSESSED
- SITE ACCESS
- LIABILITY REDUCTION
- USFWS DETERMINES REQUIREMENTS FOR FEDERAL LISTED SPECIES



Current wind-energy site locations active/proposed



PROVISIONS

1) EARLY NOTIFICATION

- EARLIER RESPONSE FROM PGC
- IMPROVED BUDGETING
- IMPROVED PROJECT PLANNING

2) SHARED DATA

- IMPROVED COORDINATION CONCERNING AVAILABLE DATA AND POTENTIAL IMPACTS
- INCREASED CONSIDERATION FOR USING EXISTING DATA IN ORDER TO REDUCE THE AMOUNT OF MONITORING
- INCREASED LEVEL OF TRUST



PROVISIONS

3) PGC RESPONSE

- PRIORITY RESPONSE TIME FROM PGC

4) STANDARDIZED MONITORING

- PRE-DETERMINED MONITORING
- STANDARDIZED DATA COLLECTION & METHODS ENABLES COMPARISON OF RESULTS FROM SITE TO SITE.

5) BEST MANAGEMENT PRACTICES (2011 Annual Report)

- REDUCED WILDLIFE IMPACTS
- GREENER PUBLIC IMAGE
- FLEXIBILITY TO FURTHER MINIMIZE PROJECT IMPACTS & LIABILITY



PROVISIONS

6) SPECIAL USE PERMIT

- STREAMLINED PERMIT ISSUANCE WITH AUTOMATIC RENEWAL

7) LIABILITY

- LIMITED LIABILITY FOR BIRD AND BAT MORTALITY

8) FEDERALLY LISTED SPECIES

- STANDARD DEFERRAL TO USFWS CONCERNING ACTIONS TAKEN ON FEDERALLY LISTED SPECIES

9) ACCESS

- INCREASED WORKING RELATIONSHIPS AND TRUST



PROVISIONS

10) AGREEMENT TERMINATION

- TERMINATION PROVISION ALLOWS FOR EASY OUT IF EITHER PARTY IS UNSATISFIED WITH THE AGREEMENT

11) CONFIDENTIALITY

- CONFIDENTIALITY OF INFORMATION ALLOWS FOR THE USE OF DATA WITHOUT DISCLOSING PROPRIETARY INFORMATION





**PENNSYLVANIA
WIND ENERGY COOPERATIVE
AGREEMENT**

**PRE AND POST-CONSTRUCTION
MONITORING PROTOCOLS**



PRE-CONSTRUCTION MONITORING PROTOCOL

- **THREATENED & ENDANGERED SPECIES REVIEW:**
HABITAT AND PRESENCE/ ABSENCE SURVEYS IF
REQUIRED



- **BAT HIBERNACULUM SEARCH & SURVEY**
 - COOPERATOR WITHIN PROJECT LIMITS
 - PGC OUTSIDE OF PROJECT LIMITS

- **BIRD SURVEYS**
 - EAGLE MONITORING
 - BREEDING BIRD SURVEYS
 - RAPTOR MIGRATION SURVEYS



PRE-CONSTRUCTION BAT MONITORING DETERMINED BY RISK PRIORITY OF SITE

- HIGH PRIORITY
- MODERATE PRIORITY
- LOW PRIORITY



BAT PRE-CONSTRUCTION MONITORING PROTOCOLS

- **HIGH PRIORITY SITE: ONE SEASON ACOUSTIC & MIST NETTING, TELEMETRY ON STATE LISTED SPECIES**
 - HIBERNACULA OF CONCERN* ON OR WITHIN 1 MILE OR SEVERAL HIBERNACULA WITHIN 1 MILE
 - HIBERNACULA WITH >5,000 BATS ON OR WITHIN 5 MILES
 - HIBERNACULA CONTAINING THREATENED OR ENDANGERED SPECIES ON OR WITHIN 5 MILES
 - * HIBERNACULA OF CONCERN = 1,000 BATS INTERNAL OR 100+ TRAPPED, CONTAINS 4 OR MORE SPECIES, OR CONTAINS A STATE LISTED SPECIES



BAT PRE-CONSTRUCTION MONITORING PROTOCOLS

- **MODERATE PRIORITY SITE: ONE SEASON ACOUSTIC MONITORING**
 - HIBERNACULA OF CONCERN EXISTS BETWEEN 1 AND 5-MILE RADIUS OF PROJECT AREA
 - ANY HIBERNACULA ON OR WITHIN 5 MILES THAT CONTAINS BETWEEN 1,000 AND 5,000 BATS
 - MORE THAN 1 HIBERNACULA CONTAINING BETWEEN 100 AND 1,000 BATS ON OR WITHIN 1 MILE OF PROJECT AREA



BAT PRE-CONSTRUCTION MONITORING PROTOCOLS

- **LOW PRIORITY SITE: ONE SEASON ACOUSTIC
MONITORING**



- NO KNOWN PRESENCE OF SMALL-FOOTED OR INDIANA BATS ON OR WITHIN 5 MILES OF THE PROJECT AREA
- NO KNOWN HIBERNACULA OF CONCERN ON OR WITHIN 5 MILES OF THE PROJECT AREA
- NO HIBERNACULUM WITH MORE THAN 100 BATS EXISTS IN THE PROJECT AREA



BIRD PRE-CONSTRUCTION MONITORING PROTOCOLS

- **EAGLE MONITORING:** FOR SITES LOCATED IN MIGRATORY PATH
- **BREEDING BIRD SURVEY:** POINT COUNTS & AREA SEARCHES IN IMPORTANT BIRD AREA OR WITHIN POTENTIAL HABITAT OF BIRDS OF CONSERVATION CONCERN
- **RAPTOR MIGRATION SURVEY:** BASED ON RISK ASSESSMENT (HIGH, MODERATE, OR LOW)



BIRD PRE-CONSTRUCTION MONITORING PROTOCOLS

- **RAPTOR HIGH PRIORITY SITE:** MAJOR RAPTOR CONCENTRATION POINTS, INCLUDING AREAS DOCUMENTED IN MIGRATION
- AT LEAST 1 YEAR FULL-TIME FALL & SPRING RAPTOR MIGRATION SURVEY REQUIRED



BIRD PRE-CONSTRUCTION MONITORING PROTOCOLS

- **RAPTOR MODERATE PRIORITY SITE:**
LESSER DISCONNECTED RIDGES IN THE VALLEY &
RIDGE PROVINCE AND NEAR ESCARPMENTS IN
THE ALLEGHENY PLATEAU PROVINCE
- AT LEAST 1 YEAR FULL-TIME FALL RAPTOR
MIGRATION SURVEY REQUIRED, AND WHERE
EAGLE MIGRATION IS NOTED, SPRING
MONITORING



BIRD PRE-CONSTRUCTION MONITORING PROTOCOLS

- **RAPTOR LOW PRIORITY SITE:** SITES OF FLAT TERRAIN WHERE THERE ARE NO UPDRAFTS AND LOW-PRIORITY SITES AS LISTED IN AGREEMENT
- NO RAPTOR MIGRATION SURVEY REQUIRED, BUT RECOMMEND A FIELD CHECK DURING MIGRATION SEASON



POST-CONSTRUCTION MONITORING (BIRDS AND BATS)

- ***2 YEARS OF MORTALITY MONITORING FOR BIRDS AND BATS ON ALL SITES WITH POSSIBLE EXTENSION IF SIGNIFICANT MORTALITY IS OCCURRING**
- **POST-CONSTRUCTION BAT ACOUSTIC MONITORING SURVEYS CONCURRENT WITH MORTALITY MONITORING**



For additional information, visit the
Pennsylvania Game Commission
website at:

<http://www.pgc.state.pa.us>

