



Examples of a Collaborative Process with the Electric Utility Industry; *Addressing Electrocution and Collision Issues and Their Suggested Utility for the Commercial Wind Industry*

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**Avian
Power
Line
Interaction
Committee**



Background of Electrocution and Collision Issues and Collaborative Efforts

- **1876** – 1st documented bird collision at telegraph line CO.
- **1922** – 1st documented eagle electrocution transmission line.
- **1970's** – Significant eagle (>300) mortalities resulted in utilities and agencies identifying causes and began efforts to address problems. Results included collaborative workshops, and 1st *Suggested Practices for Raptor Protection on Power Lines* (1975).
- **1980's** – Conducted research on power line electrocutions; produced raptor videos; formed Ad Hoc Whooping Crane Study Group; 2nd edition *Suggested Practices* (1981); Avian Power Line Interaction Committee (APLIC) created (10 utilities, USFWS, Audubon, Edison Electric Institute; 1989).



Background, *cont.* 2

- **1990's –**

- **APLIC publication *Mitigating Bird Collisions w/ Power Lines* released 1994 – being updated;**
- **3rd *Suggested Practices* 1996 (looked at global issues, reprinted in Spanish);**
- **Service working to avoid or minimize collisions and electrocutions of migratory species, partnering w/ industry rather than regulating;**
- **APLIC developed “short courses;” and**
- **Service criminal prosecution of an electric utility (*Moon Lake Electric Cooperative*) under violation of MBTA and BGEPA for electrocutions.**



Background, *final*

- **2000's –**

- **APLIC and Service began teaching “short courses” on how to make electric utilities bird-friendly;**
- **Service began working on national MOU for utilities;**
- **Xcel Energy first to sign new MOU;**
- **Service and APLIC agreed to develop Avian Protection Plan Guidelines (released 2005);**
- **4th edition of *Suggested Practices* 2006 with Spanish translation on CD;**
- **Continued “short courses” and new APP workshops for utilities and resource agencies at industry and conservation conferences.**

Other Issues to Be Considered -- *BGEPA*

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- Recent decision clarifying definition “disturb” may lead to awareness that past practices might have resulted take Golden Eagles.

 - New proposal would authorize permits “*where take is associated with otherwise legal activities*” – specifically
 - 1) where take cannot be practicably avoided (*e.g.*, disturbance) and
 - 2) where take is unavoidable and Service-approved BMP’s/Best Available Technologies are fully implemented (*e.g.*, lethal).



Other Issues to Be Considered – *BGEPA, cont.*

- Service anticipates issuing limited number Bald and Golden Eagle take permits, but as proposed, would be under Service-reviewed and approved APP, which would include implementation schedule, monitoring and reporting requirements, performance-based demonstrated effectiveness, and possibly other conditions.**

- We anticipate permitting regulation out as final rule later this year.**

- Excellent opportunity for all industry proponents to become fully engaged with USFWS in developing APP's, working collaboratively to address potential eagle issues.**



Some Take-home Messages from APLIC and APP's

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- **The APP process, as Jim Burruss will explain, involves 12 principles and encourages workshops to educate the industry and resource agencies. Same approach could be used by wind industry.**
 - **Research is critically important. APLIC and the electric utility industry has funded research over past 35 years on collision- and electrocution-minimization studies and efficacy of recommended remedial actions. Same approach could be used by wind industry which has stepped up to plate to fund research (*e.g.*, Flint Hills, KS; BWEC; others).**
 - **Admittedly, wind industry lacks comparable *Suggested Practices* document for wind. There are few, scientifically valid “tools” in the “Mitigation Toolbox” to avoid or minimize take and minimize impacts to wildlife. That is changing.**



Take-home Messages, *final*.

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- **In addition to need for updated *Metrics and Methods* document for wind industry to conduct pre- and post-construction research and monitoring (being done), is suggested need for development of national impact assessment manual.**

 - **Manual should be compatible with regional and local level guidance documents, for use by all wind proponents.**
 - **Document should include:**
 - **1) scientifically valid, acceptable risk assessment model(s), and**
 - **2) scientifically valid, acceptable research protocols for pre- and post-construction monitoring.**

 - **Ultimately, manual could include science-based siting recommendations, deterrents, best management practices and best available technologies, and acceptable mitigation practices – focused on birds, bats, and habitats.**

Next Steps

- ❑ **Service applauds electric utility industry's motivation and initiative help address collision and electrocution issues in proactive way.**
- ❑ **Compare process to development and relationships with Natl. Wind Coordinating Collaborative, 1st with Avian Subcommittee 1995, now through Wildlife Workgroup – to address bird, bat and habitat issues. Partnership still growing and evolving.**
- ❑ **See marvelous opportunity to use APP Guidance, *Suggested Practices* documents, training protocols, key resources, risk evaluations, reporting tools, and research efforts as model for commercial wind industry to use to make wind development wildlife- and habitat-friendly.**
- ❑ **Is obvious connection between wind development and electric utility industry through power grid connections and related impacts to trust resources.**
- ❑ **We've come long way in very positive direction with electric utility industry. Exciting for me to watch partnership develop and mature over past 11 years. We can do same with wind generation industry. Jim...**



Avian Protection Plans

**Components of the
APP Guidelines
and how they
might be used by
the Wind Industry**

AVIAN PROTECTION PLAN (APP)
GUIDELINES



A Joint Document Prepared By

The Edison Electric Institute's Avian Power Line
Interaction Committee (APLIC)

and

U.S. Fish and Wildlife Service (USFWS)

April 2005



What are the APP Guidelines?

- ❑ Intended to help utilities manage avian/power line issues
- ❑ Voluntary
- ❑ Offer a “toolbox” of resources that utilities can use to create a specific program that meets their needs
- ❑ Includes 12 principles
- ❑ Available at www.aplic.org and www.fws.gov



Utility APPs

- ❑ Each utility's APP will be different based on risk, needs, scale, etc.
- ❑ Common themes to all APPs – reduce bird mortality and improve service reliability
- ❑ “Living documents” – modified and refined over time to improve effectiveness
- ❑ Include collaboration with Service

APP Principles

1. Corporate Policy

- Statement that identifies commitments
- Endorsed by management
- Provides employees with guidance on expectations and accountability





APP Principles

2. Training

- All appropriate personnel: managers, supervisors, line crews, engineering, dispatch, substations, vegetation management, etc.
- Training on reporting, procedures, avian-safe design, nest management, etc.
- APLIC-provided training: short courses, APP workshops, 2-hour course for APLIC-members

APP Principles

3. Permit Compliance

- Identify required permits (state and federal) and measures for compliance
- Examples: nest relocation, temporary possession, depredation, salvage



APP Principles

4. Construction Design Standards

- Avian-safe construction standards
 - Designing new facilities
 - Retrofitting existing facilities
- Should meet or exceed APLIC recommendations
(see 2006 *Suggested Practices*)





APP Principles

5. Nest Management

- Procedures and permits for addressing “problem” nests (those that pose safety, fire, or electrocution risks). May vary by USFWS Region.
- Training for field personnel (line crews, tree trimming crews, substation operations) on addressing active (eggs or young present) versus inactive nests.



APP Principles

6. Avian Reporting System

- Reporting may be permit requirement
- Utilities may document bird mortalities, nests, outages, remedial actions
- USFWS online mortality reporting system for utilities is available and being utilized

APP Principles

7. Risk Assessment Methodology

- Identification of areas that pose greatest risk to migratory birds
- Factors to assess: bird populations, historical mortalities, nests, habitats, prey populations, structure designs, outages



APP Principles

8. Mortality Reduction Measures

- Can use risk assessment to identify areas to implement remedial actions



APP Principles

9. Avian Enhancement Options

- Utility efforts to enhance populations and/or habitat
- Examples:
 - Installation of nest platforms or boxes; cooperative efforts with agencies or organizations; habitat management





APP Principles

10. Quality Control

- Review and update practices to ensure efficiency and effectiveness
- Examples:
 - Effectiveness of retrofitting in reducing bird mortalities and associated outages
 - Effectiveness of training in improving employee awareness, processes, and accountability
 - Effectiveness of risk assessment in identifying high risk poles

APP Principles

11. Public Awareness

- Educating public on avian/power line issues and utility efforts and collaborative successes





APP Principles

12. Key Resources

- Internal and external resources
 - Engineers, biologists, standards, procurement, field operations (distribution, transmission, and substations)
 - State and federal agencies, universities, non-governmental organizations, consultants
 - APLIC, EEI, RUS, NRECA, CEC, EPRI, IEEE
 - Manufacturers of avian protection products



APP Implementation

- Critical components to APP success
 - Management support
 - Agency involvement
 - Engineering and biological expertise (internal or external)
 - Funding
 - Documentation
 - Accountability and employee awareness
 - Involvement and endorsement of affected groups within utility

Benefits of an Implemented APP

- ❑ Reduced bird mortality
- ❑ Improved service reliability
- ❑ Favorable public perception
- ❑ Positive working relationships with agencies



In Summary

□ The Service favors:

- conservation of wildlife in the public trust;
- development of renewable energy that is bird, bat and habitat friendly; and
- use of informed decisions based on adequate environmental assessment and sound science.



Thank you.