



IBERDROLA
RENEWABLES

Avian and Bat Protection Plan

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Iberdrola Renewables USA as of 2009



- 3,000 MW of projects in operation
- 1,765 turbines
- 660 square miles of land under lease
- 470 miles of access roads
- 237 miles of overhead collector or transmission lines
- ~4,000 poles

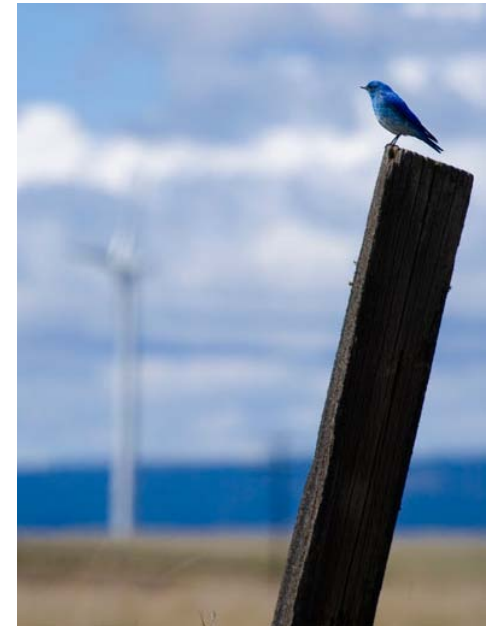


Avian Protection Plan (APP) Model Good Fit for Wind?



Reasons the APP model has been attractive to some utilities:

- Provides a tool for avian risk reduction and compliance with the Migratory Bird Treaty Act (and other wildlife statutes)
- Allows each utility to tailor the plan to its own situation (scaled at utility or operating unit level)
- Provides for self-certification, with reporting to the USFWS



Challenges with the APP model as applied to wind:



- No wind-specific guidelines or examples available
- Easier to address new facilities than existing facilities
- Broader range of avian issues for wind energy than for transmission/distribution
- USFWS is also interested in addressing bat issues
- Apply at project or corporate level or both?



Development of the Avian and Bat Protection Plan



- Began with “translation” of APP guidelines
- Drafted over 1/2008 to 10/2008 period
- Internal team included development, operations, asset management, EHS, and legal
- USFWS review team included Ecological Services, Law Enforcement, and field staff
- Adopted ABPP in October 2008
- Expects to update once USFWS Guidelines are revised; then revisit regularly



APP Principles Applied to Wind (Avian and Bat Protection Plan Table of Contents)



1. Corporate Policy – commitment to implement ABPP, signed by CEO
...Iberdrola is committed to promoting development of clean energy production, with its associated environmental benefits, while limiting the adverse environmental effects...
2. Site Suitability Assessment and Project Design
 1. Preliminary Site Assessment – early information-gathering with agencies and NGOs; review of wildlife issues before irretrievable commitment of resources to a project
 2. Preconstruction Studies – tailored to the project issues; normally one year of pre-construction monitoring (more or less depending on site and available relevant data)
 3. Site Design – Use nationally and state accepted BMPs and best construction management practices.

ABPP Table of Contents (con't.)

3. Wildlife Considerations at Operating Projects
 1. Post-Construction Monitoring —will be done at most projects
 2. Reporting —IBR will pilot-test on-line reporting system with USFWS; annual reporting to USFWS
 3. Impact Assessment —unexpectedly high mortality will be trigger to review causes in discussion with agencies
 4. Nest Management —minor issue for wind projects

4. Mortality Reduction, Mitigation, Research and Other Initiatives
 1. Impact Reduction and Mitigation Measures—commitment to address avian and bat mortality; enumeration of range of tools
 2. Research—support for cooperative research and AWWI
 3. Other Initiatives—guidelines processes, FAC, etc.

ABPP Table of Contents (con't.)

5. Permit Compliance —processes to assure permit compliance

- 6. Implementation**
 1. Training —field staff and management
 2. Quality Control—audit of processes; revisions to ABPP
 3. Key Resources —key internal staff resources
 4. Public Awareness —company preference for transparency
 5. Implementation Schedule —development principles will apply to new projects coming on line after 1/2010

Statement by USFWS Director Dale Hall:



*The U.S. Fish and Wildlife Service commends Iberdrola Renewables for seeking ways to minimize bird and bat deaths at their wind turbine facilities while pursuing renewable energy development in an environmentally responsible way. Through their avian and bat protection plan, drafted in consultation with the Service, Iberdrola Renewables is the first wind energy company to incorporate a voluntary set of principles in a formal plan to reduce wildlife impacts. **The plan's principles**, similar to ones originally developed by the electric utility industry to minimize bird electrocutions and power line collisions, **will reduce risk to birds and liability under the Migratory Bird Treaty Act.***

ABPP Implementation 2009

1. Added Jerry Roppe/PDX to implement ABPP
2. Developing project-specific ABPPs for each project during 2009
 - Project ABPPs implement processes of corporate ABPP
 - Scale and complexity matched to project
3. Initiated pilot test of national USFWS mortality reporting system
4. Negotiating first-ever national USFWS handling permit
5. Conducting 16 post-construction monitoring studies in 2009, of which about half are required by permit and the others are being done solely for ABPP requirements.

Related Outreach, Research and Mitigation Testing – Thinking of the Long-Term



- Second year of curtailment studies at Casselman, PA, as a tool to reduce bat mortality
- Second year of ultrasound bat deterrence field trials, at Locust Ridge, PA
- Use of Merlin radar and curtailment to minimize risks to migratory birds on S. Texas coast
- Founding member of American Wind and Wildlife Institute
- Participant in AWWI, National and State Wind and Wildlife Collaboratives and Working Groups.

Conclusions about ABPP Document



- Includes a commitment to agency and NGO contact at key points in the development process, but there is no “approval process” for project-specific ABPPs.
- Includes a significant commitment to reporting to the USFWS and addressing avian and bat impacts from all projects.
- Provides for consistency of effort and attention nationally across all projects, but also provides for tailoring efforts to project-specific issues.
- Will have modest effects on our costs of development and operations, but promises to reduce avian and bat risk, and risk, over the long term
- Creates basis for dialogue and problem-solving with agencies and NGOs; transparency supports mutual trust and respect

