

Avian Power Line Interaction Committee



Avian Use of Poles and Factors Influencing Electrocutation Risk

Raptors, water birds and small birds use power poles for hunting, resting, roosting and nesting – especially in open habitats with few natural alternatives



Large wingspans may bridge the distance between conductors on horizontal crossarms and tall birds may simultaneously contact different conductors on poles with vertical construction. Juvenile birds may be more susceptible as they are less agile at landing on and taking off from poles.

Seasonal patterns may influence risk due to breeding patterns, nesting activity and higher concentration of birds at certain times of the year

Nesting, courtship and territorial behavior can make raptors and other birds susceptible to electrocutation

Power Line Design and Avian Safety

Avian-safe modifications of existing facilities
Insulation – cover for phases or grounds where adequate separation is not feasible
Avian-safe designs for new facilities
Isolation – provide a minimum separation of 60 inches between phase conductors or a phase conductor and grounded hardware



Nesting on Power Line Structures

Utility structures can be adventitious to raptors nesting on utility structures, they

- provide nesting substrates in habitats where natural sites are scarce
- facilitate the range expansions of some species
- aid in increasing the local density of some species
- offer some protections from the elements

Disadvantages of nesting on utility structures include:

- increased risk of electrocutation and collision
- susceptibility to nest damage from wind and weather
- disturbance from line maintenance or construction
- more vulnerable to shooting



Artificial nest platforms can be installed in safe areas on or near utility structures to encourage birds to nest in desired areas

Various nest platform designs are used by utility companies throughout the United States, Canada and Europe

Mitigating Bird Collisions With Overhead Power Lines

Collisions with power lines and other structures become biologically significant especially when they affect a bird population's ability to sustain or increase its numbers.

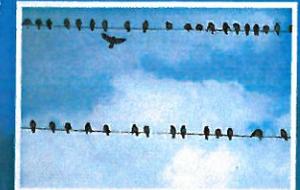
Several different factors influence risk of collision:

- Feeding and nesting areas separated by a power line
- The height a given species flies
- Time of day and related visibility
- Adverse weather conditions
- Flocking behavior

The range of management options:

- Modification of habitat and land use
- Use of tree plantings of a size that will "deflect" birds upward before collision
- Marking devices that increase line visibility
- Redesign, alter, reroute or bury power lines when possible

Implementation of management options should only be selected after gathering and evaluating data on bird movements in the vicinity of proposed or existing power lines.



APLIC Mission Statement

APLIC leads the electric utility industry in protecting avian resources while enhancing reliable energy delivery. We work in partnership with utilities, resource agencies and the public to:

- Develop & provide educational resources
- Identify and fund research
- Develop & provide cost-effective management options, and
- Serve as the focal point for avian interaction utility issues

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Avian Protection Plan Implementation

- Outline Corporate Policy and Requirements
- Provide employee training - define program goals, objectives and procedures
- Determine permit requirements
- Have accepted construction standards for both new and retrofit techniques
- Incorporate a nest management plan
- Create or use USFWS online bird electrocutation reporting system
- Use risk assessment data to create a more effective program
- Design a mortality reduction approach, preventive, reactive, and proactive
- Look for opportunities for avian enhancement options
- Include quality control mechanisms
- Public Awareness programs can provide support for company's APP
- Use internal and external key resources for guidance and assistance

