Raptor Nest Management Programs at Two Canadian Electrical Utilities

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• Introduction
• Raptor Nest Management Strategies
  - Pre-construction
  - Osprey nests
  - Ferruginous hawks
• Conclusions
ROLE OF POWER POLES ON THE LANDSCAPE

• Negative interactions: electrocution, collision
• Sometimes significant to species at risk
ROLE OF POWER POLES ON THE LANDSCAPE

Positive interactions

Todd Kemper

Gerald Romanchuk

Charlie Ogard

Adam Moltzahn

Gord Court
NESTS & ELECTROCUTION RISK

Shelanne Bulford
ATCO Electric
AltaLink
Adam Moltzahn
Jon Groves
AVIAN PROTECTION PLANS (APPS)

• An APP is a voluntary, utility-specific management plan for addressing avian-related power line issues

• 2005: the US Fish & Wildlife Service and Avian Power Line Interaction Committee released APP Guidelines
“SAVE THE BIRDS AND KEEP THE LIGHTS ON”

1. Reduce raptor mortality especially *Threatened* or *Endangered* Species
2. Improve system reliability
3. Ensure legislative compliance
ENSURE LEGISLATIVE COMPLIANCE

- Migratory Bird Convention Act (MBCA) (Canada)
- Provincial Wildlife Act (Alberta) (or equivalent)
- Species at Risk Act (Canada)
Alberta’s primary transmission service provider
• Serves 85% of Alberta’s population
• Primary issues include collision, substation electrocutions and nesting
• First APP in Canada

Nikki Heck
Primary distribution and secondary transmission provider

Serves almost 2/3 of Alberta

Primary issues include electrocution, collision, and nesting

Second APP in Canada

Cindy Kemper

Todd Kemper

Edmonton

Calgary

ATCO Electric

Alberta
RAPTOR NEST MANAGEMENT STRATEGIES

1. New Construction
2. Osprey Nests
3. Ferruginous Hawk Nest Management
1. NEW CONSTRUCTION

• Adhere to provincial industrial set-back guidelines
  – Ferruginous hawk, Peregrine falcon, Bald and Golden eagle: 1000m yr round
  – Burrowing owl: 500m yr round
  – Short-Eared owl: 200m Apr 1 – Jul 31
THE CHALLENGE WITH RAPTOR NEST MANAGEMENT FOR NEW CONSTRUCTION

• No site access for surveys until post P&L
• Post P&L, deviating from centreline cannot occur making compliance with set-back requirements impossible if raptor nests are discovered
STRATEGIES FOR MANAGING RAPTOR NESTS FOR NEW CONSTRUCTION

• Open and honest communication with regulators
  – Development of Wildlife Guidelines for the Power Line Industry

• Project specific construction and environmental protection planning
  – Construction timing windows
  – Site specific mitigation measures (e.g. tower placement, collision mitigation, alternate nest sites, post-construction monitoring)
  – Off-sets and stewardship (e.g. Conservation easements, contribute to recovery initiatives)
2. Osprey Nest Management
OSPREY NEST MANAGEMENT

Accommodate Nest

Relocate nest

Remove
ARTIFICIAL PLATFORMS — DESIGN

- Ideal base 4’ X 4’
- Able to withstand 400lbs
- Add perch above platform
  - 18” long
  - 36” above platform
  - 3” wide
ARTIFICIAL PLATFORMS - SITING

• Must be sited by a qualified biologist!
• Distance – within 20m of original site
• Platform should sit higher than original pole
• Add sticks to encourage nest-building
• Retrofit poles within 200m to raptor-safe standards
• Remove nests every few years to prevent abandonment
3. FERRUGINOUS HAWKS

• A provincially *Endangered*, federally *Threatened* Species at Risk

• 2009 Alberta Recovery Plan identified lack of suitable nesting substrates as a major barrier to ferruginous hawk recovery
FERRUGINOUS HAWK NEST PLATFORMS

• Recovery contributions through
  – In-kind nest platform installations for NGOs
  – Relocate nests low on steel lattice towers to improve fledging success
  – No-net loss for project encroachment

• Locations identified by regulators or NGOs, NOT by utility!
CONCLUSIONS: BENEFITS

- Improve system reliability while reducing raptor mortality
- Legislative compliance
- Improve relations with regulators
- Positive public publicity
CONCLUSIONS

• Global demand for electricity is increasing
  • USA: 365,000 mi (1977) $\rightarrow$ >500,000 mi (2000)
  • Canada: 100,000 mi (2003) $\rightarrow$ > 137,000 mi (2009)
• AESO estimates 3.5 billion in transmission infrastructure over next 10 years in Alberta
  • largely due to demand for wind energy (1000s MW)
• Power line mortality is relatively easily mitigated and largely preventable
THANK-YOU!

Ned Pratt

Todd Kemper
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