



# Guidance on electricity, gas and oil transmission infrastructure and Natura 2000

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## Guidance on Energy Transmission Infrastructure and EU nature legislation

## Purpose:

To provide guidance on how best to ensure that developments of energy transmission infrastructure are compatible with the provisions of the Habitats and Birds Directives

# Scope:

- terrestrial gas and oil transmission facilities
- terrestrial electricity transmission facilities
- marine gas (and oil) transmission facilities
- marine electricity transmission facilities



## Content:

- provides information on known impacts and mitigation measures,
- refers to a number of documents or websites available elsewhere
- It focuses in particular on the procedures to follow under Article 6 of the Habitats Directive
- Provides clarifications on certain key aspects of the approval process.



# Structure of the guide (1):

## Purpose and structure of this Guidance

### Chapters 1-2 context setting:

**Chapter 1:** Energy infrastructure development in the EU

**Chapter 2:** The EU nature legislation

### Chapters 3-7 the guidance part:

**Chapter 3:** Potential impacts of transmission facilities

**Chapter 4:** Potential effects on wild birds

**Chapter 5:** Potential mitigation for electricity plans or projects on wild birds

**Chapter 6:** The importance of adopting a strategic approach to planning

**Chapter 7:** the permitting procedure under article 6 of the Habitats directive

**Chapter 8:** Energy transmission infrastructure in the marine environment



# Structure of the guide (2):

## References

### Annexes:

- **Annex I:** National and international initiatives
- **Annex II:** A summary of evidence on the population-level impact of power lines on globally threatened (IUCN, 2012) bird species
- **Annex III:** Examples on the impact of power lines on meta-populations of bird species listed under Birds Directive Annex I
- **Annex IV:** A proposed list of priority species for prevention and mitigation of power line impact within the EU

# Identifying and assessing the impacts

- habitat loss, degradation or fragmentation
- disturbance of species
- collision and electrocution risk
- barrier effects

The interconnectivity of effects needs also to be taken into account





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## Why are some bird species more vulnerable to power lines than others?

This is often due to the following physiological, behavioral and ecological features:

- Large body size;
- Poor frontal vision;
- Preference for nocturnal activity;
- "Poor fliers", less maneuverable birds (collision);
- Inexperienced flyers, young birds (electrocution and collision);
- Preference for elevated places for roosting, perching or nesting;
- Preference for treeless, open habitats (electrocution);
- Flocking and gregarious behavior;
- Species susceptible to disturbance;
- Preference for low altitude habitats (i.e. in relation to higher density of electric grid);
- Rare and threatened species (coupling with low density, low fecundity etc);
- Low density species (with lower replacement potential);
- Species with low reproductive potential (through the increase in adult mortality it takes more time to recover from population losses);
- Species with low-fecundity, low mortality, long life expectancy (through decrease in recruitment potential during constant population loss)
- Long-distant intercontinental migrants (large spatial scale and very different level of mitigation of power line impacts).






# Mitigation measures

## Hierarchical approach to adopting mitigation measures

Approach to mitigation	Preference
Avoid Impacts at source	Highest
Reduce impacts at source	
Abate Impacts on site	
Abate Impacts at receptor	Lowest



## Investigating potential mitigation and preventive measures at the project level

Phase 1. Pre-construction

Phase 2. Construction

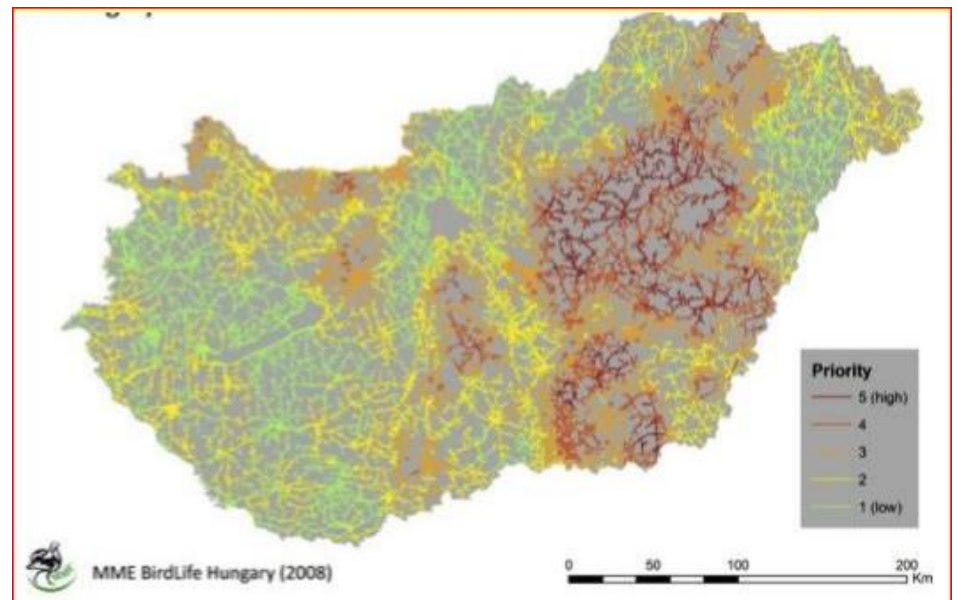
Phase 3. Operation

Phase 4. Decommissioning

# Integrated planning

Taking environmental consideration into account early on the decision making process can lead solutions being found when there are still many options available and could speed up the implementation

Bird conservation priorities along the medium voltage power line network in Hungary



## Target audience:

- Competent authorities dealing with nature protection, energy issues and land-use planning
- Developers and investors
- Scientific experts and consultants
- Natura 2000 site managers
- NGO
- The wider public

## For more information:

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EC Guidance document "Energy transmission infrastructure and EU nature legislation":

[http://ec.europa.eu/environment/nature/natura2000/management/guidance\\_en.htm](http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm)

Management of Natura 2000 sites

[http://ec.europa.eu/environment/nature/natura2000/management/guidance\\_en.htm](http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm)