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Micro wind turbines and wildlife: integrating planning with ecology

The ecological impacts of micro wind turbines (up to 50 kW) are treated in a diverse way by different local authorities in the UK during the planning approval process, research suggests. The study calls for ecologists, policymakers, planners and industry representatives to improve the integration of ecological information within planning, and for greater guidance for local authorities on the ecological considerations of micro-turbines.

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Planning applications for wind micro-generation have been increasing in recent years across Europe. In the UK, where this study was conducted, 20,000 micro-turbines are now installed. When assessing the impact of installing micro-turbines, a number of potentially conflicting economic, social and environmental criteria may be encountered. Sound decision-making therefore requires interdisciplinary and multi-stakeholder collaboration.

The study reviewed the planning processes for micro-turbine applications in the UK, focusing on how ecological factors are taken into account during the application process. Ninety local authority planning officers were surveyed to establish the factors considered when granting or refusing permission for micro-turbines between April 2009 and 2010. The majority of applications were approved, but success rates varied significantly between authorities. When applications were rejected, the most common reasons given were: visual appearance, followed by noise, and then wildlife impacts.

The local authorities had very different approaches to considering the ecological impacts of micro-turbines, with some always requiring an ecological survey, and some never requiring one. Furthermore, the potential for this ecological survey to result in refusal of permission varied between authorities. The study therefore concludes that improved guidance for local authorities on ecological considerations is needed, and specifically, the recognition of micro-turbines as distinct from wind farms.

In addition, the study suggests that the available information on which to base ecological surveys is rather limited and recommend more research on the topic. Greater understanding is needed of the turbines' potential impacts on bird and bat populations, safe distances from known populations and habitats, and potential differences in the effects of different options (e.g. turbine height and propeller design). It recommends further developing guidelines for authorities, which could be later updated following ecological research.

The researchers also considered recent updates to planning policy, questioning whether the 'presumption in favour of sustainable development' in England's new National Planning Policy Framework[1] could potentially override some local authorities' requirements for ecological surveys. The introduction, in both Scotland and England, of new Permitted Development Rights (PDRs)[2] was also considered. PDRs are intended to specify types of projects that will be permitted, although local authorities still need to be consulted to verify aspects, such as size and design.

The study concludes that the vast majority of wind micro-generation proposals will not be assisted by PDRs because most are for commercial turbines (which are not covered by PDRs) or domestic free standing turbines which usually exceed PDR restrictions on height or the swept area of the blades. These turbines will need to go through the usual planning process. An interdisciplinary approach to planning is recommended, whereby a working group of scientists, policymakers, statutory agencies and industry members are consulted to ensure that wind micro-renewables are developed in a way that accounts for all stakeholder considerations.

1. See: http://www.gov.uk/government/policies/making-the-planning-system-work-more-efficiently-and-effectively/supporting-pages/national-planning-policy-framework

2. See: http://www.parliament.uk/briefing-papers/sn00485