

## A2 ACTIVITY 4: EXPLORING THE WIND TURBINE

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### Background

The aim of this investigation is to examine one alternative for generating electricity using a renewable source. Students may be familiar with the **dynamo** used on a bike or the decorative LEDs which are often attached to the spokes or the valves. However, they may not make a conscious connection between movement and the generation of electrical energy. The previous investigation – **A2 ACTIVITY 3: THE POWER OF THE WIND — MAKING YOUR OWN GENERATOR** – is a good lead-in to this activity.

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### What to do:

1. If appropriate, recap on the investigation **A2.3 WORKSHEET C: THE POWER OF THE WIND — WHAT DO YOU THINK?** using it as a lead-in to research into wind turbines, their uses, advantages, etc.
  2. Use a roleplay approach as this contentious issue lends itself well to this method.
  3. Divide the class into three groups – **A, B** and **C**,  
**Group A** is to present the case for the erection of a wind turbine/wind farm,  
**Group B** is to oppose such an idea, whilst  
**Group C** represents the general public who, having listened to both cases, then votes on whether to accept, reject or request more information indicating what might need clarification, etc. If appropriate, two or three students from this group could be assigned the role of reporters who would then write up an article/write a radio script/present a TV clip for general presentation to the class, or even the school community.
  4. The two groups presenting their cases should be given a timeline for that presentation plus time for questions from the audience.
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### Resources:

- The [SEAI](#) website has a section on [wind energy](#) which includes some case studies.
- Visit the [Irish Wind Energy Associations](#) website for [Best Practice Guidelines](#), the [Technologies of wind energy](#) and information on how to [develop a wind farm](#).
- [Tippeary Energy Agency](#) have information on a community-owned wind farm.
- SEAI have a report on the [significance of noise in relation to onshore wind farms](#).
- Try out a [virtual laboratory on wind power](#), it includes a teacher's guide.
- The [howstuffworks](#) website has a [series of articles on wind power](#).