

A2 ACTIVITY 4: EXPLORING THE WIND TURBINE

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.

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.

Resources:

- The [Sustainable Energy Authority of Ireland](#) (SEAI) site gives detailed background information about the [history of wind energy](#), [attitudes in Ireland to wind farms](#), [best practice guidelines](#), the [technologies of wind energy](#), detailed insights into [wind farm development](#) and some [case studies](#).
- [Click here](#) for information on a community-owned wind farm, [Tipperary Energy Agency](#).
- [Click here](#) for a report on the significance of noise from onshore wind farms.
- A teacher's guide to a virtual laboratory on wind power can be accessed by [clicking here](#).
- The [howstuffworks](#) website has a [series of articles on wind power](#).