

## PROJECT TIMESCALES



## PROJECT OVERVIEW

Airtricity plans to build a wind farm with an expected rated capacity of 140 - 176MW, east of Tal-y-bont and the A487 and in the vicinity of the Nant y Moch reservoir in an area of Forestry Commission Wales managed land and privately owned agricultural grazing land.

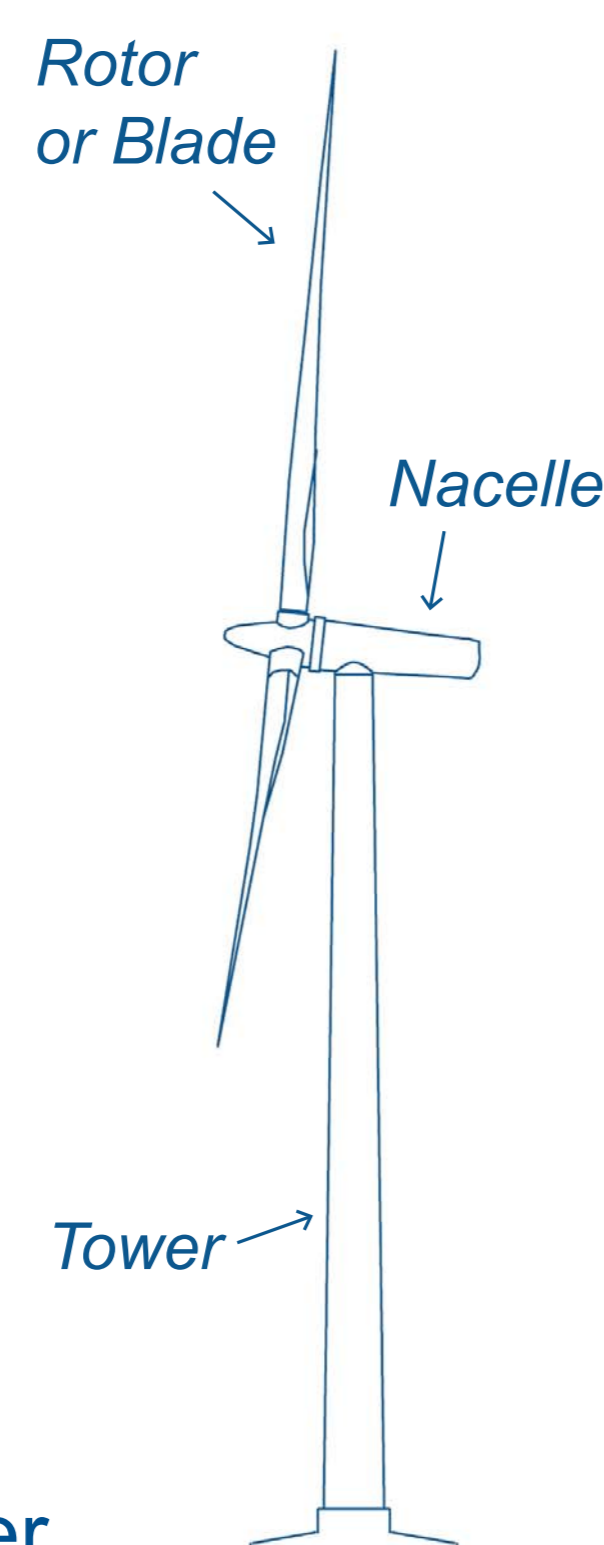
The Nant y Moch wind farm will generate electricity equivalent to the consumption of about 65,000 domestic homes (based on an average energy consumption per household of 4,700kW hours per year).

### TURBINE DETAILS

The turbines will be three bladed machines with a rated capacity of between two and three megawatts. Each turbine will be to a maximum hub height of 100 metres, with tip heights of the rotor blades being no more than 40 metres to 45 metres above the hub.

The blades are made from fibre-reinforced epoxy and attached via the hub to the nacelle, which houses the gearbox and generator. This is mounted on a steel cylindrical tower and is allowed to rotate to track the wind.

The turbine rotor speed typically varies from six to 19 rotations per minute between wind speeds of four and 25 metres per second.



### GRID CONNECTION

A new substation will be built on site to feed the power to the grid. Connection to the electricity network will be subject to a separate planning application.

### WIND FARM INFRASTRUCTURE

The construction of the wind farm will require:

- Access tracks and underground electrical cabling
- Permanent wind monitoring mast(s)
- Crane pads
- Temporary construction compound
- Substation, control room and switchgear facility

## CONSTRUCTION, OPERATION AND DECOMMISSIONING

Construction will take approximately 18 to 24 months. Decommissioning of the wind farm site is usually secured through agreement between the developer and the determining authority. Decommissioning will typically take place after 25 years of operation.

## ENVIRONMENTAL IMPACT ASSESSMENT

Developing the wind farm design and layout requires careful consideration using robust methodology of a series of environmental and technical constraints. The Environmental Impact Assessment (EIA) and subsequent Environmental Statement (ES) is a formal part of the planning and development process that provides a methodology for addressing impacts of the proposed development.

The Environmental Statement will:

- Describe the physical characteristics, scale and design of the wind farm
- Examine the existing environmental features of the site and the surrounding area
- Predict possible environmental impacts of the wind farm
- Put forward measures to avoid, reduce or offset adverse effects
- Identify areas that would benefit from environmental management geared toward enhancing ecological value on the site and put forward proposals to deliver this

In 2008 a full Environmental Impact Assessment (EIA) commenced on the entire Nant y Moch site. Surveys and assessments required for the EIA are ongoing and are expected to be completed by the end of 2009. They will help define the final layout of the wind farm. The final layout will be published in the autumn of 2009 and be presented in a second round of public consultation.

These surveys and assessments include:

- Ecology
- Archaeology
- Hydrology
- Mining
- Acoustic
- Visual Impact
- Microwave Links
- Transport and Access Assessment
- Grid Connection
- Footpaths and Public Rights of Way