



The Drumlin Wind Energy Co-operative

The Drumlin Wind Energy Co-operative owns and operates six 250 kW wind turbines across Northern Ireland.

Around 1,000 members have invested money in Drumlin Co-op and collectively they own the 6 wind turbines. An elected Board of directors from the membership operates and manages the wind turbines.

Drumlin has financially committed to a Community Fund which will be used to support initiatives like the Drumlin School programme.

If you want to know more about Drumlin Wind Energy School Programme or you are interested in arranging a visit to any of the Drumlin wind turbines, please write to the Chair of Drumlin Wind Energy Co-operative at info@drumlin.coop.

Please visit our website www.drumlin.coop for free and downloadable educational material produced during Drumlin Wind Energy School Programme



Drumlin Wind School Science Programme



A science and technology programme for primary schools, investigating renewable energy

Drumlin Wind Energy in Schools

Drumlin Wind Energy's first school programme was launched in 2017-2018. Supported by the Drumlin Wind Energy co-operative, the programme ran in 8 schools and benefited more than 300 pupils and their teachers.

The programme was professionally designed by Peter McAllister, a former primary school teacher, and Dr Martin Brown, former Education and Library Board Science Adviser.

This innovative programme is delivered in primary schools for P6 and P7 pupils. Its aims are to:

- Raise awareness of wind energy and renewable sources
- Increase understanding of the working of wind turbines
- Engage pupils in the energy debate for the future

The programme allows children to design and build a wind turbine tower that represents their individual solution to a scientific and technological challenge.

The programme allows teachers to easily include the Drumlin programme within the current Curriculum and complement their Science teaching to P6 and P7 pupils. The programme has also equipped schools with materials that can be re-used and developed for further science and technology experiments to be conducted in a classroom setting.

The schools on the 2017-2018 programmes were:

- Doagh PS
- Fairview PS, Ballyclare
- Kells and Connor PS
- Linn PS, Larne
- Newtownhamilton PS
- St Joseph's PS, Killeenan, Cookstown
- St Michael's PS, Newtownhamilton
- The Thompson PS, Ballyclare

Some of the comments from participating students and teachers:

Teachers

"The workshop was informative and engaging, and provided the children with the opportunity to get hands on and actively involved in developing their own wind turbines."

"Thank you for a great experience: the children thoroughly enjoyed the day."

"I appreciated an expert coming to the class to explain the background, and develop pupils' knowledge about wind energy. The technology part was great. My own personal knowledge and understanding has now improved."

Pupils

"I liked learning, and creating new things."

"I was surprised how well we can work together."



Peter McAllister at Newtownhamilton Primary School

Wind Energy – Facts and Curiosities

For many centuries wind power has been used to generate mechanical energy to move boats or to grind grains. Today, the most common use of wind power is to generate electricity.

Wind energy, electricity generated using wind power, is clean energy because it does not pollute the environment like energy from coal, oil or gas does and also wind will not run out like the fossil fuels will.

However, despite wind power being a free and a renewable power source abundant in nature, it is still underutilised. In 2017, in Northern Ireland 35% of all electricity was produced by renewable sources.

Drumlin's six turbines produced 2266 megawatt-hours (over 80,000 megajoules) of energy in 2017. This was enough to supply 600 average homes.

Drumlin Wind Turbines

Wind turbines have a design life span of 25 years. Wind turbines can have any number of blades. All the Drumlin wind turbines have three blades as this is the most efficient design for generating electricity and they can reach a speed at the tip of over 140mph.

Drumlin wind turbines have a tower height of 30 or 40 metres and their rotor blade diameter is 30 metres.

There is a ladder inside the turbine to allow access to the 'nacelle' at the top where the electricity generator is sited. The electricity is converted to the correct voltage for the grid in a cabin at the base of the turbine.