

WHAT IS THE ENERGY TRANSITION?

A CLEAN ENERGY SYSTEM FOR IRELAND



We need to radically change the way we produce and use energy in Ireland.


We currently rely on **fossil fuels** (oil, coal, peat and natural gas) to power our cars, buses and trucks, and to heat and light our homes and schools. However, fossil fuels when burnt release carbon dioxide (CO₂) which is harmful to our planet.

Carbon dioxide, along with other greenhouse gases, is responsible for the heating up of the earth's surface. This is known as **global warming** or **climate change**.

The energy transition sets out how Ireland will move away from burning fossil fuels, towards clean and **renewable fuels** which release little or no carbon dioxide.

The wind, sun (solar power), fast running water (hydro-power) and the sea (wave power) are all examples of renewable resources which can be used to create **clean energy**.

However the weather is unpredictable so we also need ways to store the power produced from renewable energy so that we can use it when it is needed. This is why **new technologies** - some of which have yet to be invented – are needed to help us run our future energy system in as efficient and cheap a way as possible.



WHY IS THE ENERGY TRANSITION IMPORTANT?

RISING TO THE CHALLENGES POSED BY CLIMATE CHANGE



By using less energy and replacing fossil fuels with renewables we can help reduce the impact of climate change on our planet.



As the earth's surface heats up we will see more flooding, droughts and severe storms.

The exact impact will vary depending on where you live but everyone will feel the effects in some way. The changes will force many people to leave their homes and move to safer countries.

What we can expect to see from climate change:

- **Rising sea levels** causing serious flooding in low-lying coastal areas



- **A loss of habitats** which will most probably lead to the extinction of many endangered plants and animals

- **More frequent and more intense storms** damaging buildings, powerlines and crops

- **An increase in temperature** bringing droughts and an increase in the size of deserts

- **Food shortages** as farmers struggle to grow crops and raise animals

Did you know that carbon dioxide (CO₂) stays for about 100 years or more once put into the air?

Some of the CO₂ in our atmosphere was emitted before World War 1.

(Ref: UK Met Office)

WHAT CAN YOU DO?

YOUR JOB



A big way in which you can play a part in the energy transition is by using less energy.

Why not look for new ways to be **energy efficient** in your home and school? **Here are just some of the things you might consider doing:**

- Check that all windows are closed at the end of the day and in winter draw curtains or blinds to help keep the warmth in
- Don't cover radiators or allow furniture to block radiators
- Switch to energy efficient lightbulbs (LEDs)
- Turn off lights that are not needed, for example when there is enough daylight or when a room is empty
- Check to see if your home or school's insulation levels can be improved
- Consider if it is possible to change to a more efficient heating system, or better still to replace your boiler with a heat pump (heat pumps take heat from the outside air or ground and pump it into your home or school)
- When buying new domestic items such as kettles, PCs and dishwashers choose ones with the most efficient energy rating
- Be sure to switch off all electrical appliances you're not using, especially at the end of the day

Over the long-term these measures will help reduce your home and school's energy bills, saving money. They will also make your home and school more comfortable.

And remember, in the future energy world, local communities, including schools, will generate and store their energy independently. For some this is already happening.

At Dunleer Primary School the installation of a heat pump has reduced the school's energy use by almost half.