

# LET'S GO NET-ZERO!

Many countries have a target to get to net-zero greenhouse gas emissions. Some by the year 2050, like the UK, others earlier. It is important to understand what net-zero actually means, and how it is not the same as zero emissions. Net-zero is when the greenhouse gasses we emit into the atmosphere like carbon dioxide are balanced out by their removal out of the atmosphere. It is not same as 'zero emissions' where we emit no greenhouse gasses at all, but we can get to net-zero quicker by reducing emissions. The sooner we get to net-zero, the better! How would you do it?

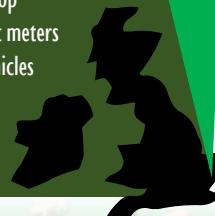
## LET'S GO LEISTON!



Leiston in Suffolk has a population of 5,400 people and is aiming to become the UK's first net-zero town and do it by 2030! The local people, council, finance experts, businesses and energy companies are attempting to do this by:

- Reduce carbon emissions from buildings by installing roof-top solar, heat pumps and smart meters
- Encourage use of electric vehicles and bikes
- Tree planting
- Composting schemes

Leiston



These are energy-based ways of helping to get towards net-zero. Can you guess what they are? Check if you're right by turning to the pages given\*.

- 1 Not renewable but generates lots of energy with very little pollution. One of these is just up the road from Leiston! (p38-39)
- 2 Very reliable renewable energy, helped by the moon's gravity! (p44-45)
- 3 Can be built on land or in shallow seas, but can have problems with NIMBY-ism (p26-27)
- 4 Can generate electricity and heat, and can be placed on the roofs of buildings (p22-23)
- 5 A well-insulated home, low-powered things and smart controls can cut down energy use (p50-51)
- 6 A zero-emission way of getting around but needs somewhere to charge and still causes jams (p52-53)
- 7 Pulling heat from the ground and squishing it can make it cozy warm! (p34-35)
- 8 Capturing the carbon emissions before they go into the atmosphere (BONUS! See glossary.)

These activities emit greenhouse gasses but can be 'offset' by doing the things above.

- 1 Industries that use fossil fuels to make stuff like cement, iron & steel and chemicals.
- 2 Greenhouse gases such as methane and nitrous oxide are released by cows and sheep burping and their manure.
- 3 Using fertilisers, chemicals and fossil-fuel powered machines like tractors to grow food.
- 4 Poorly insulated homes and buildings, and not being smart with energy use.
- 5 Getting around and transporting the stuff we need by using fossil fuels like oil.
- 6 Cutting down trees for wood or biomass and not being sustainable by replanting them.

So how would you get to net-zero? Would you stop everything that emits greenhouse-gasses and go full zero? Or would you try to strike a balance? Not everyone can afford green ways of producing and using energy, so who would pay? Can you spot other ways of reducing emissions from the image?

\*Page references in questions refer to the *National Geographic Kids Everything: Sustainable Energy* book (ISBN 9780008541576), for which this concept was created.

Background image from BEIS My2050 Game (<https://my2050.beis.gov.uk/>)



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