

Grammar

see
p. GR10

Future perfect – Future perfect continuous

- 5 **10.6.8** Read the theory and find examples of all the future tenses in the text in Ex. 1.

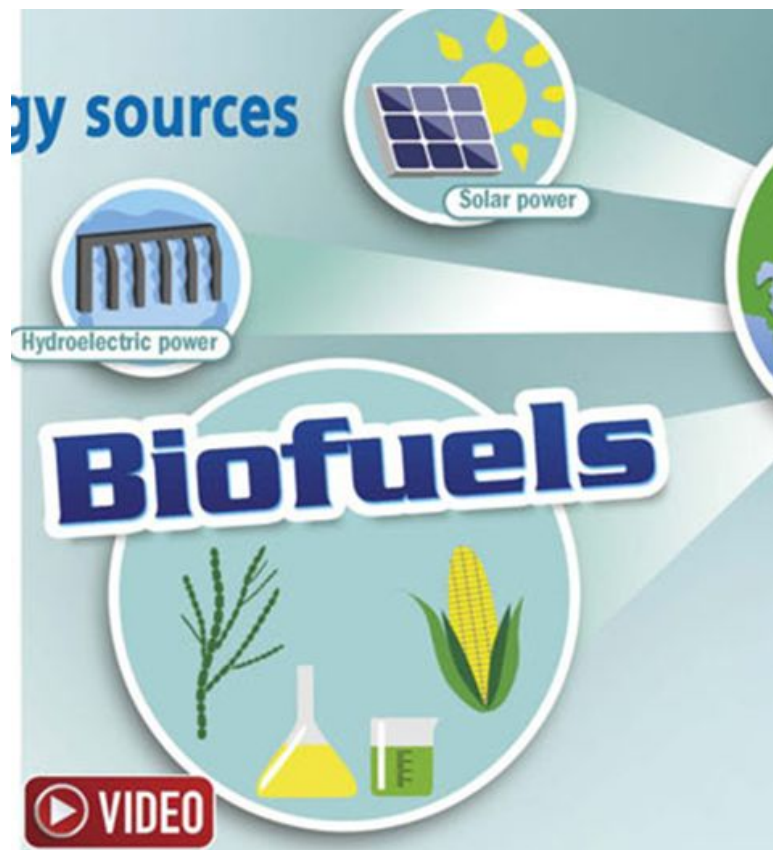
We use the **future perfect** (will have + past participle) to describe an action that will be finished before a stated future time. *They **will have finished** making the roof garden before the end of next week.* (active voice) *The apartment **will have been built** by the end of the year.* (passive voice)

Time expressions used with the future perfect: before, by, by then, by the time, until/till (in negative sentences)

We use the **future perfect continuous** to emphasise the duration of an action up to a certain time in the future. *By next month, James **will have been working** at the farm for five years.*

Time expression often used with the future perfect continuous: By ... for

- 6 **10.6.8** Put the verbs in brackets in the *future perfect* or *future perfect continuous*.
- 1 By the end of the year, we (live) in this house for 10 years!
 - 2 The rooftop of the new building (convert) into a garden by next year.
 - 3 Sanzjar (work) as a gardener for 30 years by the time he retires.
 - 4 I can't meet you at 6 o'clock. I (not finish) work by then.
 - 5 (we/find) a solution to food shortages by 2050?



Billions of gallons of biofuels are produced each year ... and they have been around since the early 20th century. But what are they?

What are they?

Many people believe that in the future, fossil fuels, such as coal, oil and gas are going to run out and will be replaced with biofuels. Fossil fuels are made from living things that died hundreds of millions of years ago whereas biofuels are made from recently living organisms such as plants and animals. All biofuels are considered to be a renewable energy source because they are quick and easy to replace. The three main types of biofuel include ethanol, biodiesel (both of which are mainly used in vehicles) and biojet fuel (which is only used in planes).

What are they made from?

Most types of biofuel are made from plant material. Crops such as corn, sugar cane, wheat, rapeseed and soybeans can all be used to make biofuels. Other examples include palm and vegetable oils. However, there are types made from other materials, such as animal fats and waste.

How are they made?

Different biofuels have different methods in order to turn them into fuels and power engines. For instance, ethanol is often mixed with petrol. In a similar

Speaking

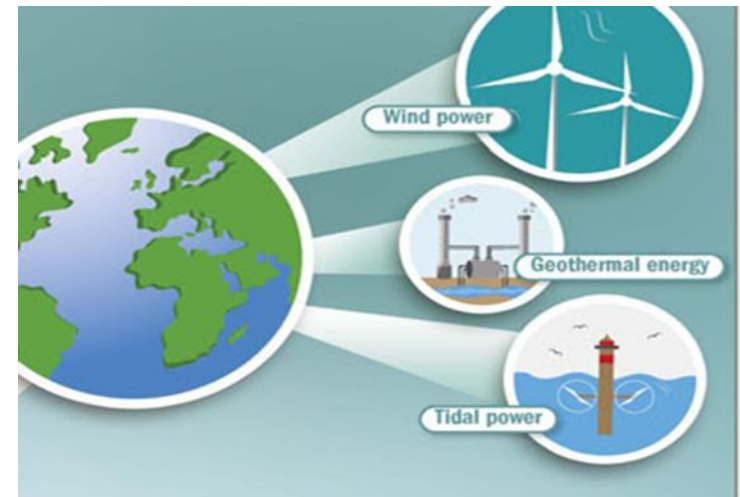
- 5 a) **10.4.6** Do you think the writer is in favour of or against biofuels? Tell the class. Justify your answers based on the information in the text.

way, biodiesel is mixed with regular diesel and biojet fuel is mixed with jet fuel.

Are they better for the environment?

This is a difficult question to answer but there are definitely some advantages. Some people say that they are better because they are carbon neutral. This means that the carbon dioxide they produce when they are used is the same as the amount taken up by the plants as they grow. So overall, they don't increase the amount of carbon dioxide in the atmosphere. Another advantage to using biofuels is that they produce less toxic chemicals than regular fuels and some biofuels are even non-toxic, non-flammable and biodegradable. This means less air pollution due to smoke and soot and sulfur which means less acid rain. Also, biofuels can increase farmers' incomes and lower fuel prices by limiting the demand for fossil fuels.


There are some disadvantages to biofuels, though. For example, it takes a lot of people, energy, money and natural resources (water, land, etc.) to grow the crops required to produce biofuels. A lot of this land space could be used for growing food crops and plants instead. As a result, some people are worried that even more land will be cleared in the future in order to grow more crops for biofuel production. This means destroying the natural habitat of some wildlife and possibly causing them to become endangered or even extinct.



Conclusion

Overall, biofuels have both pros and cons. It seems that although biofuels produce less emissions than fossil fuels they can only slow down global warming. Therefore we still have to invest in other technologies like solar power, but it is a good start.

Listening

- 6** **10.2.3** **10.2.4** **10.2.7**  Listen to two people talking about biofuels. For questions 1-5, choose the correct answer A, B or C.
- Keith says that installing solar panels
 - helps protect the environment.
 - costs a lot of money.
 - makes electricity bills less expensive.
 - Both speakers agree that
 - the town is a good location for a wind farm.
 - wind turbines will spoil the landscape.
 - birds can be hurt by wind turbines.
 - In Keith's opinion
 - a dam would prevent the town from flooding.
 - hydropower isn't a good solution for the town.
 - a dam can produce enough electricity for the whole town.
 - How does Kimberley feel about Keith's view of biofuels?
 - She strongly agrees.
 - She neither agrees nor disagrees.
 - She completely disagrees.
 - Kimberley suggests that biofuels
 - cause more air pollution than regular fuels.
 - aren't as environmentally-friendly as we think.
 - often lead to food shortages.