

## Climate Change

### Is there anything else I need to do?

If your car is still under warranty you should check with the manufacturer. If you plan to convert your car, you will need to contact your insurance company. They might refuse to insure it. There are other insurance companies that are normally happy to insure a car converted to run on bio-ethanol. Some of these are:

- [www.norwichunion.com](http://www.norwichunion.com)
- [www.cis.co.uk](http://www.cis.co.uk)
- [www.nfumutual.co.uk](http://www.nfumutual.co.uk)



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### Where can I find out more?

There are some useful websites that give general information on alternative fuels:

- [www.cat.org.uk/information](http://www.cat.org.uk/information)
- <http://www.greencarsite.co.uk>

If you need more help, get in touch with the team at Science Shops Wales. You can do this by phoning us on 0845 841 3545, or by emailing us at [scishopw@glam.ac.uk](mailto:scishopw@glam.ac.uk)

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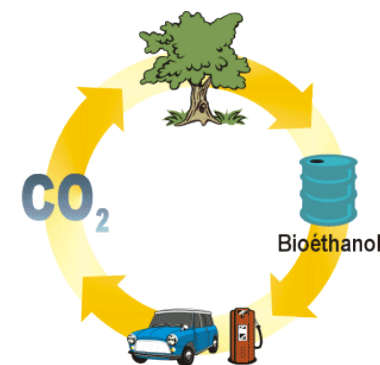
## RUNNING A CAR ON BIO-ETHANOL

Towards A  
Sustainable Future

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### Why run a car on bio-ethanol?

Bio-ethanol is a fuel distilled from fermented sugars and starches. It is made from crops such as sugar beet and wheat. It can be cheaper than petrol. It makes a lot less pollution than ordinary petrol. It also makes less carbon dioxide. Too much carbon dioxide gas in the air is causing global warming.



Courtesy of Matt Lechien, Surrealiste

## I've heard that bio-ethanol is bad for the environment.

When bio-ethanol is made directly from crops, it means that we can't use those crops for food. Natural areas like forests are often destroyed to plant the crops. A lot of chemicals such as pesticides are needed to grow the crops which can be harmful to the environment. And then it has to be transported. But it is possible to make it from crop residues or from household wastes. This also helps to reduce waste going to landfill. However, waste alone will never make enough bio-ethanol to meet all of our needs.

## What type of car will run on bio-ethanol?

All petrol engines will burn a mixture of 10% bio-ethanol and 90% petrol. Most will run happily on higher amounts of bio-ethanol. However, if you want to run your car on mixes that have more than 25% bio-ethanol, you will need to get it converted or buy a new car.

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## A Sustainable Future Climate Change



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## Where can I buy bio-ethanol?

Some petrol stations already sell a mix of 5% bio-ethanol and 95% petrol. This will be fine in any petrol engine. A lot of the petrol sold in the UK contains 5% bio-ethanol. It's not always possible to know as the garages often don't tell you.



Courtesy of <http://www.carpages.co.uk>



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Tesco and Morrisons supermarkets both sell a mix of bio-ethanol and petrol at some of their garages. They are planning to sell it at more pumps around the country. Morrisons also sell an 85% bio-ethanol and 15% petrol mix at a few garages known as E85. But you can only use this in specially converted cars or flex-fuel cars.

## How do I convert my car to bio-ethanol?

You can either buy a kit and do it yourself or get a professional to do it for you. You need to decide whether you want your car to use just ethanol or be 'flex-fuel'. Flex-fuel means your car can use pure petrol, pure ethanol or a combination of the two and you will have more fuel options.

You can find out more at the following websites:

- [www.greenfuels.co.uk](http://www.greenfuels.co.uk)
- [www.britishbioethanol.co.uk](http://www.britishbioethanol.co.uk)
- [www.cat.org.uk/information](http://www.cat.org.uk/information)

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