Transition Town Haslemere

# CASE STUDY

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## What actions were taken? *E.g. energy efficiency improvements, building work, growing vegetables, changing transport methods etc*

I converted our car about 8 years ago to LPG, to save CO2, and also cut other pollutants and reduce fuel costs. I am now on my 3rd LPG car, and can share some of the pros and cons.

## What benefits have been achieved *e.g. cost savings, reduced carbon emissions etc*

The cost savings are potentially very good. The fuel costs will be around 55-60% of the costs for the petrol version of the car. My cars have averaged about 32 mpg on LPG, which is the cost equivalent of 55 to 60 mpg on petrol or diesel. You won't get that with a family-sized diesel car (Vectra in my case).

The pollution is as low as you can get. No smoke or particles, virtually none of the other nasties, and slightly less CO2 than a Diesel. It is also using a fuel which is currently an excess waste-product from refineries. If it isn't sold as LPG, it has to be expensively and inefficiently converted into liquid oils, with massive energy costs. Until recently refineries used to flare the stuff off as it wasn't worth their while to convert it to liquid. (Now that is outlawed!)

The fuel burns so clean that the engine wear is far less than it would be on petrol. So for high mileage drivers LPG is very good news all round. And the engine is generally quieter on LPG.

LPG filling stations are widespread – about 1200 of them in UK, with published maps, and also free downloads for your satnav. A reasonable percentage of the motorway service stations have LPG. And if you run out of LPG, it switches to petrol automatically.

The downsides are:

1. Cost of conversion – approx £1800 done professionally, which will take you about 30,000 miles to pay back on a mid-sized car. If you only do 5000 miles a year, forget it. It's for high mileage drivers (or gas guzzlers!).

2. Boot space: they fit the LPG tank in the spare wheel well, and have a space-saver spare in the boot or a can of tyre sealant + an electric pump, taking up some luggage space.

3. Servicing: I won't pretend that LPG is trouble-free. It does need servicing, and if you are unlucky it can get expensive. My 2nd LPG car, with 140,000 miles on the clock, needed new LPG injectors, which cost around £600 all-in. Ouch!

4. LPG cars are not allowed on the Channel Tunnel shuttle.

5. Refuelling is more complex than with petrol or diesel, because the pump nozzle has to lock onto your car and seal before pumping starts. Perhaps surprisingly, I think LPG is safer than petrol in terms of fire and explosions, for a variety of reasons.

**Further Information:** *e.g. lessons learnt, suppliers, products, websites etc*

Don't be tempted to do a DIY conversion unless you are very determined. I did this on my first LPG car; the parts cost me about £500, which was cheap. However, it was always temperamental, and I had some difficulty getting it certified.

Some cars (especially Vauxhalls and Saabs) were made as factory-fitted LPG systems. In theory a very good thing, but having owned two high mileage examples bought second-hand, I would be hesitant to recommend this route, as you have no warranty of any kind.

A reputable LPG converter (for example AFS, Slinfold, who do my servicing) will offer a 2-year warranty on the conversion, plus possibly a 3rd year for extra cost. This is probably the best route to go down for reliability and peace of mind.

Certain engines are reputed to be unsuitable in the long term for LPG, suffering from valve wear (similar to the problems which occurred on some cars when we changed from leaded to unleaded fuel). A reputable converter will advise which cars and engines are suitable. Quite a lot of recent engines (e.g. Vauxhall VVT engines from 2006 onwards, and many Fords) are NOT suitable.

All the above information might put you off the whole idea. But bear in mind that Diesels are not trouble-free either. Modern Diesels are very reliable, but when they go wrong, the costs are eye-watering. Anything on the turbo or fuel injection system which goes wrong can cost thousands, not hundreds to fix. In that context a petrol engine with an LPG conversion is probably no more risky, and is cleaner and cheaper on fuel.