Climate Crisis Brief - April 2022

April Grimley Climate Crisis Brief

Transport - Road vehicles - reducing our fossil fuel use

In February we took a look at how we might reduce our domestic fossil fuel consumption along with our bills (given the rapidly rising cost of fossil fuels!) **and** our impact on global warming.
For those who followed the advice, I trust you are beginning to see the the reduction in consumption and savings?

In a similar vein, I thought we might take a look at our use of vehicles this month and how we might further reduce our fossil fuel use and costs. Road transport is responsible for around 30% of our total direct fossil fuel use!

Bit of the history behind the fuel efficiency of road transport, and cars in particular. It represents another success story over the years for the lobbying by the fossil fuel industry pursuing their own vested interests and profits, in conjunction with motor manufacturers, over the interests of their customers - us and mitigating global warming.
A century ago the first mass produced car – the Model T Ford – delivered 25 mpg. Today the average American motor delivers…….. 25mpg!
In the UK it's 38 mpg! That is the automotive industry in the UK has delivered an efficiency improvement of 0.13mpg per year over the last 100 years.
We will park the topic of Government action, or rather the lack of it, on this issue!

So what action might we take at a personal level to reduce our fossil fuel use and impact on global warming?

Short journeys?

- Walk, bike, – think of health benefits!
- Question whether the trip is really necessary or can be deferred and combined with another one in the near future?
- Car share.
- Take the bus.

Longer journeys?

- Coach or train

So what about use of a current car?
Basically boils down to load, aerodynamics, rolling resistance, route planning, and not least – driving technique!

Load. Weight of the motor impacts on fuel required to accelerate, rolling resistance, and brake and tyre wear.

Action. Minimise car weight - Remove all unnecessary weight that is not required for the journey – chairs, tools, kids kit, golf clubs, etc.
Air conditioning - if fitted not only adds weight, but when switched on, depending on outside air temperature, will cost you another 10% to 20% more fuel. If hot, below 50mph, wind down windows and accept the added drag.

Aerodynamics. Anything that interferes disrupts the airflow over around the car, not only adds weight but costs more fuel due to the additional drag. A roof rack will cost you another 4% of fuel, then bike racks etc?

Rolling resistance. Tyres. Every 6psi down costs another 1% fuel. I always inflate my tyres to max car load - never noticed uneven tyre wear.

Route Planning. Use your satnav to pre-plan the smartest route that avoids congestion, roadworks et cetera and permits the smoothest driving.

Driving Technique! Basically - drive smoothly, anticipate, maintain momentum, and speed(?)!

- Harsh acceleration and braking can use up to 30% more fuel and will cause increased wear and tear on tyres, brakes and vehicle.
- Shift into the highest gear as soon as practicable.
- Remember the 2 seconds rule, or more, between you and car in front - subject to traffic. Allows you to assess the traffic ahead and plan to maintain momentum rather than stop go, stop go.
- Switch off the engine if you think you will be stationary for more than two minutes.
- **Speed!!!** Driving at 80mph will cost you up to 25% more than 70 mph! 70 mph down to 60 mph will reduce fuel consumption by c10%. **Typically cars are most fuel efficient at 45 to 50 mph.** If the Government is serious about reducing fossil fuel consumption, then reducing speed limits on motorways and dual carriageways to 60 mph, and on single carriageways to 50 mph would save the UK 3% of our **Total** direct fossil fuel consumption!

Reducing speed and smarter smoother driving doesn't just save on our fossil fuel use, it also saves on wear and tear on the car, reduced tyre wear and hence micro-plastics flowing into our rivers and oceans, it reduces accidents and the associated costs to insurance and NHS.
These savings are not insignificant! Some 30 years ago I put all the 3000 drivers in the Environment Agency through a one day efficient driving course at a cost of quarter of million pounds. With considerable opposition - one can criticise someone's partner - but not their driving! The payback in reduced accidents alone was six months! Fuel savings per driver varied between 3% through to 26%. Overall savings in fossil fuel to the Environment Agency in the first year was 10%!

Again, as with our domestic heating, the "3 M"s apply. Measure the amount of fuel you put in the tank each time, having used the trip note the mileage covered since the last fill up, work out the mpl/mpg. Consider reasons for any change.
If a business - fuel cards are very useful for monitoring drivers performance.

I wish you all safer and more efficient driving!

For anyone interested in saving fuel in all transport modes this link might be of interest. Some of the data 10 years old - but basic physics has not changed!
https://www.youtube.com/watch?v=XIVcD54TNow
Dave Stanley.

Residents are welcome to join our Grimley Parish Council climate crisis working party.

The working party was set up by the parish council in late 2021 and consists of residents and parish councillors. The group works broadly within the remit of the climate declaration made by the parish council in 2008. The articles released by the group chair Cllr Dave Stanley are published at his own expense in the local parish magazine (and in the Worcester News (local newspaper)), are not voted upon by the councillors and are included on the parish council website in order to provoke thought and debate and encourage residents to educate themselves on the topics included.

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