



Amberley and its electrified future

A global energy transformation is underway, the age of electricity, powered by renewables. Solar is the largest source, with wind second, and together they are predicted by the International Energy Agency (IEA) to account for more than half of world electricity generation by 2050 (nuclear will be another large contributor).

China has become a green super power, now generating enough clean electricity to power the entire EU (installing equivalent of 100 solar panels per second). This is not altruism – China recognised its dependence on foreign oil and gas, the economic rationale of transition, and its potential for influence abroad. Even in the US, where the Administration has sought to thwart the solar and wind roll-out, clean energy has increased equivalent to Turkey's total power generation, exacerbated by the Iran situation and the growth of data centres. The direction of travel is clear – renewables will do well regardless of politics when they are shown to be affordable, efficient, and a domestic resource.

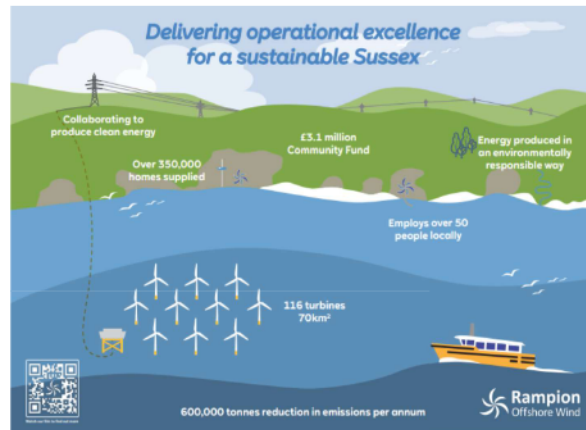
In the UK the National Grid is undergoing a fundamental transformation to accommodate radical digitisation, and growth in renewable power and storage (£30 billion investment over next four years). For example, there are now millions of generators both producing and distributing power, as well as consuming it. The grid is becoming greener, substantially bigger, more distributed, more flexible, and more intelligent. Anyone who uses the Kraken software platform, developed by Octopus Energy and now licensed elsewhere, will understand such development well when the car is automatically charged when electricity is cheapest, and when to sell power back into the grid at profit.

So where does this leave Amberley? In April 2024 I wrote a *Wildbrooks Magazine* article about Amberley's 'dirty secret': a rural idyll with one of the highest carbon emissions per capita in the country, due principally to its oil-fired heating, and extensive use of private transport powered by fossil fuel. Anecdotally, positive change seems to have been incremental.

On electric cars, there was a wonderful article recently by Rory Sutherland, which I believe worth paraphrasing:

The scenario is one where we are all driving electric cars. A rogue engineer from Volkswagen then comes up one day with what he believes to be a brilliant idea, the invention of a petrol car. He takes it to his boss:

Engineer: It's wonderfully complicated. We have a huge tank of inflammable liquid that feeds into cylinders where we engineer a series of explosions. Then as they only produce



a torque in a limited range of revolutionary cycles, we need a gearbox. We need oil for that. Also air and water filters.

Boss: OK, does it perform better, faster?

Engineer: No.

Boss: Is it quieter?

Engineer: Are you kidding?

Boss: Is it cleaner?

Engineer: Oh no, belching stuff out the back all the time!

Boss: Cheaper?

Engineer: Uh, no.

Boss: Simpler to make and maintain?

Engineer: No, 250 parts in a drive chain (EVs have seven).

Boss: So what's the upside?

Engineer: Can refuel it quickly.

Boss: At home?

Engineer: Are you insane? Have to drive to a massive place where you can buy expensive Guinness and ping meals.

Boss: So the 0.5% of the population who routinely drive 350 miles a day and have enormous bladders and don't need to stop, will benefit slightly, the rest will not.

The engineer subsequently found alternative employment.

Electric cars are now competitively priced to buy and lease; they are cheap to run for as little as 2p-a-mile; with average savings of £1,400pa in running and maintenance costs; also you cut 1,900 kgs of pollution. And 95 per cent of EV owners say they will never go back to petrol.

A no brainer, surely?

Heat pumps are over three times more efficient than oil-fired boilers. They are cheaper to run, and will be cheaper still when the government removes gas from the wholesale electricity price. No need to buy oil which is subject to price spikes, as with the wars in Ukraine and Iran. No need for smelly oil tanks. No combustion, and local pollution. Eliminates CO2 emissions. With solar panels and a battery, it is also possible to mitigate electricity costs. And you can sell excess power back into the grid. Some heat pumps now provide cooling in summer, too.

The government is now giving a grant of £9,000 to switch from an oil-fired boiler to a heat pump ([gov.uk/clean energy](https://www.gov.uk/clean-energy)). Heat pumps do require good insulation, and they are not suitable for all houses (though we have an old house and it works well). Has to be worth looking into.

Let's ditch Amberley's 'dirty secret', join the power revolution, and make our rural idyll a sustainable example to others throughout the land.

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