

# Which technologies could replace our fossil fuel driven economy?

With most people relying on fossil fuel for vans and cars, deliveries, holiday travel and heating and with most industry using gas coal and oil for its factories and processes, shifting from fossil fuels requires an enormous investment and change.

Net zero enthusiasts regularly tell us a huge increase in wind farms, onshore and offshore, would enable a faster UK transition. Yesterday I asked them to guide us on how quickly the grid and street cable systems can be greatly expanded and how this will be paid for. We await cogent answers. Without more grid and cable the wind farms cannot send their power to customers.

Today I want to ask what do we do on days and at times when the wind does not blow or blows too much? There are various technical answers being explored. There could be more large battery farms, where the batteries are charged on good wind days and discharged to the grid on low wind days. There is considerable power loss on charging and discharging, and issues over effective battery lives.

There is the possibility of using surplus wind power on good wind days to make green hydrogen. Direct drive hydrogen engines are arguably more effective for heavy plant, trucks and buses, than trying to make powerful enough batteries. Hydrogen home heating may prove warmer and better than heat pumps. A hydrogen system would require large plants to make and store commercial quantities of the gas and a distribution system for it.

There is the possibility that new synthetic or plant based fuels might emerge which are thought to lower CO<sub>2</sub> output and could be used in a variety of transport, industrial and heating uses.

The problem of intermittency could be abated by one or more of these answers. It would still be difficult to have enough battery or stored hydrogen capacity should a long cold windless period emerge in winter. Each of these answers requires further work on best methods for achieving them and on how they would be rolled out quickly and paid for on a large scale. Going over to hydrogen or to electricity for the many things that currently run on fossil fuels requires large investment in new grids, cable systems, and hydrogen pipes, stores and deliveries. The same applies to other new fuels.

When might we get greater clarity on the preferred technologies, the timetables and costs?

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## Expanding the grid

To get to net zero the UK would have to shift most people away from petrol and diesel and aviation spirit to electric transport, shift most away from fossil fuel to electric heating, and eliminate most fossil fuel use by business. This would require quadrupling the grid capacity and greatly increasing capacity of the cable system to every home and factory.

It will also be essential to end the output of the coal and gas power stations and find a way of storing and time shifting the output of wind turbines and solar panels.

How realistic is this on the time scales the government wishes? How is this done so there is enough renewable power in time for the new EVs and heat pumps? It's pointless to put in wind farms if there is no grid to carry the power and self-defeating to spend on EVs and heat pumps if the power is generated from gas.

So far there is no plan I can read for a massive expansion of the grid and cable systems let alone large sums of committed capital to build out the necessary facilities. There are planning rows over the modest additions to the grid being discussed. There is little thought about digging up the streets to provide more power to each home, nor positive thoughts about trying to bury the cables somewhere other than under the middle of the main roads.

Who will pay for all this? Presumably it will fall to electricity consumers as ways are found to add all this to bills. It would be good to know how much of an increase this might entail.

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## My Interview with Talk TV about the Bank and inflation

I gave an interview yesterday to Talk tv about Bank of England monetary policy.

I called for an urgent review of their economic model and forecasts. The Bank has admitted its forecasts have been wrong on inflation for sometime but have announced a long-winded review of what to do about it. If they cannot forecast inflation well it is difficult to understand how they can carry on setting rates to adjust inflation.

Their justification of a fourteenth rate hike this week was they needed to depress demand more to cut inflation further. They wish to do this by hitting

the spending power of those with mortgages. It does not seem to have occurred to them that raising rates increases the spending power of those with savings. Their current policy is creating a manufacturing and housing recession.

I called for an end to selling bonds at huge losses. They pass the bill to the Treasury and are now lurching from creating too much money to destroying too much. Letting their balance sheet contract as the bonds repay is sufficient a squeeze.

Why does the Bank lurch from inflation to recession inducing policy yet again?

find my interview with Talk TV's Mike Graham on You tube where we discussed the Bank of England's forecasts and monetary policy.

You can find it between: 33:4344:23.

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## Competition is good for many public services

We have discussed the strange agreement in much public debate that there are a defined number of public services which need to be in public ownership or control owing to their importance to our lives. These include the obvious ones of health and education, where it is a generally agreed fundamental that the state should pay for the care and education. There is no need for the same state involvement in water, rail travel, and electricity where customers pay. The danger is they want monopolies in the utilities, when customer choice is crucial to higher standards, more innovation and lower prices.

Health and education are special cases. All main parties agree healthcare and schooling should be available free to anyone who needs them, so all agree the state has a big role. There remains choice and competition for those with good incomes, with some people opting to send their children to fee paying schools or to buy private healthcare despite their eligibility for the free public service. The state allows a smaller private sector to compete whilst charging patients and pupils. The state also harnesses substantial private sector involvement in these services. Both main parties have accepted all drugs are supplied to the NHS by competing companies, many for profit. Both have accepted substantial private provision of meals, cleaning and other essential services within health and education. The NHS continues with many GPs as private contractors. The large pharmacy based sector provides healthcare for profit for more minor ailments. Labour introduced the idea of the NHS buying in medical capacity from private hospitals and clinics.

The other ones on the list of those who think the state should own or run them are all privatised utilities where customers have always paid all or most of the bills for what they use. Instead of offering everyone free or subsidised water or electricity, money is given to those on lower incomes to help them afford these bills for essential needs. There are competitors to many of these offerings. Rail travel faces formidable competition from road and air travel with much larger private involvement. Competition was deliberately built into the privatised models for telecoms and energy, to provide more forces for innovation and better prices. Water was not given so much competitive challenge which has lessened the favourable impact of privatisation. Some say these are natural monopolies.

The truth is there is no natural monopoly. It is easy to have competing producers of electricity. You can run competing trains on different lines – west coast and east coast to Scotland for example – and you can use a regulator to ensure train pathway allocations over fixed track for competing services in many places. You can let competing water companies gain access to common pipes, as oil and gas suppliers share pipes for some of their deliveries.

Competition puts the customer in charge. It drives innovation and productivity improvements and forces companies to deliver high quality services. Monopoly does not create the same benign pressures and leads to everyone blaming the government that owns them for poor performance and poor quality. Instead of calling for further nationalisation of water or rail those who want better service and more provision should call for more competition.

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## [Why legislating in the EU was a bad idea](#)

I was used to an open democratic process when helping make laws in the UK. A Green paper setting out the problem and legislative options invited those with views to suggest improvements or alternatives. A White Paper setting out a detailed government proposal invited forensic criticism. Three readings in each of the Commons and Lords, with a detailed scrutiny of the draft line by line on Committee ensured plenty of opportunity for MPs, peers and outside interests to defend or attack the idea of the bill and to work to improve its details. At every stage the public could be involved. Every stage was undertaken in public.

The EU system is so different, restricting public discussion and scrutiny. The main debates over the draft laws took place in secret. The Commission drafted the law. Ministers from member states were not meant to draft laws or even to table amendments. It is true that over the years the European Parliament did develop more open procedures to consider draft laws, but only

based on laws the Commission had written and the Council meeting in private had approved.

As a legislating Minister I wanted to open it up for wider public scrutiny. I did what I could by showing drafts to the UK parliament and encouraging debate there before I went to Brussels to negotiate. I kept in my mind what each country had said about the draft when the Council came to debate it and sought to share this with the press. The press were not interested. They explained to me that they needed stories on all the days I was not in Brussels, and the Commission took a dim view of anyone saying what had happened in the Council. Of course many Ministers did tell their national press what they wanted them to know about their own role, without having to worry about anyone having a different recollection of what they said and did.

In practice most Ministers went along with the Commission that they needed to reach an agreement, however needless or undesirable yet more laws might prove. I objected to the way there was no official opposition saying either we did not need that law, or telling the Commission how it needed a major rewrite. At every stage in the UK Parliament the opposition is there to challenge the need for a law, the principles behind the law, and the detail of the draft.

No wonder we ended up with so much law that proved to be anti innovation, complex, bureaucratic and costly. It is a major brake on the progress of the European economy.