The End of The ICE Age

Written by Jules Procter. April 2023

Introduction

The move away from internal combustion engined (ICE) vehicles to electric vehicles (EV) will bring about not just change in how we move about, but will move us towards a radically different approach to how we lead our lives. We have a climate crisis to fix, and we are past peak oil, so things have to change.

1) Autonomous vehicles (AV).

These will not only replace personal transport for many of us, but will allow businesses to use AVs to deliver goods to customers and other businesses, and may even give rise to the autonomous wheelie bin to take our rubbish away. (See my stories "Millie's Second Helping" and "The Shenington Goldmine", written over ten years ago.)

2) Electricity generation.

The UK we have the opportunity to generate huge amounts of electricity from wind, solar and (the much under-appreciated) hydro. Oxford Low Carbon Hub reckon we will need about three times the electricity we currently use, as we move to an all-electric society. I think that figure should be five times, as the "locally generate to locally use" model they have identified is less efficient than centrally generated systems. Also , it gives the opportunity to use "surplus" electricity in beneficial ways, such as powering AI (Artificial Intelligence) systems and in domestic housing. (See below.)

3) Surplus power and AI.

When we get to the point of having more electricity than we need for our basic needs, then the excess can be directed into powering large AI computer systems. This will lead to problems being solved at a cheap cost, improving medical treatments, for example, and generally identifying more appropriate solutions to existing, and future, problems.

4**) Housing.**

This is a real problem in the UK. For decades we have had a poor quality of housing, following such disastrous policies such as Right To Buy, and the dismantling of local council housing stock. It doesn't make sense to just bulldoze all the energy-inefficient houses, so we have to do something more radical. Use the extra electricity to keep building habitable, until they can be either retro-fitted with insulation, or replaced. (Of course, some of our older thatched properties, for example, will just continue to need more power to keep them viable.)

5) Resource Efficiency

There will be a move of thinking about "energy efficiency" to "resource efficiency". So, very many of the existing ICE-powered vehicles will be converted to EVs, using approved kits. A lot of resource has gone into making these cars and vans, and it is irresponsible to just scrap them. Their numbers will reduce, as we move to autonomous transport, but in the interim, they will have their place. Equally, huge effort will be required to process existing man-made plastics, to reclaim the chemical energy locked up in them, or to move them into being able to properly being recycled. This resource efficiency view will also need to be applied to the housing stock.

6) Manufacturing and Business Processes

We will move away from a "just in time" process of making and moving, to holding more components, and stock, and using a more tiered approach to logistics. Electric railways will do the heavy shifting, with lower load capacity EVs handling distribution.

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Comment

Letting go of the obsession with ICE cars, will open us up to other changes we must make if the climate emergency is to be addressed meaningfully. We need to be open to change, to embrace it. Attitudes, such as NIMBY(Not In My Back Yard), have to change to PIMBY (Please, In My Back Yard).

Very many of the technical changes required to start to address the climate emergency are already available. We need the social and political forces to change as well, through education and example. The end of the ICE age, is just the beginning.