

by Derek Morrison



Advert for Waverley Electric Car in
Saturday Evening Post 1910
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*I want to buy an electric car
But that won't get me very far
Need Nissan Leaf for commutes
And Tesla Model S for longer routes
So such purchases make no sense
For going green at great expense;
Needs fast recharging stations
Easily found throughout the nations
And battery technology to mature
So in going further you can be sure
At destination you will always arrive
And not dependent on how you drive;
But vested interests are at work
In the background they do lurk
Much investment in fossil fuel
Oils the wheels of existing rule;
Remember, electric cars are not new
When you take the longer view
Combustion engines they came later
But energy stored was much greater*

*For that fuel in the tank
Is such a simple energy bank
Taking single minutes to restore
No plug in wait, no kids to bore;
But fossil fuel is bad news
So cleaner energy we must choose
An electric car does make sense
But governments sit on the fence
Nudging is now past its sell by date
Time for push, before it's too late.*

[To listen to this verse select below]

<http://www.cyberstanza.com/wp-content/uploads/2015/04/ElectricCar.mp3>

Commentary

Electric cars aren't new. They have been around since 1837 and for a short time near the end of the 1890s, because they were cleaner and could just be driven without too much preparation, they became more popular than the steam or petrol alternatives of the time. Their limited range and speed, however, meant that when the the convenience issues with internal combustion transport began to be solved, e.g. starter motors rather than crank handles, and easier access to fuel, the electric car eventually lost out. By 1912 the internal combustion engine dominated the market but electric cars were still around in the 1920s (Source: [Low Tech Magazine](#), 2010). While I know many of an academic bent would avoid mentioning Wikipedia as a source I think its current coverage of the [history of the electric vehicle](#) is excellent and well worth a visit for those interested in more detail about the history.

It would be good to think that we must have progressed considerably since 1837. But yet ...

Despite government, i.e. tax payer, subsidies in the UK the electric vehicles are still premium priced products meaning that only those with high disposable incomes are in a position to participate (or experiment) in the electric vehicle transition. That's certainly an impediment

to mass transition but putting aside the undoubted environmental benefits that might not be such a bad thing. Why?

Back in the 19th and early 20th century “range anxiety” was always an issue for electric vehicles and still is today. Range anxiety arises for several reasons but three most important are: how far the vehicle can travel before needing a recharge; the presence of a good reliable recharging infrastructure; how quickly the electric vehicle can be recharged.

The current lack of an effective and efficient national electric vehicle charging infrastructure does not bode well for those wanting to make the leap. There are many accounts available on the web but a relatively recent one in the Financial Times illustrates the challenges clearly, [Power struggle stalls London's electric cars](#) (Financial Times, 6 February 2015).

But what if a fast charging facility was to be provided on the UK's motorways? But even here commercial disputes appear to be impeding development, e.g. [Dale Vince v Elon Musk: Electric Car Tsars at War Over Motorway Charging Stations](#), The Sunday Times, 18 March 2015.

Unless the current noise and confusion about the paucity and unreliability of the UK's electric vehicle charging infrastructure is resolved soon then the transition to electric vehicles risks becoming another false dawn. But yet I suggested earlier the delay may be no bad thing – despite my personal desire that this wasn't necessary.

If there was a mass transition to electric vehicles now and even if every current fueling station was equipped with fast (standard interface) electric chargers – they still wouldn't be fast enough. Filling a vehicle with petrol or diesel currently takes only a few minutes and even then there can be queues for the pumps. Imagine a refuel that takes an average of 20-30 minutes or more and has to take place every 100 or even every 200 miles or so. The queues for the recharging stations would be backing up traffic on every carriageway and every entrance to a motorway service station. The commercial optimists fondly imagine that drivers would view this as a frequent opportunity to rest and of course purchase refreshments. Wishful thinking. It would just end up being another impediment to a journey.

So some significant technological progress is still necessary, i.e. increasing the capacity of batteries, reducing their weight, and reducing the time that is needed to charge them to full

capacity to a point equivalent to that of refueling the average family car. Oh ... and the price of said electric vehicle should be the equivalent of their internal combustion engine equivalents. Until then the electric car is the province of those in a position to indulge themselves (for whatever reason) and that, in our current state of technological and infrastructure development, is probably just as well.