

Here's Why Electric Cars Are Useless

TESLA



Range, on the flat, just over 200 miles
in summer. In winter lucky to get 100 miles.
And in winter - no heating!

TESLA



70KWhr battery
75 minute charger requires 400v @ 120KW = 150KWhr
50% of charge energy wasted as heat
Coal required to generate this = 43kg.

To suggest, as some ignorant people have, that electric cars 'emit no CO₂' is absurd because the power stations that charge them do. To charge an electric vehicle (such as a Tesla), *just once*, requires the burning of 43 kilogram of coal. A petrol car will require about 20 kilogram of petrol for the same distance. It follows that the electric car is emitting more than twice the CO₂ of a petrol car.

Here are the sums:

Drax uses about 0.31 kilogram of coal per KWhr generated.*

A Tesla battery is rated at 70 KWhr and fast charging is only 50% efficient. It will need 140 KWhr of electricity for a single charge; this works out as about 43 kilogram (0.31 × 140) of coal for a full charge.

The cost of electricity for the range available in a Tesla—200 miles in summer; 100 miles in winter—works out at £22.50. The petrol for 200 miles costs very little more and most of that cost is tax (currently about 60%) - about £28. In winter, for 100 miles, the petrol costs just £15.



During trials between 1927-30 of British steam locomotives a typical result was that, for a 500 ton express train, coal was consumed at the rate of 20 kg per mile.† Over 200 miles therefore 4000 kg was consumed. Scaling down to a 2 ton car: $4000 \div 250 = 16$ kg coal. Even allowing for economies of scale, compare this to the 43 kg required by a Tesla.

Further issues

- Battery cycling - the deterioration of the capacity of a lithium battery with charging - must be allowed for costing about £3 per cycle.‡
- Fire: even small lithium batteries are liable to catch fire or even explode. The huge dangers for occupants in event of an accident are obvious. Firehoses would only exacerbate the problem, causing electrocution of victims.

* www.euronuclear.org/info/encyclopedia/f/fuelcomparison.htm ; figures from *Greenpeace* are higher: 0.7 kg/KWhr www.energydesk.greenpeace.org/2013/02/14/much-coal-burning-will-keep-burning/.

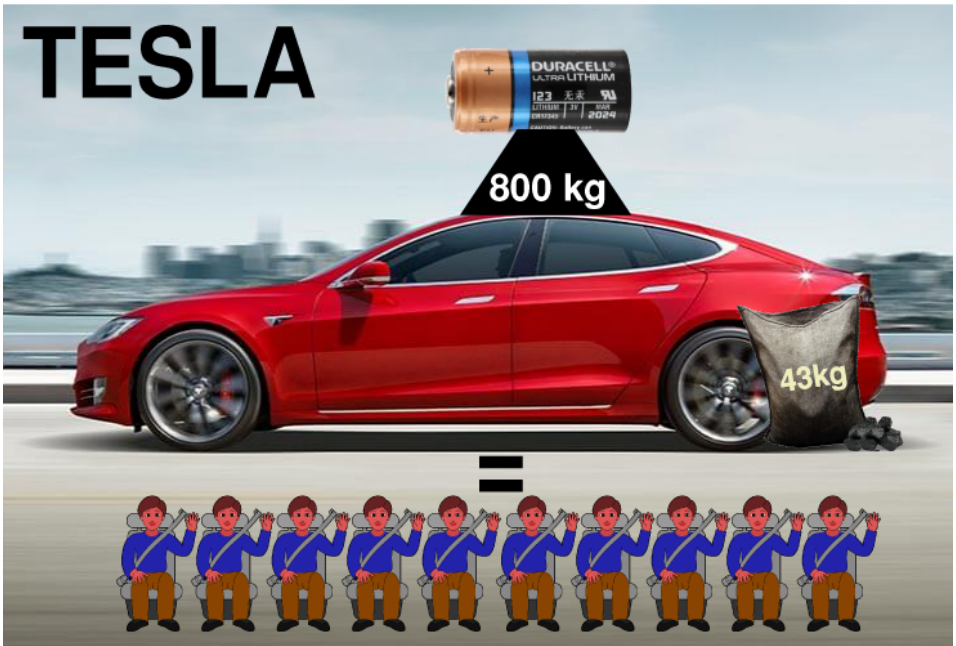
Windturbines take 25 years to pay off their CO₂ debt (concrete, metal mining and refining etc). They seldom last more than ten years.

† *The British Steam Locomotive 1925-1965* by O.S.Nock, Ian Allan 1966. p67 Dynamometer Car Tests 1927 on LMSR Engine Royal Scot No. 6100.

‡ Incidentally, battery 'swopping' is unviable. An average garage refuels 1000 cars a day; how are they going to recharge 1000 batteries every day @ 5-12 hours each?

Weight

The Tesla battery weighs 800kg—that's nearly a ton—equivalent to 10 people.



Battery/petrol equivalent weight ratio—in summer 50:1, in winter 100:1.

Further hazards

In winter, in severe conditions, electric cars become death traps. Firstly, the battery power halves every ten degree drop in temperature, so you are likely to get stuck in a snowstorm. Then there will be no heating in the car and a blizzard outside. You will freeze to death inside and, outside the car, you'll die seeking help. This would not happen in a petrol car. A petrol car's engine remains at full power down to the last drop of petrol and has plenty of heating. The electric car loses power almost immediately as the battery drains—and has no heating.

As most of the numpties, who think electric cars are viable, live in towns the above point doubtless passes them by, but the huge potential for traffic clogging due to 'dead' electric vehicles has not been considered*, nor has the issue of time to recharge. Currently an average petrol car takes about 5 minutes to fill up with petrol and depart. If an electric car takes a minimum of 75 minutes to recharge, the queues are going to be astronomical and the time wasted also astronomical.

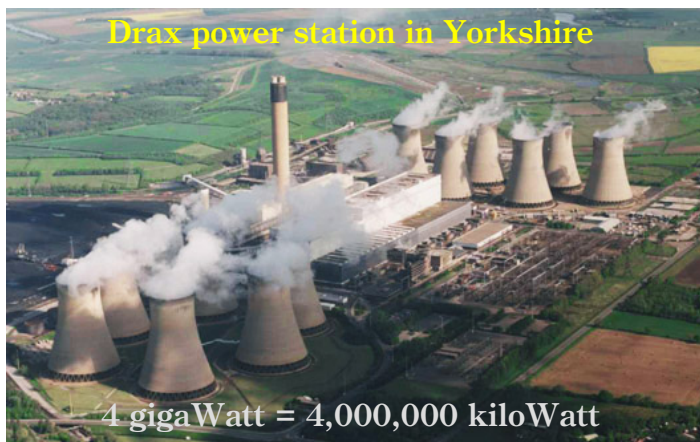
* One type of electric car is called a *Leaf*. This will give a wholly new meaning to 'leaves on the road/line'!

The BBC tried to take an electric car from London to Edinburgh. It took more than three days, slower than a Stage Coach. Strangely, people sometimes need to get to places quickly.

In case anyone thinks that there is a miracle battery just over the horizon, I can absolutely assure him or her that there is not. Battery technology is mature, and, to quote Mr John Hume, “Miracles do not happen.” (at least in technology).

Just where is all this power to come from anyway?

The Climate Change Act requires that by 2050 all gas heating be replaced by electric heating and all cars be electric. Besides the stupidity of turning huge amounts of electricity back into heat, clearly no one in government has done the maths. The results are horrendous!



17 million gas using households	@	30kW
<i>(to replace gas boiler)</i>		

17 million chargers for electric cars	@	8kW
<i>(assuming only one car per household)</i>		<u>38kW</u>

all needed at peak domestic demand (5pm-10pm):

$$38\text{kW} \times 17,000,000 = 646,000,000 \text{ kW}$$

$$\div 4,000,000$$

= 160 Drax sized power stations

Were these to be run on biomass (woodchips) as 50% of Drax already is, this would consume, annually, four times the total annual timber harvest of the USA!

Plus we will need to dig up every street to lay much bigger cables.

Electric HGVs anyone?