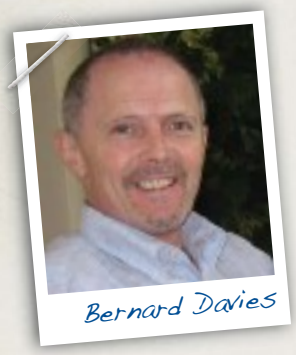
ON THE SOAPBOX

Will power issues roadblock widespread EV take-up?


Bernard Davies

This month, **Bernard Davies**, Director at Fleet Force Ltd, discusses the issues surrounding recharging electric vehicles and where the power will come from.

SINCE MY last column the automotive world has changed a bit. The truly dreadful scale of the Japanese earthquake and subsequent tsunami filled our television screens for some days and it seems trivial to align the tragic human cost of that disaster with the effect on the world of commerce. But we all know that repairing the infrastructure and helping people rebuild their lives will be aided to a large degree by a swift economic recovery.

The Japanese manufacturers have all suffered huge disruption to their production, impacting on their cash-flow, profitability and their market penetration and, even though their factories are starting to return to production, the component suppliers appear to have been unable to meet demand. And of course that doesn't just only affect the Japanese manufacturers – many components used in vehicle production around the world come from Japan.

And before the earthquake the so-called "Arab Spring" was making its way through a number of North African countries. The Libyan conflict, equally tragic for the inhabitants of Libya as the earthquake in Japan was for its residents, has been having an effect on the price of oil.

In 2009 oil was about $60 a barrel; it's now hovering around the $120 a barrel level, driving the price of gasoline and diesel ever upwards. In 2009, a litre of diesel in the UK cost £0.90-£0.95; now you have to look really hard to find it under £1.40 a litre and there's no sign of any slow-down in prices. And this continued rise would appear to be unrelated to Libya's oil production, which is only equivalent to about 2% of the world's oil – I suppose it's more a reflection of the current situation in the Middle East in general and, of course, speculation by commodity brokers.

So maybe the current interest in electric vehicles and hybrids has come at the right time. There's no doubt that the existing range capability and recharge time of plug-

in battery electric vehicles is severely limiting if your family vehicle has to perform a multitude of different tasks from commuting to family holidays, but the electric option is starting to look more attractive...

But there's a catch. Where will the power to recharge your vehicle come from? I'm talking a few years in the future here, but the events at the Fukushima nuclear plant have caused many people to question the safety and therefore wisdom of nuclear power. It's a sensitive subject at the moment and maybe not one that is for open debate in some governments, but our general requirement for electricity is already rising without the added burden of recharging electric vehicles – not that current EV volumes are going to cause too many sleepless nights in the generating industry. However, power stations regardless of how they are fuelled – nuclear, fossil or renewable – cannot be built overnight and decisions will have to be taken to safeguard future supplies. Natalie's excellent Comment column in last month's issue continued the EV "greenness" discussion and with many eminent scientists and organisations publishing papers, this subject is set to remain in the public view for the foreseeable future.

Paradoxically, as oil prices rise, so do margins. Even allowing for an increase in the break-even price, which Saudi Arabia have quoted as having risen $20 in the last year (up now to $88 a barrel), exploration and extraction in the more inaccessible and expensive places becomes more commercially viable.

So, the price of conventional fossil fuels will almost certainly continue to rise, making electric vehicles a more cost-effective day-to-day/commuting alternative, but the electricity may well be coming from fossil fuels...

Sadly, we have not yet found the silver bullet (is there one?), but I seem to recall from my brief exposure to physics at school, many years ago, that burning one fuel to make another is not very efficient.

I wonder, is this another "elephant in the room" for electric cars?