Comments to the 2011 version of “Don’t Buy an Electric Car”.

david says:
September 23, 2011 at 15:57
Your criticism of the electric car seems to have been the focus of a criticism of many other solutions that are being implemented to mitigate climate change. Assuming that you accept the IPCC recommendations concerning climate change, then we need to be testing and implementing many different trials of solutions to the climate change conundrum, some will work and some will not. We won’t know for sure until they are tested and we need to of course do risk assessment on all of them if they involve large geoengineering. See Ravetz and Funtowicz on Post Normal Science or at the NUSAP website. http://www.nusap.net/ It would appear with your criticism of the electric car, that you are allowing the perfect to be the enemy of the good. Is that a basis for a positive vision of the future?

1. **The Risk Monger** says:

   September 23, 2011 at 17:18

   Thanks David. I expressed in an earlier blog that I don’t think there is much point to mitigation. Although I am attracted to the ideas of several geoengineering projects and long for a return to the glory days of Brunel, I sadly feel that science has lost so much of the public trust that any major project would be handicapped by public outrage.
   Adaptation is our only option – Opportunism is not a good option. Certain industries like the auto or solar industries see decarbonisation as a growth business, but they are using good PR to hide the fact that they are increasing CO2. This blog is a continuation of another blog which prompted some discussion on how to make the auto industry behave more sustainably (besides sustainable PR) – I am still looking for CO2 data for the solar industry (talk about smoke and mirrors). If CO2 is cumulative, then we need to stop increasing CO2 today to decarbonise in 2050 – that is madness. I don’t think it is a question of “allowing the perfect to be the enemy of the good” but rather trying to raise awareness that this green perfection is leading the bad to become disasterous.

Allannde says:
September 23, 2011 at 21:27
The presence of oil is what made the car possible at the present scale. It also made the world population more than six times greater than it was before because it fueled an industrial revolution. It made what was basically a rural life for most people into basically an urban life for most people. Individual transportation like a car is almost a necessity. The horse was terribly polluting in large urban areas and the car was welcomed as a relief from that.

Mass transit is a possibility but it limits people to urban areas. People will want cars if they can have them. When cars are not available, we must rebuild our cities and our basic life styles. It will not be easy. I am an Urban Planner.

The largest problem with the coming loss of oil is its present use as fertilizer. That multiplies the productivity of the available soil. Without that it will be necessary to reduce the world population substantially. That will not be easy. The concern about conventional versus electric cars will pale in significance by comparison.

The “right ” to make children at will is FAR more closely held than the right to own a car and anyone can do that.

Whether an electric car is environmentally sound or not is not the issue, anyway. The time will be upon us shortly when the alternative to the electric car will be a horse. It is far better to perfect the electric car while we have the luxury of doing that than to be stuck later with a horse.

1. **The Risk Monger** says:

   September 23, 2011 at 21:42

   I don’t have problems with oil, nor do I believe the peak oil scare stories (there is always bitumen and the Arctic!). Oil was one available form of energy in the early days when cars started being produced (other alternatives included electricity and peanut oil). Petrol though was the easiest to distribute then, as now.
   Now I have issue with the idea that we keep producing electric cars until they become more sustainable (same argument goes for solar). OK to keep developing them in the lab, but stop emitting (and subsidising) so much CO2 to mass produce an emerging imperfect technology. When you can prove that it is sustainable, then you can have the right to market it, but not until then (the sense of urgency is an opportunistic fiction).
   Why do activists insist that we must do it now so that we can improve the technology, but refuse the same flexibility for carbon capture and storage for coal emissions?

 Allannde says:
September 23, 2011 at 22:57
Mr Risk Manager,

“Why do activists insist that we must do it now…?” You are speaking about perfecting the electric car.

The answer is that it takes a long time to develop a battery and determine if it will be effective. It likely takes another long time to develop the production capacity to produce that battery. If that does not work, a new cycle must replace it. These cycles may be tens of years each but they may overlap.

The “engine” for this process is the money received from the sale of product. The motivation for this process is the potential profit from doing better than has been done in the past. These thing take time, lots of time. The availability of cheap energy like oil makes this process much simpler and more successful.

Now is a good time to start the process slowly and that is just what is happening.

My question to you is “Why are you so alarmed by that?”

It is true that oil is not the only source of energy. It, however has been developed. Others will only be developed to replace it if they prove profitable and able to supply what is needed.

Will oil and coal run out? Of course. It is only a matter of when. There are much better uses for oil and coal than burning them including fertilizer, medicines, plastics, construction materials, bitumen and many more. We would be much better off if we stopped burning them now even if we are a long way from running out.

 maxime says:
October 21, 2011 at 16:26
Dear,

I fully agree on the criticism towards electric cars. There are so many alternatives to private transportation that cars are actually a bit old fashioned these days. And saying that cars have enabled an urban lifestyle is not accurate. First, because you don't need a car in cities. Second, because it is simply anachronical and geographically incorrect. Have you seen some former farmers driving cars in African cities? and in Asia? what about South Amercia? The ones that can afford that are not the ones that were living in the country side (as a general rule – you'll find exceptions).

How can an ecologist say that electric cars are a nice perspective? About 30% of urban space is devoted to cars (depending on the city of course). Imagine what kind of social interaction you could create if you have 30% more space. And for the deep ecologist, how many species would reappear if you use these public spaces in an eco-friendly fashion.

If we have to address transportation issues, why don't we actually review the transportation model itself? Since it is or will shortly become a social and public issue (I'm still waiting for the "transportation divide" concept to pop up), why don't governments take some initiatives in here? Why is the car industry not cooperating together and with external actors, looking for real alternatives to oil. I think that the answer is that they do not care about the environmental issues, as far as it does not impact social climate in a way that could hinder their business. And that's why you should not buy an electric car. At least, consider buying an electric motorcycle, or just pedal if you're still able to.

Good debate, no straight answers, just because we need to change our framework and lifestyles to address it correctly. And who would like that? Only some people earning less than 2 dollars a day. So, who cares… tragic!

1. **The Risk Monger** says:

   October 26, 2011 at 00:27

   Thank you for your comment Maxime (and sorry for the delay in approving it).
   We need to think differently on this issue, but the cynic in me says that a car is a widely desired good (even for those who think of themselves as environmentally concerned) so there is little push from any interest groups to make it less desirable or push changes.
   I would consider a need to enlarge the transportation divide (I like that term!) – make cars more expensive in line with their environmental impact (and that definitely includes electric cars and the CO2 impact from production). All cars should be heavily taxed (better to tax per km driven, and with GPS, tax urban kms much higher to bring in the impact given the alternatives).
   The design needs to be addressed as well. Why is the exhaust pipe located below at the rear of the car? So we don't see the pollution being emitted. This is madness as it is at the perfect height for babies in prams to directly breathe in the fumes. Force car manufacturers to put the tailpipes on the car roof (like lorries) so we can all see the pollution. It might shame drivers to drive less in congested cities when they look at all of the polluters around them.
   We need courageous leaders for this, and a little less hypocrisy from the interest groups.

 serious_s says:
June 7, 2012 at 10:20
Even if electric vehicles today are the equivalent of a 35MPG vehicle for CO2 emissions, tomorrow will not be true. There is a good explanation about why we want to go all EV now regardless of the CO2 equivalence today at Electric Vehicles are the equivalent of a 34mpg Gas Powered Car. We can ask ourself: Do They Have a Future?

1. **The Risk Monger** says:

   June 7, 2012 at 17:50

   This is a common argument and when I was representing companies trying to break into established markets, I also used this approach (registering environmental NGOs to act as well-intended mercenaries for my battles was simply Lobbying 101). But it is bad for the environment and unethical. CO2 is cumulative – the CO2 we emit today will have a greater impact than the CO2 we save in 2050. Go for electric cars when the research has shown serious savings – getting everyone in Belgium to have their company car become a Prius through fiscal measures means that automakers are profiting from second rate technology – why should they rush to actually make a green technology? Saying we need to create a market even if it is destructive so that we can iterate the development is not only lazy research and innovation, it is unethical – let us pollute more and profit more today so we can tweak it tomorrow (Should we let HIV patients spread the virus freely so we will be able to have a wider research base and market to find a cure in the future?). We should be telling the automotive industry that the solution is fewer cars produced that last longer on the road (and taxed to be a luxury item). Do electric cars have a future? Maybe (if people don't want to change their consumption behaviour), but we had thought wind and solar had a future until alternative natural gas extraction measures made the costs to the environment and the economy of renewables look silly. I am afraid that electric cars may go the same way if we had enlightened thinking on sustainable transportation.

Copy of 2012 follow-up blog:

Electric Cars: Ignore the facts so we can feel good about ourselves

October 8, 2012

Last year, the Risk-Monger expressed frustration that no one was prepared to study the amount of CO2 emitted to produce electric cars, but he suspected that hybrids, with two engines and large batteries, must emit much more CO2 than diesel or petrol cars. Last week (4 October 2012) a report was published by the Norwegian University of Science and Technology that finally performed a lifecycle assessment comparing electric cars to conventional cars. And the results are not what the environmentalists had promised us: taking the manufacturing process into account, electric cars produce more CO2 than diesel cars and the battery production releases more toxins into the environment.

People want to believe that green cars expunge consumers from the guilt of their polluting indulgence. As a reminder, environmentalism is not about facts; it is about feeling good about yourself (and, for many, expressing it to others). The Risk-Monger has blogged on this quite frequently, whether it is about ignoring the moral consequences of organic living, the economic injustice of solar panels or the political manipulation of the science on climate change. And so it is for electric cars – we want to believe they are OK for the environment so we can feel good about ourselves, continue to consume and not make any real sacrifices (even WWF assures us how wonderful we are to buy them!)

What did this Norwegian university report conclude? It seems that when taking into account the elevated CO2 needed to produce an electric vehicle, there is no environmental advantage over a diesel car at 100,000 km. The CO2 advantage improves over 150,000 km of use, but that is assuming that the battery is not replaced, something the technology is far from ensuring today. And these results are based on the assumption that the source of electricity is not fossil-based. It gets worse. Where electric cars prove particularly nasty is in other environmental consequences of the production phase: namely the higher levels of human toxicity, freshwater eco-toxicity and eutrophication from the heavy metal pollution in the battery production. Ouch! May each person driving a Toyota Pious wear this as a badge of honour in their environmental feel-good factor.

Indeed, the Risk-Monger today is managing an “I-told-you-so” smile.

OK, this is some long-awaited research (and the same still needs to be done for solar panels), but as we know, in environmental debates, facts don’t matter. So how will the environmental lobbyists respond? Well that is easy. As this study comes from Norway, it must be funded by the oil and gas industry. Actually no, it is funded by the Norwegian Research Council under the E-Car Project. OK, never mind that as the study did not conclude that electric cars were actually bad and we can assume that this emerging technology will improve. Actually the report brought in considerations of the speed at which conventional power train technologies were improving. Maybe, as my initial scan suggests, they will just ignore this study and continue campaigning for electric cars. I am certain that more research will be commissioned by environmentalists and electric or hybrid producers, but will this research be objective? Will it include the CO2 emitted from the energy sources? Will this research include post-use recycling?

The Risk-Monger has his own questions for further research. Will this research take into account the amount of strain the charging of these vehicles will put on their proposed smart grid? Will this research consider the impact of increased mining for the battery production? Will this research consider the increased urban particulate matter (including carbon black) from tyre dust that electric vehicles, with a higher tyre burn rate, produce? The Norwegian study did not take these points into account and so if a deeper LCA were performed, it

seems that the green cred of electric cars will be further diminished. Furthermore, will future studies consider whether we actually need to be producing more cars and rather, shouldn't we be considering alternative forms of transportation? Ooops, we are not supposed to talk about the real sacrifices you would need to make to consider yourself as a green hero.

And this leads to my final question. Will Environmental NGOs like WWF finally stop promoting electric cars and come clean and tell the world that the path to decarbonisation they are lobbying for entails some serious sacrifice?

Comments

1. **Samuel Shiroff** says:

   October 11, 2012 at 07:59

   Riskmonger, I frequently read what you write because it is almost always enlightened, well-researched and well thought out. In this circumstance, however you seem to be the victim of some serious myopia.

   I do not doubt that the studies are fairly close to accurate and that the current environmental impact of electric vehicles may be worse than the best technology offered by diesel.

   At the same time, the difference in the age of these technologies is so great that it is a very poor comparison. It is a bit like criticizing a high-potential newcomer for not being as good as the seasoned professional in his prime.

   First, the necessary efficiencies and economies of scale on electric vehicles are far from exhausted. In fact, given the infancy of the technology, there are doubtless many that are not yet even discovered. The fact that an engine and battery are currently necessary and make the overall balance more negative will no doubt be solved. Moreover, the source of electricity used to charge the batteries is not necessarily the fault of the automobile manufacturers and naturally needs to be solved by enlightened policy that puts a price on the CO2 emitted by fossil fuel power generation.

   The electric vehicle industry is at its very beginnings and requires time to not only develop the technology to a more mature point, but also ensure the overall system from production, to performance to fuel source is better for the planet. In the short-term it might be the case that more efficient traditional vehicles can have a greater immediate impact. However, electric vehicles are clearly the best route to a zero-emission personal mobility system and the industry needs every incentive possible to make the investments needed to get there.

   So, although it may not be technically correct to have people who buy and drive these vehicles believe they are “greener than thou” for doing so in the immediate, their belief and desire to be green should have a long-term pay-off by ensuring adequate demand for further investments. And, no doubt, these conscientious individuals will eventually become more aware of the negatives of such vehicles and also put pressure on manufacturers and others to focus on those shortcomings you have so astutely pointed out.

   1. **The Risk Monger** says:

      October 11, 2012 at 13:42

      Thank you for your comment Samuel. There is no doubt that improvements in electric mobility will come (and they are badly needed). At the same time, our focus on reducing CO2 emissions in conventional power train technologies (especially diesel) are starting to make exponential gains. One point I need to see on the table is that we consider the amount of CO2 that goes into the production phase as well – CO2 is cumulative so what we can save today is worth a lot more than what we can save in 20 years. So should we be building and marketing so many electric CO2 bombs in the hope that in ten years, the vehicles will be more efficient? The green debate is skewed by subjective bias and non-compromise – couldn’t we accept that innovations in diesel

power train technologies will lead to greater gains for the environment? Or are we affected by the same bias that influences other debates where the green lobby is demanding patience and investment in “renewables” technologies but refuse to consider investing in research in carbon capture and storage or next generation nuclear – both of those technologies look more promising for a decarbonising world but go against the grain of green bias (I am not even considering touching fracking in this debate!). Why not put all technologies on the table and consider the best quick win – and given the problems with electric cars at the moment, maybe more investment in research is needed, but stop allowing such ecological disasters on the road until then. In the meantime, start repricing cars to take into account their real impact.

A more important point, put more articulately in the first blog: Don’t buy an electric car – is that we should not be building and buying so many cars – they are the greatest source of environmental pollution and a major cause of human health issues (and deaths) – and at present, more so for electric cars. As long as we continue to trick ourselves into thinking we can drive cars and think of ourselves as green (a fallacy WWF is promoting), we will not make progress.

2. **Samuel Shiroff** says:

October 11, 2012 at 13:52

As mentioned in my previous post, I tend to agree with a signficant percentage of what you write, so I don’t find myself in a position to contradict most of that response. I am for employing all available technologies as possible short, medium and long-term solutions. We need them.

I will take issue on one point which is when you write that cars should be repriced.

This is a bit too far up the on the production chain as far as I am concerned. I do agree that technologies should be given an even playing field and left to “fight it out” in the marketplace. However, in this case, a carbon tax all along the supply chain would be the best way for this to happen. A diesel car might get points for lower upfront cost due to its lower manufacturing impact; whereas the fuel would then be much more expensive. The electric vehicle would have the reverse, but at the same time manufacturers would be strongly incentivized to work on the environmental impact of both technologies and consumers would be free to choose.