Technological, not political, solutions the root of the problem

By Piers Maclaren

The price of carbon has nose-dived from last year's dizzying heights of over $20/tonne to a miserable $8. At such a low figure, no action of any sort will take place: no new tree planting, no moves to end the evil ways of carbon emitters like all of us. All this was entirely predictable. The ETS was never likely to work. The reasons lie in sociology, not in economics let alone climatology.

To make a successful emissions scheme of the necessary scale requires that substantial resources throughout the economy be re-allocated. In the inevitable disruption, there will be winners and losers – demanding a considerable degree of consensus among the general public. This we do not have, and it would be suicidal for a political party to actively pursue this agenda.

Public opinion polls show that a clear majority are not even convinced by the science; they do not accept the need for any sort of imposition to counter what they perceive as a distant, nebulous and improbable threat. They do not read the scientific papers – which are remarkably unanimous on the subject; instead they access popular sources which are substantially more ambiguous. For example, Straight Furrow – New Zealand's free farming magazine in every rural delivery letterbox – has for years carried a number of superficially plausible letters and articles in every issue attacking the basic science. I have worked on this topic since 1988, and have come across a great many so-called "climate sceptics", but very few appear to have read even part of one of the IPCC's Climate Change Reports – of which 16 of the main ones sit on my bookshelf.

The IPCC often stands accused of supporting "junk science", and is often described as promoting a "huge scam". Some people are incapable of believing any theory unless they can identify some sort of conspiracy, but the notion that thousands of scientists from dozens of different countries and cultures could have colluded to further their own ends is totally implausible. Far more believable is the idea that companies promoting the use of fossil fuels, and conservative community organisations, could be responsible for a deliberate campaign of misinformation and distortion. Or, more believable still, is the observation that some people are innately resistant to changing their ideas. In the words of Max Planck, "A scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die and a new generation grows up that is familiar with it". But with climate change we cannot afford this luxury.

It would be interesting to see a breakdown of what type of person has strong views either way, and their reasons for those views. The ages, education, gender, profession, political leanings, and other interests of respondents would be quite revealing. The whole issue of anthropogenic global warming (AGW) must be a wonderful treasure-chest for sociologists!

So, if one believes in AGW and if economic and political instruments cannot work in our imperfect society, is there any hope for mankind? Indeed, there is. Technology might provide the answer. Let us consider an analogy from a previous century.

The killing of whales peaked in 1845, driven by the demand for whale oil for lamps. Supposing you had been an early conservationist, aghast at the bloody slaughter of these beautiful creatures; you might have obtained figures to show the declining numbers, and that within a generation or two they would no longer exist. You might have petitioned politicians, chained yourself to the railings, and gone on hunger strikes. All of this would have been a wasted effort. You can imagine the arguments used against you: "your data are incorrect – there are actually many more whales out there; if we didn't have whale oil, we would need to work by candle-light – you are threatening our

economy and giving our enemies at lower latitudes a competitive advantage; if He hadn't intended us to use that power, God would not have given us dominion over all creatures"; and so on.

Meanwhile, kerosene (derived from petroleum) became cheaper and more plentiful than whale oil. The first oil well in the USA was in 1859 and Edison patented his light bulb in 1879. In the twentieth century, if a house boasted electric lighting and you knocked on the door trying to sell whale oil, you would have been laughed off the premises. In summary, political efforts to save the whale would have been useless, whereas technological changes had an inevitable and decisive result.

We run our vehicles on petroleum. Supposing, in a few decades, all New Zealand's vehicles were entirely electric, charged (and billed) by induction every time you parked in any city parking space: sourced by such things as hydro dams, wind turbines or rooftop photovoltaic cells. If someone then tried to sell you some petrol for your car, you would laugh at them in exactly the same way. Similarly, coal is heavy, dirty and costs lives to extract. If we could smelt steel or make cement without it, would we ever look back?

Politics and sociology have their own "laws", as powerful in their own way as the Laws of Thermodynamics but less well understood. Engineers and technocrats are often innocently unaware of such laws, and debate everything merely in terms of what is technically achievable. And they have a point– there are no insurmountable theoretical obstacles to building a sustainable future based on inexhaustible sources of energy. It's a pity the human world is even more complex than engineers' models.

On a global scale, the technologies to watch out for include: nuclear fusion; massive PV arrays in deserts; geothermal power from ultra -deep drilling; and biodiesel from genetically engineered crops. In New Zealand, we have abundant Cook Strait tidal currents, supplemented with conventional hydro, wind, geothermal and PV systems.

Rather than attempting an unworkable ETS, a wise government could achieve better results by giving full backing to those entrepreneurs investigating alternatives to fossil fuels.