FINANCIAL TIMES

March 3, 2013

Let the market decide our energy sources

By Robert McFarlane and George Olah

Thanks to shale gas we have alternatives to petrol, say Robert McFarlane and George Olah

For the past 40 years, since the Arab oil embargo of 1973, Opec has conspired to set the global price of oil. The rest of the world has simply observed this staggering restraint of trade and done nothing.

If western oil companies tried to do what Opec does, they would be prosecuted within hours. The producers' cartel, however, can get away with it because its members own 78 per cent of the world's oil reserves and lie beyond our courts.

Here in the US, we have taken heart from the windfall discovery of new oil reserves within our borders without pausing to remember that the price of that oil will still largely be set by Opec.

It would be hard to overstate the impact of all this upon the economy and national security. Each day the US borrows roughly $1bn from China with one hand to buy foreign oil with the other. As much as a third of the defence budget – about $200bn – funds overseas operations to ensure the continued flow of oil to the global economy. This is not to mention the environmental and health costs directly attributable to our dependence on oil.

Meanwhile, the US struggles to create jobs. Its employment-to-population-growth ratio remains at an ominous 59 per cent. To make a dent in this "stagployment" it would need to add at least 250,000 new jobs a month, every month, for years. In January, job growth was an anaemic 157,000.

Imagine what could be done to restore the strength of our economy if we invested the $600bn a year that we spend on securing foreign oil instead on education, infrastructure, research and renewal.

We have known how to get off this treadmill for a long time. The solution? Introduce competition among transport fuels. Today, thanks in large measure to the discovery of massive quantities of previously unreachable natural gas through the use of new drilling techniques, we have alternatives to petrol at hand.

In the past, each time we have moved towards taking effective action, Opec has dropped the oil price and we have lost interest in solutions. But three things have happened in the past two years that mean this time might be different.

Perhaps the most significant change lies in the "Arab spring", the ongoing grassroots uprisings throughout the Middle East. One of the effects of this unrest has been to strike fear in the hearts of Arab oligarchs in Saudi Arabia and throughout the Gulf. In order to cope with smouldering unrest in their own populations, they have raised social spending dramatically – and with it, increased what they must take in from oil revenues to pay the bill. In short, Opec nations now have much less margin for managing their cartel control by dropping the price of oil below this now-much-higher domestic "break-even" point.

The second game-changer derives from the discovery here – and throughout much of the world – of massive reserves of shale gas. Suddenly, a vehicle fuel has become available that is not only affordable, but clean and virtually inexhaustible. Various ways to use natural gas are being developed: simply compressing it (CNG), for example, or turning it into methanol – a fuel in use for many years by racing drivers.

Methanol has many appealing features; an exhaustive study by the Massachusetts Institute of Technology concluded it was the best use of gas. As a high-octane fuel, it enables manufacturers to make not only more efficient engines but also lighter ones that produce lower carbon-dioxide emissions and avoid the use of carcinogenic additives currently used in petrol.

It is cheaper, too. The current spot price of methanol is roughly $1.20 a gallon. Even after compensating for its lower energy content, manufacturers are confident that they will be able to deliver it to your tank (including processing, distribution, taxes and infrastructure) at a much lower cost per mile than petrol.

Third, after going through a wrenching global recession – in part brought on by the high oil price – laboratories and factories from Tokyo to Detroit have focused intensively on how to power a vehicle on something other than oil. The result has been nothing short of a revolution in the industry – and it is just getting into high gear. Hybrid-electrics (and now plug-in hybrids) have established that technology as a proved winner. In Europe, giant strides have been made in cleaner and more efficient diesel engines.

In Detroit, each of the three major car manufacturers have testified in Congress that they would be willing to make “flex-fuel” vehicles constitute up to 50 per cent of their output – cars that are able to run on petrol, methanol, ethanol or any mixture of those fuels. Brazil has been using sugar-ethanol as an alternative fuel for more than 30 years and the feature adds no more than $100 to the cost of a vehicle.

The final part of what must become the centrepiece of US national energy policy is for the government to encourage the production of all of these alternatives. No subsidies are needed and the government need not start picking winners. All Washington needs to do is assure timely consideration and approvals by environmental authorities, and then get out of the way.

The writers are, respectively, a former national security adviser and a Nobel laureate in chemistry. Both are members of the US Energy Security Council

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