

**INTERNATIONAL WORKSHOP ON OIL AND GAS DEPLETION  
ASPO LISBON MEETING**

**CONTRIBUTION BY MICHAEL MEACHER MP  
THURSDAY 19 MAY 2005  
(The Depletion Protocol: Panel Discussion on Political Action)**

**“POLITICAL ACTION ON PEAK OIL”**

1. The scale of change required in the world economy in the next few decades following the passing of Peak Oil within the next few years is nothing less than apocalyptic.

Since our whole civilisation and our whole economy is based overwhelmingly on oil, namely – industry, agriculture, transportation – the dislocation caused by the growing shortfall in availability is likely to be on a scale unprecedented in human history.

Already, four fifths of the world’s oil supply comes from fields discovered before 1970, and even finding a field as large as Ghawar in Saudi Arabia – which is anyway almost inconceivable given the huge improvements in geological knowledge in the last 30 years – it would only meet world demand for another 10 years.

2. So what is to be done?

(i) Market forces will undoubtedly exert strong signals, but are unlikely to be able to prevent abrupt dislocations without powerful accompanying strategies ruthlessly enforced in the face of vested interests. CIBC predicts that likely supply shortfall will be some 9m barrels per day by 2010 and that the oil price needed to reduce demand will be around \$100 per barrel, and of course thereafter figures steadily rise further. But with oil prices at say \$100/150 per barrel, economies of heavily oil-dependent countries (the great majority in the world) will be forced into a tailspin of decline, leading to violent uprisings, revolutions and mass migration on a scale we have never seen. So what else needs to be done to prevent this?

(ii) Colin Campbell’s proposal is the so-called Rimini Protocol, providing that importing countries cut imports to match the world depletion rate (i.e. annual production as percentage of what is left) now running at about 2 ½ % a year. This is

an ingenious suggestion, and deserves to be taken very seriously. It means that poorer developing countries would be able to afford their minimal needs, profiteering from shortage by the Middle East would be avoided, and consumers would be forced to avoid waste by improving energy efficiency and to switch to renewables. But like all good proposals, there are significant problems with it – the most obvious is ‘Real politic’ – how is it to be enforced? Enforcing the Kyoto Protocol has proved enormously difficult, and after 13 years since Rio in ’92, only some 30 countries have committed to targets (although enough to secure ratification), but excluding the United States, with 5% of the world population and 25% greenhouse gas emissions, and excluding all developing countries, especially China and India, whose greenhouse gas emissions will exceed those of the West within some 10 years. Since the United States political power derives from its economy, and given that US economic strength depends entirely on rapid growth and ready access to cheap energy, why should Bush sign up to Rimini any more than Kyoto? This is not an argument for not pressing for a Rimini Protocol (indeed US opinion on climate change and energy is changing), but other measures are also needed. What are they?

**(iii)** I do not believe there is a technological magic bullet solution (which the US hankers after), but I do think we can construct instruments to effect switch to a transitional economy.

**A** A bridge economy is more likely to shift to gas in the first instance, rather than directly to renewables. Gas could be refined directly into synthetic petrol and diesel for transportation, although this is probably no a major fuel source until after 2010. Again, one important use of gas would be as a transitional feedstock to make hydrogen for fuel cells, and fuel cells would slowly but steadily penetrate vehicle markets and stationary power markets and lay groundwork for eventual emergence of a hydrogen economy, once technologies to make hydrogen from renewables (solar or wind or clean-coal) became cost-competitive.

**B** A carbon penalty needs to be developed as a market mechanism. A government (eg US) could create a carbon budget for each individual sector (like NAPs in EU), starting with the worst offender (power generation), and set up a carbon-trading system. The option also needs to be pursued of a near-zero-emissions clean-coal

power plant, with carbon capture potential, perhaps up and running by 2020. I repeat that, over the longer term, a successful coal gasification industry could become the cornerstone of a hydrogen economy, converting coal into low-cost hydrogen for use in large stationary fuel cells and ultimately in fuel cells for cars.

**C** A no-holds-barred multi-faceted campaign needs to be launched to cut Americans' high consumption of oil and other energy. One mechanism could be a 'feedback', i.e. consumers buying a vehicle that gets 20 miles per gallon or less would have to pay a stiff fee (e.g. \$5,000), while if a consumer chooses a car getting 40 miles per gallon, they would get a rebate at the same amount. Secondly, heavy government investment in basic fuel cell research could speed development of fuel cells cars by resolving critical engineering obstacles like reliability, material costs (especially platinum catalysts) and fuel storage issues.

**D** Potential for conservation is enormous since the volume of energy wasted is prodigious, e.g. US power plants discard more energy in waste heat than is needed to run the entire Japanese economy. Only 15% of the energy in a gallon of petrol ever reaches the wheels of a car. Less than a quarter of the energy used in a standard oven reaches the food. It has even been estimated that a mere 3 mile per gallon improvement in the fuel economy of US cars and light vehicles would be enough to forego oil imports from the Middle East entirely – a better solution than launching a war in Iraq! If we could reduce energy intensity by just 3% per year, we could meet world demand in 2100 with only a quarter of the energy used today.

**E** The potential for a huge global shift to renewables is greatly under-estimated. The US Department of Energy estimated that three states – North and South Dakota and Texas –have enough harnessable wind energy to meet the entire US electricity requirements. Similarly, it is estimated that Europe's off-shore wind potential in waters of 100 feet depth or less could supply all of the continent's power, while China has so much wind energy that it could double its national electricity generation by harnessing it. Regarding solar power, where the price has already fallen 10-fold since 1980, a recent study (by accountants KPMG) estimated that construction of a 500 MW plant (at a cost of only \$0.7 billion) would bring the wholesale price down to that

of conventional energy. While even the Ford Motor Company believes that hydrogen fuel cells will become the main power source for transport within 25 years.

**I conclude therefore** that the energy economy of 2030 will be a hybrid of sorts, meeting demand with alternative fuels and improved energy efficiencies, yet still heavily reliant on hydrocarbons. Maybe a cheaper vehicle fuel cell, for example, or a dramatically more efficient solar panel, could completely change the path of our energy future. But none of this will happen without strong government intervention to propel research and innovate production. As always, the question for politicians is: are we ready to take risks and to give the lead that the world craves?

Michael Meacher

May 2005