

The upside of interdependence

By JOHN MITCHELL

ASSOCIATE RESEARCH FELLOW, CHATHAM HOUSE



JOHN MITCHELL is an Associate Fellow at Chatham House. His areas of expertise include energy economics, energy security and the oil industry. In 2007 he was awarded a lifetime achievement for research by King Abdullah at the opening of the third OPEC Summit in Riyadh. His recent publications include *Europe's Energy Security After Copenhagen: Time for a Retrofit?* and *Ending Dependence: Hard Choices for Oil-Exporting States* (with Paul Stevens).

Energy security is a powerful slogan. Among importers, it reflects the experience of the disruptions of 30 years ago in the global oil market, and the last three years in the Eastern European gas market. It has led to an identification of insecurity with imports. This is a deceptive idea.

During the last thirty years repeated policy analysis and rhetoric in the US, Europe and Japan has shown that 'energy independence' is unobtainable except in a few rare situations (the UK during the 1980s and 1990s, Brazil today, Canada and Denmark). Generally, the difficulty for such policies is how little, and at what cost, domestic resources can be developed to reduce imports and how little consumption can be reduced without taxes and restrictions which are politically and economically unacceptable. The benefits from international trade – to both sides – are very great, and overwhelm the costs of 'energy independence'. There is no escape from the fact that the energy systems which have prevailed to date, and are likely to continue, are based on international trade. Energy natural resources occur in different parts of the world from those where the main demand for them exists. The slogan of energy independence has therefore moved to the margins of real policy debates, though the slogan of 'import dependence' remains to confuse the politics.

Mitigating short-term disruptions of supply and cushioning their effects

Interruptions can be domestic (as in the UK coal strikes of 1973-74 or the US hurricanes of 2008 and 2009) as well as external, due to civil war or revolution or, as in 1973, deliberate political action. The response for consumers is simple: strategic stocks under government control in consuming countries and an agreement to share available supplies in times of disruption. These are provided for OECD members through the International Energy Agency (IEA) and its Emergency Response Mechanism (ERM), which includes an obligation on member governments to hold stocks, under their control, equal to 90 days of imports (the EU requires stocks equal to 90 days of consumption). Stocks are now being built by the Chinese and Indian governments, but they are not part of the ERM because they are not OECD members.

Though compulsory stocks and emergency sharing are the most obvious and least controversial security

policies for importing countries, they were at first regarded by oil exporters as threatening their influence in the market. In fact, strategic stocks have rarely been used, and then almost entirely in response to actual or expected disruptions to the oil market (as in the Gulf war of 1990) or, in the US, to deal with local situations created by weather conditions and local shortages.

Exporters also have an interest in avoiding disruptions of the oil market. Price hikes boost revenues today but may dampen future price rises by funding investments in increasing capacity (OPEC does not have quotas for expansion). Price hikes may also reduce future markets. After the oil price shocks of 1978-79 oil lost 10 per cent of the world energy market, which has never been regained. The prices which have prevailed since 2003 – 2-3 times the level from 1986 to 2005 – are certain to create further permanent losses. These prices penetrate energy systems in importing countries which have for years been exploring the potential for avoiding the use of fossil fuels, in anticipation of restrictions on CO₂ emissions and fears of 'Peak oil'. The competition against oil is ready to go. The question is not when oil supply will peak, but at what price will oil demand peak. US\$143 may have been that price.

The balance of interest between producers and consumers has a common point: to avoid or buffer price shocks. Saudi Arabia has a deliberate policy of investing in spare capacity which can be used – at its own discretion – to stabilise the market when prices spike, and OPEC by production quotas tries to protect prices from collapse. There is nothing that governments of importing countries could do to protect demand, which in the short-term is a function of economic activity, and which governments would stabilise, for domestic reasons, if they could.

The world thus has in practice a reasonable effective but informal system for stabilising prices under certain circumstances. If there are unexpected disruptions in supply, exporters with spare capacity can use it and if they do not, or if it is insufficient, IEA members can draw on their stocks. Exporters naturally prefer to keep the initiative in their hands, and are fine-tuning their controls by building or buying storage terminals offshore main importing countries.

On both sides, the problem is the incomplete coverage of IEA and OPEC membership. USDOE/EIO projections show the OECD share of world liquid

fuel and hydrocarbon consumption falling below 50 per cent by 2020, The OPEC share of world liquid hydrocarbon production is projected to remain just over 40 per cent. The members of both organisations carry a big load of free riders. The free riders can also be rogue riders. A non-OECD Asian importing country with low strategic stocks and a big exposure to the source of disruption will bid up supplies in the spot market and drive up prices for everyone. Some formal process for bringing major non-members into the IEA Emergency Response Mechanism is needed.

Medium term security of supply and markets

Importers have two concerns, often confused together. The idea of 'Peak oil', has a currency in policy and journalism far beyond its credibility as a technical or scientific theory. Nevertheless, the image is powerful, and there is some reality behind it. A consensus is growing that supplies of 'conventional' – or cheap – oil will cease to grow within 20 years. Then the peak oil formulas give way to scenarios about shale oil, tar sands and biofuels. Economists point the effect of price explosions (implicit in the peak oil concept) on demand and the supply of alternative fuels. The second element is worry at the concentration of oil supplies in the Middle East, based on the BP Statistical Review report of the proportion of 'Proved' reserves in that region. In fact, the same source shows a fall in the concentration of oil reserves in both OPEC and the Middle East since 1989. Projections by the US Energy Information Agency (2009 International Energy Outlook), show no increase in either the OPEC or the Middle East share of world liquids production to 2030.

A more realistic concern is that investment in supply may fail to match increases in demand. After the experience of recent years when the world ran out of spare capacity it is impossible to dismiss this fear. All these uncertainties are compounded by the slow but inexorable move towards worldwide action to restrict emissions of greenhouse gases.

What to do?

Governments of producing and consuming countries cannot do much about these uncertainties. Government intervention itself is uncertain, because policies change when circumstances change. On the supply side, probably more could be done to providing information about reserves data and investment plans in those countries where this is available to the Government. On the demand side, governments are not in control, but they intervene, by taxes and emission restrictions, in ways which affect demand. Transparency in these would be welcomed by all investors, whether in oil or in alternatives and energy-avoiding technology. The WTO provides some

opportunities for exporting members to challenge interventions which are trade-distorting, but so far the WTO has seldom been used for this.

Gas

Finally, discussion of producer-consumer cooperation has tended to concentrate on oil. But there are producers and consumers of gas also. The unforeseen development of shale gas in the US, probably to be followed elsewhere, has reduced gas prices and opened the way to an expansion of the gas share of energy demand. The gas trade is mainly intra-regional, but the growth of the LNG trade, and recent investment in LNG terminals, has expanded its future. LNG provides flexibility to gas networks which are dependent on pipeline supplies, and likewise enables exporters to access the most profitable markets. But continuous investment is necessary. There are things which governments could do to reduce some of the uncertainties. One possibility might be an 'LNG Protocol' which could be applied to the trade in LNG and equipment to build terminals. It could provide for non-discrimination between suppliers, markets, and foreign investors, and add cooperation on technical issues. Selected sections of the Energy Charter Treaty could be the basis, but unlike the ECT there would be no need for transit protocols; pre-investment issues would be less important and the question of sovereignty over natural resources would not apply.

Improving the game

There are three issues which are changing the game for co-operation between producers and consumers:

- The changing balance of the world economy, including the energy economy, towards Asia;
- The expected slowdown – and possibly reversal – in the growth of capacity to produce oil from limited resources, and
- The global spread of government policies designed to limit dangerous climate change by limiting the use of fossil fuels.

What can be done?

Bring Asian non-OECD members into a formal arrangement with the IEA for responding to emergency disruptions of oil supplies. Uncertainties about future capacity and demand could be reduced by more information about resources and investment plans on the producer side, and about interventions by way of taxes, quotas, and subsidies for alternate fuels in the consumer side – with some opportunity to use the WTO where appropriate. And finally, look at the possibility of an international protocol to facilitate LNG development and trade. These would be first, but necessary, steps. ■

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