Odell predicts

A New World Energy Order is coming


Peter Odell

Peter Odell, Professor Emeritus of International Energy Studies of Erasmus University Rotterdam, and one of the most renowned energy economists alive, has never been one to shy away from bold pronouncements. He recently wrote a remarkably succinct and provocative paper in which he described his vision of the new world energy order that is on the way in the form of eight propositions, which we are proud to be able to publish for the first time. We asked three experienced energy analysts as well as the ceo of a major energy company, Dutch gas producer Gasunie, for a response. We hope you enjoy the debate – and please do not hesitate to let us know your views!

An insight into the likely future evolution of the global oil and gas industry in eight propositions

1 The current 60% contribution of oil and gas to world energy supplies will be only modestly reduced by mid-century. Thereafter, the contribution of hydrocarbons to energy demand will slowly decline, but will still account for over 40% in 2100. By then, however, natural gas will be two-and-a-half times more important than oil. The latter will still be an industry larger than that of 2000, albeit one which will become up to 90% based on non-conventional oil. Meanwhile, natural gas will have become the prime energy source in the second quarter of the 21st century - twice as important as renewables. Initially this will be achieved through a near three-fold increase in conventional gas production to a peak in 2050 and, thereafter, through non-conventional gas reserves.

2 The ultimate physical sufficiency of the world's oil and gas resources to yield more than 50% of global energy demand until the end of the third quarter of the 21st century is thus not in doubt. Indeed, one can ignore the present-day Jeremiahs on near-future "peak oil and gas". Their predecessors in the 1960s, the 70s and the 80s were all quickly proved wrong and a similar fate will overcome these pessimists by the end of the present decade. Any under-achievement in levels of future oil and gas production will instead be the result of a combination of organisational, economic, political and environmental factors. However, all of these can be overcome, as they always have been in the past – except for short-term lapses.

3 The current generally accepted politico-economic wisdom favouring globalisation, liberalisation, market competition and dependence on speculative trading exchanges (such as NYMEX and the IPE) for price determination will soon fall from favour as a consequence of the turmoil and high prices which they have created over the past four years. The continuing growth of the world's use of oil now clearly requires the establishment of an international oil organisation, whereby order can be brought to the markets. The current unacceptability of any such proposal by policy makers in the OECD countries will hardly be relevant beyond the middle of the next decade, given the now declining importance of these countries in the expansion of global oil demand.

4 The oil industries of non-OECD countries already account for some 95% of world reserves, from which their state-owned or state-controlled companies produce over 65% of total world output. Thus, even the remaining five largest multinational oil corporations increasingly appear to be unable to secure significant new exploration and production rights, except as minority partners in state-run systems. This rapid progress towards state control of oil supply is now unlikely to be reversed, as all the ten large oil consuming nations of the developing world, together with many of the smaller oil-using countries, view self-sufficiency as a prime objective and feel assured of this only in the context of their nationally owned and operated companies.

5 In these potentially worsening circumstances for the oil majors, the fact that they have in recent years pursued policies which have hardly endeared them to the countries in which expanding demands for energy are of the essence is not helpful for their survival. The companies are seen as responsible for high prices, leading to high profits, from which extortionate remuneration is paid to their executives and shares are 'bought-back' so as to enhance the companies' status in the stock markets. Meanwhile, they make too little investment in new upstream operations because they cannot count on securing their required 20% plus rate of return on such investments.

6 The existing oil majors may thus well be playing out their last few years in countries outside the OECD. A Chinese bid for Exxon and/or Chevron and/or a Russian bid for Shell and/or BP seem likely to be a matter of time. With the 'majors' gone there will be heightened concern in the main OECD countries for their future security of supply. In this context one can forecast a revival of state-owned oil and gas industries in the developed world. This is already indicated in the three currently booming state oil companies in OECD countries (Statoil of Norway, ENI/AGIP of Italy and ÖMV of Austria). These could get new bedfellows; e.g. a new British National Oil Corporation, a revived Petro-Canada and a de-privatised Total in France/Belgium.

7 Above and beyond these developments, we should seriously anticipate the creation of a UN International Energy Organisation designed to deal with the world's 21st century energy matters. Such an organisation would necessarily include central roles for Russia, with its massive resources, and China, with continuing increases in demand and its plethora of oil and gas sector agreements in more than thirty overseas countries. There will also be a major input from the ever more powerful Organisation of Petroleum Exporting Countries, given its members' interests in tomorrow's much expanded and ordered global oil markets. In this global context one can, however, also anticipate the early demise of the International Energy Agency, given its failure in recent years to take any action to stabilise energy markets.

8 In Europe, the current obsession for liberalisation will be abandoned, as external gas suppliers wisely insist on long-term contracts to ensure security of demand as against the European nations' search for security of supply. The EU's commitment to liberalised gas markets seems unlikely to be maintained. Post-2020, an ordered gas market will emerge, with continuing long-term benefits based on the near-limitless supplies available to Europe from external gas-rich countries, i.e. Russia, the Caspian region, the Middle East and North and West Africa. The consuming countries' preference for natural gas over the high-cost alternatives of renewables and nuclear power will serve to sustain the producers' opportunities. Watch for the establishment of a Greater European Strategic Gas Authority and similar organisations in the rest of the world.

Jérôme Guillet

‘Forget about business as usual’

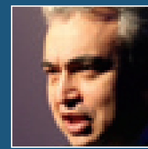
Odell’s proposals are an interesting mix of prescience, controversy and naivety, and provide a good starting point for a serious discussion of energy issues, despite one huge blind spot.

His first, unsubstantiated, affirmation that ‘peak oil and gas jeremiahs can be ignored’ is controversial. Even the strongest deniers of the concept of peak oil, like the IEA or CERA (the consultancy) suggest that oil production will start declining soon after 2030. Several senior oil executives, including the ceo of Total have announced their expectation of an earlier date for the peak, in the 2020s. A number of increasingly vocal analysts have suggested earlier dates. Natural gas is less discussed, but many neutral observers (such as Jonathan Sterm of Oxford Energy Studies) doubt Russia’s long-term ability and willingness to increase its exports much beyond their current levels. The formula “gas will be two-and-a-half times bigger than oil” is possibly a way to implicitly acknowledge peak oil, but this is impossible to assess unless one knows the underlying expected rate of demand growth – and Odell strongly suggests that it is positive – a hypothesis that puts him firmly in the “business as usual” analysts who never even seem to consider that demand might – or should – go down. That fuzziness in the numbers is further reinforced by the combination of assertions that “the industry will be up to 90% based on non-conventional oil” and “95% of reserves are controlled by State-owned companies”. This suggests one of two things. Either a lot of new oil will be found in deep waters, or below the poles, or from the conversion of oil shales, or from GTL or CTL processes – but in that case, why would these reserves be necessarily under the control of state-owned companies? Or that production will come from existing reserves (which are indeed mostly under state control) – but in that case the numbers don’t add up as far as long term production levels are concerned, as these reserves can in no way sustain the massive production increases implied by Odell.

Thus, the explanation chosen by Odell for high oil prices is, conveniently, globalisation and speculative trading, rather than supply constraints. He is certainly right that Europe’s ideological drive towards liberalisation will reach its end in the near future, as the contradictions between policies that consider demand growth an inalienable right and encourage the construction of gas-fired power plants clash with security of supply requirements and carbon emission reduction goals.

His suggestion of an energy UN makes a lot of sense, but unfortunately appears to be wishful thinking rather than an inevitable future reality. The prospect of energy-driven wars is absent from Odell’s text (which is not surprising given his rosy production outlook) but is much more likely than a cooperative approach.

Jérôme Guillet is editor of the European Tribune, contributing editor to the Oil Drum and investment banker in the energy sector.



Fatih Birol

‘Worried about supply-side constraints’

The world energy market is confronted with three major issues. The first is the continuing strong demand from India and China in the next ten years. The second is constraints on the supply side. What we are seeing is that oil production from non-Opec countries is set to decline significantly, in some cases at a higher pace than expected. For example, the decline rate of Norwegian oil production is higher than many experts had foreseen. Expectations of production in Russia and West Africa are also not as high as perhaps we once thought. In the next five to ten years, production from non-Opec countries will reach a peak before starting to decline.

The third big issue follows from the second: the important decisions will henceforth be made by the national oil companies (NOC’s) instead of the international oil companies (IOC’s). It is the Saudi Aramcos or Gazproms that are calling the shots, not the international majors. That means a completely new market structure. The NOC’s will understandably look after their own interests first.

I do not want to categorize myself as peakoil or anti-peakoil. I do want to stress that I am worried about the future. Not just about the short-term situation, also the mid and long-term prospects. We have had some nasty surprises in the past few years. Current price levels confirm that there is every reason to worry. For the future supply of oil, Iraq is very important. Iraq produces very poorly now, it is crucial how this country will perform. If Iraq does not increase its production significantly between now and 2015, we may have a problem, especially if demand growth can not be dampened.

> *‘I am very worried. We have had some nasty surprises in the past few years’*
>
> *Fatih Birol*

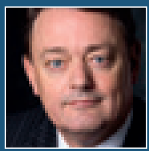
One problem is that there is a lack of information, for instance about the exact levels of oil reserves in key producing countries. There is a question mark for both IOC and NOC reserves. We need more transparency.

What we are advising governments above all is to conserve energy. Governments are listening now, but we are not yet seeing enough determined actions. We need more action and less discussion.

Alternatives are hard to come by. Biofuels will remain very expensive. We expect market share of biofuels to be only 7% in 2030. To reach that level, one needs an agricultural area as big as Australia plus Korea, Japan and New Zealand.

The share of the IOC’s in the world market will go down and down. Their fields are mature and declining quickly. I would not be surprised if many IOC’s became niche players in ten to fifteen years’ time, if they do not change their strategy. The new energy situation does not mean, however, that liberalization is not desirable anymore. The liberalization of energy markets is good in almost all circumstances. It creates efficiency and brings advantages to consumers. Governments should watch the supply situation and do something about climate.

Fatih Birol is Chief Economist of the International Energy Agency in Paris.



Marcel Kramer

‘Market is not so vulnerable’

As always, Professor Odell, takes the bull by the horns. He will probably end up being right in many aspects and many ways. For instance, even when Europe is serious and effective about climate control and able to convince the rest of the world about the urgency of a sustainable future with a smaller role for fossil fuels, it is likely that we will end up with only a modestly reduced worldwide supply of oil and gas by mid-century. This could eventually lead to just the geopolitical changes that Mr Odell outlines, if OECD countries do not make energy and geopolitics a real priority.

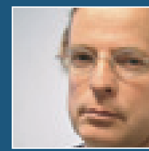
I disagree, however, with his criticism of market mechanisms. I believe that actual market mechanisms and our way of doing business are far less vulnerable than Mr Odell pictures. The fast growing LNG world market in this respect shows great promise. It will make it possible to arbitrage price differentials between the regional gas markets. It is a way forward for Europe towards a balanced and diversified supply. In the long term, trading will be profitable for all market participants, whether they are private or state-controlled. And even in the unlikely case of a world Gaspec dominance, trading would give the world essential information about pricing.

> *‘Europe is obsessed by liberalization. I would call it a kind of myopia’*
>
> *Marcel Kramer*

I agree with Mr Odell that the ‘peak’ for gas will vanish behind its artificial, short-term horizon. There is no doubt in my mind that the importance of gas, as the least CO_2-intensive of the fossil fuels, will grow in the next decades and will turn out to be the most important and feasible link towards the sustainable future that we will have reached by mid-century. In Europe with the most extended and detailed gas network of the world it would be foolish not to rely on gas.

According to Mr Odell, Europe currently is obsessed by liberalisation. I would rather characterise it as a kind of myopia. We have been extremely occupied with the establishment of national (!) regulated transport markets, with an ever growing complexity in the decision making process for “public” transport and with the mirage of a truly single European energy market. As a result, we have forgotten some of the business fundamentals. When I consider that there are many customers and only few suppliers in gas, that some considerable time is required to market this gas, that Europe will need substantial new supplies from outside the region, that therefore new infrastructure is needed in Europe, that new infrastructure is too costly in proportion to the long-term commodity gains for all parties concerned and that we need this infrastructure now to ascertain future diversified supply, I can only agree with Mr Odell: we not only need open access to infrastructure, as the European Commission demands, but also long-term contracts along with limited access to secure supply for the European consumers and secure demand for the suppliers.

Marcel Kramer is ceo of Dutch gas transport company Gasunie.



Mathijs van Gool

‘Alternative energy inescapable’

Europe is facing mounting uncertainty with regard to its ‘traditional’ power supplies from oil and gas. The most important underlying developments are the increasing domination of Opec, the increasing nationalisation of oil and gas reserves, investment restrictions and increasing competition for supply contracts among energy-craving emerging economies. European politicians have reached a crossroads where they have to decide how to secure future power supplies.

In geological terms there are sufficient oil and gas stocks to take us well into this century. But the exploitation of oil and gas is being placed under heavy pressure. The effects of this are being felt every day at the petrol pumps.

A number of irreversible developments have taken place in the past five years. As a result of that the quantity of oil and gas that can be placed on the markets is determined by national politicians and only barely by the technical options. That is a turnaround of some magnitude; the culmination of the developments set out below.

Domination of cartels: over the past five years Opec has developed into an immensely powerful cartel. By creating a link between the price of gas and oil, Opec in fact also sets the price of the gas. This cartel is too big to be taken on by the UN. Forget the dream of a liberal market. It is a market of and by national cartels.

Nationalisation: following the wave of nationalisations in the 1970s, the other countries are seizing their chance. Venezuela is a classic case of nationalisation; the process in Russia is more subtle but amounts to much the same thing. In Norway the government has ordered a merger between the two biggest players, and even the French government is working on the creation of a state-controlled national champion. There is no way back from this.

Investment restrictions: as a result of the nationalisations it is the individual governments that decide the extent to which investments are made in the national oil and gas industries. That political control is blocking free investments for oil and gas exploitation.

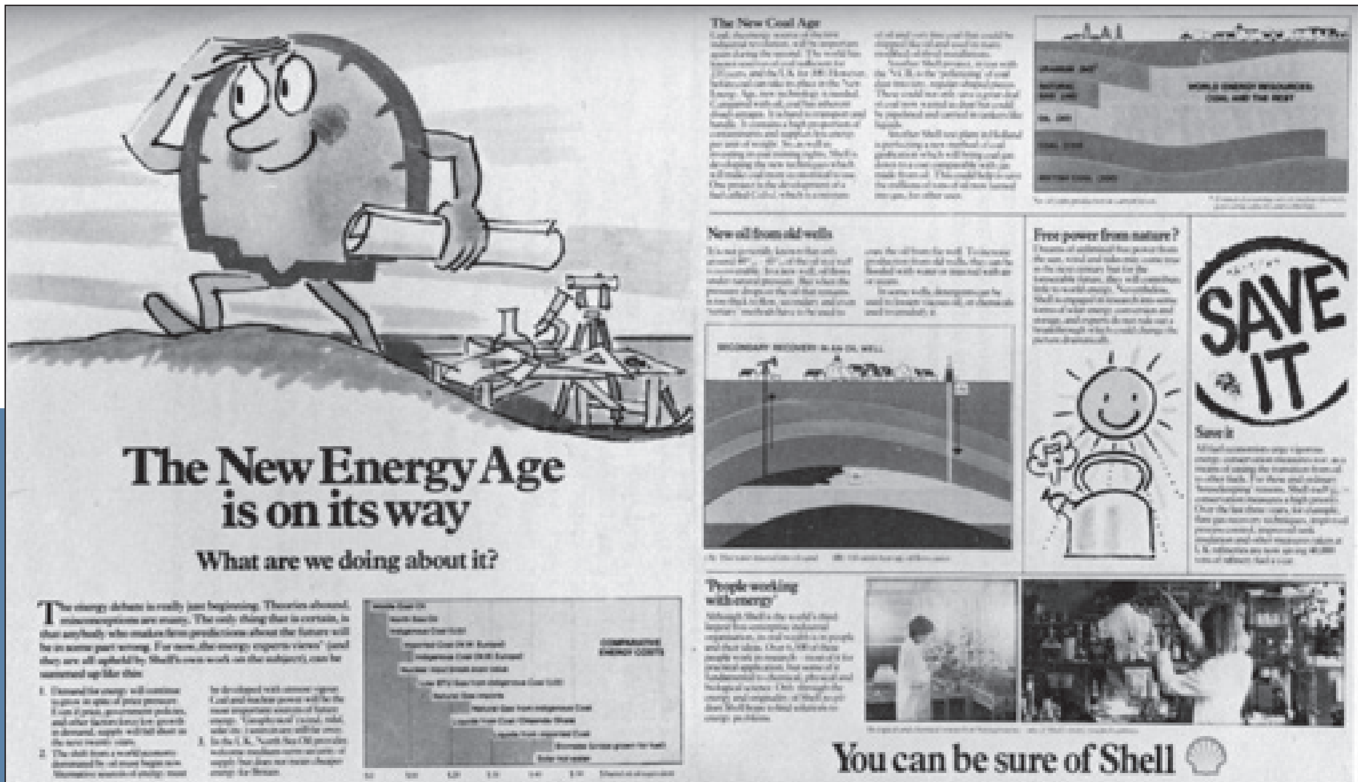
The battle for supply contracts: countries such as China and India are starting to prefinance oil and gas exploitation in friendly developing countries. China, for example, is investing billions in Angola’s oil and gas sector. China is thus laying claim to reliability of supply for the future, while other nations and private oil companies are left standing. This is completely disrupting the free market for volumes. Large volumes are disappearing from the free market. As a result, a ‘War on Reserves’ has broken out.

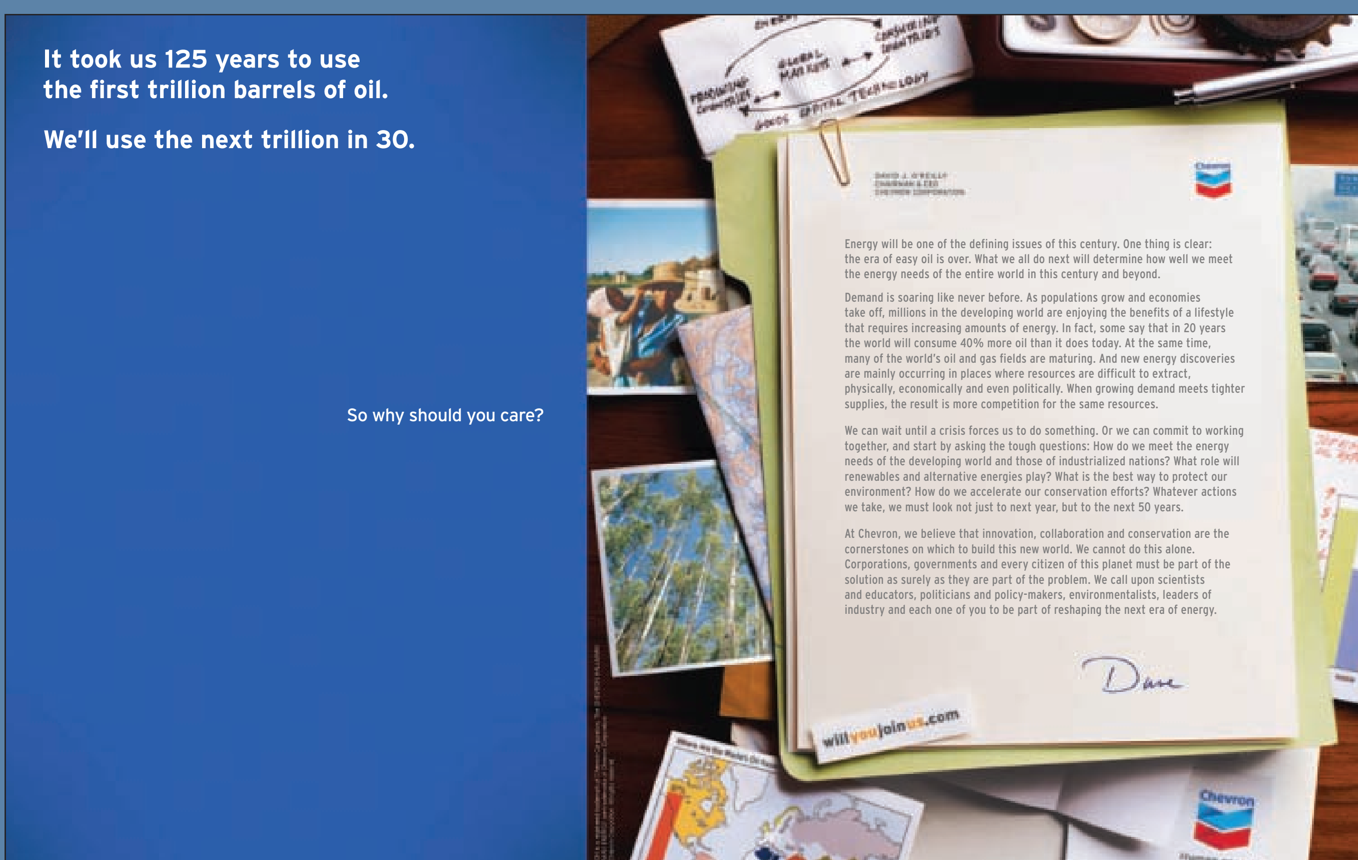
Developed economies such as Europe will have to learn to live with this new reality. They are forced to formulate and initiate an adapted policy as quickly as possible.

Mathijs van Gool was until recently head of the research department of the Dutch business newspaper Financieele Dagblad.

Peak Oil revisited

History is repeating itself. In the late 1970's, Shell put ads in newspapers to announce the coming of a 'new energy age', in which the company forecast the decline of oil supplies and affirmed the need for alternatives. ChevronTexaco is doing the same today.





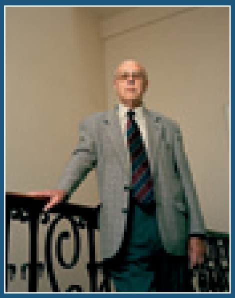


Photo: Hollandse Hoogte.

Peter Odell

‘I have been a “peak oiler” since 1980’

Peter Odell, one of the most famous energy economists of our time, is 77 now, but still passionate about energy. He also has not become a whit less outspoken than he was when he was still teaching at Erasmus University in Rotterdam. ‘The high oil prices of today’, he says, at the kitchen table in his house in Ipswich where he lives with his wife, ‘are the result of our willingness to let traders trade oil like coffee.

Odell – author of many books, including the famous Oil and World Power, the Future of Oil (with Kenneth Rosing) and most recently, Why Carbon Fuels Will Dominate the 21st Century’s Global Energy Economy – has, of course, ‘seen it all before’. In 1963 he wrote a paper for the Fabian Society entitled, ‘Oil: The New Commanding Height’, stressing its near-future takeover from UK coal-dependence. He later advised the Labour government’s secretary of state for energy, Tony Benn, to create a partnership between government and private sector in the UK’s offshore oil and gas industry that would allow some government control over output and prices. Just when this advice was given, Margaret Thatcher came to power.

Odell is of course well-known and frequently criticized for his ‘optimistic’ outlook on carbon fuel reserves. He already wrote about the subject in 1966, in his book ‘An Economic Geography of Oil’. ‘Even in those days I was arguing that we were not about to run out of oil’, he says. In the 1970s, he and his colleagues at Erasmus University in Rotterdam, argued in general that there was more oil than most people realized; and in particular, that there was a lot of oil and gas under the North Sea. ‘At the time, many people, including some in the industry, were saying oil resources were dwindling and likely to disappear by the year 2000. The Club of Rome said this, of course, but they did not go into any depth. BP and Shell were also very pessimistic. BP predicted a production plateau in the late 1980s at 70 million barrels per day, excluding the centrally planned economies, while Shell was only somewhat less pessimistic. Shell in fact ran ads that were very much like the Chevron ads you see now.’

Odell’s viewpoint was so controversial, in fact, that BP declared him persona non grata. Later, BP’s Lord Browne apologized for the company’s actions. ‘But at the time it really hurt our ability to get financing in Rotterdam’, he says. Erasmus University, incidentally, closed the Department of International Energy Studies when Odell retired in 1992. ‘The Economic Faculty decided to concentrate on logistics. Maybe they regret this now.’

Although Odell is much criticized by modern-day ‘peak oil’ theorists for his supposed blind faith in carbon fuels, he says, ‘I have been a “peak oiler” since 1980. I have for a long time predicted an oil peak to happen around the middle of the 21st century. In my book The Future of Oil, published in 1980, I wrote that there is a 75% probability of a peak in 2030 and a 25% probability in 2060.’

Odell even has solar panels on the roof of his house. Not, however, because he is afraid oil or gas will run out or even because of global warming, about which he has his doubts. ‘Governments have become obsessed by global warming. But the British Met Office recently said there has been no increase in average global temperature since 1998. It makes one wonder.’

The reason for the solar panels is, rather, his fear of the consequences of liberalization. ‘I bought them because I fear for gas price increases as a result of the oligopolistic market that has arisen after the market’s liberalisation in the UK. There are no controls anymore. Companies can push up the price as much as they like.’

Odell holds a dim view of the liberalization of the energy market that the EU is pursuing. ‘I am not convinced of the necessity of open markets for public utilities. Indeed, I don’t think a real market will ever exist in gas or electricity. You certainly are not going obtain security of supply by giving suppliers the freedom to do what they want. It is a matter of time before the euroview of liberalised markets collapses.’

When it comes to gas, its security of supply should be the ‘sole defining feature’ of energy policy as from now, says Odell. ‘It is only a matter of time before we run up against deliberately-created supply problems. Indeed, this already happened in the winter of 2005/2006 in the UK.’ He points out that the decline curve in oil production in the UK part of the North Sea is ‘the steepest the world has ever seen, except in cases of military conflicts’. He blames this on underinvestment by the industry, in the context of liberalization. ‘The government is failing in its responsibility to stimulate production.’

Odell believes the time is ripe for a form of international responsibility over the oil and gas market. Ideally, ‘an international organisation concentrating on energy issues’. The high prices of today, he says, are caused largely by traders and speculators. ‘They are the result of our willingness to let the traders set the prices. The oil trade, which is now in the hands of organisations like Goldman Sachs, only dates back by only four or five years. Prices now change every minute. In the past, the price would not have changed as a result of a kidnapping in Nigeria. Such events have nothing to do with where we really stand in the supply-demand situation.’ ■