The next oil shock?

The world is wallowing in cheap oil. But the oil industry's most authoritative data shows that Opec is set for a comeback

by David Fleming / April 20, 1999 / Leave a comment

I have missed my vocation. I should have been a pick-pocket. I like dipping sneakily into heavy tomes full of small print, to see what I come up with. Occasionally I find something extraordinary. The latest issue of the International Energy Agency's annual publication, World Energy Outlook, is a case in point. It has a story to tell which will profoundly affect the future of every man and woman on earth.

The International Energy Agency (IEA) is the most authoritative body in the field of energy. It was set up in 1974 with an office in Paris; its job is to tell governments what is happening in the oil market, and to publish statistics. The 1998 edition of the Outlook contains a table and a graph which forecast the supply of oil during the first two decades of the next century. Evidently, there are some big expansions in oil production on the way. An investment of "many multibillion" dollars in something called "unidentified unconventional oil," which stands at zero at the moment, will be producing as much oil as the middle east does today; middle east oil production itself will more than double, as will production of oil from natural gas-known as natural gas liquids. In total, allowing for sources which are in decline, production in 2020 will be about 55 per cent more than it is now, and a reasonable summary of all this might be: “All’s well.”

Then I noticed something odd. The first thing which looks suspicious is this: “unidentified unconventional oil.” What is it? And if it really is “unidentified,” what is it doing in the table? Well, “unconventional” oil is derived from a variety of inconvenient sources. It is extracted from oil shales (oil-sodden rocks) and from oil and tar sands; it is synthesised from coal and gas, and it is produced from vegetation (biomass).

The production of oil from unconventional sources calls for exceptional reserves of patience. For example, in the case of tar sands and shales, you typically have to make a crater some 300 feet deep; you then dig out millions of tons of sand and transport it to a plant to extract the oil by a heavy industrial process which involves the application of heat and high pressure; you then have to find somewhere to dump the waste. It can be done, but even to do it on a small scale produces a landscape which is a black vision of hell, and in the process you use up much of the energy you get from the oil. The cost is huge, and the mess is beyond description. On a large scale, it is not a proposition at all.

The word “unidentified” means that no one has yet been able to say what those unconventional sources might actually be. In short, they do not exist, not even in the form of a sketch on the back of an envelope. In fact, the Outlook disarmingly describes them as the “balancing item”-the shortfall which they expect in the supply of oil in 2020, and which has to be written into the table somehow to make the figures add up. There is only one explanation: “unidentified unconventional oil” is there for decoration only.

The second odd thing about this survey of future oil prospects is the starring role which the IEA has in mind for the oil producers in the middle east. The oil market is a pas de deux between two dancers; they are, first, the middle east oil producers who are also members of Opec-that is, Iran, Iraq, Kuwait, Saudi Arabia and the United Arab Emirates; and, second, the “rest of the world” (which includes Britain). Until now, the rest of the world has been much the more important of the two groups, but this is about to change.

In 2001, according to the Outlook, the rest of the world’s oil production will reach its all-time peak of about 47m barrels per day (MBD). From then onwards it is downhill all the way, passing the 27 MBD mark in 2020, and thence towards depletion. The middle east, on the other hand, has a few more shots in its locker. Its output, at present about 20 MBD, is scheduled to double by 2010; but then the middle east, too, will reach its peak in 2014 (at 49 MBD), beginning the long decline towards depletion.

Not to worry. More than half the total resource is still in the ground. Everyone knows that oil is a finite resource, and if supplies gradually begin to fall off in 20 years' time, with the middle east sustaining the flow throughout the period, this fits in nicely with the new technologies which are coming to take its place, and with the need to reduce our dependence on fossil fuels to protect the climate. And yet there is something wrong here-a dog not barking?

The Outlook has told us that in the future there will be a very, very big role for the "Big Five" middle east producers. This group is now suffering from the very low price of oil (roughly the same level as before the price rise of 1973). But it is about to break through to a market share of more than 30 per cent, putting it back into the position of power it enjoyed so much in the 1970s. By 2009, according to the IEA, its share will reach 50 per cent. The middle east, with merely five members, is about to become a giant. Its hour is coming at last. It is growing in stature like a sumo wrestler. And yet, according to the Outlook's forecasts, this will be a sumo wrestler with a difference. This one will not throw its weight around: it will maintain the sweetest good nature; it will keep oil prices low; it will do all it can to avoid inconveniencing anyone in any way.

Odd behaviour in a heavyweight, you might think. Especially odd for the five heavyweight oil producers in the middle east. Not all of them are famous for the warm affection with which they regard the west. They feel that they have been almost giving away their one priceless asset for the past 50 years. They are within a few years of the half-way mark in the depletion of their oil. They are about to find themselves with a prize which they have craved for a long time. The prize is control over the price of oil.

Oil prices will begin to rise, and once they have started, they will move fast. There is a "positive feedback" in the oil market. The oil-producing countries depend on their oil revenues, and when prices fall, they are tempted to increase sales to maintain their revenues, which makes prices fall still further. The problem is that the converse is also true: when prices rise, producers can maintain their revenue with reduced production; lower production leads on to higher prices. This makes the oil which is still in the ground more valuable-an appreciating asset which should be conserved. This tends to raise prices still further.

Here is an "oil price shock" of a new kind. In the 1973 price shock, oil prices rose more than eightfold from their starting-point of around $2 a barrel; after settling back some way, they surged ahead again in 1979 to three times the peak they had reached in 1973, reaching nearly $50 a barrel. In both cases, prices fell back again-not all the way, but far enough to restore business as usual. There were too many producers around to allow high prices to be sustained; new fields were clearly identified or were opening up-for example, in Alaska and the North Sea. But now there are no important new fields to be discovered; the IEA says this, so it can be taken as settled.

Where the heavyweights lead, the others will follow. The rest of the world producers, too, will see their chance; they will be only too delighted to get a decent price for their oil and to ease off the rate at which it is being depleted. As for the "natural gas liquid" which, according to the table, is scheduled to play such an important part in ten years time, its price will follow exactly in step with crude oil prices. We can now put all these clues together and discern the bold outlines of the case: an oil price "shock" will lift-off in the first decade of the coming century. This time, there will be no return ticket. A reasonable expectation is that it will happen within the first three or four years.

All we have done here is read a table and a graph (table 7.12 and figure 7.7) in the Outlook; we have mixed in a bit of deduction, and added some experience of what people do when they are in possession of power. The sequence of cause and effect follows: a market close to its peak; the Big Five with a dominant share; higher prices; reduced production; even higher prices; a rapid transformation of the oil market. The logic leaves the reassuring data in the Outlook in ruins. There is a real possibility that it leaves the basic assumptions of economic growth, employment and sustainable development also in ruins. The oil producers will not want to destroy their customers' economies; on the other hand, if prices rise far enough, the producers will be able to sustain their revenues even if the quantity they sell declines drastically.

So why is the IEA not shouting about this? As the most influential policy body in the oil business, it is in a delicate position. It cannot just blurt it out. It cannot say: "We are looking at a big, permanent oil deficit, for which we can offer no solutions." What it can do is to provide data which signals the gaps and inconsistencies clearly, and allows-nay, invites-readers to draw their own conclusions. The IEA has revealed the situation in coded form.

The prospect of a one-way oil price shock early in the next decade changes the present economic and political agenda profoundly. Assumptions of sustained economic growth and low unemployment will be blown out of the water. Britain has some protection, because of its own oil reserves, but it is entirely exposed to the effects of a one-way oil shock on its trading partners and food suppliers. The immediate impact of the shock will take the form of serial disruptions in transport and distribution, heating, lighting, manufacturing and all other energy-dependent functions; much higher costs will ripple through the British economy, as indeed through every economy in the world. Certainly something can be done-not to prevent it, but to deal with it. Under extreme pressure of circumstance, astonishing leaps forward can be made in technology, organisation and living patterns. But they will not happen unless there is intensive preparation; so far, there has been none. There is a raft of new energy technologies, gently drifting along on the tide, waiting for the costs of the technology to fall-or for the price of oil to rise. Only when the price of oil has shifted far enough will they become economic, which means that a rapid price rise would leave them, along with the nation as a whole and its trading partners, totally unprepared.

Most of the big events of this century have caught the world unawares. A general sense of relaxed business-as-usual, immediately beforehand, is almost the signature of the decisive turning-point. The IEA's figures are so astonishing that they seem to have caught the agency itself un-awares. At first sight the tables seem quite innocent. We see a routine exercise, with perhaps rather more columns and divisions than you might expect. And then the penny drops.

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