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Chris Skrebowski on spare global petroleum capacity

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Transcribed by Kristin Sponsler

Julian Darley for Global Public Media, on the 4th of June, 2007, and I'm talking to Chris Skrebowski, the editor of the U.K. Petroleum Review.

JD: Chris, you've been a watcher of the petroleum scene for a number of decades, and you have much experience with the Middle East from the 1970s, and onwards, and you've been a keen watcher of the matter of spare global petroleum capacity. Could you first say what that is, and then we can go into about why it matters and how much it might be?

CS: Yes, certainly. There is a definition of spare capacity which is used by the IEA, which is that capacity which can be turned on within 30 days, and which can be sustained for 90 days. In other words, turned on within the month, and you can sustain that for at least 3 months. It sounds very precise, but of course it isn't nearly that accurate, so when we're looking at spare capacity what we're trying to establish is the amount that can be turned on relatively quickly and can be sustained for a useful length of time.

JD: And why does that matter?

CS: Well, it matters because at the moment the system is under not inconsiderable pressure. But like any system, you can have a shock to it, you can have some sort of upheaval or setback in one part of the system, and then if things are to continue reasonably smoothly you need another part of the system to take up the slack and to allow you to continue to deliver the flows you want.

JD: And what happens when that slack isn't?

CS: Well then economics comes in. And the only way to reconcile a supply and demand that's now out of balance is some sort of price spike.

JD: Which we have seen perhaps in the last few years.

CS: Yes, I mean that is undoubtedly what has been happening. As the system gets tighter, and as people have maybe less confidence that there is slack and there is an ability to turn stuff on, then the price tends to get spikier.

JD: Now there are various numbers which are used to illustrate how much global spare capacity there should be or there needs to be. What in your mind from your experience is that sort of number? Are we talking half a million barrels a day of production, should it be seven million, that is, for the system to be reasonably smoothly functioning, and to avoid these price spikes?

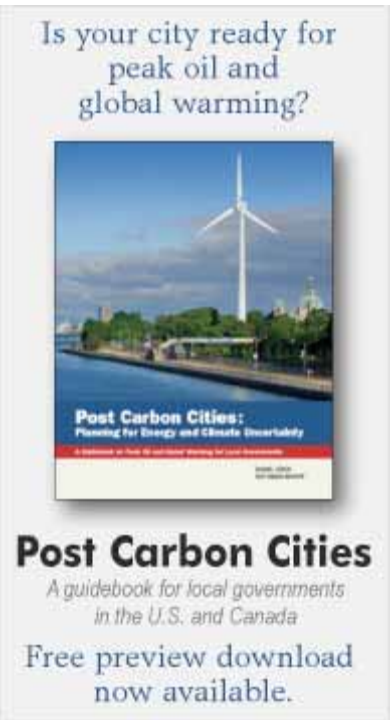
CS: Well, the comfortable margin, given that we currently breeze through about 85 million barrels a day, is probably about 5 or 6 million barrels a day, which of course we haven't had for a number of years. If you had that level of spare capacity you could be pretty relaxed about any geopolitical shock or any upheaval in a part of the system. In more recent years it's been down to two or three million barrels a day has been the general sort of assessment of where it is. And that really is a bit tight for comfort.

JD: Well, how do we know what spare capacity is, that's really the crux of the quantifiable question.

CS: Yes, and that is indeed the extremely difficult question to answer. A simple system is simply to look at what a country has produced in the relatively recent past, and assuming you know of no catastrophic setback, you might wish to argue that they can do that again. You need to adjust this with new capacity that's come on stream, and maybe stuff that's no longer functioning as well as it might. So it's a bit of a fine calculation at the best of times. When OPEC has actually got its production under quota and you have cutbacks from levels previously established, you can assume, at least over a relatively short period of time, that they've switched off that much capacity and that therefore it can be switched on again.

JD: So from your understanding of the world situation, what do you think the spare global petroleum production capacity is at the moment?

CS: Well before I try and answer that, all I will mention is that there's been an idea around in the industry for a long time and which is a perfectly reasonable idea, that with the very big productive fields of the Middle East, you could always in effect overrun them and produce them about ten percent more than we might be more comfortable with on any one occasion. This is a bit like saying your car's top speed is ninety miles an hour but if everything's tuned up and you go out and go down a reasonably steep hill you can probably do a bit more than ninety miles an hour. With a system, and oil production is only a system in the end, that sort of argument is reasonable enough. The problem is that where this was once true because these fields were young and in good condition, they're now much older, they've been produced for a long time, the equipment is very often relatively elderly even if it's been well maintained, so you're less confident of the idea that you can just open the throttle up and overrun them. And then I think you actually have to look very closely at



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Depletion

what has actually been achieved in the relatively recent past, and make an adjustment for any new capacity you know has come on stream. Now the EIA and the IEA do this on the calculation. They're currently saying that OPEC has spare capacity of two or three million barrels a day collectively, and they're hoping that is going to build up as we go through the decade. The first question is where is that spare capacity, and the answer unfortunately seems to be that it's overwhelmingly in Saudi Arabia. I say unfortunately because once you have all your eggs in one basket so to speak you then become concerned as to whether this is a good and reliable figure. But that is in effect the situation we're in. If you believe the agencies, maybe as much as two million barrels a day of spare capacity is held by Saudi, and the other OPEC members between them probably have little more than a half a million barrels a day of spare capacity, and a good chunk of that's held in Abu Dhabi and Kuwait.

JD: And Kuwait itself is not necessarily what it once was. I am referring in particular to the estate of Burgan, which is the world's second largest oil field.

CS: Yes, I think this is a general developing feature of the Middle East that a lot of these fields were brought into production a long time ago. They haven't necessarily been run very hard, but they've been run for a long time, and they're now getting the oil industry equivalent of the hardening of the arteries.

JD: And before we get to Saudi Arabia, which is really the crux of the spare capacity argument, how much would you say of the spare capacity might there be in Kuwait given the caveats you've already mentioned?

CS: Well I think if we look at what Kuwait was producing before the cutback, and there hasn't really been any significant change to their capacity since, it looks as though they've turned it down by about 200,000 barrels a day, and therefore, at least in theory, could turn it back up by a similar amount.

JD: And are you confident that they could?

CS: Yes, I think I'm reasonably confident in the sense that it was recently enough that they achieved that number so I don't think it will have eroded that quickly that they can't put that back on again.

JD: And Abu Dhabi you think is probably also able to increase a bit?

CS: Yes, again, a roughly similar amount as they've turned down. In Abu Dhabi there's quite a bit of work going on, there's some development going, and they're fairly reticent about revealing exact timetables and when things come on, but in their case I think I'd be reasonably comfortable saying they could turn on that 200,000 and maybe even squeeze a bit more out.

JD: And another of the countries that may have spare capacity but is also rather complex is Venezuela.

CS: Yes, I think that the way I would put it there is Venezuela undoubtedly has the resource in the sense of having known oil in the ground, particularly in the Orinoco region. Of course what has happened is for an extended period now they've been investing less than what will be required to maintain and expand their capacity. And so almost as an act of policy they've been taking money out of the state oil company PDVSA, spending it on their social programs, and their political program, and if you like, accepting this is eroding and constraining their ability to produce oil. Not fast, but it's a steady sort of loss of 40-50,000 barrels a day each year over recent years.

JD: Now turning to Saudi Arabia which is the lion amongst the operators, including in spare capacity, there has been much speculation, and I think quite informed speculation, as best one can, about the Saudi Arabian production situation. Given that we've seen in the past until relatively recently, say until the last year and a half, that the Saudi production line was a sort of a staircase, it would go up, and then it would go down and then it would go up again, but it was pretty flat in between. In the last few months we've seen Saudi production levels generally I think on the decline, and looking much more haphazard than graphs in the past. If you agree with those estimations, what implications does that have for the possible spare capacity that Saudi Arabia is supposed to have?

CS: I think that the honest answer is that we really don't know. Saudi has become, in effect, slightly mysterious. You're quite right, if you look up the production graphs for Saudi, Saudi production appeared to start falling from about May of last year. It wasn't until about September that they were announcing production cutbacks as part of an OPEC package. Then we find that the volume that has been lost in terms of Saudi production is greater than the normal share that Saudi would take of a production cutback. So some people are saying this is the start of a real erosion of Saudi capacity. Some people are saying No that they've just turned it down, they know that they have various incremental capacity coming on stream, but they're quite happy to take the pressure off other bits of the system, and so are quite happy to cut back at a time of pretty high prices. It's very difficult to really get a definitive handle on this because the people who really know what's going on simply aren't telling us.

JD: Right. Which is perhaps for planners in the world and in the corridors of power, should this perhaps be a cause of some concern, since Saudi has most of the supposed spare capacity, and yet it's actually quite mysterious and somewhat faith-based?

CS: Yes, I don't think that I could agree more strongly on that one. Saudi has this defining position in the market, it notionally has the bulk of the world's spare capacity, and therefore the world's insurance policy if you like. They are not being forthcoming, and I would have thought that certainly at a ministerial level, Western governments would want some real assurances, or some real knowledge as to exactly what's going on. Whether that capacity is there and available, or whether there are some challenges to that.

JD: Do you know of any representations being made to the Saudi government to try to find out that rather useful information?

CS: Well, not that I'm aware of, but then I have to recognize that I wouldn't be informed anyway.

JD: Turning to the matter of the longer term, we're talking about now in terms of spare capacity, the only way that there could be more spare capacity is if there are more projects brought on stream than there is decline in output due to depletion and other matters, and you are in an unusually good position because of

your mega-project survey over the last few years to be able to tell us what you think the forecast for the next two, three, four years is for spare capacity.

CS: Right, well I think what we've seen over the last few years is that the amount of capacity lost to depletion has been increasing steadily, which ultimately is not that surprising. More countries are depleting, i.e. they're producing less at the end of each year than the year before. There is some evidence that the rate of depletion is in fact increasing. Again, that's not that surprising, if you're short falling in areas you put more pressure on the rest of the system, and so the consequence of that is you deplete them faster. What we've been seeing over the last three years if you try and reconcile the gross capacity that was apparently going to come on stream with the net capacity, that which turned up and was available to meet demand for sale, we're seeing typically 40% or less actually eventuating as saleable capacity. And that's a fairly terrifying idea that you've got to bring on ten units to be able to sell four. But that is the consequence we're seeing. And so if you look at the gross capacity going forward, we apparently have adequate volumes coming on stream in 2007, 2008, and 2009, and after that they start falling away. But if depletion is increasing at the rate we're already seeing, then if 2007 is surprisingly tightly balanced, prices are still staying high rather than going down, 2008 is not likely to be significantly better. 2009 could even be worse. And after that, it really starts getting difficult.

JD: Before we come on to address what may happen towards the end of this year, which I know you have some interest in, there is also another intriguing question which is why should anybody bother to create spare capacity anyway given that we've been economically trained to think about net present value and we want to realize our assets now in an economic sense?

CS: Yes, I mean I think like any system, a certain amount of spare capacity is quite useful in purely operational terms. If you're running a selection of oil fields, you know you've got to do work in some of those oil fields over time, you've got to connect new beds, so having a degree of spare capacity just allows the thing to function smoothly. So what we're really asking is there any reason that producer countries should have spent money on creating capacity over and above what they need to run the oil fields in a reasonably orderly manner? The answer is not really, because there isn't any return on that money, and you're spending money for which you have no particular requirement. It's not necessarily to run your system, and if anything what it's going to do is depress the price you might get. So I think there has been a certain amount of misunderstanding about spare capacity. Spare capacity in the Middle East in OPEC basically arose because after the first and second oil crises the investment pattern, which had been done originally by the international majors, had been looking at meeting a seven percent a year annual compound growth. So they have been putting in capacity in the Middle East which meant that when in effect we had the crises, demand fell away and we had a number of years of limited economic activity, the Middle East found itself with significantly more production capacity than they immediately had a market for. And as they were also by this time trying to control the price they were getting for their product, they weren't just going to pump it flat out and drive the price right down. That meant that they had to spend a number of years trying to cope with this excess capacity they had, and so it's taken if you like from that date, from the early 80's until now for that lump of excess capacity to work itself out of the system. We are now at the point where it in effect disappeared in 2004. A little bit got restored in the last couple of years which is what you need to run the system. So if you're asking would any OPEC member willingly invest to drive their own price down the answer is no. It would be a very strange act.

JD: So we've got used to spare capacity, we had the world, at least America had spare capacity, pre-1970 which was controlled by the Texas Railroad Commission, and then post-1973 or so, thanks I think it's fair to say to the historic accident of the oil shocks the world has had two different kinds of spare capacity, is that fair to say?

CS: Yes, it's quite interesting if you look at the sort of U.S. spare capacity, that basically goes all the way back to the 1920s, when the economic boom of the 1920s hit the wall with the 1929 crash, and then the Depression, and it's one of those sorts of terrible paradoxes that a number of very large fields were probably discovered in the 1930s, and the price collapsed to such low levels that everyone agreed that something had got to be done in order to put the industry back on its feet. And the vehicle used was the Texas Railroad Commission, which started allocating the amount that each field could produce, and that really only finally worked its way out into the late 60's, early 70's when U.S. production pro-ration effectively stopped in the sort of mid-60's. All the fields were then run flat out and finally peaked in 1970.

JD: Yes, and in case anybody's wondering the reason that the Texas Railroad Commission controlled this was because so much oil in those days was carried by the railway network. Is that right?

CS: Yes, and I think the other thing was the Railroad Commission had powers that were easily amended in legalistic terms to cover this, so it just became a convenient body to use to achieve this end.

JD: What do you make of some of the august bodies like Cambridge Energy Research Associates, who are forecasting many millions of barrels of spare capacity, we see five, six, seven...also the EIA, the Energy Information Administration in America, and the IEA in Paris, the International Energy Agency, all producing pretty rosy numbers, around about the five, six, seven numbers you said that the world would find comfortable during the next few years? What do you make of that, and do you think that's actually very helpful for world planners?

CS: My opinion for what it's worth, is that there's an awful lot of wish fulfillment in there, and there isn't necessarily terribly solid grounds for thinking that that will emerge, partially because of your earlier point. Why should these people invest and in effect spoil their own markets, which is a pretty strange act on their part. And partially because of what we've been seeing, which is that every time we thought that enough new capacity was coming on the market to make a difference, so much has been eroded by depletion that it's coming in at a much lower level. So I can't say that these won't eventuate, I find it difficult to see how they're going to eventuate, and if you read some of these reports very carefully, you will find that there's rather a lot of use of the word could, which suggests to me that even these agencies aren't necessarily as confident as they're pretending that this will turn up.

JD: And to finish with, and to contract the timeline again up from the end of this decade through to the end

of this year, you have some interesting readings of what the IEA is saying about what may eventuate toward the end of this year. Can you explain a bit more about why you're concerned?

CS: Yes, this is really extremely simple. The sort of consensus figure is that world demand this year will increase by 1.4, 1.5 million barrels a day, that the non-OPEC countries should be able to cover about a million barrels a day of that, which then leaves OPEC to meet the other half million barrels a day. Now if all their production plans come on the stream, this should be easily attainable. Probably as we're halfway through the year with OPEC having been producing rather less, in fact about 750,000 barrels a days less than we might have been expecting. So that's a big hole, so to speak, and of course the year isn't spread out evenly in terms of demand and supply. We have the rather greater demand in the winter quarters. And so the IEA has already stated that OPEC is going to need to not only up its production but also use some of its spare capacity if we're to comfortably meet our fourth quarter demand. The alternative obviously would be to take even more oil out of stock. We've been taking oil out of stock in the fourth quarter of last year and the first quarter of this year basically to make up for that OPEC shortfall in production. So I think people would be reluctant to take even more stock out. We'd tend to get prices spiking upward. So it's already looking, and the IEA is stating this quite clearly, that the fourth quarter could be rather tight.

JD: Thank you very much, Chris, and I hope that the next time we talk we may be able to discuss Russia and gas since Russia is making increasingly interesting noises towards Europe and America, and Europe doesn't really have many other places to turn than Russia for gas. So if we might discuss that next time I'm sure that our listeners would be very interested to hear that.

CS: OK, look forward to that.

JD: Thank you very much Chris Skrebowski, editor of Petroleum Review in the U.K, and this is Julian Darley for Global Public Media.

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