

# Why We'll See \$300 Oil by 2020

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*For decades, the theory of peak oil—or the idea that the world either has or will soon exhaust its ability to produce more oil—was derided as a doomsday scenario too unbelievable to ever come to pass. But \$147 oil and one commodity crash later, and suddenly peak oil doesn't sound so strange after all.*

*In fact, mounting scientific evidence suggests that peak oil will not only be a reality, but may soon be upon us, says Charles Maxwell, senior energy analyst for Weeden & Co.*

*With over 50 years' experience in the oil industry, Maxwell is a renowned expert in the energy markets; Institutional Investor has ranked him as the market's No. 1 oil analyst nine different years. In addition to his role as Weeden's senior energy analyst, Maxwell serves as director for Chesapeake Energy and American DG Energy.*

*Recently, HAI Associate Editor Lara Crigger sat down with Maxwell to get his perspective on peak oil, including why Athabasca's a better play than Haynesville, exactly how peak oil will change our quality of life and why we'll see oil back to \$150 in just five years.*

**Crigger: Let's talk about the oil supply situation in the U.S. We've been trading in a \$70-\$80 range for months now—will we see a breakout to either side soon?**

**Maxwell:** By and large, stockpiles are quite high. In many cases they're right at record levels. So we're struggling with an oversupply of gasoline, diesel, fuel oil and crude oil. And this situation in the U.S. is echoed in foreign areas, where, again, both crude oil and resulting products are on the high side. It's putting pressure on prices.

What's very interesting is that it's not putting *more* pressure on prices than what we're seeing. One might have thought that by this time, we might be down in the mid \$60s or low \$60s. I thought we might be. But that would be a traditional reaction to this high inventory. Obviously something else is happening here.

**Crigger: What do you think that is?**

**Maxwell:** I think there's this great wave of liquidity that has been created by the central banks around the system, and that liquidity tends to go somewhere. Among other things, it goes into gold, but we all understand that gold can only take so much. So oil becomes the primary place where excess liquidity goes, simply because of its ability to absorb so much. It's going into physical stockpiles and in paper barrels around the world.

So I think that prices now are both a mark of over-liquidity, if you will, and also of increasing thought that, for now, supply and demand in the world are roughly in balance, and inventories are modestly on the high side. But these conditions don't look like they're sustainable. That is, as India and China get back into gear, and America recovers, and so on, we're going to find that time is on the side of a tightening in the oil market. So as you can see that for 2013, 2014 and 2015, which I do (and many other people do too), then it becomes a question of, "Well, when do you want to buy?" People are beginning to buy with the future in mind, and that puts a premium on today's prices that is very difficult to analyze.

**Crigger:** You're a pretty firm believer in the reality of peak oil. In fact, a few months ago, [you predicted \\$300/barrel oil by 2020, and at least \\$150 oil by 2015](#). Do you still agree with those projections?

**Maxwell:** Yes, I do. So far, in 2010, OPEC is doing a reasonably good job. They definitely are supplying enough oil to the system that we are holding in that \$70-\$80 area. We have gone higher, up to \$87, and we've gone lower, to \$66, but we didn't stay there. Those levels seem to be unsustainable.

So, relative to the past, I'd call that a fairly stable oil price. That would suggest that OPEC has opened the spigots about right, given the problems of the Great Recession and the issues of recovery in places like India and China and the Far East and so on.

But, one looks out a couple of years, and you see that Chinese demand continues to be strong. There are those who say China is trending down, but we haven't really seen much of a turndown in China—certainly not in the use of petroleum.

**Crigger:** Sure, they've been talking a big game, but they haven't slowed down their economic growth yet.

**Maxwell:** Right. There are more cars and more roads in China every year, and the roads that they have are better maintained and better built. In India, you need a lot of iron, steel—basic commodities to combine into basic things, like basins, pots and pans, refrigerators, and so on. That transformation is also happening in Africa and South America, as well as Asia.

So we're probably entering a period of time when the supply of oil, which is rising now more slowly than demand, will eventually catch up. Right now, oil supply is growing about 1-1.5 percent per year, and we think by 2015, it will reach a point where it's not growing at all, or say, only 0.5 percent vs. 1.5 percent demand growth.

I think demand for the U.S. and Europe will be flattish, and in the rest of the world, it will be relatively strong. This leads to tightening markets. I think those markets will not begin to tighten physically until about 2013, but it wouldn't surprise me if the financial side of the oil business began to tighten in 2012 anyway, in anticipation of what could be seen in 2013 and 2014.

Particularly, we could begin to have interest in the companies with very large reserves or smaller capitalizations, where you're buying a lot of barrels per hundred dollars of market capitalization. Those companies would be particularly sensitive because they have so much leverage: If a barrel of oil in the ground is suddenly worth a little bit more, and you have a lot of barrels of oil in the ground, then suddenly your capitalization begins to move up rather quickly. That would be particularly companies of the kind that we see in Canada's Athabasca Oil Sands.

**Crigger:** Which companies would be particularly poised to capture this effect?

**Maxwell:** Companies of the kind that we see in Canada's Athabasca Oil Sands, for example. We might see them someday in Venezuela's Orinoco Tar Sands, too. Then there are a few big companies like Lukoil ([LUKOY.PK](#)) and Petrobras ([PBR](#)) that for whatever reason happen to have conventional oil supplies that are very large relative to their capitalization.

**Crigger: How do you feel about shale oil plays? At the moment, most shale projects are focused on natural gas, but there is the potential for them to go into shale oil, as well.**

**Maxwell:** Yes there is. There's the Bakken, of course, but it's a very small play. Compared to Athabasca, the Bakken is just a tiny sideshow. Now the shale play for natural gas is very large, but my geological research indicates that these fields are not perhaps as good as some people suggest. They won't solve all of our energy problems; they're not that good, that big or that long lasting.

The Barnett, one great shale play, has already peaked. The Fayetteville, which is smaller, is probably about five to six years away from peaking. The Eagle Ford would be another 10 years. But the Haynesville, which may be the largest of the plays in America, doesn't look like it will peak for another seven to nine years.

Now the Marcellus may turn out to be the largest of all the shale plays, but it's not as dense as the Haynesville. It's more spread out, and I think it will take longer to develop. There's a certain amount of urban and farm country that may not be disturbable. So all things considered, I would put the peak of the Marcellus at around 20 to 25 years. Looking then, at these five great plays, it looks like something around nine to 12 years for the peak of shale.

**Crigger: That's a much shorter life span than many have predicted.**

**Maxwell:** Well, that's a good long time, because, as I calculated, we are in a lot of trouble in energy in the United States and around the world by about 2012-2015. That's where we can see the waves coming towards shore, and *now* we're scared. Then they hit shore around 2015, and I think we will have peak oil for three or four years—a plateau in the late 'teens.

But by 2020, I expect that we will actually slip off the edge of that plateau, and as a world, we will have started slowly downwards. Each year we'll have some tiny percentage lower production than the year previous. At first it will start with maybe a 0.25 percent decrease. But in theory, we'd still have say, 1 percent per year increase in population and in wealth (as defined by trucks and cars), and so on.

So we'll have a theoretical demand for more oil, but we won't have the equivalent supply.

**Crigger: Just to clarify: When you say "we won't have the supply," do you mean that the oil will actually run dry? Or that we'll no longer be able to keep up with rising demand?**

**Maxwell:** That we'll run out of the ability to keep up with rising demand—our inability to produce the incremental barrel as a group. We aren't going to run out of oil for 50,000 years.

That doesn't mean that individual companies won't be able to produce the incremental barrel. But as an industry, we won't be able to. And this will really bring about change: changes in where we live, how we build upwards, how we design our cities and parks, and so on. We'll need to have a much more complete subway and bus transport system. Things will change quite a lot. I don't think it will change the *quality* of life; it's just going to be a different kind of quality.

**Crigger: So is the solution to peak oil a switch to alternative energy sources, like solar and wind? A reduction of our energy usage? Or a combination of both?**

**Maxwell:** I think a combination is the most likely outcome. We have four great fuels: oil, gas, coal and nuclear. Of those, three are fossil fuels, and we would like to dial those down, because they do put out a lot of CO<sub>2</sub> and other pollutants.

Oil is the first problem, because oil represents about 97 percent of the demand from the transportation business around the world. As I said earlier, I think oil will flatten out, while demand will continue to rise at least 1 percent per year. So it will be a kind of slow strangulation, meaning rising prices.

If you have a demand for 100 barrels and you can only supply 99, then somebody who needs a barrel is not going to get it. As soon as they see that the loss has landed on them, they'll bid higher, so someone else will have to take the loss. That loss will be tossed around like a hot potato, until finally the price of oil gets high enough that somebody says, "I can't bid any higher."

That bidding process for 1 percent deficiency of oil can easily carry to 10 percent or 15 percent or 20 percent on a yearly basis. It will be pushing prices up very quickly because an awful lot of people don't want to be the one that fails to get that barrel.

**Lara: So even a small tightening of the market could lead to a sharp increase in prices?**

**Maxwell:** Exactly. Price increases could begin in '12 or '13 simply from the psychology of demand. That vulnerability will probably reach a peak, and it's going to be very, very scary to people in 2019, 2020, 2021, when I estimate that we'll see the beginning of an actual drop. It's not the drop itself that will cause the problem. The problem is that people see the edge of the plateau: We've seen this movie before; we know how it ends. And down it goes: first oil, then gas, and then finally, many hundreds of years later, coal.

Right now we're using more oil every year, when we should be learning how to use less oil every year. Of course, the market will teach us how to use less oil, by raising the price to a point where we have no choice. That will be a painful, harsh, long process.

**Crigger: When does it start to get better?**

**Maxwell:** By 2025, people will begin to start understanding. They'll move in the ways that prices suggest they should, and we will have a lot of new alternative energies that have had time to develop. They don't have time to develop now, in the time that we're giving them.

**Crigger: Or the incentive. After all, if oil is still so cheap, where is the incentive to develop alternatives?**

**Maxwell:** Exactly. The government's trying to give incentives with subsidies, but they don't really know what they're doing, and they don't really understand the situation. No one can understand what the situation will exactly be in 2020. We're doing the best we can, but what we're able to do in anticipation is not very much.

But all that will be resolved, and our vulnerabilities will start to get better, I think, around 2025. By '30 and '35, we'll have this energy problem pretty well licked.

**Crigger: Well, let's hope!**