

## Are We On The Cusp Of A Global Energy Crisis?

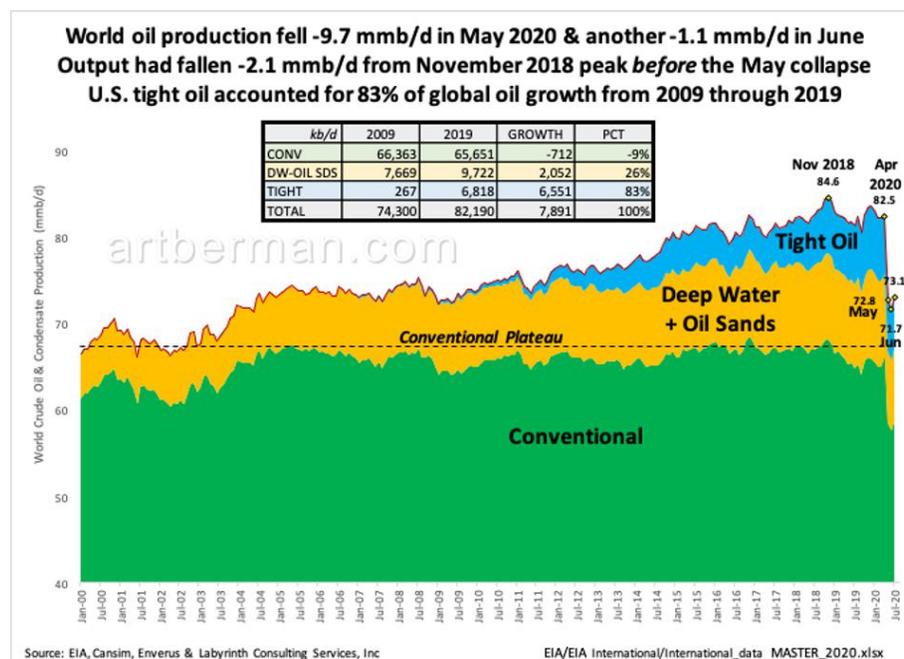
[Art Berman](#), Contributor, [Energy](#)

[Goehring and Rozenchwajg](#) believe that we are on the cusp of a global energy crisis because of the depletion of U.S. tight oil plays.

*“We are on the cusp of a global energy crisis... Global energy markets in general and oil markets in particular are slipping into a structural deficit as we speak. We believe that energy will be the most important investment theme of the next several years and the biggest unintended consequence of the coronavirus.”*

—Goehring and Rozenchwajg, July 2020

I doubt that they are right but their logic is sound.



U.S. tight oil accounted for 83% of growth in world production over the decade 2009 to 2019 (Figure 1). Deep water and oil sands were the other growth area at 23% while conventional production declined 9% over the same period.

*World production fell an astonishing 10.8 mmb/d from April to June of this year. About 30% of that decline was from U.S. output and a little more than half of the U.S. decline was from tight oil.*

### Tight Oil Rig Count and Oil Production

Rig count is a good way to predict future oil production as long as the proper leads and lags are incorporated.

It takes a month or two between increased oil price and a signed rig contract. It takes another 5 or 6 months to drill and complete all the wells on a drilling pad. It then takes another 5 or 6 months from first production before new wells offset declining output from older wells. Add it all together and it takes at least a year between an upward price signal and enough new production to maintain or increase output.

Twelve-month lagged tight oil horizontal production reached 7.28 mmb/d when the rig count was 613 (Figure 2). That corresponded to 12.9 mmb/d of U.S. oil production (tight oil is about 53% of total U.S.

output). The EIA forecasts about 11 mmb/d of output through 2021. Approximately 450 rigs are needed to maintain that level but the July tight oil rig count was 147, about one-third of the number needed to maintain 11 mmb/d.

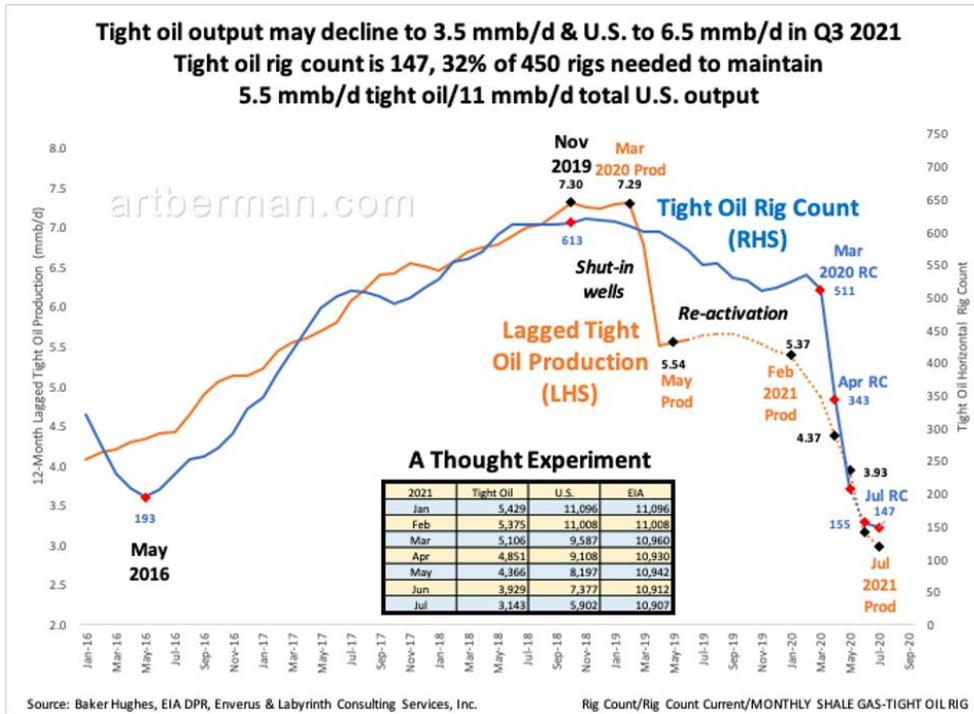


Figure 2. Tight oil output may decline to 3.5 mmb/d & U.S. to 6.5 mmb/d in Q3 2021 Tight oil rig ... [+] art berman.com

It is, therefore, inevitable that production will fall. The considerable lags and leads mean that production decline cannot be expected to reverse until well into 2021 assuming that large numbers of rigs are added immediately. That won't happen because of constrained

budgets and low oil prices. Based on rig count analysis, U.S. oil production will probably be about 6 mmb/d by mid-2021 or less than half of peak November 2019 levels.

That sounds ominous but it is only half of the story. World liquids demand has fallen almost 19 mmb/d in the first half of 2020 (Figure 3). That works out to a crude and condensate decrease of about 15.5 mmb/d.

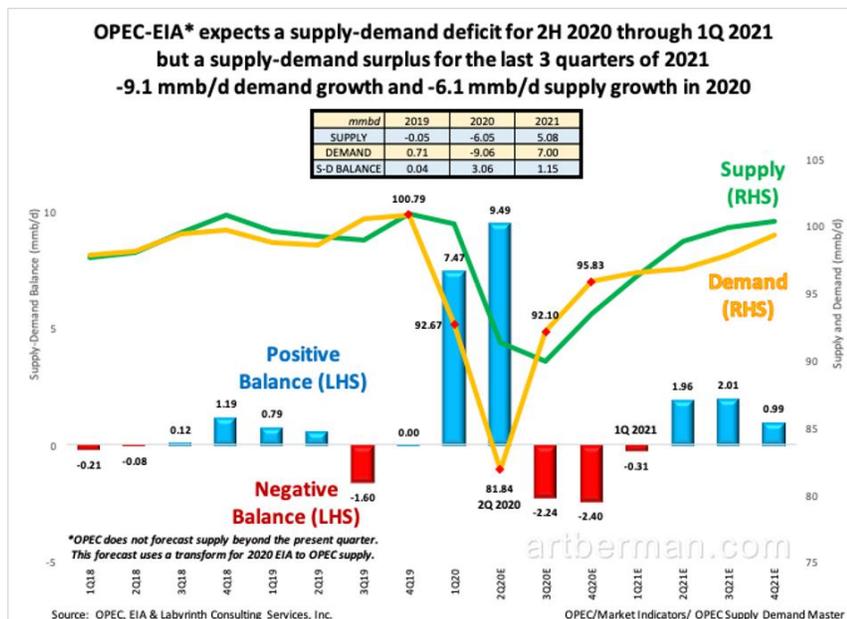


Figure 3. OPEC-EIA\* expects a supply-demand deficit for 2H 2020 through 1Q 2021 but a supply-demand ... [+] art berman.com

And that is precisely the problem and why oil prices remain range-bound in the \$40 range. A big drop in supply only results in an energy crisis if demand recovers to 2019 levels.

The integrated OPEC-EIA data shown in Figure 3 indicates a V-shaped demand recovery in the third quarter of 2020 with a lagging

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recovery in supply. I don't believe that either forecast is likely but let's put that aside for now so we can understand the best-case outcome.

A huge supply surplus in the first half of the year is expected to give way to a smaller yet significant supply deficit in the second half. A 2.25 to 2.50 mmb/d supply deficit in the second half of the year is not an energy crisis but it does suggest higher oil prices are ahead.

The OPEC-EIA model suggests approximate market balance in early 2021 followed by a substantial surplus during the rest of the year. That is hardly a death knell for the oil industry but it does suggest lower oil prices are ahead.

Where is the crisis ?

To be fair, I'm sure that Goehring and Rozenchwajg would say that they are thinking farther into the future. Their models assume some version of business-as-usual but I don't think there is anything usual about the either the present or the future. The world has changed but paradigms change slowly.

For a more detailed investigation of this subject, please go to

[Art Berman Stop Expecting Oil and the Economy to Recover - Art Berman](#)

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I am a petroleum geologist with 42 years of oil and gas industry experience. I am an expert on U.S. shale plays and currently consulting for several E&P companies and ...