TOP TRENDS TO WATCH IN 2020

Energy Commodity Trading

ENVERUS Trading & Risk

WHITE PAPER

Energy commodity trading continues to drive the industry forward. As market makers and takers enter the new decade, massive disruptions are underway. Utilizing data, navigating evolving ESG (environmental, social, and corporate governance), and embracing the volatility of adopting new forms of energy will be key as investor scrutiny intensifies. Enverus' Fundamentals team has the top 8 trends to be aware of in 2020.

1. DATA—A NEW FORM OF CAPITAL

It's against an uncertain global context that digitalization is in full swing. In 2020, data is now a form of capital on par with financial capital when it comes to understanding the market. Some say data is the oil of the new age, but truly data is like the air we breathe; it's never ending and growing.

New data innovations in energy commodity trading are likely to become even more prominent during 2020. We'll see continued growth in machine learning to track market trends and mine information; a greater ability to evaluate portfolios in real time; and the importance of applying data analytics to forward curve pricing. Energy trading companies today require robust, customizable, rules-based engines that generate forward curves and provide crucial inputs into decision-making.

It will be essential to customize robust data solutions and provide single and tailored access to differing roles within energy trading. For example, trading analysts will need full access to quality historical data and be able to forecast export volumes of crude or refined products to make more informed trading decisions. Risk analysts will look to research price trends to determine the total portfolio value at risk (VAR), as well as look to Energy Trading and Risk Management (ETRM) systems to manage complex risk scenarios.

From machine learning to deep learning, the cloud, artificial intelligence, and robotic process automation—data intelligence delivers in all of these areas and it will be the energy trading companies who choose their technology partners carefully and leverage them smartly that will come out on top.

Finally, effective data management will be used to see where oil & gas companies prioritize their vast projects. We see a significant increase in IT-focused employees which is a confirmation that a greater operator understanding of the importance of leveraging IT to capitalize on increasing their business advantage.

2. DECLINING CAPEX TRENDS—OIL & GAS PRODUCERS CUT BACK

Oil & gas producers are entering the new decade with continued scrutiny on spending. Early guidance data revealed in third quarter earnings calls show companies slashing CAPEX across liquids- and gas-weighted producers.

Spending will be significantly lower in 2020. Liquids-weighted producers are currently averaging about a 5% reduction in CAPEX, led with a $2.5B–or 44%–drop by Occidental Petroleum in the Permian and Rockies regions alone.

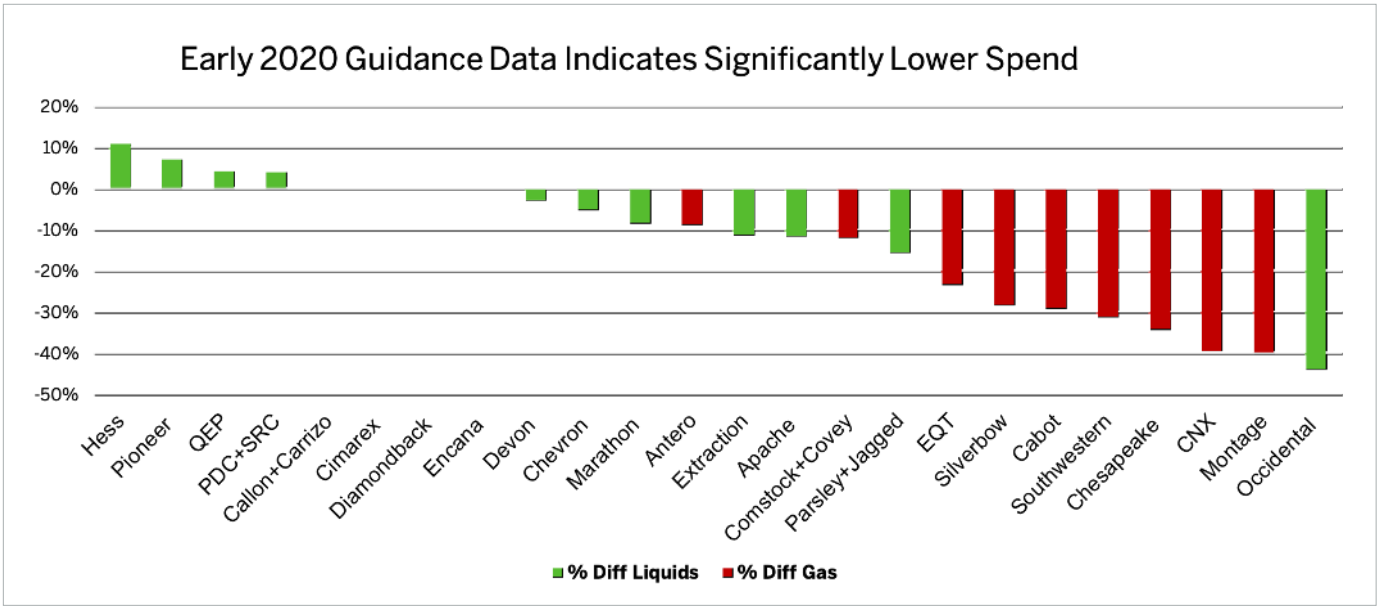

Figure 1: Enverus estimates significantly lower capital expenditures among oil and gas producers in 2020.

The picture is bleaker for gas-weighted producers. The average reduction among gas-weighted producers sits at 25%, with notable companies like EQT and Chesapeake shedding $1.1B between them. In the northeast, the top five gas producers are collectively dropping CAPEX by $1.5B.

Investor confidence in the energy sector is bleak. Access to equity capital is closed to most. For those who can raise, the cost is prohibitively high. In the third quarter of 2019, the midstream sector did not raise any capital through equity for the first time in nearly two decades. The good news about the bleak outlook for equity issuance is that it can't get much worse. We believe annual equity issuance has bottomed and will recover in years to come.

3. THE SUPPLY/DEMAND BALANCE

As we enter the new decade, the global petroleum market continues to walk a tight rope. This year saw a string of supply constraints for the first time since late 2017, but it still hasn't been enough to boost prices. The undersupply will be short-lived, however, Enverus' ProdCast solution forecasts a global overhang of just above 1 MBbl/d in 2020.

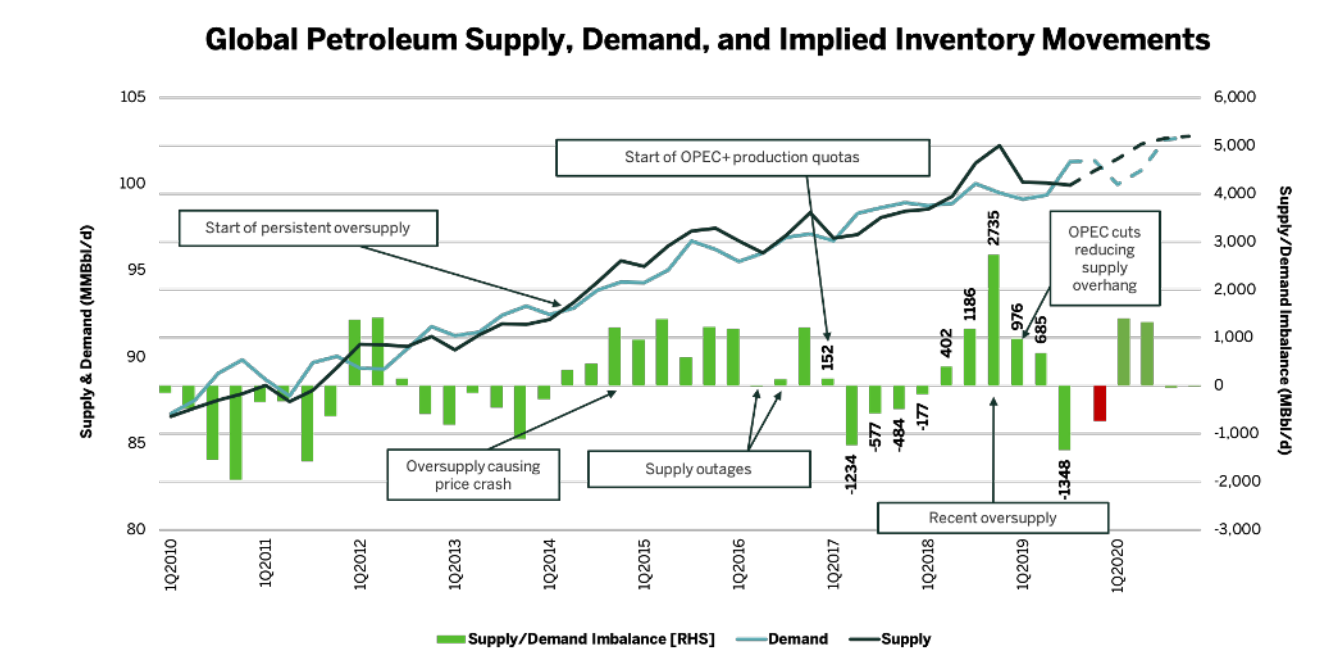

Figure 2: Global petroleum markets continue to walk a tight rope. Sources: Enverus ProdCast, IEA MODS

Looking forward to future demand trends—the International Energy Agency (IEA) forecast for supply and demand through 2020 show some worrying trends for demand growth. Its projection for demand is relatively low growth and will likely get revised down. At the same time, supply is coming on strong.

The U.S. will continue to lead the charge in crude production growth. Our preliminary estimate for crude and condensate production growth stands at 1.3 MBbl/d, though that may be revised down after inputting new guidance from shale producers. The growth is substantial, but at a notably lower rate when compared to recent years. The smaller increase in output growth is more than offset by gains in Norway and Brazil. A growth project in Norway will boost production by 400,000 b/d, while Brazilian crude output is set to increase by 300,000 b/d, according to Enverus Analysts.

4. WELL SPACING AND ITS IMPACTS TO OIL & GAS PRODUCTIVITY

As producers scramble to boost output while slashing CAPEX, they're turning to optimal well spacing tactics to optimize production. Spacing is a complex issue that's impacted by multiple variables and scenarios—we found more than 300 attributes are key in well spacing calculations. Get your well spacing right and you can look forward to robust development plans, productivity, and an expanding midstream infrastructure. Get it wrong and expect a negative impact on investment returns and less volumes within existing, production, and midstream systems.

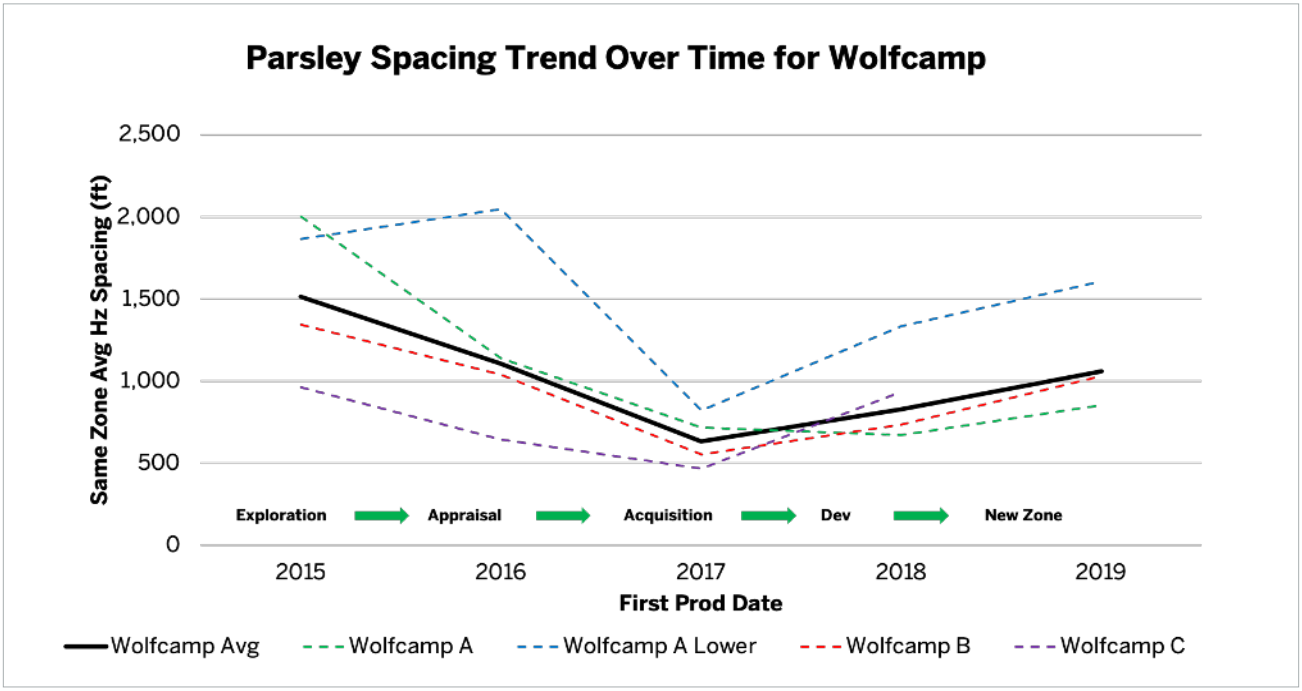

Figure 3: Enverus Well Spacing analysis showing well spacing trends in Parsley's Wolfcamp acreage.

Understanding parent-child relationships and optimized spacing at a basin level is important, too. It's essential to get more granular and dive deeper to get the full picture and this requires a reliable, robust, and engineered dataset.

Enverus' Well Spacing Solutions give the user the ability to dive through the most comprehensive well spacing dataset available. By combining geology, completion, production, M&A, and well placement and timing data sets rather than looking at well spacing metrics in a vacuum, Enverus reveals the important factors that impact operations and productivity.

5. ESG —A CHANGE OF LANGUAGE

Another macro trend impacting the energy market today and throughout 2020 will be the growing focus on environmental, social, and corporate governance (ESG).

There has been a marked changing of the language of big oil with greater conservatism towards largescale oil & gas projects, a growing focus on renewables, and—with pressure from investors—a commitment to address governance, disclosure, risk, and emissions targets. Exxon Mobil, Sunoco, and BP, to name a few, are all focused on the environment and reducing greenhouse gas.

What does this mean for energy trading companies? It's clear that physical assets in the energy sector will have a critical future role in moving towards a greener economy. ESG is also likely to spur on additional investments in renewable energy generation and power distribution networks, as well as heralding a moving away from other commodities. Commodity trader Gunvor, for example, recently announced that it will no longer trade in coal and is looking at how it can lower emissions from its refineries and ships, according to an October report from the ***Financial Times***.

6. LNG AND NATURAL GAS TAKE TO THE WORLD STAGE

One of the biggest developments in energy trading over the last few years has been the emergence of liquefied natural gas (LNG) as a major commodity and we don't see any change in this area. This growing buyer-driven market is an opportunity for independent trading firms to provide short-term deals, as well as long term purchase and sales agreements.

It is indeed true that LNG and the ready availability of natural gas from U.S. shale has made natural gas the 'go-to fuel' over the past decade. With global demand having risen by 28%, its influence is likely to be strong in 2020.

While there have been weak gas prices in the U.S. and Europe during 2019, any increased demand this winter can quickly spur a recovery in prices and a rebalancing of supply and demand in 2020/2021. With global demand rising and the pace of new LNG terminals reaching FID slowing, the currently oversupplied market may begin to trend towards tightness.

Furthermore, the continued growth in renewables, growing environmental regulations, and the high production costs of LNG are likely to make it more important that traders build accurate and robust supply/demand models for the future. In the case of natural gas, such models must include historical flow data, interactive geospatial tools for viewing pipelines and flowmeters, and forward-looking optimization capabilities.

Again, data is king with immediate access to data...geospatial, smart metering, or even better visibility into LNG tankers giving traders that all important competitive edge.

7. POWER MARKETS ADOPT RENEWABLES AND BRACE FOR VOLATILITY

Across the U.S., the influence of renewable energy in the power industry continues to grow. Where power is generated geographically matters because of ISO transmission grid management, state renewable laws, and local climatology. For example, it is sunny and windy in west Texas, making wind and solar power attractive in that region. Congestion on transmission lines are causing constraints, and it is increasing price volatility significantly. From California to Texas to the Great Plains and Midcontinent, ISOs are building renewable power sources.

Prices will swing to extreme levels in the summer and the winter as reliance on non-dispatchable renewables continue to grow. In Texas, or the ERCOT market, power prices are trending lower as more renewables penetrate the wholesale market. This is making it harder for ERCOT to attract new gas plants, and companies that own coal and high-efficiency gas plants will continue to lose money.

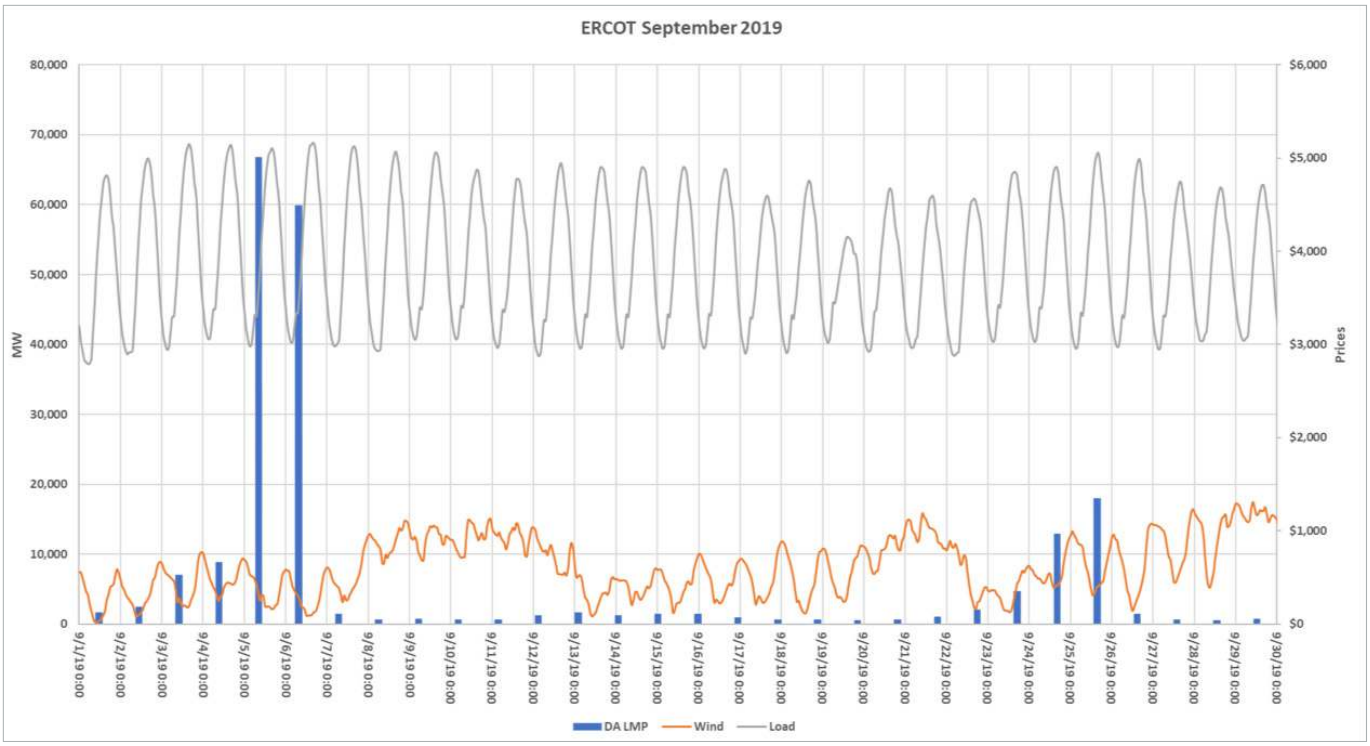

Figure 4: Case study: ERCOT September 2019 wholesale power prices were extremely high with record-high load. However, when wind generation came up prices were greatly reduced even if the load stayed relatively high. Source: Enverus PRT

In California, we expect to see an ongoing solar build-out. The state's Energy Imbalance Market (EIM) is leaned on more and more to balance the grid with more renewables, and the Southwest Power Pool's movement westward could ease CAISO's ability to balance the grid.

In MISO, the Midcontinent market, the biggest price volatility will come in the shoulder months, or autumn and spring seasons, when there are more unit outages, less load, and more renewables (especially in the spring).

Outside of the U.S., adoption of electric vehicles and bus fleets will continue to challenge power grids. European utilities are dividing up their approaches for generation, with some building up purchases of burgeoning U.S. LNG exports and others like Engie focusing solely on renewables. Overall the market sentiment is bearish due to the increased renewable sources.

8. IMO 2020 BRINGS A GLOBAL SEA CHANGE TO MARINE FUEL MARKETS

Finally, there is IMO 2020. On January 1, 2020, the global shipping industry will undergo a radical change, with all ships having to reduce the sulfur content within marine fuels from 3.5% to 0.5%, as mandated by the International Maritime Organization (IMO). This will impact crude as well as refined products markets.

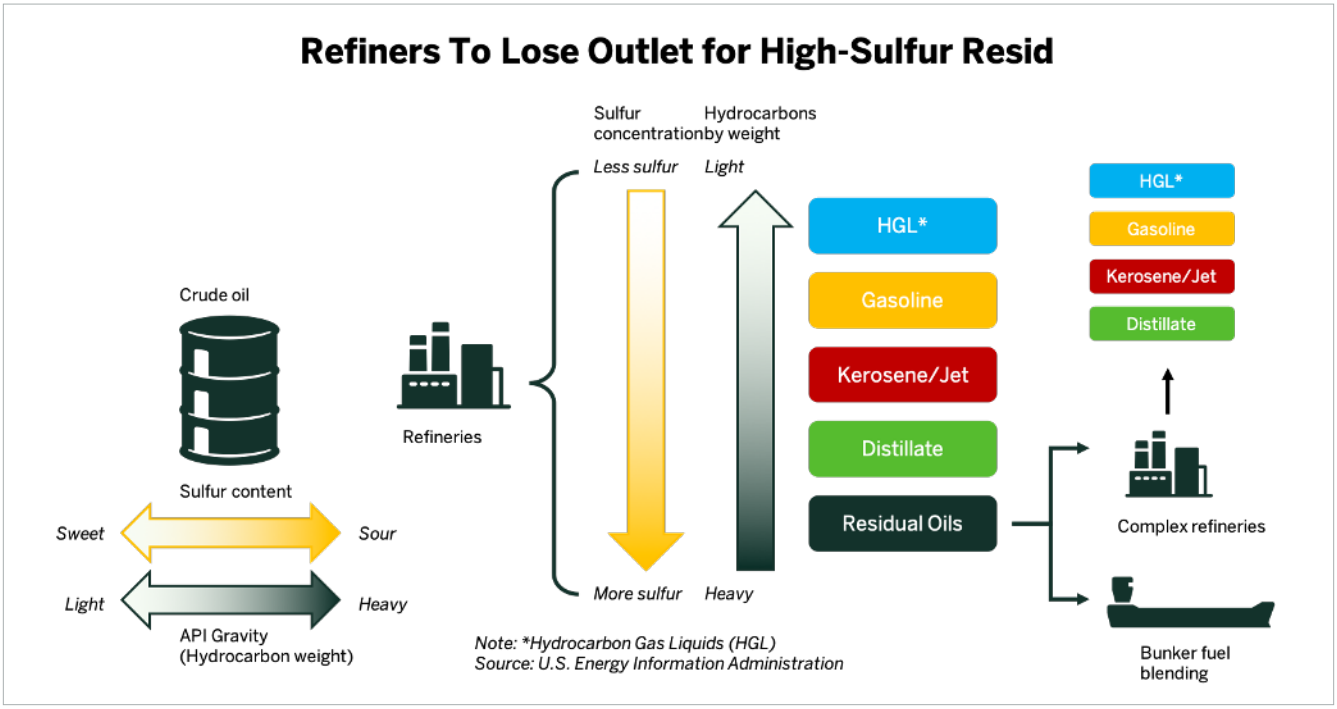

Figure 5: High-sulfur residual fuel will be displaced with the advent of IMO 2020. Source: EIA

IMO 2020 is likely to lead to significant opportunities for traders, due to the price dislocations between refined products and crude grades in different regions. Market volatility and constrained supplies can also be expected until the market can figure out the fundamental impacts with trading instruments already in place. Watch this space closely!

With uncertainty and volatility, the watchwords for 2020, it's never been more important to embrace technology advances and maximize the use of data. Find out more about Enverus' energy trading expertise and how we can help you navigate through these fast-moving challenges.

https://www.enverus.com/industry/trading