IEEFA Energy Finance Conference 2020 (online)

Thursday, July 16

Prospects for the Oil and Gas Industry on a Downward Spiral

The oil and gas sector continues to struggle financially. Ongoing challenges – global oversupply and a weak macro outlook – have accelerated with the global pandemic. What are the near- and long-term implications?

Speakers:

Kathy Hipple, IEEFA, Financial Analyst

Mariana Fernandez, Observatorio Petrolero Sur, Economist

Moderator:

Nicholas Cunningham, Independent Journalist

Archived presentation: youtube.com/ieefa_org

Q & A*

1. *What will be the impact of the recent pipeline cancellations in the U.S. on regional and global markets?* (Krista Shennum, Yale School of Environment and Asociación Interamericana para la Defensa del Ambiente (AIDA))

Kathy Hipple

The recent pipeline cancellations illustrate the declining demand for fossil gas in the U.S. electricity sector. New pipelines in the U.S. are not economically viable as renewable generation is now cheaper than gas. Utilities are now recognizing this diminished need for new pipelines. Even Mr. Kinder, co-founder of Kinder Morgan, has acknowledged this recently. There is currently a glut of gas in both the U.S. and globally. This is likely to continue. Gas prices in the U.S. are at or near a 25-year low, and global gas prices have plunged. This topic was explored in depth during a session at the 2020 IEEFA Conference, *Under Pressure: The Impetus for Over-Building Pipelines and How to Stop It*.

2. *Have you seen private equity investors taking up the slack from the public markets and banks withdrawal from O&G? Which investors are buying the bonds with such poor performance and continual restructuring?* (Bill Weil, Sustainable Finance at Tempest Advisors)

Kathy Hipple

The public markets have largely been closed to O&G companies, particularly exploration & production (E&P) companies. Some private equity funds that can tolerate high risk with potentially no returns have continued to offer financing to these companies – but at high rates of interest. There is an active market for high yield (aka “junk”) bonds and even for distressed bonds. Recently, the Federal Reserve made the unprecedented decision to buy corporate bonds, including bonds that were below investment grade. An analysis of the Fed’s buying program suggested it was heavily overweight debt issued by oil and gas companies.

3. *Aren't oil companies still hugely profitable? Exxon made billions in profits in 2019 for e.g.* (Mark Brooks, WWF)

Kathy Hipple

Oil companies' profits have either disappeared or declined precipitously. Smaller E&P companies have been cash-flow negative for a decade. Even the larger oil companies, the oil majors -- ExxonMobil, Total, Shell, BP and Chevron – have seen their profits decline. ExxonMobil has recorded two straight quarterly losses, for example. Chevron and BP also lost billions in the second quarter. Shell and Total only avoided losses in the second quarter because of their earnings from trading oil and gas. Cash flow from operations among the five largest oil companies have not been enough to fund shareholder distributions for a decade, including in 2019.

4. *Do you see a growing role in financing oil/gas from non-Bank financial companies (e.g., pension funds, ect.) in emerging markets?* (Heike Mainhardt, urgewald)

Tim Buckley, IEEFA Director Energy Finance Studies, Australia/South Asia

Absolutely. The vast majority of new energy demand globally is coming from the developing world, probably close to 100%. Electricity demand in the U.S. and Australia has flatlined for a decade, energy efficiency driving a decoupling of economic growth and energy use. Given this, global capital has to pivot to supplying the energy system of the future for the world, which means OECD capital must flow to the developing markets, but it needs the right financial instruments and the right risk-return metrics.

The Global Green Bonds sector is doing a really good job, but its flows need to double and double again to really drive a global impact. What I think will be the game changer is the flow of OECD capital into emerging markets renewable energy infrastructure projects, supported by government-backed 25-year PPAs, like India is offering on solar today. These are infrastructure projects.

What drives this? OECD bond yields are now down below 1% p.a. Equity markets ROE expectations are still close to 10% p.a. Deploying trillions of dollars of pension capital from the OECD into emerging markets infrastructure (secured by government backed PPAs) can deliver the Norwegian SWF 5% US$ returns annually, five times the annual return they are currently getting on their US$300bn US$ bond portfolio. The search for acceptable risk-adjusted returns will drive this. A government backed 25-year cashflow annuity is another word for a bond, but it delivers a fivefold uplift in returns. Why would global pensions not follow this return uplift?

5. *Are you aware of any potential long-term impacts that COVID-19 may have on the oil and gas industry? If so, will these impacts exacerbate the "downward spiral" that the industry is currently on?* (Joshua R. Castigliego, Applied Economics Clinic)

Kathy Hipple

Like all things coronavirus-related, it's difficult to say what the long-term implications will be. There does seem to be a new recognition among the industry that the energy transition requires them to reconsider their strategies and recognize that their oil and gas price assumptions were unrealistic. Certainly, the long-term trends in this industry have accelerated in the first half of 2020. The glut in oil and gas in global markets are likely to hang over the industry and will require them to address their failing business models. Some, such as BP, Total and Shell, are moving more quickly than their U.S. counterparts, ExxonMobil and Chevron.

6. *What does this portend for countries in the Global South, particularly in Eastern Africa licensing oil exploration companies, and with the underlying economic strategy to invest in infrastructure such as pipelines and field development?* (Abdirahman Gorod)

Tim Buckley

I'm optimistic that the shareholder wealth destruction of the last decade by the O&G industry will force an accelerating pivot-or-die outcome. Exxon will die, it won't pivot. BP and Total are desperately trying to pivot to stay relevant, and to stay viable. BP just announced it will invest US$50bn in 50GW of renewable energy this decade. Who needs 50GW of additional renewable energy? Emerging Markets.

So, most of this capital will flow to the Global South. Who is going to take O&G exploration risk now? Add on extreme emerging markets risk and corruption as well, forget it. OECD shareholders have lost money on that model for the last decade, who is dumb enough to keep sinking billions in a high-risk loss-making strategy? The work will pivot to zero carbon, low cost domestic electrification in power and transport (financial markets are telling us this, just look at Ørsted and Tesla's share prices), which will permanently erode demand for oil and gas, which will kick the sector down into a death spiral. I think 2020 is the year global financial markets have realised this. Watch the capital flight accelerate.

7. *What are the implications of the oil/gas financial situation for pension funds and other public funds invested in oil & gas? Kathy - How do the Boards of oil companies justify giving shareholders billions of payments beyond their income? Are there any regulations/laws that should prevent this? It seems to contradict fiduciary responsibility.* (Andy McDonald)

Kathy Hipple

IEEFA has long suggested pension funds should not own oil and gas stocks as their financial performance has been poor for a decade, in last place in the S&P 500 between 2010 and 2019, including last place in 2018 and 2019. These stocks are high risk and low return, and not suitable for pension funds with a long-term investment horizon. Day traders and other short-term trading-focused funds may have opportunities to trade this sector, which has become increasingly risky and volatile. But pension funds should divest from the sector.

There are no laws or regulations that prevent oil companies from paying shareholders more than their cash flows. The boards of oil companies should be looking carefully at the financials of these companies to determine if continued shareholder distributions are wise. Both Shell and BP have recently cut their dividends.

8. *Kathy, have you or are you going to release this data on the 5 [oil] majors?* (Tzeporah Berman, Stand.Earth)

Kathy Hipple

The data on the five oil majors are contained in two reports we've released:
https://ieefa.org/wp-content/uploads/2020/01/Living-Beyond-Their-Means-Five-Oil-Majors-Cannot-Cover-Dividends_January-2020.pdf

and

https://ieefa.org/wp-content/uploads/2020/04/Oil-Majors-Beyond-Their-Means_April-2020.pdf

We are working on an additional report, based on the second quarter 2020 results.

9. *Is there a feedback on the horizon? if producers start dropping out, wouldn't prices increase leading some producers to come back online?* (Tyler Comings, Applied Economics Clinic)

Kathy Hipple

In a general sense, yes. But there is evidence that the industry is getting smaller. Large oil and gas majors, for example, have seen their revenues halve. Their assets and market caps have halved. Smaller subsets of the oil and gas industry, the E&Ps (exploration and production), or frackers, for example, have seen their market caps decline even more dramatically over the past five years. While some producers may come back online, the global glut of oil and gas will continue. The demand forecasts continue to be revised downward. Some industry analysts suggest that demand for oil and gas will not return to 2019 levels for many years – if ever.

10. *Aren't gas companies finding and pushing new markets in petrochemicals?* (Maya Golden-Krasner, Climate Law Institute at the Center for Biological Diversity)

Kathy Hipple

Oil and gas companies are indeed pushing new markets in petrochemicals. We believe this is unlikely to rescue the financials of the industry. This topic was covered in depth during the conference session: Petrochemicals: The Final Frontier for Fossil Fuel Survival?

IEEFA has also released a report on the Shell petrochemical complex currently under construction in Pennsylvania that highlights many of the risks facing this industry. https://ieefa.org/wp-content/uploads/2020/06/Financial-Risks_Weak-Outlook_Shell-PA-Petrochemical-Complex_June-2020.pdf

Mariana Fernandez

Dow Chemical is involved in Vaca Muerta [shale formation in Patagonia]. They have been participating in a joint venture with Argentina's YPF to develop an area called "El Orejano" (*The Ear*) since 2013. Their main goal seems to be to guarantee the gas supply for their petrochemical plant located in Bahía Blanca. However, their plans to increase the capacity of the petrochemical plant have been postponed due to the level of oversupply worldwide, and their priority has been to invest in the USA.

11. *Has anyone analyzed the write-downs by basin?* (Pamela Eaton, Green West Strategies)

Kathy Hipple

I do not know. My guess is that IHS Markit or Wood Mackenzie has this data available.

12. *How do government bailouts affect the short- and mid-term forecasts for fossil fuel companies?* (Dr. Robert Cook, Zegar Family Foundation)

Kathy Hipple

The government's support of the fossil fuel industry has absolutely favored the oil and gas sector, but it's hard to tell whether these bailouts have changed the short- and mid-term forecasts for the fossil fuel companies. The larger, macro-economic forces appear to be too strong, with numerous E&Ps and oilfield services filing for bankruptcies, and oil majors taking massive write-downs and recording record losses.

13. *What is the proposed Bcf/ per day [billion cubic feet/day] of Vaca Muerta LNG and the MtCo2 [metric tons of carbon dioxide equivalent] potential per year?* (Tzeporah Berman, Stand.Earth)

Mariana Fernandez

The export opportunities for massive exports are not clear now due to the crisis. However, the latest official report on "Energy Scenarios 2030" (December 2019) mentions the installation of two LNG plants (in 2024 and 2026), with capacities of 10 and 20 MMm3/d (2.5 and 5 MTPA) respectively, that would allow exports of up to 30 MMm3/d (1060 BCF/d).

Regarding emissions, there are no official projections for Vaca Muerta. They usually consider the energy system or the extraction of O&G as a whole, without distinguishing Vaca Muerta. There is a report from Oil Change [International] that, based on the estimates of Rystad and those of the U.S. Energy Information Agency, says that Vaca Muerta will have generated in 2050 3.4 GtCO2 (Rystad) and 18.4 GtCO2 (EIA).

14. *Have the generous stimulus payments to Big Oil affected their financial outlook?* (Sandy Emerson, Fossil Free California)

Kathy Hipple

It is hard to say whether the generous stimulus payments have affected the financial outlook of the oil majors (assuming that's what you mean by Big Oil). Given their failing business model and the disastrous second quarter most of them have had, the macro forces facing their industry seem – at least for the moment – to be greater factors than stimulus payments. With oil and gas prices down sharply, a global glut, and demand forecasts dropping sharply, government stimulus will not likely be enough to rescue this industry, which faces existential risk from cheaper alternatives, such as renewable energy and electric vehicles.

15. *Are the cuts to capex affecting the (admittedly meager) investments in renewables? Does all this restructuring just mean a consolidation? Or will it weaken the majors enough to not be able to absorb the smaller companies?* (Vanessa Warheit, Fossil Free California)

Kathy Hipple

Oil majors' investments have been, as your question suggests, meager so far. However, the European majors, led by Total, have increased capex directed toward new energy modestly in the past few years. Most significantly, BP recently announced it would reduce its overall capex but would maintain its investment levels in renewables/new energy. During its second quarter earnings call, BP expanded on its plans to increase its investment in new energy initiatives, and set specific, near-term benchmarks to reduce its production of oil and gas, with its chair noting: "But, and this is our third judgment, over the longer term, the demand for both oil and gas will be increasingly challenged. Finally, our fourth judgment is that BP, alongside many others, can make a contribution to the energy transition the world wants and needs and create value in doing so."

The U.S. oil majors, ExxonMobil and Chevron, have committed minimal investments toward renewable energy.

IEEFA published an excellent report on Shell and Total's investments in new energy initiatives: Oil Supermajors' Trajectory Towards Renewables Needs to Scale Up and Speed Up.

The massive restructuring of the industry may lead to consolidation, but the industry is struggling and has less cash and higher debt levels that will make acquisitions difficult. For example, when Chevron recently opted to buy Noble Energy, it funded its purchase with stock, rather than issuing debt or paying with cash. Many oil majors are, in fact, dependent on selling their own assets

Most oil majors have indicated that their plans include divestitures of their assets. But there are few buyers in this environment and the sales that occur are often described as "fire sales."

16. *How much can brown bailout in countries like the U.S. provide a lifeline to oil and gas companies? Is it just delaying the unavoidable or giving those players new license?* (Liane Schalatek, Heinrich Böll Foundation.

Kathy Hipple

In my view, any government aid for the industry will not be sufficient to provide a lifeline to oil and gas companies. The headwinds facing the industry are far too strong.

17. *Are mainstream market analysts (and accountants/auditors) mostly still telling an over-optimistic story on the prospects for oil and gas? If so, why? - Conflicts of interest, biases, or…?* (Alex Wilks, The Sunrise Project)

Kathy Hipple

Many mainstream market analysts have begun to recognize that investments in oil and gas companies has become increasingly risky. Many finance professionals are older and likely recall times when the energy sector was dominant, offering investors opportunities for both capital gains and dividends. They are not forward-looking. If they analyze the performance of the fossil energy sector since 2010, they could not make a compelling financial case for remaining invested in the sector. If they analyzed the future prospects of this sector, they would not be bullish. So, to answer your question, it is difficult to see why some are still telling an overly optimistic story on the sector.

18. *Does the financial analysis of Vaca Muerta include health and environmental impact costs borne by communities in Argentina?* (Vanessa Warheit, Fossil Free California)

Mariana Fernandez

No, the results I presented do not include socio-environmental impacts. Of course, we consider them when we analyze Vaca Muerta, but we focus on the standard-economic approach [when] discussing it using the same financial/economic terms that the government uses to promote the megaproject. In fact, we want to show that there are no certainties about the economic viability of this kind of project, even within an economic system that does not internalize their socio-environmental impacts.

19. *How do you see Vaca Muerta's future prospects? Will the crisis make it 'muerta'?* (Heffa Schuecking, urgewald)

Mariana Fernandez

Without a doubt, the global O&G situation, accelerated by COVID-19, is a very hard blow for Vaca Muerta. Gas exploitation has already slowed down since the beginning of 2019. The Argentine government plans to sustain the project to extract energy for domestic consumption, through some benefits and with local companies, while waiting for the global market to recover.

20. *What is the break-even production cost for oil and natural gas in Argentina? Do they think it could be near the prices in the USA?* (Albert Lin, Pearl Street Station Finance Lab)

Mariana Fernandez

There is not much information in this regard. There are different basins and the values that the companies indicate vary according to where they report them. In May, the government set the internal price of a barrel at US$ 45 p/b, mainly to benefit the oil provinces, which are currently in crisis, obtaining 12% of the total hydrocarbons sold. Different analysts – close to the current administration – say that barrel cost ranges between US$20-$26. The lack of infrastructure, extraction levels, distances and geopolitical location make it difficult for Argentine production to compete with that of the main world producers.

21. *Beyond E&P companies, how do you see the current situation and the future for midstream companies, in particular transport and export infrastructures companies relying on shale?* (Lorette Philippot, Friends of the Earth, France)

Kathy Hipple

The midstream sector and export infrastructure are likely to pull back, given the recent demand forecasts and production cuts among the shale producers. The growing opposition in the U.S. to pipelines was discussed extensively during the IEEFA conference session: Under Pressure: The Impetus for Over-Building Pipelines and How to Stop It.

Mariana Fernandez

In Argentina, the situation is a total paralysis of infrastructure projects linked to shale that require large investments. We think that the main reason is that these projects are only profitable if Vaca Muerta achieves a sustained export of O&G, which does not seem to be a real option in the near future. In fact, last week the government canceled the tender for the main gas pipeline that would connect Vaca Muerta with the gas separation plant and the port.

22. *Do you see a difference in either oil or gas in your analysis? We've seen gas in the last few years viewed as a waste product and flared in oil drilling but now it's looking like gas may be rising in value?* (Jill Morrison, Powder River Basin Research Council)

Kathy Hipple

Both the global oil *and* gas markets are over-supplied. You're correct that there is a narrative about potential rising gas prices. The logic is that the reduction of associated gas from the Permian [Basin] will drop along with oil production, and this will lead inexorably to a rise in gas prices. However, gas prices were recently at a 25-year low. LNG prices have also plunged. The global demand scenario suggests the gas glut remains. It will be useful to keep an eye on global gas prices.

23. *This industry has expanded without economic justification. Is there an economic remedy -- or are we seeing a political problem to be solved?* (Steven Carbó, Carbó Strategic Consulting)

Kathy Hipple

There is an economic remedy. Market forces are at play. We're seeing this play out in sector's performance as last-place financial results in the S&P 500 for the past decade, including 2018, 2019, and the first half of 2020. The sector now represents less than 3% of the broader market. The public markets are signaling that this sector has weaker growth prospects than every other sector. Public debt financing of the riskier credits in the sector, which includes most companies in the sector, has almost collapsed. So, the oil and gas companies' ability to access low-cost capital has diminished.

24. Can you talk about Asset Retirement Obligations (ARO), and how bankruptcy proceedings will impact the ability to clean up the mess? Mariana, does Argentina have an ARO issue? Mariana, what kind of renewable resources does Argentina have? Is there a comparable investment option for solar/wind/geothermal infrastructure instead of sinking money into Vaca Muerta? Is there a way to quantify keeping the carbon under Vaca Muerta in the ground, that would help to write off the debt? I.e. "pay us to NOT drill"? (Vanessa Warheit, Fossil Free California)

Kathy Hipple: I defer to my colleague **Clark Willliams-Derry** (energy finance analyst, IEEFA):

For those who don't know, asset retirement obligations, or AROs, are **legal obligations to clean up** – i.e., properly plug old wells, remediate soils, decommission pipelines and storage tanks, dismantle off-shore oil platforms, etc.

IEEFA wrote a primer on AROs in bankruptcy, which is here. But I'll summarize below.

In theory, **AROs survive bankruptcy**. Unlike financial obligations, like debts, AROs don't get wiped out in bankruptcy. So, if a new company arises from the ashes of a bankruptcy funeral pyre, that company has to take on those cleanup obligations. Or if there's a bankruptcy fire sale and assets are sold off, the new owners must take on the cleanup obligations.

But there are wrinkles! For example, in a particularly bad bankruptcy, it's possible that *nobody* will want to buy old wells that have huge cleanup costs attached, and there may be no money left in the bankruptcy estate to pay for cleanup. In that case, oil and gas wells can be "abandoned" in bankruptcy. Bankruptcy judges have some authority to sort this out, but it's possible that a bad bankruptcy would leave "orphan" wells -- oil and gas wells with no legal owner.

In some places, such as California, it may be possible to pin those costs on a previous owner, as long as one can be found. But if there's no previous owner, these wells can become orphans, and it's up to the state to figure out how and whether to clean them up.

For the current wave of big, high-profile bankruptcies, I don't expect to see a huge number of orphans. Orphans are more likely to happen in the smaller bankruptcies -- the companies with a relative handful of wells, and that aren't publicly traded. However, what we've seen in the coal industry is that old coal mines change hands multiple times, through the course of multiple bankruptcies, until the final owner falls apart -- and the mines are abandoned. I think something similar could happen in oil and gas.

In short – AROs are a very big problem. The dollar values are typically bigger than the amount of the liability carried on a company's books, and bigger than most analysts realize. AROs will complicate the bankruptcy process. And as portions of the oil and gas sector continue their descent into insolvency, we're likely to see a growing "orphan well" problem, with huge cleanup bills for lots of old wells, and no money to pay for it all.

To me, this is a situation where state and federal regulators must step in as soon as possible. To prevent a long-term financial disaster for the states, regulators will need to require solvent oil companies to post bonds to pay for cleanup; raise money from the oil and gas industry to clean up orphan wells; and put old, idle wells on a strict cleanup & retirement schedule.

Mariana Fernandez

Argentina has a very vast surface and there are many energy possibilities. In the north of the country there are very good possibilities with respect to photovoltaic generation and in the south with wind. Anyway, there has been very little progress on these sources.

In the debate about the negotiation of foreign debt, that occupies a large part of the political agenda until mid-next year at least, no such postulates have been made. There isn't any political movement strongly raising such an argument.

**Note that questions were submitted by conference attendees online during the live Q & A session. Answers were provided post-event by presenters. For further information, contact IEEFA Strategic Communications Director Vivienne Heston (vheston@ieefa.org).*

# # #