

Oil and Gas Production in Argentina's Vaca Muerta Awaits Direction from New President

Foreign Investors Push Pause Button, Concerned Over Political Uncertainty

Efforts by the oil and gas industry to develop Vaca Muerta, Argentina's vast shale reserves in northern Patagonia, have hit pause as the industry awaits direction from the country's new president, who will take office on December 10. Alberto Fernandez, the incoming president, has not yet announced a new energy secretary, nor named a new president for the state-controlled oil company, YPF, nor outlined a new energy policy. While the country's leadership change has slowed development of Vaca Muerta, it also offers Argentina an opportunity to chart a new path for its currently failing energy policy.

Rather than relying on unreasonable and costly investments designed to provide oil and gas for export into an oversupplied global market, the new administration could chart a stronger course by lowering production goals and focusing on developing low-cost energy for domestic markets. The new administration would be well-served to learn from the decade-long financial failure of unconventional production (horizontal drilling and hydraulic fracturing, or fracking) in the U.S., despite impressive production gains.¹ The financial difficulties facing the U.S. shale industry, now regularly acknowledged in the Argentine press,² should be top-of-mind for the new administration as it considers its future energy policies.

Rather than aiming for exports, Argentina should provide low-cost energy for domestic markets.

Foreign Partners Remain Skittish on Development in Vaca Muerta

While companies await direction from Fernandez, only state-controlled YPF has continued to ramp up its oil and gas production in Vaca Muerta.³ Foreign investors, by contrast, have been spooked by economic and political events throughout the

¹ IEEFA. IEEFA update: Fracking sector spills more red ink in Q3. November 19, 2019.

² La Politica Online. Entra en crisis la industria del shale en Estados Unidos y complica Vaca Muerta. November 26, 2019.

³ The Motley Fool. YPF S.A. (YPF) Q3 2019 Earnings Call Transcript. November 8, 2019.

year. These foreign partners are crucial to Vaca Muerta's unconventional production, which relies on horizontal drilling and hydraulic fracturing, or fracking.⁴ They are likely to remain on the sidelines until the incoming president articulates a new energy policy.

Fernandez' new energy policy should learn from his predecessor's failure. Outgoing President Mauricio Macri's 2018 Energy Plan had sought to double production of oil and gas within five years, with a goal of creating an export market beyond Argentina's regional partners. But the Macri plan was overly optimistic that the export market would drive more investment in Argentina. The policy relied on subsidies and other incentives for rapid expansion of production of oil and gas from Vaca Muerta. The subsidies were short-lived because of Argentina's fiscal distress. The export plans were dead on arrival due to a tight market. The net result? Argentinians faced rising energy prices even as their country had abundant oil and gas reserves.

Macri Administration's Changing Gas Subsidies, Oil Price Freeze Blamed for Dwindling Development Efforts in Vaca Muerta

Since its inception, the Macri plan faced headwinds that have accelerated throughout 2019. Faced with an oversupply of gas and budget constraints, the government in January 2019 retroactively changed its 2018 subsidies for gas production. Moody's called the subsidy change "credit negative" for many companies operating in Argentina. Tecpetrol, Vaca Muerta's largest producer of gas, responded to the shifting subsidy policy by suing the government.⁵

The subsidy changes, pipeline bottlenecks and a general oversupply of gas led many producers, such as Wintershall, Tecpetrol, and Shell, to focus on oil production. But when Macri lost a primary election in August, this strategy also proved fraught.

The market response to Macri's loss was a rapid devaluation of the peso and a financial crisis.

The market responded to Macri's loss with a rapid devaluation of the peso and a financial crisis. Macri responded by imposing capital controls, freezing the price of oil in dollars at \$42/barrel, and setting a fixed exchange rate, which was below market. This price freeze made it uneconomic to produce oil.

Companies reacted by reducing unconventional production in Vaca Muerta. Well development plummeted in September and October.⁶ When the oil price freeze was announced, Shell, ExxonMobil, Wintershall, Vista and Tecpetrol immediately

⁴ IEEFA. Financial Risks Cloud Development of Vaca Muerta. March 2019.

⁵ BNAmericas. Tecpetrol sues Argentina over US\$55mn worth of subsidies. May 14, 2019.

⁶ Rio Negro. Vaca Muerta a pique: las etapas de fractura cayeron a la mitad. October 31, 2019.

stopped investing in existing wells. And Total and Pan American Energy (PAE), a BP subsidiary, drastically reduced new drilling activity in Vaca Muerta.⁷ By October, advanced development in existing wells ⁸ in Vaca Muerta were only half the August levels, with YPF accounting for almost all new development.⁹

Some companies are divesting from Argentina altogether. For example, Schlumberger, the world's largest oil services and equipment manufacturer, is trying to sell its investments in Argentina,¹⁰ and claims it has offers.¹¹ Schlumberger, itself suffering significant financial distress due to an oversupplied global market, must reduce its worldwide activities to concentrate on core investments.

Foreign Companies Speak Publicly About Need for Stability

Foreign companies are increasingly speaking out publicly about their skittishness in Vaca Muerta.¹² During a conference in November organized by newspaper *El Cronista* in Buenos Aires, Shell and ExxonMobil executives spoke of the need for stable government policies, greater government spending on infrastructure, and government financing.

"The [Vaca Muerta] resource has great quality... the same or better quality than wells in the U.S.," said Daniel De Nigris, head of ExxonMobil's operations in Argentina. But the country's financial crisis combined with regulatory uncertainty, capital controls, high taxes and price caps have made it harder to plan business and make a profit, he noted.¹³

Regulatory uncertainty, capital controls, high taxes and price caps have made it hard to make plans and profits.

And Shell's head of operations in Argentina, Sean Rooney, said, "It is harder to invest in a country with challenging economic and financial conditions."¹⁴

Wintershall Dea's Managing Director for Argentina, Manfred Boeckmann, gave a clear message to the current national government and to the incoming government after the October elections: "A more competitive regulatory framework, infrastructure improvements, access to new markets, a cost structure and a more

⁷ Ibid.

⁸ Hydraulic fracturing, or fracking, is also called unconventional production is described here. Schlumberger. Oilfield Glossary.

⁹ Rio Negro. Vaca Muerta a pique: las etapas de fractura cayeron a la mitad. October 31, 2019.

¹⁰ Houston Chronicle. Schlumberger's \$11.4 billion loss blamed on two past acquisitions, weakening shale market. October 20, 2019.

¹¹ Upstream. Schlumberger sees offers for Argentine block stake. October 23, 2019.

¹² S&P Global Platts. Producers delay boosting Vaca Muerta output until political outlook becomes more clear. November 20, 2019.

¹³ Ibid.

¹⁴ Ibid.

competitive tax regime are necessary to ensure sustainable development at scale in Vaca Muerta."¹⁵

More Government-Financed Infrastructure Needed

Foreign partners also blame inadequate infrastructure for the slow pace of development in Vaca Muerta. Limited pipelines, railroads and roads have constrained development, as producers struggle with an oversupply of natural gas.

Bids for a long-promised US\$2 billion pipeline to connect Vaca Muerta to ports near Buenos Aires have been delayed three times over the past two years. The most recent delay will push the deadline for bids until March 2020.¹⁶

This failure to draw foreign capital into the infrastructure plans further demonstrates the nature of the dilemma. Existing pipeline capacity appears cramped for new gas production, for which demand is highly seasonal. During the summer months, consumption is low and the markets oversupplied. During winter and peak demand, the pipeline capacity is constrained. The popular view is "Until the pipeline is built, it won't be necessary to drill more gas wells," said Rooney.¹⁷ The problem is a failure to focus on stability in the domestic market as a top priority.

Layoffs Are Underway in Vaca Muerta

As development in Vaca Muerta slows down, lay-offs are mounting. Union oil workers said 1,000 workers had been suspended in September following the oil price freeze,¹⁸ bringing the total number to 2,000 workers suspended.¹⁹ Another round of layoffs are expected this month, which union members are promising to oppose vigorously.²⁰

Another round of layoffs is expected in December.

Guillermo Pereyra, leader of the Petroleum and Gas Union of Rio Negro, Neuquén and La Pampa, has repeatedly called for clear rules.²¹ He has pushed for specific legislation that would assure stability in Vaca Muerta, regardless of who is in power at the national level.

¹⁵ RoadShow. Pese a la crisis, empresas siguen apostando al desarrollo de Vaca Muerta. September 25, 2019.

¹⁶ S&P Global Platts. Argentina delays Vaca Muerta gas pipeline project due to financial crisis. November 6, 2019

¹⁷ S&P Global Platts. Producers delay boosting Vaca Muerta output until political outlook becomes more clear. November 20, 2019.

 ¹⁸ BNAmericas. Argentina oil price freeze hurting Vaca Muerta SMEs. September 12, 2019.
¹⁹ Rio Negro. Vaca Muerta: Petroleros en alerta ante la amenaza de 1200 despidos. November 22, 2019.

²⁰ Ibid.

²¹ Aljazeera.com. Argentina oil: Exploring fracking in Vaca Muerta. September 26, 2019.

Conclusion

As Argentines wait for clear direction on energy policy from their incoming president, foreign oil and gas companies are taking a wait-and-see approach to further development of the country's vast oil and gas reserves in Vaca Muerta. Given that global oil companies are also in a state of financial distress, driven in large part by a low-price environment, the new President faces an uphill battle to use Vaca Muerta as a source of new revenues. A Macri-like approach to foreign companies is certain death. Any policy emphasizing exports is likely to fail. The new President's energy policy will be on a more solid course using Vaca Muerta to stabilize domestic markets first.

About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

About the Authors

Kathy Hipple

Kathy Hipple, a financial analyst at IEEFA, teaches the finance sequence at Bard's MBA in Sustainability and is the founding partner of Noosphere Marketing. Hipple has written extensively about sustainable, responsible and impact finance and investing. As Vice President at Merrill Lynch for 10 years, she placed fixed income securities with international institutional clients, and advised international life insurance companies and pension funds. She later founded Ambassador Media, a local search firm in New York City, and served as its CEO.

Tom Sanzillo

Tom Sanzillo, director of finance for IEEFA. has 17 years of experience with the City and the State of New York in various senior financial and policy management positions. He is a former first deputy comptroller for the State of New York, where he oversaw the finances of 1,300 units of local government, the annual management of 44,000 government contracts, and where he had oversight of over \$200 billion in state and local municipal bond programs and a \$156 billion pension fund.

This report is for information and educational purposes only. The Institute for Energy Economics and Financial Analysis ("IEEFA") does not provide tax, legal, investment, financial product or accounting advice. This report is not intended to provide, and should not be relied on for, tax, legal, investment, financial product or accounting advice. Nothing in this report is intended as investment or financial product advice, as an offer or solicitation of an offer to buy or sell, or as a recommendation, opinion, endorsement, or sponsorship of any financial product, class of financial products, security, company, or fund. IEEFA is not responsible for any investment or other decision made by you. You are responsible for your own investment research and investment decisions. This report is not meant as a general guide to investing, nor as a source of any specific or general recommendation or opinion in relation to any financial products. Unless attributed to others, any opinions expressed are our current opinions only. Certain information presented may have been provided by third-parties. IEEFA believes that such third-party information is reliable, and has checked public records to verify it where possible, but does not guarantee its accuracy, timeliness or completeness; and it is subject to change without notice.