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1. Headline Forecasts

	2015e	2016e	2017f	2018f	2019f	2020f	2021f
Crude, NGPL & other liquids prod, 000b/d	698.3	679.1	644.9	638.1	649.6	662.3	676.2
Refined products production, 000b/d	642.7	633.1	631.2	634.3	636.2	638.1	641.3
Dry natural gas production, bcm	42.9	45.6	45.9	46.9	48.2	49.5	50.9
Dry natural gas consumption, bcm	45	45.4	45.9	46.7	47.7	49.1	50.6
Brent, USD/bbl	53.6	45.13	53.5	57	63	70	72

2. Upstream Production – Oil

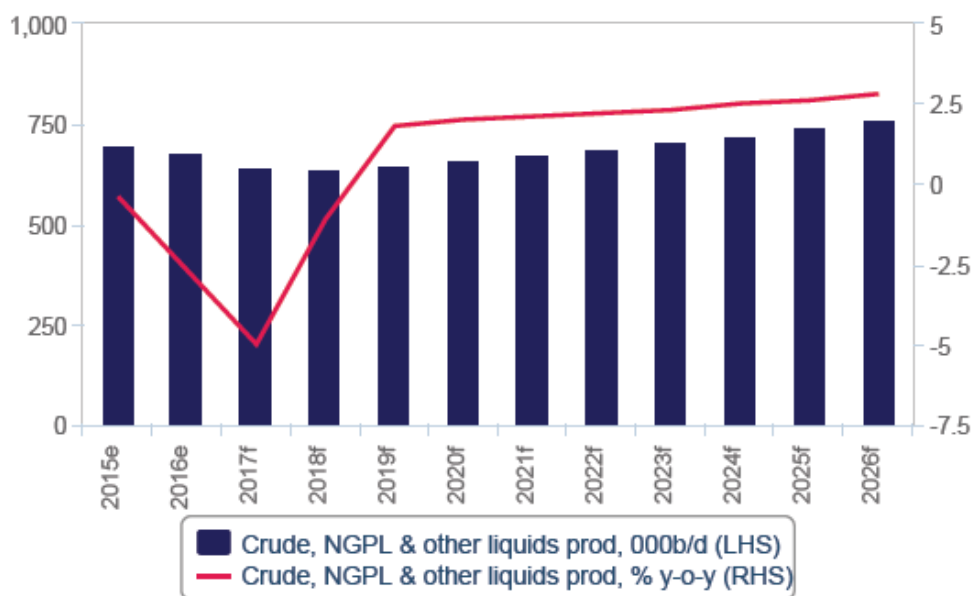
Oil production in Argentina will prove resilient over the long term due to low base effects combined with increasing investor interest. High prospectivity, low commercial breakevens, and an improving regulatory environment will drive investment into the country's energy sector, increasing production over the next decade.

- As part of their Q317 results, YPF revealed that crude production averaged 227,000b/d for the quarter, an 8.1% decline y-o-y. Through 9M17, output averaged 230,000 b/d, this compares to a FY16 average of 244,700b/d.
- Indigenous communities demanding cash payments and blocking oil wells in the Vaca Muerta area are threatening development of shale oil fields. Since the start of the year, the Mapuche have cut off access to 14 wells in the Loma de la Lata field, one of only two shale fields currently in production and is partially on Mapuche territory.
- In October, YPF announced it would invest USD21.5bn between 2018 and 2022 with hopes of increasing oil production by 26%. Investment in the country's energy sector by YPF's partners is projected at USD8.5bn during the period, bringing total expected investment to an estimated USD30 billion through 2022.
- As of November 2017, there were 61 oil rigs in Argentina, up three units from the month prior and down one units versus last year. Through the first eleven months of the year, the

average rig count is down 16.0% y-o-y.

Oil Production Forecast

(2015-2026)



e/f = BMI estimate/forecast. Source: Minem, BMI

Structural Trends

The fifteen-year decline in Argentine crude production will extend into 2018. Having fallen by 3.9% y-o-y in 2016 to an average rate of 512,000b/d, we believe production fell by an estimated 7.4% y-o-y in 2017 to an average of less than 475,000b/d. This represents a downgrade from our previous estimate where we anticipated declines of 5.3% y-o-y.

Our downgrade is due to a combination of sector-based and broader macroeconomic factors. With respect to the upstream, crude production over H117 fell by an average of 7.9% y-o-y to less than 485,000b/d. This was driven by notable declines by the country's top three oil producers - state-owned YPF, Pan American Energy, and Sinopec - which make up over 70.0% of the market, combined.

3. Upstream Production – Gas

Highly prospective acreage, an improving competitive landscape and supportive pricing dynamics will accelerate development of the Argentine natural gas sector. The core Neuquén shale province will continue in its growth trajectory, while more peripheral shale formations will take longer to grow amid increased austerity on the part of developers.

Latest Updates

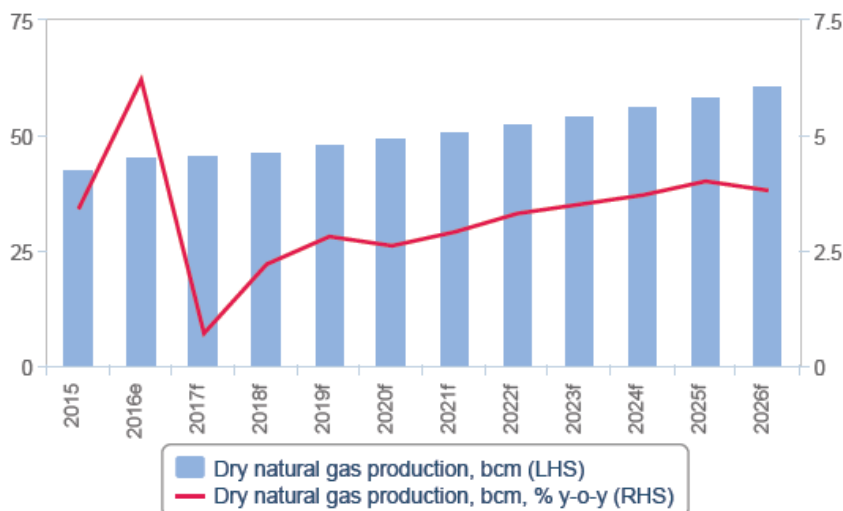
Structural Trends

We expect natural gas production in Argentina will grow over the course of our 10-year forecast period, driven by the country's vast unconventional potential. According to the Ministry of Energy, the Neuquén basin is currently the largest producer of gas in the country, responsible for nearly 59.0% of output through Q317. This is followed by the Austral (23.6%) and Golfo San Jorge Basins (11.7%).

While the government has expanded its efforts to encourage the development of Argentina's vast unconventional gas reserves, a relatively poor business environment under the previous administration, coupled with reduced profitability from lower oil prices, tempered natural gas investment and production growth through 2015 (see 'Amended Law To Boost Investments', September 19 2014).

Gas Production Forecast

(2015-2026)



e/f = BMI estimate/forecast. Source: Minem, BMI

4. Market Overview

Prior to the 2015 election, Argentine state-owned YPF struggled to attract foreign partners and capital to develop the vast Vaca Muerta shale play - largely on the back of a poor business environment. Some of the key challenges included fixed oil and gas prices, extensive currency controls and import restrictions. This had been compounded by the fact that Argentina has been largely cut off from the global credit markets ever since it went through the largest sovereign debt default in history and took nearly two years to resolve its technical default from July 2014. As a result, the nationalised YPF found itself in a conundrum: while it needed massive foreign investment, particularly into its vast shale reserves, it was still too risky a gamble for most players. However, following the election of opposition candidate Mauricio Macri in December 2015, there has been a small but growing cadre of international and national oil companies seeking to gain early-mover advantage to tap potentially game-changing shale resources in the Vaca Muerta formation. This has largely been a result of the early reforms undertaken by the new president, which increased the attractiveness of Argentina's upstream sector.

Over the long term, this will bolster the country's hydrocarbon output, but its pace will be limited

by prolonged oil price weakness and a deficit of available infrastructure.

Argentina's oil sector had been completely privatised until the October 2004 creation of new state entity, Enersa. The largest upstream and downstream operator is national company YPF, which was renationalized from Spain's Repsol in 2012. Five companies, namely YPF, PAE, Chevron, Pluspetrol and Sinopec accounted for nearly 80% of the country's oil production as of mid-2017. Meanwhile, the country's gas story was slightly more diverse, with YPF, PAE and Total accounting for approximately 67% over the same time frame.

Since 2012, Chevron, ExxonMobil, Shell, Total and Petrobras have been active in the Vaca Muerta play. Chevron is now the fourth-largest producer of oil in the country, with concessions in the Neuquén Basin.

ExxonMobil holds interests in approximately 900,000 net acres in the same basin. Furthermore, YPF signed a series of memorandums with major international and regional oil companies, including Sinopec, Pemex and Petrobras.

Transportadora de Gas del Sur (TGS) is the country's largest pipeline company, delivering two-thirds of total gas consumption, and is largely owned by Pampa Energia. Transportadora de Gas del Norte (TGN), operating in the north and centre of the country, is the other key gas supplier. Its shareholders include Techint, Compania General de Combustibles (CGC), Total and Petronas of Malaysia.

Government Policy

On a fundamental basis, we see the risks in Argentina as very different to risks in highly frontier markets with harsh operating environments. Indeed, while frontier markets may face significant challenges with respect to security and a lack of infrastructure, the relationship that foreign players often have with the governments in these markets has been qualitatively different to the relationship in Argentina. In highly frontier and risky markets, foreign companies can have significant leverage over the government and are, broadly speaking, able to negotiate from a stronger position.

In Argentina, this relationship has traditionally been inverted, with the foreign companies invited to the negotiating table attending with a significant disadvantage and government policies largely designed to favour local players over foreign ones. Those specific policies had included limits on profit repatriation and strict local content requirements.

In October 2014, the Argentine government passed a bill amending the country's hydrocarbons law. The amendments hoped to improve fiscal and regulatory stability and increase investment inflows into Argentina's emergent shale sector