

IICEC Energy Market Newsletter

Issue 19, 14 November 2018

FEATURE STORY – Market Focus on LNG Turns to Potential Medium-Term Deficit as Need for Investment Grows:

Despite the robust supply growth currently coming on-line in global LNG markets over the near-term, the outlook for liquefaction capacity over the medium-term is starting to appear tight. The potential for the shortfall is driven by the dual forces of rising global LNG demand and the lack of sanctioning of new liquefaction facilities over the past few years. Acknowledgment of the growing potential for a supply gap has been growing recently in the market, including recent comments by the CEO of Qatar Petroleum (QP).ⁱ

The first such deal was announced in May of 2018 by Cheniere Energy, a Houston-based firm that operates the Sabine Pass LNG export terminal in Louisiana. Cheniere then announced approval for the construction of a third liquefaction unit or “train” for its Corpus Christi export terminal in Texas.ⁱⁱ The firm did not include the project’s cost in its announcement, but Cheniere’s trains have averaged around \$3 billion. The first two trains at Corpus Christi are slated to stream next year. The addition of 4.5 Mt/y from the third train should come by 2021.

More notably, the recent sanctioning of Royal Dutch Shell’s LNG Canada project, which the company announced would cost \$31 billion, could be a bellwether event for the evolution of the LNG market. Its export capacity would be as much as 26 Mt/y of LNG per year.ⁱⁱⁱ This facility would be among the world’s largest LNG terminals, with Shell holding a 40% stake, Malaysia’s Petronas holding a 25% stake, Japan’s Mitsubishi and China’s PetroChina each holding a 15% stake, and South Korea’s Kogas with the remaining 5% stake.^{iv}

This megaproject in particular may be a harbinger for a new wave of FIDs in the coming years, including 11 projects that are likely to receive FIDs by 2019, including two in Mozambique and Russia. LNG Canada also offers China a source of North American LNG as the uncertainty of a trade war with the US increases.

Qatar Petroleum will be expanding its domestic LNG operations, adding a fourth train to a domestic facility. The expansion would boost LNG production by 43%, raising capacity from 77 Mt/y up to 110 Mt/y by 2023. Qatar Petroleum did not announce a financing source for the 4th train, but noted that the company may be the sole financier of the project. Qatar’s decision to add a fourth train came after a positive appraisal of its world-class North Field. QP expects to award the engineering, procurement, construction, and installation contract for the field’s offshore jackets by the end of 2018. Development drilling would ensue shortly thereafter.^v



These FIDs will look to balance the global LNG market over the medium-term. This expanded liquefaction capacity will meet demand growth driven by economic growth in emerging markets

as well as the retirement of coal electricity generation capacity. One noteworthy segment of this demand growth will come from Europe, with the EU phasing in carbon emissions caps on member nations over the next decade.

Regional demand growth will be even higher in Asia, with Japan, China, South Korea, Taiwan and India all ranking in the top ten nations for LNG imports in 2017, with new medium-term supply agreements being announced more frequently.

Natural Gas

Upstream/Supply

Algeria Announces Plans for Export Capacity Expansion to Europe, Signs Deals for Offshore Development:

After staying relatively inactive in altering upstream terms or planning significant expansions of its oil and gas network through the price downturn, activity in Algeria has taken a marked uptick over the second half of 2018. October has seen the announcement of deals for the development of prospective blocks both offshore and onshore. Most imminently, Sonatrach announced that a drilling program would be pursued offshore Algeria by Total SA (France) and Italy's Eni.^{vi} Additionally, an agreement surrounding the Tin Fouye Tabankort (TFT) gas field in southeastern Algeria was also signed with Total, reflecting the boost in near-term upstream activity.^{vii}

These deals come at a time when Algerian gas exports to Europe are down to Spain this year, largely due to lower volumes transiting the Medgaz pipeline.^{viii} Sonatrach has also initiated plans to expand export capacity to Europe, so that any medium-term output growth from rejuvenated development in the upstream. Much of this upside to gas supply is slated to be met by a significant upgrade of the aforementioned Medgaz pipeline. A Sonatrach official stated that the 4.5 Bcm/y pipeline should stream by 2020.^{ix} However, in order for a twin conduit to be constructed through Moroccan territory, a long-

term agreement must be negotiated between Algiers and Rabat, which is currently underway.^x

Noble Energy Announces Progress on Leviathan, Additional Contracts Awarded:

While the development of the Leviathan gas field offshore Israel has been delayed significantly by shifting terms offered by the government, progress is now consistently being made with an eye on start-up by late-2019. The operator of the field, Noble Energy, gave an update on its quarterly earnings call, saying the project had now reached two-thirds complete and that the ramp-up to the nameplate capacity of 2 Bcf/d should commence by 4Q19.^{xi} It is still unknown what the long-term plans for these flows will be, as domestic consumption is well below gas output by the time Leviathan hits full capacity.

On the heels of the announcement of project status, TechnipFMC awarded a contract for the subsea production manifold for Leviathan. This equipment will be installed at a depth of about 1,650 meters, and constitutes the final phases of development before commissioning next year.^{xii}

Imports/Demand/Downstream

Turkish Gas Imports to Maintain Iran Flows Even with Impending Sanctions:

The TurkStream natural gas pipeline project will be completed in 2019, with the first shipments scheduled to begin on January 1, 2020, according to Russia's Energy Minister Alexander Novak.^{xiii} The pipeline is a Russian export gas pipeline to Turkey that will transit substantial volumes on to European markets, with planning underway to stretch the pipeline to Bulgaria and Austria.^{xiv} In the next two months, Russian natural gas giant Gazprom plans to complete the Black Sea portion of the pipeline. The project is slated to have an ultimate combined capacity of 31.5 Bcm/y as both phases ramp up to operational capacities.^{xv}

Turkish President Recep Erdoğan also announced plans to continue buying Iranian natural gas supplies, despite tightening US' sanctions on Iran. At the UN General Assembly Meeting in late September, Erdoğan stated that

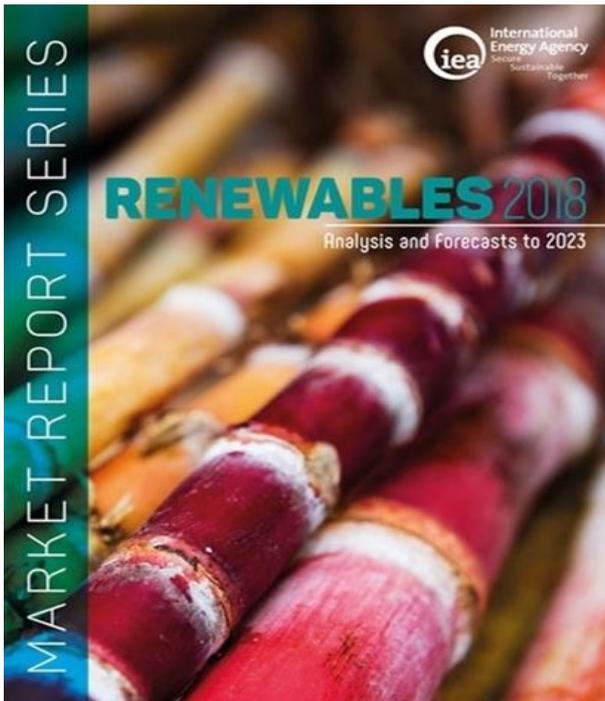
winter heating bills in Turkey would take precedence over the second phase of sanctions in November, one that bans the purchase of Iranian oil and gas.^{xvi} However, Tüpraş has said it would cease importation of oil from Iran unless the US government grants waivers from sanctions.^{xvii}

Power, Renewables & Efficiency

Global Market Trends

IEA Issues Report on Global Renewables Capacity Sees Acceleration in Market Penetration as Focus on Climate Intensifies:

In October, the International Energy Agency (IEA) released its annual renewables report. The IEA forecasted that global renewable electricity generation will increase by 5% in 2017. From 2018-2023, the IEA also predicted that the global renewable electricity grid will add 1 TW of capacity from 2018-2023, revised up from 930 GW in its 2017 report. Within the IEA's bullish forecast, solar energy was the big winner, as by 2023 solar energy will add 600 GW of solar capacity, thus reaching a global installed capacity of 1 TW. Wind power will increase by 60% worldwide, adding 300 GW of capacity, with 10% of this increase coming in the form of offshore wind farms.



The report also made notable regional revisions involving Europe, China, and the US. Due to the European Union's binding renewables targets, such as the mandate that the EU must generate 33% of its energy mix from renewables by 2030, the IEA increased its forecast for Europe. China, however, was forecast to continue its position as the global leader in the expansion of both renewable generation and consumption from 2018-2023, responsible for 400 GW of the IEA's growth forecast. Conversely, the Agency actually decreased its US' forecast for renewables growth, stemming from tax reforms and the implementation of trade tariffs.^{xviii}

Notably, the IEA's 2018 report also underscored the unrealized potential of the biofuels market, an energy source it referred to as the "overlooked giant of renewables." Bioenergy maintains massive potential in transport and heat, sectors that collectively account for 80% of total energy consumption. Bioenergy constitutes over 50% of the total renewables consumption market, or four times greater than current market share for solar, and notably, as much as hydro, solar, wind, and all other renewables combined. In this market, Asia and Latin America are set to dominate growth, especially in Brazil, which the IEA forecasts to have the world's greenest energy mix by 2023, with 45% of domestic consumption coming from renewables.^{xix} Still, bioenergy growth remains hamstrung by weak policy support.

Generation/Fuel Sources

Morocco Becomes Global Leader in Concentrated Solar Power (CSP) Solar as Renewables Capacity Connected:

In finalizing plans to add 150 MW of Concentrated Solar Power (CSP) to the Noor Ouarzazate solar complex, Morocco is continuing its globally noteworthy efforts to add renewable electricity generation sources to its grid. This step will give Noor Ouarzazate a combined capacity of 580 MW, making it the largest multi-technological solar production site in the world.^{xx} This development speaks to a bullish medium-term market outlook for CSP



around the world, as the global CSP market is expected to grow by 15.3%, reaching \$14.75 billion by 2023. Noor Ouarzazate also underscores Morocco's ambitious target to receive 42% of its total power from renewables by 2020, and 52% by 2030. These figures are some of the highest in the world, a sensible target for a country that lacks large easily recoverable hydrocarbons reserves and currently imports 90% of its energy resources.^{xxi}

The deal is also noteworthy for its use of Power Tower solar technology and hybrid utilization of a major wind farm. The solar power tower does not simply rely on traditional, photovoltaic generation cells; instead, it uses an array of movable mirrors, or heliostats, to reflect sunlight towards a collector tower. This tower contains water. The reflected sunlight heats the tower, producing steam and thus driving a power-generating turbine.^{xxii} Morocco signed a public-private partnership to build an avant grade wind farm to supplement the solar power tower. Wind firm Soluna and DMG Blockchain Solutions will develop a 37,000-acre wind farm in Dakhla, one of Morocco's Southern provinces. Soluna was established this year to bring blockchain technology with low-cost, renewable energy.^{xxiii}

Despite these developments, hydrocarbons will be needed in Morocco and elsewhere to power global energy markets. Moroccan Energy and Mines Minister Aziz Rabbah is still deciding between building a terminal for importing liquefied natural gas or a cheaper floating LNG

facility. Morocco's 2030 energy plan calls to reduce imports of oil and coal by building more gas-fired power plants.^{xxiv}

Transmission/Distribution/Consumption

In the global market for electric vehicles (EVs), Chinese automakers continue to innovate and lead the global market. Tesla's CEO Elon Musk may dominate US media headlines, and Germany's BMW has the potential to build off its plug-in hybrids, but China has truly taken the lead in both the EV market, as well as the battery technologies that will drive the sector's development.^{xxv} The country has 487 electric vehicle-makers, led by BYD, Beijing Electric Vehicle Corp, ZhiDou, Shanghai Auto and Zotye.^{xxvi} Of the three million EVs globally, two-thirds are produced and purchased in China, with 500,000 additional vehicles produced year-to-date in 2018. Only 15,000 of these new EVs were imported, such as Tesla's Model X and Model S. With new vehicle licenses in China growing at 1.5 million per month, these figures should only continue to grow, and thus easily reach the Chinese government's goal to have five million EVs on the road by 2020.

Two key factors are driving Chinese leadership in the EV market, including dominance in battery technology, and government mandate to reduce China's notorious air pollution. China's battery sector is the gold standard in mass production. It supplies the domestic market, and soon will lap its competitors by a factor of three. The Chinese government is keen to reduce onerous air

pollution, especially in major cities, a problem driven by an electricity sector that still burns coal for 80% of its generation, and a reliance on imported oil. Chinese oil imports now top 9 million barrels per day.^{xxvii}

Amid an accelerating trade war with the US, it will bear watching whether Chinese EV makers can gain a market share in Europe and the US. In September, Chinese EV maker NIO held an IPO on the New York Stock Exchange. Its CEO Louis Hsieh told reporters that Nio looks to challenge Tesla, claiming that Nio will soon unveil a model comparable to the Tesla Model 3, with better range, acceleration, and only two-thirds the price.^{xxviii}

Energy Efficiency/Climate Change

Exxon and Chevron Join Climate Change Group in Sign of Shifting Strategies:

Over the past two years, significant pressure has grown from investors on oil and gas producers – as well as mining firms and other high-emission industries – to assess more expressly and publicly the potential impact on its operations and portfolios by climate change. Two of the most prominent groups that could shape the treatment of climate change by the oil and gas industry are the Task Force on Climate-Related Financial Disclosures (TCFD), which provides a framework for companies to disclose climate-related financial developments^{xxix}, and the Oil and Gas Climate Initiative (OGCI).^{xxx}



Source: Reuters

While there has been broad adoption by the industry of initiatives such as OGCI, the absence of key players had become increasingly

conspicuous. In September, ExxonMobil, Chevron, and Occidental Petroleum jointly announced that they were joining the OGCI, filling a major gap in the representation of major US operators.^{xxxi} Exxon went even further in its apparent shift to overt support of low-carbon and climate change policies by pledging \$1 million to a group that spearheads advocacy of a carbon tax in the US.^{xxxii}

These developments came as the UN body monitoring the impacts of climate change, the Intergovernmental Panel on Climate Change (IPCC) issued a report that projected that immediate action would be necessary in order to prevent the 1.5°C rise in global temperatures.^{xxxiii} Forecasts such as these should only stoke the gathering momentum in investor pressure as it pertains to climate change.

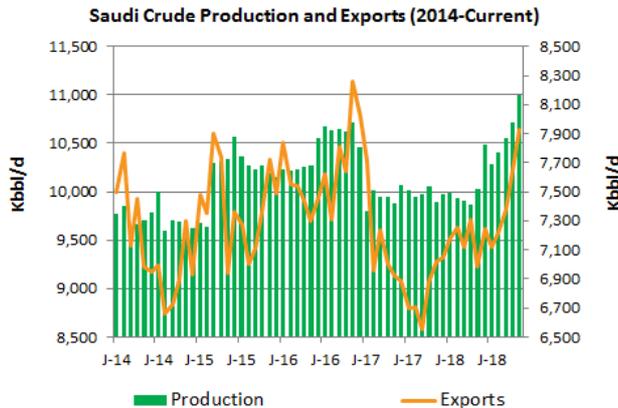
Oil Market

Upstream/Supply

As Venezuelan production continued to collapse over the first half of the year, Russia and Saudi Arabia agreed to fill the growing void when they decided to boost their output by 1 Mbb/d in June. As the US exited the Iran Nuclear Deal and deadlines for sanctions over oil imports from Iran approaches, Saudi Arabia and Russia are again being called on to increase supply further to cool prices that had already breached \$85/bbl on potential losses of Iranian exports. After Riyadh hit a new production record for the Kingdom in October at 10.7 Mbb/d^{xxxiv}, Saudi Arabia is again in need to calm markets with another 300 Kbb/d jump in output for November, potentially hitting 11 Mbb/d for the month.^{xxxv}

Prices have begun to fall as the market sees Saudi and Russia as capable of plugging any supply gap that might arise.^{xxxvi} Nevertheless, just weeks ago there was wide doubt in the market that Aramco could produce anywhere close to its nominal domestic capacity of 12 Mbb/d, stoking fears of a slim buffer for prices provided by deteriorating spare output capacity. Tehran has made strenuous efforts to protest fellow OPEC members growing volumes to take market share lost by Iran due to US sanctions,

while also questioning the capability of global producers to replace all barrels that could be taken offline.^{xxxvii}



Source: JODI

Such prospects for a shortfall in production in the near-term also spurred an attempt to reconcile differences between Saudi Arabia and Kuwait over production and development of the Partitioned Neutral Zone (PNZ), which has been an enduring disruption of 500 Kbbbl/d since late 2014. Unfortunately, not even high oil prices and a market need for incremental volumes could bring a resolution over Chevron and its role in the region.^{xxxviii}

There remains some upside supply potential from other large oil producers in the coming months, which should help – along with seasonal weakness in demand – to maintain a soft ceiling on oil price. Even as Riyadh failed to conclude a deal over PNZ production, the UAE recently stated that the commissioning of its own offshore fields, which has brought overall capacity to 3.5 Mbbbl/d, according to ADNOC, could be brought to bear should markets require.^{xxxix}

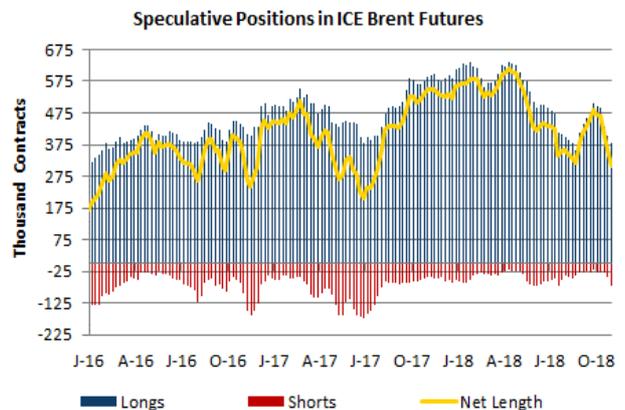
However, there are growing disagreements between Saudi Arabia and Russia over the need to cut back supply from December, as prices have fallen 20% in a month. Moscow is taking the stance that demand was seasonally weak due to refining maintenance, and as such will return relatively quickly as units come back online. This would indicate that no supply cuts are immediately needed and that the uplift in short-term demand would support prices. Riyadh has not seen sufficient uptick in customer orders

to warrant keeping production at record levels, announcing that they would cut December production by 500 Kbbbl/d. While this does not signify a total breakdown in relations between two of the leading oil producers, the coordination that has predominated over the past year and a half appears to be waning.^{xi}

Prices/Fundamentals

Crude Futures Positions Swing along with Prices as Focus Swings from Supply to Demand:

Markets over the past two months have been volatile, with a rise in oil prices to multi-year highs was followed by a correction of \$10/b as demand jitters and rising stocks overcame the geopolitical risk that brought Brent to \$85/b. Investors continued to exit long positions in both global benchmarks last week, with downward pressure concentrated on Brent, with net long positions down significantly partly driven by a doubling of outstanding shorts.^{xii} Some of this downdraft has been driven by fluctuations in financial markets, causing the oil price to fall from drivers not directly related to physical markets.^{xiii}



Source: ICE

From a fundamentals standpoint, the return of builds to US crude inventories, which persisted for six consecutive weeks thus far, has remained a drag on bullish sentiment.^{xiiii} While there has been muted exports growth that has contributed to growing storage volumes, seasonal refinery maintenance has dropped US crude demand significantly, pushing barrels into tanks.^{xiv} Global refinery demand should return to full operational

capacity into December, providing a relative support to prices from a demand perspective through the remainder of 2018.

Imports/Refining/Product Demand

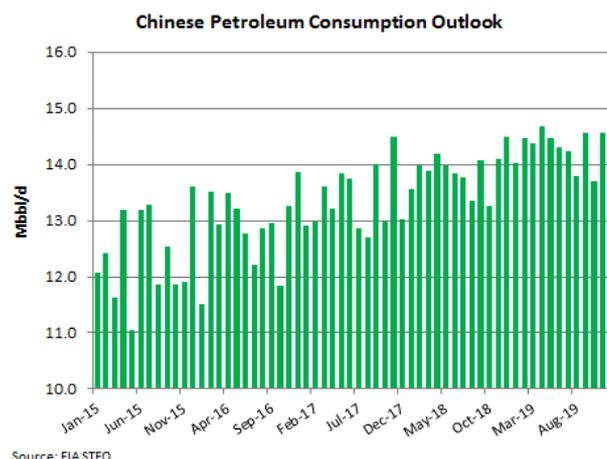
Chinese Independent Refiners Grow Role in Crude Markets, Distribution Stays Domestic:

In October, Chinese crude imports hit their highest point since May, with the country importing 9.1 Mbb/d, up over 100 Kbb/d from September. This marked the third straight monthly rise in imports, and a 6% increase in total inbound crude flows year-on-year. Chinese independent refiners, or teapots, have had a growing role in import volumes over recent years as Beijing has granted access to foreign oil supply that they had not enjoyed previously. As these crude imports have risen, so too have utilization rates for the country's private Shandong refineries.^{xlv}

In September, Chinese private downstream facilities increased their operating rates to 67%, an increase from 59% in August. Yet despite these relatively robust figures, uncertainties loom over China's independent refiners, stemming from both the availability of import supplies and regulatory hurdles from the Chinese government.

A growing trade war with the US, particularly since the recent imposition of tariffs on \$250 billion of Chinese imports by the Trump administration. In response, China largely suspended US crude imports, which would mark the first time since 2016 that oil flows from the US might drop to zero.^{xlvi} As recently as July of 2018, China imported about 12 Mb of crude per month from the US.

With potential disruptions of US crude imports on the horizon, China's independent refiners will hope to increase crude purchases from Saudi Arabia, Oman, and Brazil. Quotas and tax uncertainties from the Chinese government are also looming in 2019, raising questions as to whether the ameliorating conditions for teapot refiners will continue throughout next year.^{xlvii}



The state-run refiners have conversely seen their market share erode as independent refiners have gained a more prominent position in the Chinese market. The downstream arms of state-run giants Sinopec, PetroChina, CNOOC, and Sinochem are not subject to import quotas. Chinese independent refiners, however, need to apply and obtain consent from the government in order to import crude oil, to which independent refiners only gained access in 2015. These private refiners have until November 10th to apply for an import quota allocation, and only companies that received such an allocation in 2018 will be eligible to receive one in 2019. The Chinese government will allocate an aggregate total of 4.1 Mbb/d to non-state refiners next year, and though this figure represents a 42% increase from import quota levels in 2017, new independent refinery capacity is scheduled to go online in 2019, meaning not all of this increase is organic growth in crude demand from the standing capacity of the teapots.^{xlviii}

One market that the independent refiners have been barred from is the ability to export significant volumes of products, which remains a space in which the state-run players hold a competitive advantage. Just as private Chinese downstream companies must apply for an import quota, they must do so to export refined oil products. The available export quotas have not increased since 2016 and total only some 40 Kbb/d. The Chinese government is also imposing a more unfavorable tax structure on the country's private downstream sector. Effective on March 1, 2019, the independents will no

longer be exempted from a consumption tax on refined oil product sales, a tax break they have enjoyed for three years.^{xlix}

Political-Economy

Macroeconomy

As mutual escalation of trade barriers continues between Washington and Beijing, indicators are revealing a growing impact from the various tariffs that have been applied by both sides. Given the central role both economies play in the global supply chain, the fallout cannot be contained to the bilateral trade relationship.ⁱ With tariffs set to jump from 10% to 25% by 1 January on those \$250 billion worth of goods that have already been listed on the US tariff schedule. Furthermore, Trump is threatening to list the entirety of US imports from China, an additional \$267 billion.ⁱⁱ

Beyond the potential downside from any repercussions of this trade dispute, the growing divergence between the US and the rest of the global economy continues to propel the dollar. The Federal Reserve could maintain a measured approach to interest rates as inflation and wage growth stayed low, even with multi-decade sub-4% lows in unemployment. With wages seeing gains, the Fed sees greater urgency to raise rates.ⁱⁱⁱ Such dollar strength has a direct impact for oil demand growth over the medium-term, in addition to the price run-up seen in 2018.ⁱⁱⁱⁱ

The US economy, which provided support for global growth over the past several years, has now reached a point of separation from the rest of the global economy. This has caused an increasingly divergent economic situation in which the US, particularly in equity valuations, continues to outperform emerging markets, with signs that Europe and China are both likewise slowing down. As long as the US economy continues to post strong employment numbers and broad-based growth, emerging markets could become increasingly exposed to currency-based economic impacts, particularly to dollar-denominated debt.^{liv}

Much of the concern surrounding global economic growth surrounds the escalating trade tensions between the US and China. While both Presidents Trump and Xi have recently indicated a potential for rapprochement, analysts remain skeptical until tariff measures are at least halted, if not reversed. From an oil market perspective, the prospective production growth from the US does need Chinese demand as an outlet to facilitate the increase in supply without surging crude inventories in the US.^{lv}



Government Finances/Sovereign Debt

The Debt Spiral Plaguing Venezuela Accelerates, Eating into Slumping Exports:

As of early September, Venezuela's debt repayments to private investors are \$5 billion behind schedule, compounding woes for a country hamstrung by an inflation rate of 1 million% in 2018. Venezuela's banks are already defaulting on \$6.4 billion in debt over the last year. The Venezuelan Treasury and PDVSA have a combined \$3 billion in debt payments due in 2018. There are a few remedies, though options may be dwindling. Venezuela's central bank has hard currency reserves of \$8.4 billion, including an estimated \$1 billion in gold, that it might allocate for the remaining debt payments.^{lvi} But news of Venezuela's slow debt repayments have already depressed the value of PDVSA bonds from 90 cents to 86 cents, even though honoring these bonds have historically been a priority for the Venezuelan government.

Several international court decisions are adding immediate pressure to the embattled oil producer, and especially to Citgo, PDVSA's US-based refinery and retail company, which is valued at \$8 billion.^{lvii} Caracas used a 49%

equity stake in Citgo as collateral for a Russian loan from 2016. The potential for the entirety of Citgo to be confiscated by international bondholders, many of which are based in the US, is rising substantially.

Additionally, \$500 million is now due to ConocoPhillips, with incremental payments to be made each quarter, all a portion of a \$2 billion settlement surrounding the 2007 nationalization of the Texas-based oil producer's assets in Venezuela. A separate \$8 billion bondholder group advised by Millstein & Co. has stated that it is currently exploring its options to ensure that Venezuela's overseas assets, namely Citgo, are available to satisfy creditor claims.



A judge in the US state of Delaware ruled last week that the mining company can seize Citgo's assets, including 5,300 US-based retail stations and the company's flagship Lake Charles refinery, which is in the midst of a \$20 million upgrade.^{lviii} Finally, there remains the 49% stake in Citgo linked to a \$1.5 billion oil-backed loan to the Russian national oil company, Rosneft. This makes two court cases and four separate claims that could set up a showdown over Citgo, which still processes 175 Kbb/d of Venezuelan crude and returns 29 Kbb/d of refined fuel products to Venezuela. PDVSA seems destined to lose control of the company.^{lix}

The financial straits in which Caracas finds itself comes amid the ongoing and spectacular drop in crude production, even as Venezuela continues to boast the largest crude reserves in the world. Oil production for September of 2018 was about

1.2 Mbb/d, down from 1.9 Mbb/d in September of 2017, with daily production declines averaging about 50 Kbb/d. As such, PDVSA and Venezuela have seen diminishing returns from the recent rise in oil prices, a particularly unwelcome development given that 95% of Venezuela's sourcing of foreign exchange come from crude exports.

Venezuelan President Nicholas Maduro has recently proposed to increase oil shipments to China by 1 Mbb/d, underscoring how Maduro has increasingly looked to China and Russia for investment capital following the deterioration of the Venezuela's relationship with the US. China has invested \$5 billion into Venezuelan oil production since 2008, and restructured this loan in 2016. Venezuela has repaid this debt with oil shipments. Since 2016, however, China and Russia have only shown an interest in simply adjusting terms of current loans through direct oil and mineral stakes. After years of injecting liquidity into the country, its stalwart creditors in Moscow and Beijing now have little appetite to provide further incremental capital into Venezuela and its mounting debt problems.^{lx}

Internal documents from PDVSA state that in September, upwards of 730 Kbb/d was allocated to debt repayment, largely to Russia and China for past obligations. Such a volume would be the vast majority of their current export program. Some estimates have outstanding debt with China alone at \$23 billion, notwithstanding the growing numbers of counterparties receiving debt payments in the form of crude shipments.^{lxi} The question remains whether the need to allocate an increasing proportion of exports will starve the potential for any liquidity that might be reinvested in its collapsing oil network.

Geopolitics

As Final Deadline for Iran Sanctions Nears, US Grants Temporary Waivers:

As the final deadline approached that would see the full array of US sanctions re-imposed on Iran, the Trump administration loosened its heretofore hardline policy regarding the granting of waivers

to importers of Iranian crude.^{lxii} There remain several unknowns surrounding the nature of these waivers that will maintain uncertainty over global crude supply into 2019, such as the duration of these waivers and the ultimate expectation of total diversification away from Iran supply.^{lxiii} U.S. Secretary of State Pompeo has recently stated that support from the traditional customers of Tehran to get Iranian crude and condensate exports to zero by mid-2019, which would represent the loss of 2.2-2.4 Mbbbl/d from the market over a single year.^{lxiv}

In addition to the short-term relief provided to markets by the granting of these temporary exceptions to sanctions, Iraq gained a reprieve in the form of disqualifying the import of natural gas and electricity from Iran sanctions whatsoever.^{lxv} These natural gas supplies and inbound flows of electricity have become a crucial source of energy for Iraq and denying such a supply source would indeed cause great difficulties, even as temperatures cool from summer peak, when protests against the government in the Basra region turned violent over July and August.

Some drastic shift of cabinet members in Tehran by the government of Rouhani indicate that Iran is preparing for economic hardship, even while externally maintaining a defiant tone. Such moves include the replacement of the economy minister, as well as a new head of the Central Bank of Iran (CBI).^{lxvi} One group that did flourish under the previous round of sanctions between 2012 and early 2016 was the Republican Guard Corps (IRGC), which is closely aligned or holds significant influence in a number of native oil service and engineering firms.^{lxvii} Development of the Iranian upstream that was expected following the lifting of sanctions will now be delayed by years, and the IRGC firms that have been involved in major projects have shown little capability of advancing any fields to production.

References

- ⁱ <https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/100918-qatar-petroleum-ceo-warns-of-upcoming-very-big-lng-shortage>
- ⁱⁱ <https://www.reuters.com/article/us-cheniere-energy-lng/cheniere-moves-ahead-with-corpus-christi-lng-expansion-idUSKCN1IN33Z>
- ⁱⁱⁱ <https://www.bloomberg.com/news/articles/2018-09-28/shell-s-31-billion-lng-canada-project-moves-ahead-as-china-oks>
- ^{iv} <https://www.bloomberg.com/news/articles/2018-09-27/the-next-cycle-of-lng-investments-is-set-to-kick-off-in-canada>
- ^v <https://www.ogj.com/articles/2018/09/qatar-petroleum-adds-fourth-train-to-lng-expansion.html>
- ^{vi} <https://www.epmag.com/sonatrach-launch-offshore-drilling-total-eni-algeria-next-year-1718196>
- ^{vii} <https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/100818-frances-total-agrees-tft-satellite-natural-gas-field-deal-with-algerias-sonatrach>
- ^{viii} <http://interfaxenergy.com/gasdaily/article/33005/rise-in-algerian-exports-to-spain-offsets-italian-decline>
- ^{ix} <https://af.reuters.com/article/moroccoNews/idAFL5N1VY3X5>
- ^x <https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/100418-algeria-morocco-to-hold-talks-on-natural-gas-supply-transit-deal-post-2021-source>
- ^{xi} https://www.rigzone.com/news/leviathan_project_67_complete-02-nov-2018-157376-article/
- ^{xii} <https://www.offshore-mag.com/articles/2018/11/jumbo-to-install-leviathan-subsea-production-manifold.html>
- ^{xiii} <https://www.dailysabah.com/energy/2018/10/09/turkstream-to-supply-natural-gas-from-january-2020-russian-energy-minister-says>
- ^{xiv} <https://www.dailysabah.com/energy/2018/10/04/gazprom-turkstream-nord-stream-2-vital-for-eu-to-meet-growing-gas-demand>
- ^{xv} http://www.xinhuanet.com/english/2018-10/05/c_129965988.htm
- ^{xvi} <https://www.aa.com.tr/en/middle-east/turkey-to-continue-buying-iranian-gas-erdogan/1265216>
- ^{xvii} <https://www.reuters.com/article/us-iran-oil-turkey/turkeys-tupras-in-talks-with-u-s-for-iran-sanctions-waiver-sources-idUSKCN1MS0ND>
- ^{xviii} <https://www.spglobal.com/platts/en/market-insights/latest-news/electric-power/100818-iea-lifts-renewables-forecast-for-europe-but-china-continues-to-dominate>
- ^{xix} <https://www.iea.org/renewables2018/>
- ^{xx} http://www.xinhuanet.com/english/2018-09/27/c_137495056.htm
- ^{xxi} <https://www.marketwatch.com/press-release/concentrated-solar-power-csp-a-sustainable-green-energy-solution-to-witness-a-cagr-of-153-during-2017-2023-2018-09-27>
- ^{xxii} <https://www.power-technology.com/comment/morocco-pioneering-renewable-energy-integration/>
- ^{xxiii} <https://www.morocoworldnews.com/2018/09/253522/soluna-and-blockchain-dmg-partner-moroccan-wind-farm-project/>
- ^{xxiv} <https://www.bloomberg.com/news/articles/2018-10-01/morocco-debates-whether-to-build-or-float-its-first-lng-terminal>
- ^{xxv} <https://www.bloomberg.com/news/articles/2018-09-18/only-bmw-comes-close-to-china-s-electric-vehicle-heavyweights>
- ^{xxvi} <https://www.forbes.com/sites/michaeldunne/2018/03/30/chinas-electric-vehicle-leaders-who-are-they/#7ebf130a30b6>
- ^{xxvii} <https://247wallst.com/autos/2018/09/06/china-electric-vehicle-sales-more-than-double-in-first-half-of-2018/>
- ^{xxviii} <https://www.cnbc.com/2018/09/12/chinese-electric-car-maker-listing-on-nyse-says-its-cars-are-better-than-teslas.html>
- ^{xxix} <https://www.reuters.com/article/us-climatechange-financial-disclosure/climate-related-financial-disclosure-becoming-more-mainstream-g20-task-force-idUSKCN1M61OM>
- ^{xxx} <https://oilandgasclimateinitiative.com/>
- ^{xxxi} <https://www.cnbc.com/2018/09/20/exxon-mobil-and-chevron-will-join-oil-and-gas-climate-initiative.html>
- ^{xxxi} <https://www.bloomberg.com/news/articles/2018-10-09/exxon-puts-1-million-into-quest-for-carbon-tax-and-rebate-plan>

- ^{xxxiii} <https://www.theguardian.com/environment/live/2018/oct/08/ipcc-climate-change-report-urgent-action-fossil-fuels-live>
- ^{xxxiv} <https://www.businessinsider.com/saudis-to-ramp-up-oil-output-to-near-record-after-trump-outbursts-ope-2018-10>
- ^{xxxv} <https://www.reuters.com/article/us-global-oil/oil-falls-by-2-after-saudi-arabia-reassures-market-on-supply-idUSKCN1MX046>
- ^{xxxvi} <https://www.marketwatch.com/story/ope-2018-10-11>
- ^{xxxvii} <https://www.reuters.com/article/us-iran-oil-sanctions/saudi-russian-oil-output-unable-to-compensate-for-iranian-crude-zanganeh-idUSKCN1MW18G>
- ^{xxxviii} <https://oilprice.com/Latest-Energy-News/World-News/Saudis-Kuwait-Fail-To-Agree-On-500000-Bpd-Joint-Oil-Fields-Restart.html>
- ^{xxxix} <https://www.spglobal.com/platts/en/market-insights/latest-news/oil/101118-uae-to-pump-more-oil-in-oct-nov-to-meet-customers-needs-energy-minister>
- ^{xl} <https://www.cnbc.com/2018/11/12/saudi-arabia-and-russia-have-a-long-term-relationship-despite-output-u-turn-dan-yergin-says.html>
- ^{xli} <https://af.reuters.com/article/commoditiesNews/idAFL8N1XG3VA>
- ^{xlii} <https://www.reuters.com/article/global-oil-int/oil-falls-3-percent-as-equity-markets-drop-inventories-climb-idUSKCN1ML02R?feedType=RSS&feedName=businessNews>
- ^{xliiii} <https://www.reuters.com/article/us-usa-oil-eia/u-s-crude-stocks-rise-for-a-sixth-week-fuel-draws-down-eia-idUSKCN1N5256>
- ^{xliv} <https://www.bloomberg.com/news/articles/2018-10-24/oil-dips-to-two-month-low-on-saudi-output-pledge-risk-off-mood>
- ^{xlv} <https://www.reuters.com/article/us-china-economy-trade-oil/chinas-september-crude-imports-mark-highest-in-four-months-idUSKCN1MM09J>
- ^{xlvi} <https://www.bloomberg.com/news/articles/2018-10-05/china-slams-brakes-on-u-s-crude-oil-imports-amid-trade-tensions>
- ^{xlvii} <https://www.spglobal.com/platts/en/market-insights/latest-news/oil/101218-china-data-shandong-independent-refiners-raise-sep-run-rates-on-higher-margins>
- ^{xlviii} <https://oilprice.com/Latest-Energy-News/World-News/China-Boosts-Oil-Import-Quota-For-Independent-Refiners-By-42.html>
- ^{xlix} <https://www.hellenicshippingnews.com/oil-product-exports-by-chinas-independent-refiners-a-distant-dream/>
- ^l <https://www.reuters.com/article/global-economy/global-economy-u-s-china-trade-battle-shows-deepening-economic-impact-across-asia-idUSL8N1XB0T4>
- ^{li} <https://www.reuters.com/article/usa-trade-china-cantonfair/update-1-export-orders-to-u-s-down-a-third-at-chinas-largest-trade-fair-idUSL4N1XG2SY>
- ^{lii} <https://www.investors.com/news/economy/jobs-report-wage-growth-9-year-high/>
- ^{liiii} <https://www.reuters.com/article/global-precious/precious-gold-dips-as-dollar-gains-on-solid-us-jobs-data-idUSL3N1XD50Q>
- ^{liv} <https://www.cnbc.com/2018/10/16/us-economic-outlook-vs-the-rest-of-the-globe-is-brighter-than-its-been-in-11-years.html>
- ^{lv} <https://www.bloomberg.com/news/articles/2018-11-02/trump-risks-backlash-in-zeal-for-deal-to-end-china-trade-war>
- ^{lvi} <https://www.argusmedia.com/en/news/1767857-looming-debt-payments-leave-caracas-exposed?backToResults=true>
- ^{lvii} <https://www.bloomberg.com/news/articles/2018-08-15/venezuela-has-sovereign-bonds-due-they-re-trading-at-28-cents>
- ^{lviii} <https://www.nytimes.com/2018/10/01/business/energy-environment/venezuela-citgo-oil-sanctions.html>
- ^{lix} <https://www.aljazeera.com/news/2018/09/venezuela-significantly-increase-oil-exports-china-180919070322004.html>
- ^{lx} <https://oilprice.com/Energy/Crude-Oil/Venezuelas-Oil-Exports-Are-Falling-Even-Faster-Than-Expected.html>
- ^{lxi} <https://www.argusmedia.com/en/news/1785613-pdv-paying-more-debts-with-oil>
- ^{lxii} <http://www.hurriyetdailynews.com/turkey-among-8-countries-granted-waiver-from-us-oil-sanctions-on-iran-138591>
- ^{lxiii} <https://www.reuters.com/article/us-usa-iran-sanctions-factbox/factbox-the-knowns-and-unknowns-of-u-s-iran-oil-sanction-waivers-idUSKCN1NC100>

^{lxiv} <https://www.spglobal.com/platts/en/market-insights/latest-news/oil/110818-growing-support-for-us-effort-to-get-iranian-oil-exports-to-zero-pompeo>

^{lxv} <https://www.argusmedia.com/en/news/1787538-iraq-can-import-energy-from-iran-us-says?backToResults=true>

^{lxvi} <https://www.reuters.com/article/us-iran-politics/irans-rouhani-appoints-new-economy-minister-in-reshuffle-state-tv-idUSKCN1MV06Y>

^{lxvii} <https://www.reuters.com/article/us-usa-iran-sanctions-guards/iran-able-to-flourish-under-sanctions-revolutionary-guard-idUSKCN1NC2NQ>