Hollow Energy Promises in China Deal
Targets rely on disrupting existing suppliers.

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Data Sources for This Publication
CME Group
U.S. Census Bureau
China General Administration of Customs

To discover more about the data sources used, click here.

Lofty Goals

The U.S.-China Phase 1 trade agreement signed Jan. 15 marked at least a temporary cessation of hostilities in the heated trade war between the world's two largest economies. Under the agreement, China committed to increase spending by over $200 billion on imports in return for the U.S. holding off further tariffs on Chinese goods. The agreement details Chinese spending targets by sector in an annex, including a promise to increase energy imports by $52.4 billion over 2017 levels during 2020 and 2021. While these lofty goals are theoretically possible, they would require wholesale disruption of both countries' existing energy trade ecosystems. This note details how and whether U.S.-China energy trade could be expanded to meet the pact's terms.

Targets

The trade agreement annex details increased Chinese imports of "Energy" from the U.S. to the tune of $18.5 billion in 2020 and $33.9 billion in 2021, with both these numbers being additions to a baseline 2017 level. The energy category includes liquefied natural gas, crude oil, refined products, and coal, although there is no breakdown of individual values for each of these.

Our analysis of 2017 U.S. census data shows crude exports to China were valued at $4.4 billion, refined products (including liquid petroleum gas, or LPG, and fuel oil) at $3.1 billion, LNG at $424 million, and coal at $404 million. That adds up to a total 2017 energy category value of $8.3 billion, 53% crude, 37% refined products, and 5% each for LNG and coal. The 2017 value is only 21% of the trade agreement target of $26.8 billion for 2020 ($18.5 billion uplift plus 2017 baseline of $8.3 billion). With tariffs imposed in 2018 dramatically reducing U.S. exports to China in 2018 and 2019, U.S. energy exports in 2019 were valued at just $3.7 billion—meaning the 2020 target of $26.8 billion represents a more than sevenfold increase in energy export values over 2019. The annex promises an additional 57% increase to $42.2 billion for energy purchases in 2020 ($33.9 billion plus the $8.3 billion 2017 baseline).

These are lofty goals in any circumstances, let alone for a Chinese economy suffering blanket quarantine conditions in the wake of the coronavirus outbreak. Lower energy prices this year make the agreement's value targets even harder to realize.

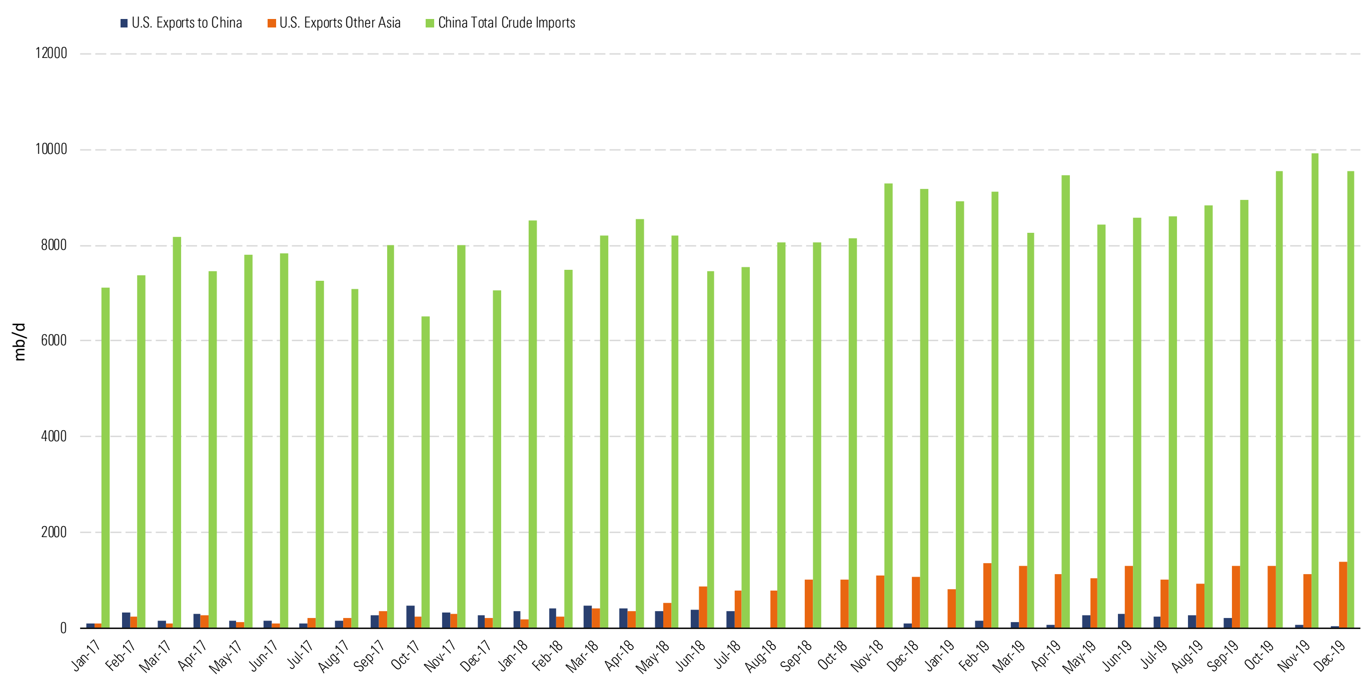
Next, we take a closer look at how these targets could be met in each energy category.

Crude Trade

U.S. crude exports to China took off in 2017 in response to higher prices spurred by OPEC cuts, averaging 222 thousand barrels/day, according to the U.S. Census Bureau. Volumes increased to an average 232 mb/d in 2018 despite grinding to a halt in August before China imposed a 5% tariff on U.S. crude imports in September. As a result, U.S. exports retreated to average 134 mb/d in 2019. Although large by U.S. standards, these volumes are tiny compared with China's total crude import demand. That averaged 7.47 million barrels/day during 2017, 8.22 mmb/d in 2018, and 9.01 mmb/d in 2019, according to China's General Administration of Customs, with the U.S. representing just 3% by volume in 2017 and 2018, falling to 1% in 2019. Exhibit 1 shows monthly average U.S. exports to China (blue bars) and total Chinese crude imports (green bars).

Exhibit 1 also shows total U.S. exports to Asia apart from China, (red bars) that increased sixfold from an annual average 191 mb/d in 2017 to 1157 mb/d in 2019 growing in part as a response to the curtailment of Chinese purchases. It is instructive to note that, assuming the U.S. diverted all 2019 crude exports to Asia in the direction of China instead, the 2019 volume would have increased to an average 1,290 mb/d or 14% of China's total imports. This example illustrates that a significant increase in U.S. exports to meet the trade target is possible without a parallel increase in domestic production, provided China becomes the focus destination market at the expense of other 2019 Asian customers.

Exhibit 1 U.S. and China Crude Trade 2017-2019



Source: U.S. Customs and Border Protection, Chinese General Administration of Customs, Morningstar.

Value Over Volume

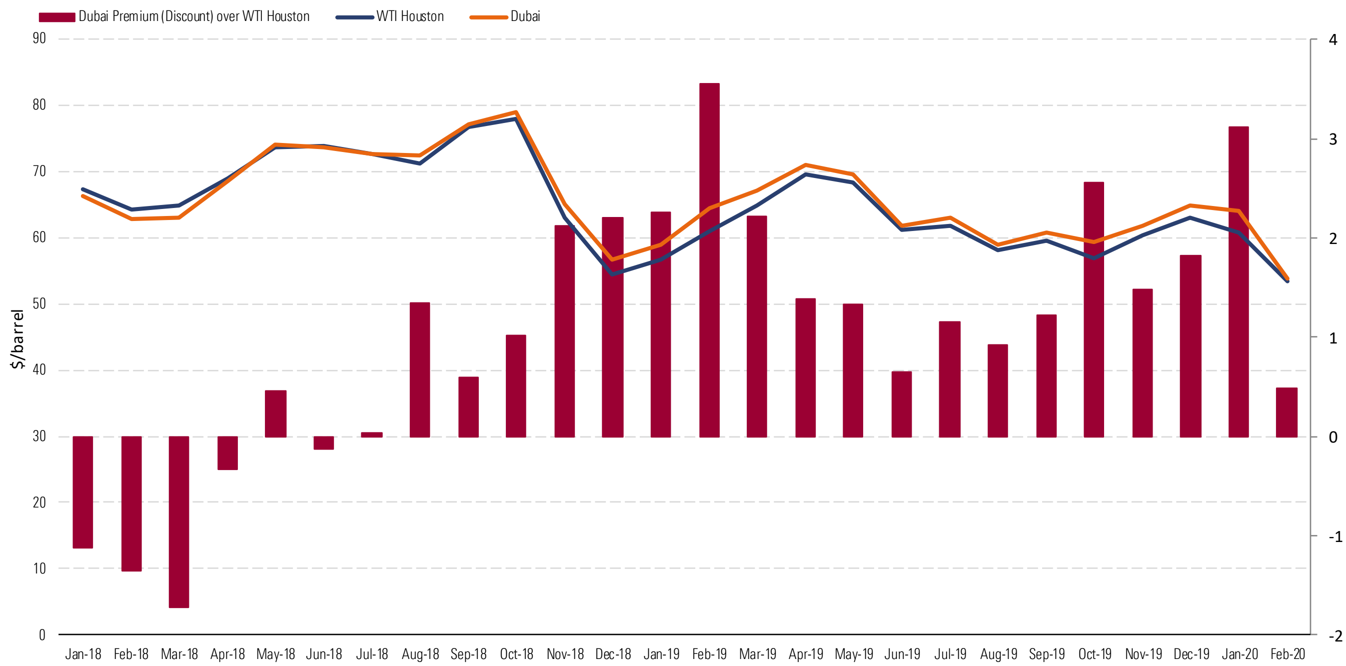
But since the U.S.-China trade pact promises are in dollars, value is more important than volume to the deal although the numbers paint a similar picture. U.S. census data shows crude exports to China in 2017 valued at $4.38 billion, in 2018 $5.43 billion, and in 2019 $2.90 billion. Like the volume data, these numbers are a drop in the ocean, representing 3%, 2%, and 1%, respectively, of the total value of China’s crude imports. Those values were reported by China’s General Administration of Customs as $164 billion in 2017, $237 billion in 2018, and $239 billion in 2019. That means China could easily meet the target values in the trade pact by importing more crude from the U.S. at the expense of existing suppliers.

Using the same example as above, transferring all 2019 U.S. non-China crude exports to Asia would have increased the value of U.S. shipments to China by about $25 billion—nearly matching the overall 2020 target of $26.8 billion, including the 2017 base. In that case, based on 2019 prices, the U.S. would be exporting an additional 1.1 mmb/d of crude to China.

Math Versus Reality

Although the math works well for increased crude purchases to meet the trade agreement terms, practical difficulties would abound. For one thing, China has maintained a 2.5% tariff on U.S. crude purchases (reduced from 5% on Feb. 14, 2020) that makes U.S. crude uncompetitive. Any increase in Chinese crude purchases from the U.S. would affect existing Asian buyers like South Korea, Japan, and Taiwan—left looking elsewhere for supplies and exerting upward pressure on prices. If mandated by their government to purchase, Chinese buyers would pay premium prices for U.S. crude and tankers shipping from the U.S. Gulf. Whereas in 2018 and 2019 they could buy U.S. crudes priced against WTI Houston at a discount to Asian benchmark Dubai (Exhibit 2), any ramp-up in purchases as a result of the agreement would certainly narrow and probably remove the WTI discount. While in terms of the trade agreement, higher prices allow China to reach the energy spending targets quickly, they would also price Chinese refiners out of the market and produce the unfavorable downstream impact of higher domestic prices.

Exhibit 2 Dubai Premium (Discount) to WTI Houston



Source: CME Group, Morningstar.

Refined Products

In terms of energy, U.S. refined product exports to China are second only in value to crude oil, reaching a peak of $3.1 billion in 2017. By far the largest volume and value for refined products is propane, which represented $1.7 billion, or 55% of the total refined product export value in 2017. However, propane export values dropped to $0.9 billion in 2018 after China imposed a 25% tariff in August. Propane exports then plummeted to less than $66 million in 2019. And while China temporarily exempted some chemicals and oils from tariffs after the trade deal was announced in December 2018, there has been no such exemption on propane except the removal of a threat to add another 5% duty. The continued high tariff on propane effectively prices U.S. exports out of the Chinese market. Unless the propane tariff is removed, it's unlikely refined product exports can increase to the level needed to meet trade deal targets.

Coal

Exports of coal to China in 2017 were worth $404 million according to U.S. census data—a tiny fraction of China's coal import demand that year—valued at $22.7 billion by China's customs authority. Total U.S. coal exports in 2017 were valued at $10.2 billion, meaning China represented just 4% of the U.S. export market. Although there were no tariffs imposed by China on U.S. coal imports, their value fell 68% between 2017 and 2019 to $128 million even as Chinese overall imports increased 3% to $23.4 billion.

While in theory China could ramp up coal imports from the U.S. to help meet the trade agreement target, it would require significant disruption caused by replacing existing suppliers. The high freight cost also means that U.S. coal would likely be more expensive than closer by alternatives such as Australia and Indonesia. China would be penalizing its economy by switching to higher imports of U.S. coal. Nevertheless, the option of ratcheting up China's coal imports from the U.S. does exist and would strike a positive chord with one of the Trump administration's favored constituencies.

LNG

This month (February 2020), worldwide LNG prices lingered at record lows, with Asian spot cargoes fetching less than $3 per million British thermal units. One of the warmest winters on record is crushing demand in the western hemisphere, and the coronavirus has decimated Chinese industrial demand for gas. This environment offers little hope of a big increase in Chinese demand, meaning that, as we have seen with crude, refined products and coal, the only way to increase U.S. exports is for China to switch from existing suppliers. A continued 25% tariff on U.S. imports of LNG is a significant barrier to such a change.

U.S. LNG cargoes exported to China in 2017 had a value of $424 million, according to census data, a number that increased slightly to $464 million in 2018 before falling to $63 million in 2019 after a 10% tariff was imposed in September 2018 and raised to 25% in June 2019. Overall Chinese imports of LNG were valued by China's General Administration of Customs at $14.75 billion in 2017, meaning U.S. imports of $424 million represented just 2% of the value.

These numbers leave plenty of upside for U.S. shippers if China switches to U.S. LNG. However, the structure of the LNG market means that many cargoes, especially those to Asia, are shipped based on long-term supply purchase agreements that preclude switching suppliers and destinations. Also, with current prices below $3/mmBtu, China isn't motivated to increase purchases from the U.S. where terminal and freight costs make shipments to Asia from the U.S. Gulf uneconomic.

Coronavirus

This analysis would be incomplete without reiterating the impact of the coronavirus on China's trade during the first quarter of 2020. That impact has seriously reduced demand for energy with an immediate effect on crude and LNG prices. At the time of writing, the duration of the virus impact is unknown. All of which complicates planning a massive increase in purchases of U.S. energy under the terms of the Phase 1 trade agreement.

Outlook

In the circumstances, we don't expect China to engage in a U.S. energy spending spree during 2020. If the coronavirus is brought under control, there will be a rebound in Chinese imports as business recovers, but the priority is unlikely to be the U.S. trade deal. Our analysis shows there is plenty of scope for China to meet its treaty promises—particularly in the crude oil and LNG markets, where their purchases from the U.S. are a drop in the ocean compared with their overall spending. At the end of the day, the absence of detail and penalties in the agreement suggests implementation is less important to its framers than the deal itself. Longer term, the continued surplus of U.S. energy supplies and China's economic growth make stronger trade vital to both.

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