



THE TRUMP-LED TRADE WAR WITH CHINA

Energy Dominance Self-destructed?

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Executive Summary

Under particular US legal rationale, such as calling foreign imports a “national security threat”, President Donald Trump has started imposing tariffs and/or quotas and has launched national security investigations on a growing number of imported goods from US allies and other alike. In March and June 2018, the US imposed tariffs or quotas on steel and aluminium on all trading partners, but Australia. In July and August 2018, the US began imposing tariffs on \$50 billion in Chinese industrial goods on the ground of unfair trade practices. As China has retaliated with tit-for-tat measures, President Trump has imposed tariffs on \$200 billion in Chinese goods from 24 September 2018, and in an unprecedented escalation of his trade war with China, he has also threatened to impose tariffs on an additional \$267 billion in Chinese goods. If eventually carried out, Trump’s latest threat could result in tariffs on all Chinese goods entering the US. China has retaliated and imposed tariffs on \$60 billion in US goods, including a 10% duty on liquefied natural gas (LNG).

For the time being, trade tensions have had a limited impact on the energy market. But the new round of US tariffs and retaliation measures by China suggest that this is going to change. The potential impact of the trade battles on the energy market is fourfold:

For oil and energy demand as the latest tariffs announced by President Trump could derail the global economy upswing and translate, in the medium term, into lower global crude oil and energy demand growth and thus exert downward pressure on prices.

An immediate impact through China’s retaliatory measures targeting US energy products. Energy was not included in the first round of China’s retaliatory measures. But in the second round (23 August 2018), China has started to impose tariffs on US energy products, although the selected products (e. g. coal) target key Trump supporters and should have limited impact on the global commodity markets. US crude oil, which was included in the initial list of products to be taxed from 23 August, has been removed from the list. However, China may have spared US crude oil for now to hit the fuel if tensions escalate. Chinese buyers of US energy commodities have already started to reconfigure purchases to avoid the tariffs, even for crude oil and LNG that were not subject to tariffs. The anticipation of tariffs on US crude has already

impacted import volumes and trade flows with a sharp reduction in China's imports of US crude since July. China became the largest oil importing country in the world in 2017, but its imports from the US accounted for only a tiny share of its oil imports. For US exporters, China represented a growing share of their supplies, with China even the largest buyer of US crude in June 2018. As the global crude oil market is fungible, even potentially steep tariffs by China on US oil would not interrupt US oil flows that would be reshuffled. But the reduced demand from China would nonetheless exert some downward pressure on US crude prices and widen the Brent-WTI spread. In the short term, the biggest winners would be "OPEC+". But the benefit would be short-lived. In the long run, tariffs and trade wars threaten not only global trade but also economic growth and global oil demand growth.

Chinese retaliatory measures directed on American LNG could slow down the developments of US exports and in turn result in a less liquid global LNG market. In response to the second round of US tariffs on \$200 billion of Chinese goods, the Chinese government has announced that it will impose tariffs on \$60 billion in American products, including a 10% duty on LNG. A tariff on US LNG will put some of the second wave of US LNG export projects at risk and slowdown the expansion of US LNG exports. The rebalancing of the LNG market will create inefficiencies, higher costs and a loss of flexibility in the burgeoning commoditized LNG market. Although China will easily find alternative suppliers, trade barriers on US LNG will deprive the nation from a flexible supplier and make the nation more vulnerable to LNG price spikes, notably in winter.

An indirect impact on the US oil and gas industry due to the imposition of tariffs on imported steel, which constitutes a key raw material in the sector. Prices of US steel products have soared since the imposition of tariffs. The steel tariff and rising domestic steel prices are increasing costs of oil and gas projects. In addition, the US oil and gas industry relies on specialty steel products, especially for the building of oil and gas pipelines, which are not available in sufficient quantities and specifications from domestic manufacturers, or even not produced in the US. Companies are seeking for exemptions from the tariff. But the process is cumbersome and uncertain, which may delay pipeline construction. As US production is rising at an accelerated pace, infrastructure is becoming a bottleneck and may limit the growth in production and exports.

A slow-down in the growth of the deployment of renewable energy sources in the USA and a missed opportunity for US coal to develop its exports to China as domestic demand

has been slightly declining, with less new job creations in this sector and possibly, job losses.

The US-China trade war is escalating with no visible way out yet. Although the energy market can reshuffle flows and rebalance, the biggest threat of the trade tensions on the energy market come from the escalation of the trade wars and its resulting impact on investment and economic growth.

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Introduction: “Fortress America” and “U.S. energy dominance”, a contradiction in Trump’s multiple trade battles?

Both international trade and energy were at the forefront of the successful campaign of Donald Trump and are a mainstay of the presidency of a man who likes to remind his electorate, in the raucous meetings that he cherishes, that he keeps his word.

On the trade front, analysts and commentators were generally happy to underline, at the end of 2017, that there was more bark than bite. Their optimism has proven fleeting, however, as the first half of 2018 has seen a litany of protectionist measures taken by using the whole panoply of U.S. trade instruments.

This could come as a surprise. The last time a similar assault was mounted was in the 1930s when the infamous Smoot-Hawley tariffs were voted by Congress and signed, reluctantly, by President Hoover. This time around, though, the American economy is going through one of its longest-ever periods of growth, which did not seem to justify measures to close the market to foreign products.

Two reasons explain this radical switch in U.S. policies: the personal convictions of the President, who has been on the record for many years, long before he even considered entering politics, as advocating protectionist policies; and the political gains that he registered after adopting this stance and hopes to solidify now. The younger Donald Trump bought pages of ads to criticize Ronald Reagan for his foreign policy positions and used in his speeches the same lines of attack against Japan that he does now against China: “We are being ripped off and decimated by many foreign nations who are supposedly our allies.” Thus President Trump follows a long line of American politicians, going back to the foundation of the Republic: the issue of international trade and the authority responsible for managing it, federal or not, was one of the most hotly debated in Philadelphia as the American Constitution was written to

succeed the Articles of Confederation. The proponents of the so-called American System (advocating high tariffs to protect local manufacturing) held sway during the first decades of the young nation.

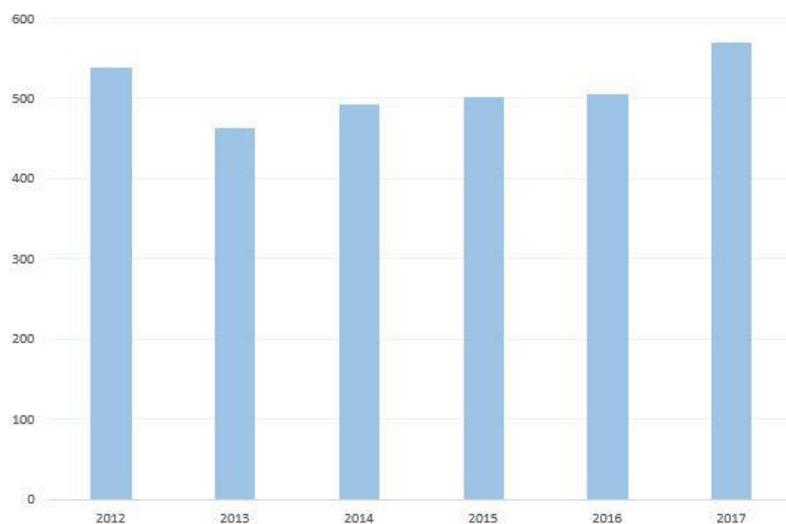
Beyond his core convictions, the President does not miss a chance to repeat that his protectionist stance brought him the Presidency. And he is right about that: in a system where the majority of the popular vote is not the deciding factor, but rather the electoral college, the key to being elected is a small number of swing states, mainly in the Midwest (Michigan, Ohio, Wisconsin), but also Pennsylvania, hard hit by the loss of manufacturing jobs and now by the opioid crisis. Hence the ritual appearance of blue-collar workers in the Oval Office of the White House for every announcement of a trade restriction, and the constant references to trade in the campaign-like meetings that the President enjoys.

The list of the trade actions undertaken is a long one: antidumping and countervailing actions, a traditional tool in the US arsenal, have increased by 216% since the beginning of the Trump administration, compared to the record of the Obama administration over the same period of time; two safeguard measures have hit solar panels and residential washers; the rare use of section 232 of the Trade expansion act of 1962, which the executive can invoke to protect the “national security” of the USA, has allowed tariffs restrictions on steel and aluminum imports; two free trade agreements, United States – Korea Free Trade Agreement (KORUS FTA), with South Korea and the North American Free Trade Agreement (NAFTA) are being renegotiated, and a series of tariff increases against China have been enacted, under the auspices of section 301 of the Trade Act of 1974, which aims to protect the intellectual property of American companies.

Energy dominance is another rallying cry and another facet of America First, the “signature” of the Trump presidency. Building on the mutations of the sector in the eight preceding years, “energy dominance” underlines both the return of the USA to a predominant role in the production of oil and gas, well ahead of Russia and Saudi Arabia, thanks to the development of fracking technologies, and the country’s new potential as an exporter. Gas exports, of LNG in particular, are mentioned as a way for foreign countries to “correct” the bilateral surpluses that most of them have with the USA. LNG precisely is at the heart of the nexus of the between trade and international energy policies. The Trump administration, and the President himself, complains bitterly about the trade deficit of the country, which is for the overwhelming majority of economists the result of macroeconomic policies implemented over the past decades, but that he chooses to read as the result of bad trade

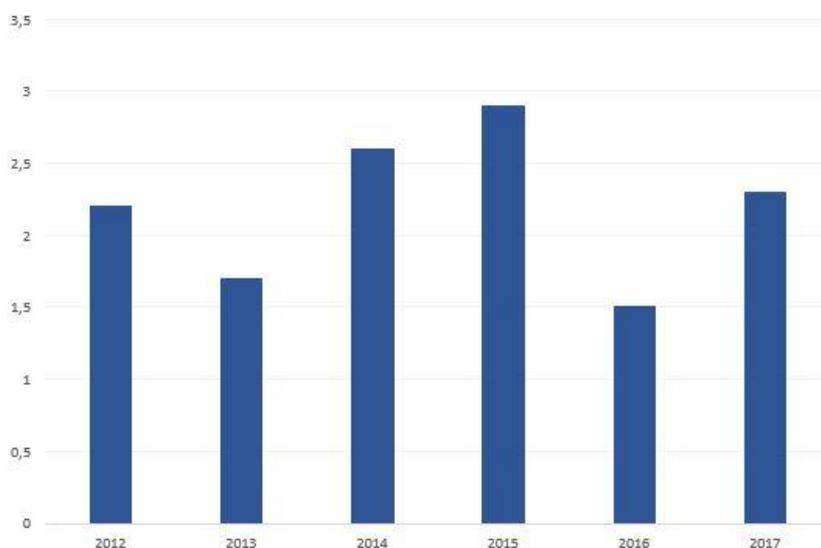
agreements negotiated by his predecessors. One of the ways of correcting these imbalances is to push countries to buy more American products, such as energy products: coal, oil and in particular LNG, and trade partners have been at various times “invited”, in friendly or unfriendly terms, to import more natural gas from the U.S.

Figure 1: Evolution of the US trade deficit in goods and services, 2012-2017 (\$billion)



Source: World Bank, World Development Indicators.

Figure 2: Evolution of US GDP growth, 2012-2017 (in percent)



Source: World Bank, World Development Indicators.

China committed to increase its imports of US LNG in May 2018, in a failed attempt to reach a “truce” in its trade war with Washington. And the statement issued after the meeting on July 25 between Jean-Claude Juncker and President Trump states: “Secondly, we agreed today to strengthen our strategic cooperation with respect to energy. The European Union (EU) wants to import more LNG from the United States to diversify its energy supply.”

The new tariffs or quotas are being imposed on a growing number of imported goods from US allies and others alike:¹

- On 22 January 2018, Trump approves global safeguard tariffs on **\$8.5 billion in imports of solar panels** and \$1.8 billion of washing machines, clearly targeted China.
- On 23 March 2018, Trump imposed tariffs on all trading partners of **25% on steel and 10% on aluminium** under national security grounds. Exemptions for selected countries applied: Canada, Mexico and the EU were briefly granted exemptions from the tariffs but with the NAFTA and EU renegotiation falling through, the countries lost their exemptions starting 1 June. The US granted exemptions from the 25% global tariff on steel imports to Argentina, Brazil and South Korea after the countries agreed to annual import quotas based on shipments in the prior three years. South Korea’s exemption was also tied to a renegotiated trade deal that gives US automakers greater access to the South Korean market. Australia was exempted from the steel tariff and is not subject to an import quota. Australia and Argentina are the only countries exempt from the 10% tariff on aluminium imports, with Argentina subject to an annual import quota. Recent talks between the US and the EU centred around a complete removal of the tariffs, but, despite a joint agreement² between the US and the EU on 25 July that de-escalates the trade tensions between the two trading partners, so far there has been no progress on the matter. Mexico signed a preliminary bilateral trade agreement with the US at the end of August, but its steel exports to the US have remained subject to the tariff so far.
- **Since March 2018, Trump has targeted China** on the ground of unfair trade practices related to technology transfer, intellectual property, and innovation under Section 301 of the Trade Act of 1974.

1. Peterson Institute for International Economics (PIIE), “Trump’s Trade War Timeline: An Up-to-Date Guide”, 23 August 2018, available at: piie.com.

2. European Commission, “Joint U.S.-EU Statement Following President Juncker’s Visit to the White House”, 25 July 2018, available at: europa.eu.

After an escalation of the trade tensions between the two nations, and despite Beijing offer in May 2018 to buy nearly \$70 billion of American products (of which crude, LNG and coal were an important part), the US administration turned down the offer and chose instead to implement tariffs on Chinese industrial goods. In a first round of tariffs, a first tranche of \$34 billion worth of Chinese goods was subject to 25% tariffs from 6 July and a second tranche of \$16 billion from 23 August. Products that will be hit are from industrial sectors that contribute to or benefit from the 'Made in China 2025' industrial policy. As China has retaliated with tit-for-tat measures, Trump has threatened to impose tariffs on another \$200 billion of Chinese goods, at a rate initially set at 10%, and then raised up to 25% in an August proposal. The public comment period on the second, \$200 billion round of tariffs, ended on 6 September, the last step before a decision. On 18 September 2018, Trump announced that the tariff on \$200 billion in Chinese goods will be in effect from 24 September 2018. The tariffs will start at 10%, beginning on 24 September, and then rise to 25% on 1 January 2019. In addition, **on 7 September 2018, Trump said he is ready to impose tariffs on \$267 billion in Chinese goods, on top of the additional \$200 billion.**³ If eventually carried out, Trump's latest threat could result in tariffs on all Chinese goods entering the US, **an unprecedented escalation of his trade war with China.** The US imported \$505 billion in goods from China in 2017, while China imported \$130 billion in goods from the US in 2017.

- Since May 2018, the US Commerce Department has initiated a **national security investigation into imported autos and parts** that could lead to a 25% tariff on imported cars.
- On 18 July, the Department of Commerce announced that it would begin investigating the effects of **uranium imports** on the national security interests of the United States.

Trading partners have responded to the US tariffs and imposed retaliatory tariffs on the same amount of US goods, targeting diverse US products, such as US iconic goods (Harley-Davidson motorcycles), but also politically-motivated products (soybeans), which target areas that voted heavily for Trump, and iron and steel products.⁴ China retaliated immediately to the first round of tariffs by imposing a 25%

3. V. Salama, "Trump Says He's Preparing Tariffs on Further \$267 Billion in Chinese Imports", *The Wall Street Journal*, 8 September 2018, available at: www.wsj.com.

4. For a full list of retaliatory measures, see PIIE, "Trump's Trade War Timeline: An Up-to-Date Guide", *op. cit.*

duty on imports from America of a similar value: \$34 billion of US imports from 6 July and an additional \$16 billion from 23 August. China also retaliated immediately to the second round of tariffs by imposing tariffs on \$60 billion in US goods from 24 September, as previously planned, but has reduced the volume of tariffs that it will collect on the products. The tariff rates will be levied at 5 and 10%, instead of the previously proposed rates of 5, 10, 20 and 25%.

Energy products were spared from the first list of US goods subject to tariffs (6 July), but the second list (23 August) and the second round of tariffs (24 September) include energy products, such as LNG, liquefied petroleum gas (LPG), naphtha, coal, as well as petrochemicals. Initially, US crude oil was targeted by Chinese tariffs but was removed from the list of products to be levied when the final list was announced at the beginning of August. However, there is no indication that crude is completely spared from future retaliatory measures. China's targeting of US LNG opens a new front in the trade war between the two countries, at a time when the White House is trumpeting growing US energy export prowess. It is worth to note that the tariff on US LNG is 10%, instead of the previously announced 25%.

What are the impacts of the current trade tensions on energy markets, and notably on the US energy markets in particular? Are the two goals of protecting individual sectors of the American economy from foreign competition and promoting energy dominance compatible?

Global impact of the trade war on energy markets

Strong pace of global economic growth under threat

The prospect of further escalation in the trade tensions risk significantly hampering trade and investment, and possibly the global economy. The International Monetary Fund (IMF) has projected the global economy to grow at a solid pace of 3.9% annually in 2018 and 2019, and 3.8% in 2020.⁵ **The risk that current trade tensions escalate further – with adverse effects on confidence, asset prices, and investment – is the greatest near-term threat to global growth.** The developing US-China trade war and a potential US tariff on imported cars are far more significant for global economic growth than the steel tariffs. Moody's forecasts that higher American tariffs on \$50 billion worth of Chinese imports could reduce US gross domestic product (GDP) in 2019 by 0.25%, offsetting some of the gains from last year's tax cuts.⁶ But the economy would take a bigger hit if the US proceeds with President Trump's threat to impose tariffs on all Chinese goods, as well as steep duties on cars and auto parts. The IMF estimates that a global trade war could end up hitting global GDP by 0.5% by 2020, or about \$430bn in lost GDP worldwide. The US would actually be the biggest loser.

Lower economic growth would in turn reduce the pace of increase of crude oil and energy demand. Already, oil demand growth is expected to lower due to higher oil prices. The August edition of the Short-term energy outlook (STEO) by the US Energy Information Administration (EIA) forecasts global demand growth for petroleum and other liquids to average 1.66 million barrels per day (mb/d) in 2018 and 1.57 mb/d in 2019, down from the July STEO forecast of 1.72 mb/d and 1.71 mb/d for 2018 and 2019, respectively.⁷ A particular consequence could be a further slowdown in oil demand growth in

5. International Monetary Fund (IMF), *World Economic Outlook Update*, July 2018, available at: www.imf.org.

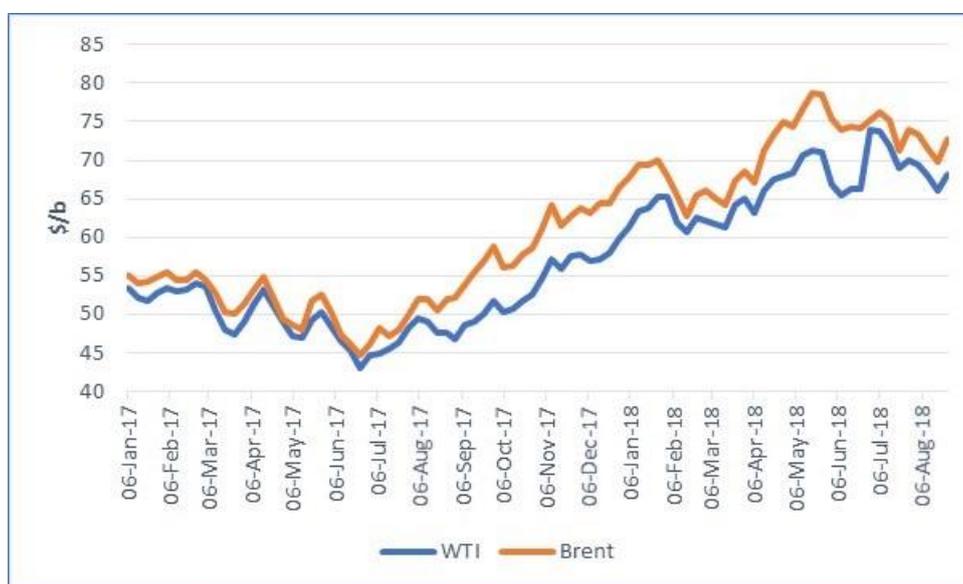
6. R. Layne, "Trade War with China Will Hurt U.S. in 2019: Moody's", *CBS News*, 23 August 2018, available at: www.cbsnews.com.

7. EIA, *Short-Term Energy Outlook (STEO)*, August 2018, available at: www.eia.gov.

China, which became the world's largest oil importing country in 2017 (importing 8.4 mb/d), outpacing the US.⁸

Oil prices have briefly responded to announced tariffs and threat of a global economic slowdown. But the renewed US sanctions imposed on Iranian oil exports from November 2018, have largely dominated the oil market and supported oil prices. This would change in the medium term if an escalation of trade tensions leads to lower oil demand growth.

**Figure 3: Brent and WTI crude oil prices
(January 2017-August 2018)**



Source: EIA.

US tariff on steel: a tax on the US oil industry

The emphasis on the new motto, “energy dominance” rather than the traditional “energy independence,” the Holy Grail of every administration, on the other hand, means that oil and gas are the center of President Trump’s attention. When he announced his intention to impose tariffs on steel and aluminium imports, the US industry’s optimism following higher

8. EIA, “China Surpassed the United States as the World’s Largest Crude Oil Importer in 2017”, *Today in Energy*, 5 February 2018, available at: www.eia.gov.

prices, output and exports was muted and **a lot of concern was expressed about the expected decisions** as part of the 232 section.⁹

Interestingly enough, the Department of Defense, which has to be consulted, noted that it only uses 3% of the steel manufactured in the country and that its suppliers never have encountered any difficulty in finding the raw material needed for their products. But the goal was never to ensure that the steel needed by the Pentagon was readily available: it was to satisfy the executives of the steel companies,¹⁰ who had invested in the campaign, and the steelworkers who had defected from the Democratic Party to the Trump campaign.

The only uncertainty was the level of the remedy, quotas or tariffs, chosen. Tariffs have been a favourite theme of the campaign, and figure prominently in the Presidential tweets: so tariffs it was, at a 25% level. After a few weeks of uncertainty about the possible exclusion of particular countries, it appeared that all suppliers would be affected, even if a handful of countries agreed to quotas (Brazil, Argentina and South Korea in particular). Another characteristic of the decision was that there was no distinction among the innumerable different varieties of steel.

Oil and gas executives expressed their opposition but were obviously not heard. The President of the American Petroleum Institute, Jack Gerard, stated after the Presidential declaration: “The actions taken today are inconsistent with the administration’s goal of continuing the energy renaissance and building world-class infrastructure. The US oil and gas industry in particular relies on specialty steel for many of its projects that most US steelmakers don’t supply.” The problem is indeed twofold: price of a material that is crucial at every stage of upstream and downstream activity, from drilling to refineries and petrochemical plants, going through onshore and offshore production facilities, pipelines and

9. Section 232 of the Trade Expansion Act of 1962 is a rarely used tool in the arsenal of the American executive branch, which allows the imposition of trade restrictions to protect the “national security” of the country. It offers two advantages for the administration: “national security” measures are less likely to be challenged in courts, because of the deference of the judges to the executive prerogatives in the domain of foreign relations; they are also less likely to be challenged in the WTO, as opposed to safeguarding measures (sections 201 in American trade parlance). The U.S. can argue that Article XXI of the GATT –exceptions for national security–, justifies section 232 at the WTO although Article XXI refers more to international crises or conflicts than to restrictions on the imports of specific products. Sections 232 proceedings are instructed by the Department of Commerce, the high priest of protectionism in the American administration, and the verdict was not in any doubt after the launch of the inquiry on April 20, 2017.

10. One of them was an advisor to the Trump campaign.

LNG terminals, but also availability of the special steel used for some projects.¹¹

The pipeline industry, which requires specialty steel products, may face disruption and higher costs. About 77% of the steel used to build pipelines in the US was imported in recent years.¹² The US domestic steel makers have not the capacity to produce the required steel products in sufficient quantities and specifications as required for the building of pipelines.¹³ Companies have the possibility of asking the Department of Commerce for exemptions, but the process is very slow and bureaucratic, and permits are often denied for dubious reasons (American manufacturers are part of the process and have essentially a right of veto on exemptions requests).¹⁴

In the wake of the imposition of tariffs, US steel price surged by an average of 40%, prompting the Secretary of Commerce to announce his intention to inquire into the “profiteering” of the actors. At the time of the steel decision announcement, ICF Consulting estimated that it would raise the cost of building a pipeline by 3 to 5%.

The increase in steel prices and restrictions on steel supplies come at a time when the US industry needs to adapt its pipeline capacity rapidly to meet the new record levels of oil and gas production. US oil and gas production is rising at an accelerated rate. The US has become the largest crude oil producer (11 mb/d) surpassing both Saudi Arabia and Russia. It crude oil exports have now exceeded the 2 mb/d mark. Thanks to higher oil prices, the industry absorbs higher costs with almost every component rising in 2018, from sand to labour and oilfield services costs. **The steel tariff adds to the burden. But steel supply restrictions could delay natural gas and oil transportation** and in turn reduce the growth in natural gas and oil production.

Box 1: Transportation constraints in the Permian Basin

Oil production growth in the prolific Permian Basin shale play is already straining existing pipeline capacity. Transportation constraints are driving down local prices for oil and natural gas, causing

11. S. Whitfield, “The Trump Steel Tariff: How Will It Affect Industry Operations?”, *Society of Petroleum Engineers*, 2 May 2018, available at: www.spe.org.

12. ICF, “Feasibility and Impacts of Domestic Content Requirements for U.S. Oil and Gas Pipelines”, *API*, 16 May 2017, available at: www.api.org.

13. “Oil Industry Fears Toll of Trump Steel, Aluminium Tariffs”, *The Hill*, 31 May 2018, available at: thehill.com.

14. S. Whitfield, “US Steel Tariff Exclusion Process Leaves Trail of Confusion”, *Society of Petroleum Engineers*, 29 August 2018, available at: www.spe.org.

drilling activity to flatten and the inventory of uncompleted wells to rise in the basin.¹⁵ WTI Midland crude price declined to an average of \$52/b in August and the spread between Midland and Brent widened to \$20.74. While some companies may be hedged against low wellhead prices, drilling activity—and energy employment growth—slowed over the summer.¹⁶

The transportation bottlenecks are temporary and will eventually be resolved. New pipelines are under construction, but they will not enter service before mid- to end 2019, when the industry expects to add enough new pipeline capacity to move another 1.5 mb/d to 2 mb/d. But some pipelines may be delayed. In July, pipeline operator Plains All American Pipeline's request for an exemption to the steel trade tariff was denied.¹⁷ Plains is building the Cactus II line from the Permian to Corpus Christi, expected to be completed in fall 2019.

Pending new transportation capacity, oil production and exports from the Permian are expected to grow at a much slower pace than in the past 12 months when production rose by 1 mb/d to 3.3 mb/d in August 2018. ConocoPhillips is one of a growing number of oil producers that are reevaluating their drilling plans in the Permian Basin because of the region's pipeline shortage.¹⁸ The company, which lacks enough transportation capacity, is looking at reallocating its resources to other regions like the Bakken or Eagle Ford until new pipelines enter service in the Permian.

Pipelines are a perfect example of the contradiction between the trade policy of America First and the goal of Energy Dominance, but the same is true of LNG facilities: the Center for Liquefied Natural Gas, a Washington lobby, notes that cost increases that will result from the steel and aluminium tariffs “may erode the current competitive advantage held by the U.S. in the global LNG market, as well as the willingness of buyers to sign the contracts that underpin financing of multi-billion dollar LNG facilities”.¹⁹

About 30% of total US steel demand was satisfied by imports in 2017. In 2017, the US produced 82 Mt of crude steel and imported 35 Mt of steel products, making the US the world's biggest steel

15. Federal Reserve Bank of Dallas, Energy Indicators, September 2018, available at: www.dallasfed.org.

16. Federal Reserve Bank of Dallas, September 2018, *op. cit.*

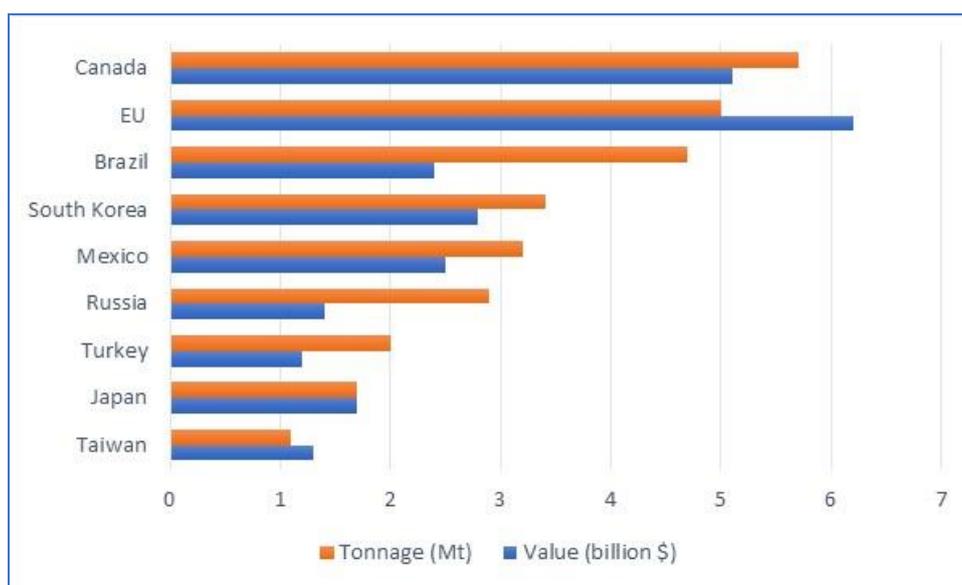
17. Reuters, “U.S. Hits \$1.1 Billion Texas Oil Pipeline with Steel Tariff”, 17 July 2018, available at: www.reuters.com.

18. M. DiLallo, “ConocoPhillips Is the Latest Oil Company Feeling the Permian Basin's Pipeline Pinch”, 3 July 2018, *The Motley Fool*, available at: www.fool.com.

19. Kallanish Energy, “Trump's Tariffs Policy Likely to Backfire”, available at: www.kallanishenergy.com.

importing nation.²⁰ The 9 countries highlighted in graph 5 represent the top sources for US imports of steel, with the US receiving more than 1 Mt from each and together accounting for 75% of US steel imports in 2017.²¹ The EU, South Korea and Japan deliver high-grade, high-value steel products, while some trading partners (e.g. Russia, Turkey) mostly deliver low value commodity grade steels.

Figure 4: US steel imports – Main partners in 2017



Note: China exported limited amount of steel products to the US (0.74 Mt in 2017), due to antidumping measures already in place before the implementation of the tariff on steel.

Source: data from US Census Bureau.

The trade tariffs on steel apply to items such as plated steel, slabs, coil, rolls of aluminium and tubes – raw materials that are **used extensively across US manufacturing, construction and the oil industry.**

The trade tariff has supported US crude steel makers. US steel makers recorded \$5 billion in earnings before interest, taxes, depreciation and amortization (Ebitda) in the first six months of 2018, a near-30% increase over the \$4 billion earned in the same period a year earlier.²² In the second quarter of 2018, Nucor, the top US steel maker,

20. US Department of Commerce, Global Steel Trade Monitor, Steel Imports Report: United States, June 2018, available at: www.trade.gov.

21. US Census Bureau, “U.S. Imports for Consumption Of Steel Products From Selected Countries And Areas”, January 2018, available at: www.census.gov.

22. “Steel Profits Soar, Showing Power Of Tariffs”, *Argus Media*, 20 August 2018, available at: www.argusmedia.com.

recorded the best second quarter in its history and saw its profits more than double year-on-year. US Steel has restarted blast furnaces at its Granite City steelworks in southern Illinois. Mills have boosted output and prices to supplant imports displaced by the tariff. **Prices of US steel products have soared. US domestic prices for hot-rolled band increased to \$995/t in July 2018, up 46% from December 2017.**²³

While the tariffs have significantly benefited US steel producers, **US downstream users of steel and manufacturers have been heavily affected by rising costs** without common measures with the increased earnings of steel makers.²⁴

The impact of the steel tariff on the oil and gas industry depends on the success of oil and gas companies to get exemptions from the tariff. Individual companies can seek exemptions, but the application process can be lengthy, requiring separate requests for materials that may differ in make-up, rather than a single request for varied types. Thousand companies have asked for an exemption from the tariffs. As of August 27, the **US Department of Commerce had received 30,035 exemption requests** for steel and aluminium imports combined (all sectors).²⁵ The Department has approved 2,101 requests and denied 1,458 as of August 27. On 12 July, **the Department granted the oil and gas sector its first exclusions from the 25% tariff on steel imports**, after agreeing with Royal Dutch Shell and Chevron that the specialty steel the companies were importing is not manufactured in the US.²⁶ The exclusions relate to 243 tons of steel casing and production tubing Shell used when drilling wells in the Gulf of Mexico, and 50 tons of corrosion resistant stainless steel tubing used by Chevron. **The exclusions mark a victory for the oil and gas industry but also show how cumbersome the process can be.** At the end of August, President Donald Trump signed a proclamation that allows the Department of Commerce to provide targeted relief from quotas on steel and aluminium imports.²⁷ Currently, South Korea, Argentina and Brazil are the three countries subject to a quota for exports of steel to the US. The new policy could provide some relief for oil and gas companies since South

23. US Department of Commerce, "International Trade Administration, Steel Industry Executive Summary: August 2018", available at: enforcement.trade.gov.

24. Automaker General Motors cited steel prices as the primary driver behind \$600-700 million of raw materials cost headwinds it expects to incur on the year. Ford expects a similar impact. "Steel Profits Soar, Showing Power of Tariffs", *op. cit.*

25. "Senator Warren Calls For Investigation Into Exemption Process for US Metals Tariffs", *Platts*, 30 August 2018, available at: www.spglobal.com.

26. "Shell, Chevron Get First Waivers to US Steel Tariffs", *Argus Media*, 12 July 2018, available at: www.argusmedia.com.

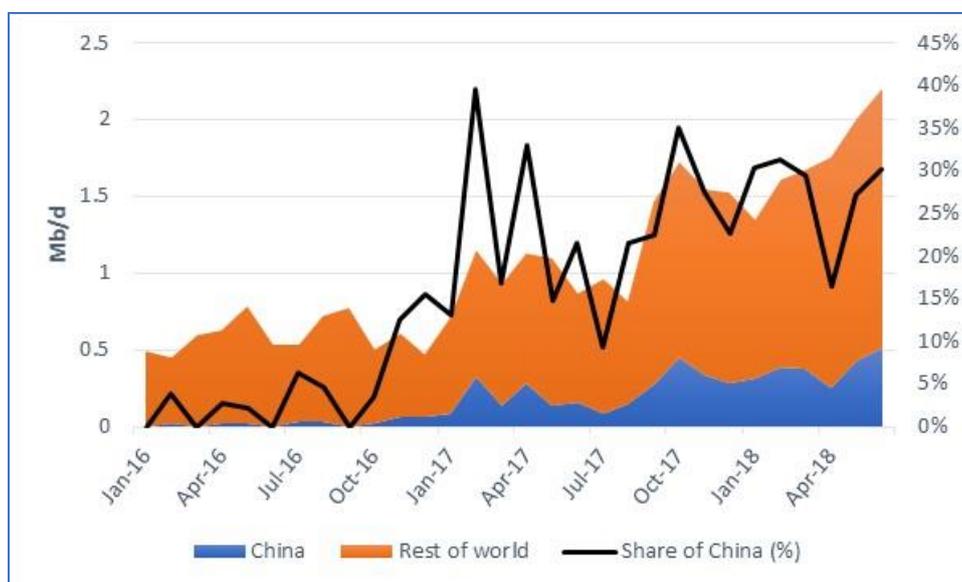
27. "Senator Warren Calls for Investigation into Exemption Process for US Metals Tariffs", *op. cit.*

Korea is a very big player in the pipeline steel market (Argentina and Brazil are most modest exporters for this type of steel products). However, it is still too early to gauge the overall impact of the administration's trade policies on the pipeline industry.

Oil: a future weapon in Chinese hands?

As China's domestic energy consumption has grown, the country has become a significant destination for US energy exports. Namely, China has been among the largest importers of US crude oil. US crude oil exports have risen strongly since mid-2017, absorbing a significant portion of the incremental light US crude production. They jumped to 2.2 mb/d in June 2018 from less than 1 mb/d in the first half of 2017. **China has taken a large share of the incremental volumes and emerged as the second largest buyer of US crude oil in 2017, behind Canada, taking up 19% of US crude oil exports, and even the largest one in June 2017.**

Figure 5: US crude oil exports to China and the rest of the world (January 2016-June 2018)



Source: EIA.

The US exported 0.22 mb/d to China in 2017, a ten-fold increase from 2016. **Despite the dramatic increase, the US accounted for less than 3% of Chinese crude oil imports.** In 2017, 56% of China's crude oil imports came from OPEC, a decline from a peak of 67% in 2012 but still making it a significant market for OPEC. Russia surpassed Saudi

Arabia as China's largest source of foreign crude oil in 2016, exporting 1.2 mb/d to China in 2017 compared with Saudi Arabia's 1.0 mb/d.

The removal of crude oil from the list of US products subject to tariff may reflect China's inherent energy security concerns. But other short-and longer-term issues and negotiating tactics may explain the move.

Commercial issues could be an explanation, at least in the short term. China's original plan to target US crude came at an inopportune time for the country's buyers. Unipeç, the trading arm of China's state-owned Sinopec, the world's largest refiner, had purchased nearly 16 mb of light sweet US crudes in June in support of Beijing's previous effort to narrow its trade deficit with the US. These cargoes were expected to be delivered to China over July-August. Moreover, Sinopec had cut back its nominations for Saudi crude by 40% of the total monthly allocations for May-July loading in response to the higher-than-expected official selling prices set by Saudi Aramco.²⁸ Thus, a tariff on crude oil from 23 August would not have come at the ideal time. A Chinese tariff on US crude oil would directly hurt the Chinese economy. The light sweet characteristics of American oil compared to the medium sour of other suppliers and the discount at which it is being sold (see Graph 1), makes it an attractive product. The surge in US oil production, to 11 mb/d since June 2018, has weakened the cost of US supply relative to Middle East benchmark Dubai and Atlantic Basin marker Brent, raising US shipments to Asia. Other Asian customers could fill the gap created by Chinese customers meaning that the tariffs would affect Beijing more than the US. With several new refineries starting up over the next couple of years, China would thus be wary of taking a decision that could end up severely hurting its domestic refining industry.

Another explanation could be that China is preparing to defend its plan to continue importing Iranian crude after renewed US sanctions come back on 4 November. China has indicated that it would be unwilling to comply with Washington's demands of stopping oil purchases from Iran.²⁹ By not imposing tariffs on US oil, China indicates that the country needs all sources of supplies, including US, but also Iranian oil.

Security of supply concerns may have played a large role. The US has been and will remain the main source of incremental crude

28. "China's Unipeç Buys Record Monthly Volume of US Crude For June Lifting", *Platts*, 24 May 2018, available at: www.platts.com.es.

29. "U.S., China Trade War Puts A Lid On Oil", *Oil Price.com*, 19 August 2018, available at: oilprice.com.

production globally. With oil from Iran and Venezuela at risk, US crude is offering Chinese refiners an abundant alternative and enables diversification of oil supplies.

Finally, China may have spared US crude oil for now to hit the fuel if tensions escalate. But this would likely be a last resort measure in the trade war between the two countries.

Before the trade war escalation, **US crude exports to China had risen to 15.3 mb in June.** That made China the biggest buyer of US crude oil. But the threat of a tariff on US crude has already reduced shipments dramatically. China received 9.6 mb of US crude in July, and August arrivals in China are expected at 7.94 mb, according to Platts.³⁰ The amount of US crude arriving in September is expected to fall to 6 mb. Chinese refiners may still be wary of boosting American oil purchases because it may yet be targeted with tariffs in subsequent rounds of the trade spat.

The global crude oil market is fungible and even potentially steep tariffs by China on US oil exports would not disrupt US oil flows that would be reshuffled. US crude could find other buyers, but the reduced demand from China would nonetheless exert some downward pressure on US crude prices and widen the WTI-Brent spread. If global crude oil demand growth weakens, US crude would find it hard to find an alternative market and would suffer a larger price penalty. Of course, geopolitical events could challenge the expected downward pressure on oil prices.

China would likely replace the lost US barrels from its top sellers, Russia or Saudi Arabia, which have recently risen their oil output. Russia has also expanded its oil export capacity to China. In January 2018, China and Russia began operating an expansion of the East Siberia-Pacific Ocean (ESPO) pipeline, doubling its delivery capacity to approximately 0.6 mb/d. China's oil imports from West Africa and the North Sea would also increase. The reshuffling would also have a cost for Chinese oil buyers.

As for the fuels such as butane, diesel and naphtha, on the list of US products subject to Chinese tariffs, China imports negligible quantities of those commodities from the US, and the duties are unlikely to cause any major disruption to global trade flows. The tariff will push China to buy elsewhere (including at higher prices if non-US supplies are tight) and the US to find alternative customers and reduces its prices, if needed.

30. "Diversifying Crude Supply Trumps Geopolitical Pressures for China's Sinopec", *Platts*, 29 August 2018, available at: www.spglobal.com.

Propane is more affected at least in the short term. The US is the largest propane exporter in the world and is the primary propane growth engine in the world. China was the third-largest importer of US propane in 2017, behind Japan and Mexico, importing 14% of US propane exports. Since March, Chinese buyers have reduced their imports of US propane and have been diverting some contracted volumes to other buyers in Northeast Asia. The reduction intensified in July and August. With the tariff on propane now in effect, a reshuffle of trade flows is expected. It is likely to result in Japan and South Korea taking more LPG from the US (Japan has already further increased its US LPG imports)³¹ while China will take more from the Middle East. US propane production will continue to grow since LPG is produced as a by-product of refining and natural gas processing. It remains that the trade rebalancing will have a cost, both for Chinese buyers and US sellers.

The US petrochemicals industry will also suffer from the tariffs. US petrochemicals industry has experienced a renaissance thanks to its abundant supply of low-cost, domestically-produced shale gas feedstocks.³² The US is adding 9.2 Mt/y of the polyethylene capacity starting up from 2017 through 2020 and beyond. Most of the new capacity aimed at exports as the US market is already well supplied. China represents the largest growth market for these products. But two grades of US-origin polyethylene, which make up 80% of the production of the new plants, are now subject to Chinese tariffs. Again, trade may be reshuffled, but the US will find it difficult to find other markets able to absorb volumes targeted for China, where demand growth is expected to surpass other regions. The Chinese tariff on polyethylene may not enable the plants to be used at full capacity and may even postponed planned projects. The American Chemistry Council (ACC) has assessed the damage caused by Chinese retaliatory measures to US tariffs and concludes that China's retaliatory tariffs on \$11 billion in US chemicals and plastics exports put nearly 55,000 American jobs and \$18 billion in domestic activity at risk.³³

31. "Japan Steps up US LPG Purchases in Fallout From Sino-US Trade Conflict", *Economic Times*, 16 August 2018, available at: energy.economictimes.indiatimes.com.

32. S. Cornot-Gandolphe, "The Impact of the Development of Shale Gas in the United States on Europe's Petrochemical Industries", Ifri, *Notes de l'Ifri*, November 2013, available at: www.ifri.org.

33. "An Assessment of the Impact of Retaliatory Tariffs on US Chemical Exports To China: Jobs Lost and Economic Harms", American Chemistry Council (ACC), 6 September 2018, available at: www.americanchemistry.com.

LNG: clouds on the second wave of US LNG projects?

China retaliated to the US tariffs on \$200 billion in Chinese goods by imposing tariffs on \$60 billion in US goods, including a 10% tariff on LNG. The LNG trade dynamic suggests that the tariff on US LNG will hurt both nations, but the US more than China.

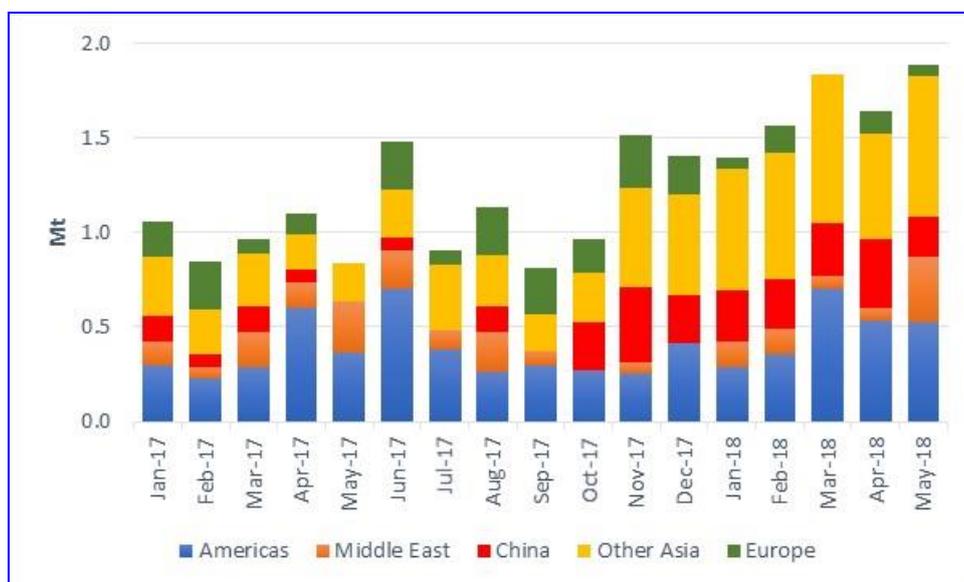
China became the second largest LNG importer, surpassing South Korea in 2017. Its LNG imports were up 46% to 39 Mt and China was the largest contributor to global LNG demand growth, helping to erase the expected LNG supply glut. The Chinese government has made natural gas a key policy choice to reduce air pollution and restructure its high-carbon energy mix. China's natural gas demand is booming: it increased by 15% in 2017 and again by 17.5% in the first half of 2018. On its side, **the US is becoming the third-largest LNG exporting country by capacity** and will be the key source of incremental supply growth from 2018 to 2020. Four new LNG projects are going to start by 2020, in addition to the two existing ones, bringing US export capacity to close to 70 Mt/y.

Currently, the US is not a major supplier of LNG to China. However, the US-China bilateral LNG trade is significant for both countries. U.S. LNG exports to China grew by a factor of seven in 2017, from 0.2 Mt in 2016 to 1.4 Mt,³⁴ about 11% of American LNG exports, behind Mexico and South Korea, and almost 17% in the first seven months of 2018. In November 2017, the two countries signed preliminary agreements for US LNG exports from Sabine Pass on the Gulf Coast of Louisiana, the Delfin export project (fully approved, but in construction) and a proposed Alaska project. In February 2018, the China National Petroleum Corporation (CNPC) and Cheniere Energy signed two binding long-term contracts for 1.2 Mt/y of LNG from Sabine Pass and a new facility under construction near Corpus Christi in Texas. Part of the supply begins in 2018 from Sabine Pass (but can be diverted to other markets) and the balance starts in 2023 from Corpus Christi Train 3. The agreement was instrumental in helping Cheniere reach a final investment decision (FID) on the Corpus Christi Train 3.

34. International Group of Liquefied Natural Gas Importers (GIIGNL), *Annual Report 2018 Edition*, available at: www.giignl.org.

US LNG represented less than 4% of total Chinese LNG imports and moved up to around 7% in the first seven months of 2018. Most of these purchases were spot or portfolio sales as China only signed its first-ever LNG contracts with the US in February 2018. CNPC signed two contracts with US Cheniere to purchase 1.2 Mt/y of LNG. **Despite the small volumes, US LNG played a key role in short-term balancing of the Chinese market and supply security.** Most US spot cargoes were sold in the winter period, facilitating the rebalancing of the Chinese market. In winter 2017-18, several provinces in China suffered serious gas shortages due to higher-than-expected gas demand and pipeline supplies issues, on top of a structural lack of gas storage capacity.

**Figure 6: US LNG exports by destination
(January 2017-May 2018)**



Note: The “natural home” for US exports on a transport cost basis is Latin America which offers the highest returns. But in periods of strong Asian demand, higher spot prices have been attracting US cargoes to Asia (e.g. winter 17-18). Any US export volumes surplus to Asian and Latin American requirements typically flow to Europe (e.g. over summer 2017). A surge in Asian spot LNG prices across spring and summer 2018 is providing a price signal for US exports to flow to Asia.

Source: data from EIA, CEDIGAZ.

A trade tariff on US LNG will have a different impact on existing/under construction and proposed US LNG export projects. Most of the US existing and under construction capacity has been backed by long-term agreements with non-Chinese firms. However, the spare capacity of the plants and most US LNG bought by portfolio aggregators is sold on the spot market. Any effect from the tariff will

depend on global LNG demand. If global LNG demand remains high (it increased by 10% in 2017 and at the same speed in the first half of 2018), the impact will be lessened. Trade flows can be redrawn with US LNG going to other north Asian markets and more Australian and other Pacific LNG supplies going to China. If global LNG demand growth weakens and if Russia maintains a “volume” strategy on the EU gas markets, the US will find it harder to maintain full export capacity utilization without Chinese customers. US LNG exporters and portfolio players which have bought US LNG will be incentivised to send more LNG to other markets, including Europe (see Box 2).

The trade conflict could have a significant impact on the new wave of US LNG. Chinese gas demand forecasts are underpinning several proposed LNG export terminals, such as Delfin LNG, the Alaskan LNG project, and Texas LNG. These projects rely on Chinese customers to sign long-term agreements enabling their promoters to take FID. Tariffs will make US LNG imports uncompetitive and this will prompt Chinese buyers to seek supplies from elsewhere. Thus, US LNG developers risk losing a solid market. It is important to note, however, that China is not the only rapidly growing LNG market. Over the past decade, an increasing number of emerging markets has joined the LNG import club.³⁵ From 7 countries in 2010, they were 17 in 2017. Their LNG demand has surged since 2010, from 9 Mt in 2010 to 41 Mt in 2017. In addition to South and Southeast Asia, LNG demand is rising across South Europe, the Middle East, and the Americas, the later three markets are geographically closer to the US and thus offer more favourable returns for US exporters. However, emerging LNG buyers have appeared less incline (or less creditworthiness) to sign long-term contracts that provide the necessary financial backing of the proposed US LNG projects. **A Chinese tariff may therefore delay or even stall some US LNG projects and slowdown the expansion of US LNG exports, and in turn, could cascade into lower growth of US gas production.** The global LNG market may lose some flexibility as US LNG projects offer flexible offtake contracts and price indexation on US gas hubs.

China will not lack alternative sources. Even without a tariff, US LNG exports to China face competition from suppliers that are closer and therefore able to offer cheaper freight, such as Australia and Qatar. US LNG has generally a higher cost in China than other LNG supplies due to the higher freight. This explains the concentration of Chinese imports of US LNG in winter, when the global LNG market tightens and LNG spot

35. S. Cornot-Gandolphe, “New and Emerging LNG Markets: The Demand Shock”, Ifri, *Études de l’Ifri*, June 2018, available at: www.ifri.org.

prices surge. **A cut in US LNG exports to China would open the door further to cooperation with Russia.** Novatek has announced a second LNG Arctic LNG project, after the successful launch of its Yamal LNG project in December 2017. Exports by pipeline from Russia could also be boosted. Gas deliveries from Eastern Russia via the Power of Siberia pipeline are scheduled to start by the end of 2019 and talks between China and Russia on new routes for gas deliveries resumed at the beginning of 2018. **Other LNG exporters will benefit**, such as Qatar, Papua New Guinea and Australia, which have some flexible volumes available in the short term and are better placed than the US geographically to supply China. Qatar announced in 2017 a 30% expansion in its LNG capacity and, in September 2018, PetroChina signed **a 22-year agreement to buy 3.4 Mt/y of LNG from Qatar**.³⁶ In July 2018, PetroChina signed a three-year **deal with Papua's PNG LNG** to import 1.35 Mt. The agreement could pave the way for Exxon and its partners to sign up for a larger, longer-term contract that would help underpin the proposed expansion of the LNG export terminal. The opportunity of grabbing a larger share of China's growing LNG market may prompt Australian producers to expand capacity at their existing plants. China therefore is unlikely to have a hard time finding alternative suppliers, but **trade barriers on US LNG will deprive the country from a flexible supplier, both in terms of volumes and pricing, and make China more vulnerable to LNG price spikes, notably in winter.**

Box 2: Europe to give a hand to US LNG producers?

In their joint statement of 25 July, European Commission (EC) President Juncker and President Trump agreed to “launch a new phase in the relationship between the US and the EU” and work together to eliminate tariffs on all non-auto industrial goods, **increase cooperation on energy purchases** and reform the World Trade Organization.³⁷ Juncker suggested that the EU will import more US LNG. “The EU is ready to facilitate more imports of LNG from the US and this is already the case as we speak. The growing exports of US LNG, if priced competitively, could play an increasing and strategic role in EU gas supply” Juncker said.

The EU is a growing LNG market. In 2017, the EU imported 39 Mt of LNG, up 17% from 2016, but only slightly above 3% was received from the

36. “PetroChina Inks Its Biggest Qatar LNG Deal as U.S. Trade at Risk”, *Bloomberg*, 10 September 2018, available at: www.bloomberg.com.

37. European Commission, “Joint U.S.-EU Statement Following President Juncker’s Visit to the White House”, 25 July 2018, available at: europa.eu and European Commission, “EU-U.S. Joint Statement of 25 July: European Union Imports of U.S. Liquefied Natural Gas (LNG) Are on the Rise”, 9 August 2018, available at: europa.eu.

US. But even with little US cargoes imported into Europe, US LNG plays a key role in the competitiveness, security and diversification of EU gas supplies. The EU accounted for about 10% of total US LNG exports last year. EU LNG imports are just a fraction of its gas demand.

While Trump has a vision of Europe becoming a “massive buyer” of US LNG, the fuel will still have to compete with other gas suppliers, including gas arriving from Russia, which reached record high level last year. There is very large spare LNG import capacity in the EU and capacity of European hubs to absorb LNG surpluses is indeed determined by the capacity of LNG to replace the flexible volumes of long-term contracts, notably Russian gas.

So far, the economics work against large-scale US LNG volumes sent to Europe, both for EU buyers, which have lower cost alternatives, and for US exporters, which have higher returns when sending LNG to other markets.

How much US LNG will enter in the EU market in the future is determined by the complex interaction of European gas, coal and CO₂ prices, Asian LNG prices and US gas hub prices, as well as Asian LNG demand. An escalation of the trade war between the US and China will likely result in more US LNG cargoes entering the European market.

Local impacts on the US

US renewables deployment expected to slow down in the short term

The development of renewables is clearly not an objective of the Trump administration, even if the Department of Energy continues to use the motto of the previous team: “All of the above.” The need to court the vote of the miners, not to mention the coal mine owners, major donors to the Trump campaign, has led to numerous initiatives to push aside renewables, blamed for their unreliability, in favor of “beautiful clean coal”, to quote one of the of- repeated rallying cries of the President. The request for a safeguard on imports of solar panels offered a perfect opportunity to slow down the development of the solar industry in the country.

The protectionist tone of the campaign created expectations and whetted the appetite of companies across the country, inciting them to use trade instruments that had been rarely called upon in the past, such as the safeguard (section 201). Two companies, Suniva and Solarworld, both subsidiaries of foreign companies, Chinese for Suniva and German for Solarworld, petitioned the government for import relief on solar products. The safeguard process involves an independent agency, the International Trade Commission (ITC), in charge of assessing the reality of the injury and, in the affirmative, offering remedies to the administration, sole in charge of the final decision. In the solar case, after concluding affirmatively on the injury, the Commission split on which remedies to apply. One of the four commissioners offered the most lenient proposal, an 8.9-gigawatt quota on concentrated solar photovoltaic (CSPV) module and cells, to increase by 1.4 gigawatts each over four years, noting that “damaging the domestic consumers, installers and manufacturers supporting CSPV deployment is not an effective way to save domestic producers of CSPV products”. Not surprisingly, the President did not follow that advice **and his decision was to impose, on top of a quota of 2.5 gigawatts of imports free of duty, a 30% tariff, declining by 5% each year for four years.** The statement issued by the US Trade Representative (USTR) blames China for building overcapacity in the industry, although China represents only 10% of imports (many Chinese producers are already hit with antidumping or countervailing duties) and made no mention of exclusion of any country, including Mexico or Canada, both NAFTA

members, although the ITC had recommended the exclusion of a number of countries which had an free trade agreement (FTA) with the US.

The goal of the Trump administration, and the proclamation by the President himself, was to **stimulate the creation of new jobs in the US**, through the development of existing facilities or the creation of new ones. The challenge for the companies is the limited time of protection under the 201 process, four years at best if the measure is not found inconsistent with the WTO rules (affected countries, including the EU, have introduced complaints against the measure in the WTO). So far, a number of companies have announced their intention to invest in new production facilities in the US: Jinko Solar, a Taiwanese company, in Jacksonville, Florida; the Korean Hanwha Q Cells in Georgia and First Solar (now owned by Sun Power)³⁸ in Ohio. The projects would not be completed before the end of 2019 and could increase the production capacity in the US by 3 gigawatts or more, compared with a capacity of 1.8 gigawatts at the end of 2017. The impact on job creation, however, is somewhat fuzzy. While Solar World claims that its new factory in Ohio will create 500 jobs, other firms have not mentioned any numbers. The increased level of automation in factories limits the creation of jobs. So far, the only concrete result of the 201 action on jobs creation is a facility in Minnesota's industrial Iron Range, where the Canadian Heliene invested \$ 22 million and created 130 jobs.³⁹

The impact of the tariffs on the downstream solar industry was the major reason why the Solar Energy Industries Association opposed the tariffs. The President of the Association issued this statement the day of the proclamation of the tariffs: "While tariffs in this case will not create adequate cell or module manufacturing to meet U.S. demand, or keep foreign-owned Suniva and SolarWorld afloat, they will create a crisis in a part of our economy that has been thriving, which will ultimately cost tens of thousands of hard-working, blue-collar Americans their jobs". The association estimated at the time that the tariffs would cause the loss of roughly 23 000 jobs in 2018 alone. Developers have since reported the **cancellation or freeze of more than \$2.5 billion in large projects**. GTM Research, the clean energy research firm, lowered its forecast for utility-scale solar installations in 2019 and 2020 by 20 percent and 17 percent, respectively.⁴⁰ Since the solar industry employs

38. SunPower is majority owned by Total since 2011, and announced its acquisition of SolarWorld in April this year.

39. B. Eckhouse and C. Martin, "Trump Helps More Than Double U.S. Solar Capacity With Duties", *Bloomberg*, 30 May 2018, available at: www.bloomberg.com.

40. N. Groom, "Billions in U.S. Solar Projects Shelved after Trump Panel Tariff", *Reuters*, 7 June 2018, available at: www.reuters.com.

250 000 people, about 40% in installation versus 20% in manufacturing, the loss of jobs in installation vastly outnumbers the jobs created in –still to come– new manufacturing facilities. The SunPower CEO, although his company benefits from the tariff, is quoted as saying that “there could be substantially more employment without the tariff”. The blow of the tariffs has been softened somewhat by the stockpiling of panels, in anticipation of the 201 decision, by some companies, and by the decision of the Chinese government in May to abruptly stop the financing of new solar projects, which led to a glut of panels and a subsequent decline in prices worldwide. The impact of the tariffs varies from state to state: from a 7% decline in California to 13% in Texas, 24% in Pennsylvania or almost 50% in Montana: the price effect is cancelled in a number of states by regulations and the portfolio policies. California for example mandates that, starting in 2020, all new houses need to be equipped with solar panels.

While the utility business has been hit, **the impact on the residential sector seems so far limited**. After a decline in 2016, the sector looks basically flat for the year 2018.⁴¹

Coal: a missed opportunity for US miners

Since 23 August, China has imposed an additional 25% import tariff on US coking coal, coke and steam coal. This brings the total tariff imposed on US coking and steam coal to China to 28% and 31% respectively as China already applied 3% and 6% import duties on its coal imports (Australia and Indonesia are exempted). Similar to the Chinese tariff imposed on US soybeans from 6 July 2018, **the tariff on coal targets key Trump supporters and an industry which has been a battle field of Trump since he was elected.**

In 2017, China imported 3 Mt of US coal (all types of coal),⁴² representing only 1% of total Chinese coal imports and almost nothing in its total coal consumption (estimated at 3,810 Mt). Most of Chinese coal imports from the US were coking coal used in the iron and steel industry (2.7 Mt, i.e. 3.9% of total Chinese imports of coking coal). Imports of steam coal and coke were marginal. On the Chinese side, the impact of the tariff will be minor. Not only the quantities imported are minimal, but there is ample availability of alternative supplies at lower cost than US coal products. Domestic, Australian or Mongolian coking coal can easily

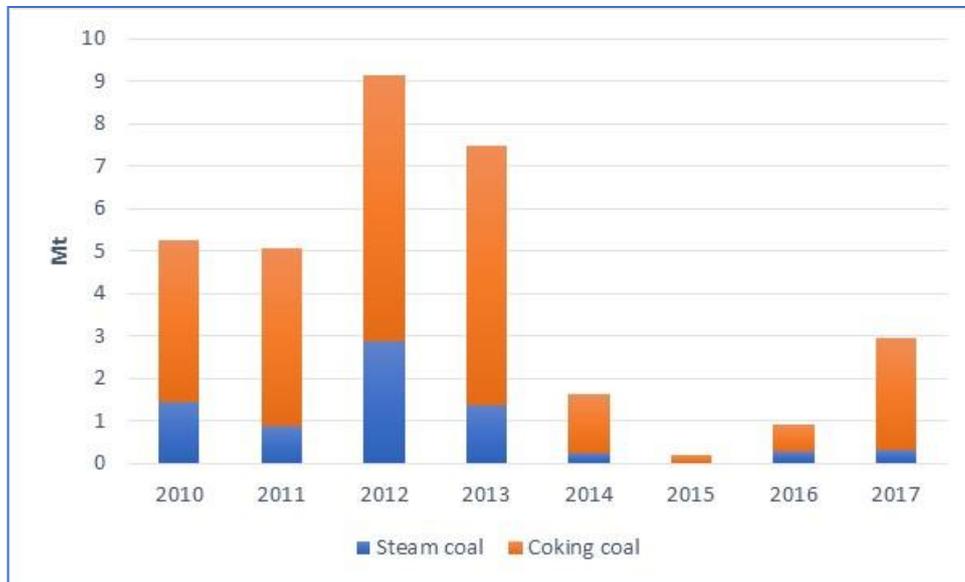
41. “Residential Solar Capacity Additions to Remain Flat in 2018, and that’s Good News”, *Green Tech Media*, 12 June 2018, available at: www.greentechmedia.com.

42. EIA, *Coal data browser*, available at: www.eia.gov.

replace US coal. US coal imports only make sense when the coking coal market is tight: for instance, when cyclones and flooding in Australia, the world's largest exporter of coking coal, reduce its coal production and exports. In 2017, disruptions to coal supply from Australia (Cyclone Debbie) meant that many Asian countries, including China, turned to imports from the US to offset these disruptions.

On the US side, **China accounted for only 5% of US coking coal exports**. Europe is the top destination, accounting for 45% of total US coking exports in 2017. Asian buyers (Japan, South Korea and India) also significantly increased their US imports in 2017. The effect of China's tariffs on the US coal industry can be seen as a **missed opportunity for US miners** as the Chinese market was only a potential new outlet for US coal. US coal miners increasingly rely on the export market as domestic coal consumption is shrinking. In 2017, an increase in demand for US coal exports more than offset a slight decline in domestic coal consumption, contributing to higher coal production. US coal mining companies expected China to increase its imports after the negotiations between China and the US held in May 2018 led Beijing to encourage Chinese steel mills to buy more US coal to narrow the trade deficit between the two countries. Already one of the largest metallurgical importers in China has pulled back from import talks with US coal trader XCoal and miner Consol Energy.⁴³ US coking coal producers now expect US demand for metallurgical coal (23 Mt in 2017) will rise as US steel production increases. They are also turning their attention to India, which is expected to become the world's second largest steel producer in 2018 and will require increased amounts of imported coking coal.

43. "‘We Are Walking a Tightrope’: US Coal Miners Worried As Trump’s Trade War Sees Chinese Demand For American Coal Dropping”, *South China Morning Post*, 26 June 2018, available at: www.scmp.com.

Figure 7: US coal exports to China (2010-2017)

Source: EIA.

Conclusion

The trade war has been going on since the release by the USTR of a report on China's violations of US intellectual property rights under Section 301 of the Trade Act of 1974. Section 301, which can be used in conjunction with the WTO, is more often a tool used unilaterally to impose sanctions on presumed culprits. The use of Section 301, initially justified by Chinese practices, is turning out to be a tool suited for two goals: on the President's side, reducing or getting altogether rid of the trade deficit with China; on the administration's side, changing the nature of the Chinese state economy, relegating the country to second-class economic status and preventing the emergence of the rival in high technology industries that China aims to become through the ambitious program "made in China 2025."

The situation has evolved quickly into a full-fledged trade war. The U.S. goals, presented to the Chinese side in Beijing at the beginning of May 2018, are a call for unconditional capitulation on the part of China. The will of China to retaliate at each step to American sanctions despite the vastly differing amounts of exports on the two sides (\$505 billion goods exported by China to the US vs. \$130 billion on the other side) means that all American exports are threatened by tariffs of 10 or 25%. In the first round of tariffs, each side has hit the other in equal amounts, \$34 billion on July 6 and \$16 billion on August 23. The US is now imposing a second round of tariffs on \$200 billion of Chinese exports, which are answered by Chinese tariffs on \$60 billion of American goods.

While American energy products were exempt from the first wave of Chinese retaliation, which concentrated on agricultural commodities, energy products –propane, butane, naphtha, jet fuel and coal- are on the second list, enforced since August 23 and LNG is on the third list enforced from September 24. Even though oil – part of the initial list announced for August- was finally withdrawn, it could be added at any time.

While LNG was mentioned by the China side as one of the ways to partially reduce the trade imbalance between the two countries last spring, exports from the US have declined over the past months, even before the announcement of a 10% tariff. That tariff will disqualify American LNG vis-à-vis LNG from Qatar and Australia, not to mention Russian gas supplied by the new Power of Siberia pipeline whose completion is scheduled for the

end of 2019. The situation is complicating the projects of LNG developers in the U.S., Cheniere and Tellurian among others, to build new terminals. Current US LNG export projects may find it harder to commercialize their full capacity without Chinese buyers.

For the time being, trade tensions have had a limited impact on the energy market, but Trump's threat to tax all Chinese goods indicates a serious escalation of the trade war and heightened risks for the global economy.

The first material effects of Trump's trade battles on the energy market are already visible in the US where US oil and gas companies are hit by rising costs of steel and supply restrictions.

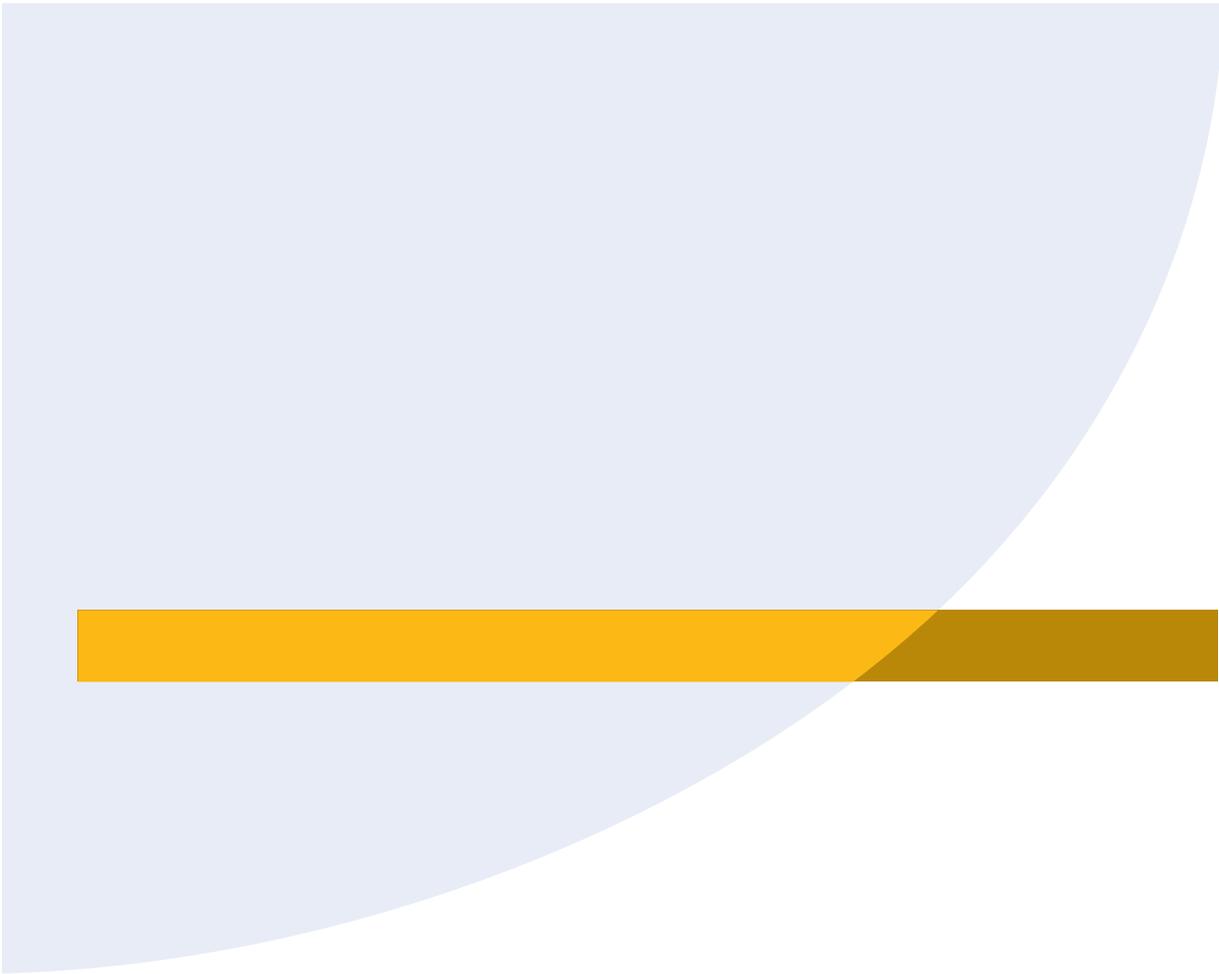
More significantly, the escalating trade war with China may hit US oil producers if China retaliates with tariffs on US crude oil. US oil flows would not be disrupted but the reduced demand from China would nonetheless exert some downward pressure on US crude prices and widen the Brent-WTI spread.

In the short term, the biggest winners of an oil trade war between China and the US would be OPEC and Russia. Chinese tariffs on US oil imports would help OPEC regain market share and Russia to reinforce its top position on the Chinese oil market. But the benefit would be short-lived. In the long run, tariffs and trade wars threaten not only global trade but also economic growth and global oil demand growth.

Similarly, competitors of US LNG producers would benefit from a Chinese tariff on US LNG. But the tariff could affect Atlantic-Pacific trade flows and provide a lift to Asian spot LNG prices. Higher LNG prices may deter some Asian emerging markets just when they are entering the market and reduce global LNG demand growth. The rebalancing of the global LNG market suggests more US LNG seeking to enter the EU market with implications for current EU suppliers.

The Chinese tariff on US LNG sends a perfect message to Trump on the contradictions between the Trump "art of the deal" way of waging trade wars and the pursuit of energy dominance. There is over all no doubt that the protectionist decisions of the Trump administration hurt the competitiveness of the American energy sector. It might not upset this administration in the field of renewables, although one can argue that renewables will be key to any sort of energy dominance in the 21st century, but it definitely will be a handicap for the oil and gas industry as far as steel and LNG tariffs are concerned.

Moreover, the somewhat erratic conduct of the trade policy raises a more fundamental question, about the reliability of commitments entered into by the President and his team. Gazprom delivered gas to Western Europe throughout the Cold War and the worst periods of tension with Russia. Who knows whether or not a President who loves to break the norms of international diplomacy and take hostages before negotiating a trade agreement would hesitate to ban, on a whim and through his favorite medium, a tweet, LNG exports to a country whose actions he disapproves? The current state of affairs in Washington shows that it would not be prudent to count on the judicial system or Congress to moderate the executive. Trust is essential in the field of energy trade, and the systematic violation of agreements and treaties is not the best way to build trust.



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