



## US Energy Independence: On the Home Stretch

June 29, 2021

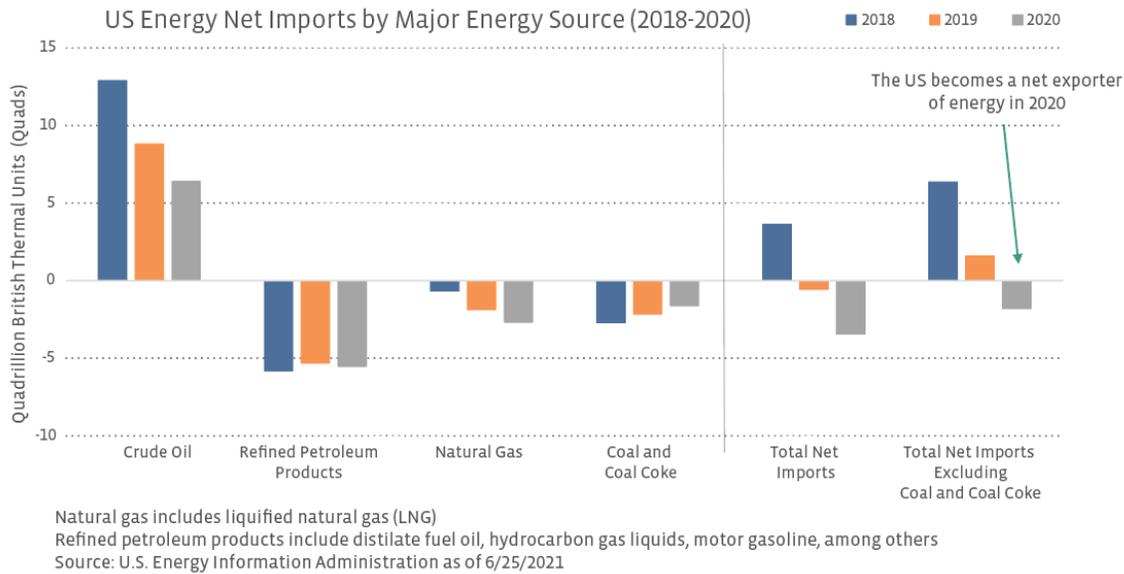
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### Summary

- After 2020 marked the first time the US exported more petroleum than it imported on an annual basis, trade disruptions from the global response to COVID-19 are expected to temporarily revert the US to a net importer of petroleum in 2021 and 2022.
- Following record-high natural gas exports in 2020, the US's growing dominance as a natural gas exporter is expected to strengthen further as additional LNG capacity comes online and countries increasingly shift to cleaner energy sources.
- While supply disruptions from the COVID-19 pandemic have temporarily impeded the US from sustaining its energy independence status, the secular trends driving energy export growth look to prevail in the long-run.

The long-proclaimed pursuit of energy independence became a reality in 2020, marking the first time the US exported more energy than it imported on an annual basis. While steady global demand continues to drive US energy exports higher, supply and demand shifts caused by COVID-19 have temporarily reverted the US to a net importer of energy for the foreseeable future. Today's note examines the key trends driving the US towards sustained energy independence and the ensuing effects from trade disruptions caused by the COVID-19 pandemic.

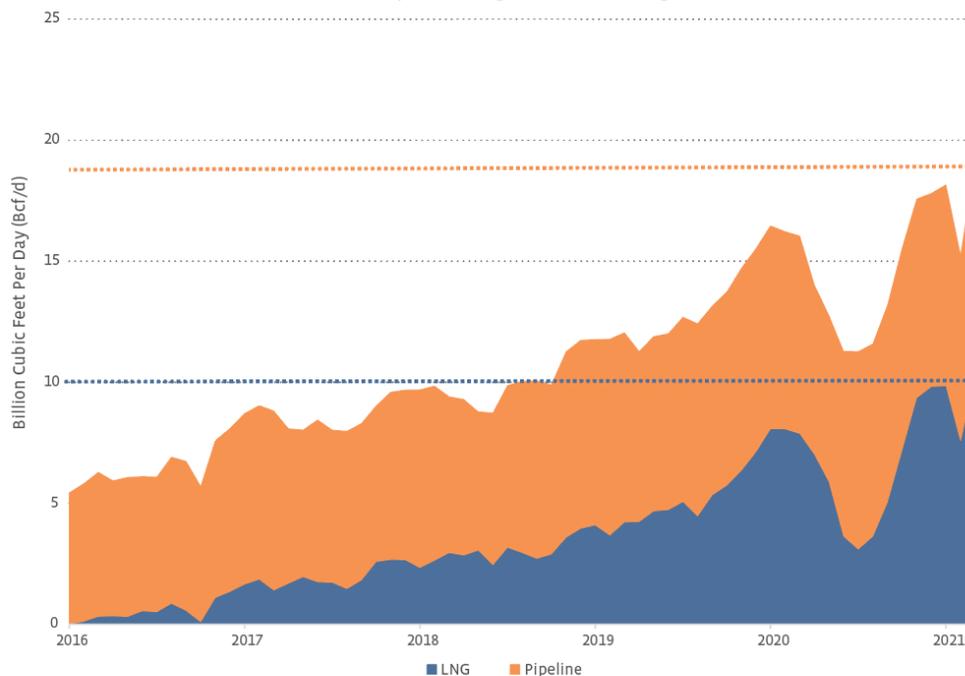
For context, we define energy independence as exporting more energy than imported as opposed to defining it as an "absolute self-sufficient energy economy" (i.e., producing all the energy consumed) since the latter ignores both the benefits of open energy trade and the market dynamics that necessitate energy imports. For example, crude oil imports—[which account for the largest share of US energy imports](#)—benefit US refiners who must consider logistical constraints, cost of transportation, and unique refinery configuration (some refiners prefer heavy and medium grade crude produced in Canada or overseas). And while the US is a net exporter of refined petroleum products (which includes gasoline, distillates, jet fuel, petrochemical feedstocks, and hydrocarbon gas liquids), refined product imports help satisfy local demand in certain US regions faced with refining capacity constraints. Because proponents of energy independence by definition of self-sufficiency tend to label energy imports as a geopolitical risk, it should be noted that [most energy imports today](#) come from neighboring countries with strong diplomatic ties to the US (e.g., Canada, Mexico). Thus, with open trade policies likely to remain in place, energy imports will remain a key component of the US energy landscape in view of the benefits they provide for refiners and consumers. With that said, significant growth in domestic oil and natural gas production over the last decade has led to a sharp rise in energy exports, placing the US on a steadfast path towards energy independence. In addition, while the US has always been a [net exporter of coal](#), the growth of petroleum and natural gas exports has largely overshadowed coal exports and their impact on aggregate US energy trade, and rightly so since the carbon intensive energy source should be excluded from the energy independence discussion given its [diminishing relevance](#). Notably, excluding the net exports from coal and coal coke, 2020 marked the first year that the US exported more energy than it imported.



### Expanded LNG export capacity boosts natural gas exports to record highs.

Since becoming a net exporter of natural gas in 2017, US natural gas net exports continue to grow, benefiting from increases in [Liquefied natural gas \(LNG\) export capacity](#) and relatively stable demand as countries shift to cleaner energy sources. Notably, following supply disruptions and a [challenged LNG market](#) through the summer of 2020 as a result of COVID-19, US natural gas exports recovered into the end of 2020, posting an [all-time high](#) and increasing by 13% over 2019 as both natural gas exports to Mexico and LNG exports to markets overseas reached record levels, while natural gas imports decreased to their lowest levels since 1993. According to [data](#) gathered by the [US Energy Information Administration](#) (EIA), the strong trend continued through the first three months of 2021. In March, natural gas exports via pipeline surged to monthly high of 8.8 billion cubic feet per day (Bcf/d) while LNG exports saw a monthly record high of 10.2 Bcf/d. On an annual basis, natural gas exports are expected to surpass 2020 record levels in 2021 and 2022. In its June 2021 Short-Term Energy Outlook, the EIA [projects](#) exports of natural gas (including LNG) will average 18.3 Bcf/d in 2021 and 18.4 Bcf/d in 2022—a substantial increase relative to the record average of 14.4 Bcf/d set in 2020.

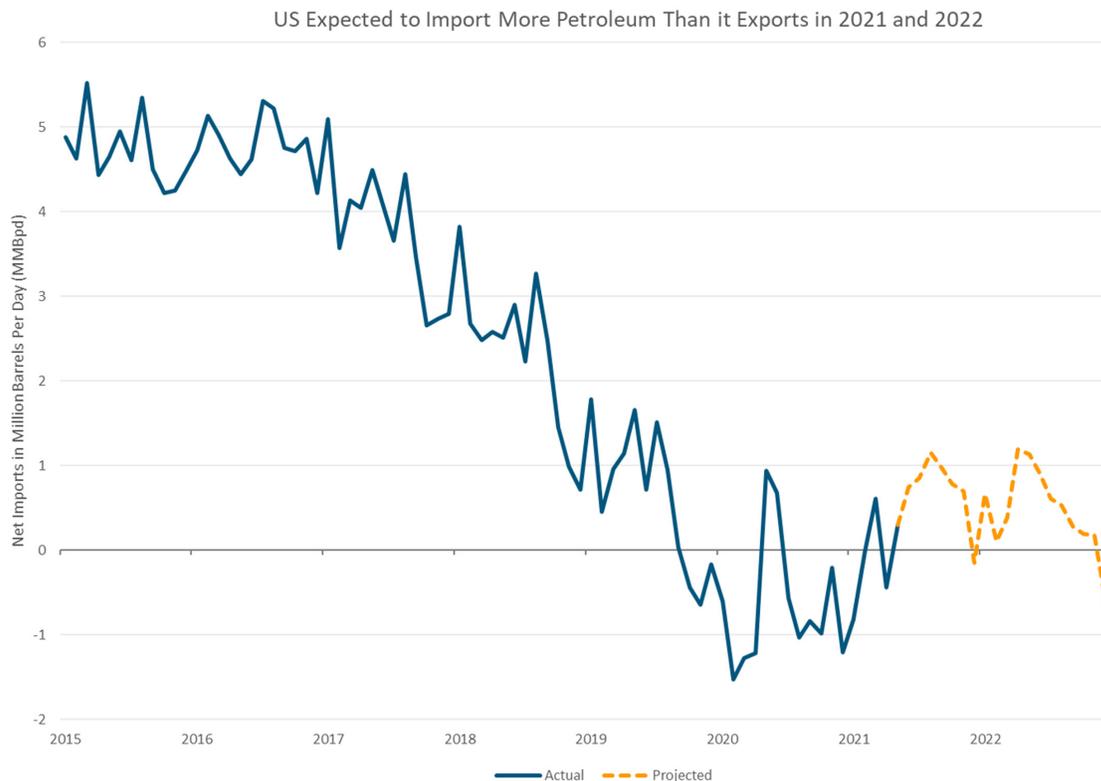
US Natural Gas Exports Surge To Record Highs in March



Source: U.S. Energy Information Administration as of 6/25/2021

## Domestic production declines temporarily halt US energy independence.

While the US has established itself as a consistent net exporter of natural gas, becoming a consistent net exporter of petroleum (which includes crude oil, refined petroleum products, and other liquids) is critical to achieving its energy independence ambitions in the long run. Since the removal of the crude export ban in 2015, the US has seen steady progression towards becoming a net exporter of petroleum, with 2020 marking the first time that the US [exported more petroleum than it imported](#) on an annual basis. However, disruptions to global energy trade—and shifts in supply and demand—caused by the COVID-19 pandemic have temporarily upended the US’s newly found energy independence. According to the EIA’s [forecast](#), an expected increase in crude oil imports (to offset lower domestic crude oil production) will revert the US to a net importer of petroleum in both 2021 and 2022.

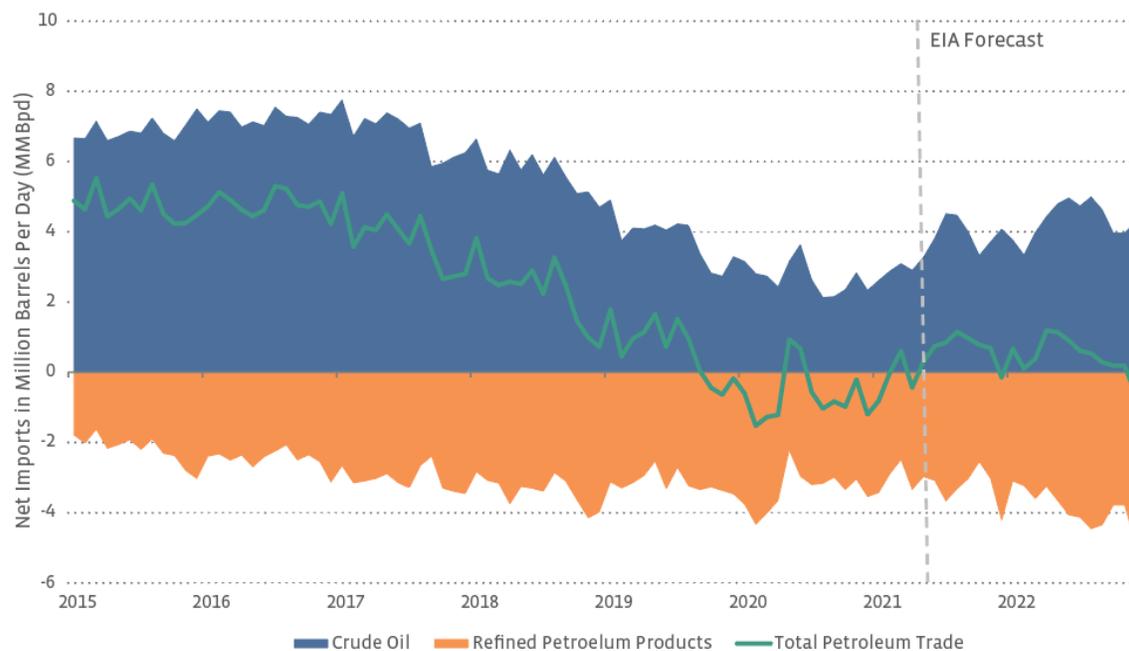


Source: US Energy Information Administration as of 6/23/2021  
Petroleum includes crude oil, refined petroleum products, and other liquids.

## Refined product net exports display resilience through COVID-19 disruptions

Upon dissecting US petroleum net trade, it is worth noting that refined petroleum product net exports remained largely unchanged in 2020 and increased by an average 0.2 million barrels per day (MMBpd) over 2019 as demand steadily recovered into the remainder of the year after bottoming in the second quarter. Importantly, the EIA [projects](#) refined product net exports will see annual increases of 0.1 and 0.4 MMBpd in 2021 and 2022, respectively. While the increase in crude oil net imports is expected to more than offset the steady growth for refined product net exports, the EIA projects the US will become a monthly net exporter of petroleum by December 2022.

## Stronger Refined Product Net Exports Help Offset Higher Crude Oil Net Imports



Source: US Energy Information Administration as of 6/25/2021

Refined petroleum products include distillate fuel oil, hydrocarbon gas liquids, motor gasoline, among others

### Bottom Line:

While the COVID-19 pandemic has temporarily impeded the US from sustaining its newfound energy independence, the secular trends driving energy export growth look to prevail in the long-run. The US's growing dominance as a natural gas exporter is expected to strengthen further as additional LNG capacity comes online and countries increasingly shift to cleaner energy sources. With a global recovery ahead, ensuing oil and refined product demand—and higher domestic oil production—could revert the US to net exporter of petroleum in 2023 and beyond.

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