Chickasaw Capital Management

MIDSTREAM & GLOBAL ENERGY SECURITY

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U.S. Energy Assets are Critical Assets (not liabilities) in a World Seeking Energy Security

KEY TAKEAWAYS

- U.S. and EU agreement in response to Russia's invasion of Ukraine is positive long-term for U.S. energy supplies and asset networks.
- While the agreement scales over time, the commitment potentially creates a higher level of stability and pricing for U.S. production volumes.
- Midstream assets remain mission-critical for domestic demand; these assets could play an increasingly critical role for global demand.
- Model Portfolio remains overweight towards companies with high exposure to natural gas and natural gas liquids (NGLs).

Overview

On March 25th, the U.S. and the European Union (EU) established the joint Task Force for Energy Security, which among other broad parameters, focuses on supplying Europe with incremental liquefied natural gas (LNG) to help the European continent reduce its reliance on natural gas imports from Russia by 2027 in response to Russian's invasion of Ukraine[1]. The agreement calls for the U.S. and other LNG exporting countries to provide Europe with ~15 billion cubic meters (Bcm) of LNG in 2022 (equivalent to ~1.45 billion cubic feet per day (Bcf/d)) with the U.S. also targeting an additional 50 Bcm (~4.8 Bcf/d) of LNG exported to Europe until at least 2030, which would represent a ~27% compound annual growth rate (CAGR) when compared to 2021 LNG export volumes sent to Europe. According to the International Energy Agency (IEA), European countries received ~40% of their natural gas consumption from Russia in 2021[2]. To completely wean themselves from this source requires a seismic shift in the way the continent receives gas, particularly

(1) European Commission, "Joint Statement between the European Commission and the United States on European Energy Security", 3/25/22. (2) IEA, "How Europe can cut natural gas imports from Russia significantly within a year", 3/3/22.

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increasing investment in the capacity of LNG import terminals. However, the agreement announced last week is an important step in the right direction. Lastly, based on the EU's resolution to classify natural gas as an energy transition resource[3], there is potentially the double tailwind associated with increased volumetric needs for U.S. gas and the ability to take market share.

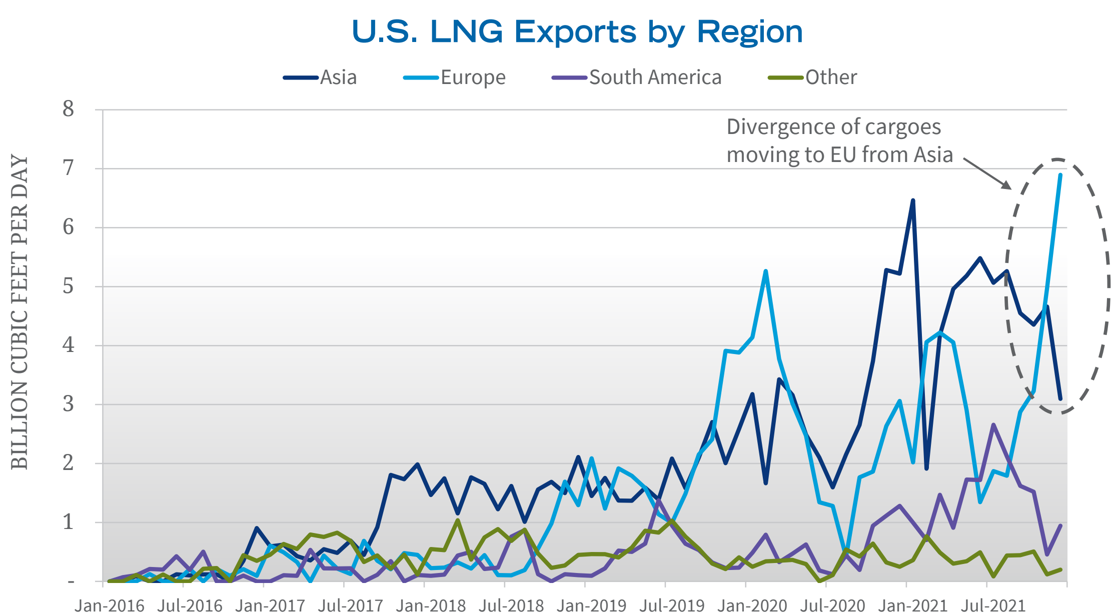
Regarding the displacement of crude oil imports from Russia to the EU, the impacts are less meaningful and less immediate near term, but could be incrementally positive on the margin for U.S. crude oil fundamentals long term.

Impact on Midstream Assets

North American Midstream assets have an important role to play in supporting the EU, most immediately through higher utilization of existing and new exportation assets, and then more medium- and long-term as these assets call on larger produced volumes from U.S. basins across the entire Midstream value chain. We believe investors should stop treating these assets as liabilities, and focus on the critical role Midstream companies can play in enhancing global energy security.

Looking first at LNG, we estimate the U.S. currently has 12.5 Bcf/d of LNG export capacity increasing to ~13 Bcf/d by the end of 2022. Tying to the announced agreement, this capacity equates to ~140 Bcm of LNG per year. U.S. export facilities have been running at full utilization rates over the past few months with several facilities appearing to be running above "nameplate" (the originally intended maximum) capacity.

As shown in the chart below, Europe and Asia have been the two largest destination regions for U.S. LNG over the past two years. Exports to Europe ticked up significantly towards the end of 2021 due to tighter inventories and higher localized prices. One of the advantages of U.S. LNG exports is destination flexibility that allows the owner of the cargo to deliver the product to the most attractive market. In this case, we have seen cargoes that have historically gone to Asia being diverted to Europe in order to capture the higher pricing levels. Due to this flexibility, we estimate the U.S., if we're using 2021 as a baseline, has already accomplished the majority of the 1.45 Bcf/d of incremental LNG set forth in the agreement for 2022. The newly announced agreement will only deepen the commercial ties longer term.



Source: EIA

(3) CNBC, "EU's Plan to Include Gas and Nuclear in 'Green' Ranking Leaves Investors Confused", 1/6/22.

Practically speaking, with ~85% of U.S. LNG export capacity locked in under long-term contracts, there is little incremental volume that can be diverted to Europe, particularly in the winter months when most of the contracted volume is being used by customers for seasonal heating demand. The next major U.S. LNG project expected to come online is Golden Pass LNG, which is targeting a 2024 in-service date. As a result, U.S. LNG is limited in its ability to help bridge the immediate supply gap needed to offset the loss of Russian natural gas imports at least for the next 2-5 years based on approval and construction timelines, hence the 2027 annual goal.

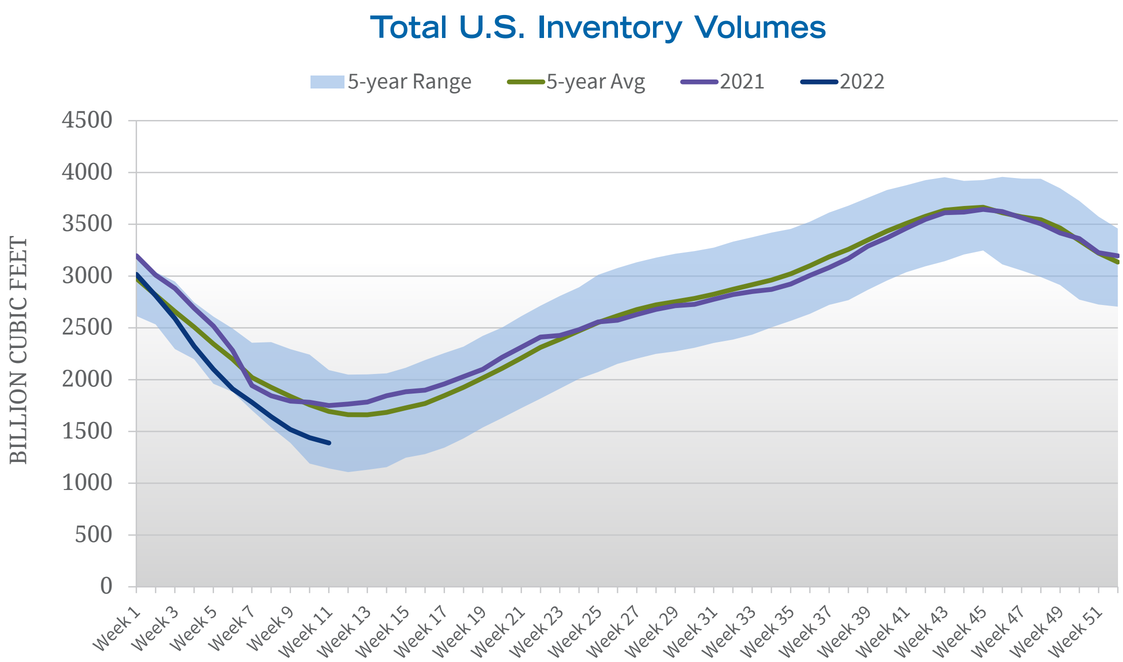
Despite the U.S. being limited in its ability to provide immediate relief to Europe's natural gas needs, we think there is ample opportunity for the U.S. energy sector to meet these needs over the medium- to long-term. Outside of Golden Pass LNG, there are multiple U.S. LNG projects under development that have already secured customers and/or financing and are nearing a final investment decision (FID) to proceed with construction. We expect this announcement could be the catalyst to push some or all of these projects over the finish line.

Permitted U.S. LNG Projects Awaiting Final Investment Decisions

Company	Project	Location	Capacity (mtpa)
Cheniere Energy	Corpus Christi Stage III	Texas	10
Delfin Energy	Delfin LNG	Gulf of Mexico	13
Energy Transfer	Lake Charles LNG	Louisiana	16.5
Freeport LNG	Freeport LNG Train 4	Texas	5.1
Glenfarne Group	Magnolia LNG	Louisana	8
Glenfarne Group	Texas LNG	Texas	4
Kinder Morgan	Gulf LNG	Mississippi	11.5
NextDecade	Rio Grande LNG	Texas	27
Sempra Energy	Port Arthur LNG	Texas	13.5
Tellurian	Driftwood LNG	Louisiana	27.6
Venture Global LNG	Plaquemines LNG	Louisiana	20
		Total	**156.2**

Source: Federal Energy Regulatory Commission/Bloomberg

In addition to LNG export facilities, we expect the entire energy value chain will be needed to support the incremental exporting of natural gas including gas processing and treating, intra-and interstate gas pipelines, and coastal delivery networks. Natural gas inventories in the U.S. are currently running below the 5-year average as shown in the chart below. These lower inventory levels are being driven by stable U.S. consumption and increasing LNG exports.



Source: EIA, CCM

In order to support incremental LNG export volumes, both for the EU and globally, we will need a supply response from U.S. producers matched with increased capacity across Midstream gas pipeline assets to facilitate the transfer of the natural gas from the wellhead to the export dock. From a supply standpoint, we continue to expect production growth out of the Permian and Haynesville basins with a call on other basins as demand for U.S. natural gas increases.

Overall, we view the call on U.S. LNG to help meet Europe's energy needs as a positive and reinforcing message showing the importance, reliability, and long-term nature of the U.S. energy industry. As low-cost, clean and increasingly responsibly sourced U.S. natural gas production is demanded by the rest of the world, Midstream infrastructure stands to benefit from increased utilization, expansion of existing assets, and development of new assets where necessary.

Impact on Crude

Russia is the 3rd largest crude producer in the World at ~11 million barrels per day (MMBpd). When including refined products, Russia exports ~7.5 MMBpd, or 7-8% of global demand made up of ~4 .5 MMBpd of crude and ~3 MMBpd of refined products[4]. As of the first two months of 2022, Russia's largest crude customers were the Netherlands (13%), China (11%), Italy (9%), South Korea (9%), and Denmark (5%)[5].

(4) UBS, "Global Oil Fundamentals: Russian oil shock?", 3/7/2022. (5) Tanker Tracker, 3/15/2022.

The U.S. has minimal exposure to Russian crude imports, averaging 308 thousand barrels per day (MBpd) in 2021, or 3% of total imports. When including refined products this figure increases slightly to 670 MBpd or 8% of total imports[6]. Unlike the U.S., Europe is much more dependent on Russia for its hydrocarbon energy imports, sourcing 27% of crude and 41% of natural gas imports, respectively[7]. Security of diesel supply is of the utmost importance as 50% of Europe's diesel imports come from Russia (15% of total consumption)[8]. Unfortunately for Europe, diesel inventories are at or below 5-year lows across the globe[9], leaving little supply available to be diverted to the European continent. This could have serious ramifications globally for not only an already over-burdened logistics environment, but also in terms of other industries dependent upon diesel such as agriculture, mining, and yes, development of additional hydrocarbon resources.

In the near term, there is only so much U.S. producers can do to alleviate the global supply crunch. According to Wells Fargo[10], the U.S. can realistically replace only 25%/44% of Russian oil/gas, respectively, under current physical (i.e., infrastructure and pipeline) and regulatory constraints, not to mention the current constraints investors have placed on U.S. exploration and production (E&P) companies emphasizing cash flow returns over growth in capital expenditures. However, while a near term U.S. production response could be somewhat muted, longer term the global push for energy security should increase the demand for American energy, which highlights the long-term significance of U.S. Midstream infrastructure to geopolitical security.

Portfolio Impact

As communicated in prior letters, over the past 18+ months, we have continuously high-graded the portfolio fundamentally towards companies with greater exposure to natural gas and NGLs, and those cash flow categories currently account for 60-65% of the aggregate cash flow profile. The reasons for this focus are: (1) the U.S. is the low-cost producer of each globally, (2) natural gas and NGLs offer the highest number of "touches" in fee-based asset chains (multiple fees earned), (3) the asset networks are well developed to safely and reliably reach areas of demand, and (4) natural gas and NGLs are fungible on a British thermal unit (BTU) basis once they leave U.S. export facilities and reach the water. The last point is the reason why cargoes destined for Asia have been able to be diverted to European countries, as LNG cargoes can be swapped amongst global players, and has further demonstrated the resiliency of our thesis.

We were quite comfortable being structurally over-weight towards the gas value chain prior to Russia's invasion of Ukraine. After the joint agreement announced March 25th, and forecasting structural shifts we expect to occur through the remainder of the decade, we believe our portfolio is well-positioned for long-term cash flow stability and a continued validation of long-term asset values.

(6) U.S. Energy Information Administration (EIA), "U.S. Imports by Country of Origin", 2/28/2022. (7) Eurostat, "Energy Dependence, March 25th, 2022. (8) Financial Times, "Traders warn of looming global diesel shortage", 3/25/2022. (9) Morgan Stanley Research, "Middle Distillates", 3/22/2022. (10) Wells Fargo, "Weekend Drill Down: What would energy independence cost?", 3/10/2022.

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