

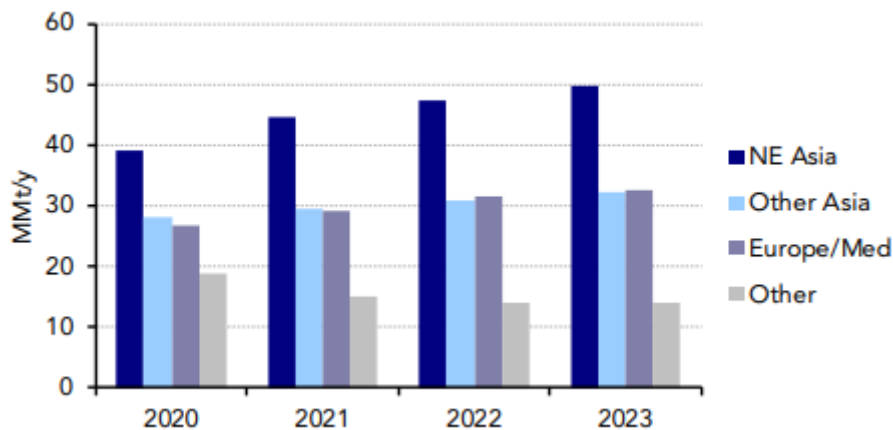


LPG Market Outlook

Global LPG prices signaling tight supplies

The incremental demand for LPG globally will continue to be driven by the European, Mediterranean, and especially the Northeast Asian markets at least until 2023. The rise of the petchem sector in those regions will drive most of the growth in import requirements. Northeast Asian imports are forecast to make up 35-40% of global imports and climb to roughly 50 MMt/y by 2023 – up from 39 MMt/y in 2020.

Global LPG imports



Meanwhile, imports for South and Southeast Asia are forecast to account for 25% and imports for Europe and the Med will account for another 25% of total global imports. Growth in imports for South and Southeast Asia is forecast at roughly 5% per year out to 2023 to reach 32 MMt/y. For Europe and the Med, imports are forecast to grow by 8% out to 2022 to 32.5 MMt/y but the growth rate slows in 2023 to 3%.

Ratio of US propane to WTI crude



Current LPG prices are very high, due to the tightness of supply, at least in part. Looking at the ratio of US propane prices to WTI shows the role that small production growth in 2020 and 2021 is playing in today's market prices. The ratio is above 60% in today's market, relatively high for the summer months when storage levels are building as lower seasonal demand puts downward pressure on prices. With the lag in US production growth, global demand rising at a quicker pace, and record levels of LPG exports from the US that left inventories short of the 5-year average, propane prices are signaling that more production is needed to support such high levels of exports.

Ratio of propane to naphtha



The story is similar with respect to the propane to naphtha ratios in Europe and Asia above 90%. Last year around the same time, ratios encouraged LPG consumption in the petchem sector in both regions. This year, higher demand in Asia from new PDH units and higher operating rates at existing ones are squeezing supplies and pushing up prices. The ratios are high for this time of year indicating that part of the reason for higher prices is market related in addition to the sharp increase in crude price this year. If inventories remain low and production doesn't increase at a higher rate, prices could rise sharply this winter