

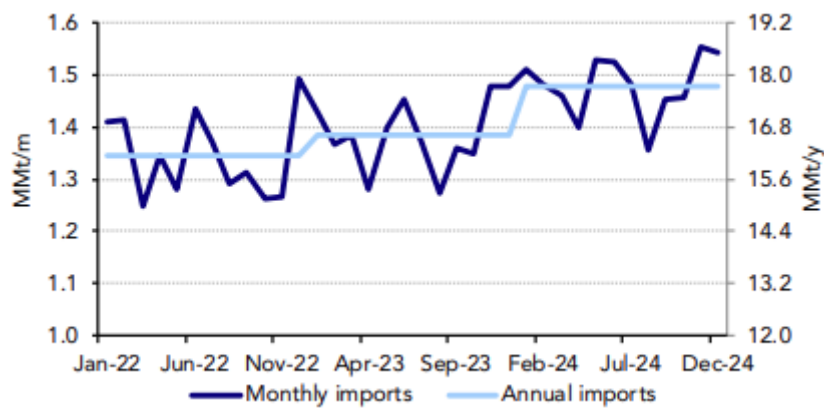


LPG Market Outlook

European Industrial Power Demand for LPG Set to Grow

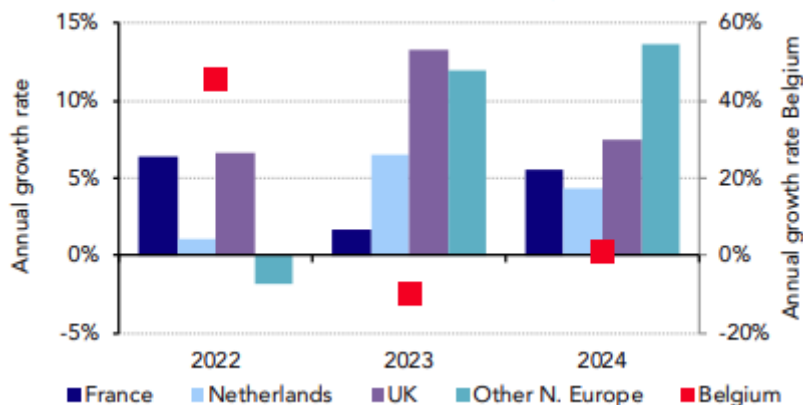
Europe saw a 12% growth in imports in 1H 2022, but higher energy costs are raising concerns for the future of petrochemical demand in the region. The surge in imports in 2022 was largely driven by increased petrochemical demand. However, Russia has threatened to cut off energy supplies to Europe completely which would lead to power rationing this winter and potentially through 2023. The industrial sector would be the first sector to assume a decrease in power consumption.

Europe LPG Import Forecast



To that end, some European petrochemical companies have indicated that they will burn more LPG for power generation to avoid disruptions. As a result, imports are forecast to fall only slightly in 2H 2022 to 8 MMt, from 8.1 MMt/y in 1H 2022. Imports for 4Q 2022 are forecast at 4 MMt. Imports could be higher than forecast if Russia cuts off gas supplies and some plants significantly increase LPG burns for power generation

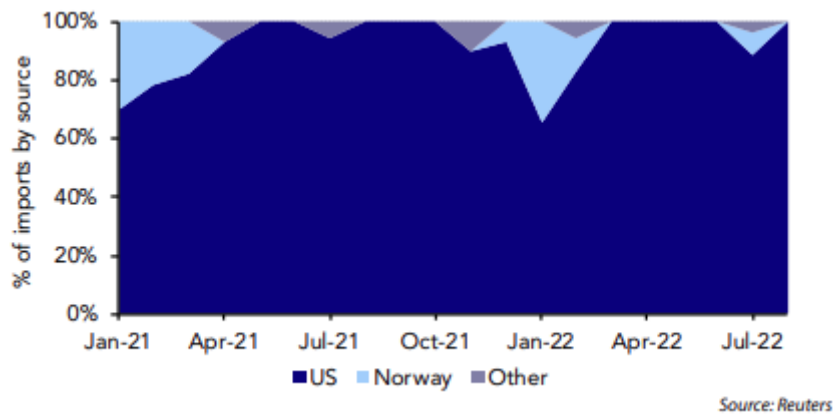
LPG Import Forecast Growth Rates North Europe



Typically, there is little seasonality associated with imports for India and imports are unaffected by weather changes from quarter to quarter. In 2021, imports were higher in 2H rather than 1H due to higher demand during religious festivals. The surge in imports in 3Q 2022 means 3Q will be the highest quarter for imports this year according to the forecast.

In 2023 and 2024, it is expected that imports between quarters will show less difference than previously seen due to consistent demand from the residential sector. There are few alternatives for LPG in the residential sector for India. Electrification of cooking and heating or piped natural gas are being considered but are cost prohibitive in the short term.

Europe LPG Imports by Source



Domestic supplies of LPG are forecast to grow between 3% and 5% from 2022 to 2024 on higher domestic natural gas production and expanding refinery capacity. A recent shortage of coal along with persistent high LNG prices has some Indian policy makers leaning towards opening more offshore and onshore oil and gas blocks to foreign investment to increase domestic output.

Meanwhile, India is leading Asia in terms of planned refinery expansion projects between 2022 and 2026. There are two new refineries coming online and 84 expansions of existing projects.