India

Neutral *(no change)*

Highlighted Companies

Gujarat Gas

ADD, TP Rs679, Rs552 close

CGD business will experience lower gas costs and higher margins, mainly driven by lower LNG pricing. We expect an increased volume in FY25F, especially with falling LNG prices, which should also positively impact margins. We currently have an ADD rating on the stock

Summary Valuation Metrics

P/E (x)	Mar24-F	Mar25-F	Mar26-F
Gujarat Gas	21.5	18.8	16.46
P/BV (x)	**Mar24-F**	**Mar25-F**	**Mar26-F**
Gujarat Gas	4.39	3.6	2.99
Dividend Yield	**Mar24-F**	**Mar25-F**	**Mar26-F**
Gujarat Gas	0.36%	0.36%	0.36%

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Oil & Gas Refinery

LPG to become costlier vis-à-vis LNG

- LPG production is rising as its cracks are better than naphtha, but its demand is also rising as it is being increasingly used by propylene makers.
- Demand-supply dynamics of LPG means that while its discount with crude oil will narrow, its usage as fuel totally depends on per mmBtu cost vis-à-vis LNG.
- As LPG becomes costlier compared to LNG, LNG volume growth will come back, thus leading to higher earnings growth for Petronet LNG & Gujarat Gas.

LPG demand is surging as it is increasingly used to make propylene

In 2023, global LPG demand surged to approximately 13.7m bbls per day (mb/d), reflecting steady growth that is expected to continue in the coming years. Key consumption hubs include the US (3.7 mb/d), China (2.4 mb/d), India (0.9 mb/d), and South Korea (0.3 mb/d). Today, steam crackers continue to be the dominant source of propylene, followed by refineries. On-purpose and conventional are the two types prevalent in steam cracker methodologies. Leading the charge in these innovations are propylene dehydrogenation (PDH) & coal to-olefins (CTO) technologies among on-purpose methodologies. The primary distinction between conventional propylene production and on-purpose technologies lies in the feedstock: conventional methods primarily use oil or naphtha whereas on-purpose technologies utilize propane and coal. The higher propylene margins via the LPG route are leading to a surge in LPG demand.

LPG cracks are improving - leading to higher output in Asia

Recent market dynamics have shown naphtha cracking margins climbing from -US$304/t at the start of 2024 to -US$104/t by 28 Feb 2024. However, the shift to propane has been even more advantageous, with propane cracking margins improving from -US$240/t on 3 Jan 2024 to -US$2/t on 28 Feb 2024. As a result, flexible Asian crackers have transitioned from naphtha to propane since Jan 2024 to maximize production margins.

LPG discount to crude oil to go up but unlikely to touch 2023 levels

This evolving landscape underscores the dynamic nature of the propylene market, driven by technological advancements and shifting feedstock economics. While we believe that LPG's discount to crude oil will increase in the coming months, higher base steam cracker demand will mean that it can never become too cheap.

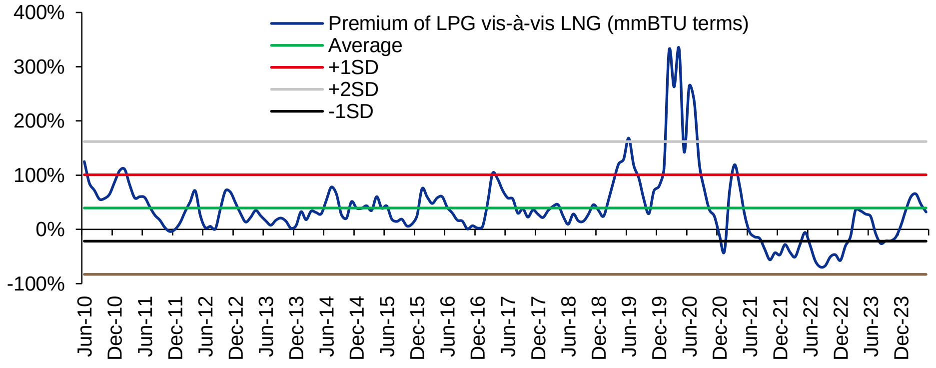
Usage of LPG as fuel depends on its relative premium over LNG

Most Indian industrial users have built the infrastructure to shift from LNG to LPG. They can shift from LNG to LPG and vice versa, depending upon its mmBtu prices. In the recent past, scarcity of LNG meant that LPG went to discount vis-à-vis LNG and hence, Indian suppliers like Gujarat Gas suffered. However, LPG premium will only increase from here on as 1) LNG prices will fall, and 2) there will be increased usage of LPG to make propylene.

LNG regasifiers & distributor to benefit - Petronet LNG & Gujarat Gas

As LPG becomes much costlier compared to LNG, LNG volume growth will come back, thus leading to higher earnings growth for LNG companies. India needs much higher capacity for LNG regasification and hence, we expect many more LNG terminals coming online soon. Please see our note (IN: Oil & Gas - Retail - LNG prices to fall to US$5.5-6/mmBtu) We like Petronet LNG and Gujarat Gas based on this theme .

Figure 1: Falling LNG prices led LPG premiums to rise and thus, usage will decline



SOURCES: INCRED RESEARCH, COMPANY REPORTS

China, South Korea drive LPG demand amid widening LNG price threat

Propylene making has two different technologies – On-purpose and conventional

Today, steam crackers continue to be a dominant source of propylene, followed by refineries. On-purpose and conventional are the two types prevalent in steam cracker methodologies.

Propylene dehydrogenation (PDH) & coal to-olefins (CTO) are the two types of on-purpose technologies

Leading the charge in these innovations are propylene dehydrogenation (PDH) & coal-to-olefins (CTO) technologies among on-purpose methodologies. The primary distinction between conventional propylene production and on-purpose technologies lies in the feedstock: conventional methods primarily use crude oil or naphtha whereas on-purpose technologies utilize propane and coal.

China's propane dehydrogenation (PDH) expansion boosts LPG demand

China is significantly increasing the capacity of its propane dehydrogenation (PDH) plants, which are projected to grow from 17.27mtpa to approximately 31 mtpa in the next two years. These PDH plants use propane as a raw material and are expected to increase their consumption from approximately 3,34,000 barrals per day (b/d) to 5,91,000 b/d, posting a 33% compounded annual growth rate (CAGR) until 2025F. The primary product of these PDH plants is propylene, which is further processed into polypropylene. This versatile material is used in various industries, including automobile, textile, plastics, construction, and electrical appliances, driving 70% of the demand for LPG in the PDH industry. The expansion of petrochemical plants in China has a significant impact on the shipborne LPG market, driving increased demand for imports.

South Korea also shifts to LPG feedstock to make propylene

South Korea has seen significant demand surge for LPG due to its shift from naphtha-based propylene production to LPG-based feedstock. This shift is driven by increased utilization of cracker plants and recovery of cracking margins. South Korean cracker operators are increasing the run rate due to the margins recovering in ethylene, and butadiene prices, which raises the demand for LPG feedstock as propane and butane are still cheaper than naphtha. Several major companies, including Hanwha Total, KPIC, LG Chem, GS Caltex, and Lotte Chemical have raised or are planning to raise the utilization rate at their cracking units. Naphtha cracking margin of companies in South Korea shifting to LPG feedstock to make propylene has significantly improved, climbing from US$304/t at the start of 2024 to US$104/t on 28 Feb 2024. Propane cracking margins have improved even better, from US$240/t on 3 Jan 2024 to US$2/t on 28 Feb 2024. Flexible Asian crackers have shifted to propane from naphtha since Jan 2024 to maximize production margins.

As a result, propane gains an edge over naphtha led by margin improvement

Over the past five years, US gasoline production has increasingly met domestic demand, leading to a substantial surplus in naphtha and gasoline. Recent market dynamics have shown naphtha cracking margins, climbing from US$304/t at the start of 2024 to US$104/t on 28 Feb 2024. However, the shift to propane has been even more advantageous, with propane cracking margins improving from US$240/t on 3 Jan 2024 to US$2/t on 28 Feb 2024. As a result, flexible Asian crackers have transitioned from naphtha to propane since Jan 2024 to maximize production margins. This evolving landscape underscores the dynamic nature of the propylene market, driven by technological advancements and shifting feedstock economics.

The massive shift to LPG-based propylene manufacturing is leading to increased exports of LPG from the US to Asia

Saudi Arabia, a major LPG exporter, sets prices through its contract price mechanism, which influences the Middle East's export prices. In contrast, the US LPG price is set daily by traders. Historically, Saudi Arabia CP has been consistently several hundred US$/t more expensive than the comparable US price. For instance, LPG prices were seen at approximately US$450/t in the US & around US$600/t in China during Apr 2024. This price differential creates an arbitrage opportunity, boosting the demand for US LPG exports to East Asia.

Widening LNG-LPG spread threatens LPG demand

The LPG vs. LNG analysis offers critical insights into the price dynamics between these two energy sources. The US Henry Hub Nymex prices reflect the comparative cost advantages of LNG over LPG. The average LPG price remains relatively stable around US$14.416/mmBtu, with the conversion factor indicating 1t of LPG equates to 43.7mmBtu. However, the widening price differential between LNG and LPG, in terms of US$/mmBtu, poses a future threat to LPG demand. If the spread continues to widen, LNG may replace LPG, particularly for heating and energy purposes, leaving LPG primarily for feedstock and petrochemical usage.

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